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THE CANADA FARMER

Vol. III. No. 11.

TORONTO, CANADA, NOVEMBER 15, 1871.

NEW SERIES.

The Field.

Fall Ploughing.

In Canada, ploughing in the fall of the year is a matter of no small importance to the farmer, and he who can accomplish a large acreage finds himself forehanded in our short spring months. At the same time there is amongst many men an impression that quantity is the great desideratum to be looked to in this operation, and they are apt to neglect quality.

This is the right season of the year to plough deeply. It is said that Great Britain would double her crop were the system of deep cultivation to become universal, and with much greater force may the same opinion be applied to Canada, where our land has been utterly run out upon the surface, and where a few inches under nearly every farm lies a hard pan compacted by the passage of the plough year after year.

Shallow ploughing is, we consider, one of the chief causes of that deterioration of crops which takes place so rapidly after the virgin soil has once become partially exhausted.

Of course in the discussion of such a wide question as that of deep ploughing, consideration must always be had to the various combinations and states in which different soils exist.

There are exceptional cases—or, we should say, there is an exceptional case—in which deep ploughing would actually be prejudicial, and that is where a shallow top soil is underlain with gravel or sand highly impregnated with an oxide of iron. Such a soil is, however, fortunately of rare occurrence, and, where it exists, we should advise the farmer to work it as little as possible. But even upon such a soil the use of a purely subsoil plough, such as was exhibited at the Central Fair in Hamilton this year, would be very beneficial.

The presence of oxygen and carbonaceous gases in the soil, is absolutely necessary to the growth of all plants, and these can only

be made available by thoroughly aerating or impregnating the pores of the earth with atmospheric air.

Good agriculture exists not only in renewing but also in prolonging the fertile properties of the soil. Of course all deepening of the soil must be done gradually and with judgment. There are men who, having heard something of the benefits of deep ploughing, have rushed into it without due consideration—have turned up a subsoil, and upon it have sown a crop which has proved a failure. They have then condemned the principle; yet the principle was good—the fault was in their application of it.

Presuming that all soil is disintegrated rock, and that these rocks contain in a greater or less proportion the salts necessary to the growth of plants, the roots of living plants, by the power which they obtain from their very principle of life, are enabled to extract and imbibe whatever of these salts are attached to or contained in the particles of soil. The plough then carries this disintegration still further, and exposes new surfaces or new sources of food to the roots of the growing plant.

Now this subsoil contains no mould or decaying vegetable matter, and thus is usually termed sour, or, in other words, contains much that is absolutely detrimental to the vigor of plant life. It therefore requires to be aerated to be relieved of its noxious gases, and there is no season so propitious and no action so effectual for this purpose, as that of frost and snow. Frost breaks up and crumbles the particles of soil, opening them to the action of the atmosphere, while the snow carries to them nitrogenous matter in large quantities.

The farmer, then, who feels convinced that a deeper ploughing would be of benefit to his land, must be gradual in his application—should plough, say, an inch deeper each time, giving the subsoil, cold or unavailable to the plant, but rich in vegetable food, time to make those chemical combinations with the oxygen and carbonaceous gases of the air, which shall enable it to give forth its plant

food to the tender rootlets seeking sustenance.

Another advantageous time to plough deep is just before an application of manure.

When the young plant first sends out its tender rootlets, they readily find food in the manure from which to gather strength, and then are enabled to take up food contained in the new soil, before unavailable by reason of their tenderness.

Again, deep ploughing is a system of drainage.

What is the secret of that yellow tint upon the barley blade when put in the ground too early in spring? The farmer will tell you that the soil was too cold, and he is right; but what made it too cold? Simply the presence of stagnant water. Water percolating the soil is beneficial; but the instant that water gathers in a spot it becomes injurious.

The farmer knows the ill effects of stagnant water upon the surface of the land, because he can see it, and yet it is hard to make him recognise the fact that there is an immense pool of water lying stagnant over many acres of his land, just out of sight, a few inches below the surface.

Thorough underdraining is the effectual cure to this evil, and next to that comes deep ploughing.

There are fields that have been ploughed the same depth for perhaps forty years; the farmer does not try to force his plough below, and in consequence, with the pressure of the plough and the trampling of horse and man, there is a hard pan through which no water can possibly sink away, nor can any root obtain a hold upon it. Break that up, an inch at a time, and you will relieve your land of stagnant water, prolong the fertility of the soil, get upon the land a fortnight earlier in the spring, and plough it later in the fall; your wheat will not heave out, because there will be no stagnant water about the roots upon which the frost can act; your cedar posts will stop in the ground for 30 years, instead of being thrown out inch by inch per annum.

Utilizing Burnt Land.

The devastating fires in the woods, and especially those in the swamps, naturally lead us to consider what course of operations can be adopted to utilize those tracts of land so burnt over. I was a sufferer to a considerable extent from such fires; and knowing a neighbour of mine, who lived a few miles away, had also suffered a few years since in a similar manner, I determined to pay him a visit and learn his experience and remedy.

My friend was an intelligent North of Ireland man, and well-to-do in the world. I told him my errand, and I begged him, after hearing what I had to say, to tell me all particulars of his own experience from beginning to end. He said in reply, that after he had paid for his present farm, and one for each of his sons, he purchased an adjoining 30 acre piece, which was valuable only for its timber. He had paid a large price for it, and never could account for the fire getting into it and destroying the timber so completely. He said, when relating the particulars, "When I examined the lot after the fire was subdued, more from want of light combustible fuel to destroy than by any act of our own, for we were powerless to arrest its progress, I felt very low spirited at having sustained such a heavy loss. The land was covered with a heavy growth of pine, cedar, and other swamp timber. This piece had cost me nearly \$16 an acre, and was, as I supposed, valuable only for its timber; in fact, I would not have taken twenty dollars an acre for it, as the fences were getting bad on all three of our farms, and we had no other source from which to replace them. After the fire, myself and my sons walked over the lot, and agreed that as it was of no use 'crying over spilt milk,' we would think no more about it. We therefore turned our faces homeward, and I did not visit that wilderness of timber and ashes for twelve months. The land was perfectly covered with fallen timber, lying 'criss-cross' every way, and in some places piled up several feet high.

"About the same time next year my youngest son came running to me to say that the fire had again got into our swamp. It originated, he said, from a camp of Indians who lived close by. There was a strong wind blowing at the time. I examined the fire, and found it had by that time got great headway, and was burning furiously. The dry logs and half consumed stumps, now like tinder, caught and blazed up twenty to thirty feet high, a perfect mass of flame unquenched by the strong breeze. I saw at once it would be useless and impossible to even try to stop the fire, and consoled our minds with the idea that all the mischief was done that could be done; and as we could not put it out, we would let it burn without trying to do so. We went carefully all round the

edge, and removed all dangerous logs that might cause destruction to our fences, and in some cases the fences themselves were removed. Next morning the fire was almost down, and a smart shower of rain effectually extinguished the remainder. We now concluded to examine the results, and found the fire had nearly cleared 30 acres of land; the stumps even were so much burnt that they stood up like 'crabs' on their toes, and many of them could be pushed over, and almost all could be jerked out by oxen, and, in fact, by cutting a log here and there, and chunking up some brands, the land would be well cleared. The swamps at that season of the year would bear cattle well, and we were soon jerking out stumps, not a difficult job when we consider they were only held by the points of a few roots. After all was done, and a black job it was, I had a tract of 30 acres all cleared of swamps, with a few exceptions. A neighbour, a Welshman, advised me to sow *Cocksfoot*, *Timothy* and *Blue Grass*, at once. I did so, and after cutting a few drains I next year had—what I have found by experience to be—a far more valuable field, acre for acre, than the best piece on my farm, or any farm adjoining in that neighbourhood."

The above short history of a remedy applied to a great misfortune, may perhaps be useful to many.

I myself have a lot of nearly 160 acres similarly circumstanced, as before stated, and am determined to follow my old friend's plan, and after completing the clearing, cutting a few drains, sow it with *Timothy*, *Cocksfoot*, and *Blue Grass*, and am sure shall thus realize full value for my loss of timber, or at least shall utilize the land after the loss is sustained.

C. L.

Talk with Farmers.

DITCHING.

"How are things progressing on the Government Road Settlement?"

"Oh, well. Our crops have been excellent; but our young people have lately had their minds a good deal unsettled by my son's return from California and British Columbia. His accounts were so glowing, and he was so free with his money (although a careful fellow) that the rest of the young folks can hardly be persuaded to stay at home and work quietly."

"How did the field turn out you were about to ditch?"

"It did nothing the first and second years. It was one mass of strawberry plants when it was dry, and there was a great swale right across the hundred acres; so that with foulness of the dry peat, and the flooded state of the wet, I did not realize any sort of profit, and hardly expenses, from my crop; so that although it was rented land, I determined to drain it, and I did so."

"Did you tile drain it?"

"No; I ditched it, and made a real good job. I always ditch with the plough and scraper. My boys don't like to work in the wet; neither do I; so we watch for a dry time, and then put in the plough with a good strong team. We plough out as much as we

can, and then get scrapers to work, each with a team. We take out the loose soil with the scraper, and remove it to low places, so that we both ditch and raise depressed places at the same time, and fill up runs and gullies where they are not wanted. After going over the ground once, and removing all that the plough has moved, we plough again, and again scrape out. I never leave steep sides to my ditches; but prefer depressions in the ground; and for that purpose, wherever it wants it, we cross the ditch with the scrapers, as well as go lengthways. This saves future trouble, and all danger to sheep or cattle or horses, by getting on their backs in the ditch, and so being lost. Besides, I find that I get better grass in the slope than in the flat, and it all bears a heavy crop, except in just the water way, and when I put it into grain it bears a splendid crop right down to the water furrow in the bottom. Moreover when I do it in this way, I can always plough across the ditch if I want, and take it altogether it is a much better plan."

"Well, but how about the economy of it? You must move so much earth that it must cost more than common ditching?"

"No; it does not. A pair of horses with a good scraper will move an immense deal in a day, and besides can put it just where it is wanted; but if I ditch with the spade, the earth can only be thrown out on each bank as far as a man can heave it; and if you want it to go further you must cart it, and then you have to move it all again, so that it is twice the labour it would otherwise be. And besides all this, myself and my boys think it a deal the best plan for the horses to do the hard dirty work, rather than ourselves."

"But you cannot go deep enough in this way?"

"Yes, I can. I have in other places made ditches three and even four feet deep through rising ground; and although they are wider than the actual flow of the water requires, yet I find the profit of it in other ways."

"How long was the ditch in question across the 100 acres?"

"It was fully sixty rods long; it averaged two feet deep, and was wide enough for the team all through; it was well sloped at the sides, so that it can never founder with frost or be trodden in by cattle, or fill up in any way; and it only took us three days to finish it—three men and two horses, with plough and scraper."

"Did it answer well?"

"Yes, capitally; and this year I have a splendid crop, and good promise for future years. I have all the hollows near by filled up, have got rid of the strawberries and other weeds, and now have a fine field instead of a piece of rough pasture, that was a scandal to the farm. This is not the first work of the kind I have done either for myself or others, and I have always succeeded well, and the work done in this way has given the best of satisfaction. You will

see that this ditch has not cost me, even at a dollar a day wages for the men, and two dollars for the horses, quite 25 cents a row; and we have moved from three to four times as much earth as we could have done with spades and shovels, besides doing it for all time, for this will never founder or be trampled in by cattle, and all it can ever want again is a double furrow in the bottom of it, and generally a single turn water furrow will be sufficient. Besides, at the above rates you will see that we have earned excellent wages, although of course we don't found much on that."

I enquired the shape of his scrapers.

He said they were of the ordinary kind, square across the edge and wide, so that they would take up *moval* earth.

I suggested a scraper made half circular like a sugar scoop, such as is used by grocers, with a sharp cutting steel edge.

My friend caught at the idea, said that a machine of that kind would work well, and would face any ordinary ground, without ploughing, so that he could complete the work as he went, and be always working against a breast of earth; besides, he could finish the sides much better, as he could trim off small places which required it, and it would be saving the going over the ground a second time. If he could have found such a scraper, he would have purchased one at once; but as my circular scraper was only an *ideal* one, I could not recommend him to a manufacturer. I have no doubt, however, he will eventually get one made.

This was a hard-working, well-doing man, who has rendered himself independent as a farmer, and has settled a large family prosperously. He was, I believe, originally an English labourer, who came to Canada to "better" himself, and he has succeeded.

VECTIS.

Harvesting Turnips.

To the Editor.

SIR,—Notwithstanding "C's" condemnation of those who still adhere to the old fashion of topping and tailing turnips, I am not yet brought over to his way of harrowing them. I will concede that his plan is more expeditious than the old-fashioned way; but it is, to say the best of it, but a dirty job. I have never yet seen the harrow so constructed, or so used, that it will lay the turnips in rows. Moreover, no harrow will pull *all* the turnips out.

The only point that can be urged against topping and tailing is the comparative slowness of lifting; but when they are once lifted, every other after process of storing is lightened and quickened.

The following reasons may with justice be urged against the process of harrowing up turnips:

1. The lightest is that the tops are thus rendered unavailable (if the cattle be fed in another place), and made very dirty for stock even when the latter are turned upon the field.

2. Until "C." can show us his plan of manipulating harrows so that they will be made to leave the roots in rows, or an invention such as he passingly alludes to be brought out, I do not think it possible either to place

the roots in rows, or to avoid leaving a great many turnips still fast in the ground.

3. The time taken in collecting these roots is nearly half as long again as when they lie in top and tailed heaps.

4. A great number are invariably left upon the ground, hidden by the bunches of leaves with which the harrows have covered them.

5. Not one man in a hundred will pass over a number of rows with a sharp hoe without leaving many leaves attached to the bulbs and cutting *into* many turnips. When brought to the cellar, about three inches of mould will invariably be found at the bottom of the cart, which, together with that upon the roots, must be dumped in. If carried in a waggon, and the roots thrown down a shoot, where the shovel is used for unloading (and surely "C." would not like the *same* process of unloading by hand), the same amount of dirt is thrown in, which, owing to the fact that it adheres to the uncut roots of the turnips, will also be carried down into the cellar.

6. The roots with their tails on do not roll freely down a shoot, and require a steep incline to roll at all; indeed, so bad is the process in this way that when taken in thus I have invariably had to employ an *extra* hand in the cellar to keep the shoot clear.

"C." says "there are, however, some dunderheads," * * and for these people pulling up turnips with one hand, chopping off the greens with a knife with the other, allowing the turnips to lie just where they fell or grew, scattered all over the field, again to be picked up by a basket and by help of a second man lifted into a waggon, which stands about twenty yards into the turnip patch," &c., &c.

This shows that the writer either knows nothing whatever about the proper process of topping or tailing, or has wilfully misrepresented the usual plan in order to make his own way appear more feasible.

Far from allowing the root to lie just where it grew, at the same moment the green is cut off the root is jerked into a pile, and these piles are made in a continuous line in the middle of each four rows, i.e., about eight feet apart, thus enabling a waggon to drive between two rows, from each of which the turnips are thrown about one yard into the box.

As to first putting the turnips into a basket, I must confess, awkwardly as I have seen some people manage their turnip harvest, I have never come across a "dunderhead" who would deliberately and without rhyme or reason make such a piece of work as that for himself.

It is quicker to make a road with dirt at hand than to draw gravel a mile, to set posts in the ground one foot than three, to horse-rake peas than pull them with the scythe; but I leave it to any good farmer which are the better of these plans.

Quickness is a point to be striven after in all operations upon the farm; but when rapidity interferes with thoroughness of execution, I think it is a mistake.

"What is worth doing is worth doing well," may be proved by many similar proverbs and platitudes, and by daily observations of the ways of successful mechanics, tradesmen or farmers.

Until "C." can show me a quicker plan that is not subject to the objections that I take against *harrowing up*, I shall be content to write myself, in his opinion, an "old-fashioned, dull-headed plodder," and

"DUNDERHEAD."

Stock Department.

Economizing Food for Stock.

The probabilities for next winter (now soon to set in), are dear hay, and straw scarce, although of excellent quality. It is many years since such beautiful white straw was harvested.

In some localities hay will be *very high*. The price in prospect is even now felt, as cows are offered at prices much below average. I allude to stock cows, not those fresh calved, although these are comparatively easy in price. As a general rule, when wheat is high, hay is likewise dear. Experience shows this fact, even when there is an abundant crop, instead of, as is the case this season, when the yield per acre is very light.

The great improvement in the manufacture of cutting boxes in Canada is now well established, and the improved construction and increased strength of the various parts, surpass probably at the price any in the world, not excepting even England, where these things are usually particularly well done.

The fact is, that for some years past competition in manufacturing agricultural machines of all kinds has so spurred the makers that whilst on the one hand the quality of the article is vastly improved, the price is at the same time much lowered.

Many cutting machines now exist that will cut the straw almost as fast as four horses can thrash the wheat.

Still, with all these advantages, much difference of opinion exists as to the benefits to be derived from cutting straw for fodder under any circumstances. Many deny there is any profit to it, whilst others always use a cutting box on their farm; but the fact is, that if cattle are fed with cut straw alone, taken from a straw stack, as they are usually built out of doors, without shelter of any kind, such fodder really amounts to comparative starvation, and certainly although cattle may exist on such food, they never can thrive. In this class of feed; when cut up, the cutter often gets the blame as being useless and all waste time; and men who give such opinion ought to know that the blame rests with the quality of the feed cut, and is not in any way due to the cutting *per se*. I have often seen well-doing farmers cutting up a lot of bad hay with straw, or, as the case may be, bad straw with hay, in order to thereby force the consumption of the inferior portion; and when cattle refuse it, the cutting alone is blamed; whereas the fact is the poor brutes cannot so well select the good portion from the bad, and consequently they refuse the whole.

If cattle are fed on chopped straw, of good quality, mixed with pulped turnips, they will winter on two-thirds the quantity, and will be in far better condition

when spring comes than if fed on whole turnips and uncut straw. When such cut feed is so prepared, the addition to the mixture of a very small portion of pea or barley chop each meal will make a wonderful difference in the condition of the stock.

In England, farmers who resided near where the writer came from, could never be induced to thrash their grain faster than their cattle consumed the straw, and in many of the small holdings the thrasher's business was to feed out the straw as he thrashed it, only gaining sufficiently on the supply to meet the Sunday demand. These farmers argued that to do otherwise was more loss in cattle feed than gain in other respects. In England, none but Gipsies, travelling tinkers, and such like itinerant tradesmen, would think even their donkeys placed beyond starvation point by giving them such poor mouldy straw as I have often seen Canadian farmers in good circumstances feeding to their cattle, and compelling them to eat or want.

Our Canadian cattle are certainly hardy. Were it otherwise, many more must die each winter than usually do; but to test their hardihood with blooded stock, put a thoroughbred short-horn cow into the same straw yard with a Canadian-bred cow, both being equal in condition when put together, and my experience goes to show the Canada-bred animal would have the best of it.

C.

Shorthorn Sales in Britain.

A number of extensive and important sales of Shorthorns have lately taken place in England, and the results show that the fancy for this breed, which has so long held the first rank among cattle, is as lively as ever. Indeed, the prices realized have surpassed any that have been hitherto given for this class of stock at public auction.

The first in order of time was also the most remarkable, namely, the sale of the Duke of Devonshire's Shorthorns at Holker, in Lancashire, which took place on the 6th of September. The sale was not so large as some others, there being but 43 head altogether; but the highest average in the annals of shorthorn sales was reached, namely, £240 13s. The chief attraction of the occasion was the Oxford tribe, all of which that were offered brought extraordinary prices. The highest figure among the females was 1,005 guineas for Grand Duchess of Oxford 18th, a heifer not quite a year old. A 7-year old cow, Grand Duchess 8th, fetched 915 guineas; and a 2-year old heifer, Grand Duchess 16th, brought 610 guineas. Amongst the bulls of the same tribe, Grand Duke of Oxford 20th was sold for 1,000 guineas; and two others for 335 and 305 guineas each.

Another tribe, the Winsomes, also realized good prices, though not equal to those paid for the Oxfords. The highest prices among the females of this family were 405, 370, 355, 350, 320, 300 guineas. The following is a summary of the total sale:—

31 Cows—average £248 2s.
12 Bulls— “ 221 11s.

43 head—averaged £240 13s.; total, £10,349 17s.

On the following day, Sept. 7th, the sale of Mr. Slye's Shorthorns came off near Lancaster. No remarkable prices were obtained, the highest sum 500 guineas being paid for a cow, Lady Tregunter Bates. Altogether 22 head averaged £71 10s., and realized a total of £2,002 2s. 7d.

The sale of Mr. Foster's Shorthorns at Killhow, took place on the 8th of September. 360, 325, 250, and 215 guineas, were the highest figures reached for cows. 56 head averaged £102 1s. 6d., and brought a total of £5,716 4s.

September 12th witnessed another somewhat remarkable sale of the same class, consisting of a draft from the herd of T. Beil, of Brocton House, Eccleshall. The grand feature of the occasion was the sale of the bull Eighth Duke of York, by 4th Duke of Thornedale (17750), for 1,065 guineas, the highest price yet given for a bull, and the highest for any Shorthorn at public auction. The summary of the sale is:

37 Cows—average £41 2s. 4d.
12 Bulls— “ £112 15s. 9d.

49 head averaged £58 13s. 5d.; total, £2,874 18s.

Mr. Thornton conducted the sale of a part of the Messrs. Dudding's herd at Wragby, on the 14th of September. No high prices were obtained—57 guineas for a cow being the highest.

The average price of 71 cows was £46 7s.
“ “ 11 bulls “ £59 15s.

The total amount for 82 head £3,948.

The sale of Mr. Sheldon's Shorthorns at Bradles has already been noticed. The highest figure reached was 415 guineas for a cow, Grand Duchess of Barrington.

The average of 26 cows was £112 9s.
“ “ 15 bulls “ £44 4s. 2d.

Total for 41 head, £3,527 8s.

Our latest English exchanges bring an account of another sale from Mr. Ladd's herd of Ellington, on the 28th of September. No animal brought a higher price than 81 guineas.

The average of 72 cows was £45 12s. 0d.
“ “ 23 bulls “ £37 13s. 3d.
The 95 head brought a total of £4,149 12s.

The Swine Exposition.

The great International Swine Exposition at Chicago closed on Friday evening, Sept. 22nd. As an exhibition, it was pronounced a success. The entries comprised about four thousand swine, of all ages, and of various breeds. Numbers of these animals were renowned prize takers, some of them having carried off prizes at the great agricultural shows of America, while others were the winners of prizes at the shows of the Royal Agricultural Society of England; and others, were premium swine of the best Provincial Shows of Canada. So far, then, as the extent and variety of swine were concerned, the Exposition was an immense success. But its friends and supporters cannot say as much of the financial results. The attendance and receipts were entirely disproportioned to the magnitude of the exhibition.

The grounds were in first-rate order, and the arrangements altogether gave great satisfaction.

The Berkshires alone numbered about 1,000 head, and the principal exhibitors outside of Illinois were J. R. Craig, Geo. Roach, Peter Wakem, and John Curry, all of Canada; S. H. Clay, of Kentucky; and Crowder Bros., Charles Snoad, Adam Rankin, David Crinklaw, J. G. Loose, J. H. Francis, H. S. Manon, Jesse Cloyd, A. M. Fauley, Thomas Ennis, James Kepple, J. Meyers, L. T. Clark, P. G. Bander, W. R. Duncan, M. H. Rayburn, Hildredth & Wamer, Byers & Campbell, and A. Hostetter, of Illinois.

Suffolk and Essex pigs were well and numerous represented. There were also a great number of the "Magie" breed, Chester White, and other large breeds. Every recognized variety had its representative; and there were besides a promiscuous lot of crosses.

At the late Swine Exhibition in Chicago, the second prize of \$500 for a collection of pigs, was awarded to our fellow-countryman, Mr. J. B. Craig, of Edmonton, who also gained other valuable prizes with his beautiful lot of imported Berkshires. Mr. G. Roach was another successful Canadian exhibitor on the same occasion.

Feed for Working Horses.

We may feed too much as well as too little. We may feed the wrong kind of food, or at the wrong time. This, we believe, has been sufficiently demonstrated. It is in general best to feed a horse less than he wants to eat; this is to keep up appetite, an important element in horse-keeping. Secure a good appetite, and digestion will follow this to a greater or less extent; and where digestion is good, there must good result to the animal. If then the food is not over-abundant, and appetite and digestion are good, there certainly can no harm result from over-feeding, or any of its evils; these are all avoided, and in the horse, as in the human, they are legion, open and obscure. But give a fair quantity of good food, and at regular times, and there will be good eating, good digestion, and the system will get the benefit and no hurt. The machine is not over-crowded, but does its proper work readily. There is more sprightliness, animation in the horse, he is not clogged or loaded down; his system throughout is healthy, does its work well, readily and with benefit. The food is all, or nearly all, used to support the system; it is not in the body as a foreign or unnecessary substance, but it adds, helps, gives strength. We are always pleased when we see this kind of feeding, as we do. A horse is safe we know; he will do more work, do it better, more willingly, is therefore more service. Of course you are not to starve him.

These principles have been well exemplified in a horse owned by a friend, who has adopted the mode we prescribed. He feeds during the summer one bushel of cut hay mixed with twelve quarts of ground oats and corn, equal parts, per day. This is moistened

when fed, and fed regularly at stated times three times a day. A doctor's horse—it is worked hard, and it seems a wonder that it should thrive under such treatment. But that is all the feed it has, and when it slacks in work still less is given—generally two to four quarts less. When fed it consumes its food in a short time, and then has the long interval till another meal to do nothing, and nothing to disturb the work of the stomach; but it has much to do, as the business for the horse is almost a constant one—on foot a good deal and lying down much when in the stable, no food to tempt it to be busy when it should rest.

With all this work and this little allowance of food, the horse is in excellent condition, full in flesh and lively at his work. In winter he has hay given him, uncut, unmoistened, with about the same quantity of meal. This is done in consequence of the cold, which freezes the moistened mess. It is held by the owner, who has a sharp lookout for the good qualities of a horse as well as his keeping—that this small allowance is of greater benefit to his horse than a larger amount would be. He says he has tested this thoroughly time and again. Horses are fed too much, he thinks, as well as not enough. There is a mean in this as in other things.—*Country Gentleman.*

KELSO RAM SALE.—The annual sale of rams, chiefly Border Leicesters, came off at Kelso on the 8th of September. There was a large attendance of buyers, a magnificent show of sheep, and good average prices were realized. As usual, the Mertoun and Mellendean flocks—the former owned by Lord Polwarth, and the latter by Miss Stark—were far ahead of all others. The highest price obtained this year was £115 for a splendid Mertoun ram, destined for Australia. This is the highest price that has yet been reached. Previous to this year's sale, £109, the price of one of the Mellendean flock in 1869, had been the highest sum paid. The average of Lord Polwarth's lots this year was £30 10s.; that of Miss Stark's, £28 15s. 8d. The two leading flocks evidently maintained a very close and even competition. The total number of entries was 1,802. An account and illustration of the Mellendean rams will be found in the October number of the CANADA FARMER for 1870, which gives a good idea of the fine form, full fleece, and noble bearing of these splendid types of the Leicester sheep.

STARTING A BALKY HORSE, AND A LOAD TOO.—It is not well for novices, or in fact for anybody, to attempt to doctor stubborn cases without the advice of some competent person, or at least until all the circumstances have been duly considered. For instance, some people think they know how to manage refractory horses. Perhaps they do; but the quadruped sometimes gets the best of it, as will be seen from the following, which we clip from an exchange:—A farmer in the neighbourhood of Boston undertook to start a balky horse, the other day, by pulling a small quantity of hay from the load to which the animal was attached, placing it under him, and setting fire to it. The remedy took hold well, and the horse started forward just enough to clear the flames, which soon communicated with the hay, and the entire load, with the waggon, was destroyed, the farmer having as much as he could do to clear the horse from the waggon in season to save his life. The farmer still retains the horse and the satisfaction of having moved him, though he is doubtful as to the expediency of repeating the experiment very often.

Veterinary Department.

Diseases of the Digestive Organs of Cattle.

We have lately had a number of cases of disease of the rumen, resulting from sudden changes and irregularity in giving food, whereby the functions of the organs generally are impaired, and a great accumulation of food is formed within the rumen. It is very often produced by allowing cows to eat freely of potato peelings, apples, and other refuse of the kitchen. This we find to be a common cause amongst cows in the city. The injudicious use of turnip tops, carrots, and more especially if slightly touched by frost, is another prominent cause. When such food is taken into the paunch in large quantities, the whole digestive organs become affected, the solid matters are retained, producing more or less stretching and paralysis of the muscular coat.

This complaint differs very much in the development of its symptoms from tympanites or hoven, or that condition of the rumen when it is distended with gas; there is considerable distension, but it is from an excess of solid matter. The animal shows great dullness and distress, as can be easily seen by the peculiar moan and generally dejected appearance; the left flank looks unnaturally prominent, and when pressed or tapped with the hand, the nature of the disease can be readily detected; the pressure of the fingers on the rumen will leave a hollow mark, and on percussion a dull dead sound is emitted; the contents feel like a mass of clay. Accompanying these symptoms is a quickened pulse, dry muzzle, and great irregularity in the temperature of the legs and ears; the breathing is hurried and laboured, and the poor sufferer shows a very great disinclination to be moved. If not relieved, fermentation of the contents of the rumen is apt to ensue, which produces more distressing and still more dangerous symptoms. The circulation of the blood can scarcely be detected, the breathing still more laboured, and death very soon ensues.

Distension of the rumen from food requires immediate and careful treatment, which must be such as to produce a reaction in the stomach. It is generally necessary to give a full dose of purgative medicine, as one pound of Epsom salts, which should be dissolved in a considerable quantity of water. As a stimulant, the preparations of ammonia are useful in restoring the action of the stomach and hastening the action of the purgative. Injections of soap and water should be given. Another convenient and useful stimulant is warm ale, a quart of which may be given three times a day; and in the course of twelve hours, if the animal be not relieved, it may be necessary to repeat the dose of purgative medicine. In some cases medicines appear to have no effect whatever, and the only chance of giving relief is by cutting into the

paunch and removing the contents with the hand. Such an operation, however, should only be attempted by a person conversant with the situation and structure of the parts. During recovery, the food should consist of bran mash or any other food that is easily digested. It is usually a week or ten days before the stomach is restored to its proper tone and strength.

Horse-Shoeing.

NO. I.

"Can you shoe a horse?" was the question asked me, some ten or eleven years ago, by a postman, somewhat enraged at the blacksmith because his horse had lost a shoe; my employer, in reply, excusing himself by saying that he thought I was the youngest apprentice. I was at this time working for a man who made no difference between fore and hind feet shoes in the making, and in fitting or setting them the difference was only made so far as the shape of the foot seemed to demand it; he never filed his shoes, and rasped as little on the feet as he possibly could; his work was a little rough, but under this kind of management he kept the feet in fully as good order as the majority of horse-shoers do.

Subsequent to this, I removed to a town eighteen miles distant, where work was done on the same principle, with the addition of a little more polishing. Still later, and with a desire to know the mode of horse-shoeing adopted in the capital, where everything is so particular, I went to Edinburgh, where, with the Veterinary College at its head, the art cannot fail to be plied according to the best known principles. Here there was most certainly a great change; and Edinburgh is probably as good a place as can be selected for thoroughly testing the various methods. The streets being all constructed with stone set on edge, and the city of a decidedly hilly nature, are well calculated to try the mechanism of the shoe and all its belongings. In Edinburgh, shoes on private gentlemen's horses last about a month. On cab horses, from two to three weeks; but I have seen shoes half an inch in thickness, with a toe welded on half an inch more, worn through in six days. The first horse-shoeing shop that I wrought in here the work was done in what people call regular good style. The shoes were filed, and the feet pared until the blood began to show itself like the points of needles. To pare to this extent feet that had been pared in the same way before, especially in dry weather, was a very hard job, and in not a few cases impossible; but it must be done. And in order to accomplish the work a piece of iron is heated to a white heat; then the hot bar is applied to the sole of the foot until the horn becomes roasted or melted, when the knife can be plied with perfect ease until the required test makes its appearance. This done, and the wall of the foot lowered, ready for setting the shoe, it

gets one or two more scratches, which makes it ready for nailing the shoe on. This having been done, the process of clinching commences. The feet are now thoroughly rasped all over and polished. Then, as a finishing touch, the hoofs are greased, and the horse pronounced ready for the road. But truly he is in a tender condition for hard work, as I will endeavour to show. After such a method of shoeing as that described, the groom or stableman was charged to be sure and stop the horse's feet seven nights in the week with soft clay or manure, so that they may be easier pared the next time the horse is shod. This command was seldom if ever complied with, and its neglect was often the cause of some hard words on both sides when the horse returned to be re-shod, and his feet were again subjected to the same destructive process. I say destructive, and no owner of horses will deny that more of them are rendered incapable for work, and thereby useless, by mismanagement of the feet than by all other disorders with which the animal is afflicted.

There are very few things on which men hold more determined opinions than on horse-shoeing. Hence the difficulty in convincing one contrary to his preconceived notions; but every one who will lay aside prejudice, and look the matter fairly in the face, cannot fail to see the evil effects of such a system as I have just described. Paring the sole robs the horse of that which nature has given him to keep his feet in proper shape, and also of that which is necessary for protection against small stones and other hard substances on which he may tread. Paring out the sole merely does not satisfy; the heels must be opened up; and as the result, though no doubt helped by bad stable management, we often find two large cracks penetrating deep into the flesh, causing intense pain and lameness; and to make the matter still worse, the frog is also cut away. It is strange how anxious men are to get a good cut at this part of the foot; it seems a relief after cutting at the hard horn, and they dive into it with apparent delight.

I have often been amused to see how careful some are to keep the frog off the ground. They seem to think it is too tender; but, strangely enough, these same people will allow the horse-shoer to cut it nearly off, without dreading any harm. Inventors in modern days have done much to promote man's ease and comfort. Amongst other things, the accommodation for travelling has changed what used to be a wearisome duty to a pleasant luxury. But while we are drawn, with ease and comfort to ourselves, in a carriage with elastic springs, do we ever think that we have robbed the horse of that elastic spring which an all-wise Creator saw necessary to give him? The frog is an elastic cushion, and the more we study its structure and design, the more does it become apparent that our present system of shoeing is a grievous error. It is done with the good intention of preserving the foot; but it is a misdirected aim—a mistaken kindness.

ROBERT SABISTON,
Caledonia.

The Diseases of Stock.

CATTLE-PLAGUE.—Intelligence from France respecting the progress of the plague is not, in any important particulars, more satisfactory than during the previous month. According to the official returns, the disease has raged in forty departments of the east, north, west, and centre of France. In Russia, cattle-plague has destroyed many animals in the villages surrounding Taganrog, and the districts in the neighbourhood of Stavropol and on the Criban have suffered severely. Poland remained free from the disease for some time, but we learn from Warsaw that an outbreak occurred in the early part of September in a great many localities in the Governments of Petrikau and Lublin.

PLEURO-PNEUMONIA.—Compared with last year, the return of cases of pleuro-pneumonia show an increase in the number of attacks, but not to any serious extent. As far as we know, the total number of animals at present affected does not exceed three hundred; this time last year the number of diseased animals was reported to be a little over two hundred. The total number of counties returned as infected is forty-four, giving an average of some half a dozen cases to each county.

FOOT-AND-MOUTH DISEASE.—This affection continues to advance with extraordinary rapidity. In the return of cases for the week ending September 9th, the number of attacks reached nearly thirty-nine thousand, while in the corresponding week of last year they were less than seventeen thousand. The number of infected counties has increased from fifty-nine, as stated in our last report, to seventy-six, and the centres of infection number between nine and ten thousand. Under these circumstances, and with the present system of carrying out the provisions of the Contagious Diseases (Animals) Act, it will be remarkable if the disease ceases while any susceptible subjects remain to be attacked.

PARASITIC LUNG DISEASE OF LAMBS.—For a few weeks past a great fatality has prevailed among the lambs in many parts of the country, more especially in the counties of Worcester, Gloucester, and Shropshire. In some instances the deaths have reached full 50 per cent., and in very few has it been less than 20 to 30. Throughout its progress the disease has been accompanied with great wasting, the animals ultimately becoming so emaciated as to be little better than living skeletons; a "hacking cough" has also been a prominent symptom from the beginning of the disease, while dysenteric purging has immediately preceded death. These symptoms, and others unnecessary to particularize in a short notice of this kind, have had their origin in the existence of worm (*Strongylus bronchialis*), within the windpipe, bronchial tubes, and air-passes of the lungs.—*Veterinarian.*

Suppurating Glands.

James Hutcheon, of North Keppell, writes: to ask advice respecting several of his cows who have been suffering from suppurating swellings "on the throat, near the head." As the complaint has affected several of his herd, he fears it may be contagious.

We do not think the disease is infectious; possibly, however, it may be constitutional. We would recommend you to feed the animals well, and give daily for fifteen days about one drachm of the sulphate of copper, which can either be dissolved in water or mixed with the food. Dress the sores with carbolic lotion, about the strength of one part of carbolic acid to ten parts of water, and apply to the indurated swellings twice a week a small quantity of the biniodide of mercury ointment, of the strength of one part of biniodide to four parts of lard.

Splenic Apoplexy.

To the Editor.

SIR,—I have lost three yearling steers, and should feel obliged if you would inform me what is the nature of the disease, and what remedies I can use to prevent or cure it. When first attacked the animals appear shy and run from your approach; but they soon get stupid, and show slight lameness in the four legs. After this they stand apparently still and helpless until they fall dead without a struggle. Death takes place in about forty-eight hours. The heart, on examination, is in some cases filled with clotted blood. [G. N. P.]

Bayham.

There are certain diseases in cattle that run their course with extreme rapidity to a fatal termination, and there is one which has been of frequent occurrence of late years. It is known as an engorged condition of the spleen, and is usually called splenic apoplexy.

The symptoms above stated are similar to those presented in cases of engorgement of the spleen. It is a blood disease, and may result from any cause that may alter any of the constituents which go to form the blood. Hence we find the disease occurring amongst animals that are fed on very luxuriant pastures, or arising from eating herbs or grasses that are likely to interfere with the process of digestion, and act as a blood poison. It also appears to be prevalent in certain seasons and localities, and more especially where the supply of water is insufficient or impregnated with substances injurious to the system.

A disease that is so rapid in its course and extremely fatal as splenic apoplexy, is seldom treated with success. In the way of prevention, however, something may be done. Every care should be taken that the food is of a proper quality, and that the supply of water is regular and pure.

In your case we would advise a change of pasture, and administer daily, for five or six days, to each animal, three drachms of the chlorate of potash dissolved in a quart of water.

"Oilt of Condition."

To the Editor.

SIR,—A few weeks ago, through an unfortunate "trade" made by my son, I came into possession of a horse apparently not more than 7 or 8 years old, but so thin that there appears to be nothing of him but skin and bone. He eats well, looks healthy out of the eyes, and appears well every way except that his hind sticks as close to his bones as the "bark to a tree," and all he eats seems to do him no good. Would you suppose that being lute-bound alone would keep him in such a state of poverty and weakness, and what (in your opinion) should I do to get him in condition?

J. M.

Bridgewater.

ANSWER.—Your horse appears to be suffering from some disorder of the digestive organs, and we would recommend careful feeding on food that is easily digested, as boiled oats or barley, to be given morning and night, and in the middle of the day allow four quarts of the very best oats. At night give two drachms of the sulphate of iron, finely powdered, and mix it with his food. Groom the horse thoroughly morning and night, and give moderate exercise once a day.

Veterinary Queries.

Is it injurious to a working mare in foal to feed grain in winter? **ANS.—No**

Is there any efficacy in feeding one pint of wheat daily as a preventive to a mare slipping her foal? **ANS.—No.**

Spoiling Horses' Feet.

It is almost impossible to get horses shod without having the frogs cut away. All veterinary surgeons, all horsemen, all leading blacksmiths, agree that the frog should not be pared one particle—not even trimmed. No matter how pliable and soft the frog is, cut it away smooth on all sides, and in two days it will be dry and hard as a chip. You might as well cut off all the leaves of trees, and expect them to flourish, as to pare away the frog and have a healthy foot. The rough, spongy part of the frog is to the foot what leaves are to the tree—the lungs.

Never have a red-hot shoe put upon the foot to burn it level. If you can find a blacksmith that is mechanic enough to level the foot without red-hot iron, employ him. The burning process deadens the hoof and tends to contract it. If you do not think so, try the red-hot poker on your finger nail, and see if it will not affect the growth of that.

There are many important points in shoeing horses, but these two are of more importance than all the rest, level to the apprehension of men not skilled in horses, and the two most disregarded.—*Mirror and Farmer.*

The Dairy.

Feeding Milch Cows.

Winter Feeding.—At four o'clock in the morning each cow gets half a bushel of brewers' or distillers' grains, after which they are milked. At seven o'clock each cow is allowed to eat as many whole turnips as it desires, after which it gets a drink of water, and then the stall is cleaned, after which the animal is allowed to rest. At ten o'clock each cow is allowed to eat as much as it likes of a "steamed chop" of hay and straw. At two o'clock a feed of mangolds is given, after which a drink of water, and, after being cleaned out, a second feed of steamed chop. The cow is then milked at half-past three, after which it gets more steamed chop if it can eat it. If the cow is losing flesh, on milking very heavily, it gets an addition of three and a-half pounds of linseed cake per day. In summer the feeding is on the same plan, but, for the roots and steamed chaff, Italian rye grass is substituted. For each cow in winter feeding the following substances are made up into a mash, steamed or otherwise cooked: Fifty-five pounds of turnips, a pound and a fifth of oil-cake, three pounds and a fifth of rape-cake, one and a-half ounces of salt, a pound of mixed meals, as beans, oatmeal, &c., together with a like quantity of the refuse of wheat or grain dust. This mashed food is supplemented by a food given dry, or in the natural condition, made up as follows: Thirteen pounds of straw, and five pounds of hay cut into chaff, twelve pounds of mangolds and half a pound of linseed-meal, the food to be divided into three portions, the mash given first and the dry food afterwards. At five in the morning as much hay is shaken down before each cow as will keep it busy till about seven o'clock, after which it gets a drink of water, which is succeeded by a feed of oat or barley straw chaff mixed with four or five pounds of meal, and a little salt, the whole moistened with water. A little hay or straw is given between the first and second feeds, which latter is at one o'clock, and is the same as the first feed. Plain straw is given to each cow for the evening and night feeding. The feeding materials are brewers' or distillers' grains, mangold, rape-cake, or oil-cake, four pounds per day; bean-meal, six pounds ditto. Another method.—Ninety pounds of pulped turnips mixed with seven pounds of cut straw per day per head. The materials for three days' feeding are well mixed and allowed to lie in a bin before being used. In addition to this mixture four pounds of oil-cake per head per day are given. The ninety-seven pounds of grated turnips and cut straw are divided into four equal portions. One portion is given to the animals at six o'clock in the morning, a second at nine o'clock, a third at one, and the fourth and last at four o'clock, about three pounds of hay being given in the evening, and the linseed-cake at mid-day. Another method.—At seven o'clock

in the morning each cow gets seven pounds of cut hay, at nine o'clock half a pound of bean-meal in a pailful of water, at ten o'clock two pounds of oil-cake, at one o'clock seven pounds of cut hay, at two o'clock two pounds of oil-cake after being watered, at three o'clock a quarter of a cwt. of roots, and at eight o'clock seven pounds of cut hay. The following method has been adopted with great success for obtaining large supplies of milk for a town business. At eight o'clock 30 lbs. of cooked roots are given, mixed with 2 lbs. of linseed and two pounds of bean or pea meal, and a quantity of light grain or chaff; this is followed with a supply of oat-straw. At ten o'clock, sixty pounds of yellow turnips are given, with straw; at two o'clock, a sixth of a bushel of grains, and at five o'clock, sixty pounds of yellow turnips are given with oat-straw. The first method we now give is as follows: Sixty pounds of cooked turnips, four pounds of rape-cake, and hay *ad libitum*. The cooked turnips are mixed with some chaff, the rape-cake and the chaff being previously steamed together. The above methods are all adapted for house or winter feeding. In a succeeding lot of "facts," we shall glance at different methods of carrying out summer feeding, concluding this lot with a statement showing the relative value of different feeding materials for dairy purposes, as compared with one hundred pounds of good meadow hay. Oats 50 lbs.; peas or beans, 25 lbs.; oil-cake, 50 lbs.; wheat-straw, 400 lbs.; oat-straw, 300 lbs.; barley straw, 400 lbs.; rye straw, 300 lbs.; pea-straw, 250 lbs.; vetches, 250 lbs.; hay, 80 lbs.; potatoes, 200 lbs.; beet-root, 460 lbs.; cabbage, 350 lbs.; carrots, 250 lbs.—*Mark Lane Express.*

Setting Milk for Cream.

I should have something to say about the newly-recommended method of setting milk for cream in very deep vessels. The result is so manifest that it does not seem worth while to wait longer before stating it. Taking it all in all, I regard it as the most important improvement in butter-making that has come up in my time. I have just completed the plans and specifications for building an elaborate milk-house for a client in Massachusetts with water-tipping for shelves, having a flow of warm water through them in winter, and cold water in summer; and I have advised that the plan be abandoned, and that a much cheaper one be adopted, suitable for the new of Swedish system. I was brought up on the shallow plan system, and rarely set my milk more than an inch deep. Having confidence in the source from which I obtained the information, I had half a dozen cans made of three sheets of 12-inch by 17-inch tin, measuring, when finished, about 17 inches deep and 11½ inches in diameter. I then moved into my summer milk-room (underground) an unused horse-trough, about 18 inches deep, and large enough to hold five of the cans. Three cans hold most of the milk of each milking, but we are obliged to set some of the milk in shallow pans yet, and this affords an opportunity for comparison. In the morning we set three of the cans, filled to within an inch of the top, in the trough. At evening only two cans can be put in, the third being put on the floor out-

side of the trough. My self-regulating wind-mill, which works in the lightest winds and is rarely still, keeps an almost constant flow of water, from a deep well nearly a quarter of a mile away, pouring into the trough, and flowing out at the other end. This keeps the temperature at about 58 or 59 deg. I have not ice enough to keep it colder. Neither do I skim until the milk has stood nearly 24 hours (just before the second milking), and I have not even tried to see whether it would do as well to skim at the end of twelve hours. At five o'clock on the second morning, the three cans of the previous morning are skimmed. The two of the evening before are moved up to the head of the trough; and the third, which has stood outside, is put in the water. Then two of the morning cans are put in, and the third is set outside. Thus at each milking two cans are put at once in the water, and one is left outside for twelve hours, and is then taken inside. The following are the results:

1. In ordinary weather the milk that is set in the old-fashioned pans yields all its cream, but turns a little sour within the twenty-four hours.

2. The two cans that are put at once in the water remain entirely sweet, and they yield, as nearly as I can judge without accurate measurement, at least as much cream as we would get from the same amount of milk in shallow pans—possibly a little more.

3. The milk in the can that passes its first 12 hours out of the water—probably because it cools off much more slowly—gets more sour than the milk in the shallow pans, turning quite thick. I think it thickens before it gives up all its cream, as we seem to get rather less cream from this than from the other two.

4. We make quite as much money from a given quantity of milk as we did when using shallow pans.

5. The skimming is done with a dipper, and is done much more expeditiously than under the old system, occupying the same time for one can that it did for one pan.

6. We use 6 cans in place of from 90 to 110 pans.

7. The cream is of a uniform consistency, and much more liquid than when so much of its surface is exposed to the air. The cream on a pan of Jersey milk that has stood 24 hours is so tough as to seem almost leathery, and can be taken off in a mass—almost rolled off. The cream on one of my cans—two inches thick—is liquid, and can not be taken up with a punctured strainer. I am thus far disposed to attribute to this the fact that the "marbling" of the colour of the butter, which we scarcely ever avoided before, has entirely disappeared under the new method; the "O.F." butter being now a pure, solid gold colour throughout. It is not unlikely that the exposure of so much of the cream to the air affected the colour of parts of the butter.

Then, again, the cream now mixes thoroughly, and at once, in the cream-pail, while that which was taken from the old pans was always more or less clotted. One of the old-fashioned preventives of "marbling" was to stir the cream thoroughly together whenever a new skimming was added. Hitherto, however thoroughly this was done, the cream was always quite lumpy when it was turned into the churn; it now pours like a smooth syrup.

8. This can not be called a *result*; it is, as yet, only a suggestion, and one that it will be difficult to prove. My butter, from the same cows and the same food, has never been so good as it is now. May not the present improved quality be due in part to the fact that so little of the cream is exposed to the air? Does not such exposure allow an oxidation or evaporation, or other action that destroys or wastes the aroma?

A month is not long to study the operation of any improvement, but I have studied this one closely, and I am satisfied that my conclusion, as described under the foregoing heads, is a sound one, and I shall do away with all of my old utensils, have a permanent trough made large enough to hold the necessary cans for all my milk, and follow the example of Mr. Swartz, until I find some better way. I advise all who are so situated that they can keep up a supply of cold water, either with ice or by the aid of naturally or artificially running spring water, and who care for the least work and best results, to do likewise.—From the Ogdon papers in *American Agriculturist*.

Airing and Cooling Milk.

The general impression seems to be that the airing of milk is of quite as much consequence if not more than cooling. This subject recently came up before the Western New York Dairymen's Association. Hon. Lewis F. Allen thought that the cheesemakers might cool their milk by using ice cans and allowing the animal odour to evaporate with the heat.

Mr. Stewart said that he had tried the cooling process, and had cooled his milk in an ice cream freezer, and, although the animal heat departed, the odour remained and gave a bad smell to the fluid. When the milk was exposed to the air and cooled gradually, the odour departed, leaving the milk sweet and pure. He related an instance where ten gallons of fresh milk were put into a tin can and shut up tight, and driven directly to the factory. Upon arriving there it was found so bad that it was unfit for use. The cause of taint could not be attributed to the can, for it was perfectly clean.

Mr. Horton advocated the principle of cooling the milk as it was taken from the cows. Every farmer should stir and cool his milk before taking it to the factory. As a factory proprietor, he preferred that farmers should keep their milk over night and bring it cool to the factory in the morning.

The foregoing correctly indicates the judgment of the most intelligent dairymen on the subject of airing and cooling milk. We have long entertained the same opinion. We think that airing is of quite as much im-

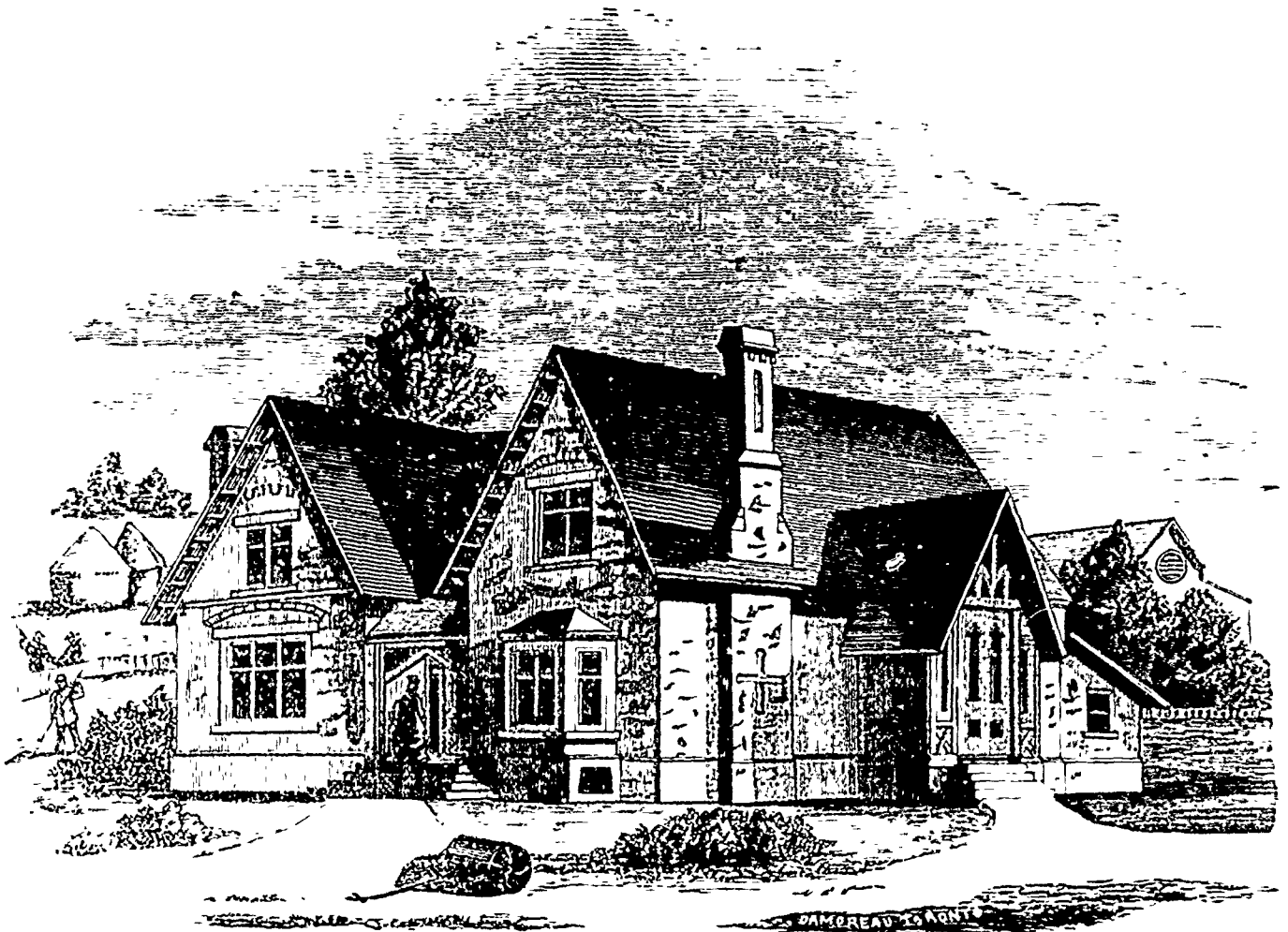
portance as cooling, and that milk should be thoroughly aired as soon as possible after milking, whether cooled or not, and whether carried to the factory once or twice a day. But we long looked in vain for some satisfactory method of airing. At a meeting of the Central New York Dairymen's Club, some time last spring, we suggested the idea of pumping air through the milk in the can or other vessel. For this purpose, a simple air-pump has been invented, which thus far appears to do the work effectually. Milk through which the air has been forced for five or ten minutes, if not in quantity, in one mass of more than the yield of fifteen or twenty cows, has been found to keep sweet longer than milk cooled with the use of water and ice. But in larger masses, cooling seems to be necessary as well as airing; and, in all cases, we believe the gradual reduction of the temperature to 70° is beneficial. For the purpose of aiding in this process, an ice-pan with openings in the bottom, so made as to keep the water from leaking through, is attached to the top of the cylinder, to be filled with finely-broken ice, so that the air must all be drawn through this ice. In this way, the air is cooled before being passed through the milk. It does not cool the milk so rapidly as it can be done with water, but we think it leaves the milk in a better condition for dairying purposes. Certainly, if airing milk is the thing, this simple invention, or something operating on the same principle, must be used, or the work will never be done. It is inexpensive, not liable to get out of repair, requires no water and only a small amount of ice, needs very little cleaning, which is easily done, and uses an element—the surrounding atmosphere—present everywhere.—*Utica Herald*.

Cow Stables.

I will give your readers my experience in making stable floors for milch cows. In stabling milch cows in winter, their bags are often badly besmeared, and consequently it is a dirty job to milk, hence I have often thought that I would rather do without milk in winter. But early last winter I went to work and overhauled my stable floor, and relaid it as follows: Raising it two inches from the manger, far enough back for the cows to stand on, leaving a fall of two inches immediately behind the cows to the outside of the stable. In so doing, the droppings mostly fall on the floor that has the fall of two inches, and when the cows lie down they lie on the raised floor, and their bags are usually clean. The length of plank on the raised part should be varied from four to five feet, according to size of cows.

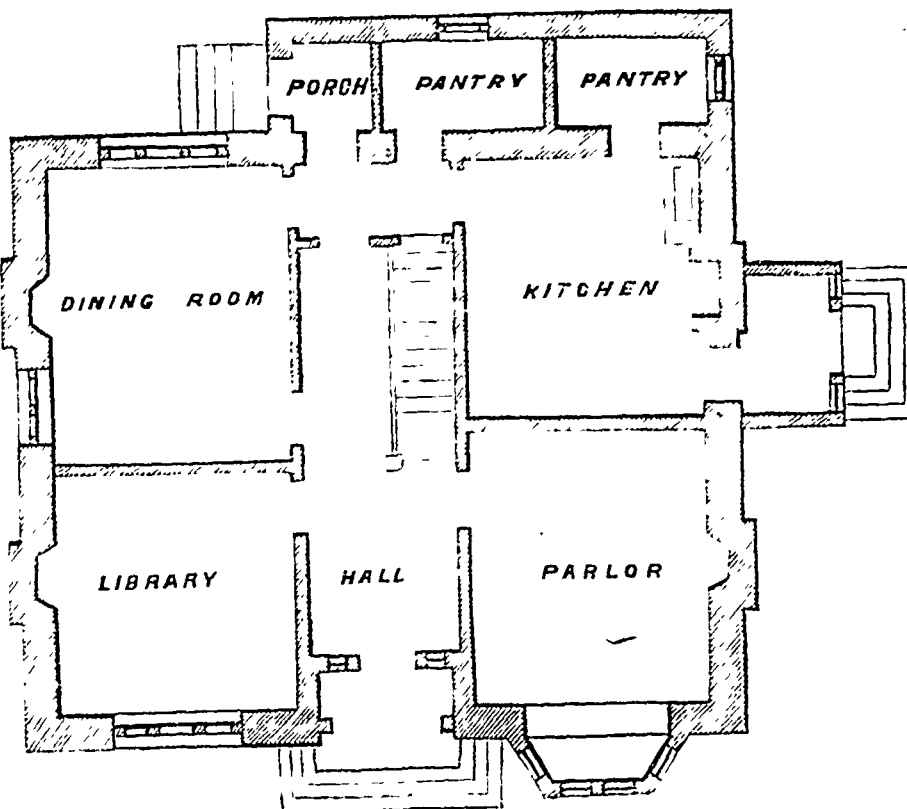
I wish also to say a few words in regard to manure windows. Many farmers have a small window about four feet high, which makes it very hard to throw out manure, and it falls down against the barn, and if by chance (as it often does) it lies there till fall, it does the barn no good. I think a better way for manure windows is to have a small slide door on the sill, and then one can easily throw out manure so far with a long handled shovel, which is much easier than a short handle, that it will not injure the barn by lying.—*Ohio Farmer*.

Rural Architecture.



PERSPECTIVE ELEVATION.

GROUND PLAN.



Design for a Country House.

The accompanying designs are an example of a cottage in the domestic gothic style of architecture, a style which is very prevalent in Great Britain at the present time, being economical in construction, effective in appearance, and well adapted to the wants of this climate. Although nearly square in plan, an artistic effect is gained in the elevation by running up steep gables in the front, and a porch on the right hand side for covered entrance to the kitchen.

The chimneys are carried up with set-offs and chamfered and projecting stone copings,

thus making them an ornamental feature in the building.

The house is intended to be built with rubble stone random coursed, having the joints neatly pointed. The window sills and strings will require to be of cut stone. The walls should be at least eighteen or twenty inches thick, as it is not safe to build rubble stone walls thinner. There should also be a good proportion of flat stones for binders. Bond timbers and wood bricks should be built in with the store-work for fastening the joiners' work, &c. Bond timbers in stone also assist to bind the walls.

The carpenters' work can be finished to suit

the fancy and purse of the proprietor; so nothing need be said about it; only care should be taken to construct the roofs so as to prevent them spreading the walls, and also having them perfectly water-tight. The shingles should be of the best quality obtainable, and laid in good mortar, and painted, if the means of the proprietor allow it.

The ground floor is divided into four rooms and a hall, the hall running through from front to rear, having a porch in the rear and a vestibule in the front. Each pantry will be a lean-to, one opening out of the kitchen for kitchen pantry, the other opening out of the hall for the dining room. The entrance to the cellar will be under the stairs.

The first floor may be divided into four roomy bed rooms, each furnished with a wardrobe, or otherwise arranged according to the fancy or requirements of the proprietor.

The front door is recessed so as to form a small verandah, giving protection in wet weather, and a shade in the summer.

The probable cost of this house would be in the neighbourhood of three thousand dollars.

Poultry Yard.

Raising Ducks.

The highest authorities in ornithology are agreed that all the varieties of the domestic duck, however different they may now appear, have a common origin in the wild Mallard. Many amateurs who share the writer's fondness for this class of domestic fowls, hold the contrary opinion, and trace the different varieties to sources equally various, but as already said, the researches of the most scientific observers, entitled thereby to rank as authorities upon the theme, all refer the many varieties now known to the common wild Mallard.

With myself, no variety or class of domestic fowls stand higher than the ducks; that they require so little room by comparison, that they are so easily kept and so free from tendency to disease, are very desirable points to be obtained by the amateur breeder. A good stream of water or a pond may be considered by many indispensable to the successful raising of these fowls, but although with proper care either is of advantage, still, with the inexperienced, such a supply of water has many times caused the loss of all the ducklings, whose hatching was awaited with eager anticipation.

In breeding ducks, it is a frequent practice with myself to send eggs to be hatched under hens at distant farmyards, and in nearly every case the result has been most satisfactory, even when no water was within reach of the ducklings beyond that contained in a common pan. Many premium birds have been reared in this way. I can say with con-

fidence, therefore, that my own experience demonstrates the fact that they can be raised successfully in a farm yard with simply water enough for them to drink. Still, for the thorough gratification of their natural instinct, an abundant supply of water, a stream or pond is needful and beneficial.

One mistake made by some admirers of these fowls is to allow young ducks too free access to such supplies of water as afford gratification to the older ones. This should never be done. The young should never be suffered to go near a pond or creek, nor in wet grass, until from ten to fourteen days old. Previous to that age they should be kept in a warm, dry place, and be allowed no more water than might be sufficient for them to dip their bills in. At the age of a fortnight let them have access to the larger supply, and their frolics will not only prove amusing to the observer, but harmless to themselves.

The character of the food furnished to the young has an important bearing upon the success of duck rearing. Soft food is so necessary to success therein as to be deemed indispensable. For the first few days after hatching, hard boiled eggs and cooked meat, chopped fine should be given occasionally, but the chief supply used in my own yard is Indian meal and "ships" in equal quantities by measure, well mixed and thoroughly scalded. Use this until the ducklings are two-thirds grown; for the main article of food afterwards, alternate occasionally with grain. The same is also good for old ducks.

Ground worms (angle worms) and small fish are manifestly tid-bits with young ducks, and as they are not only very fond of such food but thrive well on it, it should not be denied them. Any pains we may take to obtain it for them will be amply repaid by the eagerness and satisfaction displayed by the fowls upon receiving it. In most seasons they will ordinarily find worms for themselves, but when none can be found, their place should be supplied with fresh meat.

As to which is most profitable for flesh and eggs, all my experience has not yet resulted in a decision between the Rouen, Aylesbury and Cayuga. The Muscovys are equal to any as egg producers, require less water, and by many are considered the finest flavoured for table use; while others, for the same reason, prefer the Black Cayuga. In points of general interest, taste, on the part of some, will favour the pure white plumage of the Aylesbury, with its pale flesh-coloured bill; some choose the greenish-black of the Cayuga, while others still cling to the colour of the Mallard to be found in the decided markings and changeable colours of the Rouen. Which of the above named varieties is most hardy is also a question I cannot answer, as each has been proved to be perfectly hardy, so much so as to live in our cold climate from fall till spring, on the banks of a creek, through sun and storm, with no shelter save the canopy above.

In regard to the diseases of ducks, I can state that they are mainly occasioned by improper food. Hard food (as uncooked grain) given to young ducks, will occasion sore eyes and sore beaks, and if continued, death soon follows.

Horticulture.

EDITOR D. W. BEADLE,
CORRESPONDING MEMBER OF THE ROYAL HORTICULTURAL SOCIETY, ENGLAND.

The Best Rose at the Show.

This new form of competition is exciting no little interest among both judges and exhibitors, and calls for no little exercise of knowledge of roses on the part of those whose duty it is to award the prizes. As we understand it, no special entries are required or made for competition in this class, but the judges are to select from the two dozens, dozens, sixes, or whatever else may be on exhibition, the best rose in the room. We hope the days are not far distant when Ontario will have her Provincial Rose Show, and the lovers of roses will have such rose feasts here as they have so long enjoyed in England, and we shall get to know more clearly than we now do what are our best roses.

It is not to be expected that the same rose will come out best in every season. Such is the variable character of our seasons, sometimes excessively hot, sometimes very cool, at one time parched with drought, at another deluged with rains, that it is quite impossible that the same rose will be able to develop itself in perfection under all these trying and varying conditions of the seasons. Yet we can grow most beautiful roses in Canada, and we are fully persuaded that the territorial limits of successful rose growing are much greater than has been generally supposed. In all those parts of the Dominion where the snow falls before the ground is deeply frozen, and remains all through the winter, wrapping all the rose bushes securely in its beautiful blanket, and snugly tucking them in from the power of the back frost, there can be no doubt but that the rose can be grown in much greater security and perfection than in the more trying latitudes where the ground is often bare nearly all the winter through.

But we are speaking of the best rose, and it is deeply interesting to watch the decisions that have obtained in England at the various shows, and especially to note how far our own favourites, as grown in Canadian soils and climate, have maintained their position. At the great Exhibition of the Royal Horticultural Society, at Nottingham, this year, the Duke of Devonshire carried off the banner of all England. It is a rose of most gorgeous colouring and of lovely form, as we have seen it in our own grounds this year; and we greatly wished it could be transferred in all its wealth of beauty to the pages of the CANADA FARMER, that our friends might share our joy. How far it will be found to adapt itself to our climate, and maintain its beauty under our trying suns, time alone can tell.

On some occasions MARECHAL NIEL has taken the front rank, and no wonder, for when allowed to ramble at will, its flowers are most magnificent. Here, in the vicinity of the great lakes, where the winter snows are exceedingly unreliable, it cannot be relied upon to remain out of doors; but farther north, covered all winter with its snowy blanket, it would come forth in spring unharmed by frost, and yield its great golden blooms, so deliciously scented, in splendid profusion. Here, grown under glass, trained to a rafter where it has full room to ramble, there is nothing like it in all its class. Grown in a pot also, as a window plant, we have seen it in great loveliness, and those whose love of flowers is not sentimental, but a thing of the heart, will find the Marechal Niel to repay their ten lerness with a bountiful gratitude.

At other times, PRINCE CAMILLE DE ROHAN has won all the honours. Its rich velvety petals, shaded with such deep, dark crimson, would never fail to command admiration, and we expect to find it a great favourite in Canada, for it seems to stand our fiercest summer suns without flinching, and maintain a fine healthy foliage all the season.

CHARLES LEBERRE has cut his way to the front, with MADAME MARGOTTIN, as Queen of the Teas, by his side. These two have well maintained their high position on this side of the Atlantic, and well deserve the confidence and esteem of Canadian rosarians.

A careful attention to the roses that thus and their way to the front rank as the best rose in the room; will in a few years give us a select list of those which are most esteemed in England, with which, perhaps, we must content ourselves, until Canadian rose shows shall have become sufficiently numerous, and Canadian judges sufficiently skilled, to give us a list of the premier roses of Canada.

Address of the Hon. Marshal P. Wilder, President of the American Pomological Society.

This able address, delivered before the Society at its last meeting held in Richmond, Virginia, is well worthy the attentive perusal of every lover and grower of fruit. We condense from it a few of the more prominent thoughts which are specially valuable as well in our own Dominion as elsewhere. Speaking of the lessons of experience, he says the observations of the last few years, under the influence of warm, dry seasons, would appear to have established the principle that such weather, without excessive drought, especially in the earlier part of the summer, is more favourable to the perfection and ripening of fruits, particularly of grapes, than cold, wet seasons. These conditions are also peculiarly advantageous for the formation of fruit buds, and the storing up of the necessary perfected food for a future crop, and for the ripening of the wood, so necessary that it may endure the winter with safety.

We see also the importance of thorough draining of our fruit lands, which produces in

soils, not naturally possessing them, the conditions of warmth and dryness, thus rendering the earth in these respects analogous to the condition of the air. Besides this advantage, there is secured a thorough aeration of the soil, whereby it is enabled to absorb fertilizing matter from the atmosphere, rain and snow, and from the moisture drawn up from the springs below. Thus, paradoxical as it may seem, the same means which guard against excessive wet serve also to supply moisture in excessive droughts.

Another lesson, most impressively taught, is that the cultivation of our orchards should be shallow, so as not to injure the roots, but to preserve them near the surface; and that manure applied to fruit trees should be either in the form of a top dressing, or as near the surface as is consistent with the composition of the soil and the preservation of its fertilizing elements. Also, it may now be considered as fixed that mulching for dry seasons and soils, whereby the temperature and moisture of the soils are kept uniform, and the fertilizing elements maintained in a soluble state, is of great advantage, inasmuch as these conditions are essential for the production of perfect fruit.

We have also learned that large fruit will sell better than small—that even the Seckel pear, which once commanded in Boston market the highest price, will not now sell, unless of extra size, for any more, if as much, as common varieties of a larger size. Hence, to meet this demand, the fruit must not only have good cultivation, but must be thinned.

The importance of shelter is year by year becoming more generally appreciated. The fact is established that the removal of forests diminishes the quantity of rain, increases the evaporation of moisture, reduces the temperature, and subjects our fruit to greater vicissitudes. We may find varieties, and probably shall, adapted to exposed situations; but at present the large majority of our finer fruits will be benefited by the shelter of belts of forest trees.

The venerable President commends again the important and benevolent work of originating new varieties of fruit, both as a means of improvement and as a substitute for those which have experienced the decline incident to all things of human origin. The acquisitions already made give promise of still richer rewards. Much has already been done, but this branch of science is yet in its infancy. It may require time and patience and care to produce a superior variety, but we have the most cheering assurance of the time when every section of our country shall possess fruits adapted to its own locality. We have learned many of the laws which govern hybridization; and the more we become acquainted with this most interesting art, the more we work with nature in these efforts for her improvement, the more shall we admire this most perfect and beautiful illustration of the great fundamental law, which has been established from the begin-

ning of time, for the improvement of men, animals and plants. Well did Linnæus exclaim, when overwhelmed by the discovery of an unknown principle in this most interesting study, "I have seen God passing by." Let us go on, then, developing the wonderful resources of this art.

He speaks also of the importance and value of this calling in developing the resources of our country, in the occupation of unimproved lands, adorning our homesteads, enhancing the value of real estate, multiplying the blessings and comforts of life, and promoting a great source of national wealth; and refers to the benign influence which this employment has upon the moral and religious instincts of the heart, the refinement of taste and the welfare of society.

Then glancing at the necrology of the year, and briefly alluding to the labours of those associates who have gone to their reward, he concludes his very able address with the expression of his hope that the Society may go on conferring blessings on the country until every hearthstone and fireside shall be gladdened with the golden fruits of summer and autumn, until thanksgiving and the perfume of the orchard shall ascend together like incense from the altar of every family, and the whole world realize, as in the beginning, the blissful fruition of dwelling in the "Garden of the Lord." And when, at last, the chain of friendship which has bound so many of us together in labour and love shall be broken; when the last link shall be sundered, and the fruits of this world shall delight us no more; when the culture, training and sorrows of earth shall culminate in the purity, perfection, and bliss of heaven, may we all sit down together at that feast of immortal fruits,

Where life fills the wine cup, and love makes it clear
Where life's balm in its freshness shall flow
O'er the wounds which the pruning knife gave us
below.

Grapes.

To the Editor.

SIR,—The Delaware is still at the head of the list with me both for quality and for productiveness.

I fruited the Adirondac this year for the first time, and find it among black grapes what the Delaware is among light, the very best. It is with me a slower grower than the Delaware on the same soil. The latter is here a good grower on common soil.

My vineyard faces the west, on the slope of a hill. These vines at the foot of the hill lost their leaves first by frost. The vineyard contains 4½ acres. I have also some vines planted on a hill lying to the south-east, but these on the first named coloured earlier, and the same varieties were much larger. This, I think, must have been owing to their not suffering so much from drought and heat. All varieties ripened three weeks later this year than last.

In the fall of 1869 the Crovding ripened two weeks before the Clinton; but in 1870 and 1871 the Clinton has been a week earlier than it. All varieties are perfectly healthy so far.

I have lost the Isabella grapes this year from frost; they are too late here.

J. W. JOHNSTON,
Campbellford.

On Onion Culture.

I notice a very good article on onion culture in the last number of the CANADA FARMER, but I do not consider it by any means an exhaustive one. Some people say there is a "knack" in raising this vegetable. However this may be, I know not; certain it is that some succeed with very little trouble, while others fail with all the skill and ingenuity they are able to possess themselves of. As the writer referred to remarks, a well pulverized and rich soil are the main requisites for success. In this section of the Province it is found seed onions do the best, and ripen earliest, when sown about the 15th of August, thickly in drills. These are allowed to stand out all winter, and are transplanted in the spring to a distance of from two to three inches apart, and fourteen inches between rows, the soil having been previously brought to the highest pitch of cultivation. These will ripen about the first of August, having had the damp weather of the autumn and the cool spring to grow in, and the hottest part of the summer to ripen the bulbs. This plan is slightly different from that practised in the Northern States. There the young bulb is pulled before freezing-up time, dried, and stowed away in some dry, airy place, free from frost. I fancy the cause of their doing so well here is the depth of the snow during winter, and the fact that we have no January or any other thaw to remove it from the ground until the breaking up of spring. I am anxious to know how this plan would succeed west of Toronto with or without a light mulching of forest leaves or some other material that would not smother them.

The Yellow Danvers is found the best suited to this mode of culture. This variety is early, of good form and flavour, tender, keeps well, and produces a heavy crop. In growing the onion, a liberal supply of hard-wood ashes should always be added to the soil in addition to other manures, and a light top-dressing may be applied every two weeks throughout the growing season. Amateurs, and those requiring onions for home consumption only, will find the Potato Onion the easiest to raise, the surest crop, and for all practical purposes, equal in every respect to the finest grown from seed, and for salads are unrivalled, being exceedingly mild when used in the green state. This variety may also be set in the autumn, six inches apart, and fifteen between the rows. They are a sure crop, and are seldom attacked by disease.

The Top Onion is another variety, a cluster of small onions being produced on the top of the seed stalk. These are saved in the fall, being removed after the stock upon which they grow turns brown. They are planted in the spring, and form a large sized onion by the end of the season. This variety is not a very good keeper, and is consequently

not so much cultivated as those from seed, but they are very prolific, and it is estimated that from six hundred to a thousand bushels may be grown upon an acre.

There are two diseases from which the onion suffers. The first is the smut; but the onion fly is its worst enemy. This pest appears to have been introduced from Europe; it begins to lay its eggs so soon as the onion has attained a height of an inch or two; the eggs are hatched about twenty-four hours after they are laid, and the worm begins immediately to eat its way down the stem until it reaches the more solid part of the root, which they soon consume, and then attack the one next to it. Many remedies are suggested. Those which appear to be the best are tar water, hard-wood ashes, lime, powdered charcoal, flower of sulphur and carbolic soap-suds.

From four to six hundred bushels of onions are no unusual crop, but probably from 300 to 350 is a more common acreage. These fetch from 75 cents to \$1.25 per bushel, and at these prices it will be found a very remunerative crop.

P. E. BUCKE.

Ottawa, Oct. 16, 1871

Fruit Crop Near Berlin.

The apple crop in this locality is far below the average, and is seriously injured by the codlin-moth. On my place the Baldwins are the worst, and the Swaysie Pomme Grise the least affected. The price I obtained for good fruit is 50c. to 60c. per bushel. Pears are abundant and unusually fine, and readily command \$2 per bushel. Plums were scarce, and sold for \$3 per bushel. My crop was about one-half of last year. The effects of the frost of last winter fatally injured a number of fine bearing trees, the injury being just at the snow line. I find Pond's Seedling is the variety in demand for canning, and fortunately the crop was good. The poorest bearer with me is the Yellow Gage, and the best the Lombard. The Washington has done its duty for the past two seasons, and is the most profitable in the collection on account of earliness and the high price obtained; it is rather tender, and requires to be in a favourable position and well protected from a N. E. exposure. The Imperial Gages and Luscomb's Nonsuch having fruited heavily last season, did not yield anything this season. These varieties are too tender for exposed positions, but do well in village or town gardens, which are surrounded by buildings. This may also apply to all green and yellow fruited varieties.

The only grape which has ripened thoroughly in this locality is the Delaware, and with which our market is well supplied at 8 cents per lb. I have fruited this variety for some eight or ten years, and have only lost the crop of 1869, which was rather an exceptional season. I, however, then exhibited at our county show three ripe bunches. Last year it ripened on the 1st of September; this season about the 10th. Concord and Clintons are a very uncertain crop here.

G. ROY.

Wine Making.

To the Editor.

SIR,—If you would publish a *recipe* for making grape wine, you would do a favour to myself and many others in this section of country. There are many acres of grapes in this section, some in full bearing and others just coming to it. They are principally Clintons, and were planted in the expectation of finding ready sale at home; but up to this time there has been no regular buyer established in this part. The consequence is that many having small quantities, are at a loss to know what to do with them, and Concord grapes can be bought for from 4 to 5 cents per pound, and Clintons for about half that price; and many would make wine of what they had if they knew of any practicable means of doing so.

W.

NOTE BY THE EDITOR.—We have never made wine, but subjoin a description of the manner in which it is made by some manufacturers. Others crush the grapes by running them between rollers and pressing out the juice.

WINE MAKING.

The grapes, as soon as gathered, are put into large oaken vats in a room that can be kept at a temperature of about 70 degrees. After remaining in the vats for three or four days, a stout hard-wood stick, placed upright in the centre of each vat, is moved by seizing it at the top and swinging the top around, in this way bruising the grapes that are near it. This is done four times a day, until the grapes ferment and bubble up around the stick. Then the juice is drawn off by pulling out the plug at the bottom of the vat, and a man with bare feet gets into the vat and treads the grapes with his heel until the juice is pressed in this way out of the vat. Then the juice is examined to ascertain how much of acids and of saccharine it contains; and if any of these be in excess or deficient, they are brought to their proper proportion. A good juice may be in the following proportions: Sugar, 262 lbs.; acids, 5 lbs.; water, 733 lbs.; total, 1,000 lbs. That is, in a thousand pounds of good grape juice, there may be 262 lbs. of sugar, 5 lbs. of acid, and 733 lbs. of water. There is an instrument which determines the proportion of sugar, and another the proportion of acid; though an experienced wine-maker will tell by the taste with sufficient accuracy.

There should never be less than four pounds of acids in a thousand pounds of juice, nor more than nine. If it be found necessary to increase the quantity of sugar, only the very purest, refined white sugar should be used, which may be dissolved in rain water and added to the juice, in such quantities as shall bring the sugar to the proportion above given. It is then returned to the vat. Fermentation will soon begin anew, and the skins, seeds and sediments will all be thrown to the surface. This fermentation will continue about three days, and when it subsides, great attention is needed to draw off the wine again as soon as the fermentation is ceased; for if the cap of

skins, seeds, &c., falls before the wine is drawn out, the wine is spoiled. The wine is now put into casks in the cellar without delay, and the bung of the cask left open. A new fermentation will now commence, and the froth will run out at the bung; but the cask must be kept full by pouring in wine several times every day. When the fermentation becomes less active, the bung can be laid upon the bung-hole, and the casks filled once a day; and in fifteen or twenty days the bungs can be driven in, and the casks examined and filled every few days. In the spring the wine should be drawn off the lees, and the casks frequently examined and kept full. The wine will keep improving all summer, and for a variable period beyond. Be careful not to use pine-wood for any purpose, not even for bungs, as it imparts a flavour to the wine; nor allow cheese, butter, fish, vegetables, &c., to be kept in the same cellar with the wine. The best wines are never made from any one grape, but by combining several varieties in such proportions as experience may determine to produce the best results. Of course, the Canadian planter has much to learn on this point; but it now seems that a vineyard planted nearly one-half with Clinton, and the remainder with Delaware and Creveling, will be likely to yield an excellent wine. The quality of the wine does not depend upon the amount of alcohol it may contain. Some of the very best wines of Burgundy have not more than 9 per cent. of alcohol. It is the acid parts which give to the wine its value and palatable taste, and the combinations formed by these give to the wine its aroma or "boquet." The sugar in the juice is, after a while, all changed into alcohol; and a juice, or "must" which contains 262 lbs. of sugar in every thousand pounds of must, will make a wine containing thirteen per cent. of alcohol. This is surely quite enough for those to whom "wine is a delicate beverage, valuable for its odour or 'boquet,' and its unctuous and agreeable flavour to the palate." Indeed, a must that contains 200 lbs. of sugar in a thousand pounds of must, will make wine containing as much alcohol as the best wines of Burgundy.

The Sherry and Port Wines with which we are most familiar, are at best wines that have been strengthened by the addition of alcohol; while most of them are guiltless of a single drop of the juice of the grape. These wines usually have an alcoholic strength of 45 per cent., and this great addition of alcohol so entirely destroys all the delicate flavour and odour of a true wine, that those whose taste has been formed upon such wines, have a very imperfect conception of the qualities of a pure wine. Unfortunately, in this country the so-called wines of commerce are almost entirely of this character; and thus it has come to pass that we have formed the habit of judging the value or quality of wine by its alcoholic strength. Indeed, such is the power of this habit that a really good wine, of delicate flavour and boquet, is not only not appreciated, but is pronounced to be undrinkable by men who think they are judges of wine, but who in truth have had their tastes so vitiated by alcoholic wines that they are utterly incompetent judges. It will take time to correct

these erroneous views, and to bring our people to the right conception of the true character of a pure wine. Enough has been done to prove that good wine can be made in Canada; it now remains to grow the grapes and produce it in sufficient quantities to place it within the reach of every one, so that it may become a substitute for the strong alcoholic drinks which are now so commonly used, and which are so ruinous to the health—physical, mental and moral—of those who habitually use them.

Moving Grape Vines.

To the Editor.

SIR,—A friend of mine intends moving some grape vines from Cape Rich, a very gravelly locality, to a location near Meaford, sandy loam—three grape roots, received from Rochester nursery about sixteen years ago, labelled "Clinton," "Isabella," "Hamburgh;" but he fancies foreign nurserymen have their own peculiar nomenclature. He can distinguish very little difference in the vines, leaves or fruit—only one seems to bear clusters of a more compact inverted cone shape, the other two more spreading and branchy. The colour of the berries of two were dark purple; the other not so dark, but larger, and a little tart to the taste. They have all been very prolific, and ripened every year but two for the last fourteen years. This year he has cut off over a hundred pounds weight of fruit, exclusive of the frequent and destructive pickings of invited and uninvited friends. One year, a drizzly, chilly, wet one, they mildewed; another year the frost nipped the clusters before maturity, although "Jack" does not bite early at the Cape.

1st. Should my friend move them now, or defer till spring?

2nd. Should all the runners, old and young, be cut down to the main root, or some left?

3. Can he divide the roots as we do currant bushes?

4th. Any other relative information will oblige,

J. McL.

St. Vincent.

REPLY.—If the soil in which he intends planting be thoroughly drained, he may plant this fall; if not, it should be first drained and then planted. After planting, the ground should be well mulched with coarse litter, leaves, &c.

2nd. The vines should be well cut back, leaving the top proportioned to the root left on the vine.

3rd. It is not often that the old stock can be well divided at the root.

4th. He had better not transplant them at all. Such old vines very seldom thrive well on being transplanted. He had better take off a number of cuttings of this year's wood, each cutting three eyes in length, and plant these, covering with soil all but the upper bud. These he can plant in a bed, protect with evergreen branches during winter, and, when they have made a year's growth, transplant to the intended site. They will be larger and healthier three years hence than the old ones if transplanted.

Grapes on the Shore of Lake Huron.

To the Editor.

SIR,—The writer of this has read with much pleasure the address before the Fruit Growers' Association of Canada at Kingston, by the Rev. Mr. Burnett. Much of what the Rev. President said was true, all interesting; but when that gentleman praised the Isabella grape, he was wrong; its merits compared with many grapes we have here in the Lake Basin are as those of the common Meshannock potato compared with the Early Rose or the Pink Eye—simply better than none.

It is to be doubted if the grape is yet produced which is the best that our soil or climate (that of the Lake Basin) will grow to advantage. So far, the Ives' Seedling, the Delaware, and the Catawba, have proved best.

My object in writing this is to say that all along from Goderich to say Lyell Island, on the east coast of Lake Huron, above Southampton, there are to be found the proper conditions for grape and fruit growing and wine making.

It is well known that in Europe the best wines are produced not far from the northern limit of the growth of the vine. There is nothing to compare with the wines of Johannesberger in all the world.

On the eastern shore of Lake Michigan, as high up as Northport and Traverse, peaches, grapes and apricots grow, to the greatest perfection. This is due to the influence of the waters of that lake, and their modifying influence on the harsh westerly and northerly winds. The easterly winds are tempered by the waters of Lakes Ontario and Huron. Now it seems to me that these winds (the northerly and westerly) after sweeping over both Lakes Michigan and Huron, would strike the eastern shore of Lake Huron in a much more tempered and softened state than they are when they strike the shores of Lake Michigan; while the easterly winds would be tempered by passing over the waters of Lake Ontario, and those of the Georgian Bay as well as Simcoe.

There seems to be every encouragement for the prosecution of fruit growing on the north-east, or rather the east shore of Lake Huron.

This matter of vine and fruit growing, and wine making, is all new to the lake country. Twenty years ago the thing was not thought practicable; now you can get a better bottle (or as good a one) of champagne here than can be produced in France; and there is no good reason in my opinion why the light wines of the Rhine country cannot be grown and made as well in the lake country as in Europe.

I do not claim to be an expert, but have some considerable knowledge of wines and vine culture, and a most decided opinion that the country along from Goderich and Kincardine to Lyell Island, on the east shore

of Lake Huron, is the very best in all the lake region, and, for that matter, on the continent, for growing grapes. Every acre of that land, near enough to the lake to feel its influence, is, in my opinion, worth a thousand dollars for the growing of fruits, especially the wine grape.

I am an American, and have no special interest in Canada, writing this only in the interest of fruit growers, who are of my guild.

B.

Grand Island.

Tea Roses.

I can confirm all the good things said of Tea Roses. The following have been almost continuously covered with bloom, and perfectly healthy out of doors with me, from the middle of June to the present time:—Monsieur Furtado, Madame Margottin, Souvenir d'un Ami, Safrano, Madame Willermoz, Alba roses, Adrienne Christophle, Monplaisir, Vicomtesse de Cazes, and Canary. The first is the most vigorous grower, but not the most satisfactory bloomer; it has proved a bad opener with me. Nothing can be more satisfactory than the graceful habit of Safrano and Vicomtesse de Cazes. They have sent up rich-looking shoots from 12 to 18 inches high, and these formed heads of bloom with from eight to twelve sound roses, delicately drooping in a circle around these stems. Supported against a trellis in a south border they get the warmth and circulation of air, which, as Mr. Paul points out, they certainly need.

I give a list of twelve other Tea Roses, which from experience have been found suitable for out-door culture. Adrienne Christophle, one can hardly have too much of; it is difficult to define its colour—apricot, copper rose, peach, salmon, all subtly mix with peculiar beauty, and it ought never to be left out of a group.

- Souvenir d'un Ami, rose.
- Comte de Paris, pale flesh.
- David Pradel, rose and lavender.
- Louise de Savoie, fawn.
- Madame Bravy, white, rose centre.
- Babens, white and rose.
- Souvenir d'Elise, white and blush; the best Tea.
- Président, pale rose and salmon.
- Niphotos, pure white.
- Madame Willermoz.
- Moiret, fawn.
- Souvenir de David, crimson.
- To these I must add—
- Madame Margottin, yellow.
- Madame Charles, yellow.
- Madame Falcot, yellow.
- La Sylphide, cream, centre fawn.
- Bougère, rosy bronze.

These I have tried some time, and can thoroughly recommend. There are several new varieties which promise to be great acquisitions, but only having had them one season, I cannot as yet speak positively. viz., Catherine Mornet, Belle Lyonnaise, Tour Bertrand, Jean Pernet and Unique.—Cottage Gardener.

American Pomological Society.

The thirteenth biennial session and exhibition of this Society was held at Richmond, Va., opening on Wednesday, the 6th September, and continuing four days. The attendance was large, the discussions animated, and the display of fruits one of the largest ever brought together in North America. There were nearly four thousand plates of fruit on exhibition. Among the State contributions were the following: Iowa, 118 varieties of apples; Kansas, 200 varieties of apples, 30 of pears, 20 of grapes; Nebraska, 146 varieties of apples, 13 of pears, 15 of peaches, 1 of plums, and 1 of grapes; California, 27 varieties of apples, 10 of pears, 14 of grapes, 3 of oranges, and one each of plums, almonds, olives and quince; Minnesota, 60 varieties of apples, 22 of pears, 10 of Siberian crab, 4 of plums; and one of grapes. The collection from Nebraska, being the only one meeting the requirements, and being deemed worthy, was awarded the hundred dollar premium offered by the Virginia State Horticultural Society, for the best and largest collection of different species of fruits from any one State. The Land Department of the Illinois Central Railroad exhibited over 200 varieties of apples and about 30 of pears. Prominent among the individual exhibitors were the following: Hon. Marshal P. Wilder, Dorchester, 232 varieties of pears; Elwanger & Barry, Rochester, 157 varieties of pears; F. & J. Clapp, Boston, 30 new seedling pears, many of "extraordinary beauty and quality;" Dr. A. P. Wylie, South Carolina, 40 varieties of new seedling and hybrid grapes.

Strawberries in 1871.

Napoleon III.—More magnificent than ever; must be grown on very heavy land, and be well mulched, and it will produce the finest flavoured berries that ever gladdened the sight of an amateur.

Boyd's No. 30—Is a very fine, large fruit, of agreeable taste and very productive, seems to do well on any soil.

Chas. Downing—Valuable for every family garden; will do well on light land as well as heavy, but needs manure for producing the big berries.

Russell's Prolific—Is rising in public estimation; universally productive, good flavour needs another variety close by to fertilize it.

President Wilder—Equal in flavour to all that has been said of it; not productive here, does better the second year than the first.

Lanning's White—Is the queen of all strawberry berries; its spicy, delicious flavour, is unequalled among all fruits we have ever seen.

Jucunda—Sells at high prices, usually 50 cents per quart (in New York city), about as productive as Triomphe de Gand.

Green Prolific—Very vigorous, productive, and a good sure family variety.

Raising Firs from Seed.

To the Editor.

SIR,—Can you give me, through the columns of the CANADA FARMER, or refer me to an authority where I can find practical directions for the propagation of firs from the seed of cones, particularly as to the extraction of the seed. The nearest approach I have found to the information desired is to the effect that the cones are collected when the seed is ripe, preserved over winter in a convenient cool place, with an even temperature, and early in the spring sown in seed beds. However full the directions upon other parts of the propagation and culture, I find no directions for the extraction of the seed from the cones.

T. O. W.

Belleville.

If the cones are laid on a sheet, and placed in a warm, dry atmosphere, say in front of the grate or near a stove, the scales will open and the seeds fall out, or can be shaken out by giving the cone a smart rap against the floor.

Currants.

Allow me to mention a few more red currants, and to offer a few notes on a novel system of growing them, which is here very generally admired.

Knight's Sweet Red—The sweetest currant grown. It is of a distinct habit from other varieties, making its shoots nearly perpendicular, never horizontal. The berries and bunches are of a fair average size, and of good colour.

Le Versailles—A splendid sort for exhibition or market purposes, producing very long bunches, with twenty or more berries on a bunch when well grown; it is more acid than several of the varieties, but it always commands a good price in the market. This and the *Cherry Currant* are the best for exhibition.

I have taken great interest in the red currant for years, and grow fifteen varieties. I adopt with them a method of training peculiar to myself, namely, the pillar form, and which is much admired when in fruit, since the trees take up little room and fruit nicely. The pillars are raised in the following manner: I select good, well-grown shoots for cuttings, leaving the leading bud and five or six others; these latter form side shoots, while the leader goes upright, forming branches as it advances, which latter are cut back every season to one or two buds. The plants require tying to a stake. When they get about twelve or fourteen inches wide, I cut the new wood close; and in the case of those from which I wish to exhibit, I pinch off all the shoots close, at the latter end of June. This makes a wonderful difference in the size of the fruit, and they are easier to shade with mats, when wanted for a later season.

White currants I also train in the same way, and find that they generally bear finer fruit than on the old system, while they are not liable to be beaten about by the storms. They take rather longer to raise in this way. I have several plants six feet high.—John Walker, Manchester, England, in Florist and Pomologist.

Entomology.

Entomological Society of Ontario.

The annual general meeting of the Society was held at Kingston, Sept 27, at Queen's College. In the unavoidable absence of the President, Mr. W. Saunders, of London, took the chair.

The President's address, and the Secretary's Report having been read the following officers were appointed for the year 1871:

President, Rev. J. S. Bethune, M. A. Port Hope.

Sec. Treas. Mr. W. Saunders, London.

And a Chapter of five Directors: Professor Court, Toronto; Rev. V. Rogers, Kingston; Johnson Patten, Gainsby; J. M. Denton, London; Professor I. Macoun, Belleville.

Adjutors: Mr. C. Chapman, London; Mr. S. G. Hibbs, London.

Annual Address of the President of the Entomological Society of Ontario, 1871.

To the Members of the Entomological Society of Ontario.

GENTLEMEN,—It is with no ordinary feelings of pleasure and satisfaction that I offer you my congratulations upon the continued success and prosperity of the Entomological Society of Ontario. We are now met together to hold our first annual meeting under our Act of Incorporation, and as a public society, duly recognized by the Government of the Province, and closely associated with the Agricultural and Arts Association of Ontario, who are now holding their great annual exhibition in the city of Kingston. As we have now attained to a position so much superior to anything we anticipated a few years ago, it may not be amiss to give a brief account of the origin and progress of the Society, and of the work it has been able to accomplish.

The origin of the Society may be traced to the publication, in the number of the *Canadian Naturalist and Geologist*, for June, 1862, of a "List of Entomologists in Canada," prepared by Mr. Saunders of London, Ont., and myself. As this list contained the names of thirty-six persons interested in the collection and study of insects, it was resolved to hold a meeting and endeavour to form a Society or Club of those engaged in this branch of Natural Science. In the following September, accordingly, ten gentlemen assembled at the residence of Prof. Croft, in Toronto, and decided upon the formation of an Entomological Society, whose objects should be (1) the preparation of as complete a collection as possible of Canadian insects, to be kept in some central place for general information and reference; (2) the charge of a depository of duplicate specimens contributed by entomologists for distribution amongst its members; and (3) the holding of meetings from time to time

for mutual information and the advancement of the science throughout the country at large. As so few were present at this meeting, no definite organization was attempted at the time, but the matter was laid over until the following spring.

On the 16th of April in the following year (1863) the Society was at length officially organized under the Presidency of Prof. Croft, and with Mr. W. Saunders as Secretary, Treasurer, and the late Rev. Prof. Hibbert as Chairman. The names of about twenty-five persons were enrolled as original members. During the year meetings were held from time to time, and several more names were added to the list of members.

The next year (1864) was one of great progress, being signalized by the formation, in March, of a branch, with ten original members, at Quebec, Canada East; and of another in July, at London, Canada West, with thirteen original members. A preliminary list of Canadian Lepidoptera, embracing 144 species of Butterflies, Bombycæ, and Spingæ, was published by the Society during the year. In 1865 many additions to the roll of membership were made and much good work was done, including the publication of a second list of Canadian Lepidoptera, containing the names of 350 more species. During the following year (1866) the Society held but few meetings and effected little, owing to the disturbance caused by the Fenian raid, and the call made upon many members to leave their homes and join the ranks of the volunteer service. The year 1867 was marked, in the annals of the Society, by the publication of a valuable list of Canadian Coleoptera, which included no less than 75 families, 432 genera, and 1,231 species, being many times more than had ever been previously enumerated in a Canadian list.

In August, 1868, the Society issued the first number of the *CANADIAN ENTOMOLOGIST*, a small monthly periodical devoted to the publication of original papers on the classification, description, habits, and general history of insects. This little serial has been received with much favour by the leading entomologists of America, many of whom have from time to time contributed to its pages. It has now reached the middle of its third volume, and has increased, to three times its original dimensions; it has also improved much in style and typographical appearance, as well as in the excellence of its illustrations.

Until December, 1869, the Society received no extraneous assistance nor public recognition, but depended wholly for its maintenance upon the efforts of its members. At that time, however, it was voted a grant of \$400 for the year 1870 by the Board of the Agricultural and Arts Association of Ontario, on condition that it furnished an Annual Report, formed a cabinet of insects useful or prejudicial to agriculture and horticulture, and continued the publication of the *Canadian*

Entomologist. These conditions were severally complied with, by the continuance, and improvement of our periodical, the formation of a cabinet of insects arranged in an economical point of view, and placed in the rooms of the Association at Toronto, and by the publication of a report upon the insects affecting the apple, grape, and plum, prepared by Messrs. Saunders, and Kneal and myself. The singular favour accorded by the public to this report, and the fact that an edition of three thousand copies was speedily exhausted, sufficiently attest its value.

The present year (1871) has been signalized by the incorporation of the Society by the Legislature of Ontario, at the instigation of the Bureau of Agriculture, and the grant to its funds by the Government of \$500 a year. By the same Act, moreover, your President is entitled to take his seat as an *ex officio* member at the Board of Agriculture and Arts.

Among the marks of progress of the year, mention must by no means be omitted of the formation of a third branch of the Society at Kingston, which we trust will long continue to grow and prosper.

Such, gentlemen, is a brief account of the origin and progress of our Society, the recital of which has not, I trust, proved uninteresting to you. When we look back upon our growth and development, we must all, I am sure, feel cheered and encouraged to continue our work, and strive by our united efforts to make the ENTOMOLOGICAL SOCIETY OF ONTARIO a credit and a blessing to our land.

Before concluding, I feel that it is my painful duty to remind you of the loss which our Society, and the cause of natural science generally in this Province, has sustained in the recent death of Prof. Hincks, of University College, Toronto. He joined us in our first attempts at organization, and continued our steady friend and supporter till a few months ago. Though his special studies were chiefly devoted to another department of Nature, he yet took a lively interest in entomology, and was a frequent attendant at our meetings. He died at a ripe old age, and has left a mark upon the scientific records of our country which will not soon be effaced.

Thanking you, gentlemen, for the honour you have done me in calling upon me to preside over you during the past year, and trusting that our Society will continue to grow and prosper, and be zealously maintained by us all,

I have the honour to be, gentlemen,

Your obedient servant,

CHARLES J. BETHUNE.
Kingston, September 27, 1871.

The Locust Tree Borer.

We have received from Mr. David Martin, of Kirkwall, Beverley Township, a pair of beetles that he found upon his Locust trees, and which he correctly regarded as the parents of the grubs working within. He states that his trees are being destroyed by these borers, and that he found the specimens sent to us apparently laying their eggs for the production of a fresh brood.

It is now about ten years since we first observed this insect at its work of destruction among the young Locust trees in the

neighbourhood of Toronto. Since that time we have frequently noticed its ravages in various parts of the country, though we have lately been under the impression that it had almost disappeared, owing, probably, to the diminution in the supply of its food.

The grub, which performs the mischief by boring into the wood of the trees, and gradually destroying their vitality, is of a yellowish-white colour, about an inch long, and as thick, when full grown, as an ordinary quill; it is furnished with powerful jaws, and with six minute legs. When young, it bores chiefly into the sap-wood, but afterwards extends its burrows into the solid wood of the tree, perforating it in every direction. Its presence may be readily detected by the little heaps of saw-dust like castings extruded from the holes, and accumulated about the base of the tree. In its perfect state the beetle feeds upon the pollen of flowers, and may often be found in September on the blossoms of the Common Golden rod (*Solidago*). It is a very handsome black and yellow creature from half to three-quarters of an inch in length, and bearing a strong resemblance in colour and markings to a wasp. It is called by entomologists *Clonus flaviventris* (Fab.), (*C. pictus*, Drury, *robustus*, Forster).

Parasite of the Colorado Potato Beetle

Some little time since we received from Mr. W. B. Crinkley, of Gad's Hill, Ont., a specimen of the larva of a bug that fed upon the eggs, larvæ, and perfect forms of the Colorado Potato Beetle. As specimens of the latter were sent with the insect, we were enabled to test ourselves its useful qualities in this respect. When the insect first reached us we were unable to determine its species, as in their immature larval state bugs resemble each other very much; recently, however, it completed its transformations into the perfect, or winged state, and proved to be, as we were inclined to suspect at first, the spined Soldier-bug (*Arma spinosa*, Dallas.) This insect belongs to the true bugs (*Hemiptera*), and is a member of an extensive family, (*Scutelleridae*), distinguished by the very large scutel or triangular piece of frame-work between the wing covers at the base. Most of the species of this family are vegetable feeders, and often very destructive; but this one, with some others, is carnivorous, attacking other insects, and sucking their juices through the long and sharp proboscis with which it is furnished. It is quite a common insect in Canada, and may often be found on trees, wandering about in search of its proper food. It has been known for some time to do good service among Colorado beetles, and was described and figured in the *American Entomologist* in September, 1868. It does not, however, confine itself to this particular insect as an article of diet, but will readily attack almost any caterpillar or beetle that comes in its way. It is needless, we trust, to add that this bug, though unsavory in odour, should never be molested, but rather encouraged in its useful work.

The Hag-moth Caterpillar.

We have received from Messrs. J. R. Cook, of Mount Albion, and W. H. Crooker, of Waterdown, a single specimen each of the oddest-looking insect imaginable. It is of a dark-brown colour, and covered with short velvet-like down; its length is about half an inch, and its breadth in part the same, giving the creature a somewhat square appearance; from each side there extend long flattened projections of the same colour and velvet appearance as the rest of the upper surface; three of these processes on each side are much longer than the others, and look as if they were meant for legs. No description, however, that we can give will afford a correct idea of the peculiarities of this extraordinary caterpillar; one might easily mistake it for a hairy spider, or, if it were at rest, for a bit of brown lurr. It feeds upon the leaves of the apple, pear, cherry, and, according to Dr. Harris, of the white and red oak as well. Late in September, or in October, it forms a small round silken cocoon, from which it emerges as a moth in the following spring. Before changing to the hibernian state, it discards the curious processes described above, and hence appears, as Mr. Crooker supposed, to lose its legs. Its actual legs, however, are very minute, and almost concealed beneath the fore part of the body. The name of the creature is the Hag-moth (*Limacodes pitheoium*, Smith); the specific name signifies a shrivelled and monkey-faced old woman or hag, and is applied to the insect from its appearance in the larval state, the generic name, *Limacodes*, (meaning "like a slug") refers to the shape and crawling habit of the various species of caterpillars of this genus. Though voracious in feeding, as both our correspondents observed, it is not at all likely to prove a pest in the orchard, being a very rare insect in Canada.

Potato Sphinx Chrysalis.

The specimen received from Mr. John Yoder, of Springfield, Ont., and which he found when digging his potatoes, is the chrysalis of the Potato Sphinx Caterpillar, (*S. Quinque-maculata*); it is at once distinguished from others by the curious jug-handle appendage proceeding from the head, which contains the long sucking-tube of the moth. The caterpillar, a very large blackish or greenish one, with oblique stripes along the sides, feeds upon the tomato as well as the potato plants, and is popularly, but erroneously, supposed to be poisonous, simply because it is ugly and has a stiff tail—at least we have never been able to ascertain any other reason. If left in the earth, the chrysalis would produce next summer a large handsome moth, of the same character and habits as the so-called Humming-bird or Hawk moths. For a full account of the insect, and illustrations of its different stages, see the CANADA FARMER for November, 1870, page 424.

Correspondence.

My Farm.

No. 11.

To the Editor.

Yes, Sir, we have thrashed, we have moved about for three whole days in a barn filled with grain in the straw, and straw pure, in an atmosphere made up of 95 per cent. of dust, with a storm of oak chaff and barley beards constantly floating about and assaulting themselves into the hair, the eyes, and every conceivable point of entrance to the body. We have kept several men busy sometimes, and sometimes sitting in comfortable attitudes whilst the boss thrasher repaired a belt or rode to the blacksmith's shop. Our horses have been galled in the everlasting "go around," and we have experienced feelings which do not make us alter the stand taken concerning the status of Canadian threshing in my last letter to you.

Three mornings ago I found eight strange cattle feeding on my corn and turnips. I think those eight animals were each and all possessed of an evil spirit. They rushed amongst my stacks of corn, apparently trying which could overturn the greatest number in a given space. They did not leave one standing. I think they never saw corn before, at least in the cob. They were hungry, lean and active. They would come under no class in our exhibitions; they belong to the breed road cattle.

My front gate was unfortunately left open, they got in and tasted turnip top; now nothing will keep them out. If they can't insert a head and lift off the riders, and then clear the fence, they will jump through fence, riders and all.

I mention this to stir up your readers in the matter of road cattle. I almost wish (it would in the end be charity) that every farmer in this country would experience the feeling of disgust that I have had with these cattle, and then I think we could pass a by-law forbidding them to run at large upon the roads.

Apples are ready to be picked. Now there are apples that are worth picking, and there are those that are worth nothing, therefore, I say cut off these worthless things, and graft good fruit. These small apples, sweet or sour, may make cider, but you can't use up the cider made from the apples on about fifty trees, and I don't believe it pays to make cider for sale. They are no good for pigs. I believe swine fall away upon apples, and I know they are bad for horses, cows and sheep, when these animals are allowed to pick them up as quick as they like upon a windy day in October.

Good apples, particularly keepers, are worth barrels, and I believe the best way to

keep them is to hand-pick carefully, put them in barrels, and head them up tight, leave them in the open air to sweat until the nights get cold, and then take them into a frost-proof yet cool cellar. I have a neighbour who has kept some varieties (especially russets) in this way, for fourteen months.

Now, this question of keeping is a very puzzling one, and although I believe it to be the safest plan to sell a thing as soon as the article is quoted at a paying price, yet we sometimes make terrible mistakes. I was advising my neighbour the other day to sell his hops at 25 cents, as that is undoubtedly a paying price. He held on, and has sold for 35 cents. If he had done as I advised, I am afraid that he would not have "blest me" for it. I often think that I'll never give more advice; but as in this world it is never taken except it coincide with the views and wishes of the recipient, perhaps it were as well to make no rash resolves.

While upon this subject of selling for a fair price, I should like to hear an opinion from either yourself or some of your practical subscribers, whether it is wise to sell barley at an average of 60 cents now, or hold on till the spring. Now, there are several points urging me at different times in each direction. If I hold on, it must be till spring. Barley is a bad grain to keep sweet, and there are mice and rats, shrinkage of grain, a loss of percentage, and the cost of insurance, to contend with. Moreover, barley at 60 cents is cheaper feed than oats at 45 cents, even 40 cents. Would some of your readers give us an opinion upon this point in the CANADA FARMER?

I have some fences to repair. My neighbour and I have not quarrelled yet, but the question of a line fence is getting very hot. I neither believe that it pays to put up a shaky fence, nor do I believe that it pays to allow one old rail rotten at the end to remain in a panel. As long as we are obliged to use snaked rail fences, nothing short of six rails and two riders will make them stock proof. The stakes must be strong and the holes deep and well caved upon the side farthest from the fence corner. I have seen stake-holes made with one blow of a broad-faced pick. Some of the stakes set therein lasted a year. These were never touched. Most of them were either rooted up by the first wind, carrying riders with them, or ditto by the rubbing of a yearling calf.

NO. III.

To the Editor.

SIR,—My neighbours are all on the road, drawing grain to market. The flow of teams has, however, been somewhat checked by the sudden decline of wheat—8 cents in less than a week.

There is much debate as to what would be the proper thing to do with our barley; 50 cents and 55 cents is a sad, low price. Indeed, I think that oats at 40 cents make a far dearer feed than barley at 55 cents. Therefore, I say hold on in this case to both barley and oats, or feed the barley and sell the oats. It is going to be a risky thing feeding many head of cattle this winter; feed is going to be very dear. I saw Swedes sold in the

Hamilton market for 25 cents a bushel by the load. We must put in the barley and husband the hay.

There were three knolls in my fall wheat field that I did not think were up to 30 bushels to the acre; and so, determined that I would if possible have a good yield of that in my pet field, I drew some ten loads of well rotted year-old barn-yard manure, and top-dressed the wheat upon these knolls. My man thought it a terrible pity that I should waste good dung that way. "Why," he said "it will all dry out, and the juice will go out of it." It was little use to explain to him that upon these gravelly hills, if we plough under our manure, the essence is washed out of the reach of any plant by the first rains, that there is no loss by evaporation when manure is thoroughly rotted and is spread out, but only when heating. His answer was: "I've been most all over my part of Scotland, and I never saw it done before." I took him to the top of a high knoll; it was sown with fall wheat upon oat stubble. The oats had not been above six inches high upon this spot, and the land when turned up was a red-yellow hungry gravel. Manure had been harrowed in here upon the surface just previous to drilling, and my man could not but allow that the plant was as vigorous upon that land which had been only able to produce six inches of oat straw as upon any portion of the field.

I believe the principle of ploughing under manure should be generally abandoned. I read much in your valuable columns, at different times, on this subject; but I wish some of our old-fashioned farmers, who stick to the old ways because their fathers did before them, would come out in black and white, advance their plans of operation, their reasons and the results, and let the opposers answer them, and let the fight wax loud; such is the way to arrive at a just conclusion on these points. Let those who differ from us take up the pen and set their joint opinion in type; the columns of the CANADA FARMER are open to one and all. If they convince us that we are wrong, we will retract our opinions; if we prove to be in the right, take advantage of our propositions. It is but a selfish neighbour who will not give the benefit of his experience and observation to his brother farmer. Our profession should not be one of antagonism, but of mutual interchange of opinions and help. My man, two days ago, believed that I was throwing my manure to the winds. His opinion, although he still maintains it outwardly, is, I know, shaken; in a short time he will have come round, and will agree with me. The constant falling of a drop of water will drill a hole in the hardest rock, and the constant exposition of a new theory; if there be truth in it, will in time overcome the sneers and scoffs of the most incredulous.

I am going to start stercing my turnips in a few days, and hope to have them all safely housed before November sets in. Now,

many of my neighbours have not thought of doing such, and they will not until heavy rains and hard black frosts bid them hurry up. They say turnips will grow yet; I don't believe it. But still, if we allow that Swedes will grow, their increase will not pay for the extra time and trouble in taking them up when covered with mud, and for the loss in the cellar which must result from their storage in a wet state. How often are farmers caught in a fall of snow in the middle of securing their roots. It is but a few years ago that thousands of bushels were lost to the country by the advent of an unusually early winter. We are working hard to get everything housed before November—potatoes, carrots, mangolds, swedes, and corn stalks.

Before closing this letter, allow me to impress upon our farmers the necessity of saving every pound of straw this winter. Some throw their straw about under the idea that they will make more manure. Now, it is not the quantity but the quality of the manure heap that we should look at. A load of manure, made and kept under cover, is worth three that are made in the open yard, and are subject to leaching by falling rains and melting snows; and one such load will give its benefit to a given amount of land with one-third less expense in labour.

If I had a lot of straw over, I would rather take it to my wheat field and spread it broadcast upon the melting snows in spring than provide more absorbents than actually required for my manure. In the former case it mats round the young wheat plant, and helps somewhat to save it from the freezing and thawing of our spring days; or I would even sell it in the market. I hear my good farmer neighbour exclaim: "What'll sell your straw?" and I answer "Yes; but only under one condition—that you buy clover seed or artificial manure with the proceeds."

I have already drawn my letter out to a greater length than I first intended. I have said nothing of fencing, fall ploughing, ditching, and those many operations which crowd these latter months—as busy times, I think, as any in the year—while we are hurrying to get ready for the advent of the ice-bound king.

If, however, I should have drawn out a good smart passage of arms between the advocates of covering or surface manure, or those of any other agricultural theory, I shall not think that I have trespassed on your space in vain.

OLD-COUNTRY MAN.

Farming on the Yorkshire Wolds.

To the Editor.

SIR,—I am a farmer as well as a railway-contractor, and a constant reader of the CANADA FARMER. I am very fond of farming, as I was brought up on the Yorkshire wolds, on some of the largest farms, until I was about 20 years of age; then I started off on the railways, and have been connected with that business ever since. I am now in my 60th year, and continue to be very fond of farming. I follow the Yorkshire wold system. I farm 400 acres, and in the last three years I have expended \$23,000 in buildings, draining, fencing, and improving generally. This year I had the best crop in the county.

I have 30 acres in turnips, and I think I may challenge any farmer in the county to show a larger crop. I am feeding sheep on part of them, and expect to have a lot of 4s fine fat sheep for Christmas as any other farmer. I fold them on the turnips with sheep nets. I have a shepherd, and one of Messrs. Maxwell & Whitelaw's well known turnip cutter. I manured the land with 50 loads of barnyard manure per acre; then I drilled in 20 bushels of bone dust per acre along with the seed; the drill I had to send to England for as I could not get one in Canada. I am going to sow the turnip land in the spring with either wheat or barley, and seed down. If any of your readers can recommend a better plan for putting land into good order, and keeping it so, I should be very glad to hear of it. This is the way we used to farm in England on the Yorkshire wolds, and the land never gets poor, but always remains rich, and enables the English farmer to pay his annual rent of two pounds sterling and upwards per acre, and get rich at that; and I think I shall make money out of farming on the same principle. More another time.

JOHN FORSTER.

Cobourg, Oct. 30, 1871.

Cropping Burnt Land.

In answer to enquiries respecting restoring burnt land to its original fertility, we refer our correspondent to an article on the subject in the issue of the CANADA FARMER of February last. A valued contributor to this journal, who has had some experience with this trouble says:—In regard to the mode of treating badly burnt land and planting root crops thereon, we have always found that turnips thrive best after one crop of grain (followed by clover) had been taken from the land. I would recommend any one who has suffered by having the land deeply burnt over to sow barley, and seed down with plenty of clover, using several varieties—Alsike, Broad and Dutch. After harvesting the barley, allow the clover the following year to attain a height of 18 inches or two feet, and let it begin to ripen its seed, and then plough all under, being careful to bury the stalks thoroughly, but not all the heads. As soon as these heads are thoroughly dried, but not on any account sooner, harrow the land well, and sow wheat—fall wheat if possible. There will be an abundant crop of clover amongst this crop, to be again ploughed under in early spring. As soon as this second crop of clover attains a fair growth, plough it under; and turnips on this will be a successful crop. Burnt land, if badly injured, will not do for turnips the first year; but if only partially burnt, or but little injured, the turnip crop is the best that can be grown on some description of soils. If too much burnt clay results, the turnip plant does not thrive at first, and is checked too much.

Letters on the Weather.

No 1

To the Editor,

SIR,—Permit me, through the medium of your column, to address the farmers of Canada on a subject of the greatest interest to them. It would doubtless be to their advantage to know the general character of a season in advance. My object in this and following letters is to show that this as possible, and to enable anyone to form an approximate estimate of rainfall at least a year before-hand.

Ever since the invention of the telescope, spots of very large size, undergoing at times great changes, have been known to exist on the sun's surface; but it remained for Schwabe, a German, who still lives, to point out the fact that these spots are more numerous at some times than others; sometimes but very few spots break out during a year, then they gradually increase until they become very numerous, and having reached their maximum they decrease in number, and in about 10 or 11 years from the former minimum the sun is again seen free from spots.

Schwabe has been observing the sun for more than forty years, noting every day where new spots become visible, and we give the results of his observations in the following table.

A. D.	Days of no spots.	New Eruptions.
1826	22	118
1827	2	161
1828—MAX	0	296
1829	9	199
1830	1	170
1831	3	149
1832	19	84
1833—MIN	139	33
1834	129	51
1835	18	173
1836	0	272
1837—MAX	0	343
1838	0	282
1839	0	162
1840	3	152
1841	15	162
1842	64	63
1843—MIN	119	34
1844	111	52
1845	29	114
1846	1	157
1847	0	267
1848	0	238
1849	0	339
1850	2	186
1851	0	157
1852	2	125
1853	3	91
1854	65	67
1855	146	79
1856—MIN	193	34
1857	62	93
1858	0	188
1859	0	205
1860—MAX	0	211
1861	0	204
1862	3	160
1863	2	124
1864	4	180
1865	25	93
1866	..	..
1867—MIN	..	..
1868	..	..
1869	..	..
1870	..	..
1871—MAX	..	..

This table makes us acquainted with the following facts:

First. That sun spots are subject to a kind of periodical change.

Second. That the period is not a regular period.

Third. That the average interval from one maximum to the following one is about 11 years.

Fourth. That the maxima do not occur midway between the minima. This table shows that there have been sun spot maxima in the following years: 1829, 1837, 1848, 1860, 1871; and minima in 1833, 1844, 1856, and 1867.

There are very important coincidences between these dates and the general character of the weather of Ontario, as the records of the Toronto Observatory will plainly show, and I shall ask your attention to this point in my next.

NO. II.

To the Editor.

SIR, The records of the Toronto Observatory are of the utmost importance to us in our present enquiry. In 1840 it commenced its operations, and a faithful record of meteorological facts and changes have been kept and published from that time to the present. Amongst other things recorded is the quantity of rain which falls daily; the yearly total is given in the following table:

Year.	Toronto Rainfall	Year.	Toronto Rainfall
1840	28.539	1857	33.265
1841	37.979	1858	28.651
1842	32.790	1859	33.183
1843	33.545 Wet	1860	23.484 Dry
1844	19.440 Dry	1861	26.995
1845	22.435	1862	25.629
1846	32.355	1863	26.629
1847	33.560 Wet	1864	29.486
1848	22.285 Dry	1865	26.393
1849	32.216	1866	34.249 Wet
1850	28.439	1867	19.041 Dry
1851	20.875	1868	26.103
1852	31.345	1869	31.182
1853	23.560	1870	..
1854	27.765	1871	..
1855	31.603 Wet		
1856	21.503 Dry		

If we look through this table we shall see that the years 1844, 1856, and 1867, were unusually dry years, about 20 inches of rainfall, while the average is about 29.

Now, it is an interesting and an important fact that those years were the years in which the sun-spots reached their minimum (as may be seen from my last letter), and the possibility of a direct or indirect connection between sun-spots and rainfall at once suggests itself; it may be that sun-spots influence our rainfall, or that some common cause influences both, sun and earth, and causes this coincidence. Let us take another glance at this table: 1848 and 1860 were also dry, though not quite as dry as the ones we have been referring to, and it is a remarkable fact that those were the years in which the sun,

spots reached their maximum; and so we see that the dry years in the past have coincided either with *maximum* or a *minimum* of sun-spots.

Is this coincidence the work of chance? or is it the result of the operation of some general law? If the latter, this coincidence must have existed before our Observatory commenced its work, and it must also exist in the future. So I reasoned in 1869, and I have watched the result with some anxiety since.

NO. III.

To the Editor.

SIR,—In my last I showed that we have always had dry years at the period of sun-spot *maximum* and *minimum*; but if your readers will look over the table of rainfall, they will see that the year before the *dry year* has been invariably a *wet year*; so we have the same reason to expect a *wet year* just before the maximum or minimum of sun-spots, as we have to expect a *dry year* just at or rather closely following the turning point of sun-spots.

It was then natural for me to have thought in 1869, that as the sun-spots were expected to reach their maximum in the early part of 1871, that 1871 would be a dry year, not much above 20 inches at Toronto. But there was the same reason to expect a wet year in 1870; and from a survey of the past I thought it probable that 33 inches of rain would be the quantity at Toronto for that year. I stated this to some friends, and drew this as the quantity to be expected on a rough chart which still exists, and waited as patiently as I was able for the result. 1870 came, and with it came excess of rain. Our hay harvest was heavy, but saved with difficulty between the ever-recurring showers; our rivers were swollen to their highest point; and at the year's end the record of the Observatory showed a very wet year, more than 32 inches of rain. My prediction had been 33, so it was fulfilled to within a fraction of an inch.

Success inspired courage, and I published a series of letters in which I embodied a prediction that the year 1871 would be very dry, about 21 or 22 inches at Toronto. Having thus publicly stated that which the previous year had been only mentioned to friends, the reader will judge that I looked with great anxiety for the verdict of the present year in this case.

Now, 1871 has given its verdict, and it is this:

Dry weather, as a rule, throughout the year; a light hay crop in consequence; rivers and lakes unusually low, our lake lower than ever known before; fires on our prairies and in our woods; our cities and towns, like under, are burned to ashes; scarcity of water prevails everywhere, and a general prayer seems to ascend to heaven, "Let us have rain."

Our Observatory shows as yet (Oct. 25) only about 19 inches of rain. But on this subject you must hear from me again

OMICRON.

Over-feeding for Exhibition.

To the Editor.

SIR,—In a recent issue of your journal I had great pleasure in perusing an interesting and very sensible article by "A Subscriber to THE GLOBE," on the subject of over-fed animals contending for honours and prizes at our Agricultural Shows, and therein suggesting to those who are to serve as judges at our forthcoming annual exhibitions to exclude, as our cousins do on the other side of the lines, all animals intended for breeding purposes that shall have been *purposely over-fed* to hide deficiencies of points, or with the determination of taking a premium.

Now, Sir, upon casually glancing over such an article, an uninterested reader of it would at the time think it of little moment; but let me assure you that it is of the highest importance to breeders and to the agricultural community at large, that the advice and suggestions which your correspondent has so ably advanced should be thoroughly carried out.

As a breeder myself, of many years' standing, of every class of animal used upon the farm, both in the old country and in this, I can speak with certainty of the *pernicious* effect such a system generates, and of the urgent necessity of this mal-practice being effectually and for ever stamped out. Let the reform be commenced this fall by all judges who may be called upon to serve on committees at our numerous autumn fairs, and in a few years this necessary revolution will unquestionably be carried out, to the great benefit of all parties interested therein.

It is utterly impossible for any one not well posted in the matter to imagine the enormous annual loss this over-feeding of breeding animals entails upon breeders and the community at large. And does it not seem *retrograde in the extreme*, that after an experienced breeder has been at an enormous expense in importing first-class breeding animals, he should, by injudicious treatment of them, "destroy their pro-creativity, and thereby render them utterly useless for the very purpose for which they were imported. To meet seems incredible that any one can be induced to such folly for the sake of, in some instances, a miserable premium, or to gratify an ill-judged, inordinate and unprofitable ambition.

It is a well known fact to others, as well as to myself, that our shows are deprived of many first-class animals of every breed, because the owners thereof are determined not to ruin their stock by an injudicious forcing process, to enable them successfully to contend with other animals on exhibition, nor yet to entail on their exchequer a formidable and irretrievable loss.

It is not only with our cousins across the border that the revolution I have spoken of—of discarding all over-fed breeding animals as prize-takers at their shows—is carried out, for it has been practised for a length of

time past to some extent in the old country, breeders there having found it too costly to follow up that practice to the extent in fashion in years gone by, and are becoming very chary of indulging in it.

LEICESTERSHIRE.

Guelph Township.

Field, Road, and Dairy.

To the Editor.

SIR,—I have to thank your to me unknown correspondent for the information he has given me respecting the Sea Kale Beet. I would not cut it for the cows in the summer if I could avoid it; but I find the want of something to keep up the supply of milk about the beginning of August, as at that time cows will scarcely eat Indian corn if they can get any grass. I tried to get some seed last spring, but could not succeed, and any expense I will readily defray. If any of your readers have tried the Bokhara clover, I wish they would state the results in your columns. The caterpillars which attacked the leaves of my sugar beet have long since disappeared; they were not sufficiently numerous to do much harm, although the outside leaves of some of the beets have the appearance of a sieve, while a few of the common red beet, growing among them by chance, are scarcely touched. I should like to try the sugar beet again next year.

I noticed some time ago your remarks anent that annual farce, statute labour as at present performed, but I do not see how the farmers are to help themselves in this matter. The Municipal Assessment Act authorizes the Township Council to fix the amount of commutation at any rate not exceeding one dollar per day, ~~and that rate I believe it is generally fixed.~~ I have vainly tried to induce our township Council to appoint a road overseer, whose duty it should be to get the road lists from the township clerk, after revision of the assessment rolls, to take them round to the pathmasters, examine the beets, and direct them where to apply the statute labour; then go round again in August, by which time the work ought to be finished, and if it has in any way been neglected, report the offending pathmasters to the Council, to be dealt with according to the by-laws in that case made and provided. The truth seems to be that our councillors, like their betters in higher places, are afraid of offending those on whose votes they depend for continuance in office. I hope some member of the Legislative Assembly will, in the next session, move for an amendment in the Assessment Act, making commutation compulsory throughout the Province at the rate of fifty cents per day.

Your notice of the Devonshire cream is on the whole correct; but I must demur to the statement that the cream may be made into butter in a few minutes by stirring it about by hand in a smooth wooden bowl. It is the custom in Cornwall, as well as in Devonshire, to scald the milk; but in small dairies

the churn was never used. The butter was always made by stirring the cream by hand in a large wooden bowl; and I have seen the dairymaid sitting, not like patience on a monument smiling at grief, but on a wooden chair, and stirring away, in anything but a smiling mood, for many a long "hour by Shrewsbury clock," on a warm summer's day, before the butter would make its appearance. Still there is no good reason why a farmer's wife should not occasionally adopt the method in order to provide an extra delicacy for the table.

SARAWAK.

A Trip to Marmora.

To the Editor.

SIR,—Thinking that a few brief notes of a visit recently paid to the gold regions round Madoc may not be without interest, I jot down the result of such hurried observations as my limited opportunities enabled me to make.

After an interrupted journey, as usual, by the Grand Trunk as far as Belleville, I performed the rest of the journey by stage in about five hours. Madoc village has a forlorn appearance, as if it had seen better days. The land is terrible to think of ploughing. The disadvantages of "stumpy land" become quite insignificant by comparison with the masses of rock that everywhere meet the eye in this neighbourhood; yet much of this land was ploughed. A few fields less rocky and more attractive to the farmer, form exceptions to the general sterile character of the scene. The cattle, too, are miserable things. I should imagine there had not been an imported animal of any kind, except horses, ever taken into that section of the country. All are alike poor, scrubby, and ancient looking; such a breed as the old U. E. Loyalists in bygone days may have been supposed to have had; and there are numbers of these settlers here. In the morning I got a conveyance and drove ten miles to Marmora, over a tremendously rough road, and a country much inferior even to Madoc. On arriving at Marmora and the mines, a still wilder scene than the country I had left behind spread around me, characterized by wild upheavings of granite, dolomite and quartz rock. One lot in particular that I passed over presented one succession of enormous granite billows, acres and acres in extent, perfectly clear from dirt, and free from timber of any kind except in the little valleys that are formed between the enormous upheavings of granite. In these there is quite a dense mass of second growth, which effectually obscures all minerals, even if they exist.

One thing struck me as singular: All up the road and on scattered farms I saw many fields of Indian corn sowed broadcast for feed for stock. Every one, indeed, spoke well of it, and professed to be unable to do without it. The corn was sowed about the middle of May, at the rate of about one bushel an acre if sown broadcast; if planted in drills about 18 inches to 24 inches apart, less seed

will answer. Some preferred this plan, but the broadcast system seemed most in favour. Just now the pasture is all gone in the most favoured localities; but in these thin soils, with stone within a short distance of the surface almost everywhere, there can be no doubt of the great value of Indian corn sowed for fodder.

I am yet of opinion that there is a great future before that portion of Canada that possesses gold-bearing rock. The insane speculative *furor* is entirely dead, never again, I trust, to be revived; but there is no manner of doubt that gold in large and paying quantities exists, and will shortly be made a profitable investment for capital.

C. L.

Butter.

In reply to a correspondent from Grey county, we would say that factory butter in the New York market fetches as high a price, if not higher, than what comes from private dairies.

The only way for farmers to obtain the highest figures for their butter is simply to have it of the finest quality; sweet, uniform butter will always fetch full prices. Skill in handling, cleanliness, and the right kind of a cellar, will be sure to turn out the quality.

We have always advocated the establishment of butter factories, and believe that this co-operative system would secure, as in the case of cheese, a more uniformly good article, at less cost, than the private dairy can produce.

The Canada Farmer.

TORONTO, CANADA, NOV. 15, 1871.

Improved Agricultural Implements.

The farmers of Ontario are now fast falling into an appreciation of the double furrow plough. These implements seem a great success—one man and two heavy horses, or three lighter ones, doing as much work in a day as was formerly done by two men, two ploughs, and four horses. The saving of one man and one horse is an immense percentage on the cost of a year's work. The least cost of a man for the three summer months, during which time it may be fairly calculated the plough must be steadily used, cannot be reckoned at less than 80 cents a day, considering it to be intermitting work, liable to some stoppage from bad weather, and also that labour is always high during seed time, whether spring or fall. A horse and wear and tear of harness, is also something even on a farm, and costs at least 20 cents a day. The total amount thus saved would be \$70; in fact, it is more in reality than this sum, large as it seems. If you must keep six horses to get through the farm work in an ordinary manner, and if you can dispense with two, you in fact save not only the keep and cost of the horses during the three months the double furrow saves their work,

but you save their keep during the remainder of the year, one-half of which they may not be required at all, not to mention the depreciation in value, which is something very large each year, even if the animals are kept insured against sickness. This insurance, however, is rarely kept up, and when paid, still amounts to a considerable sum, and, moreover, does not include "wearing out" from old age or decreasing value from casual injuries or accidents, so that all these things, reckoned together, from a very serious item in farming operations.

The double furrow plough, therefore, seems a real boon to the farmer. At present the cost is great, as they are not yet extensively manufactured in Canada, and the cost of freight and duties adds about fifty per cent. to the value when laid down here. Our manufacturers will, however, shortly meet these difficulties, as they have met similar ones, and the probabilities are that we shall shortly see ploughs of equal excellence sold here in Ontario at two-thirds or even half the price of the imported article.

There is a vast number of excellent farming tools now made and sold in the Dominion, all of which save much labour and lighten the cost of farm manipulation. They are, to be sure, expensive to purchase; but they save so much in comparison with the old plan of operation that few ought to hesitate in investing in some of them every year. We would not advocate extensive indebtedness to obtain them, but certainly where a saving of thirty or forty per cent. on the cost of working a field can be secured by procuring the best implements to do it with, there seems to be a great inducement even to go moderately into debt. The great drawback to free expenditure in these implements arises not alone from the first purchase, but also from the subsequent wear, tear and decay. Say a farmer spends \$800 in thrashing, mowing, reaping and drilling machines, and these machines are worn out in eight years, there is the very heavy item of \$100 a year, and interest, absolutely sunk and lost. But to counterbalance that less you have the increased facilities with which your labour is performed, and if all were done without any of these appliances, the hundred dollars and interest annually would go a very little way indeed. Hence we may safely calculate on the advisability of procuring all the best farm implements we can, and our attention must be turned towards protecting them from injury and destruction from exposure. At the same time we must select from the great variety of tools those that will be likely to retain their utility the longest. We have several times brought the point of the durability of implements before the notice of our judges at our township and provincial fairs; and this point is a most important one, to be taken into consideration when awarding premiums, as will be readily seen by reflecting on the foregoing calculations.

Death of Mr. Robert Russell.

With feelings of profound regret we learn, from intelligence recently received from Scotland, of the decease of this eminent scientific and practical agriculturist, who has been suddenly taken away in the prime of life and the midst of his usefulness.

Mr. Russell has been favourably known for a number of years as an enlightened and advancing agriculturist, not only in Great Britain and her colonies, but likewise in the United States, and in those European countries where improved agriculture has commanded a share of public attention. On his former farm of Killwhiss he conducted experiments with discriminating care into the effects of various kinds of fertilizers on the more important farm crops, and by practical results, carefully obtained, threw much interesting and valuable light on this difficult and very important department of rural economy. He afterwards occupied, to the time of his lamented decease, the fine farm of Pilmuir, near Leven in Fife, and an extensive sheep-farm in the vicinity of Ben Lomond, on the estate of the Duke of Montrose.

Both by his extensive observations and practice as a farmer, and his numerous contributions to agricultural literature, Mr. Russell rendered important services to the recognition and advancement of improved systems of cultivation, having made for a number of years the subject of farm implements and machines, in their practical application to the various soils and the actual wants of farmers, a special study. The breeding and management of sheep; the culture and diseases of turnips; and other important matters belonging to agricultural practice, received at his hands persevering and systematic attention, which in several instances led to advantageous results.

In 1854 Mr. Russell paid a prolonged visit to Canada and the United States, and acted as a judge of agricultural implements at the Provincial Exhibition held in London. Having paid for several years special attention to Meteorology, he delivered, by invitation of Professor Menry, a course of lectures on his favourite science, at the Smithsonian Institute, in Washington. After returning home he prepared and published a large octavo volume, appropriately illustrated, on "*The Agriculture and Climate of North America*," a work abounding in much original and valuable matter, both practical and scientific, and which the late Professor McCulloch pronounced as the best work that had ever been produced on the subject of which it treats. Only a year or two ago he collected the most important papers which he had contributed to scientific literature, and condensed their matter in a work entitled "*The Science of the Weather*," which attracted much attention, and received the highest commendations from distinguished meteorologists. In

this his favourite science, as in matters agricultural, he was a deep and original thinker, and as a consequence his conclusions were not always in full accordance with current theories. Mr. Buchan, Secretary of the Scottish Meteorological Society, writes of him as the "greatest of recent meteorologists." Only a week or two before his death, apparently in excellent health, he attended the meeting of the *British Association for the Advancement of Science*, held in Edinburgh, and read an important paper on the subject of his favourite science.

Mr. Russell was editor for several years of the "*Transactions of the Highland Society*," to which he contributed several papers of permanent value, and he was also a Director of the same; and in this capacity rendered valuable services to his country. "The mere man of science, (remarks a correspondent of *The Farmer*) has little weight with the farmer when he leaves his sphere of study, and the want in Scotland has been felt, and is still becoming more so, that science will do little to benefit agriculture until it can be applied to men as conversant with practice as they are with science. Mr. Russell's writings have done much to explain the wants in this respect, and, as one of the pioneers, he has helped to clear the way for those who are to follow."

The writer of this imperfect sketch had the pleasure of making Mr. Russell's acquaintance during his visit to Canada, seventeen years ago. He has since been favoured with two opportunities of visiting him on his farms in Fife and the shores of Loch Lomond; and these he regards as amongst his most cherished reminiscences of the dear "old country." In private life our deceased friend was an example of those qualities of mind and heart which render home attractive and happy, and in public he was universally esteemed for modesty, intelligence and uprightness. He leaves a widow and a son to mourn his irreparable loss, who, with the other members of the family, have the consolation of knowing that under this very painful bereavement they have the deepest sympathy of a wide circle of sorrowing friends. *Requiescat in pace.*

THE MANITOBA PROVINCIAL EXHIBITION.

—This new portion of our Dominion held its first Agricultural Exhibition on the 4th and 5th of October. The success of the enterprise was somewhat marred by the general disturbance consequent on the recent Fenian raid, but nevertheless the show was a creditable one for so young a Province. The number of entries were about 500. Stock, agricultural products, and implements were all in some measure represented. This respectable beginning will, no doubt, be followed by annual exhibitions of increasing magnitude and excellence, keeping pace with a steady progress of the Province.

The Drainage Act.

A correspondent from Ancaster enquires about the terms of the Government Drainage Act, under the impression that there is provision in the said Act for granting aid to private individuals in draining their own lands. Our correspondent is mistaken as to the scope and intention of the Act referred to. The Government do not lend money to individuals for draining, but they can undertake the draining of tracts of swamp land, under certain conditions, and reimburse themselves for the outlay by an annual rent charge for twenty-two years on the land so improved.

We have already published a summary of the Ontario Drainage Act, as it is called, which provides that a sum not exceeding \$200,000 may be expended in draining swamp and flooded lands, to be surveyed and the draining contracted for under the supervision of the Commissioner of Agriculture and Public Works. The same Act gives the Commissioner power to cause obstructions to water courses to be removed, when the drainage system requires it, and to make compensation to the owners of mill-dams or other obstructions so removed.

Private individuals may, under permission of the Minister of Agriculture, construct at their own expense lateral drains to connect with main drains or water-courses that may have been constructed under the provisions of this Act.

The only other Act bearing on the subject is the Municipal Act of Upper Canada, 22 Victoria, cap. 54, (Consolidated Statutes U.C., page 593) which provides that the majority of resident owners of land may petition the Township Council for draining a section of land; such Council, if it appear to them necessary, may make provision for draining the same, and collect from the owners a proportionate payment. They may also remove obstructions to streams and natural water-courses, charging the owners of the property on which the obstructions exist with the expense.

Crop Reports.

The demands of the numerous exhibitions that have crowded together within the past few weeks have prevented an earlier notice of the crop returns that have been collected and published by the Grand Trunk and Great Western Railways. These are almost the only reports of the kind that we receive until after the interest and chief utility of such records are past; and though they are far from complete or accurate, they may be received as a fair indication of the harvest in those sections—and they are widely extended—to which they refer. When, moreover, there is a general uniformity and consistency in the various accounts transmitted from different localities, it may safely be inferred that the information is correct. Such has been peculiarly the case with the reports this year, and the general voice of the country will endorse the favourable statements that appear in these published documents.

From all parts of the country where fall wheat is grown (and the breadth of land sown with this crop has been unusually large), an almost unvarying account of a large yield is given—only 7 stations reporting it as under average, while 89 return it as above average. Spring wheat has experienced greater variation, and has turned out in some sections unfavourably, in consequence of the drought. Still, the proportion of the returns over average, or a good average, is larger than the season would seem to warrant. The same remark applies to barley and peas. Oats, however, with even fewer exceptions than fall wheat, have been reported as an unusually heavy crop. Hay has been generally light; yet, in some districts, even this crop is said to be exceedingly good. The statistics were collected almost too early in the year to be of much reliance in regard to root crops generally, with the exception, perhaps, of potatoes. These are variously estimated. In some places considerable complaint is made of the rot; and both the yield and the keeping quality of most sorts will, on the whole, be inferior to the product of average years. Very little is said about damage from the Colorado Potato Beetle. Hitherto this destructive insect seems to have inflicted far less injury than was anticipated. Farmers should not, however, on this account, allow their vigilance to slumber, or neglect any reasonable precautions against the incursions of next year's broods. Flax, in the few places where it is cultivated, appears to have done well. Amid the general favourable character of the reports, it is curious to note a singular exception, which we cannot help partly ascribing to the mood of the reporter, for the district around does not seem to have been less favoured than the country generally. If there is no mistake, Beamsville must be peculiarly unfortunate, for we are told that the average yield of "fall wheat is 3 bushels to the acre;" of spring wheat, 10; barley, light; hay, very light; while there is "abundance only of straw and oats."

The following tabular statement will give a general idea of the character of the returns. The country through which the Grand Trunk Railway passes is divided into districts as follows:—The Buffalo and Goderich District, embracing the country between Goderich and Fort Erie—The Western District, extending from Detroit to Weston—The Central District, from Toronto to Montreal—The Eastern District, including the tract of country between St. Lambert and Lachine. Besides these chief divisions, there are a few stations included in the Montreal and Champlain District, and the Richmond and Riviere du Loup Districts. The report of the Great Western Railway embraces the country lying along the main line from Windsor to Suspension Bridge. We have divided the returns under three heads, in regard to the average, which we set down—for fall wheat, at from 20 to 25 bushels to the acre; for spring wheat, from 15 to 20; for barley, from 20 to 25; for peas, from 20 to 25; and for oats, from 25 to 30 bushels per acre.

GRAND TRUNK CROP RETURNS.

BUFFALO AND GODERICH DISTRICT.

	Over Average	Average	Under Average
Fall Wheat	12	3	0
Spring Wheat	8	6	0
Barley	11	4	1
Peas	12	2	..
Oats	4	0	4
Roots	0	3	6
Hay			

WESTERN DISTRICT.

	Over Average	Average	Under Average
Fall Wheat	25	6	0
Spring Wheat	12	15	3
Barley	19	9	1
Peas	13	8	1
Oats	20	3	2
Roots	5	12	17
Hay	0	2	17

CENTRAL DISTRICT.

	Over Average	Average	Under Average
Fall Wheat	18	10	9
Spring Wheat	15	15	0
Barley	20	10	1
Peas	11	8	0
Oats	21	0	0
Roots	3	12	12
Hay	1	7	15

EASTERN DISTRICT.

	Over Average	Average	Under Average
Fall Wheat	8	0	1
Spring Wheat	14	12	3
Barley	11	10	3
Peas	10	8	1
Oats	19	7	1
Roots	1	22	2
Hay	1	7	10

MONTREAL AND CHAMPLAIN—RICHMOND AND RIVIERE DU LOUP.

	Over Average	Average	Under Average
Spring Wheat	8	7	4
Barley	7	10	1
Oats	13	5	0
Potatoes	1	9	5
Hay	9	3	2

GREAT WESTERN CROP REPORT.

	Over Average	Average	Under Average
Fall Wheat	26	20	4
Spring Wheat	19	20	9
Barley	18	24	2
Peas	21	18	1
Oats	25	17	3
Roots	0	30	7
Hay	0	12	15

The Sugar Beet.

Wherever this root has been grown during the past season, it has proved itself quite equal to the mangel for hardness and safety against drought; and even although the bulk may not be so great, the quality of the root makes up for that deficiency. It has stood the summer frosts well, is even now growing rapidly, and does not appear to have been checked by the autumnal frosts; and in one place, where it was sown as late as the first of July as an experiment, and then did not come up for a long time owing to the drought, the plants are doing well, and bid fair to come to maturity. We shall know more of this, however, in a short time.

Public attention has been thoroughly roused to the advantages of the production of sugar from this root, and in the course of a few weeks we hope to have for our readers a plan for its manufacture, which will come within the means of most farmers who are cultivating land on a tolerably large scale. The experiments with this year's roots are progressing satisfactorily, and our correspondent "Vectis" has no doubt of a gratifying and encouraging amount of success.

A Canadian Manual of Horticulture.

We have received from the publishers, James Campbell & Son, advance specimen sheets of a forthcoming work on horticulture, by D. W. Boodle, of St. Catharines, and it is with great pleasure and confidence that we bespeak public attention to this much needed and very valuable addition to our young Canadian literature. The qualifications of the author for the task he has undertaken are an ample guarantee for the excellence of the work. His long, practical acquaintance with the subject in all its branches, his constant intercourse with the foremost horticulturists in this country and in the United States, as well as in Great Britain, and the experience gained from his connection with the press, give him peculiar fitness for the office of a teacher and a guide in Canadian horticulture.

There are many excellent manuals for the gardener, but hitherto no work on the subject has been published by a Canadian, and the special value of the forthcoming volume is derived from the fact that it is written by one who has spent the greater part of his life in this country, and has for many years been practically familiar with the peculiarities and difficulties of our own soil and climate, and is therefore well acquainted with the peculiar position and wants of the Canadian cultivator.

The title of the new publication is the "Canadian Fruit, Flower and Kitchen Gardener," a title which correctly indicates the general scope and arrangement of the work. It is adorned with three beautiful coloured engravings, appropriate to each of the principal departments of which it treats, and is

throughout profusely illustrated with explanatory wood cuts, which are accurately and clearly executed.

The following brief summary of the contents will give a fair idea of the full and practical information, and the varied range of subjects, which the work will embrace. Under the first part—or the Fruit Garden—are chapters on the propagation of fruit trees (including grafting and budding), pruning, transplanting, mulching, treatment of young orchards, location of an orchard, injurious insects, and the production of new varieties; then follow chapters on individual fruit adapted to this climate, with special attention to the cultivation of the goose-bath

the open air and under glass. In the second part, all the vegetables which can be successfully grown in Canada come under notice. They are arranged in alphabetical order, and all requisite information is given concisely but fully for the cultivation of each. The third section—The Flower Garden—treats of the more strictly ornamental department of Canadian horticulture in the following order: Hardy flowering shrubs, hardy climbing shrubs, hardy herbaceous flowers, bedding plants, annuals, and roses.

We shall look with much interest for the completion of the work and its speedy publication, and cordially recommend it to all Canadians who love a garden, and who would be aided in its cultivation by the ripe experience of a thoroughly practical and accomplished horticulturist, who is at the same time a fellow countryman.

Notes on the Weather.

We have again to record another month of extraordinary drought, one terrible consequence of which all the world has long since learnt with mingled consternation and generous sympathy. "The awful catastrophe that has laid in ashes one of the finest cities on this continent has no doubt been greatly aggravated, if not in large measure brought on by the excessive dryness of the season." Certainly the more extensive, and, so far as human lives are concerned, more fatal fires in Michigan, are altogether attributable to this cause, and our own fair Provinces have been visited with no inconsiderable share of similar calamities. Bush fires have prevailed to an unprecedented extent, have approached nearer to towns, and settled districts; and have caused a large amount of destruction not only to native timber but to farm fences, buildings, crops, stock, and even human lives, though we have much cause to be thankful that in this respect our losses have been small indeed in comparison with those of our neighbours.

Amid the widespread misery which these calamities have inflicted, it is pleasing to note the warm and active sympathy which has been evoked, and the liberal aid that has poured in from all quarters to the relief of the unfortunate sufferers.

Another good result that ought to follow so fearful a lesson is a better state of preparation within cities and isolated homesteads against such terrible liabilities. Public attention having been so tragically roused to the importance of the subject, it is to be hoped that improvements and better safeguards will be introduced in the construction of buildings, in the supply and modes of utilizing water, or even more effective means for extinguishing fires, and greater care be generally exercised to avoid the neglect or other culpable causes to which these calamities so often owe their origin.

The farm operations of the last month have been generally disappointing, but ploughing—with which the dry season has considerably interfered—and the usual preparations for the coming winter. The temperature has been for the most part moderate, and the season altogether, independent of the excessive drought, a pleasant one.

The following is the report from the Toronto Observatory of the meteorological conditions during the month of October:

The mean temperature of the month was 48.4, being 2.8 warmer than the average, and 1.6 colder than October, 1870. The highest temperature was 72.2, which occurred on the 22nd, and the lowest 25.6, on the 31st. The warmest day, the 5th, average 56.7, being 7° warmer than the average; and the coldest, the 7th, 39.0, being 10° below.

The amount of sky-clouded exceeds the average as 7 is to 6, and the proportion may be placed as 15 cloudy and 16 partially so.

The amount of rainfall again falls far short of the usual quantity, and although divided over 12 days, only amounts to a little over an inch—little more than one-third of the usual rain-fall for October. In last month's report, the difference from average of the rain-fall was inadvertently understated. Instead of one-half the amount of the rain-fall of September, 1870, it should have been set down as about one-fifth; the relative numbers being, September, 1870, 6.794; September, 1871, 1.290.

The prevailing winds have been W. and S. W., and the average velocity about 2 miles per hour greater than the average. Gales of wind from the W., on the 6th, 15th, 19th, 25th, and 28th, when the velocity of the wind was respectively 11, 15, 17, 15 and 12 miles per hour.

Literary Notices.

OUR CHICAGO EXCHANGES.—Among the consequences and reminders of the dire calamity that has befallen the Queen-City of the West, has been the temporary suspension of two of the most valuable agricultural journals, which we have been glad to welcome among our exchanges ever since the CANADA FARMER was first started. One of them, the *Prairie Farmer*, has reappeared, in greatly diminished size, truly, but with every promise of speedily resuming its former

dimensions, and taking rank again with the best agricultural papers of the day. The other, the *Western Rural*, has not yet reached us, but we feel sure so excellent a journal, which must have become indispensable to so many homes in the West, cannot be allowed to be thus suddenly cut off in its prosperous career. Like its contemporary, it will, we are confident, emerge with unabated vigour and new life. After publication, not less esteemed though not so old an acquaintance has been temporarily interrupted by the emigration of the *National Live Stock Journal*, the October number of which has just reached us. The issue, the first impression having been totally destroyed in the fire. This is an admirable periodical, devoted particularly to the department of live stock, and was well and very favourably known to all the principal breeders and others interested in improved stock in Canada as well as in the States. All such account it an indispensable source of intelligence in its special sphere. We put the highest value on all these journals, and the proprietors have our cordial sympathy and best wishes in the work before them. Old subscribers will no doubt promptly renew their subscriptions, and many new friends will be added to the large number which these excellent journals have heretofore counted among their warm and steady supporters.

WHAT I KNOW OF FARMING.—The series of articles under this head, which first appeared in the *New York Tribune*, and was extensively copied by the agricultural press of this continent, has now been collected and published in a separate issue, the work forming a small pamphlet of nearly 200 pages. What Horace Greeley writes is almost sure to be interesting and readable, and it is small praise, and only part of what is due to the ability displayed in this unpretentious production, to say that there is much in it of practical wisdom, put in a clear and forcible manner; and even the experienced farmer will find in it material for thought abundantly sufficient to repay its perusal. The pamphlet is issued by the Canadian News and Publishing Company, Toronto.

ATWOOD'S COUNTRY AND SUBURBAN HOUSES.—Among the many valuable works which have been published by the enterprising firm of Orange Judd & Co., few will be more welcome to the rural community than this cheap, concise, and thoroughly practical treatise on country architecture. The work is a small octavo of nearly 300 pages, on good paper, well printed, and profusely illustrated in a neat and perspicuous style. The first half of the work is devoted to the principles and details of building generally, and in the remaining portion are given a great number of very pleasing designs for country houses, with all necessary drawings and specifications briefly set down, but with sufficient clearness to enable any practical builder to erect a house according to any of the plans. The author, D. T. Atwood, is an architect of considerable repute, and the work is characterized throughout by scientific acquaintance with the subject, combined with good sense and good taste. We commend it especially to that large class in any community whose means are only moderate, and who desire to erect comfortable but inexpensive dwellings.

Agricultural Intelligence.

Award of Prizes at the Provincial Exhibition, 1871.

HORSES.

CLASS 1.—BLOOD HORSES.

22 ENTRIES.

JUDGES.—Messrs. N. Ray, Whitby; John Clark, Ottawa; and T. Shenick, Brampton.

Stallion, thorough-bred, 4 years old and upwards, 1st prize, John Shedden, Toronto, "Thunder,"	\$36 00
2nd do, James White, Trafalgar, "Terror,"	26 00
3rd do, G. S. Herchimer, Kingston, "Roscoe,"	16 00
Stallion, 3 years old, 1st prize, John Shedden, Montreal "Jack Falstaff,"	21 00
2nd do, James Lawrence, Bradford, "Young Huper,"	14 00
Stallion, 2 years old, John Shedden, Toronto, "Nonlander,"	15 00
Colt, yearling, 1st prize, John Shedden,	10 00
Stallion, thorough-bred, of any age, John Shedden, "Nonlander," Diploma.	
Mare and foal, or satisfactory evidence that a foal has been raised this season, John Shedden, "Julia Adams,"	21 00

CLASS 2.—ROAD OR CARRIAGE HORSES.

266 ENTRIES.

JUDGES.—Messrs. Benjamin Gilbert, Belleville; H. D. Smith, Clearville; J. H. Price, Welland; J. S. Clark, St. Catharines; A. K. Scholfield.

Roadster or carriage stallion, best, 4 years old and upwards, C. J. Buckland, Guelph,	\$40 00
2nd do, John Clark, Nepean	30 00
3rd do, M. Herrington, Ameliasburgh.	20 00
Best yearling, P. Lazier, Hallockville	24 00
2nd do, J. S. Hagerman, Sterling.	18 00
3rd do, J. A. Grant, Richmond.	12 00
Best do, 2 years old, Simon Beattie, Bangor, imported November, 1870.	63 00
2nd do, Isaac Carruthers, Thistleton.	14 00
3rd do, M. Jarrett, Pine Grove.	7 00
Best yearling Colt, Ezra Hall, Clarke	12 00
2nd do, Lake & Fraser, Fredericksburgh.	9 00
Stallion, best, of any age, Simon Beattie, Bangor	Diploma.
French Canadian stallion, best, W. Robertson, Dalkeith	36 00
2nd do, J. Hickson, St. Paul, Montreal	24 00
3rd do, C. Spelman, Kingston.	12 00
Roadster or carriage filly, best 3 years old, D. Campbell, Gwillimbury	20 00
2nd do, J. McCutcheon, Leeds	15 00
3rd do, Lake & Fraser, Fredericksburgh.	10 00
Filly, best 2 years old, W. M. Smith, Burford	15 00
2nd do, S. K. Miller, Bath.	10 00
3rd do, J. Nimmo, Camden Fast	7 00
Filly, best yearling, Silas Lake, Ernestown	10 00
2nd do, J. C. Hawley, Fredericksburg.	8 00
Mare and foal, best brood, or evidence of having raised a foal, Lake & Fraser, Fredericksburg.	24 00
2nd do, Allan Caven, Picton.	16 00
Best pair of matched carriage horses (geldings or mares) 16 hands and over, 1st prize, Lake & Fraser, Fredericksburg.	25 00
2nd do, Wm. Miller, Napance.	20 00
3rd do, D. J. Wagner, Kingston Tp.	15 00
Pair matched driving or roadster horses (geldings or mares,) under 16 hands, 1st prize, Wm. Jones, Belleville	25 00
2nd do, John Spooner, Kingston.	20 00

3rd do, D. Roblin, Sydney.	15 00
Single carriage horse (gelding or mare) in harness, 1st prize, Peter Amey, Napance	15 00
2nd do, Folger Bros., Kingston	12 00
3rd do, J. Atcheson, Smith's Falls.	8 00
Saddle horse, (gelding or mare,) 1st prize, John Duff, Kingston.	15 00
2nd do, Dr. A. Smith, Toronto.	12 00
3rd do, W. M. Aylesworth, Ernestown.	8 00

EXTRA.—Richard Hadden, Picton, pair of Shetland Ponies, \$2; Jos. Hickson, St. Paul, Shetland stallion, \$2.

CLASS 3.—AGRICULTURAL HORSES.

103 ENTRIES.

JUDGES.—Messrs. Isaac Harris, Caledon; James Beith, Bowmanville; John Warrilow, Owen Sound; Hugh Stewart, Willow Grove.

Stallion, for agricultural purposes, 4 years old and upwards, 1st prize, John Clarke, Nepean	\$40 00
2nd do, H. & R. Beith, Darlington	30 00
3rd do, Jacob Brillinger, Richmond Hill	20 00
Stallion, 3 years old, 1st prize, Joseph Smith, Etobicoke	21 00
2nd do, J. R. Todd, Derby.	18 00
3rd do, R. Shaw, Darlington.	12 00
Stallion, 2 years old, 1st prize, Asa Choate, Port Hope	21 00
2nd do, Neil Smith, sen., Darlington.	11 00
3rd do, Wm. Johnston, Thurlow.	7 00
Colt, yearling, 1st prize, J. J. Davidson, Pickering	10 00
Filly, 3 years old, 1st prize, S. K. Miller, Bath.	18 00
2nd do, John Marks, Portsmouth.	11 00
3rd do, Angus Shaw, Portsmouth.	7 00
Filly, 2 years old, 1st prize, Geo. Miller, Markham	14 00
2nd do, Silas Inch, Whitby	9 00
3rd do, S. K. Miller, Bath.	5 00
Filly, yearling, 1st prize, Neil Taylor, Clarke	8 00
2nd do, D. McConnachie, Clarke.	6 00
3rd do, D. McConnachie, Clarke.	4 00
Mare, brood, and foal, or evidence that a foal has been raised, 1st prize, D. McConnachie, Clarke.	21 00
2nd do, John Johnston, Kingston tp.	14 00
3rd do, Robert Orr, Glenburnie.	7 00
Best span matched farm team (geldings or mares) in harness, W. M. Aylesworth, Ernestown.	20 00
2nd do, H. M. Wright, Napance Mills.	15 00
Sweepstakes—best agricultural stallion, of any age, Joseph Smith, Etobicoke, Diploma and	50 00

CLASS 4.—HEAVY DRAUGHT HORSES.

74 ENTRIES.

JUDGES.—A. J. Grant, Williamstown; Thos. Drury, Barrie; John Clark, Nepean; J. H. Stull, Grantham; and Geo. Heck, Prescott.

Stallion, heavy draught, 4 years old and upwards, 1st prize, G. S. Shaw, Bowmanville, imported 1871.	\$120 00
2nd do, Simon Beattie, Bangor	30 00
3rd do, Robert Ferris, Richmond Hill.	20 00
Stallion, 3 years old, 1st prize, Robert Ferris, Richmond Hill.	24 00
2nd do, J. Porter, Oshawa.	18 00
3rd do, John Miller, Brougham.	12 00
Stallion, 2 years old, 1st prize, A. W. Farewell, Whitby, imported 1871.	63 00
2nd do, John Oke, Darlington.	14 00
3rd do, John Shedden, Toronto.	7 00
Colt, yearling, 1st prize, H. & R. Beith, Darlington.	12 00
2nd do, J. J. Davidson, Pickering.	9 00
Stallion, draught, any age, 1st prize, Robert Ferris, Richmond Hill.	Diploma.
Filly, 3 years old, 1st prize, J. J. Davidson, Pickering.	20 00
2nd do, John Miller, Brougham.	15 00
3rd do, Thos. Irving, Rockfield.	10 00

Filly, 2 years old, 1st prize, Geo. Miller, Markham, "Kitty Fisher"	15 00
Filly, yearling, 1st prize, H. & R. Beith, Darlington	10 00
2nd do, John Shedden, Toronto.	8 00
3rd do, Thos. Irving, Rockfield.	6 00
Brood mare and foal, or evidence that a foal has been raised, 1st prize, John Shedden, Toronto.	24 00
2nd do, John Shedden, Toronto.	16 00
3rd do, P. McCallum, Pittsburgh.	8 00

CATTLE.

CLASS 5.—THE PRINCE OF WALES' PRIZE.

8 ENTRIES.

JUDGES.—James Vine, St. Catharines; Robert Garbutt, Belleville; David Lawrence, Brampton; Frank Wyatt, St. Catharines, and A. E. McCrae, Glen Nevis.

For the best short-horn bull, and five of his calves under 1 year old, the calves to be the property of the exhibitor or any other person or persons. Prize presented by His Royal Highness, the Prince of Wales, J. Snell & Sons, Edmonton, "Louden Duke," and five calves \$60 00

CLASS 6.—DURHAMS.

149 ENTRIES.

JUDGES.—Joseph Kirby, Milton; Robert Ward, Port Hope; G. W. Miller, Homer; and N. H. Pauling, Port Dalhousie

Bull, 4 years old and upwards, 1st prize, J. Snell & Sons, Edmonton, "Louden Duke,"	\$40 00
2nd do, John Miller, Brougham, "Oxford Mazurka,"	30 00
3rd do, F. W. Stone, Guelph, "The Knight of Canada,"	20 00
3 years old bull, 1st prize, John Miller, Brougham, "Fawsley Chief,"	40 00
2nd do, Simon Beattie, Bangor, "Lord York,"	30 00
3rd do, F. W. Stone, Guelph, "Grand Duke of Cambridge"	20 00
2 years old bull, 1st prize, George Miller, Markham, "Forest Duke,"	40 00
2nd do, J. J. Davidson, Pickering, "Statesman"	30 00
3rd do, George Purvis, Arnprior, "Telegram,"	20 00
1 year old bull, 1st prize, J. Snell & Sons, Edmonton, "Joe Johnson,"	25 00
2nd do, John Bellwood, Newcastle, "Louden Prince,"	20 00
3rd do, George Miller, Markham, "Captain Massey,"	15 00
Bull calf, (under 1 year), 1st prize, J. Snell & Son, Edmonton, "Gladstone,"	20 00
2nd do, J. Snell & Son, Edmonton, "Marquis of Lorne,"	15 00
3rd do, John Miller, Brougham, "Fawsley's Dipthong,"	10 00
Bull of any age, 1st prize, John Miller, "Fawsley Chief,"	Diploma.
Cow, 1st prize, John Miller, Brougham, "Cherry Bloom,"	30 00
2nd do, John Miller, Brougham, "Nelly Bly 2nd,"	22 00
3rd do, F. W. Stone, Guelph, Isabella 12th,"	15 00
3 years old Cow, 1st prize, F. W. Stone, Guelph, "Sanspareil 15th,"	25 00
2nd do, George Miller, Markham, "Christmas Eve,"	20 00
3rd do, George Miller, Markham, "Necklace"	15 00
2 years old heifer, 1st prize, John Miller, Brougham, "Lady Julia 2nd,"	20 00
2nd do, George Miller, Markham, "Lady Bell,"	15 00
3rd do, F. W. Stone, Guelph, "Sanspareil 16th,"	10 00

J. Snell & Sons, Edmonton..... Commended.
 One year old heifer, 1st prize, J. Snell & Son, Edmonton, "Rosa Bonheur," 16 00
 2nd do, John Miller, Brougham, "Lady Oxford," 12 00
 3rd do, J. Snell & Sons, Edmonton, "Blanche Bertrand," 8 00
 Heifer calf, (under one year), 1st prize, J. Snell & Son, Edmonton, "Crimson Rosebud," 16 00
 2nd do, George Miller, Markham, "Necklace 6th," 12 00
 3rd do, F. W. Stone, Guelph, "Cambridge 13th," 8 00
 Herd of Durham Cattle, consisting of one bull and five females, of any age or ages, 1st prize, John Miller, Brougham 40 00
 Herd of Durham Cattle, consisting of one bull and five females, of any age, bred and owned by the exhibitor, 1st prize, J. Snell & Sons, Edmonton, 50 00

CLASS 7.—HEREFORDS.
 24 ENTRIES.

JUDGES.—Mr. John Scott, Seneca; Mr. Martin Johnson, Barrie.
 Bull, 4 years old and upwards, 1st prize, F. W. Stone, Guelph, "Sir Charles," \$35 00
 Bull, 3 years old, 1st prize, F. W. Stone, Guelph, "Commander-in-chief," 35 00
 Bull, 2 years old, 1st prize, F. W. Stone, Guelph, "Second Moreton Hero," 30 00
 Bull calf, under one year, 1st prize, F. W. Stone, Guelph, 20 00
 2nd do, F. W. Stone, Guelph, 15 00
 Bull, of any age, 1st prize, F. W. Stone, Guelph, "Sir Charles," Diploma.
 Cow, 1st prize, F. W. Stone, Guelph, "Graceful 2nd," 25 00
 2nd do, F. W. Stone, Guelph, "Vesta 4th," 20 00
 3rd do, F. W. Stone, Guelph, "Bonnie Lass," 15 00
 Cow, 3 years old, 1st prize, F. W. Stone, Guelph, "Bonnie Lass 5th," 25 00
 2nd do, F. W. Stone, Guelph, "Graceful 4th," 20 00
 Heifer, 2 years old, 1st prize, F. W. Stone, Guelph, "Baroness 7th," 20 00
 2nd do, F. W. Stone, Guelph, "Vesta 5th," 15 00
 Heifer, 1 year old, 1st prize, F. W. Stone, Guelph, "Graceful 5th," 15 00
 2nd do, F. W. Stone, Guelph, "Bonnie Lass 6th," 10 00
 Heifer Calf, under 1 year, 1st prize, F. W. Stone, Guelph, "Graceful 7th," 12 00
 2nd do, F. W. Stone, Guelph, "Graceful 8th," 8 00
 3rd do, F. W. Stone, Guelph, "Peach 3rd," 6 00
 Herd of Herefords, consisting of one bull and five females, of any age or ages, 1st prize, F. W. Stone, Guelph. 30 00

CLASS 8.—DEVONS.
 78 ENTRIES.

JUDGES.—J. J. Watson, Adolphustown; John Randall, Newmarket; W. English, Rondeau; Thomas Stock, Waterdown.
 Bull, 4 years old and upwards, 1st prize, W. & L. Courtice, Bowmanville, "Wilmot," \$35 00
 2nd do, Nathan Choate, Hope, "Prince Arthur," 25 00
 3rd do, R. Spooner, Kingston township, "Sultan," 15 00
 Three years old bull, 1st prize, R. Spooner, Kingston township, "Commodore," 35 00
 Two years old bull, 1st prize, Jas. Patton, Scarboro', "Young Duke of Devon," 30 00
 2nd do, R. D. Foley, Bowmanville, "Comet," 20 00
 3rd do, Nathan Choate, Hope, "Pilot," 10 00

One year old bull, 1st prize, G. G. Mann, Bowmanville, "Prince Arthur," 25 00
 2nd do, R. Foley, Darlington, "Sir Gilbert," 15 00
 3rd do, N. Choate, Hope, "Sampson," 10 00
 Bull calf (under one year), 1st prize, G. G. Mann, Bowmanville, "Bismark" 20 00
 2nd do, H. H. Spencer, Whitby, "Earl of Leicester," 15 00
 3rd do, Nathan Choate, Hope, "Duke," 10 00
 Bull of any age, W. & L. Courtice, Bowmanville..... Diploma.
 Cow, 1st prize, G. G. Mann, Bowmanville, "Duchess," 25 00
 2nd do, Nathan Choate, Hope, "Princess," 20 00
 3rd do, H. H. Spencer, Whitby, "Marion," 15 00
 Three years old cow, 1st prize, G. G. Mann, Bowmanville, "Gipsy," 25 00
 2nd do, N. Choate, Hope, "Rose," 20 00
 3rd do, do, do, "Maud," 15 00
 Two years old heifer, 1st prize, G. G. Mann, Bowmanville, "Princess Royal" 20 00
 2nd do, N. Choate, Hope, "Daisy," 15 00
 3rd do, R. Foley, Darlington, "Fairy Bell," 10 00
 One year old heifer, 1st prize, W. & L. Courtice, Bowmanville, "Queen Ann" 15 00
 2nd do, R. Foley, Darlington, "Bell," 10 00
 3rd do, do, do, "Jane Ann," 8 00
 Heifer calf (under one year), R. Foley, Darlington, "Beauty," 12 00
 2nd do, G. G. Mann, Bowmanville, "Maude," 8 00
 3rd do, N. Choate, Hope, "Rosebud," 6 00
 Herd of Devon cattle, consisting of one bull and five females, of any age or ages, 1st prize, G. G. Mann, Bowmanville. 30 00

CLASS 9.—AYRSHIRES.
 235 ENTRIES.

JUDGES. J. W. Hough, Fairfield East; John Pratt, Cobourg; J. S. Torrance, Porter's Hill; John Richardson, St. Catharines; and J. D. Servos, Virgil.
 Bull, 4 years old and upwards, 1st prize, Thomas Irving, Rockfield, "Robbie Burns," \$35 00
 2nd do, James Laurie, Malvern, "Arondale Farmer," 25 00
 3rd do, W. H. Wallbridge, Belleville, "Dominion," 15 00
 Bull, 3 years old, 1st prize, Thomas Thompson & Son, Williamsburg, "Crown Prince," 35 00
 2nd do, Thos. Patterson, Scarboro', "St. Andrew," 25 00
 3rd do, Hugh Macaugherty, Pittsburgh, "Jeff 2nd," 15 00
 Wm. Rodden, Plantagenet, "Prince Arthur," overlooked, highly commended, special 1st prize, 35 00
 Bull, 2 years old, 1st prize, Thomas Thompson & Son, Williamsburg, "Sir Colin," 30 00
 2nd do, Thos. Thompson & Son, Williamsburg, "Highland Chief," 20 00
 3rd do, Geo. Morton, Kingston, "Bruce," 10 00
 Bull, 1 year old, 1st prize, Thos. Guy, Oshawa, "Lord Lisgar," 25 00
 2nd do, do, do, "Comet," 15 00
 3rd do, Brodie, Son, & Converse, Belleville, "Woodville Chief," 10 00
 Calf, under 1 year old, 1st prize, T. Irving, Rockfield, "Sir William," 20 00
 2nd do, Thos. Thompson & Son, Williamsburg, "Robbie Burns," 15 00
 3rd do, Geo. Morton, Kingston, "Billy," 10 00
 Bull of any age, J. P. Wheeler, Woburn Diploma.
 Cow of any age, 1st prize, Thos. Irving, Rockfield, "Mountain Maid," 25 00
 2nd do, Thos. Guy, Oshawa, "Cherry," 20 00

3rd do, Thos. Thompson & Son, Williamsburgh, "Diamond," 15 00
 Cow, 3 years old, 1st prize, Jos. Yuill, Ramsay, "Grieg," 25 00
 2nd do, Thos. Thompson & Son, Williamsburgh, "Rosie 2nd," 20 00
 3rd do, James Laurie, Malvern, "Black Eye," 15 00
 Heifer, 2 years old, 1st prize, Thomas Irving, Rockfield, "Stately," 20 00
 2nd do, do, do, "Louise," 15 00
 3rd do, Thos. Guy, Oshawa, "Cora," 10 00
 Heifer, 1 year old, 1st prize, Thos. Guy, Oshawa, "Verbena," 15 00
 2nd do, Brodie, Son & Converse, Belleville, "Lady Mary," 10 00
 3rd do, Thos. Irving, Rockfield, "Annie," 8 00
 Heifer calf, under 1 year, 1st prize, Thos. Irving, Rockfield, "Mary Ann," 12 00
 2nd do, Thos. Guy, Oshawa, "Jessie Graham," 8 00
 3rd do, do, do, "Dominion Girl," 6 00
 Herd of Ayrshire cattle, consisting of one bull and five females, of any age or ages, 1st prize, Thomas Irving, Rockfield..... 30 00
 Thomas Guy, Oshawa, Highly Commended.

EXTRAS.

W. L. Rutherford, Waddington, N. Y., Herd Jersey cattle, \$20; Moses Ellis, Waddington, N. Y., Herd Jersey cattle, \$20.

CLASS 10.—GALLOWAYS.
 47 ENTRIES.

JUDGES.—Messrs. C. W. Huffman, Bath; John Underwood, Cobourg; Jacob Spears, Owen Sound.
 Bull, 4 years old and upwards, 1st prize, Wm. Hood, Guelph, "Our John," \$32 00
 Bull, 3 years old, 1st prize, Thos. McCrae, Guelph, "Black Prince," 32 00
 Bull, 2 years old, 1st prize, Wm. Hood, Guelph, "Robin," 25 00
 Bull, 1 year old, 1st prize, Arthur McNeil, Vaughan, "Rodger," 22 00
 2nd do, do, do, "Jim," 15 00
 3rd do, Thos. McCrae, Guelph, "King Tom," 9 00
 Bull Calf, under 1 year, 1st prize, Arthur McNeil, Vaughan..... 17 00
 2nd do, Thos. McCrae, Guelph, "Waverley," 12 00
 Bull of any age, Wm. Hood, Guelph..... Diploma
 Cow, 1st prize, Arthur McNeil, Vaughan, "Lizzie," 22 00
 2nd do, Thos. McCrae, Guelph, "Lady Kenmore," 17 00
 3rd do, Wm. Hood, Guelph, "Nellie Gray," 12 00
 Cow, 3 years old, 1st prize, Wm. Hood, Guelph, "Mary," 22 00
 2nd do, Thos. McCrae, Guelph, "Mary Hay," 17 00
 Heifer, 2 years old, 1st prize, Wm. Hood, Guelph, "Nina," 18 00
 2nd do, Thos. McCrae, Guelph, "Maggie Laidlaw," 14 00
 3rd do, Wm. Hood, Guelph, "Black Bess," 10 00
 Heifer, 1 year old, 1st prize, Wm. Hood, Guelph, "Topsy Wopsey," 14 00
 2nd do, Thos. McCrae, Guelph, "Lady Heron," 11 00
 3rd do, Wm. Hood, Guelph, "Gipsy Queen," 8 00
 Heifer calf, under 1 year, 1st prize, Wm. Hood, Guelph, "Queen of Beauty," 12 00
 2nd do, Arthur McNeil, Vaughan, "Fancy," 8 00
 3rd do, Wm. Hood, Guelph, "Belle Mahone," 6 00
 Best herd Galloways, consisting of one bull and five females of any age or ages, Wm. Hood, Guelph..... 25 00
 Arthur McNeil, Vaughan..... Commended

CLASS 11—GRADE CATTLE.

JUDGES.—Messrs. James Ludlow, Guelph; William Elliott, Tweed; William Dickenson, Otter Creek; D. Broderick, Louth; Booth, Farnfield.

CLASS 12—FAT AND WORKING CATTLE.

JUDGES.—Messrs. Thomas Andrews, Richmond; James Vine, St. Catharines; and John Geale, Kingston.

SHEEP, LONG-WOOLLED.

JUDGES.—Messrs. Thos. Crawford, Widdow; Thos. McCrea, Guelph; and Geo. Kenney, Aylmer.

Pen of Cotswolds, consisting of three ewes and two ewe lambs, F. W. Stone, Guelph.

CLASS 14—LEICESTERS.

JUDGES.—Messrs. Hugh Shields, Matilda; Wm. Tindale, Niagara; H. J. Brown, Niagara; and S. J. Pearson, Madocville.

SHEEP, MEDIUM-WOOLLED.

CLASS 15—DORSET-DOWNS.

JUDGES.—Messrs. J. B. Aylsworth, Newburgh; W. Miller, Napanee; and John Sharpe, Bath.

CLASS 16—SHROPSHIRE, HAMPSHIRE AND OXFORDSHIRE DOWNS.

JUDGES.—F. A. Nellis, York; Geo. Best, Niagara; and J. P. Whelery, Warkton.

Ram, 2 shears and over, 1st prize, H. Spooner, Whitby.

NOTE BY JUDGES.—The stock in this class were few in number, but the officials were extra good.

SHEET—FINE-WOOLLED.

CLASS 17—SPANISH, FRENCH AND SAXON MERINO.

JUDGES.—Messrs. Irving Diamond, Belleville; Alex. K. McDonald, St. Catharines; Robt. Scripture, Colborne.

NOTE BY JUDGES.—The Judges report the ewes in this class as very fine in quality, and that several others were highly deserving of prizes.

CLASS 18—GRAT SHEEP.

JUDGES.—Messrs. Thos. Andrews, Goderich; Jas. Vine, St. Catharines; and John Geale, Kingston.

PIGS—LARGE BREEDS.

CLASS 19—YORKSHIRE AND OTHER LARGE BREEDS—63 ENTRIES.

JUDGES.—Messrs. W. R. Havens, Hamer; John ...

Boar, one year and over, first prize, Thos. Irving, Rockfield.....	\$17 00
2nd do, Brodie, Son & Converse, Belleville.....	14 00
3rd do, Angus Shaw, Portsmouth.....	10 00
Boar, under one year, first prize, Brodie, Son & Converse, Belleville.....	14 00
2nd do, James Main, Trafalgar.....	11 00
3rd do, Brodie, Son & Converse, Belleville.....	7 00
Breeding Sow, one year and over, first prize, W. H. Wallbridge, Belleville.....	17 00
2nd do, Brodie, Son & Converse, Belleville.....	14 00
3rd do, Angus Shaw, Portsmouth.....	10 00
Sow, under one year old, first prize, Brodie, Son & Converse, Belleville.....	14 00
2nd do, Angus Shaw, Portsmouth.....	11 00
3rd do, Wm. Miller, jun., Pickering.....	7 00

PIGS—SMALL BREEDS.

CLASS 20—SUFFOLKS.
50 ENTRIES.

JUDGES—Messrs. Angus Cook, St. Catharines; Wm. McKerricher, Ridgeway; and N. Bethell, Thorold.

Boar, best, one year and over, James Main, Trafalgar, imported 1871.....	\$51 00
2nd do, Joseph Featherstone, Toronto township.....	14 00
3rd do, George Brown, Toronto.....	10 00
Boar, best, under one year, James Main, Trafalgar, imported 1871.....	42 00
2nd do, D. F. Campbell, Brampton.....	11 00
3rd do, James Main, Trafalgar.....	7 00
Sow, best breeding, one year and over, George Brown, Toronto.....	17 00
2nd do, D. F. Campbell, Brampton.....	14 00
3rd do, George Brown, Toronto.....	10 00
Sow, best, under one year old, James Main, Trafalgar, imported 1871.....	28 00
2nd do, James Main, Trafalgar.....	11 00
3rd do, D. F. Campbell, Brampton.....	7 00

CLASS 21—IMPROVED BERKSHIRES.

124 ENTRIES.

JUDGES—Same as in previous class.

Boar, best, one year and over, J. Snell & Sons, Edmonton, imported 1871.....	\$51 00
2nd do, R. D. Foley, Rowmanville.....	14 00
3rd do, John Crumb, Hampton.....	10 00
Boar, best, under one year, Simon Beattie, Bangor, imported 1871.....	42 00
2nd do, Harry Webb, Yorkville.....	11 00
3rd do, D. F. Campbell, Brampton.....	7 00
Breeding sow, one year and over, first prize, J. Snell & Sons, Edmonton, imported 1871.....	34 00
2nd do, do.....	14 00
3rd do, John Crumb, Hampton.....	10 00
Sow, under one year, first prize, J. Snell & Sons, Edmonton, imported 1871.....	28 00
2nd do, D. F. Campbell, Brampton.....	11 00
3rd do, H. C. Lang, Sydenham.....	7 00
Sweepstakes Prize, best improved Berkshire boar and two sows, of any age, J. Snell & Sons, Edmonton.....	20 00

CLASS 22—ESSEX PIGS.

35 ENTRIES.

JUDGES—Messrs. Joseph Walker, Niagara; Isaac Garbutt, Lakesfield; and John McClurg, Falkirk.

Boar, one year and over, first prize, Jos. Featherstone, Toronto tp.....	\$17 00
2nd do, Thomas McCrae, Guelph.....	14 00
Boar under one year, first prize, Joseph Featherstone, Toronto tp.....	14 00
2nd do, do.....	11 00
3rd do, Thomas McCrae, Guelph.....	7 00

Breeding sow, one year and over, first prize, James Durand, Kingston.....	17 00
2nd do, J. J. Clogg, Kingston tp.....	14 00
3rd do, J. K. Macaulay, Kingston.....	10 00
Sow, under one year, first prize, Joseph Featherstone, Toronto tp.....	14 00
2nd do, Thomas McCrae, Guelph.....	11 00
3rd do, Joseph Featherstone, Toronto tp.....	7 00

CLASS 23—OTHER SMALL BREED PIGS, EXCLUSIVE OF SUFFOLK, BERKSHIRE AND ESSEX.

37 ENTRIES.

JUDGES—Same as class 22.

Boar, one year and over, first prize, Joseph Featherstone, Toronto tp.....	\$17 00
2nd do, do, do.....	14 00
Boar, under one year, first prize, J. Main, Trafalgar, imported 1871.....	42 00
2nd do, do, do.....	11 00
3rd do, J. McCammon, Kingston tp.....	7 00
Breeding sow, one year and over, first prize, Joseph Featherstone, Toronto tp.....	17 00
2nd do, Angus Shaw, Portsmouth.....	14 00
3rd do, J. McCammon, Kingston tp.....	10 00
Sow, under one year, 1st prize, J. Main, Trafalgar, imported 1871.....	28 00
2nd do, do.....	11 00
3rd do, J. McCammon, Kingston tp.....	7 00

CLASS 24—POULTRY, &C.

393 ENTRIES.

JUDGES—Messrs. G. J. Miller, Virgil; W. Panton, jun., Whitby; A. K. Scholfield, Font-hill; W. A. Mittlebeiger, St. Catharines.

Dorkings, best trio, white, first prize, H. M. Thomas, Brooklin.....	\$1 00
Dorkings, trio, coloured, 1st prize, Jas. A. Miller, St. Catharines.....	4 00
2nd do, James Main, Trafalgar.....	2 00
Polands, trio, white crested, black, 1st prize, James Main, Trafalgar.....	4 00
2nd do, John Carson, Kingston.....	2 00
Polands, trio, golden, 1st prize, J. A. Miller, St. Catharines.....	4 00
2nd do, H. M. Thomas, Brooklin.....	2 00
Polands, trio, silver, 1st prize, J. A. Miller, St. Catharines.....	4 00
2nd do, Thos. Shannon, Picton.....	2 00
Game, pair reds, (black, blue or brown), 1st prize, J. A. Miller, St. Catharines.....	4 00
2nd do, J. A. Miller, St. Catharines.....	2 00
Game, pair, duckwing, 1st prize, J. A. Miller, St. Catharines.....	4 00
2nd do, F. Berry, Kingston.....	2 00
Game, pair pile, white or blue, 1st prize, J. A. Miller, St. Catharines.....	4 00
2nd do, John Smith, Burford.....	2 00
Cochin, trio, (cinnamon or buff,) 1st prize, H. M. Thomas, Brooklin.....	4 00
2nd do, John Forsyth, Toronto.....	2 00
Cochin, trio, partridge, 1st prize, H. M. Thomas, Brooklin.....	4 00
2nd do, John Forsyth, Toronto.....	2 00
Cochin, trio, white or black, 1st prize, H. M. Thomas, Brooklin.....	4 00
2nd do, John Forsyth, Toronto.....	2 00
Brahmas, trio, light, 1st prize, M. H. Thomas, Brooklin.....	4 00
2nd do, Jas. A. Miller, St. Catharines.....	2 00
Brahmas, trio, dark, 1st prize, J. Forsyth, Toronto.....	4 00
2nd do, Jas. A. Miller, St. Catharines.....	2 00
Spanish, trio, black, (white faced), 1st prize, J. A. Miller, St. Catharines.....	4 00
2nd do, A. Terrill, Brighton.....	2 00
Silver pencilled Hamburgs, trio, 1st prize, A. P. Briggs, Kingston.....	4 00
Golden spangled Hamburgs, trio, 1st prize, W. H. Wallbridge, Belleville.....	4 00
2nd do, H. M. Thomas, Brooklin.....	2 00
Silver spangled Hamburgs, trio, 1st prize, H. M. Thomas, Brooklin.....	4 00
2nd do, J. A. Miller, St. Catharines.....	2 00

Crève Cœur, trio, 1st prize, H. M. Thomas, Brooklin.....	4 00
2nd do, T. Friendship, Kingston tp.....	2 00
Houdans, trio, 1st prize, J. A. Miller, St. Catharines.....	4 00
2nd do, H. M. Thomas, Brooklin.....	2 00
Bantams, pair game, (duckwings), 1st prize, J. A. Miller, St. Catharines.....	4 00
Bantams, pair Sebright, 1st prize, J. A. Miller, St. Catharines.....	4 00
2nd do, do.....	2 00
Bantams, pair white, (feathered legs), 1st prize, John Carson, Kingston.....	4 00
2nd do, A. N. Scott, Kingston tp.....	2 00
Any variety of fowl not specially classed, trio, 1st prize, H. M. Thomas, Brooklin.....	4 00
2nd do, John Carson, Kingston.....	2 00
Turkeys, pair, (bronzed), 1st prize, J. A. Miller, St. Catharines.....	4 00
2nd do, N. Bethel, Thorold.....	2 00
Turkey cock, best and heaviest, 1st prize, N. Bethel, Thorold.....	4 00
2nd do, J. A. Miller, St. Catharines.....	2 00
Geese, pair common, 1st prize, J. Cullis, Hamilton tp.....	4 00
2nd do, J. Gibson, Kingston tp.....	2 00
Geese, pair China, 1st prize, A. Terrill, Brighton.....	4 00
2nd do, J. Carson, Kingston.....	2 00
Ducks, pair Aylesbury, 1st prize, J. Forsyth, Toronto.....	4 00
2nd do, J. Cullis, Hamilton tp.....	2 00
Ducks, pair Rouen, 1st prize, John Forsyth, Toronto.....	4 00
2nd do, N. Bethel, Thorold.....	2 00
Ducks, best pair of any other variety, 1st prize, J. Carson, Kingston.....	4 00
2nd do, Angus Shaw, Portsmouth.....	2 00
Guinea fowl, best pair, 1st prize, J. Featherstone, Toronto tp.....	4 00
2nd do, Angus Shaw, Portsmouth.....	2 00
Pea fowl, best pair, 1st prize, Angus Shaw, Portsmouth.....	4 00
2nd do, Dr. Day, Kingston tp.....	2 00
Collection of poultry, owned and exhibited by one person, first prize, J. A. Miller, St. Catharines.....	6 00
2nd do, H. M. Thomas, Brooklin.....	3 00
Pigeons, best carrier, pouter and tumbler, 1st prize, John Carson, Kingston.....	3 00
Collection, pigeons, any other variety, 1st prize, J. Carson, Kingston.....	3 00
2nd do, George Crawford, Kingston.....	1 00
do, equal, T. H. Bibby, Kingston.....	1 00

CHICKENS AND DUCKS OF 1871.

Dorkings, best trio, white, 1st prize, H. M. Thomas, Brooklin.....	3 00
do, best trio, coloured, 1st prize, J. A. Miller, St. Catharines.....	3 00
2nd do, R. Shearer, Niagara.....	1 00
Brahmas, best trio, light, 1st prize, H. M. Thomas, Brooklin.....	3 00
2nd do, J. A. Miller, St. Catharines.....	1 00
Brahmas, best trio, dark, 1st prize, J. A. Miller, St. Catharines.....	3 00
2nd do, H. M. Thomas, Brooklin.....	1 00
Cochin, best trio, cinnamon or buff, 1st prize, John Forsyth, Toronto.....	3 00
2nd do, H. M. Thomas, Brooklin.....	1 00
Cochin, best trio, partridge, 1st prize, John Forsyth, Toronto.....	3 00
2nd do, J. A. Miller, St. Catharines.....	1 00
Houdans, best trio, 1st prize, J. A. Miller, St. Catharines.....	3 00
2nd do, H. M. Thomas, Brooklin.....	1 00
Hamburgs, best trio, silver or golden spangled, 1st prize, H. M. Thomas, Brooklin.....	3 00
2nd do, do, do.....	1 00
Polands, trio, white crested black, 1st prize, John Smith, Burford.....	3 00
2nd do, W. M. Smith, Burford.....	1 00

Polands, trio, silver or golden, 1st prize, H. M. Thomas, Brooklin.....	3 00
2nd do, Wm. Booth, Picton.....	1 00
Game, pair reds, black, brown or blue, 1st prize, J. A. Miller, St. Catharines.....	3 00
2nd do, J. A. Miller, St. Catharines.....	1 00
Game, pair, Duckwing, 1st prize, J. A. Miller, St. Catharines.....	3 00
2nd do, J. A. Miller, St. Catharines.....	1 00
Game, pair piles, white or blue, 1st prize, J. A. Miller, St. Catharines.....	3 00
2nd do, F. Berry, Kingston.....	1 00
Ducks, pair, Aylesbury, 1st prize, J. Cullis, Hamilton Tp.....	3 00
2nd do, John Forsyth, Toronto.....	1 00
Ducks, pair, Rouen, 1st prize, J. A. Miller, St. Catharines.....	3 00
Ducks, pair, any other kind, 1st prize, P. Hinman, Grafton.....	3 00
2nd do, A. N. Scott, Kingston Tp.....	1 00
Fowls, pair of 1871, of any other kind, 1st prize, James M. Cammon, Kingston Township.....	3 00
2nd do, H. M. Thomas, Brooklin.....	1 00

EXTRAS.—A. Terrill, Brighton, common goslings and Muscovy ducklings, commended; H. M. Thomas, pair lop-eared rabbits, \$1.00; Geo. Crawford, Kingston, collection of French rabbits, \$1.00

A. N. Scott, Elginburgh, Muscovy duck, commended.

AGRICULTURAL IMPLEMENTS.

CLASS 25—IMPLEMENTS FOR CULTIVATING AND SOWING THE SOIL, HORSE, STEAM OR OTHER POWER.

124 ENTRIES.

JUDGES.—Messrs. A. B. Kinsman, Fonthill; H. Masson, Ottawa; and J. McMichael, Rondeau.

Portable steam engine for agricultural purposes, not less than six horse power, to be put in operation on the ground, 1st prize, John Abell, Woodbridge.....	\$39 00
Plough, two furrow, 1st prize, John Gray & Co., Scotland.....	30 00
2nd do, S. Hurlbert, Prescott.....	20 00
Plough, iron, diploma and 1st prize, Thomas Yeandle, Stratford.....	15 00
2nd do, J. & G. Morley, Thorold.....	10 00
3rd do, James Chisholm, Paris.....	5 00
Plough, wooden, diploma and 1st prize, J. & G. Morley, Thorold.....	12 00
2nd do, Chown & Cunningham, Kingston.....	8 00
Plough, iron-beam with steel mouldboard and wood handles, 1st prize, George Wilkinson, Whitechurch.....	15 00
2nd do, J. & G. Morley, Thorold.....	10 00
3rd do, Chas. Thain, Guelph.....	5 00
John Abell, Woodbridge.....	Commended
Plough, subsoil, diploma and 1st prize, J. & G. Morley, Thorold.....	12 00
Plough, double shear trench, 1st prize, Jacob Neades, Bowmanville.....	10 00
2nd do, S. Hurlbert, Prescott.....	7 00
Plough, double mould, 1st prize, Chas. Thain, Guelph.....	10 00
2nd do, J. & G. Morley, Thorold.....	7 00
3rd do, Chown & Cunningham, Kingston.....	4 00
Gang plough, 1st prize, R. Lean, Stratford.....	12 00
2nd do, Joseph Fleury, Aurora.....	8 00
3rd do, Barker & Shannon, Picton.....	4 00
Field or two-horse cultivator, iron, 1st prize, J. Linton, Orono.....	12 00
2nd do, Thos. Clark, Darlington.....	8 00
3rd do, H. Collard, Gananoque.....	4 00
Two-horse cultivator, wood, 1st prize, John Borer, West Flamboro.....	12 00
2nd do, Bell & Sons, St. George.....	8 00
3rd do, Barker & Shannon, Picton.....	4 00

Horse hoe, or single-horse cultivator, iron, 1st prize, E. Collard, Gananoque.....	4 00
2nd do, D. H. Winters, Picton.....	3 00
3rd do, Chas. Thain, Guelph.....	2 00
Horse hoe or single-horse cultivator, wood, 1st prize, Chas. Thain, Guelph.....	4 00
2nd do, Barker & Shannon, Picton.....	3 00
Clod crusher, 1st prize, John Abell, Woodbridge.....	8 00
Pair of iron harrows, 1st prize, H. Collard, Gananoque.....	10 00
2nd do, N. Wilmot, Kingston.....	8 00
3rd do, Alex. Robb, Indiana.....	4 00
Pair wood harrows, 1st prize, J. Fleming, Millhaven.....	6 00
2nd do, L. Amey, Ernesttown.....	4 00
3rd do, J. Morrison, Newry.....	2 00
Metal roller, 1st prize, Chown & Cunningham, Kingston.....	11 00
Wooden roller, 1st prize, Barker & Shannon, Picton.....	10 00
2nd do, H. McCaugherty, Pittsburgh.....	5 00
Grain drill, diploma and 1st prize, L. D. Sawyer & Co., Hamilton.....	12 00
2nd do, John Watson, Ayr.....	8 00
3rd do, Maxwell & Whitelaw, Paris.....	4 00
Seed drill for sowing two or more drills of turnips, mangels, or other seeds, 1st prize, C. Thain, Guelph.....	10 00
Draining plough or ditching machine, for digging drains, 1st prize, John Abell, Woodbridge.....	12 00
Stump extractor, 1st prize, Wm. Jamieson, Lochiel.....	8 00

EXTRA PRIZES.—John Westlick, Hope, "Combined sower and cultivator" \$5.00; Barker and Shannon, Picton, Corn Plough, \$3.00.

NOTE BY JUDGES.—A knife-bar, for Reapers and Mowers, manufactured by Edwin Roblin, Picton, is highly commended to the notice of the council.

CLASS 26—IMPLEMENTS AND MACHINES FOR HARVESTING, PREPARING PRODUCTS FOR USE, CARRIAGE, ETC., HORSE OR OTHER POWER.

172 ENTRIES.

JUDGES.—Messrs. John Morley, Thorold; D. David H. Eaton, Farnetsville; Walter Riddell, Cobourg.	
Mowing machines, diploma and, 1st prize, J. Abell, Woodbridge.....	\$20 00
2nd do, A. Harris & Son, Beamsville.....	12 00
3rd do, Brown & Patterson, Whitby.....	8 00
Reaping machine, diploma and, 1st prize, Brown & Patterson, Whitby.....	20 00
2nd do, L. D. Sawyer & Co., Hamilton.....	12 00
3rd do, John Abell, Woodbridge.....	8 00
Combined mower and reaper, 1st prize, John Forsyth, Dundas, diploma and.....	20 00
2nd do, J. H. Grout & Co., Grimsby.....	12 00
3rd do, Haggart Bros. Hampton.....	8 00
Sulky horse rake, 1st prize, George Davis, jr, Nicol.....	8 00
2nd do, N. W. McKim, Murvale.....	6 00
3rd do, H. Murphy & Co., Port Hope.....	4 00
Horse rake without wheels, 1st prize, Barker & Shannon, Picton.....	4 00
2nd do, W. Harker, Glenvale.....	3 00
Horse pitchfork and tackle, 1st prize, Peter Grant, Clinton.....	6 00
2nd do, W. C. Shorey, Napanee.....	4 00
3rd do, A. White, Galt.....	3 00
Horse-power thresher and separator, 1st prize and diploma, John Abell, Woodbridge.....	30 00
2nd do, L. D. Sawyer & Co., Hamilton.....	20 00
3rd do, G. & J. Brown, Belleville.....	10 00
Vibrating threshing machine and separator, 1st prize, J. Scott, Caledonia.....	30 00
2nd do, J. Watson, Ayr.....	20 00
Potato digger, 1st prize, S. Hurlbert, Prescott.....	10 00

Straw cutter, 1st prize, J. Watson, Ayr.....	8 00
2nd do, Maxwell & Whitelaw, Paris.....	6 00
3rd do, Joseph Fleury, Aurora.....	4 00
Machine for cutting roots for stock, 1st prize, John Watson, Ayr.....	8 00
2nd do, Maxwell & Whitelaw, Paris.....	6 00
Grain cracker, 1st prize, J. Watson, Ayr.....	8 00
2nd do, J. Fleury, Aurora.....	6 00
3rd do, Maxwell & Whitelaw, Paris.....	4 00
Clover cleaning machine, 1st prize, John Abell, Woodbridge.....	20 00
Cider mill and press, 1st prize, H. Sells, Vienna.....	8 00
2nd do, do, do.....	4 00
Wagon, two-horse team, 1st prize, W. H. Way, Ameliasburg.....	12 00
2nd do, Chown & Cunningham, Kingston.....	8 00
3rd do, McCrae & Bentley, Kingston.....	4 00
Wagon, two-horse spring, market, 1st prize, McCrae & Bentley, Kingston.....	10 00
Brick making machine, Bulmer & Sheppard, Montreal, Model, highly commended, extra prize.....	3 00
Two horse power, for general purposes for farmers' use, 1st prize, W. H. Wallbridge, Belleville.....	15 00
2nd do, Maxwell & Whitelaw, Paris.....	10 00
Drag saw, 1st prize, John Abell, Woodbridge.....	12 00

EXTRAS.—Wm. Fraser, Esquesing, Hay Car, prize, \$2; Samuel Merner, New Hamburg, Little Giant Thresher and Horse power, prize, \$4; Reuben Scott, Murray, Elevating Truck and Grab, prize, \$6; Joseph Sharman, Stratford, Little Giant Thresher and Horse power, prize, \$4; W. H. Wallbridge, Belleville, a ten horse power, prize \$6; do., a four horse power Thresher and Carrier, prize, \$3; Maxwell & Whitelaw, Paris, Combined Feed Mill, prize, \$5; do, do, Six horse power, \$3. The following were commended: H. Sells, Vienna, corn sheller, commended; W. H. Wallbridge, Belleville, Iron Jack, for Threshing Machines, commended.

NOTE BY JUDGES.—We the Judges would report, that we were put to a great deal of extra trouble and labour, from the articles in this class being scattered over the ground, and would recommend that in future the articles, in each class, be placed as near together as possible.

CLASS 27—AGRICULTURAL TOOLS AND IMPLEMENTS, CHIEFLY FOR HAND USE.

125 ENTRIES.

JUDGES.—Messrs. John H. Grout, Grimsby; Alonzo Eagleston, Ancaster; Johnston Browe, Kingston; W. Hammill, Queenston.	
Machine for sowing grass seeds, 1st prize, F. M. Campbell, Storrington.....	\$4 00
2nd do, David Bateman, Scugog.....	3 00
Garden, walk or lawn roller, 1st prize, Chown & Cunningham, Kingston.....	4 00
Half dozen scythe smiths, 1st prize, S. Skinner, Gananoque.....	3 00
Grain cradle, 1st prize, Peter Dick, Onllia.....	2 00
2nd do, S. Skinner, Gananoque.....	1 00
Half-dozen grass scythes, 1st prize, Tuttle, Date, and Rodden, Toronto.....	3 00
Implement or machine for cutting, pulling, or otherwise harvesting peas, hand or horse power, 1st prize, Anderson and Johnson, London.....	15 00
2nd do, John Tennant, Paris.....	10 00
George Davis, Jr., Nichol, commended.	
Straw or Barley Fork (wood) 1st prize, Miles Storms, Moscow.....	2 00
2nd do, W. J. Simpson, Northport.....	1 00
3rd do, S. Skinner, Gananoque, Threshing	

Fanning mill, diploma and 1st prize, W. A. Gerolamy, Tara.....	10 00
2nd do, George Walker, Kingston township.....	8 00
3rd do, A. Brown, Pittsburg.....	6 00
Straw cutter, 1st prize, Maxwell & Whitelaw, Paris.....	4 00
2nd do, H. Sells, Vienna.....	3 00
Machine for cutting roots for stock, 1st prize, Maxwell and Whitelaw, Paris.....	6 00
2nd do, F. N. Campbell, Storrington.....	4 00
Cheese press, 1st prize, Hatch & Co., Oshawa.....	8 00
Churn, 1st prize, James Goodwin, Stratford.....	3 00
2nd do, C. J. Blomfield, Peterborough.....	2 00
3rd do, James Cochrane, Brighton.....	1 00
Cheese vat, 1st prize, G. H. Pedlar, Oshawa.....	8 00
2nd do, Hatch & Co., Oshawa.....	5 00
3rd do, G. H. Pedlar, Oshawa.....	3 00
Assortment of factory milk cans and pails, 1st prize, Chown and Cunningham, Kingston.....	5 00
2nd do, G. H. Pedlar, Oshawa.....	3 00
Bee-hive, 1st prize, G. F. Charles, Garden Island.....	3 00
2nd do, P. Nicolle, Lindsay.....	2 00
3rd do, B. Losee, Cobourg.....	1 00
Half-dozen axe-handles, 1st prize, S. N. Venton, Ernestown.....	2 00
Set horse-shoes, 1st prize, N. Wilmot, Kingston.....	3 00
2nd do, Geo. Ayers, Whitby.....	2 00
3rd do, S. M. Barnes, Smith's Falls.....	1 00
Farm gate, 1st prize, J. J. Whitehead, Kingston, Recom. diploma.....	3 00
2nd do, Lyman Crosby, Markham.....	2 00
Specimen farm fence (wood), 1st prize, Lyman Crosby, Markham.....	3 00
Wooden pump, 1st prize, J. Broken-shire, Kingston.....	4 00
2nd do, do, do.....	3 00

EXTRAS—H. Bolton, North Augusta, direct action dog-power for churn, 1st prize, \$2; S. Hurlbert, post-hole auger, Com. B. Losee, honey extractor, double door fastener, and fruit picker, Commended. Wm. Gates, Pittsburg, fence post; D. J. Knapp, Wolf Island, Washing Machine, Commended.

AGRICULTURAL PRODUCTIONS.

CLASS 28.—FIELD GRAINS, HOPS, &C.
501 ENTRIES.

JUDGES—Messrs. John D. Ham, Newburgh; James Bissell, Algonquin; and Aaron Mann, Bridgenorth.

Canada Company's prize for the best 25 bushels of Fall Wheat, the produce of the Province of Ontario, being the growth of 1871, 1st prize, J. McNair, Richmond Hill.....	\$100 00
2nd do, by the Association, Wm. Forfar, Agincourt.....	40 00
3rd do, T. McEvers, Cobourg.....	20 00
Two bushels white winter wheat, 1st prize, J. McNair, Richmond Hill.....	10 00
2nd do, John Tennant, Brantford.....	8 00
3rd do, Wm. Forfar.....	6 00
4th do, Thomas Stock, Waterdown.....	4 00
Two bushels red winter wheat, 1st prize, Wm. Forfar, Agincourt.....	8 00
2nd do, W. A. Forfar, Ellesmere.....	6 00
3rd do, R. Shearer, Niagara.....	4 00
4th do, D. Lockwood, Sydney.....	2 00
SPECIAL PRIZE—For the best two bushels new variety hybridized fall wheat, exhibited by the original producer, 1st prize, Wm. Forfar, Agincourt.....	50 00
Two bushels of Fife spring wheat, 1st prize, T. McEvers, Cobourg.....	8 00
2nd do, George Carruthers, Grafton.....	6 00
3rd do, Alfred Crumb, Darlington.....	4 00

Two bushels spring wheat any other variety, 1st prize, W. Westington, Cobourg.....	8 00
2nd do, T. McEvers, Cobourg.....	6 00
3rd do, Wm. Eagleson, Cobourg.....	4 00
Barley (2 rowed), two bushels, 1st prize, A. McKenzie, Whitby.....	6 00
2nd do, Thomas Gibson, Markham.....	1 00
3rd do, John Pratt, Cobourg.....	2 00
4th do, Allen Bond, Storrington, Vol. Transactions.	
Barley (6 rowed), two bushels, 1st prize, S. Rennie, Scarboro'.....	6 00
2nd do, W. Thompson, Whitby.....	4 00
3rd do, W. Madden, Napanee.....	2 00
4th do, R. M. Brisco, Ernestown, Trans.	
Winter Rye, two bushels, 1st prize, J. B. Aylesworth, Newburgh.....	6 00
2nd do, S. Vrooman, Odessa.....	4 00
3rd do, J. Vanorder, Kingston Tp.....	2 00
4th do, Wm. Madden, Napanee.....	Trans.
Oats (white), two bushels, 1st prize, Wm. Thompson, Whitby.....	6 00
2nd do, Walter Riddell, Cobourg.....	1 00
3rd do, T. Gibson, Markham.....	2 00
4th do, Thos. Irving, Rockfield, Trans.	
Oats (black), two bushels, 1st prize, S. Rennie, Scarboro'.....	6 00
2nd do, John Jack, Pittsburg.....	4 00
3rd do, J. Richardson, Louth.....	2 00
4th do, John Harker, Kingston Tp. Trans.	
Small Field Peas, two bushels, 1st prize, S. Rennie, Scarboro'.....	6 00
2nd do, J. H. Grass, Kingston.....	4 00
3rd do, C. Grass, Kingston.....	2 00
4th do, Andrew Black, Hamilton Tp. Trans.	
Marrowfat Peas, two bushels, 1st prize, J. Cullis, Cobourg.....	6 00
2nd do, A. Black, do.....	4 00
3rd do, R. Lean, do.....	2 00
4th do, John Foley, Darlington, Trans.	
Field Peas, two bushels of any other 1st prize, C. Foster, East Flamboro'.....	6 00
2nd do, Wm. Madden, Napanee.....	4 00
3rd do, J. B. Aylesworth, Newburgh.....	2 00
4th do, R. D. Foley, Bowmanville, Trans.	
Bushel of small white field beans, 1st prize, R. Spooner, Kingston.....	6 00
2nd do, Wm. Gordanier, Kingston.....	4 00
3rd do, Walter Riddell, Hamilton Tp.....	2 00
4th do, Angus Shaw, Portsmouth, Trans.	
Bushel of large white field beans, 1st prize, J. Richardson, Louth.....	6 00
2nd do, Wm. Eagleson, Hamilton Tp.....	4 00
3rd do, A. Bond, Storrington.....	2 00
Two bushels of Indian corn in the ear, (white), 1st prize, H. J. Brown, Niagara.....	6 00
2nd do, A. Bond, Storrington.....	4 00
3rd do, R. Spooner, Kingston Tp.....	2 00
Two bushels of Indian corn in the ear (yellow), 1st prize, A. S. Patterson, Sophiasburg.....	6 00
2nd do, H. J. Brown, Niagara.....	4 00
3rd do, J. B. Aylesworth, Newburgh.....	2 00
4th do, Thomas Stock, Waterdown, Trans.	
Bale of hops, not less than 112 lbs., 1st prize, Moses Wilson, London.....	20 00
2nd do, Arthur Wilson, West Nissouri.....	15 00
3rd do, N. Sprague, Sophiasburg.....	10 00
EXTRAS.—J. H. Grass, crown peas, commended.	

CLASS 29.—SMALL FIELD SEEDS, FLAX, HEMP, &C.

117 ENTRIES.

JUDGES.—Messrs. John Rennie, Allensburgh; Angus McLellan, Williamstown; John Martin, Mount Forest; W. C. Beaty, Omagh; L. G. Shipley, Falkirk; and F. W. Servos, Virgil.

Timothy seed, bushel of, 1st prize, J. Richardson, Louth.....	\$ 6 00
2nd do, D. Lockwood, Sidney.....	4 00
3rd do, D. A. Lee, Kingston Tp.....	2 00
4th do, Robt. Shearer, Niagara.....	Trans.

Clover Seed, bushel of, 1st prize, W. M. Smith, Burford.....	6 00
2nd do, A. Mackenzie, Whitby.....	4 00
3rd do, John Smith, Burford.....	2 00
4th do, D. Davis, Louth.....	Trans.
Alsike Clover seed, half-bushel of, J. Richardson, Louth.....	6 00
2nd do, D. Lockwood, Sidney.....	4 00
3rd do, H. M. Thomas, Brooklin.....	2 00
Flax seed, bushel of, first prize, J. Richardson, Louth.....	6 00
2nd do, W. Benham, Guelph.....	4 00
3rd do, D. Campbell, Charlottenburgh.....	2 00
Swedish turnip seed, from transplanted bulbs, not less than 12 lbs., 1st prize, A. Crumb, Darlington.....	6 00
2nd do, J. Foley, Darlington.....	4 00
3rd do, R. D. Foley, Bowmanville.....	2 00
Belgian field carrot seed, 12 lbs. white, 1st prize, H. & R. Beith, Darlington.....	6 00
2nd do, A. Crumb, Darlington.....	4 00
3rd do, R. D. Foley, Bowmanville.....	2 00
Mangel Wurzel seed, 12 lbs. of long red, 1st prize, A. Bond, Kingston.....	6 00
2nd do, R. D. Foley, Bowmanville.....	4 00
Mangel Wurzel seed, 12 lbs. of yellow globe, 1st prize, A. Bond, Storrington.....	6 00
2nd do, J. Pratt, Cobourg.....	4 00
3rd do, Walter Riddell, Cobourg.....	2 00
Tares, bushel, 1st prize, Walter Riddell, Hamilton Tp.....	6 00
2nd do, George Croft, Guelph.....	3 00
3rd do, Wm. Thompson, Whitby.....	Trans.
Buckwheat, bushel, 1st prize, Charles Foster, E. Flamboro'.....	4 00
2nd do, Wm. Gordanier, Kingston Tp.....	2 00
3rd do, J. Richardson, Louth.....	Trans.
Millet, bushel, 1st prize, John Smith, Burford.....	4 00
Tobacco Leaf, 10 lbs. cured, growth of Ontario, 1st prize, A. Shaw, Portsmouth.....	4 00
2nd do, R. Shearer, Niagara.....	3 00
3rd do, Thos. Friendship, Kingston Tp.....	2 00
Broom corn bru h. 28 lbs., 1st prize, R. Spooner, Kingston Tp.....	3 00
Flax, 112 lbs., scutched, 1st prize, D. Campbell, Charlottenburgh.....	16 00
Hemp, dressed, 112 lbs., 1st prize, E. Law, Kingston.....	12 00
EXTRAS.—1st prize—Rev. J. Williamson, Kingston, early Dawes onion seed, 50 cts., A. Bond, Kingston, white mustard, 50 cts.	

CLASS 30.—FIELD ROOTS, &C.

366 ENTRIES.

JUDGES.—Messrs. D. Campbell, Williamstown; Geo. McManus, Mono Mills; W. C. Russell, Millbrook; Thos. Shipley, Falkirk, and Wm. Johnston, Frankville.

Best bushel of early Goodrich potatoes, 1st prize, Geo. Croft, Guelph tp.....	\$3 00
2nd do, Chas. George, Kingston tp.....	2 00
3rd do, Angus Shaw, Portsmouth.....	1 00
Best bushel Cup potatoes, 1st prize, John Harker, Kingston tp.....	3 00
2nd do, Wm. Eagleson, Hamilton tp.....	2 00
3rd do, R. Spooner, Kingston tp.....	1 00
Best bushel Garnet Chilis, 1st prize, Angus Shaw, Portsmouth.....	3 00
2nd do, J. B. Aylesworth, Newburgh.....	2 00
3rd do, J. Vanorder, Kingston.....	1 00
Best bushel Fluke potatoes, 1st prize, Wm. Westington, Hamilton tp.....	3 00
2nd do, R. Spooner, Kingston tp.....	2 00
3rd do, A. Bond, Storrington.....	1 00
Best bushel Early Rose potatoes, 1st prize, John Pratt, Cobourg.....	3 00
2nd do, Chas. Snider, Ernestown.....	2 00
3rd do, Angus Shaw, Portsmouth.....	1 00
Best bushel Peachblows, 1st prize, Angus Shaw, Portsmouth.....	3 00
2nd do, R. Spooner, Kingston tp.....	2 00

Best bushel Buckeyes or Carters, 1st prize, A. Bond, Storrington	3 00
2nd do, Angus Shaw, Portsmouth	2 00
3rd do, J. McCallum, Storrington	1 00
Bushel Harrison potatoes, 1st prize, W. Eagleson, Hamilton tp.	3 00
2nd do, S. N. Watts, Portsmouth	2 00
3rd do, Jas. Williamson, Kingston	1 00
Bushel of any other sort potatoes, 1st prize, Jas. Durand, Kingston	3 00
2nd do, Angus Shaw, Portsmouth	2 00
3rd do, John Jack, Pittsburg	1 00
Collection of field potatoes, half peck of each sort, named, 1st prize, Robt. Shearer, Niagara	6 00
2nd do, B. Losee, Cobourg	1 00
3rd do, A. Bond, Storrington	2 00
Eight roots Marshall's improved Swede Turnips, 1st prize, Jas. Daly, Glenburnie	3 00
2nd do, J. B. Hay, Flamboro' East	2 00
3rd do, Thos. McCrae, Guelph	1 00
Eight roots green-top Swede Turnips, 1st prize, John Blythe, Kingston	3 00
2nd do, J. B. Hay, Flamboro' East	2 00
3rd do, R. Spooner, Kingston tp.	1 00
Eight roots Skirving's Swede turnips, 1st prize, Jas. Daly, Glenburnie	3 00
2nd do, Thos. McCrae, Guelph	2 00
3rd do, J. B. Hay, Flamboro' East	1 00
Eight roots white Globe turnips, 1st prize, Geo. Carruthers, Grafton	3 00
2nd do, R. Spooner, Kingston tp.	2 00
Eight Grey Stone turnips, 1st prize, Walter Riddell, Hamilton tp.	3 00
2nd do, Chas. Foster, Flamboro' East	2 00
3rd do, Geo. Carruthers, Grafton	1 00
Twelve roots red carrots, 1st prize, Geo. Croft, Guelph tp.	3 00
2nd do, Geo. Scott, Kingston tp.	2 00
3rd do, Wm. Benham, Guelph	1 00
Twelve roots white or Belgian carrot, 1st prize, Jno. Pratt, Cobourg	3 00
2nd do, J. Vanorder, Kingston	2 00
3rd do, John Blythe, Kingston	1 00
Mangel wurzel, (long red), 8 roots, 1st prize, John Pratt, Cobourg	3 00
2nd do, R. D. Foley, Bowmanville	2 00
3rd do, Thos. Irving, Rockfield	1 00
Red Globe mangel wurzel, 8 roots, 1st prize, John Pratt, Cobourg	3 00
2nd do, Thos. Irving, Rockfield	2 00
3rd do, Allan Bond, Storrington	1 00
Yellow Globe mangel wurzel, 8 roots, 1st prize, John Pratt, Cobourg	3 00
2nd do, Thos. Irving, Rockfield	2 00
3rd do, J. Williamson, Kingston	1 00
Long yellow mangel wurzel, 8 roots, 1st prize, John Pratt, Cobourg	3 00
2nd do, Thos. Irving, Rockfield	2 00
3rd do, J. Williamson, Kingston	1 00
Khol rabi, 8 roots, 1st prize, John Pratt, Cobourg	3 00
2nd do, Geo. Croft, Guelph tp.	2 00
3rd do, Thos. Irving, Rockfield	1 00
White sugar-beet, 8 roots, 1st prize, Thos. Irving, Rockfield	3 00
2nd do, Thos. McCrae, Guelph	2 00
3rd do, Angus Shaw, Portsmouth	1 00
Parsnips, 12 roots, 1st prize, Wm. Benham, Guelph	3 00
2nd do Geo. Croft, Guelph tp.	2 00
3rd do, Chas. George, Kingston tp.	1 00
Chicory, 12 roots, 1st prize, Walter Riddell, Hamilton tp.	3 00
2nd do, Wm. Benham, Guelph	2 00
Squashes for cattle, 2 large, 1st prize, Angus Shaw, Portsmouth	3 00
2nd do, John Blythe, Kingston	2 00
Two Mammoth field pumpkins, 3rd prize, John Blythe, Kingston	2 00
Yellow-field, 4 common do, 1st prize, Thos. Stock, Waterdown	3 00
2nd do, W. Harker, Kingston tp.	2 00
3rd do, R. Spooner, do.	1 00

Kingston, sample New Zealand potatoes, prize, \$1. Jas. Williamson, 8 roots Carter's Imperial Purpletop Swedes, prize, \$1.

HORTICULTURAL PRODUCTS.

CLASS 31.—FRUIT.

Professional Nurserymen's List.

72 ENTRIES.

JUDGES.—Messrs. Wm. Saunders, London; Robt. Currie, Niagara; Rev. Dr. Williamson, Kingston; and W. H. Mills, Hamilton.

30 varieties of apples, correctly named, six of each, 1st prize, Beadle and Buchanan, St. Catharines	\$10 00
2nd do, Geo. Leslie & Sons, Toronto	8 00
3rd do, J. P. Williams, Bloomfield	6 00
20 varieties of apples correctly named, six of each, 1st prize, Beadle & Buchanan, St. Catharines	6 00
2nd do, J. P. Williams, Bloomfield	4 00
3rd do, George Leslie & Sons, Toronto	2 00
6 var. ties of fall tabl. apples, named, six of each, 1st prize, J. P. Williams, Bloomfield	3 00
2nd do, Beadle & Buchanan, St. Catharines	2 00
6 varieties of fall cooking apples, named, six of each, 1st prize, Beadle & Buchanan, St. Catharines	3 00
2nd do, Geo. Leslie & Sons, Toronto	2 00
6 varieties winter table apples, named, six of each, 1st prize, Geo. Leslie & Sons, Toronto	3 00
2nd do, Beadle & Buchanan, St. Catharines	2 00
6 varieties winter cooking apples, named, six of each, 1st prize, J. P. Williams, Bloomfield	3 00
2nd do, Beadle & Buchanan, St. Catharines	2 00
Collection, not less than 15 varieties pears correctly named, three of each, 1st prize Beadle & Buchanan, St. Catharines	10 00
2nd do, Geo. Leslie & Sons, Toronto	8 00
3rd do, J. P. Williams, Bloomfield	6 00
6 varieties pears, correctly named, six of each, 1st prize, Beadle & Buchanan, St. Catharines	5 00
2nd do, Geo. Leslie & Sons, Toronto	3 00
3 varieties plums, correctly named, six of each, 1st prize, Geo. Leslie & Sons, Toronto	3 00
Collection peaches, correctly named, not less than six varieties, 1st prize, Beadle & Buchanan, St. Catharines	5 00
Three varieties peaches, six of each, 1st prize, Beadle & Buchanan, St. Catharines	3 00
Collection grapes, grown in open air, not more than 12 varieties, 2 bunches each, named, 1st prize, Geo. Leslie & Sons, Toronto	8 00
Collection grapes, not more than 12 varieties, grown under glass, one bunch of each sort, correctly named, 1st prize, J. Gray & Co., Brockton	8 00
2nd do, Geo. Leslie & Sons, Toronto	6 00
Three varieties black grapes, grown under glass, 1st prize, J. Gray & Co., Brockton	3 00
2nd do, Geo. Leslie & Sons, Toronto	2 00
Three varieties white grapes, grown under glass, 1st prize, J. Gray & Co., Brockton	3 00
2nd do, Geo. Leslie & Sons, Toronto	2 00
Three varieties grapes, any other colour, grown under glass, 1st prize, J. Gray & Co., Brockton	3 00
Heaviest 1 bunch black Hamburg grapes, grown under glass, 1st prize, J. Gray & Co., Brockton	3 00
2nd do, Geo. Leslie & Sons, Toronto	2 00

Heaviest 1 bunch black grapes, any other kind, grown under glass, 1st prize, J. Gray & Co., Brockton	3 00
2nd do, Geo. Leslie & Sons, Toronto	2 00
Heaviest 1 bunch white grapes, grown under glass, 1st prize, J. Gray & Co., Brockton	3 00
2nd do, Geo. Leslie & Sons, Toronto	2 00
Display of fruit, the growth of exhibitor, distinct from other entries, three specimens of each sort, named, grown under glass and in the open air, 1st prize, Geo. Leslie & Son, Toronto	15 00
2nd do, J. P. Williams, Bloomfield	10 00
Collection of 1 dozen each of not less than six varieties of crabs, cultivated, 1st prize, Arthur Nichol, Cataragui	3 00

DOMESTIC WINES.

Professional and Commercial List.

Half-dozen dry wines, 1st prize, James Brown, Toronto	12 00
2nd do, John Forsyth, Toronto	8 00
Half-dozen sweet wine, 1st prize, V. Casei, Toronto	7 00
2nd do, J. Forsyth, Toronto	5 00

CLASS 32.—FRUIT—APPLES AND PEARS.

General List

525 ENTRIES.

JUDGES.—Messrs. D. W. Beadle, St. Catharines; Rev. Chas. Campbell, Niagara; W. Holton, Hamilton; C. Arnold, Paris; R. W. Scott, M.P.P., Ottawa.

20 varieties apples, correctly named, 3 of each, 1st prize, G. J. Miller, Virgil	\$10 00
2nd do, J. D. Servos, Niagara	8 00
3rd do, Robert Currie, Niagara	6 00
4th do, H. J. Brown, Niagara	4 00
10 varieties do, correctly named, 3 of each, 1st prize, G. J. Miller, Virgil	5 00
2nd do, J. D. Servos, Niagara	4 00
3rd do, Robert Warren, Niagara	3 00
4th do, Robert Currie, Niagara	2 00
4 varieties dessert apples, correctly named, 6 of each, 1st prize, G. J. Miller, Virgil	3 00
2nd do, Robert Warren, Niagara	2 00
3rd do, J. A. Allan, Portsmouth	1 00
4 varieties cooking do, correctly named, 6 of each, 1st prize, Robt. Currie, Niagara	3 00
2nd do, H. J. Brown, Niagara	2 00
3rd do, E. Baiden, Portsmouth	1 00
12 snow apples, 1st prize, L. Sprigger, Hamilton	2 00
2nd do, J. L. Nicol, Kingston tp.	1 00
12 fall pippins, 1st prize, Robt. Currie, Niagara	2 00
2nd do, Angus Shaw, Portsmouth	1 00
12 Gravenstein apples, 1st prize, H. J. Brown, Niagara	2 00
2nd do, G. J. Miller, Virgil	1 00
12 Mother apples, 1st prize, G. J. Miller, Virgil	2 00
12 St. Lawrence, 1st prize, Jas. Daly, Kingston	2 00
2nd do, J. A. Allan, Portsmouth	1 00
12 of any other variety fall apple, 1st prize, G. J. Miller, Virgil	2 00
2nd do, Jas. Daly, Kingston	1 00
12 Ribston pippins, 1st prize, L. Sprigger, Hamilton	2 00
2nd do, H. J. Brown, Niagara	1 00
12 Alexander apples, 1st prize, J. C. Hawley, Fredericksburg	2 00
2nd do, R. Carduff, Smith's Falls	1 00
12 Esopus Spitzenburg, 1st prize, G. J. Miller, Niagara	2 00
2nd do, H. J. Brown, Niagara	1 00
12 Beauty of Kent, 1st prize, J. D. Servos, Niagara	2 00
12 Baldwin, 1st prize, H. J. Brown, Niagara	2 00
2nd do, J. D. Servos, Niagara	1 00

EXTRAS.—Allan Bond, Storrington, 8 roots yellow Belgian carrots, \$1. Thos. Wilson,

12 Rhode Island Greening, 1st prize, R. Currie, Niagara	2 00
2nd do, J. D. Servos, Niagara	1 00
12 Porter, 1st prize, H. J. Brown, Niagara	2 00
12 Seek no Further, 1st prize, J. C. Hawley, Fredericksburgh	2 00
2nd do, Thos. Wilson, Kingston	1 00
12 Roxbury Russett, 1st prize, H. J. Brown, Niagara	2 00
2nd do, G. J. Miller, Virgil	1 00
12 Swain, 1st prize, J. Smith, Burford	2 00
2nd do, W. M. Smith, Burford	1 00
12 American Golden Russett, 1st prize, H. J. Brown, Niagara	2 00
2nd do, G. J. Miller, Virgil	1 00
12 Swayze Pomme Grise, 1st prize, G. J. Miller, Virgil	2 00
2nd do, Jos. Walker, Niagara	1 00
12 Pomme Grise, 1st prize, J. D. Servos, Niagara	2 00
2nd do, H. J. Brown, Niagara	1 00
12 Northern Spy, 1st prize, J. D. Servos, Niagara	2 00
2nd do, J. Walker, Niagara	1 00
12 any other variety, (winter), 1st prize, Robert Currie, Niagara	2 00
2nd do, Angus Shaw, Portsmouth	1 00
12 seedling apples, 1st prize, D. Johnson, Seymout	2 00
2nd do, H. J. Brown, Niagara	1 00
Collection of pears, 20 varieties, 3 of each, 1st prize, J. D. Servos, Niagara	10 00
2nd do, G. J. Miller, Virgil	8 00
3rd do, Robert Currie, Niagara	6 00
Pears, 10 varieties, 3 of each, 1st prize, J. Walker, Niagara	5 00
2nd do, H. J. Brown, Niagara	4 00
3rd do, R. Currie, Niagara	3 00
4th do, G. J. Miller, Virgil	2 00
Pears, 4 varieties, 3 of each, 1st prize, L. Springer, Hamilton	3 00
2nd do, J. A. Miller, St. Catharines	2 00
Pears, 6 Bartletts, G. J. Miller, Virgil	2 00
2nd do, D. N. Broderick, Louth	1 00
Pears, 6 Seckel, 1st prize, L. Springer, Hamilton	2 00
2nd do, Robert Warren, Niagara	1 00
Pears, 6 White Doyenne, 1st prize, G. J. Miller, Virgil	2 00
2nd do, J. Walker, Niagara	1 00
Pears, 6 Lawrence, 1st prize, J. Walker, Niagara	2 00
2nd do, Robert Currie, Niagara	1 00
Pears, 6 Flemish Beauty, 1st prize, J. D. Servos, Niagara	2 00
2nd do, G. J. Miller, Virgil	1 00
Pears, 5 Beurre Diel, 1st prize, H. J. Brown, Niagara	2 00
2nd do, G. J. Miller, Virgil	1 00
Pears, 6 Louise Bonne de Jersey, 1st prize, J. A. Miller, St. Catharines	2 00
2nd do, H. J. Brown, Niagara	1 00
Pears, 6 Belle Lucrative, 1st prize, Jos. Walker, Niagara	2 00
2nd do, G. J. Miller, Virgil	1 00
Pears, 6 Duchesse d'Angouleme, 1st prize, G. J. Miller, Virgil	2 00
2nd do, H. J. Brown, Niagara	1 00
Pears, 6 Beurre Bose, 1st prize, J. Walker, Niagara	2 00
2nd do, Robert Currie, Niagara	1 00
Pears, 6 Beurre d'Anjou, 1st prize, G. J. Miller, Virgil	2 00
2nd do, N. Choate, Hope	1 00
Pears, 6 Beurre Clairveau, 1st prize, Robert Currie, Niagara	2 00
2nd do, D. N. Broderick, Louth	1 00
6 winter Nelis, 1st prize, H. J. Brown, Niagara	2 00
2nd do, J. D. Servos, Niagara	1 00
Glout, Morceau, 6, 1st prize, J. D. Servos, Niagara	2 00
2nd do, G. J. Miller, Virgil	1 00
Vicar of Winkfield, 6, 1st prize, H. J. Brown, Niagara	2 00
2nd do, J. A. Miller, St. Catharines	1 00

Easter Beurre, 6, 1st prize, J. A. Miller, St. Catharines	2 00
2nd do, J. Walker, Niagara	1 00
Pears, six of any other variety of Fall, 1st prize, L. Springer, Hamilton	2 00
2nd do, H. J. Brown, Niagara	1 00
CLASS 33 - FRUIT - PLUMS, PEACHES, GRAPES, &c.	
General List Continued	
213 ENTRIES.	
JUDGES - Messrs. Capt. A. Pörlinger, Morrisburg; Thos. Balguy, Kingston; Lyman Crosby, Markham.	
General List Continued.	
Plums, collection of not less than six varieties, correctly named, 6 of each, 1st prize, Wm. Benham, Guelph	\$4 00
Plums, 12 dessert, one variety, correctly named, 1st prize, J. D. Servos, Niagara	2 00
2nd do, Wm. Benham, Guelph	1 00
Plums, 12 cooking, one variety, correctly named, 1st prize, Wm. Benham, Guelph	2 00
2nd do, John B. S., Niagara	1 50
Peaches 6 varieties, correctly named, 6 of each, 1st prize, Jos. Walker, Niagara	3 00
2nd do, H. J. Brown, Niagara	2 00
3rd do, D. M. Bordenick, Louth	1 00
Early Crawford, best 6, J. D. Servos, Niagara	3 00
2nd do, Robert Currie, Niagara	2 00
Late Crawfords, best 6, H. J. Brown, Niagara	3 00
2nd do, J. Walker, Niagara	2 00
Peaches, best 6, any other variety correctly named, J. D. Servos, Niagara	3 00
3rd do, Robert Currie, Niagara	2 00
3rd do, J. Walker, Niagara	1 00
Peaches, best 6, white flesh, any other variety, correctly named, J. Walker, Niagara	3 00
2nd do, G. J. Miller, Virgil	2 00
3rd do, H. J. Brown, Niagara	1 00
Peaches, best 6, yellow flesh, one variety, correctly named, G. J. Miller, Virgil	3 00
2nd do, H. J. Brown, Niagara	2 00
3rd do, J. Walker, Niagara	1 00
Grapes, best collection of grown in open air, not less than 12 varieties, 2 bunches of each, J. A. Allan, Portsmouth	8 00
2nd do, J. A. Miller, St. Catharines	6 00
3rd do, J. Forsyth, Toronto	4 00
4th do, J. Brown, Toronto	2 00
Grapes, best 6 varieties (open air) two bunches of each, J. A. Allan, Portsmouth	3 00
2nd do, J. Forsyth, Toronto	2 00
3rd do, J. A. Miller, St. Catharines	1 00
Concord grapes, best 3 bunches, G. Durand, Niagara	2 00
2nd do, J. A. Allan, Portsmouth	1 00
Delaware, best 3 bunches, J. Forsyth, Toronto	2 00
2nd do, Geo. Durand, Niagara Tp.	1 00
Adirondac, 3 bunches, J. A. Allan, Portsmouth	2 00
Diana, best 3 bunches, J. Forsyth, Toronto	2 00
2nd do, J. Brown, Toronto	1 00
Three bunches Creveling, first prize, J. A. Allen, Portsmouth	2 00
Three bunches Rogers' 4, 1st prize, J. Forsyth, Toronto	2 00
Three bunches Rodgers' 3, first prize, J. Forsyth, Toronto	2 00
2nd do, J. A. Allan, Portsmouth	1 00
Three bunches Rogers' 19, 1st prize, J. A. Miller	2 00
2nd do, J. Forsyth, Toronto	1 00

Three bunches Rogers' 44, 1st prize, J. A. Allen, Portsmouth	2 00	
Three bunches Hartford Prolific, 1st prize, J. Forsyth, Toronto	2 00	
2nd do, J. A. Allen, Portsmouth	1 00	
Three bunches Toba, 1st prize, J. Brown, Toronto	2 00	
2nd do, Mrs. F. J. George, Kingston	1 00	
Three bunches Isabella, 1st prize, J. B. Hay, East Florida	2 00	
2nd do, Mrs. F. J. George, Kingston	1 00	
Three bunches Allen Hybrid, 1st prize, J. Brown, Toronto	2 00	
2nd do, J. Forsyth, Toronto	1 00	
Three bunches any other variety, 1st prize, J. A. Allen, Portsmouth	2 00	
2nd do, John Duff, Kingston	1 00	
Collection grapes, grown under glass, not more than 12 varieties, one bunch each, correctly named, 1st prize, John Riordan, St. Catharines	\$8 00	
2nd do, G. G. Fraser, Kingston	6 00	
3rd do, J. A. Allen, Portsmouth	4 00	
Two bunches black Hanburg grapes, 1st prize, John Riordan, St. Catharines	3 00	
2nd do, G. G. Fraser, Kingston	2 00	
3rd do, J. A. Allen, Portsmouth	1 00	
Two bunches black grapes, any other variety, 1st prize, J. A. Allen, Portsmouth	3 00	
2nd do, G. G. Fraser, Kingston	2 00	
3rd do, J. A. Miller, St. Catharines	1 00	
Grapes, 2 bunches, white, grown under glass, correctly named, first prize, John Riordan, St. Catharines	3 00	
2nd do, J. A. Allen, Portsmouth	2 00	
3rd do, D. Nicol, Cataragui	1 00	
Quinces, 6, first prize, John Best, Niagara	2 00	
2nd do, Robt. Currie, Niagara	1 00	
Melon, green flesh, first prize, J. Williamson, Kingston Township	2 00	
2nd do, J. A. Allen, Portsmouth	1 00	
Melon, red or scarlet flesh, first prize, S. N. Watts, Portsmouth	2 60	
Melon, water, first prize, J. Duff, Kingston	2 00	
2nd do, J. L. Nicol, Kingston township	1 00	
Citron, first prize, H. J. Brown, Niagara	2 00	
2nd do, Thos. Friendship, Kingston Tp.	1 00	
Grapes, 3 clusters uncultivated native wild, first prize, J. Walker, Niagara	2 00	
Crab, greatest variety native wild, 12 each, first prize, J. Walker, Niagara	2 00	
Crab, 3 varieties cultivated, one dozen each, first prize, J. L. Nicol, Kingston Tp.	2 00	
2nd do, J. Walker, Niagara	1 00	
DOMESTIC WINES.		
Three bottles of dry wine, white, 1st prize, J. Taylor, St. Catharines	7 00	
Three bottles dry wine, red, 1st prize, J. Forsyth, Toronto	7 00	
Three bottles sweet wine, white, 1st prize, J. Taylor, St. Catharines	5 00	
COLLECTION.		
Open to all—Professional and General.		
The best collection of named varieties of apples, pears, peaches, grapes, plums, crabs, and quinces, contributed by any one person, or any number of persons, or any Society, (the 13th rule not to apply) Diploma and first prize, The Galloway Society, Lincoln		40 00
2nd do, H. J. Brown, G. J. Miller and Jas. A. Miller, Niagara	20 00	
CLASS 34. - GARDEN VEGETABLES.		
340 ENTRIES.		
JUDGES - Messrs. W. Sanderson, Brantford; A. Peachy, Brantford; J. Lawrence, Brockville; Joshua Modeland, and A. N. Diamond, Belleville.		

12 roots of salsify, first prize, S. N. Watts, Portsmouth.....	\$2 00
2nd do, W. Benham, Guelph.....	1 50
3 heads cauliflower, first prize, E. Baiden, Portsmouth.....	2 00
2nd do, S. N. Watts, Portsmouth.....	1 50
3rd do, Geo. Scott, Kingston Township.....	1 00
3 heads cabbage (Early York), first prize, S. N. Watts, Portsmouth.....	3 00
3 heads cabbage (Winningsstadt), first prize, D. Nicol, Cataraqui.....	2 50
3 heads cabbage (St. Denis), first prize, D. Nicol, Cataraqui.....	3 00
3 heads cabbage (Quintal), first prize, D. Nicol, Cataraqui.....	2 50
3 heads cabbage (Drumhead), first prize, D. Nicol, Cataraqui.....	2 00
4 sorts winter cabbage, including savoy, 1 of each sort, 1st prize, Chas. George, Kingston.....	3 00
2nd do, E. Baiden, Portsmouth.....	2 00
3rd do, B. Losee, Cobourg.....	1 00
3 heads red cabbage, 1st prize, D. Nicol, Cataraqui.....	2 00
2nd do, Hugh McAulay, Kingston.....	1 50
3rd do, Geo. Scott, Kingston.....	1 00
12 carrots for table, long red, 1st prize, S. N. Watts, Portsmouth.....	2 00
2nd do, W. Benham, Guelph.....	1 50
3rd do, Chas. Foster, East Flamboro'.....	1 00
12 intermediate or half long carrots, 1st prize, S. N. Watts, Portsmouth.....	2 00
2nd do, George Scott, Portsmouth.....	1 50
3rd do, J. Vanorder, Kingston.....	1 00
12 early horn carrots, 1st prize, Charles George, Kingston tp.....	2 00
2nd do, S. N. Watts, Portsmouth.....	1 50
3rd do, J. Vanorder, Kingston.....	1 00
Parsnips, 12 table, 1st prize, George Croft, Guelph.....	2 00
2nd do, S. N. Watts, Portsmouth.....	1 50
3rd do, W. Benham, Guelph.....	1 00
White celery, 6 roots, 1st prize, E. Baiden, Portsmouth.....	2 00
2nd do, Chas. George, Kingston.....	1 50
3rd do, S. N. Watts, Portsmouth.....	1 00
Red celery, 6 roots, 2nd prize, S. N. Watts, Portsmouth.....	1 50
3rd do, Angus Shaw, Portsmouth.....	1 00
Capsicums (ripe), one dozen, 1st prize, Robert Currie, Niagara.....	2 00
2nd do, John Harker, Kingston.....	1 50
3rd do, G. Scott, Kingston.....	1 00
Capsicums (ripe), collection, 1st prize, John Harker, Kingston.....	3 00
2nd do, Chas. George, Kingston.....	2 00
Egg-plant fruit, purple, 3, 1st prize, S. N. Watts, Portsmouth.....	2 00
Tomatoes (Trophy), 12, 1st prize, Angus Shaw, Portsmouth.....	3 00
Tomatoes (General Grant), 12, 1st prize, George Scott, Kingston tp.....	2 50
Tomatoes (Cook's Favourite), 12, 1st prize, John Harker, Kingston tp.....	2 00
Tomatoes (large yellow), 12, 1st prize, John Harker, Kingston tp.....	3 00
Tomatoes, (Red Cherry), 12, 1st prize, J. Harker, Kingston tp.....	2 50
Tomatoes, (Yellow Cherry), 12, 1st prize, John Harker, Kingston tp.....	2 00
Tomatoes, assorted collection, 1st prize, John Harker, Kingston tp.....	3 00
2nd do, Angus Shaw, Portsmouth.....	2 00
3rd do, W. Madden, Napanee.....	1 00
Blood beets, long, 1st prize, G. J. Miller, Virgil.....	2 00
2nd do, S. N. Watts, Portsmouth.....	1 50
3rd do, C. Foster, East Flamboro'.....	1 00
Onions, white, peck of, 2nd prize, Angus Shaw, Portsmouth.....	1 00
Onions, yellow, peck of, 1st prize, Geo. Croft, Guelph tp.....	2 00
2nd do, Geo. Scott, Kingston tp.....	1 50
3rd do, Jas. Williamson, Kingston tp.....	1 00
Onions, red, peck of, 1st prize, Geo. Croft, Guelph tp.....	2 00
2nd do, John Duff, Kingston.....	1 50
3rd do, J. A. Miller, St. Catharines.....	1 00

Onions, pickling, 2 quarts, 1st prize, Robert Currie, Niagara.....	1 50
2nd do, Richard Pigeon, Kingston.....	1 00
Turnips, white (table), 1st prize, W. Benham, Guelph.....	2 00
2nd do, Chas. George, Kingston tp.....	1 50
3rd do, R. Spooner, Kingston tp.....	1 00
Turnips, yellow, 12 (table), 1st prize, Wm. Benham, Guelph.....	2 00
2nd do, Geo. Scott, Kingston tp.....	1 50
3rd do, Chas. George, Kingston tp.....	1 00
Corn, sweet, 12 ears, fit for the table, 1st prize, Thos. Briggs, Kingston.....	2 00
2nd do, R. Spooner, Kingston tp.....	1 50
3rd do, Joseph Walker, Niagara.....	1 00
Potatoes, 6 varieties, for garden cultivation, half peck of each sort, named, 1st prize, Angus Shaw, Portsmouth.....	4 00
2nd do, Jas. Williamson, Kingston tp.....	3 00
3rd do, Chas. George, Kingston tp.....	2 00
Squashes, 3 summer or fall table, 1st prize, Thos. Friendship, Kingston tp.....	2 00
2nd do, N. A. Briscoe, Ernestown.....	1 50
3rd do, John Blythe, Kingston.....	1 00
Squashes, 3 winter table, 1st prize, Angus Shaw, Portsmouth.....	2 00
2nd do, Thos. Friendship, Kingston tp.....	1 50
3rd do, John Blythe, Kingston.....	1 00
Two vegetable marrows, 1st prize, S. N. Watts, Portsmouth.....	2 00
2nd do, Chas. George, Kingston tp.....	1 50
Greatest variety of vegetables (distinct from other entries), each kind named, 1st prize, S. N. Watts, Portsmouth.....	4 00
2nd do, Angus Shaw, Portsmouth.....	3 00
3rd do, Chas. George, Kingston tp.....	2 00

CLASS 35—PLANTS AND FLOWERS.
136 ENTRIES.

JUDGES.—Messrs. D. Nicol, Kingston; W. McKenzie Ross, Chatham; Thos. Buchanan, St. Catharines.

Dozendahlias, standard varieties, named, 1st prize, M. Flanagan, Kingston.....	\$2 00
2nd do, James O'Reilly, Kingston.....	1 50
Largest collection of dahlias, 1st prize, M. Flanagan, Kingston.....	5 00
2nd do, J. L. Nicol, Kingston Tp.....	4 00
Two large vase bouquets, 1st prize, J. L. Nicol, Kingston Tp.....	4 00
2nd do, W. T. Yarwood, Picton.....	3 00
Pair side table or fan bouquets, 1st prize, M. Flanagan, Kingston.....	3 00
2nd do, W. T. Yarwood, Picton.....	2 00
Hand bouquet, 1st prize, J. L. Nicol, Kingston Tp.....	2 00
2nd do, G. G. Fraser, Kingston.....	1 50
3rd do, W. T. Yarwood, Picton.....	1 00
Bouquet, everlastings, 1st prize, Thos. Stock, Waterdown.....	2 00
2nd do, J. B. Hay, Flamboro' East.....	1 50
3rd do, Thos. Wilson, Kingston.....	1 00
Collection of green-house plants, not less than 12 specimens, in flower, 1st prize, J. L. Nicol, Kingston Tp.....	5 00
Pansies, 12, 1st prize, M. Flanagan, Kingston.....	2 00
2nd do, J. L. Nicol, Kingston Tp.....	1 50
Fuchsias, 6, in flower, 1st prize, E. Baiden, Portsmouth.....	4 00
Collection of annuals in bloom, named, 1st prize, J. B. Hay, Flamboro' East.....	2 00
2nd do, Thomas Stock, Waterdown.....	1 50
3rd do, M. Flanagan, Kingston.....	1 00

Cockscombs, 6, 1st prize, A. Bristol, Picton.....	2 00
2nd do, Robert Warren, Niagara.....	1 50
Balsams, 6, in bloom, 1st prize, Robert Warren, Niagara.....	2 00
German asters, 12, 1st prize, M. Flanagan, Kingston.....	2 00
2nd do, James O'Reilly, Kingston.....	1 50
3rd do, J. B. Hay, Flamboro' East.....	1 00
Collection of asters, 1st prize, M. Flanagan, Kingston.....	2 00
2nd do, J. L. Nicol, Kingston Tp.....	1 50
3rd do, Thomas Stock, Waterdown.....	1 00
Collection of ten weeks stock, 1st prize, J. B. Hay, Flamboro' East.....	2 00
2nd do, Thomas Stock, Waterdown.....	1 50
3rd do, M. Flanagan, Kingston.....	1 00
Collection of hybrid perpetual roses, named, 1st prize, George Leslie & Sons, Leslieville.....	5 00
2nd do, M. Flanagan, Kingston.....	3 00
Three roses of any one variety, 1st prize, M. Flanagan, Kingston.....	3 00
Floral design for supper table, 1st prize, W. T. Yarwood, Picton.....	5 00
2nd do, Thomas Wilson, Kingston.....	4 00
Twelve verbenas, named, 1st prize, M. Flanagan, Kingston.....	2 00
2nd do, G. G. Fraser, Kingston.....	1 50
3rd do, James O'Reilly, Kingston.....	1 00
Collection of verbenas, named, 1st prize, G. G. Fraser, Kingston.....	3 00
2nd do, M. Flanagan, Kingston.....	2 00
3rd do, Miss Maria Smith, Kingston.....	1 00
Six petunias, single, 1st prize, E. Baiden, Portsmouth.....	2 00
2nd do, J. L. Nicol, Kingston tp.....	1 50
Collection of perennial phloxes, 1st prize, M. Flanagan, Kingston.....	2 00
Collection of gladiolus, 1st prize, M. Flanagan, Kingston.....	2 00
Collection of double zinnias, 1st prize, M. Flanagan, Kingston.....	2 00
2nd do, Thomas Stock, Waterdown.....	1 50
3rd do, J. B. Hay, Flamboro' East.....	1 00

EXTRAS.—M. Flanagan, Kingston, collection of double daisies, 1st prize, \$2; Miss Maria Smith, Kingston, five geraniums, 1st prize, \$2; M. Flanagan, Kingston, collection of scabiosa, 2nd prize, \$1.

DAIRY PRODUCTS, &c.

CLASS 36—DAIRY PRODUCTS, HONEY, BACON, ETC.

162 ENTRIES.

JUDGES.—Messrs. Noel Kent, Kingston; Robert Shearer, Niagara; Thomas McDonnell, Williamstown; A. McKellar, Ottawa.

JUDGES ON CHEESE, IN SECTIONS 4, 5 AND 6.—W. Burrows, Kingston; R. H. Ramsay, Toronto; John Andrews, Goderich.

Butter, best 3 firkins of, fitted for exportation, not less than 56 lbs. in each firkin, made by the exhibitor, Robert Hutton, Smith's Falls.....	\$20 00
Butter, best firkin of, in shipping order, not less than 56 lbs., Robert Carnduff, Smith's Falls.....	14 00
2nd do, Robert Hutton, Smith's Falls.....	12 00
3rd do, Charles Shibley, Portland.....	10 00
4th do, James Daly, Kingston.....	8 00
5th do, William Craig, Glenburnie.....	6 00
6th do, Stanley File, Napanee.....	4 00
Butter, best, not less than 28 lbs., in firkins, crocks, or tubs, Joseph Bawden, Pittsburgh.....	10 00
2nd do, William Gardiner, Kingston tp.....	8 00
3rd do, Robert Carnduff, Smith's Falls.....	6 00
4th do, Stanley File, Napanee.....	5 00
5th do, J. C. Hawley, Fredericksburgh.....	4 00
6th do, Wm. Ryerson Gordanier, Ernestown.....	3 00

Cheeses, best 3 factory, not less than 50 lbs. each, with statement of number of cows, and management of factory, George Morton, Kingston..... 30 00
 2nd do, Francis Brenton, Thurlow..... 25 00
 3rd do, Sidney Cheese Factory, Sidney. 20 00
Maldimand Cheese Factory, John Hagle, Ernestown, Pittsburgh Cheese Factory, and Thos. Ballantyne, Downie, all highly commended.
Cheese, best, dairy, not less than 30 lbs., John Wilmot, Pittsburg..... 12 00
 2nd do, George Morton, Kingston..... 10 00
 3rd do, J. N. Amey, Camden East..... 8 00
Cheeses, best 2 Stilton, not less than 12 lbs. each, George Morton, Kingston..... 8 00
 2nd do, do, do..... 6 00
Honey, in the comb, not less than 10 lbs., 1st prize, James Byrne, Pittsburg..... 4 00
 2nd do, J. & H. Taash, Ernestown..... 2 00
 3rd do, John Jackson, Newburgh..... 1 50
Jar of clear honey, 1st prize, Charles Merriman, Storrington..... 4 00
 2nd do, George Miller, Markham..... 2 00
 3rd do, John Jackson, Newburgh..... 1 50
4th do, J. N. Amey, Camden East..... 2 00
Maple sugar, cake, 30 lbs., 1st prize, Charles Snider, Ernestown..... 3 00
 2nd do, J. N. Amey, Camden East..... 2 00
Extra 1st prize, J. C. Hawley, Fredericksburgh..... 3 00
Maple sugar, soft or powdered, 30 lbs., 1st prize, L. Lyon, Storrington..... 3 00
Side cured bacon, 1st prize, James Schroeder, Portsmouth..... 4 00
Ham, cured, 1st prize, R. Spooner, Kingston township..... 3 00
 2nd do, James Schroeder, Portsmouth.. 2 00
EXTRA PRIZES.—Charles Snider, maple syrup, \$2; D. Campbell, Charlottenburgh, beeswax, \$1 50; George Miller, one case beeswax, \$1.
 NOTE.—The Judges have much pleasure in testifying to the excellent quality of the cheese exhibited.

ARTS AND MANUFACTURES DEPARTMENT.

CLASS 38—CABINET WARE AND OTHER WOOD AND HAIR MANUFACTURES.

67 ENTRIES.

Cabinet Ware.

JUDGES.—Messrs. J. E. Pell, Montreal, and George Cormack, Whitby.
Bed-room furniture, set of, 1st prize, J. Gibbard & Son, Napanee..... \$15 00
Carving in wood, decorative, not connected with any other article on exhibition, 1st prize, David Cockburn, Pembroke..... 10 00
 2nd do, Wm. Harold, Kingston..... 6 00
Drawing-room furniture, set of, 1st prize, Gibbard & Son, Napanee..... 20 00
Sideboard, 1st prize, Gibbard & Son, Napanee..... 10 00
Miscellaneous.
Coopers' work, 1st prize, J. McMullen, Portland..... 6 00
 2nd do, Andrew Bridge, Westbrook..... 3 00
Corn brooms, 1 dozen, 1st prize, B. Bailey & Co., Kingston..... 2 00
Joiners' work, assortment of, 1st prize, Miles Storms, Moscow..... 10 00
 2nd do, Thomas Nicholson, Kingston.. 6 00

Extra entries.—B. Bailey & Co., 1 dozen corn dusters, \$1; Joshua Johnston, Lindsay, patent door thresholds, and weather boards, to exclude water, air and dust; air-tight door jamb strips, to render windows air-tight; window and sash holders, superseding weights

and pulleys; air and water-proof door, air and water-proof French windows, with Johnston's weather protectors applied; improved system of manufacturing door and window frames, etc., 1st prize as a whole, \$4; R. Shorey & Co., Napanee, clothes-wringer, \$4; Odell's self-regulating spiral spring mangle, 1st prize, \$4; Wm. Peacock, Montreal West, cricket bats and wickets, \$4; Webster Augustus, Kingston, case of fancy boats, 1st prize, \$2; Andrew McCorkell, Kingston, fancy double scull pleasure skiff, \$8; D. Cockburn, Pembroke, statuary bracket and oval portrait frame, 1st prizes, each, \$2; William Power, Kingston, models of steam and sailing vessels, \$6; H. H. Tomlinson, Portsmouth, fancy rowing boat, 2nd prize, \$2; J. & H. Delaney, Cobourg, six decoy ducks, 2nd prize, \$1; William Jaquith, Loughborough, two patent ladders, wood, 2nd prize, \$2; Robert Gage, Kingston, clothes mangle, 2nd prize, \$2; and quilting frame recommended; Samuel Paling, Woodstock, assorted patent window blinds, 2nd prize, \$2; William Peacock, collection of gymnastic implements, 2nd prize, \$2; Charles H. Dunks, Windsor, Dominion noiseless steel spring bed bottom, 2nd prize, \$2; D. Cockburn, stationary cabinet, 2nd prize, \$2; John Seale, Pittsburgh, cabinet dressing cases, 2nd prize, \$2; S. Chown & Sons, Kingston, skiff, 2nd prize, \$4; Chas. Moore, Kingston, lady's work-box, \$2.

CLASS 39—CARRIAGES AND SLEIGHS AND PARTS THEREOF.

70 ENTRIES.

JUDGES.—Messrs. John Fitzgerald, St. Catharines; James Chisholm, Paris; and Wm. Stockdale, Ottawa.
Axle, wrought iron, 1st prize, John Doty, Oakville..... \$4 00
 2nd do, John Doty, Oakville..... 2 00
Buggy, double-seated, covered, 1st prize, E. Spragge & Co., Ameliasburg..... 10 00
 2nd do, W. H. Vermilyea, Belleville... 7 00
Buggy, double-seated, uncovered, 1st prize, Hart & Son, Picton..... 8 00
 2nd do, McCrea & Bently, Kingston... 6 00
Buggy, single-seated, covered, 1st prize, W. H. Vermilyea, Belleville..... 8 00
 2nd do, Fralick & Bros., Picton..... 6 00
Buggy, single-seated, uncovered, 1st prize, Fralick & Bros., Picton..... 7 00
 2nd do, Spragge & Co., Ameliasburg... 5 00
Buggy, trotting, 1st prize, Spragge & Co., Ameliasburg..... 6 00
 2nd do, W. H. Vermilyea, Belleville... 4 00
Carriage, two-horse, pleasure, 1st prize, W. H. Vermilyea, Belleville..... 20 00
One horse pleasure carriage, 1st prize, E. Spragge & Co., Ameliasburg..... 12 00
 2nd do, Hart & Son, Picton..... 8 00
Carriage, child's perambulator, 1st prize, W. J. Morrison, Kingston..... 4 00
Sleigh, two horse, pleasure, 1st prize, McCrea & Bentley, Kingston..... 15 00
 2nd do, Fralick Bros., Picton..... 8 00
Sleigh, one-horse, pleasure, 1st prize, W. H. Vermilyea, Belleville..... 10 00
 2nd do, Fralick Bros., Picton..... 6 00
Springs, one set steel carriage, 1st prize, Byers & Penn, Gananoque..... 5 00
Sulky, trotting, 1st prize, W. J. Hamill, St. Catharines..... 5 00
Wheels, one pair of carriage, unpainted, 1st prize, Fralick Bros., Picton..... 4 00
EXTRA ENTRIES.—Byers & Matthews, Gananoque, fifth wheel, \$4; W. J. Morrison, child's sleigh, 1st prize, \$2; Hart & Son, Picton, city phaeton, 2nd prize, \$4; Brown & St. Charles, Belleville, park phaeton, \$4.

CLASS 40—CHEMICAL MANUFACTURES AND PREPARATIONS.

12 ENTRIES.

JUDGES.—Professor Dupuis, and Dr. Neish, Kingston.

Colours, assortment in oil, pulp and powder, 1st prize, Lyman & Bros., Toronto..... \$6 00
Medical herbs, roots and plants, native growth, 2nd prize, William Teepell, Storrington..... 7 00
Commended, Allen Bond, Storrington. Highly Commended D. Davis, Louth, Oils—Linseed, 1st prize, Lyman Bros. & Co., Toronto..... 6 00
Perfumes, assortment of, 1st prize, Lyman Bros. & Co., Toronto..... 6 00
Tar, 1 gallon, 2nd prize, Allen Bond, Storrington..... 1 00
Lyman, Bros. & Co., Toronto, pure chemical and pharmaceutical preparations. 1st prize, diploma, Lyman's Quinine wine and Lyman's Canadian Alkali, Commended.

CLASS 41—DRAWINGS, ARCHITECTURAL AND MECHANICAL; ENGRAVINGS; BUILDING MATERIALS AND CONSTRUCTION, POTTERY, &c.

58 ENTRIES.

JUDGES.—Messrs. J. G. Watson, Ayr; Rev. V. Clementi, North Douro; and A. R. Pratt, Bothwell.
Bricks, kiln burnt, 1 doz., 2nd prize, R. Hanes, Matilda..... \$1 00
Drawings, architectural, geometrical and perspective views, 1st prize, J. W. Power, Kingston..... 10 00
 2nd do, F. Hora, Kingston..... 6 00
Engravings on copper, with proof, 1st prize, J. T. Rolph, Toronto..... 6 00
 2nd do, Geo. Bishop & Co., Montreal... 4 00
Iron castings for building construction, 1st prize, Chown & Cunningham, Kingston..... 8 00
Lithographic drawing, plain, 1st prize, Copp, Clark & Co., Toronto..... 6 00
Lithographic drawing, colours printed, 1st prize, J. T. Rolph, Toronto..... 6 00
 2nd do, Copp, Clark & Co., Toronto... 4 00
Lithographic commercial work, in black or colours, 1st prize, J. T. Rolph, Toronto..... 6 00
 2nd do, Geo. Bishop & Co., Montreal... 4 00
Monumental headstone, 1st prize, Angus Shaw, Portsmouth..... 8 00
Sign writing, 1st prize, Wm. Booth, Toronto..... 5 00
Stained glass, collection of specimens, 1st prize, Jos. McCausland, Toronto. 12 00
Stoneware, an assortment, 1st prize, George J. Lazier, Picton..... 8 00

EXTRA.—Wm. McKay, Ottawa, magic mirror, \$2; J. W. Bastow, Kingston, show card, \$2; Geo. Bishop & Co., Montreal, illuminated stamping, \$3; do do, die sinking, \$3; J. T. Rolph, Toronto, wedding, invitation, and business cards, embossing and seals, for the whole, \$8; Canadian Printing and Publishing Co., Ottawa, steel plate engravings, 1st prize, \$4; Buffalo Frear Stone Co., artificial frear stone, \$2; H. V. Brown, Kingston, a pair of picture frames, \$1; Geo. Bishop & Co., Montreal, stencil plate, with proof, \$2; Andrew McLaren, London, one case of india rubber artificial limbs, \$6; J. P. Merritt, St. Catharines, Historic Tree, Universal Chronographer, and Decimal Enumeration Table, all commended.

CLASS 42—FINE ARTS.

75 ENTRIES.

Professional or Amateur—Oil (Originals),
JUDGES.—Messrs. H. D. Delameter, Fonthill; Rev. W. Cochrane, Brantford.
Any subject, 1st prize, F. A. Verner, Toronto..... \$20 00
 2nd do, Thos. Martin, Toronto..... 12 00
 3rd do, S. G. Drake, Grafton..... 6 00

Animals, from life, 1st prize, Thomas Martin, Toronto.....	12 00
2nd do, H. Martin, Toronto.....	8 00
Flowers, grouped or single, 1st prize, James Griffith, London.....	10 00
2nd do, T. M. Martin, Toronto.....	6 00
Figure subject, 1st prize, Miss A. M. Machar, Kingston.....	12 00
2nd do, T. M. Martin, Toronto.....	8 00
Landscape, Canadian subject, 1st prize, F. A. Verner, Toronto.....	15 00
2nd do, H. Martin, Toronto.....	10 00
Landscape or marine painting, not Canadian subject, 1st prize, F. A. Verner, Toronto.....	10 00
2nd do, Miss A. M. Machar, Kingston.....	6 00
Marine painting, Canadian subject, 1st prize, F. A. Verner, Toronto.....	12 00
Portrait, 1st prize, F. A. Verner, Toronto.....	10 00
2nd do, T. M. Martin, Toronto.....	7 00
Still life, 1st prize, T. M. Martin, Toronto.....	10 00
2nd do, F. A. Verner, Toronto.....	6 00

Amateur List—(Copies.)

Any subject, 1st prize, F. Hora, Kingston.....	10 00
2nd do, Miss A. M. Machar, Kingston.....	6 00
Figure subject, 1st prize, Miss A. M. Machar, Kingston.....	8 00
Landscape or marine view, Canadian subject, 1st prize, Miss M. S. Bristol, Picton.....	8 00
2nd do, Miss Nancy Strickland, Whitby.....	5 00

Professional or Amateur—Figure Subjects.

(Originals.)

Carving in wood, 1st prize, Wm. Harold, Kingston.....	\$12 00
2nd do, Angus Shaw, Portsmouth.....	8 00
Carving in stone, in relief, 1st prize, L. R. Welsh & Son, Kingston.....	12 00

Photographs.

Photograph portrait, finished in oil, 1st prize, F. A. Verner, Toronto.....	\$8 00
Photograph portrait, finished in Indian ink, 1st prize, Marmaduke Mathews, Toronto.....	6 00
Photograph portrait, finished in water colors, 1st prize, M. Mathews, Toronto.....	6 00
2nd do, Miss A. M. Machar, Kingston.....	1 00

EXTRAS.—Miss Lizzie Farnhamson, Whitby, two velvet paintings, original, 1st prize, \$1; David Nicol, Cataraqui, marble table top, \$2; F. Hora, carving in ivory and sandal wood, 2nd prize, \$4; Geo. Bishop & Co., Montreal, heraldic painting, coats of arms, &c., commended.

CLASS 43—FINE ARTS.

269 ENTRIES.

Professional List—(Originals.)

JUDGES.—Messrs. A. R. Pratt, Bothwell; Rev. V. Clementi, North Douro, and J. W. Bridgman, Toronto.

Water Colours.

Any Subject, 1st prize, D. Fowler, Amherst Island.....	15 00
2nd do, James Griffith, London.....	10 00
3rd do, Chas. S. Millard, Toronto.....	6 00
Animals from life, 2nd prize, M. Mathews, Toronto.....	6 00
Flowers, grouped or single, 1st prize, D. Fowler, Amherst Island.....	7 00
2nd do, James Griffith, London.....	5 00
Henry Martin, Toronto, Commended.....	
Figure subject, 1st prize, M. Mathews Toronto.....	6 00
Landscape, Canadian subject, 1st prize, C. S. Millard, Toronto.....	12 00
2nd do, M. Mathews, Toronto.....	8 00
3rd do, Daniel Fowler, Amherst Island.....	4 00

Landscape or marine view, not Canadian subject, 1st prize, D. Fowler, Amherst Island.....	8 00
2nd do, C. S. Millard, Toronto.....	6 00
Marine view, Canadian subject, 1st prize, F. A. Verner, Toronto.....	8 00
2nd do, M. Mathews, Toronto.....	6 00
Portrait, 1st prize, M. Mathews, Toronto.....	7 00
2nd do, D. Fowler, Amherst Island.....	5 00
Still life, 1st prize, D. Fowler, Amherst Island.....	7 00
2nd do, M. Mathews, Toronto.....	5 00
<i>Pencils, Crayons, &c.</i>	
Crayon, plain, 1st prize, F. A. Verner, Toronto.....	6 00
Crayon or pencil portrait, 1st prize, F. A. Verner, Toronto.....	6 00
2nd do, D. Fowler, Amherst Island.....	4 00
Pen-and-ink sketch, 1st prize, D. Fowler, Amherst Island.....	6 00
2nd do, H. Martin, Toronto.....	4 00
Pencil drawing, 1st prize, Richard Light Kingston.....	6 00
2nd do, D. Fowler, Amherst Island.....	4 00
Seal drawing, 1st prize, James Griffith, London.....	6 00
2nd do, H. Macarquodale, Toronto.....	1 00

Amateur List—(Originals.)

Water Colours.

Any subject, 1st prize, Miss E. A. Westmacott, Toronto.....	8 00
2nd do, F. Hora, Kingston.....	6 00
3rd do, Miss R. Knapp, Kingston.....	4 00
Animals from life, 1st prize, F. Hora.....	7 00
Flowers grouped or single, 1st prize, Miss Westmacott, Toronto.....	6 00
2nd do, Miss A. M. Machar, Kingston.....	4 00
Figure subject, 1st prize, Miss H. Thurtell, Guelph.....	7 00
Landscape or marine view, Canadian subject, 1st prize, Miss A. M. Machar, Kingston.....	7 00

Pencils, Crayons, &c.

Crayon coloured, 1st prize, H. V. Brown, Kingston.....	5 00
Pencil drawing, 1st prize, Richard Pigeon, Kingston.....	5 00
2nd do, Miss Machar, Kingston.....	3 00
Pen-and-ink sketch, 1st prize, Rev. Jas. Lyster, Kingston.....	5 00

Amateur List—(Copies.)

Water Colours.

Animals grouped or single, 1st prize, Miss Palmer, Guelph.....	5 00
2nd do, F. Hora, Kingston.....	3 00
Flowers grouped or single, 1st prize, Miss A. M. Machar, Kingston.....	5 00
2nd do, R. W. Barrow, Kingston.....	3 00
Figure subject, 1st prize, Miss E. S. Drake, Grafton.....	5 00
Landscape, 1st prize, F. Hora, Kingston.....	5 00
2nd do, Miss Palmer, Guelph.....	3 00
Marine view, 1st prize, Rev. James Lyster, Kingston.....	5 00
2nd do, R. W. Barrow, Kingston.....	3 00
Still Life, 1st prize, Miss A. M. Machar Kingston.....	5 00
2nd do, Miss Nancy Strickland, Whitby.....	3 00

PENCILS, CRAYONS, &c.

Crayon coloured, 1st prize, Thos. Wilson, Kingston.....	4 00
Crayon, plain, 1st prize, Mrs. Hislop, Toronto.....	4 00
2nd do, Mrs. F. J. Bentley, Kingston.....	2 00
Crayon or Pencil portrait, 1st prize, Mrs. J. S. Powley, Kingston Tp.....	4 00
Pen-and-ink sketch, 1st prize, Miss Westmacott, Toronto.....	4 00
2nd do, Miss Nancy Strickland, Whitby.....	2 00
Pencil drawing, 1st prize, Miss Nancy Strickland, Whitby.....	4 00
2nd do, Mrs. Hislop, Toronto.....	2 00

EXTRAS.—M. Mathews, frame of studio, from nature, \$2; and combination photograph, \$2; Miss Josephine Bates, Toronto, mixed drawing, coloured, \$3; Miss, Lillie Fraser, Kingston, monotheomatic drawing, 2nd prize, \$2; S. G. Drake, Grafton, Indian ink drawing, \$3.	
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CLASS II—GROCERIES AND PROVISIONS.

70 ENTRIES.

JUDGES.—Messrs. George Harrison, Alexandra; Professor Dupuis, Kingston, and Dr. Neish, Kingston.	
Barley, pearl, 25 lbs, 1st prize, Jas. Russell, Pickering.....	\$3 00
Barley, pot, 25 lbs, 1st prize, D. Campbell, Charlottenburg.....	3 00
2nd do, J. Russell, Pickering.....	2 00
Bottled fruits, an assortment, manufactured for sale, 1st prize, E. H. Shouars, Thorold.....	6 00
Bottled pickles, an assortment, manufactured for sale, 1st prize, Richard Varney, Kingston.....	6 00
2nd do, D. Davis, Louth.....	4 00
Buckwheat Flour, 25 lbs, 1st prize, D. Campbell, Charlottenburg.....	3 00
2nd do, J. Russell, Pickering.....	2 00
Candles, tallow, 10 lbs, 1st prize, A. Watts & Co, Brantford.....	3 00
2nd do, J. F. Phippen, Kingston.....	2 00
Indian corn meal, 25 lbs, 1st prize, J. Russell, Pickering.....	3 00
2nd do, A. Bond, Storrington.....	2 00
Oatmeal, 25 lbs, 1st prize, J. Russell, Pickering.....	3 00
Salt, 30 lbs, table or dairy, Canadian, 1st prize, R. Mansford, Stapleton.....	3 00
Sauces for table use, an assortment, manufactured for sale, 1st prize, D. Davis, Louth.....	6 00
2nd do, R. Pigeon, Kingston.....	4 00
Soap, one box of common, 1st prize, Robertson Bros, Kingston.....	4 00
2nd do, A. Watts & Co, Brantford.....	3 00
Soaps, collection of assorted fancy, 1st prize, Robertson Bros, Kingston.....	6 00
2nd do, A. Watts & Co, Brantford.....	4 00
Starch, 12 lbs., corn, 1st prize, Edwardsburg Starch Co, Edwardsburg.....	2 00
Starch, 12 lbs, flour, 1st prize, Edwardsburg Starch Co, Edwardsburg.....	2 00
Wheat flour, 50 lbs, 1st prize, A. Bond, Storrington.....	7 00
2nd do, D. Campbell, Charlottenburg.....	5 00

EXTRAS.—Joseph Fisher, Portsmouth, one dozen porter, \$2, and one dozen ale, \$2; Richd. Pigeon, Toronto, soup, 1st prize, \$2; J. S. Phippen, "Star of the West" soap, 2nd prize, \$2; Jas. Russell, Pickering, 25 lbs split peas, \$2; W. W. Park & Co, Toronto, six samples vinegar, \$2; Waterloo Yeast Co, vegetable dry hop yeast, \$2; Richard Pigeon, Kingston, dandelion coffee, \$2; Richard Pigeon, Kingston, jar of mince meat, \$2; Ives & Allen, Montreal, Dominion black lead, \$2; Richd. Pigeon, Kingston, apple pie, commended, D. Campbell, Charlottenburg, homemade soap, commended.

CLASS 15—LADIES' WORK.

527 ENTRIES.

Braiding, Embroidery, Needlework, &c.

JUDGES.—Mesdames Jas. Young, Galt, and C. Anglin, Kingston, and Miss Ferguson, Kingston.	
Bead work, 1st prize, M. B. Cunningham, Kingston.....	\$3 00
2nd do, Mrs. Rees, Kingston.....	2 00
3rd do, Miss R. Lenee, Kingston.....	1 00
Braiding, 1st prize, Mrs. Gange, Kingston.....	3 00
2nd do, Miss Fowler, Hamilton tp.....	2 00
3rd do, H. Rankin, Kingston.....	1 00

Crochet work, 1st prize, Miss Bidwell, Cramahe. 3 00
 2nd do, Miss Loscombe, Kingston. 2 00
 3rd do, Miss Nancy Strickland, Whitby
 Embroidery in muslin, 1st prize, Miss Bidwell, Cramahe. 3 00
 2nd do, Miss Nancy Strickland, Whitby 2 00
 3rd do, Mrs. Williams, Cobourg 1 00
 Embroidery in cotton, 1st prize, Miss Bidwell, Cramahe. 3 00
 2nd do, Mrs. L. S. Lundy, Drummondville 2 00
 3rd do, Miss M. E. Vann, Prescott 1 00
 Embroidery in silk, 1st prize, Mrs. Bentley, Kingston. 3 00
 2nd do, Mesdames Henley and Otten, Kingston 2 00
 3rd do, Miss Farnham, Sherbrooke 1 00
 Embroidery in worsted, Miss Hawley, Fredericksburg. 3 00
 2nd do, Mrs. Rees, Kingston. 2 00
 3rd do, Miss Breden, Kingston. 1 00
 Guipure work, 1st prize, Miss Bidwell, Cramahe. 3 00
 2nd do, Miss Kirkpatrick, Kingston. 2 00
 3rd do, Miss Sarah Strickland, Whitby
 Knitting, 1st prize, Mrs. Curiau, Kingston 3 00
 2nd do, Jas. Gibson, Kingston Tp. 2 00
 3rd do, Miss G. Loscombe, Kingston 1 00
 Lace work, 1st prize, Miss Kirkpatrick, Kingston 3 00
 2nd do, Miss Bidwell, Cramahe. 2 00
 3rd do, Miss Lizzie Evans, Kingston 1 00
 Machine sewing, family, 1st prize, Miss Farnham, Sherbrooke. 3 00
 2nd do, Miss Hattie Ward, Bath 2 00
 Needle work, ornamental, 1st prize, Mrs. Sparks, Kingston. 3 00
 2nd do, Grace Marks, Kingston. 2 00
 3rd do, Miss Sarah Strickland, Whitby
 Netting, fancy, 1st prize, Miss P. A. Cullis, Cobourg. 3 00
 2nd do, Mrs. E. Miller, Pittsburgh. 2 00
 3rd do, Miss Nancy Strickland, Whitby
 Plait for bonnets or hats, of Canadian straw, 1st prize, Mrs. Hopkins, Ernestown. 3 00
 2nd do, Miss Bidwell, Cramahe. 2 00
 3rd do, Mrs. Schroeder, Portsmouth. 1 00
 Quilt, silk, 1st prize, Mrs. Macdonell, Brockville. 3 00
 2nd do, Miss Wartman, Kingston Tp. 2 00
 Quilt, patch work, 1st prize, Miss E. Jackson, Edwardsburg. 3 00
 2nd do, Mrs. J. N. Amey, Camden East 2 00
 3rd do, Wm. Lawrence, Loughboro. 1 00
 Rag carpet, 1st prize, Mrs. Augustus, Kingston 3 00
 2nd do, Mrs. S. Lake, Ernestown 2 00
 3rd do, Miss Scott, Kingston. 1 00
 Rag mat, 1st prize, Miss Mary Strickland, Whitby. 2 00
 2nd do, Mrs. Hinman, Grafton. 1 00
 3rd do, Mrs. Laidlaw, Toronto. 0 50
 Shirt, gentleman's, 1st prize, Mrs. Brock, Bowmanville. 3 00
 2nd do, Mrs. Nelson, Kingston. 2 00
 3rd do, Miss M. J. Nelson, Kingston 1 00
 Tatting, 1st prize, Miss Bidwell, Cramahe 3 00
 2nd do, Miss Lillie Beatty, Cobourg. 2 00
 3rd do, Miss McQueen, Ottawa. 1 00
 EXTRAS.—Wm. Madden, Napanee, mat, \$2
 Anna Evans, Kingston, knitted quilt, \$2
 John Hopkins, Ernestown, straw hats, \$2
 Emma G. Hoyle, Ernestown, ladies' under clothing, \$2; Miss Isabella Makins, Kingston, leather work, \$1; Mrs. Mallock, Kingston, cosy or tea pot cover, \$2; Miss Bidwell, Cramahe, handkerchief, \$1; Miss Sarah Strickland, Whitby, crochet work counterpane, \$2; Miss Laidlaw, Toronto, set cord toilet mats, \$1; Mrs. Nelson, Kingston, plain needle work, \$2; Miss E. Gange, Kingston, decalomanie design, \$2; Miss H. C. Farnham, Sherbrooke, dress making, \$2; Mrs. Chas. Doller, Ernestown, two fancy quilts, worked in feather stitch, \$2;

Mrs. Kirkpatrick, Kingston, baby's knitted woollen dress, \$2; Mrs. Farnham, Sherbrooke, Princess Louise chart and patterns cut by the chart, \$2; Lillie Fraser, Kingston, oriental work, \$1; Mrs. Chas. Doller, Ernestown, embroidery done with silk feather stitch, \$2.
 CLASS 46—LADIES' WORK.
 150 ENTRIES.
Flowers, Hair, Moss, Wax, Worsted Work, &c.
 JUDGES.—Mrs. Bond, Newmarket; Miss E. H. Ferguson, Kingston; and Miss Urquhart, Kingston.
 Flowers, silver wire, 1st prize, Mrs. A. Storms, Odessa \$3 00
 2nd do, E. F. Storms, Odessa 2 00
 Flowers, feather, 1st prize, Mrs. A. Storms, Odessa 3 00
 2nd do, Miss E. F. Storms, Odessa. 2 00
 3rd do, Mrs. T. McAdam, Kingston. 1 00
 Three pair gloves, 1st prize, Mrs. Hinman, Grafton 3 00
 2nd do, A. Ayerst, Kingston Tp. 2 00
 3rd do, Miss C. E. H. Choate, Hope. 1 00
 Hair work, 1st prize, Mrs. A. Storms, Odessa 3 00
 2nd do, Miss Schroeder, Portsmouth. 2 00
 3rd do, Miss E. F. Storms, Odessa. 1 00
 Two pair woollen mittens, 1st prize, Mrs. Amey, Camden East. 3 00
 2nd do, Mrs. Hinman, Grafton 2 00
 3rd do, A. Ayerst, Kingston Tp. 1 00
 Moss picture, 1st prize, Mrs. Band, Toronto 3 00
 2nd do, Miss Nancy Strickland, Whitby
 Moss work, 1st prize, Mrs. A. Storms, Odessa. 3 00
 Three pair woollen socks, 1st prize, Mrs. Foster, Waterdown. 3 00
 2nd do, Mrs. Hinman, Grafton. 2 00
 3rd do, A. Ayerst, Kingston Tp. 1 00
 Three pair woollen stockings, 1st prize, Mrs. J. Gibson, Kingston Tp. 3 00
 2nd do, Mrs. Hinman, Grafton 2 00
 3rd do, A. Ayerst, Kingston Tp. 1 00
 Wax flowers, 1st prize, A. Livingston, Kingston 5 00
 2nd do, Miss Price, Kingston. 3 00
 3rd do, Mrs. Bajus, Kingston 2 00
 Wax fruit, 1st prize, Mrs. Bajus, Kingston 5 00
 2nd do, Miss McEvers, Cobourg. 3 00
 Worsted work, 1st prize, Mrs. D. Powell, Cobourg. 3 00
 2nd do, Miss Richardson, Kingston. 2 00
 3rd do, Miss A. Power, Kingston. 1 00
 Miss E. Lenea, and Mrs. Fraser, Kingston, Miss Fisher, Portsmouth, and Miss C. McCammon, Kingston, highly commended
 Fancy, worsted work for framing, 1st prize, Miss Flanagan, Kingston. 3 00
 2nd do, Mrs. English, Kingston. 2 00
 3rd do, Miss A. Power, Kingston. 1 00
 Raised worsted work, 1st prize, Miss Brophy, Kingston 3 00
 2nd do, Mrs. Powley, Kingston Tp. 2 00
 3rd do, Mrs. McDonell, Brockville 1 00
 Seed wreath, 1st prize, Miss Daly, Ernestown 3 00
 EXTRAS.—Miss Price, Kingston, wax cross, \$1; Agnes Handy, Kingston, cotton socks, \$2; Agnes Handy, Kingston, cotton stockings, \$2; Miss De St. Remy, Kingston, wax cross, \$1; Annie Powell, Brockville, wax lyre, \$2.
 CLASS 47—MACHINERY, CASTINGS, AND TOOLS.
 37 ENTRIES.
 JUDGES.—Messrs. John Fensome, Toronto; T. M. Bleasdel, Ottawa; and E. E. Abbott, Gananoque.
 Assortment card clothing, 1st prize, John Forsyth, Dundas. \$4 00
 Castings for railways, railroad cars, and locomotives, assortment of, 1st prize, John Gartshore, Toronto. 20 00

Fire engine, hand power, 1st prize, Robert Dunn, Stratford. 15 00
 Pump, in metal, 1st prize, John Broken-shire, Kingston, (also highly commended). 5 00
 Refrigerator, 1st prize, James McKelvey, St. Catharines. 5 00
 2nd do, R. M. Horsey, Kingston. 3 00
 Shingle-splitting machine, 1st prize, R. Martin, Listowel 6 00
 Skates, an assortment of, 1st prize, J. H. Horvey & Co., Massachusetts 5 00
 Spinning machine, 1st prize, John Lazier, Belleville 4 00
 Water-wheel, 1st prize, W. Kenney & Son, Owen Sound 8 00
 2nd do, Barbet & Harri, Meaford 5 00
 EXTRAS—Fralick & Bros., Picton, snaitn turning machine, \$4; John McKelvie, St. Catharines, a cream still, \$3; Isaac Mills, Hamilton, dry goods stock-taking and general measuring machine, 1st prize, \$6; Fralick & Bros., tire upsetting machine, 2nd prize, \$2; Hamilton Manufacturing Company, combined flat and fluting iron, \$1; also, clothes line holder (iron), \$1; towel rack, (iron), \$1; E. W. Seord, berry and fruit picker, 2nd prize \$2.
 MANUFACTURES.
 CLASS 48—MACHINES, SEWING AND KNITTING.
 23 ENTRIES.
 JUDGES.—Mrs. W. Ferguson, Kingston; John Junkin, St. Catharines, and Hon. Wm. McDougall, Toronto.
 Sewing machine, manufacturing, 1st prize, James Barrett, Belleville. \$7 00
 2nd do, C. W. Williams & Co., Montreal. 5 00
 Sewing machine, family, 1st prize, Guelph Sewing Machine Company. 7 00
 2nd do, Gardner Sewing Machine Co. Hamilton 5 00
 Sewing machine, embroidery, 1st prize, Guelph Sewing Machine Co. 6 00
 Sewing machine, single thread, 1st prize, Guelph Sewing Machine Com. 5 00
 EXTRAS—Guelph Sewing Machine Co., full cabinet and extra ornamented machine, \$6; C. W. Williams & Co., Montreal, family sewing machine with ornamented case in mother of pearl, of superior workmanship, \$7.
 CLASS 49.—METAL WORK, (MISCELLANEOUS) INCLUDING STOVES.
 89 ENTRIES.
 JUDGES—Rev. W. F. Clarke, Guelph; Messrs. Buck, Brantford, and E. E. Abbott, Gananoque.
 Engineers' brass work, an assortment, 1st prize, J. Morrison, Toronto. \$8 00
 Files, collection of cast steel, 1st prize, Frank Astler, Gananoque. 3 00
 Goldsmiths' work, (diploma), 1st prize, Otto Meeves, Kingston. 6 00
 Gold and silver leaf, 1st prize, C. H. Hubbard, Toronto. 4 00
 Iron fencing and gate, ornamental, 1st prize, Chown & Cunningham, Kingston. 8 00
 Iron work, ornamental, cast, 1st prize, Chown & Cunningham, Kingston. 7 00
 Locksmiths' work, an assortment, 1st prize, W. C. Evans, Kingston 8 00
 Assortment malleable hardware manufactures, 1st prize, W. C. Evans, Kingston. 8 00
 Nails, 20 lbs., pressed, 1st prize, Cowan & Britton, Gananoque. 6 00
 Nails, 20 lbs., cut, 1st prize, Cowan & Britton, Gananoque. 6 00
 Plumbers' work, an assortment, 1st prize, J. Morrison, Toronto. 8 00

Screws and bolts, an assortment, 1st prize, Canada Bolt Co., Toronto..... 6 00
 Silversmiths' work, 1st prize and diploma, Otto Meeves, Kingston..... 6 00
 Tinsmiths' work, an assortment, 1st prize, Chown & Cunningham, Kingston 6 00

STOVES.

Cooking stove for wood, 1st prize, Chown & Cunningham, Kingston... 6 00
 Cooking stove for coal, 1st prize, Chown & Cunningham, Kingston..... 6 00
 Furniture for cooking stove, one set 1st prize, Chown & Cunningham, Kingston..... 5 00
 Hall stove, for wood, 1st prize, Chown & Cunningham, Kingston..... 5 00
 Stove, parlour, for wood, 1st prize, Chown & Cunningham, Kingston.... 5 00
 Grate, parlour, 1st prize, E. & C. Gurney, Toronto..... 5 00
 Fire-place, parlour complete, including setting of grate so as to economise fuel, and arrangement for ventilating room, 1st prize, John Smith, Brantford, diploma and..... 10 00

EXTRAS.—G. H. Pedlar, Oshawa, steam cauldron or steam heater, \$5; J. & H. Delaney, Cobourg, case of trolling baits, \$3; John Gross, Ridgeville, radiator and ventilator combined for stoves, \$4; Cowan & Britton, Gananoque, assortment zinc and iron shoe nails, \$2; assortment of clout, trunk, and finishing nails, \$2; and assortment of T and strap hinges, \$5; Chown & Cunningham, hot-air furnaces for coal, \$4; Jones & Co., Markham, steel amalgam bells, \$8; James Morrison, steam gauges, assortment of cabinet brass work and steam indicator, for the whole, \$11; R. Wilkes & Co., Sheffield, England, case nickelite spoons, forks, &c., \$5; H. Calcutt, Peterboro', beer and milk cooler, \$3; C. H. Hubbard, Toronto, dental gold and silver foil, \$3; W. Millechamp, Toronto, nickel-silver, best plate counter case, 1st prize, \$6; E. & C. Gurney, Toronto, 1st prize and diploma for Ruttan's tubular heater, diploma and \$3; W. C. Evans, Kingston, a set of butt hinges, \$3; G. H. Pedlar, Oshawa, drum heater, \$3; Chown & Cunningham, Kingston, hot-air furnace for wood, 2nd prize, \$5; O. S. Ferguson, St. Catharines, patent spiral damper and heat retainer, commended; Gray, Gates & Co., Toronto, revolving flue radiator, commended; W. Millechamp, ordinary plate counter case, plain plate counter case and bent plate window case, highly commended; Hamilton Manufacturing Company, the Dominion Elbow and Brush, commended; H. Calcutt, dumb stove, commended; Samuel Fell, Brockville, railway lamp or indicator, commended; Chown & Britton, Gananoque, clout, trunk and finishing nails, \$2; Samuel Fell, Brockville, railway lamp or indicator, \$4.

CLASS 50—MUSICAL INSTRUMENTS.

26 ENTRIES.

JUDGES.—Dr. Alexander, St. Catharines; Messrs. W. Burrows, Kingston, and B. H. Lyman, Toronto.
 Case for organ any kind of instrument, best made and finished, 1st prize, Heintzman & Co., Toronto..... \$8 00
 2nd do, W. Bell & Co., Guelph..... 5 00
 Harmonium, 1st prize, W. Bell & Co., Guelph..... 12 00
 Melodeon, 1st prize, W. Bell & Co., Guelph..... 6 00
 2nd do, Rainer & Co., Kingston.... 4 00
 Organ, cabinet or parlour, 1st prize, W. Bell & Co., Guelph..... 12 00
 2nd do, Rainer & Co., Kingston..... 8 00
 Organ, church, 1st prize, W. Bell & Co., Guelph..... 30 00

Piano, square, 1st prize, Heintzman & Co., Toronto..... 15 00
 2nd do, Weber & Co., Kingston..... 10 00
 Piano, cottage, 1st prize, Heintzman & Co., Toronto, diploma..... 10 00
 Piano of any kind (instruments awarded prizes in other sections allowed to compete), 1st prize, Weber & Co., Kingston, diploma and..... 15 00

EXTRAS.—W. Bell & Co., Guelph, set of keys, \$3; Weber & Co., Kingston, small scale square piano, \$8; Augustus Newell, Chicago, Double Set of Reeds, diploma.

NOTE.—To W. Bell & Co., Guelph, we recommend a Silver Medal for proficiency in Musical Instruments, as a portion of the amount of their prizes.

CLASS 51—NATURAL HISTORY.

29 ENTRIES.

JUDGES.—Messrs. Edmund B. Reed, London, and W. M. Topping, Galt.

Birds, collection of native stuffed, with common and technical names attached, and classified so as to show those injurious and those beneficial to agriculture and horticulture, 1st prize, J. Colwell, Kingston..... \$15 00
 2nd do, Richard Varney, Kingston.... 10 00
 Insects, collection of native, with common and technical names attached, and classified so as to show those injurious and those beneficial to agriculture and horticulture, 1st prize, R. V. Rogers, jun, Kingston..... 15 00
 2nd do, J. Colwell, Kingston..... 10 00
 Mammalia and Reptiles, collection of native stuffed, or preserved in spirits, with common and technical names attached, and classified so as to show those injurious and those beneficial to agriculture and horticulture, 1st prize, J. Colwell, Kingston..... 12 00
 Minerals, collection of native, named and classified, 2nd prize, H. Calcutt, Peterboro'..... 6 00
 Plants, collection of native, arranged in their natural families, and named, 1st prize, Jane Choate, Ingersoll..... 10 00
 Canadian wild flowers and forest leaves, dried collection of, 1st prize, Miss A. M. Murton, Guelph..... 6 00
 Stuffed birds and animals of any country, collection of, 1st prize, Richard Varney, Kingston..... 10 00
 2nd do, J. Colwell, Kingston..... 6 00

EXTRAS.—J. W. Bastow, Kingston, marine shells in case, 1st prize, \$6; F. Hora, Kingston, collection of insects and shells, commended; H. V. Brown, Kingston, a case of dissected leaves, 3rd prize, \$2.

CLASS 52—PAPER, PRINTING, PENMANSHIP, BOOK-BINDING AND TYPE.

18 ENTRIES.

JUDGES.—Messrs. Erastus Jackson, Newmarket; Jas. A. Miller, St. Catharines.
 Book-binding (blank book), assortment of, 1st prize, Hunter, Rose & Co., Toronto..... \$5 00
 Book-binding (letter press), assortment of, 1st prize, Hunter, Rose & Co..... 5 00
 Letter-press printing, plain, 1st prize, Hunter, Rose & Co..... 5 00
 2nd do, W. R. Climie, Bowmanville... 3 00
 Letter-press printing, ornamental, 1st prize, W. R. Climie, Bowmanville... 5 00
 Penmanship, business hand, without flourishes, 1st prize, Odell and Trout, Toronto..... 4 00
 2nd do, Thos. Mills, Portsmouth..... 2 00
 Penmanship, ornamental (not pen-and-ink pictures,) 1st prize, Odell and Trout..... 4 00

EXTRAS.—J. C. Wilson & Co., Montreal, samples of paper bags and flour sacks, Commended; Hunter, Rose & Co., electrotype and stereotype, Commended.

CLASS 53—SADDLE, ENGINE HOSE, TRUNK-MAKERS' WORK, LEATHER, &c.

36 ENTRIES.

Saddlery, &c.

JUDGES.—Messrs. Wm. Edwards, Toronto; H. J. Burbidge, Ottawa, and Thomas Field, Galt.

Engine hose and joints, 2 $\frac{3}{4}$ inches diameter, 50 feet of copper riveted, 1st prize, Wm. Ford, jr, Kingston.... \$8 00
 Harness, set of single carriage, 1st prize, Richard Hadden, Pieton..... 7 00
 2nd do, Martin Shipley, Brampton..... 4 00
 Leather machine belting, an assortment, 1st prize, Wm. Ford, jr, Kingston... 8 00
 Assortment whip thongs, 1st prize, Wm. Ford, jr, Kingston..... 3 00
 Check for horse collars, one piece, 1st prize, Hiram Smith, Kingston.... 6 00
 Belt leather, 30 lbs, 1st prize, Wm. Ford jr, Kingston..... 4 00
 Brown strap and biddle leather, one side of each, 2nd prize, Wm. Ford, jr., Kingston..... 3 00
 Carriage cover, two skins, (whole), 2nd prize, Wm. Ford, jr, Kingston..... 3 00
 Hames, carriage or gig, best assortment, 1st prize, S. Skinner, Gananoque... 5 00
 Hames, team or cart, best assortment, 1st prize, S. Skinner, Gananoque... 5 00
 Hog skins for saddles, three, 2nd prize, Wm. Ford, jr, Kingston..... 3 00
 Horse blankets, two pairs, 1st prize, F. M. Campbell, Latimer..... 5 00
 2nd do, Reuben Spooner, Kingston.... 3 00
 Kersey, for horse clothing, one piece, 1st prize, Hiram Smith, Kingston... 5 00
 2nd do, Hugh Rankin, Kingston..... 3 00
 Skirting for saddles, two sides, 2nd prize, Wm. Ford, jr, Kingston..... 3 00
 EXTRAS.—Wm. Ford, jr, Kingston, line leather, \$2; also lace leather for belts, \$2; sheep skins for saddlery, \$2; Frank Dodds, Yorkville, enamelled cloths, 1st prizes, \$4; Wm. Ford, jr, Kingston, card leather, 2nd prize, \$1; Wm. Ford, jr, Kingston, polished strap leather, \$2.

CLASS 54—SHOE AND BOOT MAKERS' WORK, LEATHER, &c.

25 ENTRIES.

JUDGES.—Messrs. M. D. Willard, Morrisburgh, and John McNeil, Guelph.

Boots, ladies', an assortment, 1st prize, A. Sutherland, Kingston..... 7 00
 Boots, gentlemen's sewed, an assortment, 1st prize, A. Sutherland, Kingston... 7 00
 Boots, machine made, an assortment, 1st prize, A. Sutherland, Kingston... 7 00
 Boots, pegged, an assortment, 1st prize, A. Sutherland, Kingston..... 5 00
 Calf skins, two, 1st prize, William Ford, jr., Kingston..... 3 00
 2nd do, Lake & Fraser, Fredericksburg. 2 00
 Calf skins, two, grained, 1st prize, Wm. Ford, jr., Kingston..... 3 00
 Calf skins, two, Morocco, 1st prize, Wm. Ford, jr., Kingston..... 3 00
 Cordovan, two skins, 1st prize, Wm. Ford, jr., Kingston..... 3 00
 Cow, buffed, two skins, 1st prize, Wm. Ford, jr., Kingston..... 3 00
 Splits, two skins, 1st prize, Wm. Ford, jr., Kingston..... 3 00
 Kip skins, two sides, 1st prize, Wm. Ford, jr., Kingston... 3 00
 Kip skins, two grained, 1st prize, Wm. Ford, jr., Kingston..... 3 00

Leather, kinds not otherwise described, assortment of, 1st prize, Wm. Ford, jr., Kingston, diploma. 5 00
 Linings, six skins, 1st prize, Wm. Ford, jr., Kingston. 3 00
 Sole leather, two sides, 1st prize, Wm. Ford, jr., Kingston. 3 00
 Upper leather, two sides, 1st prize, Wm. Ford, jr., Kingston. 3 00
 2nd do, Lake & Fraser, Fredericksburg. 2 00
 Upper leather, grained, two sides, 1st prize, Wm. Ford, jr., Kingston. 3 00

EXTRA.—Alex. Sutherland, Kingston, pair Scotch shoes, \$1.

NOTE.—We, the Judges, would recommend that Mr. Wm. Ford, jr., Kingston, be presented with a diploma for superiority in tanning process; also that Alex. Sutherland, Kingston, be awarded a diploma for excellence of all the work exhibited by him.

CLASS 55—WOOLLEN, FLAX, AND COTTON GOODS, FURS AND WEARING APPAREL.

163 ENTRIES.

JUDGES.—G. P. M. Ball, St. Catharines; John Ruettel, Kincaidine; David Rae, Dundas County.

Woollen Goods.

Blankets, one pair, 1st prize, D. Campbell, Charlottenburgh. \$6 00
 2nd do, Charles Grass, Kingston Tp. 4 00
 Carpet, one piece, 1st prize, Henry Hoffman, Fredericksburg. 8 00
 2nd do, Allan Bond, Storrington. 5 00
 Charles Merriman, do., highly commended.
 Carpet, stair, one piece, 1st prize, Allan Bond, Storrington. 7 00
 Carpet, rag, one piece, 1st prize, Mrs. L. S. Lundy, Drummondville. 5 00
 2nd do, J. Richardson, Louth. 3 00
 Cardigan Jackets, 1st prize, Armstrong, McCrae & Co., Guelph. 3 00
 Cloth, fulled, one piece, W. Lawrence, Loughboro, highly commended. 7 00
 Cloth fulled, one piece, farmer's make, 1st prize, J. Richardson, Louth. 6 00
 2nd do, Wm. Eagleson, Hamilton Tp. 3 00
 Drawers, factory-made, six pairs, 1st prize, Armstrong, McCrae & Co., Guelph. 5 00
 Flannel, factory-made, one piece, 1st prize, S. T. Willett, Chambly, Q. 5 00
 Flannel, not factory-made, one piece, 1st prize, Ch. Foster, East Flamboro' 5 00
 2nd do, Allan Bond, Storrington. 3 00
 Flannel, scarlet, one piece, 1st prize, S. T. Willett, Chambly. 5 00
 One piece, Oxford grey cloth, 2nd prize, D. Campbell, Charlottenburgh. 3 00
 Satinet, mixed, one piece, 1st prize, John Jackson, Newboro'. 3 00
 Serge, white piece of, 1st prize, D. Campbell, Charlottenburgh. 3 00
 2nd do, J. Richardson, Louth. 2 00
 Shirts, factory-made, 3 of each, 1st prize, Armstrong, McCrae & Co., Guelph. 5 00
 Stockings and socks, factory-made, 3 pairs of each, first prize, Armstrong, McCrae & Co., Guelph. 4 00
 Wincey, checked, one piece, 1st prize, J. Richardson, Louth. 5 00
 Woollen shawls, stockings, drawers, shirts and mits, an assortment, 1st prize, Armstrong, McCrae & Co., Guelph. 10 00
 Yarn, white and dyed, 1 lb. of each, factory, 1st prize, Armstrong McCrae & Co., Guelph. 3 00
 2nd do, John Hagle, Ernestown. 2 00

Yarn, fleecy woollen, for knitting, 1 lb. factory, 1st prize, Armstrong, McCrae & Co., Guelph. 3 00
 Yarn, white and dyed, 1 lb. of each, not factory, 1st prize, James Gibson, Kingston Tp. 2 00
 2nd do, J. Richardson, Louth. 1 00
 Yarn, fleecy woollen, for knitting, not factory, 1st prize, J. Richardson, Louth. 2 00
 2nd do, J. P. Ward, Kingston. 1 00

Flax and Cotton Goods.

Bags from flax or hemp, the growth of Canada, 1 dozen, 1st prize, D. Campbell, Charlottenburgh. 5 00
 2nd do, H. N. Fralick, Ernestown. 3 00
 Bags, one dozen, cotton, 1st prize, W. W. Waite, Merriton. 1 00
 Cordage, assortment of, 1st prize, E. Law, Kingston. 7 00
 Counterpanes, two, 1st prize, S. W. Day, Kingston. 5 00
 2nd do, Wm. Harker, do. 3 00
 Linen goods unbleached, one piece, 1st prize, H. N. Fralick, Ernestown. 5 00
 Linen sheeting, bleached, one piece, 1st prize, D. Campbell, Charlottenburgh. 5 00
 2nd do, H. N. Fralick, Ernestown. 3 00
 Twine, linen and cotton, an assortment, 1st prize, E. Law, Kingston. 3 00
 2nd do, W. W. Waite, Merriton. 2 00
 Yarn, cotton, two pounds, factory, 1st prize, W. W. Waite, Charlottenburgh. 3 00
 Yarn, cotton, two pound, not factory, 1st prize, D. Campbell, Charlottenburgh. 2 00
 Yarn, linen, two pounds, 1st prize, Jas. Gibson, Kingston. 3 00
 2nd do, H. N. Fralick, Ernestown. 2 00

Furs, Wearing Apparel, &c.

Caps, cloth, an assortment, 1st prize, W. Groh, Kingston. 5 00
 2nd do, Clark Wright, do. 3 00
 Furs, gentleman's set of, first prize, Clark Wright, Kingston. 5 00
 2nd do, W. Groh, Kingston. 3 00
 Furs, lady's set of, 1st prize, W. Groh, Kingston. 5 00
 2nd do, Clark Wright, Kingston. 3 00
 Fur sleigh robes—not less than three kinds, an assortment, 1st prize, Clark Wright, Kingston. 15 00
 2nd do, W. Groh, Kingston. 8 00
 Gloves and mits of any leather, an assortment, 1st prize, W. Groh, Kingston. 5 00
 2nd do, Clark Wright, Kingston. 3 00
 Shawls, home made, 1st prize, Henry Hoffman, Fredericksburg. 4 00
 2nd do, Mrs. P. Hinman, Grafton. 2 00
 Sheepskin mats, dressed and coloured, an assortment, 1st prize, Stone and Graham, Smith's Falls. 6 00
 Silk and felt hats, 1st prize, Clark Wright, Kingston. 5 00
 2nd do, W. Groh, Kingston. 3 00

EXTRAS—Edward Law, Kingston, sash line from Manilla hemp, \$2; Clark Wright, Kingston, cassimere hat, \$2; B. Sherrin & Co., Bowmanville, hoop-skirts, \$3; W. W. Waite, Merriton, batting; also wadding, \$4; Joseph Boise, Ottawa, fancy oil cloth table covers, \$4; D. Campbell, Charlottenburgh, two breakfast shawls, \$5; two large table cloths, \$5; two lbs. linen sewing threads, \$3; one piece white wincey \$5; Angus McLellan, Charlottenburgh, three gents' plaids, home made, \$5; Thos. Wilson, Kingston, door mat made of hemp and flax, \$3; Stone & Graham, Smith's Falls, sheepskin sleigh robes, \$3; E. Miles, Ottawa, wigs and general hair work, \$5; Wm. Groh, Kingston, tanned otter skins, \$3; also tanned Musk Rat skins, \$3; D. Campbell, Charlottenburgh, gents' plaid, \$3; also web linen towelling, \$3.

Prizes Awarded at the Implement Trial under the auspices of the Association, at Paris, July, 1871.

CLASS 1. MACHINES FOR HAYMAKING AND HARVESTING.

66 ENTRIES.

JUDGES.—Of Single Machines—A. E. Goodfellow, Guelph; Jas. Anderson, Rednersville; Wm. Bell, Rodgersville. Of Combined Mowers—Joseph Rymal, Hamilton; Jas. Stirton, Guelph; Alex. Dolson, Chatham. Of Combined Reapers—John Tennant, Paris; Wm. Patterson, North Easthope; George Hyde, Shakespeare. Of Pea Harvesters—Leonard Sovereign, Charles O'Neill, Robert Walker.

Best Single Mower, Brown & Patterson, Whitby. \$20 00
 2nd do, B. Bell & Son, St. George. 15 00
 3rd do, John Watson, Ayr. 10 00
 Best Reaper (single), Brown & Patterson, Whitby. 30 00
 2nd do, A. Harris & Son, Beamsville. 20 00
 3rd do, L. D. Sawyer & Co., Hamilton. 15 00
 Best Mower, combined, John Forsyth, Dundas. 20 00
 2nd do, Noxon Brothers, Ingersoll. 15 00
 3rd do, A. Harris & Son, Beamsville. 10 00
 Best Reaper, combined, John Forsyth, Dundas. 30 00
 2nd do, Noxon Brothers, Ingersoll. 20 00
 3rd do, John H. Groat & Co., Grimsby. 15 00
 Best Pea Harvester, (Horse Power), John Tennant, Paris. 12 00
 2nd do, Geo. Bunce, London. 9 00
 Best Sulky Horse Rake, George Davis, Jr., Markon. 12 00
 2nd do, James Soutar, Chatham. 9 00
 3rd do, John Watson, Ayr. 6 00

CLASS 2—MACHINES FOR PREPARING PRODUCTS FOR USE.

32 ENTRIES.

JUDGES.—Messrs. George Robson, Lobo; Henry Praxton, Port Perry; James Nellis, South Dumfries.
 Best threshing machine, John Watson, Ayr. \$50 00
 2nd do, Glasgow, McPherson & Co., Clinton. 40 00
 3rd do, John Watson, Ayr. 30 00
 Best Straw Cutter, Maxwell & White-law, Paris. 8 00
 2nd do, John Watson, Ayr. 6 00
 Best Grain Crusher, Maxwell & White-law, Paris. 12 00
 2nd do, John Watson, Ayr. 9 00

CLASS 3—IMPLEMENTS FOR CULTIVATING THE SOIL.

49 ENTRIES.

JUDGES.—Messrs. Wm. Robson, Falkirk; Robert Bell, Tuckersmith; A. McKellar, Chatham.
 Best Plough, John Gray & Co., Scotland. \$25 00
 2nd do, James Chisholm, Paris. 20 00
 3rd do, J. and G. Morley, Thorold. 15 00
 Best Gang Plough, R. Lean, Stratford. 20 00
 Best Cultivator, John Borer, Dundas. 20 00
 2nd do, Charles Thain, Guelph. 15 00
 3rd do, Thomas Clarke, Hampton. 10 00
 Best Harrow, or Set of Harrows, Alex. Robb, Indiana. 12 00
 2nd do, John M. Campbell, Norwichville. 9 00
 3rd do, R. Lean, Stratford. 6 00

The Grain Shipments from Chicago.

The Chicago *Tribune* says the advance in the price of wheat East, consequent on fear of a short supply from the West through the temporary paralysis of the Chicago forwarding business, is without justification. The grain destroyed foots up but 1,600,000 bushels of all kinds, and of this a portion will probably be secured in a damaged condition. Shipments have been resumed, and with the re-opening of the banks the business will be pushed as lively as ever. In reality, says the *Tribune*, "the very fact that so much property has been destroyed by fire, that all the money available is wanted to help rebuild the city, is guarantee that few persons will care to carry large stocks of grain here; all will want to realize on it, which can only be done by moving it on. In the general need for money we have also a circumstantial promise that no speculative mania will run up prices to a point where it will not pay to ship grain. We may expect our grain markets to be more healthy, because more natural this autumn and winter than for several years past."

The *Tribune* says it is highly probable that while lake shipments will continue active till the close of navigation, the amount of grain forwarded East by rail the coming winter will be largely in excess of any previous year.

The Louisiana Sugar Crop.

A successful planter, who has lately visited every plantation along the coast, is represented as expressing the opinion that the sugar crop of Louisiana for 1871-2 will fall at least twenty-five thousand hogsheads short of 1870-1. This seems like a demoralized statement, and yet the history of sugar planting in that State affords frequent parallels, the most noted one being 1856-7, when the crop only amounted to 74,000 hogsheads against 232,000 hogsheads in 1855-6. The past winter was unusually severe, and the continued cold weather materially injured the stubble cane, particularly in the upper parishes, while early this summer continuous heavy rains seriously retarded ploughing arrangements, and contributed largely to reducing the yield. In addition to the unfavourable weather, the levees which have been neglected so long, by reason of the improvident administration of State and parish affairs, gave way before the high waters of the early summer, causing several very disastrous crevasses along the upper and lower coast, and laying waste a considerable section of the most fertile and productive sugar lands of the State.

Horses in Belgium and France.

Belgium, after the rinderpest, is most occupied with the decline in horse breeding. Her large draught horses are in such request by foreigners, that the exportation has largely decided the country. The Government has had to come to the rescue, by renewing the subsidies for the breeding of the

noble animal. It has been decided to maintain the native race distinct, and raise a cross breed for light draught and cavalry purposes. The supply of stallions is short, and the authorities purpose buying some and stabling them in certain localities, charging nothing for their services.

France, also, is deficient in horses, and seems inclined to leave the supplying of the deficiency to private enterprise, as the aid to the State breeding studs is being gradually withdrawn. The country possesses three millions of horses, and requires a tenth of this number to be renewed every year to keep up the total average. The stallions count twelve thousand, and a third at least of the number would require to be of excellent breed to effect any sensible improvement. Germany sent three hundred and thirty thousand horses into France during the campaign, as a rule beautiful animals, very much superior to any that France opposed to her.

Whitening Wool.

The following particulars respecting a new process of giving a beautifully white colour to wool are condensed from an article upon the subject in a German industrial journal. The quantity of ingredients mentioned is intended for about 500 pounds of dirty wool, but of course a similar proportion could be maintained for a greater or less quantity. Make a bath by dissolving in water two pounds of alum, eighteen pounds of cream of tartar, one pound of sulphuric acid, eighteen pounds of starch, six pounds of sulphate of indigo, and three pounds of orchil. Immerse the wool in this bath at a temperature of 122° Fahrenheit for three quarters of an hour. In this way the wool will get such a whitish tone that many may be satisfied with it, but the white may be made much deeper by rinsing the wool out in clean water, and then transferring it for a short time to a weak bath consisting of a solution of one pound of chloride of barium. This, it is said, gives a rich satin whiteness to the wool so treated, and at the same time considerably increases its weight. It is alleged that the wool does not lose its natural softness, and is easily wrought up by the manufacturer. If the plan possess the advantages attributed to it, the price of the chemicals used cannot be much, and some of our agricultural friends might put it to the test on a small quantity of wool. —*Queensland.*

Quite a number of sheep have been killed in the northern part of Luther township by a wild cat or Canadian lynx. Messrs Jas Hunter, Alex. Hunter, and Alex. Arnott have been the principal losers.

The *Meaford Monitor* has been shown nearly a tablespoonful of salt obtained from boiling down about half a pail of water from Mr. Thompson's well, noticed a few weeks ago as giving indications of the existence of salt in solution. The result of this first rude experiment has been such as to prove beyond a doubt that there is a vein of salt underlying our village, which we believe could be profitably worked by boring a few hundred feet into the earth. It is proposed to form a company to test the matter, and we wish it success.

Mr. James I. Davidson, of Balsam, county of Ontario, has sold one of his Clydesdale mares, three years old, for \$1,000 in gold, to Wm. Moffatt, Esq., Strongville, Cayahoga county, Ohio.

The *Galt Reporter* says that never before was there such scarcity of water in this part of the Province as there is just now. Wells, cisterns, ponds, and even rivers are almost dry, and all descriptions of stock are suffering in consequence. Farmers are driving their cattle miles to water, and carting the precious liquid in barrels to their homes, while those living in towns have to exert themselves in many places to get enough for ordinary cleanliness. The Grand River has never been as low for years, and manufacturers along the banks have to submit to only keeping their factories open an hour or two a day.

Advertisements.



FOREST TREES

For Shelter, Ornament and Profit. By Arthur Bryant, Sr., Pres. Ill. State Hort. Soc. A new volume on tree culture, specially adapted to meet the forest tree necessities of the country. It gives every instruction desired by the tree grower. How to grow from seed. How to plant and what to plant for screens, for ornamental purposes and profitable plantations. Its descriptive list of Trees and Evergreens, is the most full and accurate ever written. A book of practical interest to every farmer in the United States and the best ever written on this subject. Every Western farmer should have it.

Price, post paid by mail, \$1.50. Also for sale or supplied by bookstores generally. Agents and Canvasers wanted to canvass throughout every town in the country.

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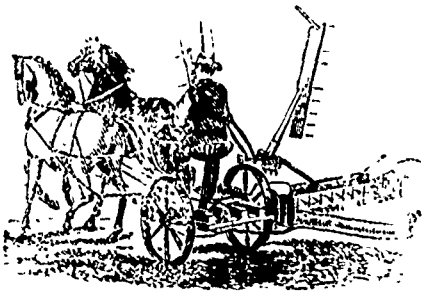
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EPPS'S COCOA.

GRATEFUL AND COMFORTING.

THE very agreeable character of this preparation has rendered it a general favourite. The *Civil Service Gazette* remarks:—"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well selected cocoa, Mr. Epps has provided our breakfast tables with a delicately flavoured beverage which may save us many heavy doctors' bills." Made simply with boiling water or milk. Sold only in tin lined packets, labelled—

JAMES EPPS & Co.,
Homoeopathic Chemists, London.



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MACHINE WORKS
OSHAWA, Ont.**

ESTABLISHED 1851

**THE JOSEPH HALL
MANUFACTURING CO., Y,
PROPRIETORS.**

**WE DESIRE TO CALL ATTEN-
TION TO OUR**

**No. One and Two Buckeye Combined
Reaper and Mower, with John-
son's Self-Rake Improved
for 1871.**

We believe this machine, as we now build it, to be the most perfect Reaper and Mower ever yet offered to the public of Canada.

Among its many advantages, we call attention to the following:

It has no gears on the Driving Wheels,

Enabling it to pass over marshy or sandy ground without clogging up the gearing, thereby rendering it less liable to breakage. It is furnished with **four knives two for mowing and two for reaping, one of which has a sickle edge for cutting ripe, clean grain, the other a smooth edge for cutting grain in which there is grass or seed clover.**

It has malleable guards both on the Mower bar and Reaper Table, with best cast steel Ledger Plates. It is also furnished with our **new Patent Tilting Table for picking up lodged grain.** This is the only really valuable Tilting Table offered on any combined Reaper and Mower. The Table can be **very easily raised or lowered by the Driver in his seat without stopping his team.** This is one of the most important improvements effected in any Machine during the past two years.

Any one or all of the arms of the Reel can be made to act as Rakes at the option of the Driver, by a Lever readily op-

erated by his foot. The cutting apparatus is in front of the Machine, and therefore whether Reaping or Mowing the entire work of the Machine is under the eye of the Driver while guiding his team. The Table is so constructed as to **gather the grain into a Bundle before it leaves the Table, and deposits it in a more compact form than any other Reel Rake.**

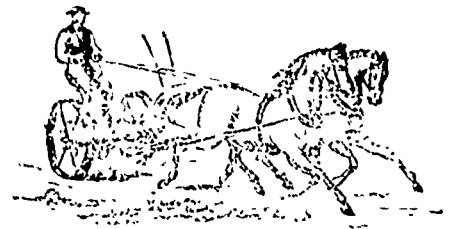
The Table is attached to the Machine both in front and rear of the Driving Wheel, which enables it to pass over rough ground with much greater ease and less injury to the Table. The Grain Wheel Axle is on a line with the axle of the drive wheel, which enables it to turn the corners readily.

The Rakes are driven by Gearing instead of Chains, and therefore, have a steady uniform motion, making them much less liable to breakage on uneven ground, and more regular in removing the Grain. The Gearing is very simple, strong and durable. The Boxes are all lined with

BABBIT METAL.

The parts are all numbered, so that the repairs can be ordered by telegraph or otherwise, by simply giving the number of the part wanted. There is no side Draught in either reaping or mowing, and the Machine is so perfectly balanced that there is no pressure on the Horses' necks either when reaping or mowing. All our malleable castings, where they are subject to much strain, have been **twice annealed, thereby rendering them both tough and strong.** Our Johnson Rake is so constructed as to raise the Cam so far above the Grain Table that the Grain does not interfere with the machinery of the Rakes or Reels. We make the above Machines in two sizes—No. One, large size for Farmers who have a large amount to reap—No. Two, medium size for Farmers having more use for a Mower than a Reaper. With the exception of difference in size, these Machines are similar in every respect. Our No. 2 Machine supplies a want heretofore unfilled, viz.: A medium between the Jun. Mower and large combined machine, both in size and price. We shall distribute our sample machines in March among our Agents, that intending Purchasers may have an early opportunity of examining their merits, and we **guarantee that all Machines shipped this season shall be equal in quality and finish to the samples exhibited by our Agents.** We invite the public to withhold giving their orders until they have had an opportunity of inspecting our Machines, as we believe that they are unsurpassed by any other machines ever yet offered on this continent. We also offer among other Machines,

Johnson's Self-Raking Reaper, impro-



ved for 1871, with two knives, smooth and sickle edge, and malleable guards.

Wood's Patent Self-Raking Reaper.

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Cayuga Chief Jr., Mower.

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Ball's Ohio Mower No. 1.

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Taylor's Sulky Horse Rake.

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Champion Hay Tedder.

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Thresher and Separator,

Greatly improved for 1871, with either Pitt's, Pelton, Planet, Woodbury, or Hall's 8 or 10 horse-power.

We shall also offer for the Fall trade a new Clover Thresher and Huller, very much superior to any other heretofore introduced.

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ILLUSTRATED CATALOGUE
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All our Machines are warranted to give satisfaction, and purchasers will have an opportunity of testing them both in Mowing and Reaping before they will be required to finally conclude the purchase.

For further information, address

**F. W. GLEN,
PRESIDENT,
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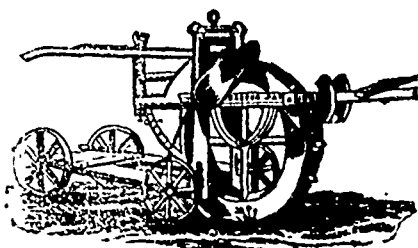
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Markets.

Toronto Markets.

'CANADA FARMER' Office, Nov. 14th, 1871. FLOUR AND MEAL. There has been considerable scarcity of shipping lots...

HAY AND STRAW. Hay, in fair supply, at \$18 to \$22. Straw, scarce, at \$12 to \$16 50. PROVISIONS. Beef, by the side, 5 1/2c to 6 1/2c.

THE CATTLE MARKET. Heves (live weight) \$3 50 to \$5 00 per cwt. Sheep—\$4 00 to \$5 80.

PROVINCIAL MARKETS. Hamilton, Nov. 7.—Wheat, Belth, \$1 26 to \$1 28; Soules \$1 26 to \$1 28; Treadwell, \$1 22 to \$1 24...

Montreal, Flour dull and lower; extra sold at \$6 20 to \$6 22 1/2; fancy, \$6 07 1/2; super, \$5 80 to \$5 85...

London, Nov. 7.—Spring wheat, \$1 14 to \$1 16; red fall do., \$1 11 to \$1 15; white do., \$1 15 to \$1 21.

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