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Canadian Live Stock AND FARM Journal

Vol. XII. No. 5.

TORONTO, MAY, 1895.

[WHOLE No. 138.

Beef! Beef! Hereford Beef!

UP Goes the price of beef, and everything indicates that it is going to stay so. Good cattle are scarce, and prime Herefords always top the market. Nothing suits the butchers so well as nice grade Herefords. Now is the time to buy; don't wait for the boom in beef breeds which is sure to follow the present shortage.

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Yorkshires and Tamworths.

Some very nice boars farrowed this spring. Come and see them, or write for particulars.

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Ingleside Farm, - Compton, Que.
181 (G.T.R. Station 2 1/2 miles.)

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of Large Yorkshire Swine.



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Registered pedigrees furnished, and all stock guaranteed to be as described. Visitors always welcome.

J. E. BRETHOUR, Burford, Ont.

DOMINION PRIZE HERD PUREBRED AYRSHIRE CATTLE

RECORD FOR 1893

54 Prizes 54

37 FIRST II SECOND

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This herd has always taken the lead: they are of large size, and of good milking strains.
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Petite Cote, Montreal, P.Q.

ARTHUR JOHNSTON, Greenwood, Ont.



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PICKERING STATION, G.T.R.
Greenwood Telegraph and P.O.

Isaleigh Grange Farm

has two very fine Guernsey bull calves to offer that will be fit for service in spring, sired by the celebrated bull, Adventurer, winner of 23 first prizes in Britain previous to unpartation.

IN SHROPSHIRE SHEEP

we have still a few ram lambs of choice breeding. Sold out entirely of yearlings, but would spare a few choice ewes, bred in imported rams, and a beautiful lot of ewe lambs fit for any flock.

IN IMPROVED LARGE YORKSHIRES

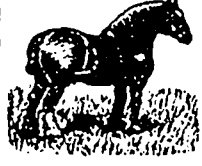
we have a fine lot of young pigs for sale, of all ages. Young boars, fit for service, and young sows served to an A1 boar, if wanted. Also our imported stock boar, Holywell Prince.

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Choice young Heifers and Bulls by the celebrated Cruickshank bulls, Northern Light and Vice-Consul.

My stock in the above lines were very successful at all the large shows last year. Call and examine stock before purchasing elsewhere. Terms reasonable.

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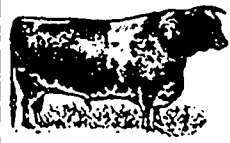
Shorthorn and Aberdeen-Angus Cattle
Dorset Horn and Shropshire Sheep

M. H. COCHRANE, Hillhurst Station, P. Q.

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BREEDERS OF

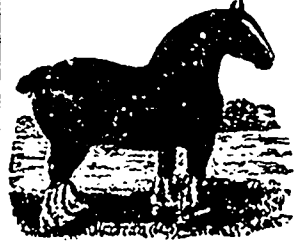
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The herd was founded on the best animals attainable, both as to pedigree and individual merit, and no expense was spared to procure the choicest specimens of the breed, comprising the well-known Rose of Strathallan, Ury Queen, Duchess of Kent, and Isabella families. Imported Golden Drop bull Albert Victor - 6318 (5523), and Imported Saladin, by Vice-Chancellor (5681), now at the head of herd. A few choice young bulls and heifers for sale. For particulars, address

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The choicest animals that money and experience can buy, and well qualified to maintain the reputation of our stud for importing more first prize and sweepstakes winners at the leading shows in Canada and the United States than all other establishments of its kind in the Dominion. The Clydesdales have immense size, large flat bones with style, quality, and choice breeding combined. The Hackneys have fine colors, style, quality, high knee action, and choicest breeding. The home of the Champions, Queen's Own, and Firefly. Also a few choice Welsh ponies. Parties wishing the best animals at reasonable prices are cordially invited to examine our stock. Catalogue free.

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152 Twenty-five miles from Toronto on C.P.R.

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Canadian and States Cattle and Sheep. Macdonald, Fraser & Co., Limited, also handle carefully, and have done so for many years past, large numbers of Canadian and States cattle and sheep.

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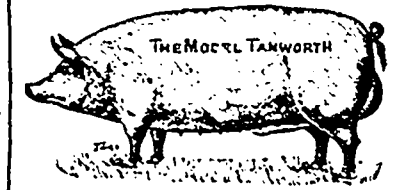
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Clydesdale Farm, AMBER, ONT.

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270

THE JOURNAL covers the whole field. If you wish to reach the Canadian farmers, THE JOURNAL is the medium.

Have you read "Dairying for Profit," by Mrs. E.M. Jones, Judge of Butter at World's Fair, Chicago? If not, you miss a treat, which would save you hundreds of dollars. Only 50c. by mail. **ROBT. BROWN,** Agent, Box 384, Brockville, Ont., Can.



JERSEY COW MASSENA, PROPERTY OF MRS. E. M. JONES, Brockville, Ont., Can. 8,000 lbs. Milk, which made 654 lbs. Splendid Butter, all within her sixteenth year. My herd has won thirty medals—gold, silver, and bronze; over 400 cash prizes, besides diplomas, etc. Solid Silver Cup, value \$30, given at the Kellogg sale in New York for highest price on animals sold there; also Silver Tea Set at London, Ont., for three best Dairy Cows of any kind. Grandsons and granddaughters of this great cow for sale; also from Canada's Sir George, whose dam made 26 1/2 lbs. butter a week, and gave 57 lbs. milk a day; also from my Signal bull, whose dam made 30 lbs. 6 oz. butter a week on second calf. Chicago tests have proved the Jersey to be the farmer's best paying cow. **MRS. E. M. JONES,** Brockville, Ont., Can.

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GRAPE VINES AND BERRY PLANTS



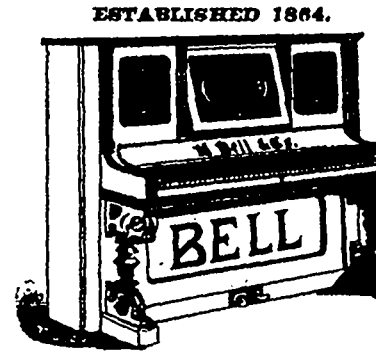
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134 400 ACRES IN EXTENT.
E. D. SMITH, Prop., WINONA, ONT.

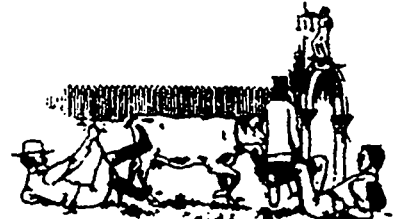


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J. L. NICHOLS & CO., 33 Richmond St. West, Toronto, Ont.

THE Canadian Live Stock and Farm Journal.

Devoted to the Interests of the Stock-Raisers and Farmers of Canada.

VOL. XII. No. 5.]

TORONTO, MAY, 1895.

[WHOLE No. 138



The Fine Show Cow, Isabella 5th,

Purchased at the Bow Park sale by Mr. R. Davies, Thorncliffe Stock Farm, Toronto.

Our Illustration.

Among the many thousands who visited the Toronto Industrial Exhibition last fall, a large proportion, in inspecting the contents of the main building, passed through the art gallery, and noticed, with pleasure, the fine painting of a white cow that was there exhibited. This painting was executed by Mr. Charles Ross, Toronto, and is a faithful representation of that prime show cow, Isabella 5th, at one time the property of Mr. Robert Davies, Thorncliffe Farm, Todmorden, near Toronto.

Those who saw this fine show cow in the ring at the last Industrial will readily recognize her in the half-tone engraving which we present to our readers on our front page, and which was taken from the picture mentioned above. The artist has truly caught the spirit of the thing, and the result is a beautiful, life-like picture, of which both Mr. Davies and the artist are very proud.

Isabella 5th was bred at Bow Park, that celebrated establishment from which so many winners have come. She was sired by The Banot, her dam being Isabella 3rd, a daughter

of Ingram's Chief, and out of that famous old show cow, Lady Isabel (imp.) - 5150 - so well known on this continent. At the dispersion sale of the Bow Park herd she was purchased, together with several other head, by Mr. Davies, and formed one of his show herd during last fall's campaign. Her beauty and symmetry can be clearly seen in the illustration, and she is a worthy descendant of the old cow, Lady Isabel.

As announced elsewhere in our columns, Mr. Davies intends offering for sale by public auction, on Thursday, May 16th, next, the

whole of his fine herd of Shorthorns. Among the bulls to be sold was that celebrated imported Cruickshank bull, Northern Light (57081) - 111117, by Standard Reaver (55096), dam Nonpareil 20th (46144), and that grand Bow Park bull, Lord Outwaste - 18787 - out of Lady Isabel (imp.), which not only won first in his class, but also the sweepstakes as the best bull at the last Toronto Exhibition. The females to be offered are also a grand lot of well bred cattle, and should have no trouble in finding ready purchasers.

THE CANADIAN Live Stock and Farm Journal

PUBLISHED ON THE
FIRST OF EACH MONTH BY

THE BRYANT PRESS,
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W. W. CHAPMAN,
Fitzalan House, Arundel St., Strand,
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The Household Companion

A monthly illustrated magazine, devoted to the ladies and young people of the household.
Furnished to subscribers to THE CANADIAN LIVE STOCK AND FARM JOURNAL as a free supplement.
Subscription price to non-subscribers 50 cents per annum.

The Horse Show.

The success that has attended the first meeting of the great Canadian Horse Show should encourage the promoters to make it a yearly event. When the idea of holding a big show of this kind was first mooted, there were not wanting many to assert that a successful exhibition was impossible, as there were not enough good horses in the country to fill up the classes, and, besides, there was the failure of the Chicago Horse Show to point to. These people must have been astonished at the number of entries made and the size of the audiences present. Everything went off satisfactorily; even that capricious element, the weather, put on her best face, and the large balance left on hand of over \$4,000 should ensure another successful show next year. We heartily congratulate the managers and all concerned on the way in which the programme was carried out.

British Exports of Cattle.

We are so accustomed to look on Great Britain as the great live stock mart, whither all countries which have cattle to export are continually shipping their surplus cattle, that it seems strange to find her herself doing an export trade in cattle. This, too, is independent of her export trade in purebred stock, which was at one time so great, but now has sunk

to comparatively small proportions. The official returns show that last year 8,281 head of store and beef cattle left the ports of Great Britain. A small trade had been done previously, but it was during the latter half of 1894 that the figures denoting the exports underwent any substantial increase. Belgium was the best customer, taking more than half the total export, while France came next, followed by Germany. One hundred and sixty-seven head of breeding stock were sent to the Argentine Republic during the year. The total value of the cattle exported was \$676,585.

An encouraging feature for our live stock export trade during the coming season, which we glean from the report before us, is that the imports of live stock to Great Britain from Ireland during the first two months of the year, with the exception of pigs, showed a marked falling off as compared with 1894.

Improvement in Trade.

There is every reason to believe that the slow but steady improvement visible in general trade will be permanent. Things have been at rock bottom, and trade generally is on a more satisfactory basis now than it has been for some time. Wholesale houses and dealers are more careful in giving credit, and the weak and unreliable establishments have been forced to go to the wall.

In the farming line things are looking better. Fat cattle are dearer than they have been for some time, while sheep are also better property. Hogs are keeping their own, while horses, so long a drug in the market, are selling fully 40 per cent. better than they were three months ago. Good horses, for which it was hard to get \$60 in the winter, have been lately sold for \$100 and \$120. Even wheat is up a little, while, as far as one can judge, there is every prospect of good crops this year. We believe that there are good times ahead for breeders and farmers generally.

Dominion Sheep and Swine Breeders' Associations.

A joint meeting of the members of the above associations will be held about May 24th, at which every member is requested to be present. The actual expenses of each officer who attends from the opening to the close of the sessions will be paid by the associations.

Several important matters will be brought up for discussion, such as the annual winter show, the revision of rules and prize list, and the selection of judges. It is also proposed to carry on experimental work with different breeds of sheep and swine for comparison's sake. Arrangements will also be made for assuming control of the swine records.

Improvement in the Horse Market.

The long-expected turn of the tide in the horse market seems to have come in the United States, and, while there has not been so much change yet in this country, yet the market is getting steadier, and will, ere long, show an upward tendency. Writing on this subject, Mr. Alex. Galbraith, secretary of the American Clydesdale Association, says:

"Reports from all over the country, and especially from the horse centres of Chicago and New York, confirm the well-founded belief that the horse market has at last definitely turned the corner, and is now on the upward grade.

"Notwithstanding heavy receipts, prices for all kinds, except unsound and inferior animals, are more satisfactory than for a long time past, and the demand for first-class draft and coach horses is most decidedly strong. Draft teams are selling right along at \$400 and \$450, while several large buyers last week signified their willingness to pay considerably more for strictly first-class matched teams of 3,400 to 3,600 lbs. The latter weight, when combined with action, quality, and proper conformation, are scarce, and those who own such can practically name their own price and get it."

Commenting on this, Mr. Galbraith gives the following sensible advice, with which we thoroughly agree:

"Clydesdale breeders should take especial encouragement from this improved condition of the market, and endeavor to make up the great lee-way of the past few years by breeding all their good mares to the best stallions obtainable during the present season.

"Remember that your colts from this season's breeding will be four years old in the year 1900, by which time we shall, in all probability, see prices one hundred per cent. higher than they are to-day.

"Those who wish to see the good times and then begin their breeding operations, which occupy, at the least, five years, will most assuredly be too late to reap the benefit. You must anticipate, or 'get left.'"

The Prize Poultry Essays.

We would remind our readers that all essays to be sent in for competition on the subject of "How to get the best results from Farm Poultry" must reach us on or before May 15th, 1895, otherwise they will be too late. We have already received several, and hope to have the number largely increased before the date mentioned.

Firm Bacon.

The feeding of swine is so intimately connected with dairying, for which the greater part of our country, as at present settled, seems so suitable, that there will always be a large output of bacon to find its way to Great Britain and other countries. To have that bacon put on the market in the best condition should be our constant aim. Only by so doing can our bacon hold its own in other lands. The first requirement is to get pigs of a suitable kind, and the next and most important step is to feed them on suitable food.

That this is not always done is evident from the evidence of Prof. Robertson given before the Select Committee of the House of Commons on Agriculture and Colonization at Ottawa. During the past winter several complaints have come from the large packers and curers of bacon as to the unsatisfactory nature of Canadian bacon. Some of it has been unusually soft, and the lard was also unusually soft in quality. The packers have ascribed the cause to the too prolific feeding of roots, but Prof. Robertson thinks that a good many farmers killed their swine without giving them three or four weeks' hard feeding. He would fatten them as fast as possible on soft food, and then give them grain for a few weeks immediately before killing, so as to prevent the flesh shrinking in weight. He would give the grain without milk, as, if milk is given up to the very close of the feeding period, while it will make a soft, luscious bacon, yet it is not profitable. In answer to Mr. Featherston, he said that whey-fed pigs made soft

pork, but, as soft pork made in the summer time gets on the market very quickly, there is no complaint about it, and packers generally consider such pork as good as grain-fed.

In reply to further questions, Prof. Robertson stated that barley had also the effect of making pork soft and oily. Wheat made soft pork, but it was so luscious that the English consumers are very much in its favor. Frozen wheat gave bacon a flavor and flesh much like the English product. He had found that a mixture of barley, rye, wheat, and bran had given a good deal of satisfaction. Pigs fed on this mixture, when from two to five months old, had gained a pound of live weight on the average for 3.82 lbs. of grain. The grain was ground and soaked.

A Brighter Outlook for the Growers of Beef.

It is a long road which has no turn in it. So says the proverb. For a good while now the beef interest has not been a very encouraging one, but it would seem that the turn has come at last. Prices of beef and mutton have advanced during the winter, and the indications of a speedy change in the opposite direction are not prominent. In fact, the indications would all seem to point upwards. Our exchanges from the Western States all speak of the scarcity of stocks of beef cattle, and more especially of beef bulls. This would seem to indicate that good prices may be expected for beef cattle for a good while to come; for, when high prices for beef are brought about by a scarcity in the supply, the scarcity cannot be made up anything like as quickly as though it were a scarcity of pigs, or of sheep. It takes a much longer time to grow cattle.

In view of the dearth of beef bulls in the United States, our farmers who have this class of stock for sale would doubtless reap a rich harvest, were it not for the barrier of the quarantine. That barrier is serious, for it will mean that bulls will not be taken into that country except in carload lots. The expense of the quarantine would otherwise be too great. There is no doubt but that the quarantine regulations of the United States are working against the beef-producing interests of this country, since they, to a great extent, shut us out from a market which at one time was our leading one for purebred cattle of the beef breeds.

But the great change in the beef market in the United States cannot but react favorably on prices here. Both countries send their surplus to the same market—that is to say, to Great Britain. If, therefore, meat is high in the United States, it will also be high in Canada. The former country is quickly increasing in population, and will more and more absorb its own supplies, which will mean that for us there will be more standing room in the markets beyond the sea.

The advance made in dairying in this country is very marked during recent years. All honor to the men who have helped to bring it about! They have, no doubt, helped to build up what will be an enduring industry. But in a country so well adapted to growing beef, we ought never to forget the art. It has been said, and truthfully, that during recent years dairying has paid better, relatively, than beef-making. But it is a possible thing that these relations may change. They are changing, and they are likely still further to change. And if they do so change that the two industries can be made to continue to flourish, so much the better for our country.

In view of these things, let us take heed as to how we govern operations in the line of calf-rearing. Good beef animals can be reared in two years if they are properly reared; and they can be reared on skim milk in very good form if the work is properly done. This will greatly tend to cheapen the cost of production as compared with rearing them on new milk. Then take care of the calves which ought to be reared for beef.

It is singular how much inclined people are to rush to extremes. Farmers are much prone to rush in the direction of an industry that is paying well for the time being, and then when a change comes in that direction they head off towards the change. Thus they oscillate when they should mark out for themselves a straight course, and adhere to it most tenaciously. The men who at one time took three cents per pound for their pork, dressed weight, were the men who at another time got nine cents per pound. Those who would not take three cents went out of the business, and when nine cents were paid they had no pigs to sell. Then they rushed into the business again, and when their pork was ready for market the price was down. The true system is to go straight ahead, without turning to the right hand or the left because prices vary; and those who are doing something in beef should put on more steam. Those who are dairying should continue in the business. Those who are doing something both in dairying and beef-making should lean more to dairying.

Riding on Horseback.

Horseback riding is not very generally practised in Canada, except by the wealthier class of people. The same conditions, moreover, exist over a large extent of the United States.

The reason for this it is not easy to find. Riding on horseback is such a healthy form of amusement that it might well be much more extensively practised by the well-to-do dwellers in the city, while farmers and their families might with advantage break out of the usual plan of using a buggy on every occasion, and, when possible, try horseback exercise instead. This should be done more generally by the younger members of the family, and more especially where the kind of horses kept and bred are such as are suitable for saddle purposes. The farmers' sons should welcome with delight the opportunity of breaking in the colt for riding purposes, and they may rest assured that, if their work is well done, the value of the animal will be increased in the buyer's estimation. There will thus be a pecuniary advantage to be obtained, besides looking at it from a healthful point of view.

We have written these few lines, calling attention to riding on horseback, because we feel that the encouragement of it will be conducive to the interests of saddle horses in Canada. We can raise excellent horses here for saddle purposes, as our American cousins well know, and we annually ship a certain number across the lines to the south and also to Great Britain, but the number sent is below what could be exported, were there sufficient horses of that kind to be got. And not only can our export trade be largely increased, but our home market can also be cultivated. Fashion is everything nowadays, and, if we can encourage riding and persuade others to do the same, we shall soon find a greater demand for saddle horses in consequence of the greater number of people using them. There are some people who think that the introduction of bicycles and electric cars means

the gradual disuse of horses for road purposes, but we are not of that opinion. Horses are not likely to fall into disuse; at any rate, not for some time to come, even if then. There is this, too, to be said for horseback riding, that a good rider always looks graceful, whereas a bicycle rider, with his humped back, can hardly be said to do so.

Prizes for Wool.

Ald. John Hallam, of Toronto, has always been in the van in encouraging the wool industry in Canada, and has now given a practical sign of his interest in it by donating \$75 towards prizes to be offered at the next Toronto Exhibition for the best display of fleece wool. To this sum the directors of the exhibition have added a similar amount, and the following premium list has now been drawn up:

FLEECE WOOL—FIVE FLEECES WASHED OR UNWASHED.

	Teg.		Ewe.	
	1st.	2nd.	1st.	2nd.
Coarse combing wools, Cotswold type....	\$8 00	\$5 00	\$8 00	\$5 00
Medium combing wool, Lincoln or Leicester.....	8 00	5 00	8 00	5 00
Medium clothing, Shrop., Dorset, or Oxford types.....	8 00	5 00	8 00	5 00
Super clothing, Southdown type.....	8 00	5 00	8 00	5 00
Fine clothing, Merino or Grades.....	8 00	5 00	8 00	5 00

CLOTHING FLEECE AND CROSSES—TWENTY FLEECES.

	1st.	2nd.	3rd.
White from Grade sheep	\$10 00	\$5 00	\$3 00

The following conditions are attached: "Teg to be first clip from animals of either sex. Ewe to be from ewes, and to be the second or subsequent clip. Prizes for fleece wools to be competed for by breeders or farmers only. Exhibitor to certify that he is the breeder of the sheep from which the wool was shorn; that they have since been in his possession, and giving details of breeding. Judges to specially note evenness of growth, uniformity and quality of staple."

For The Canadian Live Stock and Farm Journal.

Feeding Pigs from Weaning Until the Time of Fattening.

When spring litters are weaned in spring on farms which cannot furnish them with skim-milk, they can be pastured on clover when they are from ten to twelve weeks old. They must also get food of a nitrogenous character to make much growth of muscle and frame. They can be pastured in the clover in the day, and get the meal ration morning and night.

This meal ration may consist of shorts alone, but shorts and cornmeal make a better ration when fed in the proportions of two and one parts respectively, as the clover and shorts are both of a nitrogenous character, and a little food carbonaceous in character, even in the summer season, will add to the lusty development of the pigs.

While the dams get a few ears of corn in the field the young pigs come up regularly from the pastures to get their meal food. This is given to them in the pens, and it is, of course, fed as swill rather than dry. It is

soaked twelve hours at this season by using cold water. The corn portion of the ration may be given in another way, and probably with better advantage. The corn may be soaked for, say, twenty-four hours, or until it is soft enough to admit of being dented by pressure of the end of the thumb. This may be given to the pigs and sow just after the morning meal, while the pigs are yet on the sow. It should be spread on a floor, and not put into the trough, else the pigs, and the sow especially, would eat it without mastication. This food may be continued with the young pigs after they have been weaned, and it may be given in the same way, that is to say, it may be spread over the floor of the pen in which the pigs are given their meal. The pigs are thus fed until the time comes for putting them up to fatten, that is to say, they get the meal factor all along, but the quantity to be given must be judiciously varied, according to the amount and kind of the other food which the pigs are able to glean in the fields.

When the time comes for gleaning on green peas, the pigs should have some cut and thrown to them before they are allowed into the field. When they are turned in to glean, the peas should be about ready for cooking for table use. If the peas have been sown at two or three different times, and hurdles are used to fence off the divisions, as required for pasturing, the peas may be made to last for several weeks.

When the peas are nearly done, but not quite, the feeding of sweet corn may begin. At first it is thrown in to the pigs in the pea field, and later it may be fed in a yard near the pig house, but it is economical always to feed it upon a floor. The corn is ready when it has reached the cooking stage, and it should be fed stalk and all. It is surprising to see the amount of stalk the pigs will eat. By planting the corn at two or three different times the season of feeding it will be prolonged, but it should be planted early. Other corn may then follow sweet corn, but, when the heavy feeding necessary to finish the animals is well under way, the feeding of corn in this way should cease.

When the pigs do not get green peas or corn, they will require just that much more meal, but if they have extensive stubbles to glean upon they will not require so much meal. The feeding of peas and corn in the way mapped out is a cheap way of feeding them at that season of the year.

If the pigs are weaned with the aid of skim-milk when they are six weeks old, the course of feeding during the summer will be substantially the same, with the difference that the pigs must not be made to depend too much on the grass or clover factor at an early age.

With autumn litters there cannot, of course, be the same opportunity for giving them pasture, but they may be weaned if they come early enough while the pastures are still accessible. Rye pasture, or, better still, rape pasture, would be helpful to them at such a time, but they should not be allowed out upon it when the weather becomes cold. Turnips, mangels, or carrots, may then be fed to them, but only as a part of the ration, right up to the fattening period.

The Pure Breeds of Cattle.

By PROF. THOS. SHAW, St. Anthony Park, Minn.

POLLED DURHAMS—THEIR LEADING POINTS.

A scale of points does not appear to have been drawn up as yet for the Polled Durhams. It is not at all surprising that such is the fact,

as a scale of points has not as yet been drawn up for the Shorthorns, and the latter have been registered for about three quarters of a century. It is somewhat surprising, however, that a scale of points has not been drawn up for Shorthorns, and the same is true of Herefords. The breeders of Polled Durhams have aimed to bring their favorites as nearly as possible to the Shorthorn form, and it must be conceded that their aim has been realized in a most marked degree. The Polled Durham is really the Shorthorn, except that the horns are absent.

In answer to the question, therefore, which are the leading essentials as to form in the Polled Durhams, it would be convenient to say that they are essentially the same as in the Shorthorns with the exceptions named. But the questioner to whom such an answer was given would not be much wiser unless he knew the leading points of Shorthorns. And in the absence of a formulated standard, the question can only be fully answered by formulating one. This I shall now attempt to do.

General appearance. The Polled Durhams should be large, of the parallelogramic type of body, symmetrical, medium in bone, and standing on short limbs.

Head. The head should be somewhat small in proportion to the size of the body, the poll high and pointed, and covered with a tuft of hair hanging downwards; the forehead wide, the eyes large, calm, full, and clear; the muzzle broad and clear, rather than cloudy; the nostrils of good size, the jaws clean, and the ears medium in size, inclining outward, a little upward and forward, and fairly active in movement.

Neck. The neck should be short rather than long, not large where it joins the head, but increasing in width and depth toward the shoulder, and blending insensibly, as it were, into the body.

Body. The body should be broad, deep, and massive, and about equally balanced before and behind; the back broad, level, and well fleshed; the shoulders large and smooth, the coupling short rather than long; the ribs well sprung and deep; the breast wide, full, and deep; the chest and barrel capacious, the forearm well developed; heart girth good; the hindquarters deep, full, broad; the tail not prominent, and medium to fine; the thigh broad, full, and thick; the twist low and full, and the hind flank deep, full, and thick. In the cows the udders should be capacious, well placed, and the system of milk veins well developed.

Legs. The legs should be short, and fine below the knee and hock, straight, and standing well apart.

Color. The color should be red, white, and roan, but red is preferred.

The above is at least an approximately correct description of what the Polled Durham should be, if she is to be modelled exactly after the fashionable Shorthorn of today. It is probably a fairly correct representation of what she is and what she will be, if she is going to compete with the modern Shorthorn in the show rings of to-day. It was my duty at the Ohio State Fair, held at Columbus, to make the awards in the sweepstakes class open to all beef breeds. In the contest were Shorthorns, Polled Durhams, Aberdeen Polls, and two very excellent herds of Herefords. The Aberdeen Polls were also very choice. The award was given to the Shorthorns, owned by Col. Moberly, of Kentucky. His herd was headed by the world-renowned young Abbottsburn, and in it two of the females, a one-year and a two-year-old,

were of marvellous development. Yet, notwithstanding, the Kentucky herd was close pressed by the Polled Durhams, and there the award would certainly have gone had the Kentucky herd not been contesting. The Polled Durhams were owned by J. H. Miller, of Mexico, Indiana. They were a magnificent lot of cattle, and it may be mentioned here that the breed has had a fine record in the show rings since it first entered the lists for honors in 1888.

The breeders of Polled Durhams doubtless know what they are seeking, but is there not danger that this exhibiting, especially in the beef classes or against beef cattle, is going to prove a snare? The muley blood was resorted to with the two avowed objects of getting hornless cattle and milkers. Now the perfect beef form is not consonant with the highest type of milk production. Therefore the all-purpose animal will possess the same form exactly as the model beef animal. If, therefore, the Polled Durham is to fulfil this mission, it should not be quite the same in form as the model Shorthorn of the highest beef type. To produce much milk, the neck should be longer and not so massive. The ribs should be wider apart, more easily discernible to the eye, and the coupling of the females not too short. There would also have to be some sacrifice of flesh in the thigh and twist. In a word, the Polled Durham should be a close modification of the dairy Shorthorn of England, rather than an exact reproduction of the American Shorthorn of to-day.

The day is not far distant when, in the judgment of the writer, the demand for cattle that will give a fair amount of milk, and that will produce calves which will grow into fine animals for the block, will be in much greater demand than at the present time. Many reasons may be given in support of this view, but space forbids. If it is correct, then the retention of good milking properties will prove of prime importance in all animals of this class, and those which have it in the most marked degree will stand highest in favor with the public.

With the present issue the series on the pure breeds of cattle is concluded. If any have thought it worth while to follow the writer, they will remember that the series commenced several years ago. The work of gathering some of the material used was very considerable, but the hope is here expressed that the labor has not been expended in vain. If the series has furnished information to the farmers of Canada, and particularly to the young men of the farm, the writer will feel that he has received ample compensation.

Quebec Cattle.

The illustration of a typical Quebec cow in our April issue has attracted much attention, and we are in receipt, among other letters, of a description of those interesting cattle from the pen of Dr. J. A. Couture, V.S., Quebec, secretary of the French-Canadian Cattle Herdbook. Dr. Couture writes:

I was pleased to read in your last number your short article on these cattle, and to see the cut representing, as you said, a good specimen of this breed; but I must say that the original is much better than the photograph. It may not be uninteresting to your readers to know a little more concerning these Quebec cattle, or French Canadian cattle, as they are called in this part of the country.

French Canadian cows are small, weighing, on an average, 700 pounds, and are of ex-

tremely kind temper. They are the easiest kept of all breeds of cattle, and the hardiest also. They are free from tuberculosis. Their teats are large, and, consequently, they are easily milked. In color, they are solid black, or black with a yellow stripe on the back and around the muzzle, or brown with black points, or brown brindle, or even yellowish. These are the colors that are accepted for registration of females. The males must be black with or without the yellow stripes, for we want to get, in as short a time as possible, the color uniformly black.

As milkers they are the best cows of any breeds in Canada for the average farmer. They will not give the large quantities of milk yielded by the Holsteins or even by some Ayrshires in one day or one week, but they will give a good quantity daily from calf to calf, and the total for the year will be surprising, usually larger than that given by other breeds. The difference in their favor will be still more evident when the cost of keeping is considered.

Here is a farmer, Odilon Robichaud, residing at St. Denis, Ka., P.Q., who owns twenty-four cows of this breed, and who has had the following results from May 12, 1892, to May 12, 1893:

63,193 lbs. milk to cheese factory.....	\$ 531 19
1,616 " butter made at home, at 20 cts. per lb.....	323 20
9,125 lbs. milk consumed at home, at 12 cts. per gallon.....	109 50
3 calves fattened with milk.....	12 00
6 " partly brought up with milk.....	18 00

Total of revenue. \$ 993 89
Gross revenue per cow, \$41.41.

EXPENSES.

4,480 bundles hay, at \$6, \$268 80	
2,240 " straw, at \$3, 67 20	
4,800 lbs. bran, at 84 cts. 40 32	
Pasture at \$5 per head.	120 00
Total expenses.....	\$496 32

Net revenue..... \$ 497 57
Gross expenses per head, \$20 68
Net revenue " " 20 73

This farmer has no feed cutter and no ensilage. He gave neither grain nor oil cake; the cattle got only the dry hay and straw and a little bran; still they gave him a profit of 100 per cent. What other cow can give such results?

I know that some of your readers will find that the average yearly yield of milk of each cow of this herd is not very high, but they must think of the poor feeding they got.

When the little Canadian cow is properly fed she repays well for the trouble and expense, as proven by the following result obtained from the cow *Première 1712*, the property of the *Hôpital du Sacre-Cœur*, Quebec. She calved on the 28th August, 1892, when four years old, and was milked until 15th July, 1893, being due to calve again on the 31st of the same month.

During these 318 days she gave (11,310) eleven thousand three hundred and ten pounds of milk, or a daily average of 35 3/8 lbs. She weighs about 675 pounds. The food consisted of

Cut hay	10 pounds
Cut straw.	5 "
Ensilage	20 "
Bran.....	2 "
Cotton seed and meal. 2 "	

All mixed up, and fermented for twenty-four hours in advance. She was kept all this time in the stable.

I may say that I myself bought this extraordinary cow, when two years old, for \$15.

The cow *Arilda de Lewis* (956), whose picture you published in your last number, gives 8,000 pounds of milk a year on pasture alone in summer, and on fifteen pounds of dry hay and four pounds of grain, oats, bran, and oil cake daily in winter.

Let me say, for the benefit of your readers, that the French-Canadian cow that does not give 6,000 pounds of milk in the year, when she receives reasonable care and food, is not a good cow. On common pasture and dry hay and dry straw, with a handful of bran in water, she ought to give from 4,500 to 5,000 pounds of milk in the year.

This is sufficient to show your readers that with regard to the quantity of milk the little French-Canadian cow can compare favorably, if not better (we say better), than all others.

Is this milk of good quality? Of course it is. The average percentage of fat by the Babcock test is from 4 to 5 1/2 per cent. It is sometimes 6 and 6 1/2 per cent., but these are extraordinary cases. It scarcely goes below 4 per cent., though some have given only 3 1/2 per cent.

Speaking of the matter in this part of the country, we say: Percentage of fat from Jerseys: 1/2 to 6 per cent.; from Ayrshires, 2 1/2 to 4 per cent.; from French-Canadian cows, 4 to 5 1/2 per cent.

The above is the average percentage of the three breeds from a large number of tests in the various butter and cheese factories of this part of the country.

We admit that generally the Jersey's milk is somewhat richer, that the Ayrshire gives a larger yield when in her best condition (in June, for instance), but we hold that our little cow gives, everything being equal, from calf to calf, a larger yield than the two others of sufficiently rich milk. We know, also, that for the common farmer she pays better than any other.

Selection and Care of Breeding Stock.

Read by H. HOLBERT, Cassel, at the Canadian Holstein-Friesian Breeders' Association.

I do not expect to be able to tell you anything new on this important subject, yet a good thing cannot be too often repeated, and must ever remain interesting and new. It would seem, after so much has been spoken and written on the question, that every one should be familiar with it, yet my experience during the twelve years since I started breeding purebreds leads me to the conclusion that at least 90 per cent. of the general farmers and breeders of dairy cattle are either ignorant or totally ignore the importance of careful selection. Of the several hundreds of letters of inquiry which I receive every year, at least ninety out of every hundred ask for prices only, and, if anybody else offers an animal \$5 below your price (regardless of what the breeding of the animal may be), of course he is the man to make the sale.

It would seem that the large majority of our farmers have an idea that all purebreds are alike so long as they have a registered pedigree, and must naturally be superior, and here is just where they make the greatest mistake in their career. I will admit that, especially in males, all purebreds are superior to the scrub, or even grades, for breeding purposes, yet there is a vastly greater difference in the superiority among the purebreds than among the scrubs, which, I admit, are all alike for breeding purposes, and are so alike

that they never should be used, as they are so sure to transmit their qualities to their offspring that nothing but scrubs will and can be produced from them.

There are also purebred scrubs and weeds which have a registered pedigree, and may be fitted up to have the appearance of fairly good individuals; but, when used for breeding purposes, they can no more than reproduce themselves, and their offspring will be scrubs. In speaking on this subject at an institute meeting, one of our pioneer and leading dairymen said that he had used purebred Shorthorn sires for many years in his dairy, and that his cows, which at one time stood above any other herd in this section as milkers, were now hardly paying to milk them, as they had all gone to beef. I asked him if he had paid any attention as to whether the sires used had descended from milking strains, and whether their dams, grandams, and great grandams had been superior milkers. The answer was: "No; all I looked to was that the bull I purchased had a registered pedigree." No wonder that he failed and had to begin anew, and, though he had changed to another breed, yet, if he still pursues the same slipshod course, the result will be exactly the same. Now, let us consider this from the purely financial standpoint of profit and loss. At the late Western Dairymen's convention it was stated that the largest amount received per cow in 1893 from a herd was \$65, and the lowest \$9.96—quite a difference, I should say. Both herds had to be maintained, one at a loss, the other at a profit, or, if the cows that made \$10 profit proved remunerative, the others must have been a gold mine. What an object lesson for all to strive to possess the \$65 herd! But this grand result was not obtained by mere chance, it was the result of careful selection, breeding, and feeding. It is an admitted fact that the sire is one-half of the herd, and I claim that he is the better half, as every calf produced in the herd springs from his loins, and, if he is inferior, the calf must naturally be the same; but, if he is descended through many generations (on both sides) from superior producers only, and is himself a good individual, satisfactory results must follow, especially if only the best of his get are selected. Since the difference between a poor and a good cow is \$55 in a single year, I would ask, Is it wise economy to look at \$15 or \$20, or even \$50, on the price when selecting a sire, when one of his calves will more than pay the difference in a single season? This, of course, may be an extreme case, but let us take only one-half of the amount, say, \$28 per season, and, if you continue to milk your cow for ten years, you have a net gain of \$280 in favor of the superior cow, and, if you raised ten such cows from the superior sire, I would ask you to carefully consider what the difference in your bank book would be, and whether you can afford, for the sake of a few paltry dollars, to use a poor sire in preference to a superior one. Just think over this when you again select a sire. It should be an object lesson.

Now as to selection. My advice would be to go to a reliable breeder, who has a reputation at stake, and to buy the best bull within your reach. See that he is possessed of a strong, healthy, and vigorous constitution (do not begrudge a few extra dollars for a superior individual; they are well spent), investigate carefully what his dam, sire's dam, grandams, and great grandams on both sides have been doing as milk and butter producers. If there are any sisters, see what they are doing in the dairy. See that he is a purebred

with a registered pedigree. All these are essential points, and if properly observed the result must be gratifying to you. The same will apply to females also, but not necessarily to so rigid an extent, as you can improve on them with the superior sire. But now comes another very important point, that is to properly feed and care for your stock. Only disappointment and loss will be the result of improper care and feeding, no matter how well bred your stock is. If you neglect and stunt them, they will be little better than scrub. The care of the cow should begin months before she is born, her dam should be fed liberally with bone- and muscle-producing feeds, and this again continued with the calf, which must be kept growing every day up to the time when she produces her first calf. Then change to succulent and milk-producing foods. It is during the first and second year that the foundation for future usefulness is laid. It is a mistaken idea that breed alone will produce exceptionally large quantities of milk and butter. Feed must necessarily accompany it. Even the great cows, Pietertje and Pauline Paul, could not have produced 30,138½ lbs. of milk, or 1,154 lbs. of butter, respectively, in a year, had they only been fed on straw. To you as breeders of purebreds I cannot urge this point strongly enough. You all, undoubtedly, are aware that purebreds are only the outcome of careful selection, breeding, and feeding, and that it has taken hundreds of years to bring them to their present high standard of excellence. Nevertheless, it is an undeniable fact that we can, through improper care, breeding, and feeding, utterly destroy in less than ten years what it has taken generations to build up.

Notes from Great Britain.

(By Our Own Correspondent.)

The position of English agriculture at the present time is one of the greatest depression. Wherever one goes the same depressing tale is told. Land is going out of cultivation, or only being half tilled. Cottages are empty, their occupants having been compelled to leave to go where a chance of getting a livelihood appears better, *i.e.*, to drift to the towns, thus adding to the already overstocked supply of unskilled labor. Country mansions, once the homes of the resident landlords and country squires, are, in many cases, disfigured with notices "To be let," their owners being compelled to go elsewhere, being unable to maintain and keep up the establishments that their forefathers built. All this and more can be seen at a casual glance as one travels through our country, but more and worse lies behind, for, if one only just takes the trouble to enquire, he will find out that a very large majority of even the present occupiers of the soil are not entirely solvent. Many just manage to keep struggling on; others will be found who are simply stopping on their farms because no one else can be found to take their places. This is, indeed, a very serious position of affairs, and one for which some remedy will have to be found, and found before long, too, or, otherwise, one hardly dare contemplate for a single moment what will be the outcome. What the remedy will be, or what may be done or could be done, is a question beyond the scope of this article. Perhaps the best way of letting our brother farmers in Canada, who have not, from all accounts, themselves had the best of times, know what is the true state of affairs at home is to give a brief notice of the report of the statistical committee of the Central Chamber of Agriculture,

which was presented by the committee to the council of that association at their meeting held March 5th, 1895. The council in December last directed that a circular should be addressed to the associated chambers and clubs, asking them each to draw up a report on the conditions of agriculture in their districts, and to make suggestions as to how its state could be benefited for the better. Forty-four replies were received from twenty-five counties. The reports were all drawn up on one plan, and the different headings hereafter will give the general effect of the whole of the reports.

Effects of the depression on landowners. Reductions in the letting value of land are included in every report, the extent of reduced value being from 5 to 75 per cent. on letting rent. The selling value of purely agricultural

has taken place to a very large extent, probably to nearly 30 per cent. On laborers still employed there is a loss of perhaps 25 to 36 cents per week in wages.

The chief suggested remedies are: (1) A change in local taxation to suit the present state of agriculture. (2) The abolition of preferential railway rates on foreign produce. (3) A lowering of home railway rates. (4) Duties on imports. (5) Currency reforms. (6) Change in conditions of tenancy. (7) All foreign meal and produce to be sold as such. These and a host of other remedies are suggested for the prevailing distress.

What will be the outcome it is hard to say, but it is to be hoped that some means will be devised to bring back to our corn-growing agriculturists and general farmers, and, through them, to the laborer and landowner, renewed



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land has depreciated to quite an equal extent. According to the Inland Revenue returns, the gross value of the land in England is less now by \$69,000,000 than fifteen years ago.

On tenants. The reports received all more or less amplify this very serious question, but do it more or less in different ways. Figures published in the minutes of evidence taken by the Royal Commission on Agriculture, now sitting, show that the shrinkage in the receipts of the occupiers of arable land is nearly £40,000,000 per annum, as compared with twenty years ago. The reduction of the tenant's capital is estimated to be from 30 to 50 per cent. by the reports sent in, although from private knowledge of many individual cases I fear these are far too favorable.

On laborers. Reduction of employment

prosperity. There is one very remarkable thing about the whole depression which is a very valuable lesson to all farmers, *i.e.*, that wherever one goes and happens to find a farmer whose farm is well or better kept than his neighbor's that farmer is certain to be found to be a man who, in addition to using his farm to grow grain, mutton, beef, or pork, is one who is keeping some kind of registered stock, and who finds that, although this kind of stock costs him a little more at the start, he has in this department a reliable source of income, and one upon which he can depend, with a market ever ready for all he can spare at a good and remunerative price.

The Glasgow Stallion Show took place on March 15th, but the show was not quite up to its usual standard, either in point of numbe-

of entries or of quality. This is accounted for in a great measure by the fact that the show was held later in the season than usual.

In the open class for aged and three year-old horses we found a good entry, the leading position being awarded to Mr. A. Scott's Prince of Fortune, by Prince Fortunus, out of a Darnley mare.

In the three-year-old class Mr. P. Crawford's Royal Gairly again most worthily took the premium place, as he did last year, and subsequently won the Cawdor cup.

Two-year-olds were a small class, but for first and second places the competition was severe and close, Mr. W. S. Park's very nice colt, Royal Gallant, ultimately taking the lead. He is sired by Prince Gallant, and won, as a yearling, first at Paisley, Ardrossan, and other shows. The second colt, Knight of Cowal, the property of Mr. William Curr, by Gallant Prince, out of a Top Gallant mare, worthily filled the second place. He is bigger than the first-prize colt, and was second at the Highland Society's Show last year, the first-prize winner there, Mr. D. Riddell's Nonpareil, being placed third here.

The horse trade, so far as stallions are concerned, has been very good. First-class horses have been let for the season at satisfactory figures, and those whose owners travel them themselves have their lists well filled up. This applies to most breeds, particularly Shires, Clydesdales, and Hackneys.

Several important Shorthorn sales have been held, and very good prices have been made of anything with good quality, and particularly if of milking strains.

The annual sale of the Hereford Cattle Breeders' Association was a very successful one in every way. Good stock were shown, and, what is better, an excellent demand and good, sound paying prices were the order. The herd of Red Polls, the property of Mr. R. E. Lofft, were dispersed during last month, and they made an excellent average price. These cattle, apparently, are being looked after by many buyers, not only at home, but abroad, for they are grand animals for beef as well as milk.

Reports about sheep are, for the most part, satisfactory, but there does not appear any likelihood that we shall materially add to our permanent stock any number to make up the large deficiency in our flocks as shown by the returns for last year. The price for best mutton is very high. Eighteen to twenty cents per pound is easily obtained. Store sheep are very dear, indeed, and the demand for sheep is very firm, not only at home for stock for butchers' purposes, but also from abroad for breeding purposes. Enquiries are being constantly received from all parts, and almost every week we hear of lots being sent away, thus making it more than ever needful that full and proper pedigrees should be kept. It hardly matters now where the enquiry or order comes from, the almost invariable request is made that every sheep sent have a proper authorized official pedigree.

An Excellent Appointment.

We take great pleasure in presenting our readers, in this issue, with an excellent half-tone engraving of Mr. R. F. Holtermann, Brantford, who has for some time been identified with THE JOURNAL as a contributor to its apiary department, and whose articles are always found very much to the point.

The skill in beekeeping shown by Mr. Holtermann attracted the attention of the Hon. John Dryden, Minister of Agriculture,

and he has appointed him lecturer on apiculture at the Ontario Agricultural College, Guelph, and has also engaged him as experimentalist in beekeeping. The appointment is one which will be sure to give general satisfaction, not only to the college, but to beekeepers throughout the province. The subject of our sketch was born in Hamburg, Germany, and is of German and Norwegian extraction. He came to this country with his parents in 1862, when only 2 years old. Their first place of residence was in Hastings county some 100 miles from a railroad. Mr. Holtermann was a student at the Ontario Agricultural College in 1879-80, and, although unavoidably absent from lectures for ten weeks, he graduated with first honors in almost every subject, ranking second in the final examination, and being entitled to more than the maximum number of prizes any student could take. Since that time he has devoted the greater part of his time to beekeeping, having spent two years with Mr. D. A. Jones, Beeton, Ont., who was then the best-known beekeeper in the world. On leaving Mr. Jones he engaged with Messrs. E. L. Gould & Co., Brantford, and has been with them almost continuously for ten or eleven years. During that time he has become one of the most prominent contributors to apicultural literature in America and Europe. He has been a paid contributor to the *British Bee Journal*, also to German, French, and Norwegian papers, and is now editing the *Canadian Bee Journal*. He is also president of the North American Beekeepers' Association, the Biant Beekeepers' Association, and the Farrington Debating Society, and is secretary of the Ontario Agricultural and Experimental Union, a very prominent organization composed of graduates and students of the Ontario Agricultural College, which receives a government grant where with to carry on co-operative agricultural experiments. As a practical beekeeper Mr. Holtermann has won his laurels, as awards won by the Gould, Shapley & Muir Co. (Ltd.), at Chicago, Toronto, Ottawa, Montreal, and other places, amply testify. Last winter he successfully wintered 95 hives. We approve most heartily of Mr. Dryden's selection of him to advance the interests of apiculture in this province.

The Canadian Horse Show.

No event in recent years has been as popularly received as this new departure in the way of exhibitions, while the fact that it went off with such flying colors is a tribute to all classes, and especially to the society people of Toronto, who not only patronized it freely, but also lent their horses and equipages to delight the assemblages attending the show.

Held under the joint management of the Agriculture and Arts Board and the Country and Hunt Club of Toronto, its success was assured, but the history of other shows, such as the Chicago Horse Show, made one dubious as to the wonderful success that actually was achieved.

It is exceedingly gratifying to horse breeders that the interest grew keener each succeeding day, and that a horse show, pure and simple, has such drawing capabilities, and that everything savoring of circus performances was as foreign as possible to the programme.

Bright and handsomely decorated was the appearance of the new Armories building, and the fact that the capacious accommodation was taxed to its utmost made many people augur

that this show will yet require more space in the future. The boxes and seats were fairly well arranged, and there was room left for an oval ring, which was lined with tanbark, and which afforded ample room for an arena in which to show each class on the programme. Once or twice, however, so keen was the competition, and so well represented the events, that there was no space to spare.

It must be exceedingly gratifying to Mr. Henry Wade and Mr. Stewart Houston, the joint secretaries, that no hitch in the proceedings could be detected, and it reflects great credit upon the management that there was no sign of dragging or dreariness in the conduct of the programme, while all agreed that Mr. J. H. Allen, of New York, proved a great acquisition in the performance of his duties as ring-master, his experience in this line at New York show bringing out his talent for this work.

The arrangement by which drivers and riders alike wore the number of their entry in conspicuous figures both before and behind made it easy to identify each exhibitor, as well as the names of the horses. Managers of fall exhibitions might take a lesson on this point. On one point we would offer criticism. This was the keeping of reporters out of the ring while the breeding classes were being judged. This makes it impossible for us to give a fair criticism on any decision, and prevents us giving a full report on the different noted horses. The American judges who tied the ribbons on the majority of the saddle and harness classes gave pretty general satisfaction, as also did Mr. K. Stiercker, Springfield, Ill., among the Hackneys. Mr. Alex. Galbraith, Janesville, Wis., the genial secretary of the American Clydesdale Association, was also warmly welcomed by Canadian breeders.

The parade of the members of the Country and Hunt Club, all spick and span in scarlet coats and knee breeches and tops, including the master and the whips, with five couple of hounds well under control, and the reappearance of the repeatedly successful sweepstakes-winning Thoroughbred, Mikado, from Mr. Robert Davies' stud, all added generally to the interest.

Too great a measure of praise cannot be accorded to the assemblage for the liberal and unbiased manner in which they applauded all competitors alike, whether they belonged to Toronto or outside points. Especially was this the case during the skillful driving of Miss Macdonald and Messrs. Schultz and Batonyi, of New York, when long and loud were the plaudits given from boxes and galleries.

Another feature that added to the promised success of the show in the future is that the interest did not abate while the decisions were made in the breeding classes, and the company signified their approval by the warm reception that all classes received at their hands.

That this show will give a great impetus to horse breeding is certain, as those who have the means will acquire a taste for riding and driving, and, therefore, none should gain as much profit by its becoming a fixed event as the horse-breeding public, who should support it by every means in their power. The very classification of horses for the different patterns of vehicles will show what type of horse is required, and thus an educating medium may be developed which will be of great value to the country.

THOROUGHBRED STALLIONS.

Although further down the list in the programme, Thoroughbred stallions, as usual,

were placed first on the catalogue. Sixteen of the seventeen entries were forward in the section for horses foaled previous to January 1st, 1892, and this was the strongest ring yet brought out at a spring stallion show. To attempt to describe this grand lot of horses would occupy more space than we have at our command; and, if we may be allowed to judge by the dissatisfaction among disinterested outsiders arising from the decisions given, the most fortunate horses will stand criticism the least. But, we ask, are the judges altogether to blame for the dissatisfaction brought out; or, rather, has this class ever been properly defined? We think not. Now, it would be idle to suppose that the eighteen stallions shown in the two rings at the Canadian Horse Show, in addition to the grand lot of Thoroughbreds that are to be found in every locality, are to be used for breeding race-horses. If the Thoroughbred mares in the country were divided among the stallions, there would not be one apiece. The grand lot of horses shown in harness and under saddle at the late show are largely indebted to the Thoroughbred blood in their veins. Numbers of visiting American horsemen were astonished at the number and quality of these, while they stated that the superiority of Canadian horses might be attributed to the grand class of Thoroughbred stallions, specimens of which were shown. Then why not define the class so that the proper type of stallions should be encouraged? No one can doubt that Strathspey, the winner of the first prize in the aged ring, has stout running blood in his veins, and that his sire and dam have been wonderful producers of winners. But should the judges look at the catalogue or at the horse? If the former, they may as well leave the horse in the stall and decide on the pedigree alone. Conformation in the sire is what we want, if handsome harness and saddle horses are to be bred. Then, either the class should be divided, or prizes given for the type which will benefit horse breeding the most. Of the other horses awarded ribbons, Monotony is a horse of nearly sixteen hands, but certainly not as handsome as Graham Bros.' Montana, which horse carried 5th. He looked every inch a runner, and certainly deserving of a higher place. To Wiley Buckles the fourth prize ribbon was sent. Had these four been all the horses in the class, we would have reversed the decisions, and placed the last named first, Montana second, etc.; but there were some good horses left out entirely, such as Pillarist, which, for breeding for the turf, should have been noticed.

In class 2, Thoroughbred stallions foaled subsequent to January 1st, 1892, the handsome horse, St. James, imported and exhibited by Thos. Irving, Winchester, was given the red, while a very useful horse exhibited by A. Frank & Son, The Grange, by a son of Terror, was given 2nd. For the best horse calculated to get saddle horses the judges chose Stereoscope, the 3rd prize-winner in the aged class, owned by Haines & Paterson, Owen Sound.

CARRIAGE AND COACH HORSES.

In class 4, for carriage and coach stallions, foaled previous to January 1st, 1892, seven competitors were brought in, and, as usual, they comprised all shades of breeding. The first prize was awarded to Graf Bremer, a German coacher, exhibited by James McCartney, Thamesford. This horse moved freely and well, but had more of road action that is required in a carriage horse. He is, however, a handsome horse, and also won the sweepstakes for the best coacher. The second was carried off by Picador, also a German coacher, owned by the Milton German Coach Horse Co., Milton, while Thomas Irving's (Winchester) Bon Ton, a handsome English coach horse with beautiful quality, sired by the celebrated breeding horse, Favorite 581, carried off third. Bon Ton is the best pattern of an English coach horse that has been imported for years. He is rising four, while the others were one and two years older. Bon Ton should prove a grand breeder, or he will turn out differently from the other many good ones that Mr. Irving has imported. There were several other useful horses in this class, notably imported Londonderry, exhibited by Robt. Atkinson, Thistleton, a well-bred horse by Luck's All (189), dam by Sportsman (291). In the class foaled since 1892, a good son of Shining Light, exhibited by J. L. Reid, Meadowdale, was awarded first, and a neat, handsome colt, Abdallah Stanton, was given second.

STANDARD-BRED ROADSTER.

Some good horses appeared in the class for Standard-bred roadster stallions, in which seven out of eight entries came to the call, the absentee being Graham Bros.' Deacon, that won first and sweepstakes last season. To Gold Ring (owned by Learn & Miller) was sent the red, a tribute to Canadian breeding, as Gold Ring is sired by Eden Gold Dust, his dam being from one of the best bred Canadian trotting families. To Dr. McCully's Altoneer was sent the blue ribbon. He is a handsome horse, and nicely bred. Bourbonnais, owned by W. R. Proctor, Richmond Hill, is a nice horse of combined Wilkes and Almonte breeding, that carried third place.

A neat class of four three-year-olds came to the bugle call, in which the prizes were awarded according to our list given in another column. The sweepstakes was sent to the Brampton horse, Gold Ring.

HACKNEYS.

The Hackneys were splendidly brought out, and rounds of applause greeted each horse as he was put through his paces. In fact, the Hackney is becoming the favorite horse among society people, who know how to appreciate high steppers. Nicely-mannered horses are a necessity, if the fashionable vehicles of the day are to be properly harnessed. In the class for stallions over three years old the two old-time competitors from R. Beith & Co.'s stables, Ottawa and Jubilee Chief, were placed first and second in the order named. Both horses were in grand form. Ottawa was in particularly fine fettle, going his very best, while Jubilee Chief is certainly wearing exceedingly well, and his success in the stud becomes more and more evident.

H. N. Crossley's Wildfire has also steadily improved. No Hackney horse at the show is a truer type of the breed. He is as handsome as can be found, and his action is true and of the right sort, but hardly as scintillating as that of the two premier winners of the class. Yet from Fireworks' breeding and individuality we shall be disappointed if he does not give great satisfaction in the stud.

No greater surprise awaited horsemen than when A. G. Rausay's Courier was put through his paces. He goes away and comes back with a brilliancy that all admired. He has improved wonderfully since he last appeared in public, and we do not wonder that he is greatly sought after. The fact that his son, Typhoon, was sold by Dr. Seward Webb to Mr. Astor, New York, for \$3,000, should remind the Hamilton people that they have a great sire at their doors. Courier carried the third ribbon, and Fireworks the fourth, while the Norfolk-bred horse, Coker's Nelson, from the stables of A. G. Bowker, Woodstock, was placed fifth.

In Hackney stallions, over 15 and under 15½ hands, foaled previous to January 1st, 1892, the beautiful horse, Kilnwick Fireaway, exhibited by Graham Bros., Clarendon, was awarded the red ribbon. Never did this handsome horse show to better advantage, his knee and hock action are simply superb, and rounds of applause greeted each turn of his up and down the tanbark. The Shah, exhibited for the first time by A. G. Bowker, is a cobby built black, with good bone, of James Coker's breeding. To him was sent the blue, while Black Prince, from the stables of Geo. H. Hastings, Deer Park, carried away the third premium.

In the class for Hackney stallions foaled previous to January 1st, 1892, 15 hands and under, Geo. H. Hastings held all the honors, just three competing. These were Black Nobleman, Little Nobleman, and Little Duke, all three sired by imported Young Nobleman, and the two former both from imported Norfolk Duchess.

Three entries in the class for Hackney stallions foaled in 1892 were forward. R. Beith & Co.'s Banquo won here hands down. He has the most sensational action at the knee and goes well all round, while in nice quality and showy looks he clearly outclassed anything in his ring. Banquo, it will be remembered, is by Jubilee Chief, dam Mona's Queen (imp.). His stable companion, Lord Rosebery 2nd, by the same sire, and out of Florence (imp.), was given second place, while the cob stallion County Council, imported and owned by Robert Dack, Toronto, was placed third on the list.

The ring for sweepstakes brought in all the first-prize winners in their respective classes,

and caused considerable excitement, while Mr. R. Stericker was deciding which should have the highest honor of the class.

Ottawa had many friends outside the board barrier, while Kilwick Fireway had charmed the critics in the boxes and galleries, who applauded him every time he showed his dashing style down the tankark. Others contended that the colt Banquo should have it. Perhaps none were quite as undecided as the judge himself. Banquo and Kilwick Fireway were then stripped to see how they would perform in their bare bridles, and most nobly they did it, better than with their rollers, bearings, and side lines, all declared, but at the finish Banquo won, his age gaining the preference, although the judge admitted that it was hard to pass the Graham horse, to whom was sent the reserve ribbon.

A beautiful ring of Hackney mares represented the class for three-year-olds and under. Jessica, a full sister of Banquo's, but two years younger, is a sensational yearling, and quite charmed the judge. Such wonderful action she has, and she has plenty of it and of the most brilliant sort.

H. N. Crossley's Althorpe Duchess (imp.) is a grand mare rising three in August, and she, too, is nearly all one could desire. She goes well all round both on the line and better yet in harness. She is a right good sort, and her substance, style, and quality all combined carried her to second place in the list.

John Holderness' Cherry Ripe is as sweet a filly as any in the crowd, a beautiful bay with high and true action, and with the best of behavior. Many men outside the boards would put her a notch higher, while others wanted her to have the red ribbon, but the judge decreed otherwise. However, there was little to pick between them.

SHIRES.

The numbers of Shire stallions in this country do not seem to increase as they should, judging from the few that are exhibited from time to time at our shows. We have plenty of room on this continent for all the best of this fine old breed that we can get, and they are the very ones that we should get, in order that we may breed the heavy geldings that are so much in demand in the large cities of the old country.

While only five aged Shire stallions entered the ring at the bugle call at the late show, yet they were all of a good stamp. Six had entered, but one was absent on account of sickness. The contest for first place lay between H. N. Crossley's Bravo 2nd and Morris, Stone & Wellington's Pride of Hatfield, both imported horses. The former is a horse of grand Shire character, of good width and stands on short legs. He has the nicest quality of feather, while his legs are as fresh as ever. Pride of Hatfield, who, by the by, is half-brother to the celebrated Harold, now considered the best breeding Shire horse in England, is a good-topped horse with a good middle and end. He stands well on his legs, which are as clean as could be desired. He was, as will be remembered, the sweepstakes horse last year at the spring show. The judges eventually placed him first, and Bravo 2nd next. Third place was given to Garfield 2nd, a well-bred horse shown by J. M. Gardhouse, Highfield. He was got by that grand sire, What's Wanted (2332), and is looking wonderfully fresh for a fourteen-year-old horse. For fourth honors the judges selected another entry of Morris, Stone & Wellington's, Prince Charles, a heavy, low-set horse; while a useful imported horse, C.A., shown by John Semple, Tottenham, was highly commended.

The three-year-old class had but two entries. Here Duke of Blagdon (imp.), owned by J. M. Gardhouse, Highfield, proved the winner. He has a taking style about him, has lots of quality and neatness, but lacks in scale. The blue ribbon went to Frederick William, a homebred horse shown by Morris, Stone & Wellington. He is by Prince Charles mentioned above, and out of the imported mare, Elsie Morin. Though somewhat plain about the hind legs, he is well turned about the top and front, and is a thoroughly useful horse. Pride of Hatfield secured the Prince of Wales' prize for the best Shire stallion of any age, Bravo 2nd taking second place.

IMPORTED CLYDESDALES.

Great things were expected when the Clydesdales came into the ring at the late show. The class was decidedly a strong one, not, indeed, in point of numbers as compared

with other years, but the ten horses shown were almost all toppers. Several new horses made it interesting in the class foaled previous to January, 1892.

Graham Bros. had forward the imported horse, Esquire of the Park, shown for the first time in Canada. He is by the Darnley horse, Laird Darnley, and looks it, too, and is very much like his near kinsmen, the Macgregors, in appearance. He has a handsome top, and is equally grand at the ground, has plenty of bone, oblique pasterns, and the best of feet, and that silky feather which adds to the charm. He was a strong favorite from the first, and carried the coveted ribbon. He also afterwards secured the sweepstakes for imported Clydesdales.

Prince of Quality is the new arrival at Thorncliffe, in getting which Mr. Davies anticipated the breeders of Scotland, who delight in quality at the legs and feet, for Col. Holloway is breeding that kind. Such feet and pasterns are rarely seen, but Cedric gets them that way, or Col. Holloway would not have kept him so long at the head of his stud. He is one of the Prince of Wales' best breeding sons. A wonderfully handsome horse is Prince of Quality; his breeding is right for the mares at Thorncliffe, and Mr. Davies knows it.

Golden Crown won the third ribbon. He was imported by D. & O. Sorby, and exhibited by Vance & Eby, Shakespear, his owners. Golden Crown was sired by Silver Twist, his dam being by Belted Knight. He is a big one, and has lots of good points about him. In fact, he is the type of a horse that should get quick selling geldings, for it is the big ones that bring the most money for doing work between the shafts.

Tofty, by Botanist, dam by Grand Turk, is the way the breeding runs of a capital horse exhibited by John Davidson, Ashburn. He was imported by John Isaac, Markham. He also is a big one, a kind of which more are wanted.

Erskine Style came next; he was bred and is owned by John Vipond, Brooklin. His sire was Erskine (imp.); his dam, imported Brooklin Metal, was by Farmer's Boy.

Then there were other right good ones, and of the proper breeding, but a bit off that day, or some of them would have been put higher up in the prize list; but it does not take much to place a horse back. Such was the case with Craigista, Craichmore Darnley, and Uanivar, all right good ones.

First premium for Clydesdale stallions rising three went to a good one. This was Grand National, sire imported Tannahill, dam imported Mary's Pet, by Cairnbrogie Stamp, a well put-together colt, with lots of size and quality.

A neat son of Lewie Gordon, bred by John Davidson, Ashburn, came next. His dam is by Boydston Boy. The third ribbon was sent to Roslin, one of the few imported in 1894. He is owned by S. J. Prouse, Ingersoll. Graham Bros.' Symmetry 2nd was the only exhibit in the younger class.

CANADIAN-BRED CLYDESDALES.

The call for Canadian bred Clydesdale stallions, foaled previous to January, 1892, brought out three of four entries. P. Kelly's (Orillia) Pride of Dollar, many times a first-prize winner, again carried the day. There are few more useful horses than he, for size, conformation, and quality are nicely combined in his make-up. Ashburn Hero, a son of that capital breeding horse, Tannahill, foaled in 1891, came second in his class, with a promise that he will make a good horse as he develops more middle, for but little fault can be found with his quality and appearance. He was bred and exhibited by Job White, Ashburn, Ont.

Royal George, that carried third place, was sired by imported Candemas, dam by Peer of the Realm. He is a good-bodied horse, with nice quality at the ground. He was exhibited by Geo. Gray, Clarke, Ont.

Addison, bred and exhibited by Wm. Foster & Son, Humber, was the only representative in the class for colts foaled in 1892, and City Boy, by Granite City, bred by Mr. J. Howard, entered the ring alone for the class a year younger.

To Pride of Dollar was sent the sweepstakes ribbon, thus adding one more to the long list of honors won by this horse.

HORSES IN HARNESS.

The first harness class on the catalogue, but which event did not come off till

Saturday afternoon, was for mares or geldings over 14 hands 2 inches, and not exceeding 15½ hands, to be driven to gig, dog-cart, or phaeton. The class was a big one of over twenty-five entries, and here a victory was scored by the Hackneys, this sort taking two out of three ribbons. Actress, a beautiful bay mare by Norfolk Hero, exhibited by R. Beith & Co., Bowmanville, and Althorpe Duchess (imp.), from H. N. Crossley's contingent, were 1st and 3rd, respectively, while a bay mare exhibited by T. A. Crow, Toronto, gained the 2nd prize.

The second event on the boards for harness horses was the class for single mares or geldings over 15½ hands, shown to gig, dog-cart, or phaeton, and splendidly was the call responded to, no less than twenty-eight turnouts answering the bugle call. Dog-carts of different patterns were the most numerous, although one or two gigs and a phaeton added variety, if not tone, to the scene. High action in the horses told the tale in this competition. The plain, every-day jog trot cut no figure, no matter how smartly the rest of the turnout was gotten up. It was a class for horses, and the best won it. A chestnut gelding of Major Hay's carried the red ribbon. He was sired by Dennison, a Thoroughbred, his dam being a half-bred Hackney of R. Beith & Co.'s (Bowmanville) breeding. The blue ribbon was sent to Silver & Smith's Artist, a bay horse with good action, while D. T. Lowes captured third place with London, a horse with both substance and quality.

A splendid ring of nicely matched horses were gayly applauded by the audience when the class for pairs over 14½ and under 15 hands 2 inches, was called. These were chiefly driven to T-carts, although one high four wheeled dog cart, and other less pretentious vehicles were also in use. A pair of beautiful bays, shown by R. Beith & Co., and by that capital Hackney sire, Norfolk Hero, were all round favorites in the boxes and galleries, but the judges ruled otherwise and awarded them second, while a pair from D. T. Lowes' string were given first, and to Silver & Smith was sent the third.

The class for pairs over 15½ and under 16 hands brought out some nicely appointed pairs. A pair shown by H. Winnet, Toronto, nicely matched in form and action, carried the coveted color. Mrs. W. D. Woodruff's stylish pair came next on the list, while Geo. H. Gooderham gained third with a smart going pair named Dot and Harry.

Some capital pairs were forward in the competition for horses over 16 hands, in which we could hardly coincide with the decisions given by the judges. Here a pair of chestnut geldings exhibited by Quinn Bros., Brampton, were awarded first honors. They are horses of good substance and nice quality, but were hardly the type for brougham or landau horses—the way this class should be defined—they were entirely too light in color, and suitable only for wheelers or a four-in-hand, or a pair for a mail phaeton, in which size and light colors combined are allowable. The second pair were better in color, and received their just dues at the hands of the committee, but a pair drawing a landau, owned by Robert Davies, Toronto, were truer to the type required and a better pair in every way, according to our judgment.

As expected, a good deal of interest centred in the class for the best appointed gentleman's pair driven by the owner; horses to be 15 hands 3 inches to 16 hands 1 inch inclusive, and to be driven to T-cart, spider, or mail phaeton. Horses to count 50 per cent.; appointments, 25 per cent.; skill in driving, 25 per cent. A pair of beautifully matched horses, with the best possible manners and showy action, owned and driven by Geo. H. Gooderham, Toronto, were the favorites with the majority of the onlookers, but the majority are often wrong. A heavily moustached groom killed the outfit, and placed it second to that of John Macdonald, Toronto, who was also credited with better driving, although his horses were not equal to the second placed pair. To G. A. Case, Toronto, was sent the third ribbon. This turnout was also greatly admired.

It was thoughtful of the committee to give high-stepping mares or geldings, sired by a registered Hackney stallion, a chance to show alone, and thus to encourage this popular line of breeding. Most nobly did the owners of this sort respond. Actress, a beautiful mare, sired by Norfolk Hero, carried another

honor for the Beith contingent. She has the right kind of action and plenty of it. H. N. Crossley's imported Althorpe Duchess also showed to good advantage. She has the proper conformation, and uses her knees and hocks after the most approved fashion. A gelding, shown by Chas. Palmer, came in for the white ribbon. She drives nicely, and shows up well.

Six splendidly horsed tandems promised an event in which more than usual interest centred. Honors were easily won for D. T. Lowes, Brampton, with his gray gelding for leader, whose sensational action was plainly in advance of anything in the ring; a black wheeler was quite as good in his place, and the pair placed the outfit clearly a strong first. Lieut. Laurie, Toronto, also drove a nicely appointed turnout. The horses matched handsomely, both in manner of going, color, and conformation, but they lacked the dash of the previously-mentioned pair, although the appointments were most tastefully chosen. William Hendrie, of Hamilton, brought in a nice pair of chestnuts, easily driven, and thoroughly broken, that carried off the third premium, and were much admired.

Four-in-hands, driven to coach or drag, only brought out two competitors, but furnished an exhibition in fine driving, which was a rich treat to all who witnessed it. In this competition, appointments, the action, and good manners of the horses all counted. The team of Mr. D. T. Lowes were driven to a drag by Mr. Batony, New York, and the way he handled the ribbons furnished the Toronto people with food for reflection, and showed them how it ought to be done. He galloped the horses, and turned them about the tankarked ring as easily as though it was a pair he was driving. The leaders drove out with a dash and action which is hard to beat, while the wheelers behaved nicely, and the whole outfit was deftly chosen, and quite won the hearts of the company.

Mr. Beardmore's four-in-hand was the only other one competing. They were driven before a coach, which, although nicely horsed, clearly lacked several essentials in appointments, as, for instance, another footman with a horn. Yet the way Mr. Schultz, of New York, handled his horses made Toronto horse people jealous, and wish they could copy his style. There was no lack of precision and dash in his manner of driving, and the turnout was well received by the public, and rounds of applause from the boxes and galleries greeted each turn he made around the ring.

SADDLE HORSES.

Class 38, for mares or geldings over 15.2 hands, had 21 entries, of which a round dozen showed up. After looking them over carefully, and testing the selected ones by mounting one of their number on them, the judges placed the brown mare Deceit, shown by Miss Irene Jones, Brockville, 1st; Mr. Wylly's brown mare Lassie, a favorite with a good many for first place, 2nd; and a strong, useful mare, Kitty Tyrrell, the property of Lieut. Laurie, 3rd. In class 39, for mares or geldings between 14.2 and 15.2 hands, there were fewer entries. A good looking mare, Bonnie Brier, exhibited by W. M. Douglas, Toronto, scored first, second honors falling to R. Beith & Co.'s Frolic, which moved well.

Great interest was taken in the next class, which was for ladies' saddle horses not under 14.3 hands, ridden by ladies. Two prizes only were given. The horses were tested at a walk, a trot, and a canter, and the horses only were taken into consideration. W. M. Douglas' Bonnie Brier, mentioned above, and ridden by Miss Lee, Toronto, came in winner, followed by Miss Jones on the chestnut mare Binba.

A special prize of \$50 was offered by the American Horse Exchange, New York, and Mr. W. D. Grand, for the best combination saddle horse, gelding or mare, 15 hands and over, mouth and manners to be specially considered. The horses were shown first in harness, then under saddle. Here Lieut. Laurie's brown mare, Kitty Tyrrell, was chosen for first place, the reserve ribbon going to G. W. Beardmore's The Maligned.

HUNTERS AND JUMPERS.

In this section quality counted 50 per cent. and performances 50 per cent.

The heavy-weight qualified hunters did not distinguish themselves by their jumping. In fact, with the exception of R. Crean's Prince Charlie and Lieut. Laurie's Carver Doon,

none of them cleared all the hurdles placed to test their skill. First and second ribbons went to these two in the order mentioned, G. A. Carruthers' Gray Friar being selected for 3rd place.

Light weight qualified hunters did better. Out of the ten entries forward, Prof. Andrew Smith's well known aged horse Surprise distanced his competitors, and won amid the applause of the audience. The jumping all through was good.

R. O. McCulloch's Maritana, a bay mare by Sharpshooter, out of a Royal George mare, caught the judge's eyes for 1st place in the heavy weight green hunters' class. J. D. Hay's Melba and G. W. Beardmore's Cockatoo were the other successful competitors.

The light-weight green hunters' competition brought out some good horses, but the jumping, on the whole, was not up to the mark. Lieut. Laurie's mare, Kitty Tyrrell, however, did well and earned 1st money. Next place was taken by Miss Jones' mare Decet, and 3rd by W. Buckley, Cuelph, with Steel Gray. During this competition Lieut. Forrester's horse fell and threw him, fortunately without injuring his rider.

SPECIAL CLASSES.

Seven special classes were offered for riding and driving. In these the competitors were severely tested in every way in order to show off their skill in handling the ribbons or sitting their horses, as the case might be. They were among the most interesting of all the classes, and whenever any particular skill was shown by the handler of the ribbons the audience were not slow to give him their applause.

The contest for the best amateur driving of a pair of horses to a four wheeled vehicle excited great interest, particularly as F. M. Ware, the celebrated driver from New York, was one of the participants. Barrels were set up in tiering at short intervals, between which the drivers had to pilot their steeds and vehicles, the turns sometimes being rather short. At the first trial G. A. Gooderham and G. A. Case, both of Toronto, were the only ones to drive through all the barrels clear, Mr. Ware tipping one over in his course. His driving, however, was characterized by more dash and precision than that of the others, and the crowd heartily applauded him, although he did not win a place. F. N. Beardmore was awarded 1st, a decision which was not very popular, as both G. H. Gooderham, who took 2nd, and G. A. Case were, in the opinion of many, better entitled to first place.

The jumping class for the best performance over six fences called out nine entries. Considerable skill in jumping was shown by many of the horses, and, as the bars were raised at each turn, only as could clear a good height had any chance. Maritana, the winner in the heavy weight green hunter class, proved herself the best jumper and won the prize, Prince Charlie getting the reserve ribbon.

The tandem driving, open to shareholders of the Country and Hunt Club and the Toronto Riding and Driving Club, furnished considerable amusement to the spectators. There were three entries, and, to test the skill of the drivers in getting out of difficulties, hurdles were placed in an L shape, between which they had to drive till the leader reached the fence at the end, then they had to turn the leader and wheeler round and drive out without upsetting the hurdles. Lieut. Laurie first essayed the task, but, owing to the nervousness of his team, failed to accomplish it. Then F. N. Beardmore tried, and his well-trained horses went through the performance in good style. G. A. Stinson also succeeded in doing so, but not as well as Mr. Beardmore, to whom the judges awarded the prize. After this class was judged Mr. Batonyi, of New York, gave an exhibition of driving with Lieut. Laurie's team, showing his perfect control over them.

The judging for the best gentleman rider did not give satisfaction to those round the ring, but was, however, strictly correct according to the score cards of the judges. In a great many technical points, Lieut. Laurie, who won 1st, surpassed Lieut. Forrester, and his horse was also better broken. D. King Smith, a son of Prof. Smith, Toronto, and W. D. Grand, New York, had good mounts and showed great skill in handling their horses.

When the call of the bugle summoned the lady drivers into the ring, six ladies driving pairs attached to four wheeled vehicles turned out. Among them were Miss Lily. . .

aid, of New York, and several well-known ladies belonging to Toronto. Their appearance was the signal for a burst of applause, which grew louder when it was seen how deftly and well they handled the ribbons. In fact, their way of handling their teams would put, and did put, many of the gentlemen drivers to shame. The judges tested them severely, making them turn short in every conceivable manner round the neat-looking, stolid dragoons, who were posted round the ring to keep the lines in order and render assistance when required. Occasionally these had to move a little, but, as a rule, the ladies skilfully skirted them with their equipages. Miss Macdonald's driving secured her the red ribbon, while Miss Louise James and Miss Helen Beardmore were 2nd and 3rd respectively. In our opinion, Miss Cawthra should have had a place in the prize list.

The class for the best lady rider, independent of her mount, was another in which there was close competition. Two Americans were entered, Miss Macdonald, and a more youthful competitor, Miss Dill, who, in spite of her youth, carried off first prize. The judges changed the riders from horse to horse to test their capabilities, and, in this way, got a good idea of how each one showed off on a strange mount. The riding of Mrs. J. K. Kerr was much admired, and she looked, as she is, every inch, a true horsewoman. Miss Macdonald took 3rd place, and Miss Jones, Brockville, 4th. The latter had the disadvantage of having a restless horse, but proved her horsemanship thoroughly.

The judging of professional coachmen was a most severe test. Mr. Batonyi riding behind each man and watching them closely. Ten teams were present. First prize went to Terence Brady, coachman for John Macdonald, Toronto, and 2nd to James Morton, coachman for George Gooderham, Toronto.

ROADSTERS.

There were three classes for roadsters. For single horses there were 18 entries forward (forming one of the biggest rings in the show), including two from Winnipeg, Egbertetta and Winoga, full sisters, exhibited by Wm. Clougher, Winnipeg. Winoga, who carried off 1st honors, is three years old, and has a record of 2.36, while her companion has one of 2.34. Second place went to a bay exhibited by G. S. Fuller, Brampton.

In the team class under 15.2 hands, W. Clougher's two mares came to the front, beating the pairs shown by G. W. Decker, Pickering, and G. H. Gooderham, Toronto. The class for pairs 15.2 hands had but three entries, 1st going to a speedy team owned by E. W. Cox, Toronto. A good many judges would have placed either of the other pairs ahead of his.

Ponies had also three classes allotted to them. The well-known Charlie Burgess, shown by Geo. Pepper, Toronto, was an outstanding winner in the class under 13 hands under saddle. Junibo, a bay stallion owned by R. J. Hunter, took the blue ribbon, and Geo. Smith & Son's (Grimsly) First Attempt had to be content with the white.

First and second prize winners in the class over 13 hands were two beautiful animals shown by Robert Miller, Brougham, and R. Beith & Co., Bowmanville, respectively. The former is an imported Welsh pony of splendid conformation and action, while the latter is almost as good, being by the well-known Hackney sire, Jubilee Chief, out of a gray pony.

A neat pony and carriage exhibited by A. Brandenberger, Stratford, won 1st for the best pony turnout, Charlie Burgess being 2nd.

There were classes for horses in single harness, and for teams attached to delivery wagons. H. Webb, Toronto, won in the first, and J. Macdonald, Toronto, in the second, the latter being a neat pair of rears. P. McIntosh & Co. showed a good team, but too heavy for the class. P. Maher, Toronto, was deservedly awarded the red ribbon for the best-appointed pair of horses to licensed cab let for hire. The competition in this class was very keen, and the whole class merited commendation.

The last class in the catalogue, and the only one which was not copied from our New York cousins, was a special ladies' jumping class. Eight ladies came into the ring, and soon showed that they were not one whit inferior to the gentlemen in taking the leaps over the hurdles. Mrs. J. K. Kerr, mounted

on Kitty Tyrrell, cleared the hurdles in a way that won the applause of the audience every time, and was early picked out as a winner. Mrs. Carruthers, on Glen Fox, also did well. Little Miss Dill, on Dr. Smith's Surprise, sat her mount over the leaps as skilfully as some of her older competitors. After a critical test the judges awarded the prizes in the order named.

Awards.

Thoroughbreds.—Stallions foaled previous to January 1st, 1892—1st, Wm. Hendrie, Hamilton (Strathroy); 2nd, Dr. F. J. Gallanough, Thornhill (Monotony); 3rd, Haines & Patterson, Owen Sound (Stereoscope); 4th, Quinn Bros., Brampton (Wiley Buckles); highly commended, Graham Bros., Claremont (Montana); commended, Dr. F. A. Campbell, Toronto (Johnny Hecksler). Stallions foaled subsequent to January 1st, 1892—1st, Thos. Irving, Winchester (St. James); 2nd, A. Frank & Son, The Grange (Blution). Sweepstakes for the best Thoroughbred stallion of any age, qualified to improve the breed of saddlers and hunters—1st, Haines & Patterson (Stereoscope); reserve, Thos. Irving (St. James).

Judges.—Dr. W. S. Tremaine, Buffalo. Prof. Sweetapple, V.S., Toronto.

Carriage or Coach.—Stallions foaled previous to January 1st, 1892—1st, Jas. McCartney, Thamesford (Graf Bremer); 2nd, Milton German Coach Horse Co. (Picador); 3rd, Thos. Irving, Winchester (Blution); 4th, E. W. Ware, Hamilton (Khita); highly commended, Harry Webb, Toronto, Reno McGregor. Stallions foaled subsequent to January 1st, 1892—1st, J. L. Reid, Meadowdale (Salemian Boy); 2nd, L. Taylor, Toronto (Abdallah Stanton). Sweepstakes 1st, Jas. McCartney, Thamesford (Graf Bremer); 2nd, Milton German Coach Horse Co. (Picador).

Judges.—C. Brodie, V.S., Claremont; D. T. Lowes, Brampton.

Standard-bred Roadsters.—Stallions foaled previous to January 1st, 1892—1st, Learn & Miller, Brampton (Gold King); 2nd, H. E. McCully, Toronto (Alioneer); 3rd, A. Proctor, Aurora (Neurbonnia); 4th, H. Webb, Toronto (Goldband); highly commended, J. Clark, Toronto (Conn's Harry Wilkes); commended, G. S. Fuller, Brampton (Harry Leavinton). Stallions foaled subsequent to January 1st, 1892—1st, Jackson & Mackerron, Toronto (Shekhal); 2nd, H. Webb (Baron Brown); 3rd, S. B. Kiser, Godstown (Penville Boy). Sweepstakes—1st, Learn & Miller (Gold King); 2nd, H. E. McCully (Alioneer).

Judges.—Chas. Eard, Simcoe; John Scott, Galt; R. Gibson, Delaware.

Hackneys.—Stallions foaled previous to January 1st, 1892 over 15 1/2 hands—1st, R. Beith & Co., Bowmanville (Ottawa); 2nd, R. Beith & Co. (Jubilee Chief); 3rd, A. G. Ramsey, Hamilton (Courier); 4th, H. N. Crossley, Toronto (Firework); highly commended, A. G. Bowler, Woodstock (Coker's Nelson). Stallions, same age, 15 to 15 1/2 hands—1st, Graham Bros., Claremont (Kilnwick Fireaway); 2nd, A. G. Bowler, Woodstock (The Shah); 3rd, G. H. Hastings, Deer Park (Black Prince). Stallions, same age, 14 hands and under—1st, 2nd, and 3rd, G. H. Hastings (Black Nobleman, Little Duke, and Little Nobleman). Stallions foaled in 1892—1st and 2nd, R. Beith & Co. (Banquo and Lord Rosbery); 3rd, R. Dack, Toronto (County Council). Mares, three years old and under—1st, R. Beith & Co. (Jewica); 2nd, H. N. Crossley (Althorpe Duchess); 3rd, J. Holderness, Toronto (Cherry Ripe); 4th, H. N. Crossley (Althorpe Countess). Sweepstakes for best Hackney, any age—1st, R. Beith & Co. (Banquo); 2nd, Graham Bros. (Kilnwick Fireaway).

Judge.—R. P. Stericker, Springfield, Illinois.

Shires.—Stallions foaled previous to January 1st, 1892—1st, Morris, Stone & Wellington (Pride of Hatfield); 2nd, H. N. Crossley, Toronto (Bravo and); 3rd, J. M. Gardhouse, Highfield (Garfield and); 4th, Morris, Stone & Wellington (Prince Charles); highly commended, J. Semple, Tottenham (C.A.). Stallions foaled in 1892—1st, J. M. Gardhouse (Duke of Blagdon); 2nd, Morris, Stone & Wellington (Frederick William); 3rd, Morris, Stone & Wellington (Prince of Wales prize 1st); 4th, Morris, Stone & Wellington (Pride of Hatfield); 2nd, H. N. Crossley (Bravo and).

Judges.—R. Gibson, Delaware; J. S. Ormsby, Toronto; J. Warrilow, Owen Sound.

Imported Clydesdales.—Stallions foaled previous to January 1st, 1892—1st, Graham Bros., Claremont (Esquire of Park); 2nd, R. Davies, Toronto (Prince of Quality); 3rd, Vance & Eby, Shalespere (Golden Crown); 4th, John Davidson, Ashburn (Tulley); 5th, John Vipond, Brooklyn (Erskine Style); very highly commended, Graham Bros. (Craigial); highly commended, T. W. Evans, Yelverton (Ulamvar); commended, W. Taylor, Cannington (Halgoniet). Stallions foaled in 1892—1st, Alex. Cameron, Ashburn (Grand National); 2nd, John Davidson, Ashburn (Lewie); 3rd, S. J. Prouse, Ingersoll (Rosin). Stallions foaled subsequent to January 1st, 1892—1st, Graham Bros., Claremont (Symmetry and); Sweepstakes—Gold medal, Graham Bros. (Esquire of Park).

Judges.—R. Beith, M.P., Bowmanville; D. Plough, King.

Canadian-bred Clydesdales.—Stallions foaled previous to January 1st, 1892—1st, P. Kelly, Orillia (Pride of Dollar); 2nd, Geo. Gray, Clarke (Royal George); 3rd, Job White, Ashburn (Ashburn Hero). Stallions foaled in 1892—1st, W. Foster & Son, Humber (Addison). Stallion foaled subsequent to January 1st, 1892—1st, W. J. Howard, Dollar (City Boy). Sweepstakes—Gold medal, P. Kelly (Pride of Dollar).

Judges.—R. Beith, M.P., Bowmanville; D. Plough, King.

Horses in harness.—Mare or gelding over 14 hands 2 in., and not exceeding 15 hands 2 in.—1st, R. Beith & Co., Bowmanville (Actress); 2nd, T. A. Case, Toronto, (Maud); 3rd, H. Crossley, Toronto (Althorpe Duchess); 4th, Richard Teitel, Coleman (Metallic). Mare or gelding, over 14 hands 2 in., shown to give, over cart, or phaeton—1st, John D. Hay, Toronto (Brilliant); 2nd, Silver & Smith, Toronto (Artist); 3rd, D. T. Lowes, Brampton (London). Pair of horses, over 14 hands 2 in., and not exceeding 15 hands 2 in.—1st, D. T. Lowes, Brampton (Herodias and Priscilla); 2nd, R. Beith & Co., Bowmanville (Actor and Actress); 3rd, Silver & Smith,

Toronto (Trilby and Norma). Pair of horses, over 14 hands 2 in., and under 16 hands, shown to four-wheeled carriage—1st, H. Winnett, Toronto (Kitty and Frank); 2nd, Mrs. Welland S. Woodruff, St. Catharines (Sweet briar and Daffodil); 3rd, Geo. H. Gooderham, Toronto (Dot and Harry). Pair of horses, over 16 hands—1st, Quinn Bros., Brampton (Frank and Dick); 2nd, D. T. Lowes, Brampton (Cardinal and Empire); 3rd, Robert Davies, Toronto (Nellie and Pool Baby); 4th, Thos. Knottbridge, Brampton (Hawk and Doctus). Best and best-appointed gentleman's pair (dealers excluded), to be driven by owner, horses from 15 hands 2 in., 16 hands 2 in., driven to Vicar, mail phaeton, or spider phaeton; horses to count 50 per cent., appointments 25 per cent., and skill in driving 25 per cent.—1st, John Macdonald, Toronto (First Officer and Mate); 2nd, Geo. H. Gooderham, Toronto (Dot and Harry); 3rd, G. A. Case, Toronto (Sunset and Shadow). High-steppers, not under 14 har 2 in., mare or gelding, by registered Hackney stallion—1st, R. Beith & Co., Bowmanville (Actress); 2nd, H. N. Crossley, Toronto (Althorpe Duchess (imp)); 3rd, Chas. Palmer, Toronto (Hero). Tandem, best and best-appointed, gentlemen drivers—1st, D. T. Lowes, Brampton (Crown Prince and Marvel); 2nd, J. H. Laurie, Toronto (Carver Doon and Kitty Tyrrell). Four-hands, road team, 16 hands or over—1st, D. T. Lowes, Brampton; 2nd, G. W. Beardmore, Toronto.

Saddle Horses.—Mare or gelding, over 13 hands 2 in.—1st, Miss Irene Jones, Brockville (Decet); 2nd, Frederick Wyld, Toronto (Lassie); 3rd, J. H. Laurie, Toronto (Kitty Tyrrell). Mare or gelding, over 14 hands 2 in., and under 15 hands 2 in.—1st, W. M. Douglas, Toronto (Bonnie Brier); 2nd, R. Beith & Co., Bowmanville (Frolic); 3rd, A. E. Wright, Brampton (Myrtle). Lady's saddle horse, not under 14 hands 2 in.—1st, W. M. Douglas, Toronto (Bonnie Brier); 2nd, S. H. James, Toronto (Himba); 3rd, G. W. Beardmore, Toronto (Laddie). Best saddle and harness horse, special prize by W. D. Grand—1st, J. H. Laurie, Toronto (Kitty Tyrrell), very highly commended, G. W. Beardmore, Toronto (The Maligned).

Hunters and Jumpers.—Qualified hunters (heavy weight), up to carrying over 120 lb.; conformation and quality to count 50 per cent., performances over fences to count 50 per cent., horses taking prize in this class include first light-weight class—1st, Robert Green, Toronto (Prince Charlie); 2nd, J. H. Laurie (Carver Doon); 3rd, G. A. Carruthers, Toronto (Gray Friar). Light weight qualified hunters—1st, Dr. A. Smith, Toronto (Surprise); 2nd, Jca. Kilgour, Toronto (Helen II); 3rd, Robt. Bond, Toronto (The Duke). Heavy weight green hunters—1st, R. O. McCulloch, Toronto (Maritana); 2nd, J. D. Hay, Toronto (Melba); 3rd, George W. Beardmore, Toronto (Cockatoo). Light-weight green hunters—1st, J. H. Laurie, Toronto (Kitty Tyrrell); 2nd, Miss Irene Jones, Brockville (Decet); 3rd, William Buckle, Cuelph (Steel Gray).

Special Classes.—Best amateur driving of pair of horses to four-wheeled vehicle—1st, F. N. Beardmore, Toronto; 2nd, George H. Gooderham, Toronto; 3rd, R. O. McCulloch, Toronto (Maritana); 4th, R. Green, Toronto (Prince Charlie). Best amateur driving of tandem, open to Country and Hunt Club and Toronto Riding and Driving Club, single perch bow—1st, F. N. Beardmore; 2nd, G. A. Stinson, Toronto. Best gentleman rider—1st, silver cup, J. H. Laurie, Toronto; 2nd, W. Forester, Toronto. Best lady driver of pair to a four-wheeled vehicle—1st, Miss Lily Macdonald, New York; 2nd, Miss Louise James, Toronto; 3rd, Miss Helen Beardmore, Toronto. Best lady rider—1st, Miss Dill, Orange, N.J.; 2nd, Mrs. Kerr, Toronto; 3rd, Miss Lily Macdonald, New York; 4th, Miss Irene Jones, Brockville. Best performance of professional coachman—1st, Terence Brady, coachman for John Macdonald, Toronto; 2nd, James Morton, coachman for George Gooderham, Toronto; 3rd, Thomas Kane, coachman for George A. Cox, Toronto.

Roadsters.—Mare or gelding, to be shown to a road wagon—1st, Wm. Clougher, Winnipeg (Winoga); 2nd, G. S. Fuller, Brampton, Ont. (Crank); 3rd, Chas. Brown, Toronto (Dr. Ten Eyck); 4th, F. L. Brazill, Toronto (Tom). Pair of mares or geldings, not over 15.2 hands, to road wagon—1st, Wm. Clougher, Winnipeg (Egbertetta and Winoga); 2nd, G. W. Decker, Pickering (Dr. Francis and Kitty Mattson); 3rd, Geo. H. Gooderham, Toronto (Tommy Lamo and Lorette). Pair of mares or geldings, 15 hands 2 in., shown to road wagon—1st, E. W. Cox, Toronto (George S. and Photographer); 2nd, John Macdonald, Toronto (Bracelet and Bangle); 3rd, J. L. Clark, Brampton (Tony and Toco). Best pony under 13 hands, to be ridden by a boy or girl—1st, Geo. Pepper, Toronto (Charlie Burgess); 2nd, R. J. Hunter, Toronto (Junibo); 3rd, Geo. Smith & Son, Grimsly (First Attempt); 4th, C. B. Patterson, Oakville (Jinny); 5th, O. T. Maclellan, Toronto (Hessie). Best pony, over 13 hands and not exceeding 14 hands 2 in.—1st, Robt. Miller, Brougham (Magnat); 2nd, Robert Beith & Co., Bowmanville (Lady Lyons); 3rd, James McGuane, Toronto (Sir Richard). Best pony turnout, appointments, etc., under 13 hands—1st, A. Brandenberger, Stratford (Mike); 2nd, G. Peppert, Toronto (Charlie Burgess); 3rd, M. Hunter, Toronto (Sandy). Mare and gelding, to be shown in single harness and delivery wagon, actually as used in local deliveries, etc.—1st, Harry Webb, Toronto; 2nd, Caldwell & Hodgins, Toronto; 3rd, P. McIntosh & Son, Toronto. Pair of horses in double harness and delivery wagon, as actually used in local deliveries—1st, John Macdonald & Co., Toronto (Orange Sentinel and Catholic Register); 2nd, Copland Brewing Co., Toronto (Tom and Jerry). Best appointed pair of horses to licensed cab let for hire—1st, P. Maher; 2nd, Charles Brown. Special ladies' class: prize, \$50 in plate, presented by the Toronto Riding and Driving Club—1st, Mrs. Kerr, Toronto; 2nd, Mrs. Carruthers, Toronto; 3rd, Miss Dill, Orange, N.J.

A Pony Team.

Editor Canadian Live Stock and Farm Journal: Sir,—I live on a lush farm, and at present have only a yoke of oxen to do my work. It has occurred to me whether a new departure is at all possible. My neighbors are mostly horse poor; some would be better with oxen; others who raise an occasional colt

do not at a positive loss if they only figured the thing out.

I have thought, if I could touch a pair of ponies, stud and mare, which, with gentle treatment, might do my work and raise every year a colt after their kind, that such stock might command a market for the use of children or small carriages.

You, sir, are so well versed in matters pertaining to horses that I do not know where I can better ask for information as to prospects and possibilities.

NORTH EAST.

[We doubt if a team of ponies would be big enough to do what work you would require to do on a lush farm.—E.C.]

Special Stock Reviews.

Mr. John Revell's Tamworths.

Mr. Revell's farm is situated in that well-known dairy district near Ingersoll, where cheese-making was early recognized as one of the most profitable industries of the farm.

His station is Putnam, on the St. Thomas branch of the C.P.R., the farm being only a few minutes walk therefrom.

Like most experienced dairymen, he has found that the consuming of the by-products in the growing of hogs for pork production is a very material help to the credit side of the ledger, and, although on a rented farm, so thoroughly convinced is he of the profit of feeding pigs that he has built a most substantial and commodious piggery, in order that he may more easily carry out his feeding a d breeding operations. In feeding he has had considerable experience with the different breeds, and like many more in his locality, has found that Tam worths are good growers and easy feeders, and, therefore, fill the bill both for the feeder and the baconer.

Mr. Revell's herd has furnished quite a number of pigs that have proved prize-winners in the hands of the professional showmen, and, although he has bred many good ones, he has never exhibited his pigs himself.

The stock was selected from the large importation of Messrs. J. L. Grant & Co., Ingersoll, most of his breeding stock being the offspring of imported sires and dams of that company's importing, in which such names as Revell's Hoar (imp.), Tamworth Boy (imp.), among the boars, and Gun Hill Princess (imp.) and Woodlands' Queen (imp.), among the sows, are the most prominent.

The young pigs on this farm are thrifty, and will grow without any attempt at pushing them forward. While others' herds have suffered badly from rheumatism and kindred disorders, caused by the extreme, continued cold of the winter, Mr. Revell's herd appears to be perfectly exempt from troubles of any kind, which fact we cannot help attributing to his plan of feeding, which we hope to bring out in an article on this subject at an early date.

There is no lack of good pigs among both fall and spring litters, the latter being especially fine, while among those farrowed last fall, all, without an exception, are well grown and healthy, and in fine condition for mating, should purchasers so elect. We counted something over thirty head of purebred Tamworths. These were chiefly sired by Buffalo Bill and Revell's Hoar. The former is one of the breeding of Mr. Mitchell, of Elm Dale, England, while the latter was sired by Tamworth Boy (imp.), dam Gun Hill Princess, and has proved quite a successful sire, as many of last season's prize-winners were got by him.

Tamworths at Mr. Andrew Dunn's.

Ingersoll gained considerable notoriety in swine breeding circles through the fact of Messrs. J. L. Grant & Co., of the Ingersoll Pork Packing Company, having gone out of their usual line of business in order to import Tamworth pigs, which the company had become convinced were necessary in order to produce the proper kind of bacon hogs for the export trade. The company sunk a large sum of money in introducing these pigs, and at first found it very uphill work to induce the farmers of their locality to breed them after they had brought them over. However, all is changed now, and those who have given the breed a fair trial have found them all that the most sanguine enthusiast could desire.

Tamworth sows are prolific, and good mothers, and eight to twelve pigs can generally be relied upon to a litter, while the young pigs are fast growers and quick feeders, developing up to the size required, viz., 300 lbs., in about five months. Therefore, spring litters may be relied upon to be ready for the block before the price of pork has receded too far for profit.

Among those who purchased Tamworths of Messrs. J. L. Grant & Co. was Mr. Andrew Dunn, who lives a short distance north of Ingersoll. His first purchase thoroughly convinced him of the good qualities of

Tamworths, and he at last secured an imported boar and a lot of sows reserved by Messrs. Grant for their own breeding pens. These consist of the imported boar, Gun Hill Reliance 171 (2155), bred by Mr. A. Hutson, Gun Hill, Arley, England, and some sows, of which six are imported, including Middleton's, bred by Mr. Egbert de Hamel, Middleton Hall, Tamworth, England; Lady Whiteacre, bred by Mr. D. W. Philip, Whiteacre, Coleshill, England; Ingersoll Duchess, bred by Mr. A. Hutson, Arley, and Gun Hill Princess, bred by the same gentleman; while the sixth is Lady Hamel, bred by Mr. Egbert de Hamel, Middleton Hall. With a foundation such as this, together with the advantage of having such other imported boars as there are in his neighborhood, Mr. Dunn is most favorably situated for furnishing pigs of the best breeding. At the time of our visit there were also a number of young sows of his own breeding that had farrowed, so that there will be no lack of young pigs, while Mr. Dunn had several young boars and sows that had been held over for breeding, the whole forming a large herd of all ages and both sexes suitable for the wants of the trade.

Pine Grove Poland Chinas.

Our first visit to Pine Grove was two years ago shortly after Captain Young had first introduced Poland China swine into his part of the country. At our second visit we found a vast improvement in the herd, both as regards numbers and the quality of the individuals. Canada Wilkes - 277 is still freely used on the herd, although several other good boars have left behind them capital pigs. The Wilkes boar, however, with his good breeding and excellent individuality, is rightly thought the most of. He has now completed his third year, and is fully developed, and, although not very large, he is a pig of capital character, with plenty of size, while his heavy bone, smooth finish, and more than ordinary length make him a most desirable sire to breed from. Canada Wilkes is by George Wilkes, claimed by his owner to be the best Poland China pig of his time, while Canada Wilkes is a combination of the celebrated Wilkes, Tecumseh, and Corwin families. Dover Prince, by Rhiets' Chief, dam, Lofly, is a boar that has good breeding, and is showing it through the excellent pigs that he is leaving behind him. He was bred by Mr. Oliver Drury, Fargo, a gentleman, by the way, who will have the best blood and the best individuals, and, therefore, is making a success of breeding Poland China swine. Another imported boar, strongly bred after Tecumseh blood lines, has also been freely used. We, unfortunately, had not the opportunity of seeing him, although we were told that he is a particularly good one.

Rebecca 1st, bred by Mr. Levi Arnold, Plainville, Mich., was the first sow that Captain Young brought over. She is a capital individual, possessing good size, good length and depth, while she has turned out very prolific, having produced seventy-seven pigs at seven litters. Cora, another of the earlier sows introduced, is also of Mr. Arnold's breeding, but belongs to a different family, her blood lines being entirely different. She is a neat, well formed, breedy sow, but lacks the greater scale of the previously mentioned one. Muggs Climax is a more recent venture. She is full of the blood of the Tecumseh and Corwins, and is half-sister to the boar that took first prize and swept all in the yearling class at the Chicago Columbian Exposition. There are also a number of other imported sows that have quality and finish to recommend them, while we greatly admired a number of choice pigs of last fall's farrowings that are of just the right age for mating, and should not be long in finding purchasers. In spring litters Captain Young has some very neat, promising youngsters that should push themselves to the front if they are given a chance. There is no lack of first-class material of all ages at Pine Grove, from which a capital choice might be made should any desire to look them up.

Captain Young has recently gone into poultry rearing on an extensive scale. No less than nine varieties are in the breeding yards, and among them are white-faced Black Spanish, both brown and white Leghorns silver gray Dorkings, Light Brahmas, Patterd g Cochins and silver spangled Hamburgs.

Spring Brook Stock Farm.

It will be remembered that the firm of Messrs. A. C. Hallman & Co held a sale during the winter, at which a part of their herd of Holstein-Friesian cattle was dispersed by auction, the object being to reduce the herd to such dimensions that one farm would accommodate the herd. We were glad, however, to find, during a late visit, that, although the numbers were less than formerly, there is no want of strength as regards quality. We found the youngsters, especially in good growthy shape, promising good development for milk production when their time for milking comes around.

Several promising young bull calves were to be seen. Of these, three by Netherland Aggie Edem, a second-prize winner at Toronto both as a yearling and a two-year-old, testify to his worth as a sire. There are also three good ones by the celebrated silver-medal bull, Netherland Statesman's Cornelius, while a fine heifer calf from that noted cow, Princess Margaret, will by and by help to strengthen the herd of coming cows. Two choicely-bred Pieterje heifers, lately purchased, will add to the variety of breeding, and will, doubtless, turn out good performers at the stall, or they will not take after the illustrious family from which they have sprung. We were especially pleased with many of the younger cows that have grown up during the last few years. Much of the credit, doubtless, may be ascribed to the excellent bulls that have been in use, and particularly to the silver-medal bull, Netherland Statesman's Cornelius, which has brought much honor to the herd, both in the winnings he has carried himself, and the prize-winning stock which he has sired. He has now been at service for seven years, yet, notwithstanding his yearly preparation for the show ring, he is as active, vigorous, and as useful as ever, showing how good a constitution he has. The old show bull, Prairie Aggie Prince, has also left two handsome daughters by which he may be remembered. Princess Medina, a granddaughter of Princess Margaret, is a most promising two-year-old. Polianthus 3rd, a full sister of the first-prize yearling bull last year at Toronto, is a fine good heifer and a heavy producer, while a daughter of the cow Polianthus (imp.) (a prize-winner in high company), Ideal Netherland, was also pointed out to us. We were told that her milk tested over 5 per cent, while her dam gave 14 lbs. of butter per week as a two-year-old. These are but samples of the very excellent cattle which still remain at the Spring Brook Farm.

The Tamworth sows had already produced several spring litters, of which one, Briery Banks Rachel, has a fine litter by imported British Chieftain, bred by Mr. Norman, of Cliff House. Cliff Belle 2nd (imp.) has some good fall pigs, while her spring litter is now ready to wean.

In all, there are some five or six particularly good breeding sows of more than ordinary individual merit. A few nice Improved Yorkshires are also kept. A young boar of that breed, a thick, useful pig, showed plenty of easy keeping quality.

From the foregoing it will be easily seen that at the Spring Brook Farm there is a variety of stock to be seen, and those ordering in any line may rest assured that they will be well treated.

Oxford Downs at Farnham Farm.

Few, indeed, have done their part more faithfully in helping along the breed of their choice than Mr. Henry Arkell, whose name has become so thoroughly identified with the breeding and importing of Oxford Downs. He was one of the first Canadian breeders to take up this now popular sort, with a lifetime's experience as a stockmaster, the work for him was comparatively easy: hence the success he has made of this branch of breeding. While other breeders have been content to breed and sell to such buyers as may come across the lines in quest of sheep, Mr. Arkell had a higher motive in view, and this was to persuade other Canadians to take up the breeding of Oxford's. These, too, he did not leave to their own resources, but has annually purchased from them their surplus stock, thus at once furnishing them with a market, and establishing a trade which is not likely to grow less as the days go on. To give some idea of the extent of his trade, during a recent visit he was feeding some seventy shearing rams at home for the western trade while we were told that he had forty at another pen awaiting orders. We were also shown eight or ten shearlings that had been pushed for customers requiring show sheep. We have yet to see a better lot of shearlings of this breed than these last, and when we say that these ranged between 200 lbs. and 250 lbs., and were by no means the best lambs of 1894 (these having been sold), experienced shepherds will have some idea of the skill that has developed them to such extreme weights. Experience in feeding has taught Mr. Arkell the type which is the easiest to handle, and he has come to the conclusion that there is a vast difference in the English flocks. His aim now is to develop a flock low on the leg, with fleshy, meaty backs, that will put Oxford Downs to the front for meat production. How well he is succeeding any one can see for himself by calling at Farnham Farm and inspecting the grand lot of shearlings in their quarters. In all, Mr. Arkell has something over 250 sheep on the farm. Five grand imported stock rams were in one pen by themselves. These were a fine lot, and comprise such celebrities as The Nob, bred by Mr. Brassey, Chippling Norton, winner at the Bath and West of England show, and two others, also bred in the celebrated Brassey flock, that had been Royal winners, while

another, bred by Mr. Adams, of Farrington, and yet another from a flock of equal notoriety, were also good sheep. These sheep were all in their wool, and it would be hard to find in any one place a finer lot of stock sheep of any breed.

The flock of breeding ewes comprise something over fifty, imported from flocks such as Mr. Brassey's, before mentioned, Mr. Adams, of Farrington; Mr. Arkell's, Fairford, Gloucestershire, and Baron Rothschild's. From these imported ewes had been bred forty shearing ewes, which had been reserved for the future breeding flock, while no less than three pens are being fitted for show purposes, most of which had already been ordered by breeders living in the United States. These shanlings were sired by the two Royal winners, Royal Warwick and Royal Doncaster. This lot display a great deal of quality. They are of smooth, blocky build, and their fleshy tops and capital character show both breeding and care. We were also shown three three-shear imported ewes, also in preparation for show and honors. Two of them were from Baron Rothschild's flock, the remaining one from that of Mr. Brassey. They are in grand form for show now, and will, doubtless, speak for themselves at the fall show.

Mr. Clemons' Importation of Holsteins.

Mr. G. W. Clemons, St. George, has gone more extensively into Holsteins, and now has in quarantine at Point Edward an importation of choice cattle, numbering seven head, selected from the famous Brookside herd of Messrs. Henry Stevens & Sons, Lacuna, N.Y. This herd, as will be remembered, secured six-ty out of a possible twenty-seven prizes offered by the American Holstein-Friesian Association for the largest official butter records made during the past year. The greatest record made by any cow in these tests was that of Messrs. Stevens' great cow, DeKol 2nd, made only ten days after calving, and, consequently, at a great disadvantage. She produced 17 seven days 26.57 lbs. butter, reckoning according to the Columbian test rules, and her week's record, made six years ago under more favorable circumstances, is 33 lbs. 6 oz., the largest ever made by a four-year-old cow. Her daughter, DeKol 2nd's Queen, made, as a three year-old, 28 lbs. 7 oz. butter in a week, and another daughter, Netherland DeKol, made 28 lbs. 7 1/2 oz. in thirty days as a two-year-old, both of which are world's records for age. Mr. Clemons has secured as much as possible of the DeKol blood, which should prove very serviceable in increasing the butter-producing qualities of Canadian Holsteins.

Among the animals included in the importation is the bull calf Sir Pieterje Josephine Mechthilde, whose sire is Empress Josephine 3rd's Sir Mechthilde, whose dam, Empress Josephine 3rd, and sire's dam, Mechthilde, have butter records which average 35 lbs. 11 1/2 oz. for seven days. His dam is Pieterje 3rd's Albino, a grand two year-old daughter of the great cow, Pieterje 3rd, that gave, before she was three years old, 17,927 lbs. 1 oz. of milk in a year, and, as a four-year-old, 24,126 lbs. in a year, the largest record ever made by a four-year-old. In midwinter she made 27 lbs. 8 1/2 oz. butter in seven days, and 110 lbs. 6 1/2 oz. in thirty days. Pieterje 3rd's dam was Pieterje 2nd, whose milk record of 20,185 lbs. in a year is the largest ever made by any cow. The great cows, Koningin Van Friesland 5th, with the largest three-year-old milk record in the world—19,700 lbs. 2 oz. in a year—and Pieterje 4th, with a six-year-old butter record of 26 lbs. 14 oz. in seven days, are half-sisters to Pieterje 3rd. The sire of Pieterje 3rd's Albino was the great show bull and butter sire, Netherland Allan, brother to Albino 2nd, with a milk record of 18,241 lbs. 4 oz. in a year, as a two-year-old, which has never been equalled by a heifer of her age, and a butter record of 25 lbs. 14 1/2 oz. in a week, and 106 lbs. 14 oz. in thirty days as a three-year-old. It will be noticed that on the maternal side Sir Pieterje Josephine Mechthilde is closely related to all the cows holding the world's greatest early milk records for the different ages, while his sire's dam, Empress Josephine 3rd, has captured more prizes in public butter tests than any other cow in America, and his sire's granddam, Mechthilde, has the largest seven-day butter record ever made by a Holstein-Friesian cow, viz., 39 lbs. 10 1/2 oz. This calf is said by Messrs. Stevens & Sons to be the best they have ever bred in nearly twenty years' experience in breeding, and, if he develops according to present indications, he will certainly do credit to his rich breeding.

Of the six females imported, the cow Inka 5th, a very fine daughter of the famous old cow, Inka, is in the Advanced Registry, and has a milk record of 75 lbs. in a day, and 2,050 1/2 lbs. in thirty days, while her butter record, made at four years old, is 18 1/2 lbs. in seven days. She was the first-prize cow at Rochester last year, and is due to calve May 14th to the great litter bull, DeKol 2nd's Paul DeKol, a son of DeKol 2nd and by Paul DeKol, who was by DeKol 2nd's Prince, out of Pauline Paul. Lady Akkum 2nd is a beautiful

and is probably the finest butter cow of the breed ever brought to Canada. She gave as a five-year-old 67 lbs. milk in a day, and 15,217 lbs. in eleven months, and made 24 lbs. butter in seven days. Lady Akman was the first of six cows selected from the Brookside herd by Messrs. Hoxie and Yeomans for the proposed Columbian tests, and her milk, tested by these gentlemen, showed a 60 per cent. fat. She is due to calve April 5th, by DeKol and's Paul DeKol. The heifer, Queen DeKol, sired by DeKol and's Netherland, a very handsome son of DeKol and, by Netherland Allan, mentioned above, has for her dam Woodland Queen, perhaps the handsomest cow in the herd, and who has a six-year-old record of 717 lbs. milk in a day, testing as high as 4.6 per cent. fat. She should calve about May 1st, having been served by Empress Josephine 3rd's Sir Mechthilde. Next comes the heifer, Inka Rose Pieterje DeKol, sired by DeKol and's Netherland; dam, Inka 4th's Pieterje Rose, a wonderful daughter of Milla's Pieterje Netherland and Inka 4th, Hon. D. F. Wilber's great show cow. Inka 4th's Pieterje Rose made an official record in the recent tests of 75 lbs. milk in a day, and 21,013 lbs. butter in a week, at only four years old. Mr. Clemons considers that he has a treasure in her daughter, and has already refused \$300 for her. She is due to calve June 12th, by Empress Josephine 3rd's Sir Mechthilde. Lady Netherland DeKol, sired by DeKol and's Netherland; dam, Lady Netherland of Brookside, who has a two-year-old record of 615 lbs. in a day, 17,025 lbs. in a year, and 15 lbs. butter in a week, is a very fine and milky heifer, and is in calf to Empress Josephine 3rd's Sir Mechthilde. The remaining heifer is Mondamin's Daisy Harrington, sired by Orphe's Lytle; dam, Mondamin's Daisy. The fourteen nearest female ancestors of this heifer, except the dam, average 52.5-14 lbs. milk a day. She won first as a calf, in 1884, at Rochester, Oswego, and Sandy Creek, and sweepstakes over all breeds at Rochester. She was bred February 27th to DeKol and's Butter B 3, whose six nearest female ancestors average nearly 33 lbs. of butter a week.

This importation comprises the blood of the wonderful butter cows, DeKol and, Pauline Paul, Mechthilde, and Empress Josephine 3rd, mingled with that of the Inkas, Pieterjes, Alvinos, Netherlands, Harringtons, and other popular families.

Mr. H. Penfold's Southdowns.

Our readers will see on reference to our advertisement column that Mr. Penfold, of Selsey, Chichester, England, has decided to sell off during August next his flock of registered Southdown sheep by auction without reserve. What an opportunity here presents itself to buyers and breeders of these sheep, for here we have a flock for sale without reserve, every sheep of which has its own individual ear number in right ear, the society's registered trade mark, and Mr. Penfold's registered flock No. 21 in the left ear, thus rendering it absolutely possible for each and every sheep, no matter where sent to, to be individually identified. Every sheep sent abroad will be accompanied by a certificate of pedigree signed by the association's secretary, certifying the correct pedigree of the sheep and also what its ear number is in the right ear, and thus every buyer will be certain that he receives the sheep that is sought for him.

As regards the old rams, they are sires of known merit. Norton 104, Vol. 1, was bred by Mr. Penfold in 1888, and is descended from No. 241, Vol. 1, who was bred in 1871 by Lord Walsingham.

Chichester 124, Vol. 1, is a most excellent sheep, descended through the Goodwood flock from Mr. Henry Webb's celebrated flock.

Selsey Boy 1-8, Vol. 1, by Constitution 101, Vol. 1, is a sheep who is sure a grand sire of very many of the ewes included in the sale. He is by a son (Penfold's Favorite 471, Vol. 1) of Mr. Henry Webb's grand and typical Southdown sheep. General Favorite, which sheep, by the way, was sure of that most noted sheep, Webb's Gloucester 57, Vol. 1, who, in his turn, was sire of the celebrated and well-known Webb sheep, Cambridgehire, for whom the Duke of Richmond gave \$1,000 at Mr. Webb's sale in 1884.

Selsey Hero 4th 600, Vol. 2, by Selsey Bill 102, Vol. 1, by Goodwood No. 10 of 1883, 590, Vol. 2, is a grand sheep, true to type, a most impressive sire, and one that Mr. Penfold has said did him as good, if not the best, service of any that he ever had. This sheep, although born in 1887, is still as active as ever, and, although not now owned by Mr. Penfold, belongs to a neighbor who has for the last two years allowed Mr. Penfold the privilege of sending a few ewes each year to his old favorite. Several ewes are by this sheep. There are, in addition, five or six more old sheep, all of similar character, as true type and good wool as the above, in addition to which there will be offered about thirty-four shearing rams descended from such sheep as aforementioned.

The ewe flock, as it stands, is directly descended

from the flock that was dispersed in 1889, for, when this sale took place, Mr. Penfold, who was very well aware of the value of the true points of the old Selsey flock, whose existence extends back more than 100 years, retained for the formation of the present flock all his draft and broken mouth ewes and his ewe lambs, and thus it can truly be said that the present flock is descended directly from the old flock that made that grand average in 1888.

It should be remembered that it was at the 1888 sale that the Southdown wool was made aware of the fact that breeders of these sheep would give any price almost for the best sheep. At this sale Mr. Chapman, the present secretary of the Southdown Sheep Association, for Messrs. De Murretta, gave \$25 for Victor 218, bred by Mr. Penfold, whose progeny is now doing such grand things for the Pagham Harbour Co.'s flock. If our breeders want Southdowns of true type, character, wool, and constitution, they can obtain them. This is a chance that they should not miss.

Veterinary.

Ontario Veterinary College.

The closing exercises of this excellent and prosperous institution were held on March 29th, when over 150 graduates of the college gained the right to add the distinguishing letters V.S. to their names. The large assembly hall was filled with students, many of whom came from as far off as Great Britain and the West Indies, while a very large proportion were from the United States. The distinction of having won the gold medal went to Mr. T. M. Sweeney, Richmond, Va. The medals and prizes were presented to the successful candidates by the Lieut.-Governor and others of the visitors present, and brief addresses were delivered by leading men, all of whom referred to the good work done at the Veterinary College. Mr. Henry D. Stebbins, of Westmoreland, N.Y., on behalf of the students, presented Dr. Smith with a fine group picture of the graduating class of 1895.

The Effect of Tuberculin on a Non-Tuberculous Cow.

"Does the injection of tuberculin into a cow wrongly suspected of being tuberculous affect the cow injuriously in any way?" is a question often asked by stockmen. The evidence on this point has not hitherto been very clear, and, therefore, the result of some experiments in this line carried on at the Cornell Experiment Station by Prof. James Law, and given in Bulletin 82 of that station, is the more welcome.

Five cows were under observation, two being Holsteins, one a Jersey, and two dry farrow cows of common stock, one having some Shorthorn and the other some Devon blood in her veins. In order to compare the effects, if any, of tuberculin on the milk of the three first-mentioned cows, the milk of two other Holsteins and a Jersey which were not treated with tuberculin was also set apart. The tested animals were treated like the rest of the herd, with the single exception that, in order to take the temperatures, they were tied up in the stalls for twenty-four hours on each occasion for testing, while the others were let out in an enclosed shed, when not tied up for feeding and milking.

The temperatures of the animals concerned in the test showed very little variation after the injection; in fact, there were no increases of temperature that would not be found in many well-fed, healthy cattle, while in the case of some of the animals the slight rises were explained by other exceptional causes. Taken all in all, there is nothing in the records of the temperature to show that, either at the time of the test, or later, had the tuberculin proved in any way inimical to the general health. Had the health been im-

paired by the repeated operation of the tuberculin, it might have been expected that the constitutional disturbance would have been more marked in the later tests than in the earlier ones, and, as no such tendency was observable, it may be safely concluded that test doses of tuberculin do not produce illness in healthy animals. It has been alleged that the repeated use of tuberculin on animals slightly tuberculous abolishes the tendency to reaction under the use of the agent, but Prof. Law finds that the second test, made a week or so later, produced an equally marked reaction in such animals.

The pulse and breathing of the healthy cows in this test also showed no deviation from perfect health. There were certainly variations, but, in cattle, pulse and breathing vary so widely under different conditions of the animal's surroundings, digestive organs, exercise, etc., that it would take much greater variations than those shown to give true indications of disease.

Coming to the milk record, which may be accepted as a more sensitive test of constitutional injury than temperature, breathing, or pulse, we find that here, too, there was nothing out of the normal. An appreciable disturbance of the health at any one point will usually be shown in this delicate balance by a variation either in the quantity or quality of the milk, but in this test it was found that the cows that were not injected with tuberculin showed more variation than those that were. What is more significant is that the average yield of milk of the injected cows for the days following the seven injections of tuberculin is practically the same as the average yield for the whole forty-seven days included in the experiment. Extreme variations in the yield of milk cannot therefore be charged as the result of injections of tuberculin into healthy animals.

The test of the butter fats brought out the fact that there was no change in the percentage of these sufficient to indicate any disease or ill-health as the result of the administration of repeated test doses of tuberculin to healthy stock.

The weight of the animals varied so little during the experiment that it might be said to be stationary, and it may be concluded that the repeated doses had in no injurious way affected assimilation of food, the two Holsteins even showing a perceptible improvement in weight.

To complete the record the two farrow cows were killed and subjected to a *post-mortem* examination, when the main entails were found sound. There were some slight traces of inflammation in the udder of the Shorthorn grade, but no bacilli.

The results of this test are corroborated by the investigations carried on by the United States Bureau of Animal Industry in 1894 with two cows, one of which received one dose and the other three successive doses of tuberculin. The dose on each occasion was a full dose, considering that the cattle were common stock. Of variations in temperature there were no more than would occur with animals in perfect health. The analysis of the milk showed the changes in the constituents to be slight.

From these two tests it would seem safe to claim that tuberculin does not exert any harmful influence when given in doses to healthy cows, whether the injection is a single or repeated several times, and, therefore, those who wish to test their animals to see whether they are affected with tuberculosis can do so without fear of harming the healthy ones.

The Farm.

The Summerfallow.

In Ontario the old style of summerfallow is not as popular as it once was. With the increased attention given to diversified farming, there is less necessity for the bare fallow. Close competition and low prices have taught farmers that they cannot well afford to have land go idle one whole year without producing any crop. Other methods have, therefore, been resorted to of cleaning land. Among these the growing of roots is one of the most popular.

It may still be necessary to summerfallow, but where it is, the work should be done in such a way that a crop of some kind will be grown. It may not be possible to grow a crop that can be turned directly into money, or that can be used as winter fodder, but it is possible to grow something that can be plowed under, or that even may afford pasture for live stock.

Where land is poor and dirty at the same time, it ought, of course, to be put through a cleaning and a building-up process. There is no way, probably, in which this can be done at a less cost than by summerfallowing, and, at the same time, growing green crops to be turned to account in enriching it. To do this effectively, the work should begin in the fall, and as soon as possible after the previous crop has been removed. The land should be stirred with the plow or cultivator or harrow, and some quick-growing crop sown upon it, as rape, or fall turnips, or it may be barley. These may be eaten off, and the land then plowed in the fall or in the early spring. Then some quick-growing crop may be sown and again eaten off. For this crop, peas and oats would be good if eaten off with sheep, and due care taken not to leave the animals on the land while the crop is wet with dew or rain. Then a later crop may be grown, as was done the previous autumn, unless fall wheat is to be sown. Another way would be to sow rye early in the autumn, pasture with sheep or cattle until late in the spring, and plow and sow again with some such crop as millet or rape, which in turn could be eaten off. And yet another way would be to grow rye and plow it under, and then grow peas or rape and likewise plow under whichever of these crops would be grown. Usually, it would be found much better to pasture these crops than to plow them under, for the sake of the food thus secured for the live stock. The fertility upon the soil would be about the same, if the pasturing was done with sheep.

But in Manitoba and the Northwest it would not be so easily practicable to grow a catch crop on land that had produced wheat or other grain. The season for ripening is late, and it would be hazardous there to grow winter rye, owing to the rigors of the climate. But rape, millet, and spring rye will grow nicely, and may be profitably sown on the summerfallow to provide pasture, for the tramping of the light prairie soil is favorable to the production of a crop of grain the following season. It may be necessary sometimes to plow under green crops to loose land, as in stiff clays, or to bind it, as in light sands, and to render it capable of holding more moisture, as in dry sections. No crop is better for this purpose than rye and peas, but, under some conditions, white mustard, rape, and buckwheat may be grown.

Another kind of summerfallow is found in sod overturned in June, after it has been plowed up to the time of plowing, or in meadow

land overturned after the hay has been cut. Such fallows are only plowed once. They are then worked on the surface. Sometimes they are sown with winter wheat, and sometimes the land remains bare until spring. The obstacles in the way are, in some instances, the stiffness of the soil, and, in others, the busy season at which the work would have to be done.

The practice of allowing the land to remain bare all the summer is wasteful of fertility, and it is seriously so in wet summers. When rains wash down through the soil, they wash out fertility in the form of nitrates to a much greater extent than if crops were growing upon the land. If the fallow is bare during the whole of one of those seasons, and if manure has been applied to it early in the spring or summer, there will be a serious loss of fertility, and the lighter the soil the greater will be the loss.

But it would be much better to have the bare fallow and the loss of a crop than to have a dirty farm. A dirty farm is an undesirable possession. Of the two evils, if one must be chosen, take the bare fallow.

The Dwarf Essex Rape.

This plant is growing more and more in favor all the while. At one time its growth was confined to two or three counties in Ontario; now it is being grown in many counties of this province. It is rapidly coming into favor in the Province of Quebec. It is also being favorably tried in the Maritime Provinces. Some of the farmers in Manitoba grow a large acreage from year to year, and it is now grown to some extent in the territories. Much of the attention that is now being given to rape is doubtless the outcome of experiments conducted by the experiment station at Guelph, while Professor Shaw had the management of the farm.

This plant, as is now known to many, furnishes an excellent forage plant for sheep. It also furnishes fine food for cattle and swine as well, but it is, *par excellence*, a sheep food. The stockmasters of this country can ill afford to do without more or less of it to furnish autumn pastures. But on some soils, as hard clays, for instance, it may not be prudent to attempt to grow it. On these soils, clover may, to some extent, be made to answer the uses of rape. The rape crop, as is now generally known, is usually eaten off in the field, but it furnishes an excellent soiling food for animals of all classes that have to be kept more or less confined, and when fed thus to milch cows, after the time of milking, the results are very beneficial.

The Dwarf Essex rape may be grown in many different ways. It may be grown along with spring grain. When thus grown some seed may be put in along with the crop, say, about one pound of seed to an acre of land. The results from this method of sowing will vary much with the season. If the season is good, that is, if it is growthy, the rape will furnish considerable pasture after the crop of grain has been harvested. If the season is adverse, the benefit will be very slight, but the loss of seed in that case is not a very serious matter.

Sometimes the rape is sown broadcast, about the end of June, on land well prepared and in a good condition as to productiveness. From three to five pounds of seed are used per acre. This mode of sowing is coming into favor in Manitoba on fallow lands to be sown with wheat the next year. Rape should not be sown thus on poor land, for the growth will in

such instances be inadequate to the labor bestowed.

One of the best methods of sowing rape is to put it in rows on raised drills, about two feet apart, and to cultivate it much after the same fashion as a crop of turnips. It may then be sown about the end of June, and the cultivation may be made eminently helpful in cleaning the land. The cultivation is also very favorable to the growth of the rape. This mode of growing rape is one of the most satisfactory, and it may be practised where rye has been grown and pastured off. Thus two crops may be grown upon the land in a year. From one to two pounds of seed per acre is required.

Rape may also be grown after the harvesting of an early grain crop. It may be made to follow winter rye, winter wheat, barley, or, indeed, any crop that is cut early. If the season is a wet one, a large amount of food may be thus grown. It may also be grown amid standing corn. It may be sown before the last cultivation given to the corn, and, after the crop has been harvested, it may furnish much food.

Rape, of course, is only one of the fodder plants that should claim our attention. There are others of much importance. But rape is certainly a valuable plant for those who are interested in sheep husbandry. It has been a stand-by for autumn pastures for many years past with some of the best stockmasters in Ontario—practical men, whenever put in much time in trying to grow a crop which will not pay them.

Try a little. The seed is not dear. If you try nothing more than a small patch not far distant for soiling, try that much, and convince yourself of its value. The fever of rape growing is rapidly extending in the United States. Many of the New York State stockmasters now grow it as regularly as the season comes around, and the same is true of some stockmasters in Michigan.

The Value of Marls.

Sometimes the question is asked as to the value of marls in agriculture. That they are oftentimes of real value has been demonstrated over and over again. And yet in many instances their use has proved disappointing. This is just what we should look for when we know something of their value, and of the way in which they should be applied.

The chief items of manurial value in marls are phosphoric acid, potash, and lime. The relative quantities of these which they contain vary much, and the condition also in which these constituents are found varies. It is apparent, therefore, that for these reasons the results from the application of marls will vary greatly. And they vary because of other influences which will be given below.

The phosphoric acid is oftentimes found in combination with iron and alumina. This is less available than that found in superphosphates. Hence, though we know the relative amount of it in the marl, we should be careful not to put too high a valuation on it. The potash in marls is oftentimes not more available than that found in good soils. Much of it, therefore, is in a form that is inaccessible to plants; it may be for years to come. The lime is usually as good as lime obtained from other sources; but, oftentimes, it is no better. A large proportion of the plant food in marl is, therefore, not available for some time after it has been applied. Because of this the farmer oftentimes gets more benefit from the

application of marl than he is aware of, or than he is disposed to give it credit for.

But, in addition to the plant food which marl brings to land, it exerts a favorable influence on the physical properties of the soil, and it aids it mechanically. These influences, too, are sometimes more beneficial than the direct influences from the plant food in the marl. When it is applied to stiff soils it tends to improve their physical texture. When applied on lands containing an excess of organic matter the lime in the marl aids in reducing the same. And it improves soils in other ways.

It is evident, therefore, that the effect of marl upon soils, physically and mechanically, will vary much with the character of the soil, as well as with the character of the marl. When soils are nearly tight in texture they may receive but little help from the application of marl, either physically or mechanically. On the other hand, when the physical or mechanical condition is very faulty, they may be greatly benefited.

The wisdom of applying marl to land will depend very much upon the distance from which it has to be drawn, and the opportunity for drawing it. If the farmer can apply it without drawing it far, it may be eminently wise for him to do so, and more especially at those seasons of the year when he is not over busy. A time may come, in the autumn, when both men and teams may draw marl, and to very good advantage, when they would not be otherwise so profitably employed.

Because of the inert condition in which much of the plant food in marl is found, it is a good plan to get it strewn over the surface of the ground in the autumn. The influences of sun, rain, frost, and snow act upon it, and, in consequence, more of it is available than would otherwise be by the time the plants come to be sown, where the marl has been applied. And when it has thus been applied, and it is incorporated in the surface soil by the harrow, the mechanical influence on the texture of the same is usually very favorable.

In some counties in Ontario there are immense beds of marl. These may be of great service where the adjacent lands need such applications. But it is very doubtful if it will pay to transport marl to any great distance, or to go to any considerable expense in carrying it. Sometimes it is found outcropping on the surface of the soil, and is, therefore, easily accessible. At other times it is down in deep beds. In some instances it is found in a dry and almost pulverized state, and at other times it is found with much water in proximity to it. As agriculture progresses, and the necessity becomes more and more felt for the application of fertilizers, marl will receive more attention than it gets at the present time.

Thorough Cultivation.

In Ontario, and, in fact, in all the provinces to the eastward, thorough and careful cultivation is of prime importance; and the heavier the soil the more careful does the cultivation require to be. In the soils to the west, that is, in the prairie soils, deep cultivation is not nearly so important relatively, although it may be well to have these plowed deeply now and then.

The following are among the advantages that result from the careful preparation of a good seed bed: (1) The seed can easily be deposited to a good depth. (2) The ground presses more closely around the seed, and a quicker germination will result. (3) The

roots of the plants penetrate the soil more easily, and, in consequence, they gather food more readily. (4) The soil retains more moisture.

The seed can be planted more deeply. This is a question of no little importance, especially with some kinds of grains, as peas. In some parts of the province the clay is stiff, so much so that when plowed in the fall it hardens in certain seasons. When heavy rains fall on it they impact it in the winter and early spring. To use the farmer's term, it "runs together." When sowing time comes it is very hard, and in the hurry and rush of work at the time the farmer is tempted sometimes to sow without having expended sufficient labor in preparing the seed bed. He, as it were, skims over the work, in the hope that the season may prove propitious, and that, as a result, he may still hope for a fair crop. But why run any risk? The season may prove just the reverse, and then the crop will be an utter failure. Its roots cannot penetrate the hard soil below. It is, of course, different on the prairie. The soil there is spongy, and if stirred too deeply in the spring it will lie too loose, and will suffer through surface evaporation, or it may blow away.

The germination will be quicker. When seed is put in the soil the particles of earth must lie close to it, if it is to germinate quickly. If they do not, light and air will be too easily accessible, and will, in consequence, retard the growth of the young plant. If the ground is left cloddy it will dry out readily through surface evaporation, and it will very readily admit of the escape of ground moisture. But in Manitoba soils, for instance, the question of fine pulverization would scarcely need to be raised. There it would be a question rather of keeping the land firm than of making it loose. And even in Ontario we may sometimes find the soil so fine and porous near the surface that but little attention needs to be given to the preparation of a seed bed. In some seasons one harrowing over the surface will leave the ground in a better condition than half a dozen harrowings would under different conditions of weather.

The roots of the plants will, of course, penetrate the soil more easily where the ground is friable. In crop growing this question is one of much importance. It is a grand thing to have the grain get a good start. When tender rootlets come against clods as they push out into the soil, they are turned aside in their course, and in this way time is lost; and when they cannot push out roots readily in all directions, they, of course, cannot grow nearly so vigorously. To note how rapidly the rootlets of young plants push through a congenial soil, one has only to dig up a few plants and examine them. Before a blade of corn, for instance, reaches the surface of the earth, although it has only to come through about two inches of earth, its roots will have penetrated horizontally through several inches of soil. The more easily the roots of plants can penetrate the soil the further can they push in search of food, and they also multiply their rootlets more quickly, and are, in consequence, better able to gather much food for the sustenance of the plants.

The soil also retains more moisture. When the soil is only stirred a short distance from the surface, and heavy rains fall, they run away over the surface. The water cannot penetrate into the subsoil. And when the subsoil is hard, capillarity is hindered; hence less moisture comes up from below. And when the surface is rough and cloddy, as

stated before, the air can sooner dry out the soil.

On the whole, therefore, the question of a deep seed bed and of fine pulverization is greatly important. It is so important that it should never be slighted. It would be better not to sow a crop on ground unprepared, that is, not properly prepared, than to sow and run the hazard of getting little or no return if adverse weather should follow.

The Farmer's Vegetable Garden.

It is simply surprising to notice how little attention is given to the average farm garden, when we think of its value. There is no spot upon the farm, of equal size, which will compare with it, either in money value, in the influence which it exercises upon the health of the family, or in the practical knowledge which it furnishes to those who till it. The vegetable garden and the fruit garden are frequently considered together, but that is not our purpose at the present time. We wish to discuss only the vegetable garden. While both are very valuable, the vegetable garden is the more valuable of the two, and, if either one is to be done without, it should not be the latter.

A small piece of ground will suffice for a vegetable garden. Its size should bear a close relation to the size of the family, but usually it need not be larger than one-fourth of an acre. When managed on the intensive plan—that is, on the plan which is calculated to give maximum returns, without so much regard to the labor expended—the garden would answer very well if it were smaller, even half the size named, except for a family which was very large.

It should be plowed in the fall, and deeply plowed, to suit Ontario conditions. A less depth would suffice on prairie soils. But in Ontario, and also in the Northwest, if the ground could be plowed and subsoiled at the same time, it would be a decided advantage. On stiff soils it would be better to leave the land ridged, to present a large surface to the action of the weathering influences. In the spring it should be levelled with the harrow, or, at least, that portion of it which is to be first planted.

Many vegetables should go in early, such as lettuce, onions, carrots, parsnips, and radishes. Of onions there should be several varieties, and also of carrots and radishes, and the same is true of many of the other sorts yet to be named. The various kinds of each should be chosen with reference to their edible qualities, earliness or lateness, and adaptability to soils. After the kinds named, beets, peas, corn, potatoes, and beans follow, and, still later, cucumbers, melons, and squashes. Such relishes as parsley, summer savory, and spinach should not be overlooked. In fact, the aim should be to have the variety as comprehensive as possible, and yet not to have a large quantity of any one kind except of those which are regarded as stand-bys, as, for instance, carrots, beets, and turnips. Cabbages, tomatoes, and celery should all have a place. And asparagus should be given a row in some part of the garden—as, for instance, along one side—where it will not impede cultivation.

By observing due care some of the earlier crops can be grown to be out of the way of kinds that come later, inasmuch that two crops in one season can be grown on the same ground. For instance, late cabbages could come after radishes, and late corn or turnips after lettuce. When two crops are grown thus instead of

one early crop, the soil is more likely to be kept free from weeds by the cultivation given to it in growing each crop.

The great mistake made in the garden, usually, is deferring the hoeing season too long after the seeds have been put into the soil. The hand-hoeing may profitably begin before the seeds have been sown many days. It may be stirred lightly along right over the line of the row where the seeds are planted. In this way the weeds which are starting over the line of the row will be destroyed. This work must be done with much care. Then, as soon as the seeds are up, horse-hoeing may begin, for in the farmer's garden the seeds should be planted in rows rather than in beds. They should be planted invariably with an eye to the use of the horse hoe.

Much may be done by way of enriching the garden by a judicious use of the slops of the house. Suds of all kinds are excellent for the garden, and, if carefully used in a dry time, they may be made to serve an excellent use apart from the fertility which they convey. Then, oftentimes, wood ashes may be conveniently applied, which would otherwise be thrown away.

When a young family is growing up, the influence of a garden in developing a love of labor, and more especially in the direction of the tillage of the soil, is very great. Children usually love to witness growth, and more especially when they have a personal interest in it. Let each child have a share in the ownership, and the effect will be greatly encouraging. While engaged in caring for the garden, the young folks are gaining useful knowledge, they are doing what is in itself a good work, and their love of home and of farm life is intensified.

Planting Potatoes.

No question probably has been more discussed than that of planting potatoes. Opinions differ widely in regard to it, owing, it may be, to a difference in soils and climatic conditions. Opinions ought to differ, for it would not be found possible to lay down rules that would be applicable to different countries, or that would even be applicable to all parts of the same country. But in potato planting, as in other things, there are some leading principles which are generally applicable, and it will be the aim in this paper to refer to some of these.

First, as to seed, good well-developed potatoes are to be preferred. Those are to be rejected which are unshapely, crooked, distorted and small. It will be found that though small seed may be chosen and may sometimes produce a good crop, ultimately the crop would deteriorate if small seed were chosen from year to year. The good crop is not the result of the small seed, but a result obtained in spite of the fact that small seed had been planted.

The question is still undecided as to whether medium-sized seed should be chosen and planted, or as to whether pretty large sets should be chosen, and cut into three or more pieces. Both systems have given good returns. In Ontario the best returns have resulted from planting whole medium-sized potatoes in the trials made at the Guelph Experiment station, but, taking the continent over, the balance of testimony favors the cutting of large potatoes into pieces having from one to three eyes each. A number of experimenters seem to think that when whole potatoes are used there are more small ones, the result of a growth of too many tubers from the one

potato. The same result in a more aggravated form comes from planting large potatoes without first cutting them. Those who have tried the plan of cutting off the seed end of the potato and rejecting it for planting do not seem to be quite satisfied with the results. It did not seem to help the yield. It is true, probably, that there is more vitality in the seed end of the tuber. If blind eyes are found it is almost invariably at the rear end of the potato, that is, at its base. In some instances, where the seeds of the top ends of the tubers have been saved and planted by themselves, it has been thought that the early maturing of the crop has been advanced.

Some successful potato planters prefer cutting the potatoes three to five days before planting them, and then strewing them over the surface of the ground to the depth of a few inches, where they are exposed to the sunlight. The cuts heal quickly when the sets are thus exposed, and the sunshine tends to cause the potatoes to sprout quickly. Where they cannot be thus spread in the sunshine, they may be strewn over with plaster of Paris. The difference in the coming up of potatoes thus treated as compared with those not so treated is very considerable. In some instances it amounts to several days.

A vast majority of growers plant potatoes in drills rather than hills. This is not owing to the fact that hills yield less than drills, but rather to the fact that it is more trouble to plant and care for them when thus put into the ground.

The opinion is now pretty general that potatoes should be planted deeply. The drills are usually opened with some kind of plow to the depth of five to seven inches. These drills are twenty-four to thirty inches apart, and in some instances as wide as thirty-six inches with large and free-growing varieties. This is owing to the fact that in the east, where there is sometimes an excess of moisture, the tops shade the ground too much when the potatoes are closely planted, and in consequence the potatoes are more apt to rot. In the far west this excess of moisture need not be feared to anything like the same extent. The sets in the drills are planted from eight to fifteen or eighteen inches apart. In the trial contests for prizes offered by the *American Agriculturist*, those planted not too far distant gave the best returns.

Covering may be done in various ways. There is no doubt but that the most satisfactory way would be to cover with the hoe, but it is too slow where a large crop is to be grown. Some form of plow may be used in covering, but it should not cover more than three inches at the first. A deeper covering will be furnished when the harrow is run over the ground some days later. Many persons who grow potatoes lose considerably by not planting them more deeply. When planted deep they are out of the way of injury from the harrow, the tubers grow in a damp place, and they do not push their way up to the surface of the ground when they are growing.

Tile Draining.

The general verdict of those who have had experience in farm operations is that no money is so sure of giving a return as that expended in tile draining. On any land that is in good heart, and at all wet, the additional receipts from the first crop will often pay the whole bill, while almost invariably that from two crops will repay the whole expenditure.

Plants derive their sustenance through the moisture taken up by their roots; for it is

moisture that lets loose, absorbs, and thus prepares the elements for plant food, and it is through moisture alone that the elements containing plant food become soluble, and, therefore, through this process plants obtain their nourishment. Now, excessive wet not only wastes these elements after they have become soluble, but through this means the plant food is so diluted that the plants perish for want of sufficient nourishment—although they may escape drowning—for plants require air, water, and food, just as animals do.

Perhaps there is no crop that shows the absolute necessity for underdraining as much as does fall wheat. Walk over a field in April, which is generally the hardest month on this plant. When the wet hollows have been properly drained, and the apparently dry knolls left undrained, the plant will tell to the very inch how far the drains are doing their duty. As far as the soil is dry the plant will be healthy, however cold and unfavorable the weather may be, showing that it is still deriving the proper sustenance from mother earth. On the other hand, when the drainage is imperfect, the cold nights and drying winds by day, slowly, but surely, starve the plants out of existence, thus showing that it is not excessive wet alone that necessitates tile drainage, for the advantages are quite as apparent during a drought. When land is imperfectly drained the cracks open. These wide fissures admit the hot wind and dry the ground still more excessively, but when the land is thoroughly drained a different action takes place. The soil becomes interlaced with tiny channels, that not only assist drainage when required, but, as the weather becomes dry, act as capillaries in allowing the moisture to escape upward to the surface for the benefit of the crop, while these again admit the outer air, laden as it is with moisture which it gives off in the cooler temperature of the earth, just as the drops congregate on the cold surface of the water pitcher.

In entering on the practical part of tile draining, the character and varieties of soil are the chief factors which govern the laying out of the work. For instance, a nearly level surface does not require as large tile in the main drains as does a surface that is more undulating or hilly, for, in the level surface, it takes considerable time for the water from the laterals to reach the main drains. On the other hand, when the surface is undulating, after a heavy rain, the water rushes forward with a greater velocity, taxing the capacity of the drains for the time being, and endangering the growing crops.

Again, a strong, heavy clay will not retain much moisture, especially in the subsoil, and, therefore, the water must nearly all run off; while, on the other hand, a deep loam, when thoroughly dry, will absorb a large amount before the drains begin to run, and for the same reason they will run for a much longer time in such soils after a shower than in clay.

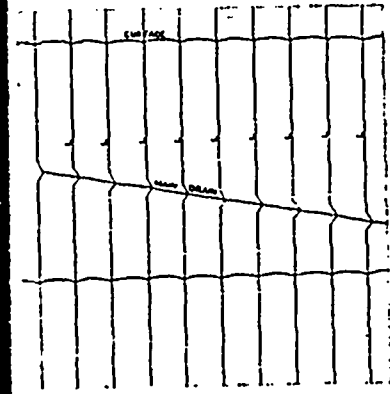
When at all practicable, a map of the drains in each field should be made and kept for future use. These will amply repay the trouble of making, as any one knows who has had the experience of searching for a drain that has become choked. It is easy to measure from some landmark, or the field fences may be made the basis from which the measurements may be taken.

In level fields, or those with a uniform surface, this work is comparatively easy; but when drains are made to follow the depressions in the field, as in the case of draining the hollows or wet bottoms, and therefore are not run straight, the work is a little more

complicated; but making a map is much more agreeable work than digging over rods of ground searching for a drain of which no bearings can be traced.

There is a vast acreage of land in Canada comprised of strong, retentive clay, which many claim will not repay the expenditure of tile draining, for the reason that the subsoil is so impervious to water that drains will not draw as they do in the more porous soils, and as this clay land comprises a large proportion of many of the best counties any plan by which they can be permanently improved is of great importance. We find this land plowed in narrow ridges with numerous cross furrows, the whole depending upon surface drains, which not only require opening up each time the field is worked, but only partially do their work, while they are a constant source of annoyance to running machinery.

But tile draining and surface draining can be made to work admirably together on this land if the work is laid out as shown in the accompanying figure.



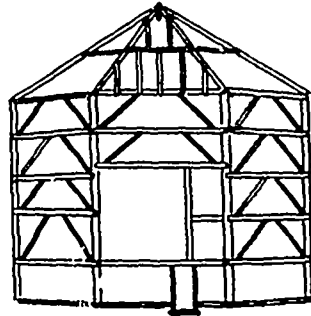
The preparation is best made when the field is in fallow. It should first be levelled, and all old dead furrows filled up and worked out. Then lay it out in lands four rods wide, at right angles to the way the field is generally plowed. Give these lands a slight crown, which may take more than one gathering. The work must be carefully performed so as to give a gentle decline from the crown to the dead furrows, where lateral drains are to be put in to carry the water, as in the figure. The advantage is apparent when the field has again been plowed across the lateral drains thus laid, as each furrow as it is plowed forms a drain, the outlet being the tile drain, while the track of each drill or harrow forms a surface drain. A field thus laid out will remain in this form for years while the slight depressions and crowns will not be found the least in the way, and the field can be plowed in much larger lands as the dead furrows will not be required for drainage.

An Octagonal Barn.

By WM. RENDALL, A.O.A.C., Camperdown, Ont.

The following sketch and accompanying plans are descriptive of an octagonal barn that the writer erected upon a fifty-acre farm in the summer of 1893. The building proves satisfactory and convenient in every respect. For the foundation a trench was dug three feet deep and eighteen inches wide; this was filled with small stones, thrown in dry and pounded down with a heavy stone hammer. Upon this there is a wall of masonry two feet high and eighteen inches thick, on which plank sills 3x10 inches are bedded. The framework rests upon this wall, and consists of eight corner posts and other necessary timbers, as shown in the elevation plan.

Dimensions—Length of each side, 18 feet; distance from ground to eaves, 32 feet; height of stable, 8 feet; each side is 18 feet long, and all the girts are of that length. The length of corner posts is 30 feet, and there is a row of girts every 6 feet. The corner posts are of round timber. They were cut in the winter, and the bark peeled off. The posts are framed by cutting gains into them to receive the girts. Round timber is as suitable for these posts as squared timber, as they are equally easy to frame, and the first cost is much less. The girts are 6x6 inches, and are framed by sizing them down



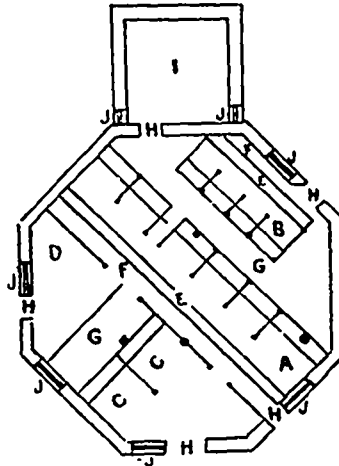
at the ends to 4x6 inches where they fit on the posts. They are fastened to the posts with 9x1/2-inch square wrought spikes, two spikes being driven into each end of the girt. The plates are 6x6 inches, and are halved into each other at the ends, and a 3/8-inch bolt passes through them and up through the corner rafter, holding all firmly together. There is a brace of 6x6-inch stuff fitted on the inside of the plates at the corner, and bolted on with 3/8-inch bolts. This makes the corners of the plate rim very strong. The corner rafters are 3x10 inches, and 28 feet long, and they all meet around an octagonal post at the peak. The purline plates are 3x6 inches and 7 feet long, and are held in place by being tenoned into the corner rafters. The intermediate rafters are 2 1/2 x 5 inches, and are placed 3 feet apart.

All braces are made of 3x4-inch scantling, cut with the proper angles at the toes, but not having any tenons. The girts are framed for the braces by boxing out seats one inch deep for the braces to rest in. The braces were cut 1/2 inch long, and were got in place by springing the girts. In this way every brace was tight and doing its work, and the strength of the girts was not reduced by having to cut mortises for the braces. A 4-inch wire nail was driven into the toes of all braces, so that they could not be displaced until the siding was put on, when each brace was nailed to it the same as the girts.

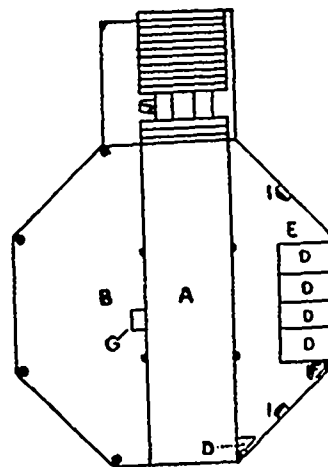
The siding is of inch lumber, fastened on with 3-inch wire nails. To the height of 6 feet all around and of 14 feet on the three sides next the granary it is double boarded, with a thickness of tarred building paper between. This is for the purpose of keeping the stable warm, and keeping the snow from blowing into the granary. The roof is sheeted with inch lumber, and covered with cedar shingles laid 4 inches to the weather. The roof is over one-third pitch.

Arrangement.—The ground plan shows how the stable is arranged; aaa are stalls for 12 head of cattle; bbb are smaller stalls for yearlings, and will hold 8 head; cc are double stalls for horses; d, box stall; ee, gutters, 4 inches deep and 18 inches wide; f, passage behind cattle; gg, feed rooms; hhh, doors; i, root house; jji, windows. The stalls are divided, as shown in plan, by

posts being set in the ground 2 1/2 feet deep. Rabbits are chiselled into the posts, into which the ends of the stall planks fit. The stall divisions are 4 feet high, and are neat and strong. The stable is laid out to economize space and be convenient, any part of it is easily and quickly reached from any other point, and the feed rooms and root house are so located that the food can be given to the stock with a minimum amount of labor. Light is admitted into the stable through five windows, each having four lights of 12x16-inch glass. The walls of the stable are two feet stone wall and six feet double boarded, with tarred paper between.



Barn floor.—The plan of the first floor shows how the interior of the barn proper is arranged. The barn floor A being placed nearer the granary side leaves a larger mow on the other side, and the floor over the granary side is so much smaller, thus leaving more room for the storage of crops than if the floor had been placed in the centre of the barn. B is a mow, having a floor area of 620 square feet. The mow over the granary has a floor area of 425 square feet. There is also a large space over the drive floor, which can be scaffolded, and used for storing crops; there being a height of twelve feet from the scaffold beams to the top of the plates. There is an open space between the bins and drive floor. It is a convenient place to set the fanning-mill when cleaning grain, and when drawing in the team is brought back past the load along



this space to work the horse fork. This is a great convenience, as in many barns, an extra horse must be kept for unloading, or else much valuable time is wasted singling out the team to get past the load. DDD are bins each of which will hold 110 bushels. E is a space that can be used for a temporary bin at time of threshing, or as occasion may

require. F is a shute to the feed room of cattle. G is a shute to the feed room in front of horses. D is a shute for bedding, and leads to the horse stable. I I windows. J is a shute in roof of root house.

The walls of the root house are built of stone laid in mortar. The roof is covered with mica roofing, which admits of a very flat pitch. There is a driveway of planks over the roof, as shown in the plan. Some of the planks are removed to show the shute J, and the joists that the planks rest upon. When roots are being drawn to the root house, these planks are slid two feet to the right, so as to leave the shute uncovered. The wagons can then be drawn alongside, and the roots unloaded. The shoot being near the centre of the root house, the labor of levelling back the roots is reduced to a minimum.

Advantages of octagonal barns.—Great saving of materials used in construction, there being no inside timber required to strengthen the octagon. Less outside wall is required to enclose the same area. The larger the building, the greater the gain. (To build a square barn equal capacity to an octagonal one, with of 22-foot sides, there would be required about 15 per cent. more material.) A roof that is very ridged, self-supporting, and not liable to be damaged by heavy gales; greater strength of building to resist pressure from the crops within and from the wind without; greater concentration, accompanied by a reduction of labor in feeding stock, and in other ways; reduction in length of timber required for building; a more attractive style of architecture.

Ashes.

Editor Canadian Live Stock and Farm Journal:

Sir,—The article on ashes in the last issue is timely. I am amazed at the density of the Canadian farmer in this regard. Some years ago I spent the night at a farm house, and, after breakfast the next morning, a visitor was announced in the shape of the ashman. He came in to warn his hands, which were hard and calloused from his work. The good woman expressed her fear that he might not get any out of the ash-house, as the winter had been severe. He managed to dig out some two bushels, and paid in cash at the rate of fifteen cents a bushel. He drove a team, and went from house to house, and generally made up a load by the afternoon, so he told me.

Boston firms have standing ads. of "Nature's own fertilizer"—sifted, hardwood Canadian ashes—analysis guaranteed, etc.

Is there not need of THE JOURNAL to extend all along the line of these farmers who throw away their own precious substance? We give good incomes to middlemen and to enrich the farmers on the other side, who pay a pretty stiff price for what they get and must have to keep their farms in good order.

"Man is a bundle of habits," as I have proved in my own neighborhood, where I have counselled great care in saving ashes. Had I been a doctor or lawyer, and had charged a substantial fee, they might have obeyed or followed my advice, but they have not, and, as my example is refused, I seek wider fields and pastures new, and give your readers my experience in this matter.

We use one good cook stove and a lux stove in the "keeping room," that is all. Every morning I draw out all the ashes into an old pan and set it in the woodshed to cool. I have a rotation of three or four. I take the coolest one and sift the ashes into a barrel, reserving my charcoal and burnt bones for my hens and hogs, which they get periodically. I have now (April 1st) four barrels packed down hard, and ready to be sown on my onion and cabbage beds, which, with a little dried blood, and perhaps a trifle of nitrate of soda, would make you, Mr. Editor, astonished at your own amazement, if by chance you came my way.

HARNAUL MINIUS.

Exorbitant Rates.

Editor Canadian Live Stock and Farm Journal:

Sir,—When will the farmer cease to pay exorbitant rates? When will he avail himself of advantages within his reach by the exercise of a little ingenuity?

The farmer is a large buyer; hay rakes, mowers, reapers, plows, harrows, he must buy. Enter his house, he must have a stove, a sewing machine, and, perhaps, he would like an organ. Why not? Music is the only thing we take with our characters into heaven from this weary world. But to the point. How should he avoid exorbitant rates? He must change his method of doing business. No farmer who is fairly affluent is destitute of the privilege of borrowing money. Bankers live by lending money. They are always ready for business. Why not use them? A bush blacksmith was known to have money in the bank. The president of a small cheese factory came to town to get some mill stuff to keep up his cows in the early spring, and those of his neighbors. The blacksmith said: "I have no money to lend, but let four farmers just state what stock they have, and let them give a joint note for \$200, and send it to So-and-so, and they will get their money all right." And so they did. Now, suppose a farmer wants a new stove, a sewing machine, and an organ, and that he is fairly certain that he can pay \$75 in a year from date.

One way to buy these things—alas! the usual way—is on time, say, \$25 for a stove, \$50 for a sewing machine, and \$100 for an organ; total, \$175.

Now, for cash, those articles may be had straight from the makers for \$75, say, a stove, weighing 350 lbs., \$14; a good sewing machine, \$21; and an organ, fit for any farmer's family, \$40. These articles will be sent, freight paid, to your nearest railway station. What more would you have? Look at the difference—\$75 at 10 per cent., for a year, \$82.50; same articles bought through agents on time, \$175. M.T.H.

Orchard and Garden.

Fraud in the Sale of Fruit.

The bill introduced by the Hon. John Dryden, Minister of Agriculture for Ontario, to prevent fraud in the sale of fruit, to which we referred in our last issue, has been amended in committee. Penalties varying from \$1 to \$5 are now enacted for any one altering, defacing, or counterfeiting marks on packages, for any one using an article previously marked, and making false marks to deceive as to the grade of fruit packed in the article. Packing so as to conceal defects in fruit either of quality or size—in other words, putting small or defective fruit in the centre or bottom of the package—also renders the packer liable to a similar fine on conviction.

The bill also enacts that every person receiving apples, pears, plums, peaches, nectarines, cherries, grapes, apricots, or berries of any description whatever, for sale in bulk on commission, shall, when requested to do so by the consignor in writing, furnish the said consignor, within one week after receiving notice or after disposing of the fruit, as may be requested, with a written detailed statement in regard to the sale or disposal of the same, giving the price or prices received therefor, and the names and addresses of the purchasers.

No prosecution or conviction under this Act shall be a bar to any proceeding for the recovery of penalties which may be imposed under any other Act, nor to any action for the recovery of damages which may be brought by any person injured or defrauded by the sale of fruit in violation of the provisions of this Act, but all such penalties may be recovered, and all such actions may be brought in the same manner as if this Act had not been passed.

Irrigation.

The advantages of irrigation are being widely discussed at the present time, and it is well that they should be, for we expect that irrigation will form a most important feature both in farming and fruit growing in the near future. Through its use it has been possible for settlers to make a living out of the so-called "desert lands" of the western part of

this continent, and those who have tried it in the more fertile spots, during the drought of summer have found that the results have been extremely satisfactory. In our December number Mr. J. J. Graham, Vandeleur, gave his experience with irrigation, which has given him such good results, and in a late issue of the *Rural New Yorker* Mr. A. J. Snydel shows how strawberries are benefited by it. He says:

"On our farm there was a living spring that formerly was an eyesore in the field in which it lay, by its overflowing, where nothing would grow but grass. But to-day it is a bank to the money value of the farm. By piping it 40 rods, I found that I could obtain a fall of nine feet. By dipping it dry, I also found that it could support a daily output of 48 barrels, or 1,920 gallons in 24 hours in dry weather. But 48 barrels applied daily to a parched berry patch was like pouring water in a crack. This was in the summer of 1893. The next season I resolved to have a reservoir to draw from, so in the winter and spring of 1893 and 1894 I scraped a hole eight feet deep and forty feet square, and stoned it up with rough stones off the place like a well. I let the spring into it, after having piped it 45 rods to my strawberry patch with 1½-inch pipe with a three-inch tile drain in the bottom under the iron pipe, to drain the spring's watercourse and carry off the overflow.

"After getting it to my strawberries, I was at a standstill how to apply the water—with a hose in the shape of rain, or by flooding the patch between each row. I chose the latter, and ran the piping across the head of the patch, which measured just one-half acre, thence across a black raspberry and blackberry patch in the same plantation side by side. By flooding four rows at a time until the water reached the lower ends of the rows, I found that I could water them once every ten days (excluding Sunday), turning the water on about 4 o'clock p.m., and turning it off in the morning at 8 o'clock.

"The patch was heavily mulched the following winter with stable manure, covering the whole plot; this was raked off the rows into the middles in spring. Thus no cultivation was given the plot other than spudding out docks, thistles, and other noxious weeds before picking time. My first application was when the berries were about half-grown, on June 14th. I kept it up until berries were done, about July 4th, and the way those berries swelled and filled up! And what berries they were, principally Crescents fertilized with Wilson!

"The profit from half an acre was \$139.85. Two other patches, covering nearly two acres and not irrigated, but mulched only, realized some \$380, not deducting expenses."

Co-operative Apple Growing.

I advocate the extension to apple-growing of the principle of co-operation, which has already been found of so great advantage in other branches, and more especially, so far as farmers are concerned, in the matter of cheese-making. This co-operation may be on a small or on a large scale. It may be only the friendly union of two or three farmers in a neighborhood, or it may include a township or a whole county, and it may apply to those who have only small orchards as well, or perhaps even better than to those who have large ones, for the latter are generally better able to take care of themselves.

(1) Co-operation may well begin with the gaining of knowledge on the subject. The

two or three may make it a point to compare notes and exchange ideas and information, and the larger body may hold meetings and secure the presence of those who are able to impart instruction with regard to the kinds of apples to grow, the best modes of growing them, and the best modes of disposing of them.

(2) As a second step co-operation in buying trees for planting will secure the advantage not only of lower prices by ordering in larger quantities, but also of greater attention to the order, the prevention of the petty frauds of the tree peddler, and greater satisfaction in every way. If I want fifty trees and two of my neighbors want twenty-five each, each of us will gain by sending in an order for one hundred trees at the lower rates that are offered for that quantity. This is an obvious and immediate advantage affecting the pocket, and is one that is within the reach of a small number who may choose to unite, as well as of a larger number.

(3) When the orchard is in bearing there may with advantage be co-operation in such a matter as spraying, where the size of the individual orchard does not seem to warrant the providing by each one of a proper spraying pump. Two or three farmers in a neighborhood may purchase a pump and provide the materials between them, or a larger number may arrange with a man who owns an outfit to make a round of their neighborhood at the proper times. Many a farmer neglects to spray his orchard, because he thinks it hardly worth while to get a pump for himself, or because at a busy time he does not want to be bothered with something that he knows very little about.

(4) When the apples come to be picked and marketed there is not only a fresh advantage to be gained from co-operation in marketing them, but there is a summing up of all the advantages already gained, the test and realization of the work of the earlier years. The knowledge and information gained, the prudent selection of varieties suitable to the locality and suitable for the market, the care in training the trees from the first year upward, the spraying, the tilling, and manuring of the ground, are all telling upon the crop produced. If the kinds of apples have been carefully and judiciously selected to begin with, the co-operating neighborhood will become known for certain good varieties of shipping apples. If the trees and the ground have been properly cared for and the trees have been properly sprayed, it will also become known for the quality of the fruit produced. Buyers will be attracted to such a neighborhood, and, if an immediate sale be made to them, better prices will be obtained on account of the uniformity and quality of the fruit, and that without any combination to keep up prices. Or, if a shipment to the English or other market be determined upon, the advantage of co-operation becomes even more apparent. The man who has only an acre or two of orchard has not a sufficient quantity to ship by himself. By uniting their forces, two or three, or a larger number, may make up a carload or a larger quantity, and thus secure the advantage of the greatly reduced rates applicable to the larger shipment. Having a larger quantity, too, there is an advantage in dealing with the commission agent and the better knowledge of the market.

(5) For windfalls and fallen fruit co-operation may secure a joint evaporator. This is a matter of great importance, not only to provide a proper means of disposing of this class of fruit, but also to avoid the unwise course of

glutting the market with poor and decaying apples, which disappoint both seller and buyer. This evaporator may be either on a large scale in a town or a village, or may be a smaller one for a smaller neighborhood.

To sum up, I recommend the formation of county societies to bring together all those who are interested in the subject at stated intervals, and to hold meetings for discussion and gathering information, and to work together as far as possible in the directions indicated. In addition to this the apple-growers in a locality, even if they be only few in number, ought to be in touch the one with the other, and assist one another in such matters as spraying and the like wherever necessary. My ideal would be to see ten, twenty, or fifty farmers in a neighborhood meet together and form a "co-operative society," each one agreeing to plant within the next five years ten acres of orchard, the varieties to be few in number and all suited for shipment; to properly study and carry out the care of their trees, and, when the time should come for fruit bearing, to unite in sending their apples forward under their own brand to the English market, having their evaporator for the windfalls, and, if necessary, their central frost and heat-proof storehouse at the central shipping point.—*Paper prepared by Mr. E. B. Edwards, Peterboro, for the Ontario Fruit Growers' Association.*

The Dairy.

Extracting Butter Fat from Whey.

Investigations carried on at the Cornell Experiment Station show that the proportion of butter fat left in the whey during the manufacture of cheese can be extracted by running the whey through the separator, and can be made into good commercial butter. In Bulletin 85 of the Cornell Station, which we give in another column, Prof. Wing describes the methods pursued in the investigations.

There seems no doubt but that the fat can be extracted from the whey and good butter made from it if the proper methods are carried out. The main question, however, is, Will it pay to do so? The average amount of fat recovered at the Cornell station was .25 of 1 per cent., which Prof. Wing seems to think was all the fat left in the whey. It is possible that, in some cases, more fat might be left in the whey, owing to careless handling, but whether it would be worth while to undertake the extra work required for separating and churning, not to speak of the extra machinery required to fit up a cheese factory for this purpose, is, at least, doubtful. This can only be proved by experiment. There would also be the fact that the whey, when the fat was extracted, would be so much the less valuable for feeding to swine.

The Thistle Milking Machine.

The great advantages to be obtained from the invention of a milking machine that will do its work satisfactorily in every respect have stirred up inventors in all parts of the world to try to overcome the difficulties in the way. Many machines have been brought out with the expectation that they would meet the requirements of the case, but, hitherto, with not much success. A Scottish inventor, however, a Dr. Shiels, seems to have done better. This machine was invented in 1893, but, before being put on the market, it has been tested thoroughly by Mr. Wallace, Auchinbrain, for a whole season, so that any defects therein

could be remedied. Mr. Wallace reports that the machine, which is called the Thistle, is thoroughly efficient, milking the cows as thoroughly as could be done by hand, while Principal McCall certifies that no injury was done to the teats and milk vessels of the cows. A company has now been formed and the machine will be put on the market at once.

The *North British Agriculturist* gives the following description of it:

The Thistle milking machine requires to be seen before any one can have any true idea of its marvellous ingenuity and capacity for performing the work for which it is designed. Like most other milking machines which have been produced before, it works by suction generated by an air-pump. But, unlike all other milking machines, the suction is applied on the pulsating principle in precisely the same way as is done by the calf in sucking the milk from the udder of the cow. This is accomplished by means of a teat "cup," which is a marvel of ingenuity. The teat "cup" is of cylindrical shape, and is made of the very best quality of rubber. By means of the suction in the rubber tube connecting with the air-pump, the "lips" of the cup fit firmly on to the vessel of the cow at the neck of the teat, precisely as the lips of the calf do when sucking. But immediately behind the "lips" and inside the "cup" are two "gums," which, with every stroke of the piston in the pump, clasp firmly round the neck of the teat, and, from the peculiar formation of the tube, the pressure, when it slackens at the neck after each pulsation, is continued down the teat, so that the milk is drawn off just as is done by the calf in sucking, or by the skilful milker with each movement of the hand in the milking process. The air-tight milking pail, into which the milk of each cow is drawn, is also a most ingenious and thoroughly original contrivance. The milk is first received into a small cylindrical compartment on the top of the "pail," this compartment having a glass gauge on one of its sides. In the bottom of this compartment is a small aperture, on which rests a ball of rubber filled with air. The milk as it falls into the compartment causes the rubber ball to rise and allow the milk to have free ingress to the milk pail, the rubber ball again closing and keeping the pail air-tight the moment the current of milk has ceased. The milk pail has also a glass gauge up one of its sides so that the amount of milk in it may be easily seen. The arrangements for regulating the pressure are equally notable as marvels of ingenuity and simplicity combined. In fact, the machine, as a whole, is one of the most notable inventions of the nineteenth century. The cows seem undoubtedly to prefer the mechanical milker to the hand milking; and the milking is done to perfection, even the last strippings being thoroughly drawn off by the machine. If the teats be brushed or washed clean before the teat "cup" is applied, the pure milk, thoroughly free from dirt on the udder or teats of the cow, or on the hands of the milkers, and perfectly uncontaminated by the germs of putrefaction, is drawn straight away through a vacuum tube into the vacuum in the air-tight milk pail.

Whey Butter.

In the process of cheesemaking a small percentage of fat escapes in the whey, writes Prof. Wing in Bulletin 55 of the Cornell Experiment Station. This fat is lost except in so far as it adds a slightly increased feeding value to the whey. From some hints that we had received from Dr. S. M. Babcock, of the

Wisconsin Agricultural Experiment Station, we were led to believe that this fat could be utilized in the form of commercial butter. Partly with the purpose of making some investigations into this matter, and partly to afford our students additional practice in running the separators, we determined at the beginning of the Short Dairy Course term of 1895 to run the whey through the separators, and, if possible, to make butter of the fat that we were thus enabled to secure. Accordingly, January 18th, 1895, we began to run the whey from the cheesemaking regularly through the separators, and we have been successful in securing a large proportion of the fat in the whey in the form of commercial butter of good quality. This butter has been scarcely, if any, inferior to that made from cream, separated from whole milk, and it has been printed and sold in the same market with our best butter.

Upon the average, we have been able to secure 2.57 pounds of butter from each 1,000 pounds of whey, and the whey has contained upon the average .25 of 1 per cent. of fat, showing that we have recovered, in the form of butter, nearly all of the fat in the whey.

In only a few details does the manufacture of whey butter differ from ordinary butter-making.

On account of the small percentage of fat in the whey, it was found to be impracticable to secure at one separation a cream thick enough for best results without churning it more or less in the separator. In order to overcome this, the whey was put through the separator in the same way milk would have been, and about one-tenth the whole bulk taken from the cream outlet. This was found to contain on the average from 2 per cent. to 5 per cent. of fat, or to be of nearly the same fat content as ordinary milk. This so-called "first cream" was run through the separator a second time, and in this way the cream condensed to the proper consistency for churning. In running the Danish-Weston machine, this was not found to be necessary. The Danish-Weston machine is provided with a contrivance whereby the proportional flow from the skim-milk and cream outlets can be controlled at will, and in running the whey through this machine it was found entirely feasible to shut off the cream outlet entirely until a sufficient amount of cream had gathered in the centre of the bowl, when by turning in the skim-milk point this cream could be thrown out, and after being so removed the skim-milk point could be thrown back again until a second portion of the cream had gathered in the centre of the bowl. In this way we were enabled to get a clean separation and cream of good consistency in one operation.

In all of our experiments the whey was run through the separator immediately after it was drawn and before it had cooled down. It was at this stage, of course, slightly acid, and the resulting cream was in good condition to churn at once after being reduced to the proper temperature. We have had no difficulty, however, so far as the flavor of the butter was concerned, in holding the whey 24 or even 48 hours in some cases, but would strongly recommend that the whey cream be churned as soon as convenient after separation. In one case where it was attempted to hold the whey 48 hours before separating, the development of lactic acid went so far that the flavor of the butter was spoiled. The practical point seems to be that the whey should be separated at once, and where possible the cream churned quickly, and preferably in any case the whey cream should not be held more than 24 hours.

The cream from the whey, containing, as it does, very little casein, was very easily, quickly, and completely churned at a low temperature. The most complete churning was obtained when the churn was started at a temperature from 48° F. to 54° F., the time required in most cases being less than twenty minutes.

In regard to the quality of butter; as before stated, butter made from the whey has gone into the same market as the butter made in the ordinary way. Good judges who have seen the two kinds of butter side by side have been in some cases unable to detect which was made from whey and which from cream. In other cases slight inferiority in texture and flavor have been noticed in the whey butter. That it is possible to make butter of good commercial quality we have clearly shown. Whether or not it can be done at a profit is the practical question for the ordinary factoryman.

In order to enable the ordinary factory to utilize the fat wasted in this way, it would be necessary to provide storage capacity for a large part of the whey produced in any given day, and a centrifugal separator, churn, and butter-worker. In cases where more than one vat of milk is made up, by so arranging the work that the whey would be drawn from the vats at different times, it would not be necessary to provide so much storage, for the separator could be started as soon as the first whey was drawn, and much of the whey could be gotten out of the way before the last vat would be ready. Most factories have the necessary steam power to run such a separator.

The manufacture of butter from the whey will not ordinarily require much increased labor. The whey can be run through the separator at the same time that the latter part of the cheesemaking process is going on, and the churning will take but a small amount of time and labor. The additional items of expense will be the storage capacity for the whey and the separator.

According to the returns made to the Commissioner of Agriculture, there were made in the State of New York, in 1892, 130,991,310 pounds of cheese. Estimating that for each pound of cheese there would be 8½ pounds of whey, we should have a total of 1,113,426,135 pounds of whey produced in the state. Our whey has contained upon the average .25 of 1 per cent., but our cheese is made in small quantities, with special pains to prevent loss of fat in the whey, and the percentage of fat in our whey is undoubtedly smaller than that of the state at large. In Bulletin 65 of the New York Experiment Station, Dr. L. L. Van Slyke gives the average of a large number of analyses of whey made by him during the season of 1893. This work represents analyses of whey made at fifty different factories in eight counties of the state, extending from April to October, and the average of the whole shows .39 of 1 per cent. of fat in the whey. Assuming this to be a fair average of the percentage of fat in all the whey produced in the state, we should have 4,342,362 pounds of fat lost in the whey. Allowing that the butter contained 85 per cent. of fat, and providing for all mechanical losses in the manufacture, we should make from this amount of fat 4,776,598 pounds of butter, which at 20 cents per pound would be worth \$995,319, or about 50 cents for each cow in the state.

In nearly all of the factories in the state this butter would find a home market among the patrons of the factory, so that expense of packages and marketing need not be taken into account, and the saving would be a clear one to the patrons.

Feeding Cows Slop.

The experiments conducted by Prof. Dean, in the dairy department of the Guelph Experimental Station, as regards feeding wet meal—so-called "slops"—to cows, tend to show that, not only is there no advantage in so doing, but that it is an expensive method. These experiments were first carried on during 1893, but the results have been corroborated by experiments carried on during November and December of last year. Nine cows were used in this trial.

The meal ration consisted of 2 lbs. ground wheat and 4 lbs. bran. While the cows were slopped once a day, half of this amount of meal was given dry and the other half in the form of warm slop. When the slops were given twice a day, this quantity of meal was given at two feeds. Besides the meal, they were getting some silage and pasture during the day for a part of the time, when the weather was favorable. Some of the cows increased in the quantity of milk and in the percentage of fat, while others decreased, during the period of slopping once a day. The difference in the percentage of fat was 0.14 for the group in the first period, and 0.10 in the second, when compared with the dry feed period. The following is the record for two weeks previous to slopping, for two weeks during which they were slopped once a day, and for two weeks during which slopping twice a day was practised:

Name of cows.	Record for two weeks previous to slopping, Oct. 8 to 21.		Record for two weeks when slopped once a day.		Record for two weeks when slopped twice a day.	
	Pounds milk.	Per cent. fat.	Pounds milk.	Per cent. fat.	Pounds milk.	Per cent. fat.
Bella	389	3.50	403	3.65	397	3.55
Violet	457	3.45	444	3.50	410	3.35
Bessie	420	3.45	466	3.30	479	3.45
Pansy	425	3.20	405	3.15	446	3.10
Annie	425	3.40	427	3.90	429	3.75
Clara	268	3.45	244	3.20	261	3.60
B. Temple	540	3.75	511	3.50	561	3.65
L. Rose	260	4.75	215	4.50	222	4.80
Totals and averages.	3,063	3.76	3,157	3.82	2,910	3.86

After an intervening period of one week, six of these cows—Bella, Violet, Bessie, Pansy, Annie, and Clara—were given nearly all their drink in the form of slop. For the first few days the covers of the water boxes were not properly fastened down, but after this they were given all the warm slop they would drink and no water. The average of the six cows for the week beginning November 19th previous to slopping was 1,110 lbs. milk and 3.60 per cent. of fat. The weekly

average for the two weeks on warm slop feed was 1,085 lbs. milk and 3.63 per cent. of fat, a decrease in the quantity of milk by 25 pounds, while the per cent. of fat remained about the same

Variation of Milk and Milk-Testing.

This was the title of a paper read by Prof. Joseph Hills, director of the Vermont Agricultural Experiment Station, at the Ayrshire breeders' meeting at Providence, R.I., from which we take the following

The home dairy tests which were inaugurated by this association at its last meeting have caused more interest than hitherto among the members in the matter of milk-testing. In order to obtain a prize in this test it is necessary that the herd of cows give a milk containing 13.00 per cent. total solids and 4.00 per cent. butter fat. Inasmuch as the milk of the same cow or same herd varies more or less from time to time, it is desirable that for the test the most favorable time be selected. A study of the variations normally existing in milk may aid the breeder in selecting a proper time for making the test.

The members of the association will recollect that at the New York meeting, in 1893, my predecessor, Prof. W. W. Cooke, read a valuable and interesting paper on the "Breed Characteristics of Milk." This did not touch, however, on the variations existing in the herd at different times.

Lack of time and space will prevent us from considering all the variations which may exist, due to different conditions, times of feeding, breeding, and due to the various methods of handling milk, and for the present we will confine ourselves simply to the variations normally occurring in the milk of the same herd, kept under ordinary farm conditions, in the course of a year.

The experiment on a large number of cows has shown that, as a rule, a cow gives the most milk, but of the poorest quality, in the first two months of her lactation; that, during the first six months of her lactation, the quality does not materially change, but in the last half of the year (if she calves every year) the milk flow shrinks and its quality increases, the latter being, on the average, an increase of about one-quarter of the total fat. It has been found that cows calving in the spring change the quality of their milk in the latter part of their lactation more decidedly than those that calve in the fall, while farrow cows, calving either in spring or fall, hold to the even quality of their milk more than those that calve each year.

The variations, from day to day, of the milk from the same cow or herd are frequently extreme, and are often due to causes which are not understood. If, however, by means of the composite sample, the quality of the yield of several days or a week is estimated, it is usually found that there are wide variations than are found from day to day.

For the past three years we have analyzed the milk of each individual cow of the Vermont Experiment Station herd twice a month, each sample being made up from eight consecutive milkings. It has been found that the milk given when the cow is four months along in lactation is very nearly the average quality of the milk given by the cow in the course of the year; that if two analyses are made at this time, fifteen days apart, upon composite samples, the result will probably be within a tenth of one per cent. of the actual average. Analyses made at this time and in

this manner will certainly be sufficient for the intelligent breeder to determine, with the assistance of the milk scales, whether any particular cow is paying her way or not.

Essentially average results will be obtained by making two analyses of composite samples, one when the cow is six weeks and one when she is six months along in milk. The average of these will be found to be close to the average of that at four months.

The extremes of fluctuations in the quality of the milk of a cow are frequently noted in the records of tests, public and private. Some of these are almost beyond belief, yet many are apparently authentic.

The greatest change in quality of milk from day to day that has come under my personal observation was that made by a registered Ayrshire owned by L. S. Drew, of Burlington, being 2.68 per cent. fat change in two days. This is, probably, the most violent change on record where the test was controlled by chemical analysis.

Has the cow a fixed quality of milk which she gives throughout life? Does a heifer, in her first lactation, indicate truly her milking qualities, or may we expect gain or loss in the years to come? Our records indicate, in eight comparisons of heifers of our own raising, less than .20 per cent. gain in per cent. of fat during the second milking period. Apparently the same general character of the milk is maintained throughout life, although the quantity may be increased or diminished. Minor variations in quality may be expected, but large ones seldom occur.

Since variations exist in milks, and since they affect its products, a rapid, cheap, simple, and accurate means of measuring them is eminently desirable. This was sought for many years by dairy scientists in many countries. Several American experiment stations have published ingenious methods whereby the fat percentage of milk might be readily estimated. All gave accurate results; most of them were cheap and quite easy of comprehension. Only two, however, the Beiming (or Vermont station) and the Babcock methods, fulfilled the requirement of rapidity. The latter soon had the field to itself, being easily preferable, and, as is undoubtedly well known to you all, is now the arbiter in hundreds of creameries and cheese factories, as well as largely used by private dairymen. It is easily comprehended and readily run by any one of average intelligence.

Cheese and Butter Exchanges.

Editor Canadian Live Stock and Farm Journal:

Sir,—The time is now ripe for what we may call cheese and butter exchanges. On every hand, the dairy business is being developed, and facilities for marketing are not keeping pace with the growth of the industry. The time is gone past when the country merchant, or even the city merchant, can handle our increasing products from the dairy.

The marketing of cheese has been handled systematically through the "Cheese Boards," which have been a great help to this branch of the dairy, but why not extend the scope of these boards? Why could not our dealers who attend these boards regularly throughout the season for the purpose of buying cheese also buy butter? Or if they do not care to handle butter, why not have butter buyers attend on the same days, and, either before or after the cheese boards are cleared, have the butter put up, and sold in the same manner as the cheese?

At almost any place where there is a cheese market established, enough creameries could be found in the vicinity or within easy reach by rail to make it worth the while of butter-buyers to attend at least monthly.

We are pleased to note the efforts that are being made to give better transportation to dairy goods, especially butter, but, at the same time, there should be some better provision made whereby sellers and buyers of butter could meet in a more advantageous manner than at present.

The formation of cheese and butter exchanges, either in conjunction with present cheese boards or separately in central localities, would, in my judgment, be of great benefit to the already large and growing dairy industry.

H. H. DEAN,
Ontario Agricultural College, Guelph

Poultry.

A New Method.

By JOHN J. LENTON, Oshawa.

I think the time has nearly arrived when our farmers will have to make up their minds that they are wasting their time in raising nothing but barley, wheat, peas, and such crops from their farms. In the case of some of them, however, the time will not come until it brings with it the experience that the land will not raise any of these crops any longer; that, like themselves, it is played out, and good for nothing better than its worst condition. Those who are wisest among them will put in the stitch in time that saves nine, and will turn their attention to the production of cattle, sheep, swine, and poultry, any of which pursuits, or any two of them combined, will give ample scope and verge enough for any man's intelligence and time, and ample opportunity for the recuperation of his acres.

One of the misfortunes of the country is that too many of our farming population are not as well informed as they ought to be for their own good, and most of that class are too old to be taught. We have gone through portions of this province where the land was so completely exhausted by over-cropping that it could with difficulty raise a blade of grass or oats over six inches long; and the little that had accomplished that growth was as white and as bleached as scutched flax. Year after year everything had been stripped off the ground and disposed of at any price. It was raised to be got rid of. It cost four times as much as it was worth, perhaps, to raise it, and it probably left the ground and its owner worse off than ever. Had a different practice prevailed, the land would have been in better heart, and the farmer better off. It is not a difficult thing to estimate the difference that exists between the two conditions.

This country and every other one where such a practice prevails, together with every one who is responsible for it, must break down at last. It is breaking down now under the persistent offences which are being practised upon it. It would pay our farmers fifty-fold more if, instead of trucking everything off their farms, they would truck twice as much on. Barley, wheat, oats, and peas are "played out" entirely in this portion of the province generally as a paying crop. Henceforth it will have to be oxen, sheep, poultry, and pigs—or "root hog or die."

Of these latter productions poultry will unquestionably give the largest profit by probably many hundreds per cent. We believe that nothing that the farmer produces is in any degree to be compared with poultry for value. No animal consumes less, and what it does consume is of less economical value than that which other animals consume. No animal consumes less, none yield more—none are more hardy, more easily housed, or more easily attended to and cared for. These are self-evident propositions which every one will have to admit, and they are propositions which will be forced home to people's convictions before long by the hard facts of practical, and perhaps painful, experience.

In a recent issue of the *American Poultry Journal*, the record is given of the produce for the year of a yard of Wyandottes, which cost about \$40, and showed a net gain of over 30 per cent. What need is there for argument or discussion in presence of conclusive facts? Is there any better business a man may enter upon with like reasonable prospect of success? If there is, we should like to know what special and particular one it is.

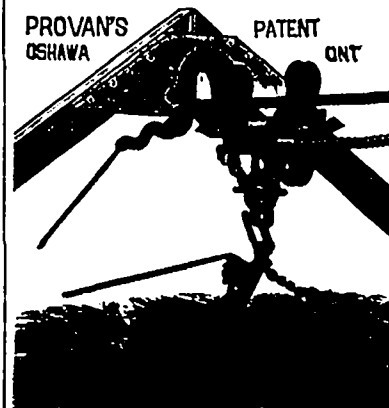
PROVAN'S

(Improved Malleable and Steel)

Horse Fork and Sling

Has been awarded first prize at all competitions, both in Canada and the United States, the latest victory being the Jolly Medal and Diploma given on Hay Carriers, Fork and Sling, at the World's Fair at Chicago.

The jurors were unanimous, and many valuable points of undoubted superiority were allowed over an extensive opposition.



SIMPLE, STRONG, DURABLE.

Many farmers who had other kinds have taken them down, and bought mine after seeing it work.

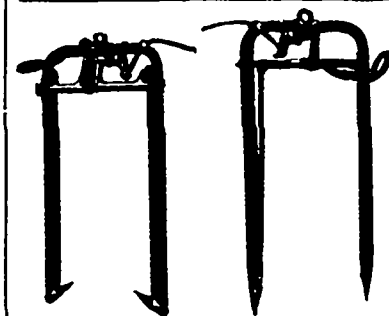
My Machine Handles Sheaves as well as Hay and Peas. It is the simplest and Best Stacker Manufactured.

Our machine has been in successful competition for seven seasons, and its superiority over all others is now placed beyond a doubt. It is the only Double-Acting and Self-Reversing Machine on the continent that has the following advantages: A loaded fork or sling can pass the stop block. Our Pulley Hoister instantly raises or lowers the pulley from or to the peak, thus avoiding climbing or untying the rope from the whiffletree. The truck used with this car is the best for the following reasons: It acts as a strengthening brace to the barn. It never warps or is affected by a side draw. The car runs easily, and can be readily moved from one barn to another. For unloading at the gable we have much the strongest end-lift. It takes up less room, and does not disfigure or weaken the building with posts or projecting beams.

While we do not recommend a Wood Track, we claim to have the latest improved and most reliable working Wood Track Car on the market.

GUARANTEE.

We guarantee every machine sold by us to do first-class work, and to unload one ton of hay in from three to five minutes, when properly handled and put up; and, if it fails to do so, will be taken back and money refunded.



SENDING TO FARMERS ON TRIAL

It has been for years a part of our business to send our machine on trial to fair-minded, responsible farmers living at remote distances, such machine to be put up by them and used until their harvesting be half done, when they are required to decide whether they will keep their apparatus or return it; if the latter, we will pay return freight charges.

J. W. PROVAN
OSHAWA, ONTARIO

Sole Manufacturer and Patentee.

Shipping Eggs.

Messrs. D. Gunn, Flavelle & Co., Toronto, the well-known produce merchants, have sent the following timely circular to country merchants and egg buyers, which should receive careful attention:

At the commencement of another egg season permit us to again call your attention to the importance of handling your eggs promptly, and not holding until they become stale.

In this city last summer thousands of dozens of eggs were sent to the dump, and tens of thousands of dozens were almost useless because they reached market too old.

Our chief market now for eggs is Great Britain, and it requires care and skill to overcome the distance and land the eggs in good order, but all the care and skill is vain if the egg is not fresh when it reaches the packer.

We, therefore, ask you to impress on your farmers the importance of marketing their eggs promptly and regularly while they are at their best; and we also beg of you to dispose of them promptly and regularly, and not to impair their value by waiting for larger shipments, or holding for a rise in price.

The volume of this business is now large, and with the co-operation of producers, local dealers and exporters, it may be indefinitely increased.

We, therefore, ask you, in your own interest as well as in the interest of the trade generally, to give this matter the care and attention its importance demands.

The Apilary.

Lessons from the Past.

By R. F. HOLTKEMANN, Brantford.

Every season brings its lessons, not alone to the careless and inexperienced, but to the expert and those who attend to business in a thorough way. Last season the honey flow was poor, and beekeepers generally secured about half a crop; more than that, in the latter part of the honey season there was in many places no crop at all. The result was that many who took it for granted that their bees had sufficient stores for winter were mistaken, and many colonies starved during the winter. Another class said that there was no money in bees, and that they would let the bees run their chances. If they wintered without care and preparation, well and good; if not, let them die. Such methods in business are not likely to lead to success. Whatever business you are in conduct it well, or go out of it in a business-like way. If I am not mistaken the honey flow is likely to be good after a severe winter, and those who have been careful are likely to reap a reward. Bees last winter were likely to starve, with some honey left in the combs. The reason can easily be given. Bees keep warm and alive in very cold weather so long as they remain in a cluster, and the colder the weather the more compact the cluster. But take a few bees away from the cluster, and in cold weather they soon perish. During such a winter as the past, the bees do not get a chance to break cluster and reach stores not covered by the bees; thus they may starve, although there are still scattered stores in the combs.

The best method to pursue during May is to see that bees have plenty of stores. Do not spread brood in the combs until settled warm weather comes, and then only when plenty of young bees are hatching, and, instead of putting empty combs in the centre of the brood chamber, put the centre combs to the outside, thus enlarging the brood chamber only a little. Better handle the bees too little than too much. If towards the latter part of the month strong colonies crowd their hives, put on supers to prevent the swarming impulse.

Horse Owners Should Try COMBAULT'S Caustic Balsam. The GREAT FRENCH VETERINARY REMEDY. A Safe, Speedy and POSITIVE CURE. Prepared exclusively by J. E. Combault, ex-Veterinary Surgeon to the French Government Stud.

Image of a horse and rider. Text: SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce any scurf or blennorrhoea. The safest best BLISTER ever used. Takes the place of all treatments for mild or severe action. Removes all Branches or Blemishes from Horses or Cattle. As a MUMMUM REMEDY for Rheumatism, Sprains, Sore Throat, Etc., it is invaluable. WE GUARANTEE that one tablespoonful of CAUSTIC BALSAM will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address: TIE, LAWRENCE-WILLIAMS CO., Cleveland, O.

— And Mud

When you spread loose salt in the pasture, the stock paw it into the ground and then eat salt—AND MUD.

To stop that, put 4 or 5 large lumps of

Rock Salt

in different parts of your pasture. Then they get as much salt as they need, when they need it, and—NO MUD—NO WASTE.

Mr. P. M. STEWART, of Houlter, Ont., says, "I am safe in saying it goes three times as far as loose salt does."

You will find it does the same by ordering 400 pounds or over at 50 cents per 100 pounds.

(Cash with the order.)

TORONTO SALT WORKS, 128 Adelaide Street East, - Toronto

THOS. HAWES, - Whitby, Ont. BREEDER OF

S. C. White and Brown Leghorns, W. P. Rocks, G. Wyandottes, B. B. Game Bantams, Silver Seabright Bantams. Eggs, \$1.00 per setting, except Bantams.

WOVEN WIRE FENCE. Why pay 30 to 50c. a rod for fences when you can make the best Woven Wire Fence of earth, horse high, bull strong, pig and chicken tight, for \$13 to 20c. A ROD? A man and boy can make from 40 to 60 Rods a day. Over 20 different styles. Call for Free Address, HITCHCOCK'S FENCE CO., Terre Haute, Indiana.

SHORTHORN STOCK SALE.

Thorncliffe Stock Farm, TORONTO.

ROBERT DAVIES, Proprietor.

Entire Herd of Shorthorns will be sold by Public Auction on May 16th, 1895, at 12 o'clock noon.

Among the bulls are the celebrated Imported Cruickshank Bull, Northern Light (572-1) - 18111 - by Standard Healer (5506), dam Nonpareil 20th (46144); also the celebrated How Park Bull, Lord Outhwaite, - 18787 - by Butterfly Duke 10th 14278 - dam Lady Isabel (Imp.) 5156 - by Crown Prince (38001); and several young bulls and heifers sired by the above. Also a lot of grandly bred cows in calf.

Write for catalogue.

Dispersion Sale - - -

of High Bred Scotch Shorthorns

AT

INGLESIDE FARM, SEAFORTH, ONT.

(about one mile from G.T.R. station)

ON WEDNESDAY, MAY 15th, 1895.

THE proprietor, having sold his farms, offers for sale by auction his entire herd, consisting of one imported bull, 2 years old; one imported bull calf, 11 months old; thirteen imported females; five homebred bull calves, and five homebred females. The imported stock is chiefly of choice Cruickshank breeding, from the celebrated herds of Wm. Duthie and W. S. Marr, imported for breeding by the proprietor. Among them are animals sired by the following celebrated sires: Stronbow, Graevend, Roan Rubin, Standard Healer, William of Orange, and Pride of Morning, the latter champion at Aberdeen, in 1891, and at the Highland, 1894. This offers a rare opportunity for obtaining first-class show or breeding stock. Catalogues on application. Trains arrive from the east—8.30 a.m., 1.10, 6.10, and 9.10 p.m.; from the west 7.43 a.m., 2.51 and 5.30 p.m.; also stage from Brucefield, on London, Huron & Bruce, arrives at 11 a.m., waits for train from London at Brucefield. Sale to commence at 1.30 p.m.

D. D. WILSON.

TO GET YOUR JOURNAL FREE.

Send us one new subscriber and one dollar in payment, and we will send you THE JOURNAL for six months free of charge. For two new subscribers we will extend your subscription one year.

Jottings.

NOTICE.—New advertisements, notice of which is desired in the Jottings or Stock Notes columns, must reach us by the 20th of the preceding month. Items for Stock Notes, to secure insertion, must also reach us on the same date.

American Shorthorn Herdbooks for Sale.—Mr. John Idington, Q.C., Stratford, Ont., has the first thirty-one volumes of the American Shorthorn herdbook for sale. See his advertisement.

Double-Locked Wire Fence.—We wish to call our readers' attention to the advertisement of the Canada Fence Company, London, in this issue. The double-lock and diamond grip fences supplied by this company are very well spoken of.

Thornton's Circular.—We have received from Messrs. John Thornton & Co., 7 Princes street, London, Eng., No. 107 of their Record of Shorthorn Transactions during the months of October, November, and December, 1894; also an index to the Transactions during the years 1892 and 1893.

Spavined Horses.—The buyers for foreign markets do not want blemished horses at any price. Spavins, Curbs, Ringbones, etc., can be entirely cured by Dick's Blisters. Price 50 cts. DICK'S Liniment is invaluable for sprains and bruises. Price 25 cts. To be had at all druggists. Full directions on the wrapper.

Journal of the R.A.S.E.—The last number of the Journal of the Royal Agricultural Society of England is largely taken up with an exhaustive article by Sir J. H. Lawes and Sir J. Gilbert, Rothamsted, on "The Feeding of Animals for the Production of Meat, Milk, and Manure, and for the Exercise of Force." This article should be carefully studied. It is illustrated by a chart, as well as numerous tables of comparison.

Dairying for Profit.—A great many of our readers have read Mrs. E. M. Jones' famous little work, "Dairying for Profit," which has had such a successful sale all over the continent. So impressed was Hon. John Dryden, Minister of Agriculture for Ontario, with it that he caused a large number of copies to be purchased, which the Department of Agriculture will send to those applying for them. We will also send a copy free to any one sending us in a new subscriber's name and \$1.

Scottish Clydesdale Studbook.—We are indebted to Mr. Arch. Macneil, secretary of the Scottish Clydesdale Horse Society, for Volume 17th of the studbook. The reduced bulk of the volume, owing to the cessation of the demand from outside countries, is very marked. The society have issued a private studbook, containing printed forms with blank spaces for writing in all particulars required for keeping a private register. This can be obtained post free for 2s. 9d. Orders with remittances to Robert MacLachlan, 153 West Nile street, Glasgow, will have prompt attention.

For Sale

(without reserve) in

August, 1895.

STALLIONS.

3 French Coach
3 Glydesdale
15 Percherons

All purchased and registered. Every one guaranteed as a sure foal-getter.

The balance unsold, if any, will be sent to the United States in September.

For particulars apply to

THE HARAS NATIONAL CO., 30 St. James Street, MONTREAL.

FOR SALE.

Nine choice bred Scotch Shorthorn bulls, from eight to twenty-four months old, at prices and terms to suit the times. Come and see them.

DAVID MILNE,

389

ETHEL, ONT.

FOR SALE

Four extra good bull calves (Ayrshire) and a few fine heifer calves, out of such bulls as Prince of Byron and Norman of Robertsland. Also some very fine Berkshire pigs, of different ages, sired by Knowlton. All direct from imported prize-winning stock, and all registered.

226 A. TERRILL, Wooler, Ont.

W. C. EDWARDS & CO., Breeders and Importers.

ELMHURST STOCK AND DAIRY FARM,
Clarence, Ont.

Shorthorns of milking families with imported Grandfleur at the head of our herd. Our Shorthorns are all imported from the best stocks in England. Berkshire Pigs. Young stock for sale. Post office and telegraph office, Clarence, Ont. Railway station and steamboat landing Thurso, P.Q., on the C.P.R.

334 HENRY SMITH, Manager.



PINE GROVE STOCK FARM,
Rockland, Ont.

Special bargains on young bulls of superior merit and select Scotch breeding. Also thick young heifers at right prices. Post Office, Telegraph Office, and Steamboat Landing, Rockland, Ont., on the C.P.R.

JOS. W. BARNETT, Manager.

LAURENTIAN STOCK AND DAIRY FARM,
North Nattion Mills, P.Q.

Ayrshires, imported and homebred: herd headed by Imported Emperor of Dromore 5431 C.A.I.R. and 1868 S.A.I.I.B. Jerseys, all of the celebrated St. Lambert family; herd headed by Llagar Pogia of St. Annee 25704, A.J.C.C. Berkshire Pigs.

Young stock of all the above breeds for sale. Post Office, Telegraph Office, and Railway Station, North Nattion Mills, P.Q., on the C.P.R. GEORGE CARSON, Manager.

AYRSHIRES.

MENIE STOCK YARD.



Breeder of Ayrshire Cattle and Berkshire Pigs. First-class pedigree stock always on hand and for sale. First-class milking stock a specialty. Hoard's Station, G.T.R. WM. STEWART, Jr., Menie, Ont. 164

SIMMONS & QUIRIE,
IVAN, ONTARIO.

Breeders of Shorthorns and Berkshire Pigs

The herd is headed by the Matchless bull, Royal Saxon - 10517 - by Excelsior (imp.) - 2693 - (51233), with Hampton M. - 18240 - sired by Hampton Hero - 124 - as reserve. Among the females are representatives of the Strathallans, Minas, Goldendrops, Mysie, Elvira. They are listed with Scotch crosses. The herd of Berkshires includes many prize-winners and are an exceedingly choice lot. Farm 7 miles from Ilderton Station, G.T.R. Stock of all kinds for sale. Apply to

G. M. SIMMONS, Ivan P.O., Ont., or JAMES QUIRIE, Delaware, Ont. 116

GLENBURN STOCK FARM.



For sale. A very choice lot of Berkshire pigs (from large litters), farrowed in February and March. Write for prices.

JOHN BLACEY, Jr., 248 Lennoxville, Que.

"THE BRIARS"

SUTTON WEST, ONT.



84 Head of Registered Shorthorns.

Including bulls of various ages, incorporating the best blood of the Scotch and English Herds. Also HORSES AND PIGS. Inspection invited. 249 F. C. SIBBALD.

J. CARSON, Agent, Yorkton, Assa.

H. I. ELLIOTT

BREEDER OF

Scotch-Shorthorns and Southdown Sheep Imported King James at the head of herd. Interview Farm, Danville, Que. 335

AVONDALE STOCK FARM.

Dominion Chief, by (imp.) Royal Chief, dam (imp.) Jess, at the head of the herd. Among the cows are imported Fairy Queen and Amy, the 1893 silver medal cow at the Industrial. From these I now have young bulls for sale, also a number of superior young bulls and heifers of different ages. Heifers always on hand.

JOHN H. DOUGLAS, 232 Warkworth, Ont.

- SHORTHORNS -



I have for sale two nice yearling heifers, red, and red and little white, good ones. Also two bull calves, well bred, and well grown. All are from first-class stock, and at reasonable prices.

D. ALEXANDER, Iridglen, Lambton County, Ont. 117

FOR SALE. SHORTHORN BULL

An extra good roan calf, eleven months old, from the unbeaten show heifer Vanity, winner of firsts at Toronto, Montreal, and London; also cows and heifers, good ones.

H. & W. SMITH, 256 Hay, Ont.

FOR SALE.

Two yearling Shorthorn bulls. Good animals. Will be sold at prices to suit the times.

JOHN DAVIDSON, 332 ASHBURN, Ont.

FOR SALE.

Seven Shorthorn Bulls and twelve Heifers, forty (registered) Southdown and Leicester Rams and Ewes and a lot of Berkshires. All first class Stock, at hard-time prices. Come and see us or write for prices.

E. JEFFERSONS, 300 BOND HEAD, Ont.

SCOTCH SHORTHORNS AND BERKSHIRE PIGS FOR SALE

Choice young cattle of both sexes of the most select breeding. Also young Berkshire pigs from sows selected from the herd of Mr. J. C. Snell, Edmonton, Ont. Write for prices. W. WARD, Iridgton, P.Q. Farm one-half mile from station C.P.R. 246

FOR SALE.

3 YOUNG SHORTHORN BULLS 3

From 8 to 24 months old, at prices and terms to suit the times. Come and see stock, or write.

DAVID MILNE, Ethel, Ont.

Maple Lodge Stock Farm

--ESTABLISHED 1854--

We are now offering a splendid lot of young BERKSHIRE PIGS

Can supply pairs not akin.

JAS. S. SMITH, Maple Lodge, Ontario 2060

FOR SALE

Volumes 1 to 31 inclusive American Shorthorn Herdbook

with volume of pedigree English bulls and Allen's History of Shorthorns. First cheque for \$60 takes lot.

Apply to JOHN IDINGTON, Stratford, Ont.

AMPLE SHADE STOCK FARM

In Shorthorns and Leicesters we have some excellent show-yard timber, sure winners, coming forward for the fall fairs. Inspection invited.

E. GAUNT & SONS, St. Helen, Ont.

FOR SALE.

Three very fine young SHORTHORN BULLS, from twelve to eighteen months old, sired by the imported Scotch bull Invincible, and from good recorded cows. Also a few heifers and a number of Improved large White Yorkshires and Large Berkshire pigs for sale at reasonable prices.

H. J. DAVIS, 195 WOODSTOCK, ONT.

Jottings—Continued.

American Clydesdale Studbook. — We have received from Mr. Alex. Galbraith, secretary of the American Clydesdale Association, Volume 8 of their studbook, which was edited by the late secretary, Mr. C. F. Mills. It contains, in addition to pedigrees, transfers, etc., engravings of Prince Patrick (677) and Lillie MacGregor 3957, champion stallion and mare, respectively, at the Columbian Exposition. In spite of hard times and much discouragement, the association is doing splendid work in furthering the interests of Clydesdale breeders. All Canadians entering in the American Clydesdale Studbook now receive a custom house certificate free of charge, in case they wish to ship their animals across the lines.

The Celebrated Centre-Cut Mower. — The celebrated centre-cut mower has now been in use for eight years, and every year it has increased in popularity, necessitating a steady increase of the output. The sales this year increased fifty per cent., and the prospects are that next year their works will have to be run to their fullest capacity to supply the demand. It is acknowledged by all that have them that they are the strongest cutter, easiest handled, easiest riding, lightest draught, and most durable mower that has ever been introduced. Two of their five-foot cut mowers are in use at the Model Farm, Guelph. One five-foot cut mower has been used the last two seasons at Niagara Falls park as a lawn mower. Manufactured by Wm. Brown, Whitby, Ont.

The Business Guide. — In our columns will be found an advertisement of a book that contains much useful information for farmers. This is the Business Guide or Farmers' Manual, by J. E. Handford, Os- goode Hall, Toronto, Barrister-at-Law. It gives particulars about notes, mortgages, cheques, deeds, wills, contracts, etc., which, if studied, would save some farmers hundreds of dollars yearly. Some of the schemes of unscrupulous agents in fleecing farmers by "tricky" notes are explained, and points of law on various subjects in which farmers are concerned are given. Tables of interest, lumber, grain, and wages are included, and many other useful hints can be found in it. The price is \$1, postpaid. Write to J. L. Nichols & Co., Wesley Building, Toronto.

Bluevale Cheese and Butter Factory. — At the annual meeting of the Bluevale Cheese and Butter Factory Company a dividend of ten per cent. was paid on the paid-up capital stock, and a reduction of three and one-half mills per pound on the charge of making cheese was refunded to the shareholders. The secretary's statement for 1891 shows that the total number of pounds of milk received was 2,250,792; the total number of pounds of cheese made, 205,922; the average number of pounds of milk to pounds of cheese, 10.97-100; the cost of drawing milk, \$1,811.70; the average cost of drawing milk per gallon of 10 pounds, 8 1/2 mills; the cost of making cheese, 73 cents per 100 pounds, the average cost of making cheese for the season, including all expenses, viz., milk drawing, insurance, salaries, cheese boxes, wood, factory supplies, renewals and repairs, and all incidental expenses, 1.93-100 cents per pound.

Stock Notes.

NOTICE.—New advertisements, notice of which is desired in the Jottings or Stock Notes columns, must reach us by the 20th of the preceding month. Items for Jottings, to secure insertion, must also reach us on the same date.

Horses.

MRS. M. MACDONALD, FRANK & Co., Glasgow, Scotland, the well-known live-stock salesmen, who handle large numbers of Canadian and American horses every year, request consignments of such.

HON. M. H. COCHRANE, Hillhurst Farm, Hillhurst Station, Que., writes: I have to report the sale to Mr. F. C. Stevens, of Attica, N.Y., of the imported three-year old Hackney filly, Canny Maid, winner of second prize and reserve for junior championship at the last New York Horse Show; also to Mr. Charles C. Doc, of South Newbury, Vt., of ten Dorset Horn ewes and the imported ram, Sir Durligh, winner of third prize at the World's Fair.

Cattle.

MR. A. TERRELL, Wooler, Ont., can spare four good Ayrshire bull calves and a few heifers.

MR. H. FRALEIGH, St. Marys, Ont., places an advertisement of a Jersey bull calf in our columns.

ALEX. HUME,

Burnbrae P.O., Ont.,

Importer and Breeder of Ayrshire cattle and Yorkshire pigs, besides bulls, cows, heifers and calves of the choicest breeding, either for milk or show- ing. We have on hand and coming on, grade calves whose dams, sires and sires, dams, are deep and persistent milkers. Purebred bulls have been used on herd for past twenty years. Pigs of the best type and pairs not skin always on hand. Telephone Hoard's Station, G.T.R. 340

CHOICE AYRSHIRES.

Stock bull is imported SILVER KING who took 1st prize—2-year-old class—in 1893 at Montreal, Hochelaga, London, Ottawa, Toronto, as also silver medal there as best bull of any age. Dam of Silver King is Nelly Osborne (imported), who took 1st as milk cow and champion medal at World's Fair, and his sire is Traveller, the champion Ayrshire bull of Scotland. I Offer For Sale young stock of both sexes sired by this famous young bull, and whose dams are not only good individuals and prize winners, but heavy milkers as well, with exceptionally high tests for quality. Please address D. McLACHLAN, 166 Petite Cote, P.Q.

JAMES COTTINGHAM,

Riverside Farm, Breeder of Ayrshire Cattle. Herd traces direct to stock imported by Andrew Allan, Montreal, and headed by the prize-winning bull, Sir James (5051); sire, Rob Roy (3972). Stock of both sexes for sale at all times, including some choice young bulls and heifers. Correspondence solicited. Visitors welcome. Railroad station and post office, Ormstown, Que. Farm one mile from station. 337

WOODROFFE STOCK AND DAIRY FARM.

YORKSHIRES! YORKSHIRES! Sired by the celebrated sweepstakes boar, Kinicroft Giant - 444, 1000 stock boar at Central Experimental Farm, and also others by his own sire, a boar, Wallace - 1671 - all from choice sows. Pairs not akin. Also AYRSHIRES. Write for prices. 289 J. G. CLARK, Ottawa, Ont.

F. W. TAYLOR,

WELLMAN'S CORNERS, - ONTARIO. A number of purebred Ayrshire calves of both sexes, and also a few high grades, due to calve in March, April, and May. 228

A. McCALLUM & SON

Spruce Hill Dairy Farm. DANVILLE, Que. IMPROVED AND BREEDERS OF PUREBRED Ayrshire cattle. Our stock is specially bred from cattle of the deepest milking strains, with high percentage of butter fat. Young stock always for sale at reasonable prices. Correspondence solicited. 198

"Your publication should be read by every progressive farmer."—Wm. S. Howell, Secretary West Lambton Farmers' Institute.



AYRSHIRES.

NEIDPATH STOCK FARM

Thos. Ballantyne & Son
Stratford, Ontario.

Purebred Ayrshire Cattle

Herd consists of the imported bull, Beauty Style of
Auchenbrain, and ten imported cows of the highest
milking strains and their progeny, by imported bulls.

GREENHOUSE STOCK FARM.

W. B. Cockburn, Nassagawoya, Ontario.
Breeder of Ayrshire Cattle, Oxford Sheep and
Berkshire Pigs.

I have several choice bull calves from imported
cows for sale, at prices to suit the times; also a nice
lot of shearing Oxford ewes, and some very promising
Berkshire pigs. Write for prices and particulars.

AYRSHIRE BULLS FOR SALE.

One yearling Bull, one two-year-old Bull, Heifer
and Bull Calves. All from choice milking stock.
Prices reasonable. Address,
287 WM. KIDD, Petite Cote, Que.

HIGH-TESTING AYRSHIRES

Our herd has won the dairiestests at the leading eastern
exhibitions for the past two seasons. The famous
Stock Bull GOLDEN GUINEA was for years at the
head of our herd. We breed to produce performers.
Young stock to dispose of. Write for particulars.

ROBERTSON & NESS,
Howick, Que.

AYRSHIRE CATTLE

DAVID BENNING, Glenhurst,

Williamstown, Summerstown Station G.T.R.,
BREEDER OF
Ayrshire Cattle, Leicester Sheep, and Berkshire Pigs.
The bull, Tom Brown, and heifer White Floss,
winners of sweepstakes at World's Fair, were bred
from this herd. Young stock always for sale.

AYRSHIRES FOR SALE.

Young stock of both sexes, sired by Silver King 5809,
and Chieftain of Barcheskis 5302, for sale at reasonable
prices. Write for prices or call and see my stock.
D. DRUMMOND, JR.
Near Montreal. 187 Petite Cote, P.Q.

BRITISH ADVERTISEMENTS.

Secretary to the National Sheep Breeders' Association
of England and the Southdown Sheep Breeders' Association;
Hon.-Sec. Kent Sheep Breeders' Association.

W. W. CHAPMAN,

PEDIGREE LIVE STOCK AGENT
AND EXPORTER.

All kinds of Registered Stock, Horses, Cattle,
Sheep, and Pigs Supplied on Commission.

References—JOHN JACKSON & SON, Abingdon,
Ont.; N. CLAYTON, Salsley, Chichester, Eng.

Offices: Fitzalan House, Arundel St., Strand,
London, England.

Registered address for cables—"Sheepote, London."

SALE OF
REGISTERED SOUTHDownS

This celebrated registered flock, the property of
MR. H. PENFOLD, Selsley, England, will be sold
during August, 1895, without reserve. Breeders,
don't lose this opportunity, a chance of a lifetime, to
buy. W. W. CHAPMAN, Fitzalan House, Arundel
Street, Strand, London, Eng., will execute any
commissions entrusted to him.

Hampshire - Down - Sheep
GREAT ENGLISH PEDIGREE SALES,
JULY, AUGUST, and SEPTEMBER, 1895.

WATERS & RAWLENCE, SALISBURY, ENG.,
will sell by auction during the season upwards of
50,000 PUREBRED EWES, RAMS, and LAMBS
Including both Rams and Ewes from the best prize-
winning flocks in the country. Commissions carefully
executed. Address,
Office, WATERS & RAWLENCE,
The Hampshire Down Sheep-Breeders' Ass'n,
Salisbury, England.

Stock Notes.—Continued.

Mr. W. B. COCKBURN, Aberfoyle, Ont., wishes to
sell several choice Ayrshire bull calves from imported
cows.

MR. JAMES TOLTON, Walkerton, Ont., has three
Shorthorn bull calves for sale, also settings of bronze
turkeys.

MR. JAMES BODEN, manager for Mr. R. Reford,
St. Anne de Bellevue, Que., reports that the cattle are
doing very well, the calves especially so.

MR. THOMAS IRVING, Montreal, writes: I am glad
to say that at my sale, which was a cash one, every
thing was sold. Prices, however, were very low.

MR. H. K. FAIRBAIRN, Rose Cottage Farm, Theford,
Ont., writes: My young things are a nice lot.
The crop of 1891 are three bulls and three heifers
sired by Great Chief 16,595. I have a grand young
bull, twelve months old, red roan in color, sired by a
World's Fair prize-winner, grand-sire Nonpareil Chief,
the sweepstakes bull in the United States in 1894.
The above animal is now for sale.

MR. D. D. WILSON, Seaford, Ont., will sell on
Wednesday, May 15th, his entire herd of Shorthorn
cattle. This herd has made a reputation for itself in
the show ring, and consists of a very choice, well-bred
lot of cattle, principally from the famous herds of Wm.
Duthie, Collynie, and Mr. Wm. Marr, Uppermill,
Scotland, whose herds have a world-wide reputation.
Some bargains may be looked for in both bulls and
females. The sale commences at 1.30 p.m., and convey-
ances will meet all trains.

MR. DAVID MILNE, Ethel, Ont., reports: I have
made the following sales of young bulls this season:
One to Mr. J. L. Wilson, Gorrie, one to Mr. Richard
Amferson, Constance, one to Mr. Wm. Barber, White-
church, one to Mr. Thos. Fear, Clinton, one to Mr.
D. M. Campbell, Poplar Hill; one to Mr. D. M.
Thompson, Cowal; one to Mr. A. McLellan, Dublin;
one to Messrs. P. & A. Bishop, Ethel, one to Mr.
Wm. McNabb, Cranbrook; and one to Albert Carter,
Walton. I have still three choice young bulls for sale
fit for immediate service, also a fine lot of bull calves
coming on for next season.

MR. R. DAVIES, Thorncliffe Farm, Tolmorden,
near Toronto, as announced in our last issue, will offer
for sale by public auction on Thursday, May 16th, at
12 o'clock, noon, his entire herd of very choice Short-
horn cattle. A sample of what may be expected at
the sale will be seen in the cut of the beautiful white
cow on our front page this month. Mr. Davies' fe-
males are a big, massive lot, smooth in conformation,
and good breeders, while among the bulls are the ce-
lebrated imported Cruickshank bull, Northern Light,
and the champion How Park-bred bull, Lord Outhwaite,
a cut of which appeared in our January issue. Buyers
can attend Mr. Wilson's sale at Seaford on Wednes-
day, and take in Mr. Davies' sale the next day.

MR. W. J. BRIDGES, Elmhurst Farm, Clinton, Ont.,
writes: Having sold all my bulls that were ready for
service and for sale, I enclose a change of advertise-
ment. The recent sales since last report are as fol-
lows: Mr. Isaac Erratt, Varna, Ont., purchased the
four-months-old calf, Talisman 20,900, a red, sired by
General Promise 29,765, and from Matchless
Gift, by imported General Booth (54353). He is a
very promising calf, and, from present appearance,
will make a good animal. Mr. Thos. Lane of Bruce-
field, Ont., bought the young Matchless bull, Royal
Albert, bred, sired by imported General Booth (54353);
Jam, Matchless of Elmhurst 10th, a grand cow and
famous milker. Royal Albert is a thrifty, stylish fel-
low, with lots of Shorthorn character and quality, and
is likely to make a prize-winner. We are getting a
nice lot of young calves of both sexes, and expect more
soon, all sired by imported General Booth.

MR. H. D. SMITH, Compton, Que., in sending in a
change of advertisement, reports: Notwithstanding
the long, cold winter we have had, my Herefords have
done exceptionally well. The young stock have de-
veloped and improved very much, the calves have
been numerous, and by far the best lot yet raised at
Ingleside. Amongst the bull calves are some really
choice ones, for instance, Amos and, out of Amy 3rd,
the dam of my noted bull calf of last season, who, by
the way, has turned out to be, if anything, a better year-
ling than he was a calf last fall. Then I have a splen-
did bull out of my silver-medal cow, Lady Tushingham
3rd, and a very promising bull out of Cherry
25th, a full sister of Spot 3rd. This latter has a nice
heifer calf again this year. Things are beginning to
look up once more in the Hereford line, and I am get-
ting lots of enquiries for young stock. The demand
for pigs is very good.

Messrs. E. GAUNT & SONS, St. Helens, Ont., re-
port: We have just sold to Mr. R. Medd, Auburn, the
nineteen-months-old bull, Accident. He is by our
stock bull, Earl of Moray 16,188, dam, Cyrene, a
prize-winner as a calf at Toronto three years ago. He
must prove an impressive sire, as the three top crosses
are noted bulls, viz., his sire, Earl of Moray; grand-
sire, Lord Lovell; great grand-sire, Prince Albert.
We have yet what is probably our best bull, a roan of
December, 1893, show bull in any company, being
thick and massive, yet stylish and smooth withal.
He, too, is from Earl of Moray, dam, Lady Lovell, a
grand cow by Lord Lovell, having great scale and
smoothness. Earl of Moray is making a reputation as
one of the best sires of the breed in the province, as
well he might, descended as he is from the best blood
in Scotland. We have also some very promising fe-
males of his get that must grow into something hand-
some if present appearances are any indication of fu-
ture development. Our herd has wintered in fine
shape, thanks to an abundant crop of turnips, which is
our great stand-by as an economical, healthy food for
all classes of live stock.

No Condition Powders like
Dick's Blood Purifier.

BRITISH ADVERTISEMENTS.

Lord Hastings' Grand Champion Red Polled Bull,
Broadbent 1721, is for sale. He is by Baroloph 977,
out of 2005 Lurch, by Passion 714.

Broadbent won champion and 1st prize at the Royal
Agricultural Society's Show, at Warwick, 1892, and
Reserve for Champion, and 1st prize at Chester, 1893,
and numerous other prizes. He is a rare stock-getter,
and is only sold in consequence of having been used
quite enough in the herd. This is a magnificent
opportunity for any one to obtain the best bull ever
bred.

Some young bulls, cows, and heifers also for sale.

APPLY TO
Estate Office, Melton Constable, Norfolk,
England

F. N. HOBGEN, F.S.I. T. C. HOBGEN, F.S.I.

HOBGEN BROS.

Auctioneers and Cattle Commission Agents,
CHICHESTER, SUSSEX, ENGLAND.

Appointed Auctioneers to the Southdown Sheep
Breeders' Association.

Lincoln Longwool Sheep-Breeders' Assoc'n
Ram Sale, 1895.

The Fourth Annual Sale of Lincoln Longwool Rams
will be held in Lincoln, England, on Friday, Sept 6th,
1895. The Fourth Flock Book is now ready.
Price, 5 shillings.

St Benedict's Square, Stephen Upton,
Lincoln, Eng. Secretary.

SIR THOS. BARRETT LENNARD, Wooding-
dean, Rottingdean, Brighton, England.

Large White pigs of prize-taking blood, bred entirely
from the stock of Sanders Spencer, Walker Jones, and
Duckering, and Berkshire pigs from the stock of
Benjafield. Boars, yeltes, and sows always for sale at
very moderate prices.

KENT OR ROMNEY MARSH SHEEP.

The Walmer Court Flock, established in 1852,
duly registered and recorded in "The Flock Book of
the Kent or Romney Marsh Sheep-Breeders' Ass'n-
ation," has long been considered a leading flock, and
has won over \$2,500 at the R.A.S.F., and other lea-
ding shows. Inspection and enquiries invited. Apply
to the owner,

H. PAGE, Walmer Court, WALMER, KENT,
ENGLAND.

Southdown Sheep-Breeders' Association
of England.

THE ANNUAL SHOW AND SALE OF RAMS,
Ram Lambs, and Ewes will be held at CHICHESTER,
ENG., on August 7th and 8th, 1895. A Second
Sale will also be held at LEWIS, ENG., in September,
1895.

All enquiries, etc., in relation thereto to be addressed
to

W. W. CHAPMAN,
Fitzalan House, Arundel Street, Strand,
London, England,
who will execute any commissions entrusted to him.

LORDS A. & L. CECIL, Orchardmains, Ton-
bridge, Kent, England,

Breeders of Clydesdales, and successful exhibitors of
the same at all the chief shows of Great Britain.
Numerous prizes have been won in the closest com-
petition. Only the best and most fashionable strains
are kept. The stud, which can be seen at any time,
is always kept in a natural condition and is under
the direct personal management of the owners. The
whole of the colts and fillies, being reared in a hardy
way, can be thoroughly recommended. Mares, colts,
and fillies always for sale. Foreign orders executed,
and stock shipped by experienced men.

REGISTERED SOUTHDownS,

Flock No. 6, Southdown Flock Book.

Property of F. N. Hobgen, Appledram,
Chichester, Sussex, England.

Sheep always for sale. Inspection invited. The
best only are kept. Specialty, good wool and mutton
combined.

JAMES LAWRENCE STALL, Pius' Farm,
Shrivenham, Bucks., England

REGISTERED
Registered Berkshire Pigs, from stock
unsurpassed for true characteristics, size,
and quality. One of the oldest estab-
lished herds in England.
Enquiries Solicited - Prices Moderate

BRITISH ADVERTISEMENTS.

JOHNA NEMPSON

EWARTON HALL,

IPSWICH, ENGLAND.

A very old established flock of Southdown sheep
bred with the greatest care from the best strains of
pure blood for more than forty years. Pedigrees care-
fully kept during the whole time. Rams and ewes
always for sale.

MUTTON SHEEP.

PUREBRED SUFFOLK SHIRRE, from registered flocks,
for exhibition or exportation. Full particulars may be
obtained upon application to the Secretary of the
Suffolk Sheep Society. Address

ERNEST PRENTICE,
Auctioneer and Commission Agent,
Stowmarket, England.

GEORGE JONAS

DUSFORD, CAMBS, Eng.

Flock of 500 pure Southdown ewes—individual
pedigrees of ewes and rams recorded for several
generations—contains much of the Webb blood and
strains from some of the purest flocks.

SIR THOS. BARRETT LENNARD, Wooding-
dean, Rottingdean, Brighton, England.

Registered Southdown Flocks 7 and 8 at Belhus in
Essex and Woodingdean in Sussex. Winner of many
prizes, including the gold medal given by the Emperor
of the French at Poissy; first prize, Fat Stock Show
Lewes, 1892, and commended at Chichester, 1892.
Full pedigrees kept, and all ewes numbered.

PAGHAM HARBOUR CO.,
Selsley, Chichester, England.

Flock of 1,000 ewes, winners Southdown Challenge
Cup in 1893-4, 1st prize Wool; Jubilee, Royal, and
Royal Prize Ram Lambs in 1892-93-94.

Registered Red Poll Cattle

PROPERTY OF
LORD HASTINGS, Melton Constable,
NORFOLK, ENGLAND.

Bulls, cows and heifers always for sale. Messrs.
Miller & Co, of Nebraska, celebrated cow RUMKKA came
from this herd. Pedigree Tamworth pigs also for sale.
Inspection invited. Quotations given. Apply Estate
Office, Melton Constable, Norfolk, England.

SUSSEX CATTLE.

Pedigree Sussex cattle descended from the oldest and
best strains of blood (first prize for bull and also for
cow at County Show, 1894), also registered Southdown
sheep (Flock No. 25 S.D.F.B.), for sale at reasonable
prices. Apply to the owner

T. BANNISTER, Ilmehurst,
Hayward Heath, Sussex, England

H. T. LOCKE-KING, Brooklands, Weybridge,
England.

Registered Southdown Flocks, 10 and 11.

Ewes individually numbered and full individual
pedigrees of every sheep recorded in private flockbook.
Rams and ewes always for sale, descended from all the
best and purest blood. Shire horses also kept, bred
from noted prize-winners.

KIDNER EDWIN,

LICENSED VALUER AND SALESMAN,
BREEDER OF

Registered Dorset Horn Sheep, Shropshire Sheep, and
Devon Cattle.

All commissions personally executed. Address:
MANOR FARM,
Cotchelestone, Taunton, Somerset, England.

Messrs. J. R. & R. R. KIRKHAM . . .

Own a flock of about 2000 Lincoln sheep, having
always rams and ewes for sale. Individual
pedigrees recorded, and given with every animal.
Enquiries and inspection solicited. Address

Biscathorpe House, Lincoln, England

The Household Companion is included with THE
JOURNAL in the subscription price of \$1 per year.

HOLSTEINS.

HOLSTEIN-FRIESIAN CATTLE.

For Sale, two extra bulls from the best milking strains, at prices to suit the times. Correspondence solicited. **JOHN MCGREGOR,** Constance P.O. Londonboro Station.

HOLSTEINS

FOR PRICES ON
F. A. FOLGER
RIDEAU STOCK FARM
BOX 577 KINGSTON, ONT.

HOLSTEIN-FRIESIANS
H. BOLLERT, Cassel, Ont.

I now offer for sale several very choice bulls fit for service; they are of rare breeding, with great milk and utter records to back them. Also females of all ages and A breeding at prices that are right. Remember the best are the cheapest. Come and see them, or write for prices and full particulars.

REGISTERED HOLSTEINS

FOR SALE BY
ELLIS BROTHERS,
BEDFORD PARK P.O., ONT.
3 miles north of Toronto, Yonge Street. Electric car bring you to our gate.
Inspection Invited and Correspondence Solicited.



Fairview Farm
E. PANNABECKER
Breeder of Grand Milking Registered Holstein Cattle. A specialty in females of all ages at present.
244 Hespeler, Ont.

BROCKHOLM HOLSTEINS



Netherland Romulus, a grandson of Netherland Prince and Albino and, at the head of herd. Original stock cows all imported from Holland. Also Improved Large Yorkshire Pigs of the best strains. Young Stock for Sale.
R. S. STEVENSON, ANCASTER P.O., ONT.

HOLSTEIN-FRIESIAN CATTLE FOR SALE.

Five extra good bull calves fit for service, and one two-year-old heifer in calf, at reasonable prices. Come and see them.
Wm. SUHRING, SEBRINGVILLE, Ont.

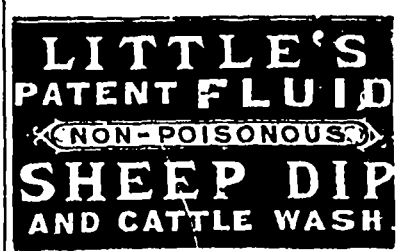
POLLED ANGUS.

THE HOME OF THE DODDIES.



Hardy Hornless
Healthy Handsome
We have still some very fine bull calves, and one bull just two years old, dam Mysie of Verulam, sire Runny male and, that grandly bred treble Ruth bull, which we will sell at a bargain to make room; also females, all ages. Farm 1/2 miles from Sarnia Tunnel Station. Give us a call.
WM. STEWART, SON, WILLOW GROVE FARM, Lucasville P.O., Lambton Co., Ont.

TO STOCKMEN AND BREEDERS



For the destruction of Ticks, Lice, Mange, and all Insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc. Superior to Carbolic Acid for Ulcers, Wounds, Sores, etc.
Removes Scurf, Roughness and Irritation of the Skin, making the coat soft, glossy, and healthy.
The following letters from the Hon. John Dryden, Minister of Agriculture, and other prominent stockmen, should be read and carefully noted by all persons interested in Live Stock:
"MAPLE SHADE" HERDS AND FLOCKS.
BROOKLIN, ONT., Sept. 4th, 1890.
DEAR SIR,—I cannot afford to be without your "Little" Sheep Dip and Cattle Wash. It is not merely useful for Sheep, but it is invaluable as a wash for Cattle, etc. It has proved the surest destroyer of lice, with which so many of our stables are infested, I have ever tried; it is also an effectual remedy for foul in the feet of Cattle. I can heartily recommend it to all farmers and breeders.
JOHN DRYDEN.

17 Gold, Silver, and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world.
Sold in Large Tins at \$1.00.
Special terms to Breeders, Ranchmen, and others, requiring large quantities.
Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to

ROBERT WIGHTMAN, Druggist, Owen Sound.
Sole Agent for the Dominion.

HOLSTEINS.

FOR SALE.
Three Registered Holstein Yearling Bulls, fit for service. Dams Heavy Milkers.
Terms Reasonable. Address,
JAMES RAE, Avonton, Ont.

Brookbank Holsteins Won Milk Test at Toronto, both 1st and 2nd prizes. Silver medal for best female, any age. Prizes in every female section, from cow to calf inclusive.
At the Great Fairs, first and diploma, best bull, any age; also first prize and diploma, best herd, at Ottawa.
All our Prize Winners in the two-year-old, one-year-old and calf sections were bred at Brookbank. All ages for sale. Special bargains in choice bred bulls and heifers from prize winning stock.
Also Poland China pigs, sired by a World's Fair prize winner.
Write for particulars. Visitors welcome.

A. & G. RICE,
Currie's Crossing P.O. and Station
Six miles south of Woodstock, Oxford Co., Ont.
165

SPRING BROOK STOCK FARM.
Holstein-Friesian Cattle, Improved Yorkshire and Tamworth Swine. Bargains in Holsteins; special in calves. Stock of all ages for sale; best strains. Great choice in Tamworths. Ask at once for prices.
A. C. HALLAM, Now Dundee, WATERLOO CO., ONT.

JERSEYS.

JERSEY BULL CALF FOR SALE.

Calved 26th July, 1894, handsome, solid, dark fawn, black tongue and switch. Sire, Exciter 3362 Dam, Matriona of St. Lambert 87204. The dam is granddaughter of the famous Canada's John Bull 8368. Also some fine registered Berkshire pigs.
234 WILLIAM CLARK, Meyersburg, Ont.
A subscription to THE JOURNAL is the best \$1 investment any farmer or stock-raiser can make.

Stock Notes.—Continued.

Swine.
Mr. J. L. RYAN, Ingersoll, Ont., advertises Tamworths in this issue.
Mr. ANDREW DUNN, Ingersoll, Ont., can supply buyers with good Tamworth pigs.
Mr. JAMES SMITH, Maple Lodge, Ont., has a splendid lot of Berkshires to dispose of.
Mr. JAMES H. SHAW, Simcoe, Ont., has spring litters of Chester Whites and Berkshires on hand.
Messrs. BENNETT & PARRO, Charing Cross, Ont., have a full stock of Chester White pigs and several varieties of poultry, as can be seen by their advertisement.

Mr. E. B. KOLD, Berlin, Ont., is another breeder who has a good line of Tamworths, which he advertises in this issue.
Mr. ANDREW ELLIOTT, Pond Mills, Ont., has Tamworth pigs, Oxford Down sheep, bronze turkeys, besides geese, ducks, and poultry, for sale.
CALF A. W. YOUNG, Tupperville, Ont., who I have lately sold five cows, bred for May litters, and have one left, due to farrow about July 1st. I am breeding four others for August sales. The imported silver gray Dorking cockerel that I bought from Mr. Daniels, Toronto, is a beautiful bird, and should give good results, to the satisfaction of my customers.
Messrs. HERRON & DABOR, Avon, Ont., write: Our sales for the last two months have been very satisfactory, as follows: Fourteen Tamworths, nine Poland China, and four Chester Whites. We still have a choice lot of spring pigs of Tamworths, Poland Chinas, and Chester Whites. Pairs furnished not akin. We aim to give as good satisfaction by shipping to order as though a man saw the pigs before they were shipped.

Sheep.
Mr. H. PRYOR, Selby, England, will dispose of his entire flock of Southdowns during August.

Messrs. HINES & FINLAYSON, Dutton and Glencoe, Ont., advertise Oxford Downs and Yorkshire pigs.

Mr. HENRY ARKELL, Arkell, Ont., a review of whose flock appears in this number, places his advertisement with us.
Messrs. JOHN COUSINS & SON, Buena Vista Farm, Harriston, Ont., writing at date March 25th, report: Lambs are coming fast, but they are good and strong. Feed is rather scarce. We have sold all our young bulls, and have lots of enquiries for young animals, thanks to THE JOURNAL.

Messrs. TURNER & JULL, Mount Vernon, Ont., write: Although the winter has been a very severe one, our flock of Oxford Downs has come out in grand shape. Our ram, Perfection (imp.) 8643, has given us a crop of lambs of very excellent quality, both this year and last. Enquiries for Oxford Downs are largely on the increase, as breeders find that they are a very fine mutton sheep, besides carrying a heavy fleece of medium fine wool, and their great hardiness makes them very desirable.
Mr. S. P. GOUNKY, Woodstock Stock Farm, Yarmouth, N.S., in the course of a business letter, says: Your paper is well got up, and is very interesting and instructive. My Leicester ewes began dropping their lambs on March 25th. Since that date a large number have been dropped, and I can now report 140 per cent. of live lambs. My Shropshire ewes began dropping their lambs on April 1st, and a stronger lot I never was my privilege to see. Orders are already beginning to come in for fall delivery, and the outlook for a good season is favorable. I have grown peas and oats for two years with splendid results. In August, 1893, I filled my silo with them, and the ensilage was excellent. I fed it out to breeding ewes and Jersey cows and heifers with great satisfaction. I shall fill the silo again this season with the same mixture.

Messrs. E. GAUNT & SONS, St. Helens, Ont., say: Our Leicesters for the past month have been "doubling up," and we have now a fine, thrifty crop of lambs. We have not yet lost a lamb. We have lambs now weighing 80 lbs. at ten weeks. We have a fine lot of shearing rams and ewes. Our seven rams on March 15th last averaged 20 lbs. each at twelve months, and on April 3rd, when shorn, averaged 14 1/2 lbs. of comparatively clean wool to each sheep. A breed of sheep that will make such development without forcing is quite good enough for us, and goes to prove that the Leicester is a sheep well adapted to our soil and climate. Turnips have been our main feed in feeding sheep through the winter, without which we think it impossible to make a marked success in sheep-breeding, as sheep seem to demand a succulent food in abundance to maintain thrift and perfect health.

Mr. W. W. CHAPMAN, London, Eng., our representative in Great Britain, has recently personally inspected the flocks of our regular advertisers, Messrs. Locke-King, Bagham, Harlow Co. and H. Penfold, and he reports that the whole of these flockowners have indeed a grand lot of shearlings, lambs, and older ewes for sale. Sheep are very dear in England, and there is a very active demand for all kinds of ewes, lambs, and store sheep. Mr. Chapman has recently sold an excellent selection of registered ewes for \$15 per head for the foundation of a new flock of Southdowns. He writes that the recently-formed Kent or Romney Marsh Sheep Breeders' Association has made rapid strides, and is certain to be a success. Our sheepmen should get a trial lot or two of these sheep over, for we are informed that wherever they go, they go to stay.

All Stock Raisers use Dick's Universal Medicines

JERSEYS.

JERSEY COWS.

Heifers in calf, heifer calves, and bull calves. Handsome, richly bred, good color, and in fine condition. Come and see, or address

J. C. SNELL, Edmonton, Ont.
R. R. Station, Brampton, G.T.R. and C.P.R.

FOR SALE. A.J.C.C. JERSEY BULL

ERIC KING OF RIVERVIEW, No. 364 3, dropped Dec. 3, '94. SILVER JACK. FAVORITE OF RIVERVIEW. Gave 31 lbs. of milk a day as a 2-year-old.
He is a pure St. Lambert, solid color, black tongue and switch; also a great-grandson of Ida of St. Lambert, whose record was 30 lbs. 2 oz. of butter in seven days.
For price and pedigree address
A. T. MACARTNEY, Dunnville, Ont.

FOR SALE. A. J. C. C. JERSEY BULL CALF.

Dropped Nov. 12th, 1894. Solid color, black points. Combines close up to blood of Ida's Roter of St. L., 10 tested daughters.
Stoke Pogis, 27 " "
Tormentor, 33 " "
Ida's Stoke Pogis, 23 " "
Pedro, 21 " "
Ida of St. L. tests 30 lbs. 2 oz.
Allie " 26 " 12 oz.
Oonan " 22 " 2 oz.
Eurotas " 22 " 7 oz.
For particulars and prices, write
H. FRALEIGH, - St. Marys, Ont.

SHEEP.

1881 SHROPSHIRE 1881

Our flock, the oldest Shropshire flock in Canada, was founded in 1881. Importations made from time to time, selected in person from best English flocks. This season's lambs are a strong lot, dropped in January and February. Orders can now be taken for pick.
J. COOPER & SON, Kippen, Ont.

A Choice Lot to Pick From.

Consisting of Ram and Ewe Lambs, and Ewes in Lamb. The finest lot of Shropshire Lambs we ever bred, and you cannot object to the prices we ask. Let us hear from you.
Allen McPherson, 219 Forest, Ont.

SHROPSHIRE FOR SALE

A choice lot of shearing rams, ewe and ram lambs. A few rams two and three years old.
Also young Yorkshire pigs, all ages.

T. H. MEDCRAFT, Sparta, Ont.
Eight miles from St. Thomas, Ont.

Oxford Downs.

Our flocks are composed of imported sheep, or sheep directly descended from imported stock. Choice ram lambs, sired by the Royal winners, Royal Warwick 3rd and "Bath and West." Also choice Yorkshire pigs, principally of Walker Jones' breeding.
Railway Stations, Dutton, on M.C.R. Glencoe, on G.T.R.
R. J. HINES, Dutton.
K. FINLAYSON, Campbellton.

SHEEP.

FOR SALE

SHROPSHIRE RAMS,
AND
YOUNG SHORTHORN BULLS
(Registered)

Also a few females. Apply to
C. H. IRVING,
Box 288, Newmarket, Ont.

MONTROSE STOCK FARM

Breeder of Shorthorns (Waterloo Booth strains), Shropshires, Berkshires, Bronze Turkeys, and Fancy Plymouth Rocks. I make a specialty of raising Swede Turnip Seed, warranted fresh and 1/2 lb. sufficient per acre. The best quality of turnips grown. Write for prices.
HORACE CHISHOLM, Paris, Ont.



T. W. HECTOR
The Cottage,
Springfield-on-the-Credit, Ont.
Breeder and Importer of
DORSET HORN SHEEP
And dealer in
Saddle and Carriage HORSES.
Stations: Springfield, C.P.R., and Port Credit, G.T.R.

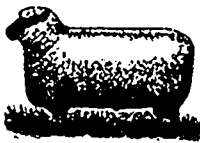
LEICESTERS.

In strong competition at leading fairs our flock won high honors. We will dispose of a number of choice ewe and ram lambs. Also good breeding ewes in lamb. Write us for particulars.

E. ARCHER & SONS,
Warwick, Ont.

SPRINGBANK STOCK FARM

SHORTHORN CATTLE, OXFORD SHEEP, BERKSHIRE PIGS, AND BRONZE TURKEYS.
Three Bull Calves for sale, sired by a grandson of Indian Chief. Good animals. Prices to suit the times.
Having made some additions to our breeding pen of Bronze Turkeys, we will be prepared to offer eggs for settings from stock of the best quality. Price, \$2.50 per 13.



JAS. TOLTON, Walkerton, Ont.

The Largest Lincoln Flock in Canada!

Our breeding ewes, 150 in all, are from the best English flocks. Our last importation was made from the flock of Mr. Henry Dudding, and were all personally selected. If you want a ram or a few ewes, send along your order. If you want shearlings or lambs of either sex, we can supply you with the very best.

J. F. GIBSON, Denfield, Ont.
W. WALKER, Hderton, Ont.
On London, Huron & Bruce Railroad.

FAIRVIEW'S SHROPSHIRE.

I can now book orders for lambs sired by the Columbian champion, Newton Lord. Many of them have for dams first-prize winners in Canada, England, or at the great World's Fair. A few late 1894 lambs of similar breeding are now offered for the first time. Among them is a ram by Newton Lord, and out of the two-year-old first-prize ewe at the World's Fair, which won, in all, four firsts at that great show. No one wanting something choice will be disappointed in paying Fairview a visit. A personal selection preferred.
Come or Write.

JOHN CAMPBELL,

Fairview Farm,
WOODVILLE, ONT. CANADA.

Whiteside Bros.,

The Glen, Innerkip,
Oxford Co., Ont.

Shropshires—Yearlings and lambs. Berkshires—Breeding stock, both sexes. Ayrshires—Three excellent bull calves for sale.
In writing mention this journal.



SHEEP.

SYLVAN AND BRANT STOCK FARMS.

We have a very choice flock of Oxford Down Sheep from which we have a very superior lot of ram lambs imported rams.

Flock is registered. Personal inspection solicited.

Turner & Jull,
125 Burford, Ont.



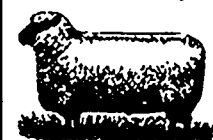
BUENA VISTA FARM, - HARRISTON, ONT.

Breeders of improved large Yorkshire Swine, milking Shorthorns, Oxford Down sheep, and Plymouth Rock fowls. Some fine young Yorkshires now for sale. Write for prices.

JOHN COUSINS & SONS,
71



SMITH EVANS, GOURCOCK, ONT.,



BREEDER and IMPORTER of Registered Oxford Down Sheep
Importation for 1893 arrived August 4th, selected from some of the best flocks in England. Stock for sale at reasonable prices.

156

SWINE.

PLEASANT VIEW HERD



Purebred Tamworth Sows in pig to (Imp.) Birmingham Hero. Also fine young stock of both sexes. Pairs not akin. For particulars apply to

E. B. KOLB, - Berlin, Ont.

The PINE GROVE HERD of DUROC-JERSEY SWINE

I have a few choice boars fit for service; also a few choice young pigs of either sex, ready for shipment. Can supply pairs not akin. Prices reasonable, and satisfaction guaranteed. Inspection invited and correspondence solicited. Address,

CHARLES ANSTICE, Springford, Ont
B. & T. Railway. 354

FOR

Chester Whites

All ages, and at prices in accordance with the times, write to

JOS. CAIRNS,
CumInchto, Ont.
375

YOUNG REGISTERED BERKSHIRES

Bred from imported stock, for sale at right prices. Now ready for shipping. All stock guaranteed as represented. Write, or come and see the stock.

H. G. CLARK,
111 Brampton, Ont.



- Large English Berkshires for Sale -

Three sows in pig, also young stock, both sexes. Address

R. J. DIXON,
273 Gleneden, - Ontario.

"Your paper is always welcome to our home, to myself and family. Am sorry that more of my neighbors do not see fit to take it. Of course the plea is that money is so scarce, but I think the little money is well invested."
DONALD FRASER, Emerson, Man.

SWINE.



E. D. GEORGE
PUTNAM, ONT.

Importer and Breeder of
OHIO IMPROVED
CHESTER WHITE SWINE

The largest and oldest established registered herd in Canada. I make this breed a specialty and furnish a good pig at a fair price. Write for prices. 291

ELMDALE TAMWORTHS



Boars fit for service. Sows ready to breed. Also a choice lot of spring pigs, all from prize-winning stock. Pairs furnished not akin. All stock registered.

JOHN C. NICHOL,
Hubrey, Ont.

FINEST STRAINS
LONG ENGLISH
BERKSHIRE
PIGS

BOW PARK

'JOANETTE'
OATS
BOW PARK CO. (LTD.)
BRANTFORD
CANADA.
277

Canada Wilkes.

A first-class specimen of the most fashionable strain of Poland Chinas in the world at head of herd.

Stock of all ages for sale at hard-time prices



Send for illustrated catalogue of
POLAND CHINAS,
POULTRY,
and **RASPBERRY PLANTS**
(In season)
Correspondence solicited, and personal inspection invited. Address,
CAPT. A. W. YOUNG,
Tupperville, Ont.
392

Red Tamworths, Yorkshires, and Ayrshire Cattle.

Tamworths, all ages, of good quality and best of pedigree.
Five Yorkshire Sows, 5 months, registered, crated F.O.B. \$15.00 each, good individuals.
Ayrshires of the very best strains. All ages, of either sex.

CALDWELL BROS.
Briery Bank Farm, 217 ORCHARD, ONT.

BERKSHIRES

of the best strains, not akin, from a number of grand sows and three different boars, 24 first prizes won this season, all ages, for sale, including sows in farrow.

W. McALLISTER, Varna,
BRUCEFIELD STATION, Huron Co.

MAPLE LEAF FARM

IMPROVED LARGE YORKSHIRES

Markham Baron, the sweepstakes, Larrow over 11 breeds at Fat Stock show at Guelph in 1892, was bred by us. A choice lot of young sows, old enough for mating. Also young boars. Pairs furnished not akin. Only first-class stock shipped.



JOHN PIKE & SON,
Locust Hill P.O., C.P.R., Markham G.T.R.

I highly prize your paper, and consider the information you impart invaluable to the general farmer. Long may you prosper in the good work.—CURTIS-TOPHER MARTIN, Eganville, Ont.

SWINE.

THOMAS DOLLIN & SON
Chatham, Ont.

Importers and breeders of Ohio Improved Chester White Swine. Young stock of above always for sale. Satisfaction guaranteed, and prices to suit the times. Pedigrees furnished with all sales, and nothing but first-class stock shipped. Four choice broad sows for sale, registered. Correspondence solicited.
205



Ontario Central Herd of Improved Chester Whites.

A few choice show boars and sows from two of the best sows in Ontario, and sired by (imp.) White Lord, also a few extra good imported Duroc Jersey and their produce from the best herds in the United States. Satisfaction guaranteed.

WM. BUTLER & SON, Dereham Centro.

DUROC JERSEY SWINE.

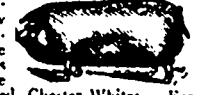
We have a fine lot of first-class young pigs of either sex, also a few young sows ready for breeding, all are bred from imported and prize-winning stock. Can supply pairs not akin. Before buying come and inspect our stock or write for prices.



169 TAPE BROS., Ridgeway, Ont.

THE PINE VIEW HERD.

Chester White and Berkshires spring litters now ready for shipping at reasonable prices. Would like to clear all Berks off this month, as I intend to make a specialty of the one breed, Chester Whites. For further particulars, write



168 JAS. H. SHAW, - SIMCOE, ONT.

Norfolk Herd of Registered Poland Chinas

Several very fine young sows bred to my imported boar due to farrow in March and April. Also pigs from six weeks to three months old. Breeding stock selected from some of the best herds in Ohio and Canada.

Prices low, considering quality of stock.
R. WILLIS, Jr.,
Box 36, GLENMEYER, Ont.
168

The Spruce Grove Herd of Tamworths and Yorkshires.

We offer young sows ready to breed, and fit for service, of either variety, of best breeding and individual merit, at right prices. Stock heavy. Call and inspect, or write for prices.



J. F. MASTER,
New Dundee, P.O.; Baden, G.T.R.; Drumbo, C.P.R.
233

The Avon Herd of Registered Tamworth, Chester White, and Imported Poland China Swine.

We have still some choice Tamworth Boars and Sows, fit for service. We have a choice lot of spring pigs of Tamworths, Poland Chinas, and Chester Whites; pairs furnished not akin.

HERRON & DAFOE, Avon, Ont.
231

LARGE ENGLISH BERKSHIRES.



My breeding stock have been selected from the best English herds. Two imported boars, and eight imported sows all breeding. Pigs of all ages to select from.

ISRAEL CRESSMAN,
NEW DUNDEE, Ont.
230

TAMWORTH SOWS.

Bred to farrow in March, pigs not akin, four months old, extra good, from prize-winning stock.

POLAND CHINA BOARS.

Fit for service. Prices moderate. Come and see me, or write.
FRANK ROW, Avon, Ont.
299

SWINE.

J. G. MAIR, Dealer and Importer
of
**Improved Largo York-
shire Pigs.**



For the spring trade I will breed from nothing but imported stock of good quality. Write early and get prices for March and April litters, which will be found very reasonable. Pairs supplied not akin. Railroad station and P.O.

HOWICK, QUE.

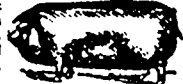
BERKSHIRES.

A CHOICE lot of sows for sale, bred to farrow in February and March, and some to breed yet. A few boars fit for service. Young pigs of various ages. Call and see stock, or write for prices and description.

J. H. SIEFFERT,
NORTH BRUCE, ONT.

DANIEL DeCOURCEY, Bornholm, Ont.
IMPORTER AND BREEDER OF
OHIO IMPROVED CHESTER WHITE SWINE

Young Stock of above always for sale. Satisfaction guaranteed. All prices right. Pedigrees furnished with all sales, and nothing shipped but first-class stock.




Young Registered Berkshires.
NITHSIDE FARM.

A choice lot of young registered Berkshires for sale. Ten sows seven months old, in pig by an extra good boar of the modern type; also six boars from five to seven months old at prices to suit the times. A grand lot of young ones two months old. Satisfaction guaranteed.

E. E. MARTIN, Canning, P.O.
Paris Station, G.T.R., Ont.

YORKSHIRE PIGS

of the best type and breeding. Pairs not akin now ready.



Also ROAD AND CARRIAGE HORSES, bred at Kingston Road Stock Farm.

J. M. HURLEY & SON, Belleville, Ont.
Box 547.

The Home of the Poland Chinas

We have the best herd of Poland China Swine in Canada. Our herd won all the sweetest diplomas and medals at the 22 out of 26 first prizes at the three largest fairs in Canada in 1904. Our herd is headed by Darkness Quality, the winner of first prize in his class over 41 entries at the World's Fair in Chicago in 1893. Young stock for sale at all times. Prices reasonable and stock guaranteed to be as represented.

W. & H. JONES,
Mount Elgin, Oxford County, Ont.

ESSEX COUNTY HERD OF POLAND CHINAS.

I have still a few boars left fit for service, and a few sows ready to mate, which I will sell cheap, in order to make room for fall pigs, of which I have a nice lot, and expect more soon.

I give a registered pedigree and guarantee every pig to be as represented.

H. H. McMullen, Goldsmith P.O., Ont.

Large English Berkshires

FOR SALE—A number of good boars, from 1 to 11 months old; some have been serving. Young pigs from choice sows now farrowing. Some fine sows in farrow by choice boars of great size. Pigs from 3 to 6 weeks old on hand. All registered stock. Prices right. Call and examine stock of write.

C. R. DECKER,
CHESTERFIELD, Ont.

KEEP YOUR EYE ON THIS SPACE



MAPLE LANE FARM.
One mile north of Claremont, on C.P.R.


Choice young boars from three to nine months old. Young sows imported and homebred, bred to three imported boars. A fine lot of ten just farrowed; four imported sows to farrow.

Special rates by express. All stock guaranteed as described. Visitors welcome.

C. T. GARBUTT,
Claremont, Ont.

SWINE.

The HURON HERD OF REGISTERED POLAND CHINAS.




Young stock from prize winning strains at the leading shows. Have a number of first class young boars and sows, six weeks old. Can supply pairs not akin. All stock registered or eligible. All stock guaranteed as described. Prices to suit the times. Write for particulars and prices, or call.

WESLEY W. FISHER,
Benmiller, Ont.; Goderich Station.

RED TAMWORTH PIGS.

Red Tamworth Pigs of the best strains. Stock of my breeding has taken highest honors at the Industrial and other shows this season. Young boars and sows of all ages now on hand. Pairs furnished not akin.



LEVI MASTER,
Haysville, P.O. New Hamburg, G.T.R.

THE MAPLES HERD OF PUREBRED TAMWORTHS.



A fine lot of young sows just the age for mating; young boars ready for service; a great choice in weaning pigs.

J. L. REVELL, Putnam, Ont.

RED TAMWORTHS.



My breeding herd is almost all imported. The noted English herds are represented. Boars and sows old enough for mating, also some good spring litters all ready for shipment. Correspondence solicited.

ANDREW DUNN, - Ingersoll Ont.

FRANCIS RUSNELL,

Mount Forest, Ont.
Breeder of Improved Large Yorkshire pigs. Young boars and sows of good breeding for sale. Prices to suit the times.



BERKSHIRES FOR SALE

My Berkshires have secured a large number of the most important prizes at Toronto, Montreal, and London exhibitions in 1893; also several prizes at the Fat Stock Show in Guelph, including sweepstakes for best purebred sow of any age or breed. A choice lot of all ages for sale. Please mention THE LIVE STOCK JOURNAL.

GEO. GREEN, Fairview P.O.
Stratford Station and Telegraph Office.

Ohio Improved Chester and Tamworth Swine.

Our herd of Improved Chester Whites have won more sweepstakes for the past five years at the large exhibitions of Ontario and Quebec than all other herds combined in the Dominion, also including the sweepstakes over all all breeds at Fat Stock Show, Guelph, 1894.

Our Tamworths are selected from the best herds in England, and winners of several of the best prizes at the large exhibitions of Ontario, including the sweepstakes, Ottawa, and Fat Stock Show, Guelph, of 1894. Have thirty imported and homebred sows of the above herds, bred to imported boars, for spring trade, also a few boars fit for spring service. Orders booked for spring pigs in pairs or trio, not akin. Reduced rates by express. Prices away down for the next 30 days.

H. GEORGE & SONS,
Crampton P.O., Ont.

POPULAR HILL HERD OF REGISTERED Poland China and Tamworth Swine.




A few good September and October pigs for sale. Also one good P.C. show sow, one year old last September. The sows that I bred for March and April pigs are first-class aged sows, and nothing but good pigs will be shipped on order. Prices reasonable.

WM. ROW, Avon P.O., Ont.

"I am well pleased with the results of my advertisement in THE LIVE STOCK JOURNAL, and wish you every success with your paper." **J. G. MAIR, Howick, Que.**

SWINE.

ASHTON GRANGE FARM.



Improved Yorkshire and Berkshire Swine. Young stock from prize winners at leading shows or pairs of either breed now ready for shipment.

WM. TAIT,
St. Laurent, P.O. Near Montreal.

MEDAL HERD OF 1894.

Chester White Swine and Dorset Horned Sheep of all ages, for sale at prices to suit the times.

R. H. HARDING, Thorndale, Ont.
Middlesex County.

POLAND CHINAS.

My Herd
Is composed of the most popular strains of imported prize-winning blood. I now have a number of

Superb Young Sows

due to farrow in May or June. Others ready to mate. Also young boars. Satisfaction guaranteed, and prices to suit the times.

OLIVER DRURY,
FARGO, ONT.

JOSEPH FEATHERSTON, Pine Grove Farm, STREETSVILLE Post Office and

Telegraph (late Springfield-on-the-Credit, Ont.), importer and breeder of Improved Large White Yorkshire and Essex swine. This herd obtained twenty first, nine second, five third, and four fourth prizes at the World's Fair, Chicago, 1893. I have now on hand a choice lot of Yorkshire sows, from the first prize sow, and out of some of the sweepstakes sows; also a limited number of first-class young boars fit for service this fall, and fifty breeding sows, which I am breeding to Haskel (1893), Halton King (1894), and the boar Holywell Ives, bred by Sanders Spencer, England, just imported in July last, selected for me by J. G. Snell, Edmonton, as the best boar in all England.

63 CHESTER WHITE SWINE. REGISTERED STOCK.



Toulouse Geese, Pekin Ducks, Bronze Turkeys, eggs \$1.50 per 11. Partridge and Buff Cochins, Plymouth Rocks, Silver Gray Dorkings, Golden Silver, and White Wyandottes, Brown and White Leghorns, Black Hamburgs, American Bantams, Black Red and Black Sumatras, and Indian and Pili Games; eggs, \$1 per 11. Will mix sittings if desired; also a few pairs of Wild Turkeys for sale.

G. BENNETT & PARDO,
Charing Cross, Ont.

HORSES.


ROBERT NESS

IMPORTER AND BREEDER OF
CLYDESDALES
FROM THE BEST STUDS IN SCOTLAND.
English and French Carriage Horses, Shetland Ponies, and Ayrshire Cattle.

WOODSIDE FARM,
HOWICK P. O., Que.

—IMPORTED— Clydesdale and Hackney Stallions

FOR SALE.
Highest Prize-winners in the Leading Shows of the World.



And the gets of famous sires, such as Lord Erskine, Darnley, Old Times, McCamon, Garnet Cross, Prince Edward, Prince Henry, Sir Windham, Good Hope, Firaway, and Macgregor.

Prices reasonable. Catalogues furnished on application.

ROBERT BEITH & CO.,
Bowmanville, Ont.

67 Bowmanville is on the main line of the G.T.R., 40 miles east of Toronto, and 294 west of Montreal.

POULTRY.

W. J. STEVENSON, OSHAWA, ONTARIO.

BREEDER OF
**GOLDEN AND WHITE WYANDOTTES,
WHITE LEGHORNS,
WHITE PLYMOUTH ROCKS.**

I have been at it for 15 years, and will cheerfully give my experience to beginners who send stamp for reply. One pen of white Plymouth Rocks for sale.

EGGS, \$1.00 for thirteen.

CANADA'S BEST

ARE IMPORTED, BRED, AND SOLD BY
JOHN. J. LENTON,
Park Farm, - Oshawa, Ont.

EGGS FOR HATCHING, from grand pens of White, Silver, and Golden Wyandottes, Barred and White Plymouth Rocks, at only \$1 per pair, or \$1.50 per fifteen. Also Bronze Turkeys of immense size; eggs, 25 cents each, or \$1 per thirteen. My birds are bred for use as well as for show; so if you want to be sure of success, you need eggs from this stock. No birds for sale until after July 1st.

I am Canadian agent for the celebrated
WEBSTER & HANNUM BONE-CUTTER.
Send to me for catalogue.

PINE TREE FARM JAMESBURG, NEW JERSEY.

2,000 Land and Water Fowl.
EGGS
For hatching, from our noted strain of Mammoth Pekin Ducks.
\$1.50 per 13; \$2.50 per 25;
\$4.50 per 50; \$8.00 per 100.


EGGS
From Light and Dark Brahmas, Barred and White Plymouth Rocks, White, Silver and Golden Wyandottes, Black Minorcas, and Buff Leghorns.
\$1.50 per 13; \$3 per 30.

EGGS
From White and Brown Leghorns.
\$1.00 per 13; \$2.00 per 30.

Send for large Catalogue of other varieties.
D. A. MOUNT, W. H. ORDWAY,
Superintendent. 379 Proprietor.

EGGS for hatching from White Plymouth Rocks, \$2 for 13; White Holland Turkeys, \$1 for 9. Asbury and Rouen Ducks, \$2 for 9. My fowls took a first, and a second prize at Toronto's fair, and a second at London, and a first, a second, and a third at the Ontario Show. Address,
77 **JAMES MCKEE, Norwich, Ont.**

FOR SALE



Eggs for Hatching from thoroughbred Light Brahmas, Black Langshans, Black Hamburgs, White Wyandottes, white Plymouth Rocks, Redcaps and Pekin Ducks. Write for prices. Eggs guaranteed fertile.

C. J. WRIGHT,
Dixville, P.O.

Barred Plymouth Rocks.

Fowls of best strains and color
EGGS FOR SALE - \$1 per 13.
Guaranteed fertile. Full particulars on application.

E. DUNSMORE,
St. Paul's Station, Ont.

Mammoth Bronze Turkeys, Silver Grey Dorkings, Brown Leghorns, Black Minorcas, White Wyandottes.

Still a few grand Bronze Tombs left. Eggs from our best mated yards, at farmers' prices.

T. & H. SHORE,
White Oak, Ont.

THE Locked-Wire Fence Company

INGERSOLL, ONT.

The accompanying cut represents five panels of fence and gate of the LOCKED-WIRE FENCE, which is now built with improved corrugated hardened steel stay, and Bessemer steel clamp, a combination which is proof against the most unruly stock or designing men. The crimp in the wire, in combination with steel clamp, when locked acts as a spring, adjusting the fence to heat or cold.

Perfectly Safe. Stronger, Better, and Cheaper

than any other fence, and without doubt the best fence on the American continent.

All persons having wire fences erected in the past should use the stay and steel clamps of the Locked-Wire Fence Co. on them. The crimp consumes all the slack, makes the fence tight, and adds over 25 per cent. to its value, at a very small cost.

We desire to inform the farmers and public generally that we are prepared to supply the material or erect this fence throughout the Dominion of Canada.

Recollect, we are the only firm that is furnishing the genuine material in the form of the corrugated hardened steel stay and Bessemer steel clamp.

THE BEST FENCE MADE FOR FARMS AND RAILROADS.

AGENTS WANTED in every township.

Send for circulars and particulars.

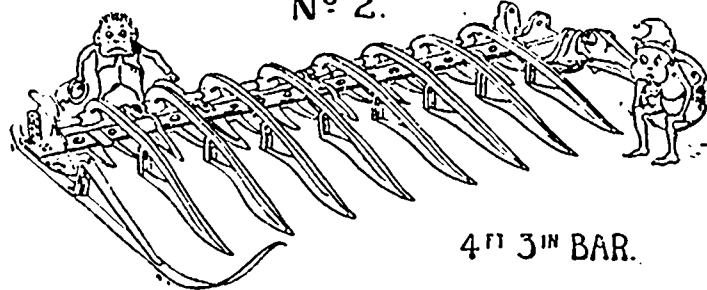
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THOUSANDS NOW IN USE.

No. 2.



Patented May, 1875, '80, '85, and '93; also greatly improved for 1895.

THE oldest, best, most efficient, successful, and durable Pea Harvester manufactured. Will harvest all kinds of Peas, and is suitable for all kinds of Mowers. It can be attached without drilling holes in Mower bar. Send in your orders early, and secure one. Be sure to state what kind and make of Mower you want it for.

4 FT 3 IN BAR.

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HOLLOWAY'S PILLS AND OINTMENT.

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Purify the Blood, correct all disorders of the LIVER, STOMACH, KIDNEYS & BOWELS, And are invaluable in all complaints incidental to Females of all ages.

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It read by all good dairymen. Given for one new subscriber to The Canadian Live Stock and Farm Journal.

THE Model Scuffler

LIGHT AND STRONG.

QUICKLY ADJUSTED.

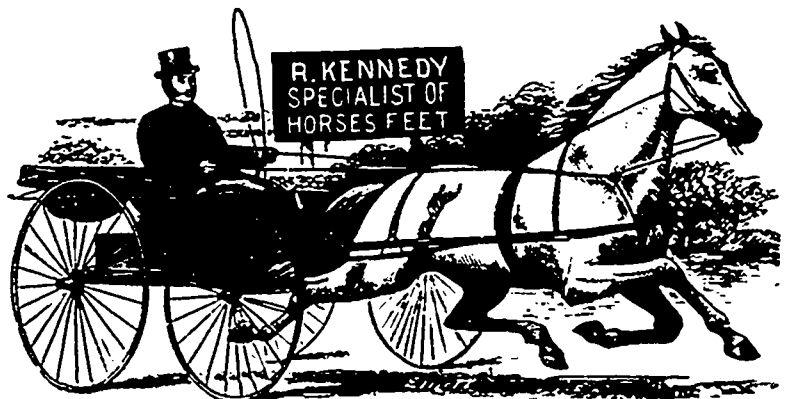


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A Cure Guaranteed or No Charge.

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Also try R. KENNEDY'S FAMOUS HOOF OINTMENT. Guaranteed to grow Hoof quicker than anything in the World. PRICE 35c.

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Poultry

Place a few lines and your name under this heading in THE JOURNAL, and see how your business in this direction will increase.

Our Stock of Sleighs Is Nearly Exhausted.

They have had an IMMENSE SALE this season
No more POPULAR SLEIGH built anywhere



Acknowledged by all who have used it to be the best working sleigh in the market. Built in two styles— one with two benches, the other with one bench, as here shown. Hind bob has free motion under heaviest load without the least strain on the sleigh. Secure one, and you will have the best. Call on our agents or write us direct.

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Complete Fertilizers

for potatoes, fruits, and all vegetables require (to secure the largest yield and best quality)

At Least 10% Actual Potash.

Results of experiments prove this conclusively. How and why, is told in our pamphlets.

They are sent free. It will cost you nothing to read them, and they will save you dollars.
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Fortunes in Fowls

Boys, Young Men, and Old Men, fortunes are awaiting you —
Read!

The very fact that the great majority of farmers consider poultry-raising of no importance is the principal reason why it is proving so profitable to those engaged in it. On most farms the poultry are allowed to care for themselves, and even then they return a fair profit. Why not, then, devote some time to it? Study the subject carefully and carry on your operations scientifically. You will find the work interesting and agreeable, and you will be surprised at the result of your efforts.

Mr. W. J. Stevenson, of Oshawa, Ont., has long been engaged in raising purebred fowls, and should be considered an authority on the subject. He is enthusiastic in the work, is using all his influence towards placing the industry on a better footing, and making it a more important factor in the question of profits on the farm.

In order to give our subscribers an opportunity to begin on a proper basis, we have made an arrangement with Mr. Stevenson by which we can supply eggs from all the leading varieties of fowls at a small cost.

Here is Our Offer :

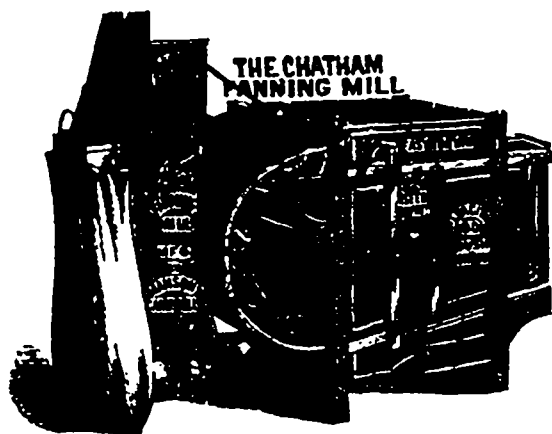
To any one who will send us THREE NEW YEARLY SUBSCRIBERS to THE JOURNAL, and three dollars, we will send a setting of 13 eggs of any of the following varieties :

- White Wyandottes
- Golden Wyandottes
- White Leghorns
- Brown Leghorns
- Barred and White Plymouth Rocks

Send to us and get some sample copies for distribution. It should not be difficult for you to induce three of your neighbors to become subscribers to such a paper as THE JOURNAL, and, should you start raising poultry in this way, you will be on a fair road to making money. Address,

The Canadian Live Stock and Farm Journal, TORONTO, ONT.

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Cleaning Black Clover and Black Eye and Marrowfat Peas a special feature.

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Over 14,200 Bagging Attachments now in use.

Bagging Attachment is run with a chain belt that cannot slip. The elevator cups are also attached to endless chain belt that cannot slip nor clog.

The mill is fitted with screens and rollers to clean and separate all kinds of grain and seed, and is sold with or without a bagger. Satisfaction Guaranteed.

Send for Circular.

MR. MANSON CAMPBELL

East Whitby, Ontario Co., April 12th, 1892.

Your mill which I bought from your agent, Mr. J. H. Tremear, works very satisfactorily. I take great pleasure in recommending it to my fellow farmers. Turns easily, cleans fast. Your bagger is something that every man should have, could not do without it, saves labor, and that means money.

Wm. HARRY, Foley P.O., Ont.

I have added to my plant a factory for weaving Wire Cloth and Perforating Zinc. Orders for zinc for Threshing Machines or Clover Mills will receive prompt attention. Can furnish all sizes of holes in zinc or iron, also Wire Cloth of all kinds.

Orders solicited.

MANSON CAMPBELL

CHATHAM, ONT.

GOLD MEDAL NURSERY STOCK AT HARD TIMES PRICES

To our purchasers, and satisfaction guaranteed

Full lines of Trees for fruit, Trees for shelter, Trees for shade, Trees for street, Trees for decoration, Berry Bushes, Hardy Grape Vines, Flowering Shrubs, Roses, etc. The largest stock of Ornamental Trees in the Dominion. Price Lists free. Enquiries requested. Failing letter orders a specialty. Get your orders placed early.

Send for Surplus Stock and Price List.
GEO. LESLIE & SON,

Years Established TORONTO NURSERIES

Feed the land,

And the land will feed you. The best way is to use

Harris' PURE ANIMAL Fertilizers

Once tried, always used. Sold by
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SPRUCEDALE FARM, Owen Sound, John Harrison, Prop., breeder of English Thoroughbred Horses (Registered in English Stud Book), and Shropshire Sheep. Stock for sale. 295

SHORTHORNS

ALEX. BURNS, Maple Lodge Farm, Rockwood, Ont., Breeder of Shorthorn Cattle. Young stock for sale. 107

W.M. DONALDSON, Huntingford, South Zorra P.O., Ont., Breeder of Shorthorns and Shropshire Down sheep. 204

W.M. DOUGLAS, Caledonia, Ont., Breeder of Shorthorn Cattle. Young stock for sale at all times. 100

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AYRSHIRES.

T. GUY, Sydenham farm, Oshawa, Ont., breeder of Ayrshire cattle, Southdown and Leicester sheep. 104

J. McCORMACK, Rockton, Ont., breeder of Ayrshire Cattle, Toulouse Geese, and Colored and Silver Grey Dorkings. 232

W. M. & J. C. SMITH, Fairfield Plain, Ont., breeders of World's Fair prize-winning Ayrshires, Merino Sheep, Poland China Pigs, and Poultry stock for sale. 180

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W. F. & J. A. STEPHEN, Brook Hill Farm, Trout River, Que., breeders of Ayrshire Cattle and Yorkshire pigs. Young stock for sale at reasonable prices. 243

THOMAS IRVING, Montreal, Importer and breeder of Ayrshire cattle and Clydesdale horses. Choice young Ayrshire bulls and heifers bred from Chicago winners for sale. Write and get prices and other particulars. 206

WALTER NICHOL, Plattsville, Ont., Breeder of Ayrshire Cattle and Leicester Sheep. Choice Young Stock For Sale. 190

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MEADOWBROOK Fruit and Stock Farm, St. Davids, Niagara Township, Lincoln Co., Samuel & W. H. Collinson, breeders of purebred Holstein-Friesian cattle of choicest strains. Stock for sale at very reasonable prices. Address W. H. COLLINSON, 236 Sherbourne Street, Toronto, Ont. 286

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W.M. SINCLAIR, Yarna, Ont., breeder of Poland China Swine. Stock for sale. Write or call. 126

JAS. A. GOULD, Woodstock, Ont., Breeder of Poland China Pigs. Stock for sale. Write or call. 150

FOR the finest Tamworth swine correspond with H. FEARMAN, Hamilton, Ont. 266

M. H. Parlee, Sussex, N.H., breeder of Large Yorkshire and Berkshire Pigs, Light Brahmas, Silver Laced Wyandottes, and Black Plymouth Rocks. Choice stock for sale. Write for prices. 359

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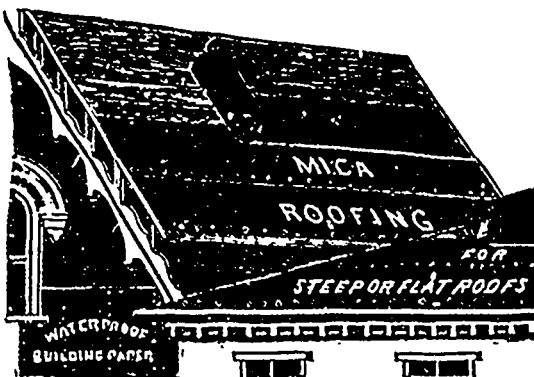
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On all your buildings.

It's cheaper than shingles.

Waterproof and Fireproof.



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To Repair Leaky Roofs Shingle, Iron, or Tin Roofs painted with it will last twice as long.

RAPIDLY TAKING THE PLACE OF SHINGLES.

Is put up in rolls of one square each, 40 feet long by 32 inches wide, and costs only \$2.25, including nails, thus affording a light, durable, and inexpensive roofing, suitable for buildings of every description—especially flat roofs—and can be laid by any person of ordinary intelligence.

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ADVERTISE

IN

The Canadian Live Stock and Farm Journal

If you want to reach the farmers all over Canada and some of the neighboring States.

Men in a hurry

often eat food insufficiently or not properly cooked. Ripans Tablets cure dyspepsia and sour stomach and immediately relieve headache.

Ripans Tablets may be obtained through your nearest druggist. Price 50 cents a box.



EVERY farmer should at once begin to deal with the pest above delineated, if it is found on his farm. It is very common on some farms, and is rapidly spreading into parts where lately it was unknown. How to deal with it effectually without losing a crop, and at the same time with benefit to the soil in which it is found, is something worth knowing. Professor Shaw's valuable book on "Weeds" will tell you—not only how to deal with this pest, but with every other pestiferous weed that is prone to injure your crops. Send for it. Only 75 cents. Neatly bound and illustrated and sent postpaid. Address THE BRYANT PRESS, 20 Bay St., Toronto.

Lewis' Combination Spray Pump. 60,000 IN USE.

This outfit makes Three Complete Brass Machines. It is a spraying Pump, Agricultural Syringe, and Veterinary Syringe combined. Everything screws together, and can be easily taken apart and cleaned. Will throw fine or coarse spray or solid stream, as desired.

A valuable Illustrated Book on Our Insect Foes and How to Destroy Them is given to each purchaser. Goods guaranteed as represented or money refunded. I will deliver one of the above described Spraying Outfits and Illustrated Books to any express station in Canada for \$6.50, express prepaid. Circulars sent on application.

W. H. VANTASSEL, BELLEVILLE, ONT.

(From The Farmer's Advocate, May 11th, 1892.)

We have made a careful test of the Lewis Combination Spray Pump which is offered for sale by W. H. Vantassel, of Belleville, Ont. It is all made of brass, excepting three or four feet of strong hose, and the parts all screw together. It is handy, strong, simple, and will serve half-a-dozen different purposes. It throws a solid stream twenty-five or thirty feet high, large or small, which can be changed instantly, without stopping to a fine or coarse spray. There is a special nozzle for spraying low bushes, such as roses, currants, etc., and can be used to apply emulsion to cattle. As a veterinary syringe it is also very useful. Practically there is nothing about it to get out of order. Mr. Vantassel will express them to any one cheap. We can heartily recommend the Lewis Sprayer.

P.S.—For 50 cents I will send by mail, postpaid, a complete Singer for singeing horses or cattle.

FOR SPRING PLANTING. FRUIT TREES, GRAPE VINES, NEW AND OLD ORNAMENTAL ROSES, ETC.



Clean and handsome. None better. They will please you. Be your own agent and save nearly one-half cost. Compare our prices and stock before placing your order; you will come again.

Send for New Illustrated Priced Catalogue.

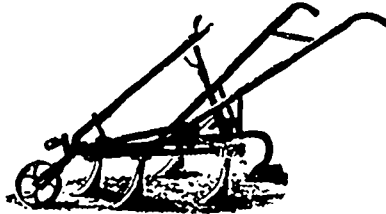
A. G. HULL & SON, Central Nurseries, ST. CATHARINES, Ont. 166

In Some Cases

Three of a kind beat two pair, but here's only one pair, and it will beat any two of a kind made!



Sows the seed sure and packs it.



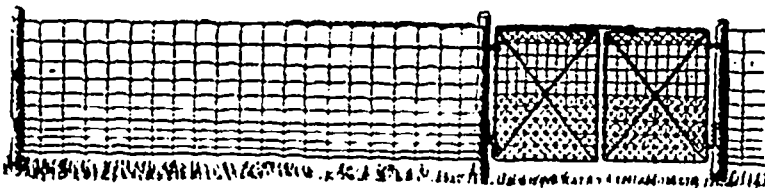
Cuts the weeds sure and kills them.

What's Left? A Fine Root Crop!

B. BELL & SON,

118

ST. GEORGE, ONT.



The Cheapest as well as the Best.

It is the aim of every farmer to put up the cheapest fence which he can depend upon as being stock proof. Unless his fence is stock proof he is better off with no fence at all.

THE PAGE FENCE

is generally recognized as the best and cheapest stock-proof fence, BECAUSE:

It needs less posts than any other fence. Thirty three feet apart is the accepted distance for posts for Page Fence. It may be stated as a rule that the Page requires half as many posts as do other good wire fences, and one-quarter as many as a board fence. The coiled spring keeps the Page from sagging. It can be put up more easily and quickly than any other. The Page is shipped from the factory ready woven, and can be rapidly stretched on the posts.

It contains the most wires and the strongest for the money. Our standard farm fence has eleven horizontal wires with cross-wires every foot. We use the best steel wire, which is twice as strong as ordinary wire of the same size.

YOU CAN PROVE IT WITHOUT EXPENSE.

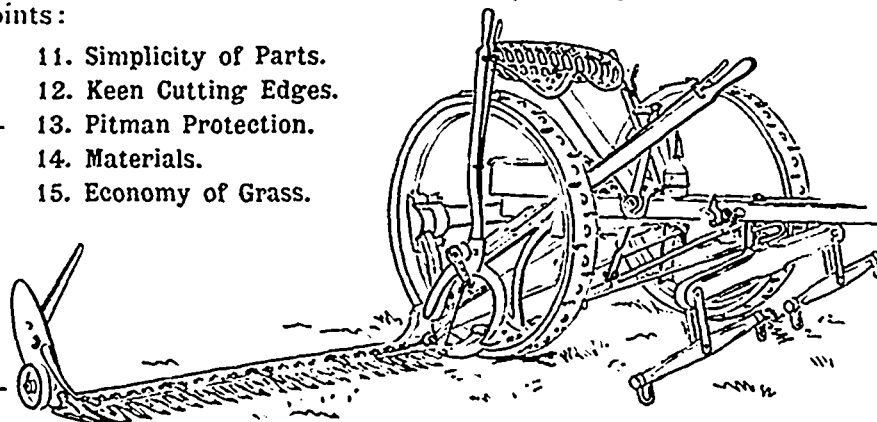
We want every farmer to know that the Page is the best, and therefore will let any reliable farmer test the fence on his posts before paying for it. In most townships there is some farmer dealing in Page Fence who will be glad to do this, as well as to show fence already in use. Where there is no one selling Page we will ship a roll from the factory on receipt of good references.

*To any one asking we will send the last six numbers of our illustrated monthly paper, containing several fine pictures.

THE PAGE WIRE FENCE CO., of Ontario (Ltd.), Walkerville, Ont.

THE CENTRE-CUT MOWERS are broad-gauge and generous in their measurements, and unexcelled in their mechanical workmanship. They excel all others in the following points:

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| 2. Thorough Work. | 12. Keen Cutting Edges. |
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| 4. Adjustability. | 14. Materials. |
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| 8. High Drive Wheels. | |
| 9. Ease of Handling. | |
| 10. Large Bearing Surfaces. | |

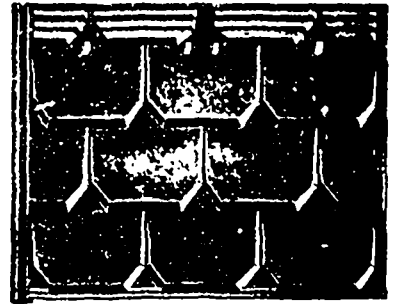


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Successor to The Mowat Mfg. CO.

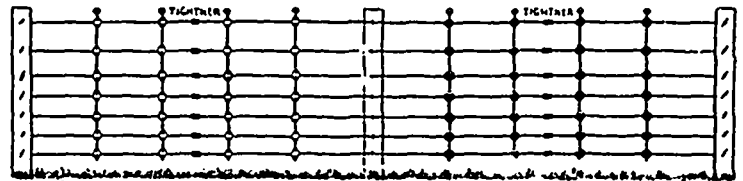
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Fire, Lightning and Storm Proof.
Ornamental, Durable, and Cheap.

The "EASTLAKE" is the old reliable shingle that has stood the test of time, and given universal satisfaction. The best constructed, tightest, and quickest laid METAL SHINGLE on the market. Made only from the finest quality of STEEL PLATE, and will last a lifetime.

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Send for Catalogue. In answering please mention this paper.



No better wire fence built than the Casey Diamond Grip, Pat. Just the thing for farmers—neat, strong, and durable. Will last a lifetime, barring accidents. Uses only straight wires, with no little depression as not to cause the galvanize to crack or peel. If there is a dealer who wants something better to handle than he's had, try it. We also supply the Double Lock Wire Fence, which is claimed by some to be second to none, the lateral wire of which, as well as the upright stay, being crimped at joints. Our agents build either on premises. Agents wanted everywhere in Canada to whom sole territory will be allotted. County and township rights for sale. Our Gas Pipe Frame Gate takes the lead. No better or cheaper place in the city to get plain or fancy turning done. Call on, or address,

CANADA FENCE COMPANY, Cor. Bathurst and Clarence Sts. LONDON, ONT.

The W. A. Freeman Co.,
Hamilton, Ont.

Gentlemen:
Last year I experimented with your "Potato Manure," and with sulphate of potash on poor, sandy land, which had been dressed with wood ashes the previous year, with results as follows:

Two rows potatoes without fertilizer yield slightly under one bushel.

Two rows, same length, about 25 lbs. sulphate potash, yield slightly over one bushel.

Two rows, same length, alongside the others, with about 25 lbs. of your "Potato Manure," yield about 2 1/2 bushels.

The potatoes were planted about the middle of June, during the drought.

(Signed) W. McKINNON.

Grimby, March, 1894

The Match that always lights

Costs no more than the match that doesn't always light.

E. B. EDDY'S
Matches always light.

THE HIGH SPEED FAMILY KNITTER



Will knit ten pairs socks per day. Will do all work any plain circular knitting machine will do from home-spin or factory yarn. The most practical family knitter on the market. A child can operate it. Strong, Durable, Simple, Rapid. We guarantee every machine to do good work. Beware of imitations. Agents wanted. Write for particulars. PRICE, \$8.

Dundas Knitting Machine Co., Dundas, Ont.