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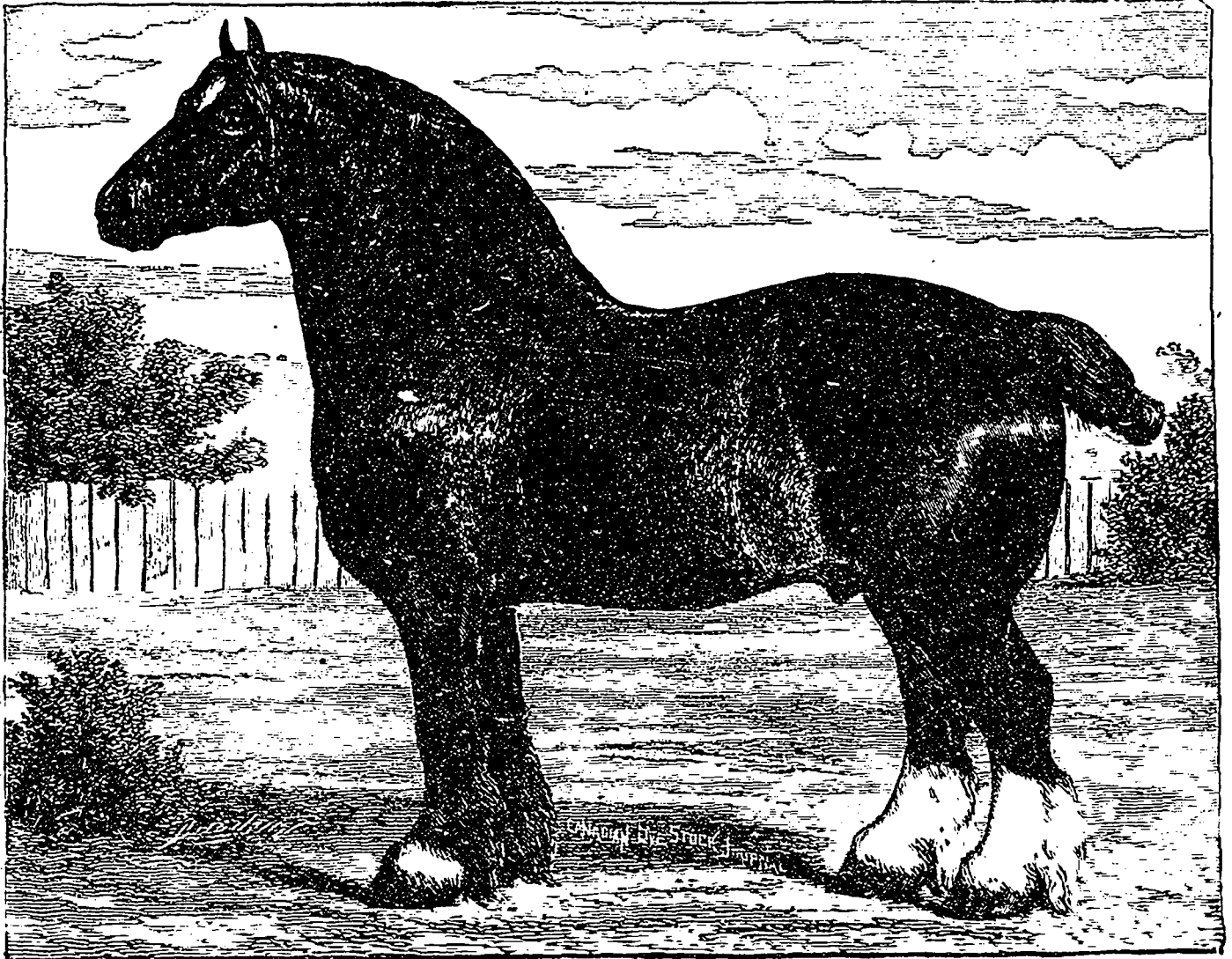
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THE CLYDESDALE STALLION REFORM (3947).

Imported by and the property of Mr. John Duff, Everton (near Rockwood), Ont.

The Clydesdale Stallion Reform (3947.)

This exceedingly serviceable horse, a beautiful mahogany brown in color, foaled in 1883, and bred by Mr. James Bruce, Collithie, Gartly, Scotland, was imported by his present owner, Mr. John Duff, Everton, near Rockwood, Ont., along with two others in the spring of 1886. His sire is Prince Albert (617), for a time the stock horse at the Castle Farm of the Duke of Richmond and Gordon. Bred by the late Lawrence Drew, of Merryton, and a second winner at the Royal of England at Birmingham in 1876. Prince Albert is by old Prince of Wales (673), one of the most famous show and stock horses that ever set foot in Scotland. Twice a prize-winner at the H. and A. S., and twice second, he was first at the R. S. at Manchester in 1869, and was sold by public auction when 18 years of age for £945. Old Mallie, the dam of Albert Victor (617), by Lochend Champion (448), one of the most noted prize-winners in her day, was exhibited at the leading shows in Scotland, and was placed first when one, two and three years old. Rose (1056), the dam of Reform, has been a local prize-winner in her own section. Her

sire, Duke of Wellington (252), is by Wellington (906), a H. and A. S. first-prize winner at Inverness in 1865, and by a horse named Lofty 3d, equally famous. Going still up the stream of Reform's pedigree, we find blood equally famous.

Reform (3947) is as good as his pedigree. He is faithfully delineated by our artist, and evinces great muscular strength and development, with enough of flinty bone to sustain his body, and sufficient spirit to enable him to use his well-placed feet, with pasterns at the right angle, to the best advantage. He stands 16½ hands high on short legs abundantly feathered. His heavy body carries deep quarters, and his breast is powerful. His weight is about 2,000 lbs., and for style and action he is not easily surpassed. He took first prize at Aberdeen as a yearling in 1884. In 1886 he came third at the Glasgow Spring Show in a class of 120 three-year olds, beating Pickwick, which was first at Toronto Industrial and the Provincial, Guelph, the same year.

But the greatest value of a stock horse does not consist so much in the renown of his ancestry, the shapeliness of his form, or his prowess in the show-rings, as in his ability to get stock of the right stamp. In this

respect Mr. Duff's favorite horse is proving a magnificent success. Some of his foals last year were very successful as prize winners at the autumn shows, and have since been sold for very high prices. With a promising outlook for the future the owner of Reform is to be congratulated on the possession of so good a horse.

Mr. Duff did not, like many of the farmers of Canada, chop his home out of the forests, and pay for it from products grown on a virgin soil, but he secured possession and finally complete ownership, in a way equally creditable, and even more advantageous to his country. When his earnings had sufficiently accumulated he invested his all in the Clydesdale stallion Agricola [334], bred in Cumberland and brought him out himself about 21 years ago. It was considered a bold venture at the time, but gave very satisfactory all round results, and seventeen years of similar work at Everton have more than put him in possession of his farm, notwithstanding the loss of the Duke of Argyle [56], during that period, a horse which cost him \$3,000. Further particulars of the work done by Mr. Duff are given by Mr. D. McCrae, Guelph, in a paper on "The Clydesdale Horse of Canada," April issue, p. 104. The full extent of the work accomplished by Mr. Duff, who always makes his selections in person, is very difficult to estimate, and the stimulating influences on breeders of horses in the adjoining counties during three years of pioneer work can never be fully known.

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THOMAS SHAW, RIVERSIDE FARM, EDITOR.

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All communications to be addressed STOCK JOURNAL Co., 48 John street south, Hamilton, Ont.

HAMILTON, CANADA, MAY, 1888.

It may not be known to all secretaries of Farmers' Institutes that before the annual grant from the Legislature can be received, a report of the work done by the Institute must be forwarded on blanks furnished on application. Those blanks may be obtained by writing to A. Blue, Esq., Bureau of Industries, Toronto.

THE season is again approaching when judges are to be selected to make the awards at the autumn shows of 1888. The live-stock and other products are also undergoing the fitting process, and the result of the awards will have very much to do with the sales of the stockmen, both as to their number and price. The choice of good men is therefore of the utmost importance, and should be made a matter of earnest, careful deliberation. Let the judges be selected months even before the show, which will obviate the necessity of picking up an inefficient, simply because no one else can be got. We have good, capable men in all the lines, and, if secured in time, will do their work much more justly than it is often done. Whether judging is done by one, two or three persons, let them be men who are known to be thorough masters of the situation.

NOTHING adds more to the appearance of the farm than neatness and tidiness in the care of the out-buildings and surroundings. Neglect here is not only repulsive to the eye but is the source of much loss. A weather-board gets loose and falls off, and if it is not at once replaced it is liable to become broken. A roof begins to leak, and when neglected there is loss to the crop stored inside. Broken panes of glass in the stable windows have a forlorn appearance, and broken gates and dismantled paddock surroundings are anything but attractive. It is within the power of the farmer usually to have it otherwise. This appearance of general unthriftiness has its origin too often in a lack of taste that is unpardonable. To keep a sharp look out for the first tokens of dilapidation is a labor that will bring much profit if the breaches are at

once made up. How differently would our country appear if general attention was given to the neglect we have just pointed out. And it could be done with very little outlay other than the expenditure of a little brain-power and muscle.

Shearing time is close at hand, and yet some weeks may elapse before the busy farmers can get time enough to take the fleeces off the sheep. They should, however, find time enough for what is sometimes termed "clatting," that is, removing any filth that may accumulate about the tail, or about the udder of the ewes. Non-attention to this matter is simply cruelty, and cannot but result in loss. When the grass becomes tender it oftentimes induces scouring, and if "clatting" does not receive attention, a large proportion of the fleece is lost. It is also far from humane to allow the fleece to remain on until the middle or end of June. We have seen the poor creatures during that month lying in the densest shade and panting like a pair of bellows, putting in whole days in misery because of the thoughtlessness of their owners. They, poor things, would cheerfully give up their fleeces to promote the comfort of the owner in winter, while he, the inconsiderate man, would not give them a little of his time to promote their comfort in summer. Thus it is that sheep are often more humane than men.

WE saw an article recently in an old country exchange headed, "Something that pays," which to our mind is very suggestive in this merry month of May. We conclude that very many things can be done just now by farmers that will be found to pay well. We may mention a few of these. 1. It will be found to pay handsomely to get in a piece of corn for fodder more or less, according to the number and character of the stock. It will serve a splendid purpose when the dry weather comes and pastures get short in the fall. 2. Takespecial pains in preparing the land to get in a good field of turnips, unless you prefer growing mangolds. Some complain of the labor of cultivating them and the cost, but it is a greater cost to be without them. 3. Make a point during the entire season to be forehanded with your hoed crops. There are times when these are growing when more will be accomplished in one day than can be done in six later on. 4. Make due preparation for taking care of the growing crop at the right time. If you do not, the loss will be more than you can tell. The most careful attention to these and a score of other things on the farm will be found to give a handsome return at the auspicious season. The adage, "make hay while the sun shines," is applicable to the farmer during the entire growing season. Crops can usually be grown, all things considered, for nearly one-half of the cost of those purchased.

At a feeding trial made by Prof. E. M. Shelton, of the Kansas Agricultural College, some time ago, a number of range scrub steers, weighing from 750 to 865 lbs. each, required on an average a little more than 1,200 lbs. of meal to produce 100 lbs. gain in their weight. Another lot of the same age, but weighing 950 to 1,300 lbs. each, required a little less than 720 lbs. of meal to produce a similar amount of gain. Here was a saving of fully 4 per cent. in the meal fed, and all because of the difference in the breed of the cattle. We do not look upon this result as at all extraordinary. We believe the difference in the gain from feeding scrubs and well-bred Short horns would be as great every time, and yet so convinced are a vast majority of our farmers even yet, that feed is everything and that breed counts for

nothing, that they cannot be induced to change their methods. If 480 pounds of meal were deliberately thrown away by the farmer who feeds the scrubs to make beef, it would not be more effectually wasted, for the feeder of good cattle would make his 100 lbs. of beef with just that amount less. The proportionate difference will be found just as great in feeding well and ill-bred sheep, pigs and poultry. In the face of all this the men who are laboring to improve the stock of the country for the benefit of the owners thereof, must be dubbed as "speculators," and called by many other hard names.

In the *North British Agriculturist* we find the following momentous utterance: "If there is one duty which more than any other devolves upon the State, it is the duty of providing for the efficient education of the people, on whose industry the whole welfare and prosperity of the country depend." If these words apply to conditions in Britain, much more will they apply to conditions here, where relatively the agricultural portion to the whole of the population is so much greater. There is no denying that too little attention has been paid by the Government of Canada in the past to the technical education of the farmer, and because the farmer has not expressed a very strong desire to have it different. The farmers are now speaking out, and they are soon to fare better. There is soon to be a text book on agriculture in the schools of Ontario, and its preparation is in good hands—a matter of much moment. But the farmers must mend their ways before they can clamor loudly for better facilities for their sons by way of getting a more advanced education. If the whole Dominion places so little store upon the advantages of a better education for farmers' sons as to send not more than *twenty-five* first year students to the Ontario Agricultural College, Guelph, in the autumn of 1887, the farmers have but little right to complain of neglect on this score. It is with them the charge of neglect rests, for the Guelph college is well furnished on the whole for the work it has to do, and on the whole it does it well. Two out of the whole number of delegates at the annual meeting of the farmers' institutes were ex-students of the college. They were the two youngest men there, and both took an active part in the business of the meeting. They represented the first-fruits, we hope, of what shall be an abundant harvest. The leaven is at work but it permeates the mass so slowly in comparison with what it might and should.

Ventilation for Stables.

We are frequently requested to give information regarding the ventilation of stables. The amount of ventilation required depends on the lowness of the ceiling, the amount of the stock to be kept in the basement, and also on the use to which it is to be devoted, in a measure at least. The ventilation of a dairy stable must be of such a nature that odors shall be kept at the lowest possible minimum. Two kinds of ventilators are in favor. The first consists of wooden boxes extending up the sides of the building and then up the under side of the roof to the ridge. The second, of large boxes running up through the mows fewer in number than the former, and extending also to the ridge. These may also be used for putting down feed. When the first kind are narrow, in very cold weather they sometimes fill with hoar frost, and so become inoperative, and it is at a time when they are most required. When the weather is very cold and ventilation cannot be assisted from the doors, small doors on the upper front corner of the larger

ones may be used when the weather is mild. Whatever the system of ventilation adopted, it should not produce any draughts where the cattle are. Where barns are built on the end drive principle, the shutters for putting down feed and bedding may also be used in promoting ventilation.

The Class of Emigrants Most Wanted.

In reply to a query from a young lad without means desirous of learning farming, the *Agricultural Gazette* has the following. "The only way to learn farming or any other trade is to serve an apprenticeship to it. Your best plan without money is to earn money by labor on the farm, if you can get employment, and learn how to hold the plough, and milk the cow. You will then do for emigration; and going out to Canada or the States, you will easily get employment at good wages, and if you wish to be more than a laborer you can save money and hire land."

The above is very sensible advice and might well be heeded by those desirous of learning farming who have money. The only proper way to learn any trade is through serving an apprenticeship to it, whether with our parents or otherwise. In the face of this plain truth young men, more so in years gone by than now, have come out from Britain to learn farming at the Guelph Ontario Agricultural College, who, had they but spent a term on a farm before coming here, would have forever abandoned the idea of choosing the profession of farming as a life work. They would then have been furnished opportunity of judging of the nature of the work at the first. The class of emigrants referred to above are a very desirable class, those who can "plough and milk," in a word, have a fair knowledge of work on the farm before coming here. We shall always have room for them in this country, and the opportunities for them to rise are on the whole better than Britain furnishes. To all such we say, come and welcome, but we can well afford to get along without the shoddy of the back streets of towns.

The Merits of Galloway Cattle.

This hardy breed has found an earnest advocate in Mr. Wm. Kough, of Owen Sound, to whose rising herd reference was made in our last issue. Mr. Kough's line of argument is a very convincing one. When arguments are presented as the result of our own experience, it is difficult, indeed, to refute them. Their early maturing properties he has demonstrated in his own herd, not only when purely bred but when crossed on Shorthorn cows, Shorthorn grade cows, and on common Canadian scrub cows, that with fairly good attention they will reach 1,200 lbs. in 18 months, and when killed will dress 72½ to 74½ per cent. live weight.

Their *hardiness* he illustrates by reference to the offspring of common cows in the neighborhood mated with his own Galloway sires. Some of these he says "have never seen the inside of a barn during the whole winter; they simply had the run of the straw stack, and yet at the sale in March, 1887, these calves, which would have been runts under such treatment from any other kind of bull, brought at public auction \$25 each, and in the summer season some of them brought over \$50 when about one year old." The price they brought does not concern us so much, for that is a relative thing after the beef price is reached, and may be affected almost wholly by men's fancies and the strength of their pockets, but when we are told on such authority, that Galloway calves will rough it in the farmyard when sufficiently fed, in our

cold Canadian winters, it is something that should arrest the most thoughtful attention. It is only in keeping, however, with the conduct of animals of this breed, who successfully fight the savage blizzards of the west which sweep into non-existence animals of less fibre.

It is not the common view that Galloways are good at the pail, but here again Mr. Kough comes forward with sustaining facts. He says the cow "Duchess" Louise 1067, the mother of Robin Adair 2124, in "his own herd, for the first two months of her suckling him, gave so much milk, that each day we milked a patent pail full from her and of the richest quality."

The quality of the meat is of a high order. This is easily demonstrated by the top prices paid for it in the English market. Mr. Kough, in the spring of 1886, sold to Mr. Haines a bunch of fat cattle for the English market. One of the lot was a half breed Galloway heifer which the buyer estimated at about 1,100 lbs. She turned the scale at 1,475 lbs., gained a pound a day on her trip to London, and brought a larger price than steers weighing 400 lbs. more. We cannot think, however, that so much difference would be made in the price in every instance as in that just cited.

There is one aspect of Galloway breeding that has not been touched upon, and it is one of great significance. We refer to the utilizing of the hides for robes in the place of the buffalo robes, which can no more be got. We fail to see why they would not make robes equally beautiful with those of the buffalo and quite as pliable when properly trimmed. They might also be used for coats in which men even could "rustle" without much danger in our cold Canadian climate. If their hides are found suitable for this purpose, and the current of fashion should set in, in this direction, it would not be easy to supply the demand for Galloway hides, while we need have no fear as to the demand for Galloway beef, which would certainly take care of itself.

Clochmohr and its Shorthorns.

The English poet sings, "Men may come and men may go," and come and go they will, but far different are the work they do and the influences they leave behind them. Most men live and die and are buried, have a tombstone erected over their dust, and the great wave of time surges on. Soon even this much is forgotten about them, that they lived at all. The grave clothes of a common oblivion shroud every remembrance of them, and the impenetrable mists of a faded past carry them more and more remotely into the gloom, or perhaps we should rather say, carry the generations of the living further and further from them. Fortunate in a sense, then, is he who by his life is rescued from this common oblivion, even for a time. It betokens the possession of some strong features of character which are not given equally to all men, and the use of them in an energetic way. Such an one is Mr. James Cowan, of Galt, Ont., who, along with two of his four sons, is carrying on the Shorthorn breeding establishment of Clochmohr, under the style of James Cowan & Sons. Clochmohr is the Gaelic for "big stone." It contains 550 acres with two steadings, at one of which one son, James L., is located, and William at the other. It is divided by the 3d con. of Waterloo township, county Waterloo, and is but two miles out of Galt, on the C. P. and Grand Trunk railways. The farm is beautifully undulating, as is almost certain to be the case in a Scotchman's choice, when he cannot perch on higher hills, supported a generous crop of pine trees in other

years; and is well watered—in fact, well adapted to the growth of good stock, to which it has been largely devoted since 1857.

In that year Red Rose 10th was purchased from Stevens & Sherwood, New York, giving \$160 for what had cost those gentlemen \$600 when a suckling calf. Three of her descendants were sold by Mr. Cowan to Mr. J. L. Harrison, New York, for \$1,000, who in turn disposed of two of them to an English purchaser for \$6,000. Not long after a fourth was sold for \$800, to go to England. Red Rose 10th had her last calf in her seventeenth year.

Next came Snowdrop in 1859, and a 1-year-old heifer purchased from Mr. Stephen Moffat, Burnside, North Dumfries, and descended from stock imported by the Hon. Adam Ferguson, Woodhill, Ont.

In 1862 Queen, Dairy Spot and Celina came from the herd of Mr. James Williams, Durham, Ont., and in 1875 two Seraphinas, originally from the herd of Mr. W. F. Stone, Guelph, were bought from R. Baxter, Burlington, and Meadow Flower, from the herd of Wm. Douglas, Onondaga, county Brant. In 1881 no less than thirteen females of the Sanspareil, Polyanthus, and other Shorthorn families, were purchased at a sale made by Mr. Stone, Guelph.

It will be readily apparent to any one who will take the trouble to look into these pedigrees, that Mr. Cowan spared no pains in making his selections on which to erect the superstructure of his herd.

The same remark will equally apply to the males. The first purchase was Emperor [225], and the first bull used in the herd, Edmund Ironsides [220], a pure Princess Galt, bred by Mr. Wm. Ashton, Cruikstone Park, Galt, in 1856. Then followed the famous Oxford Lad [518] 5056, bred by Mr. James O. Sheldon, Whitespring Farm, Geneva, N. Y., purchased jointly with the Hon. David Christie, "The Plains," Brantford, whose portrait at four years adorns vol. i. of the Canada herd book, p. 112. The price paid was \$1,000. The fame of this bull and his success as a show bull and stock-getter soon rendered bulls of a similar name very numerous. Oswald Cray—183—bred at Clochmohr in 1865, a son of Oxford Lad and the famous old cow Red Rose 10th, took the place of the former, and in turn gave way to Constance's Duke 7753, purchased from Senator Cochrane for \$400. Then came Rose's Oxford—235—bred at Clochmohr in 1873, sired by 7th Earl of Oxford, followed by Duke of Kent—154—bred by Mr. T. L. Harrison, Morley, N. Y., got by Saladin 10938, and out of the dam Airdrie Princess, by Duke of Dundall 5555. Constance Duke—239—bred by John R. Craig & Bro., Burnhamthorpe, Ont., a Constance bull, was then placed at the head of the herd, until superseded by the 6th Earl of Antrim—1212—, a bull rich in Princess and Duchess blood, and bred by Mr. H. Y. Attrill, Goderich, Ont.

The present stock bull is Duke of Colonus 2nd, calved Oct. 3d, 1886, and bred by Mr. Wm. Murray, Chesterfield, Ont. He was sired by Duke of Colonus by 54th Duke of Oxford (55733). His dam is Princess Thekla by Orphan Duke, imp., and he traces back through twenty four sires to Studly Bull, bred by Mr. Stevenson, of Ketton, England, in 1739; a roan in colour, he has good style and shape; is a fine handler, and should make a very useful animal.

Shorthorns at Clochmohr have proved a good all-round investment. But four public sales have been found necessary during these twenty years of breeding, to sell off the surplus stock. Until recently the young bulls brought readily from \$100 to \$200 each, but of late, along with other Shorthorn breeders, the Messrs. Cowan have felt the influence of the depres-

sion. In the year 1871, one thousand dollars' worth of stock were sold to the New Brunswick Agricultural Society. At two public sales young bulls brought from \$100 to \$200 each, and cows and heifers from \$100 to \$350, aggregating about \$4,000. In addition to the sales mentioned earlier in this paper, the cow Red Rose 13th was sold to Col. Taylor, London, Ont., for \$1,500, and the cow Red Rose 14th and calf, Red Rose 15th, all Princesses, for \$6000.

The young stock at present in the herd are from Red Gauntlet, a Polyanthus bull by Duke of Cambridge—2170—, and 6th Earl of Antrim—1212—, but mostly by the latter.

Mr James Cowan, sr, now in his eighty fifth year, is one of the few remaining links that bind together the earlier and the latter years of the century. He settled on Clochmohr in 1836—turned the singing pine tree forests into pleasant fields—and only gave up the contest of farm life in 1882, when he moved into Galt, where he now resides. Prior to confederation Mr. Cowan served three terms in the Legislature for South Waterloo, and is still an efficient Government Referee. Even now the veteran pioneer, at his advanced age, will take a journey to Manitoba in discharge of his official duties, with less ado than some of our young men who have just attained their majority. Mr. Wm. Cowan has a great advantage over many stockmen in that he has taken a regular course at that useful institution, the Ontario Veterinary College, Toronto. He also holds the office of Veterinary Inspector under the "Animals Contagious Diseases Act," and besides being one of the first graduates at the school to which we have referred, has been one of the examiners there every year since.

Cattle Stanchions.

A subscriber writes thus in reference to cattle stanchions: "I would like to know how to keep cattle in their place in the stable without tying them with a chain. I have seen stables made in this way, each cow having its neck between two uprights, but they could not swing the head back to lick themselves. I have heard that a man near Berlin, Ont., has invented some new kind of stanchion which allows the cattle to turn back with the head as if tied with a chain, but I cannot ascertain who the party is. If you know, Mr. Editor, would you please let me know through the columns of the JOURNAL?"

In the May number of the JOURNAL for 1885, p. 124, is a sketch of the kind of stanchion for which enquiry is made in the above letter. It is known as Smith's Patent Self-adjusting Swing Stanchion, of which Mr. C. D. Brooks, Addison, N. Y., is proprietor, and was at that time held for sale by the Messrs. Fennell & Anthes, hardware merchants, Berlin, Ont.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

A System of Partial Soiling in Relation to Stock Feeding.

BY J. E. BRETHER, BURFORD, ONT.

Soiling is a system of growing fodder to be cut green, and fed either in the open fields or stable. The main object to be obtained in a system of soiling is to so arrange your crops that they may come in regular rotation, that there may be a constant supply of green feed during the entire summer feeding season.

To attain this end, crops that mature at different periods during the season must be sown at the proper time. In preparing for soiling the following season, you may begin as soon after harvest as convenient, by ploughing up a stubble field and sowing to

rye, which in a good season will give a fair amount of fall pasture. The following spring the rye will make an early start, and will enable you to feed your stock fully a week earlier than by waiting until the grass in the pasture field is ready.

Oats and vetches should be sown immediately the ground is fit to work in the spring. Sow one bushel of vetches to two of oats per acre. Follow by sowing ensilage corn in the second week in May. The second sowing may be done upon the ground previously occupied by rye. The corn does better to be sown in drills two and a half feet apart, so that it may be run through with a cultivator. By this system the ground is kept well stirred and mellow, and will retain moisture, it also makes available more plant food, cleans the ground of foul weeds and gives a greater quantity and better quality of feed. I recommend the ensilage or a southern sweet corn in preference to other varieties, because it grows more rapidly and is tender and sweet, being relished by stock of all kinds.

White turnips should be sown the first or second week in June. They also may be sown upon a portion of ground previously occupied by rye. I prefer sowing in drills as swedes are sown, but they may be sown broadcast, and good results obtained. White turnips may again be sown in the latter part of July or early in August upon ground where oats and vetches have previously been taken off.

To better illustrate my subject, I will take for example a ten acre field, as that would be about the proper proportion for a farm of a hundred acres. I think that upon the average hundred acre farm there is quite that amount reserved for pasture land, and in some cases twice as much. We will divide the field into two equal sections. The first section (one half) to be sown to winter rye in the fall, the remainder to oats and vetches in the spring. Four acres of the other section to be sown to ensilage corn about the 10th of May, the balance, one acre, to white turnips on 10th June. The rye will all be fed off by the 20th June, and it may then be plowed and sown to corn. That portion occupied by oats and vetches will be fed by 20th July, when it may be sown to white turnips.

The rotation of feeding will stand thus. Rye from early spring to 20th June; oats and vetches from June to July 20th; ensilage corn, from first sowing, after July 20th; which will be assisted by white turnips after the middle of September. The last sowing of corn, if not required for summer feeding, may be cut and cured for winter feed. Also the white turnips that are not required, may be stored and fed in early winter.

The advantages derived from a system of soiling are—

1. *A saving of land*, because three times the amount of feed can be produced from an acre cultivated than can be produced in grass.

2. *A more even and regular system of feeding stock*, which will add very much to the returns, in both dairying and beef production, whereas, without the system of soiling, the stock in the early part of the season, have more grass than they require, and consequently a great quantity is wasted; but in the hot and dry part of the summer the grass is all parched, and there is no feed for the stock.

3. *Increase of fertility*, as the crops are not allowed to ripen. It is the maturing of the crops that takes the richness from the soil. You also have a greater amount to return to the soil in the form of manure or plant food at once available, which can be applied where it is most required.

4. *It saves the newly seeded clover and timothy*, as

the stock are generally allowed to run upon the freshly seeded fields until very late in the fall, where no other food is provided, it does great injury to the following season's crop of hay.

5. *It cleans the ground of foul weeds*, thereby rendering summer fallowing unnecessary. By soiling, the frequent working of the soil causes the weed seeds which are in the soil to germinate; but it does not leave them to mature before being cut, and they are consequently destroyed.

In conclusion, I would say that after the experience of the past summer, when many of our farmers had nothing but bare fields for their stock to roam upon, it would be advisable for every farmer who gives any attention to stock raising, to devote an acre or two to soiling; and if the feed is not required during the summer season, it will be very useful, if cured and kept, for the winter's feed.

"Don't Leave the Farm. Boys."

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Believing with Henry George that land and labor are the main factors of wealth, and knowing that hundreds of Ontario farm boys desert their rural homes, expecting to find immediate fame and fabulous riches in the busy whirl of the city, I have concluded to recount, for their benefit, some incidents of a visit to the Ayrshire home of Mr. Joseph Yuill, of Ramsay.

Mr. Yuill met me, as he does all expected visitors, at Carleton Place, on the C. P. R., at 7 a. m., and took me through three miles of rough country to such a breakfast as Mrs. Yuill well knows how to prepare.

A friend of Mr. Yuill had recommended him to me as a man of integrity in whose hands an amateur stock-raiser might place himself with safety; but he had also hinted that, when he last visited Ramsay, his old friend was a very poor man. The opinion as to his honor I have found to be correct; but the idea of him being poor, the first sight of the Yuill home dispelled.

Upon a sunny slope, near the centre of a 300 acre farm, are situated the buildings—a barn and stables on one side of the road, and the house and a mammoth new barn on the other. The new barn, erected in 1886 and 1887, is 102 feet long by 60 feet wide, and has 18 feet posts. This building has underground stables for 10 horses and 43 cows, besides 5 box stalls and a frost-proof root-house of 2,000 bushels capacity. These stables are well lighted and ventilated; but I was more particularly struck by the water system of the building. A large windmill forces a supply of water into each stable, through pipes, to the house, and to the barn across the road. A hose from each faucet is used to carry water to the cows when in the stalls, or by a change of nozzle to sprinkle the cut straw with which they are fed. In fine weather the cattle drink at the tank outside the stable. A contrivance by which the weight of water changes each driving belt to a loose pulley, when its tank is filled, prevents the stable from being overflowed, and also replaces the belt as soon as water is taken from its respective faucet. When completed, each row of cows will be supplied with a trough, so arranged as to be dropped before the cows while drinking and raised up and kept out of the way at all other times. In this way a small boy will be able to water 43 cows without labor. Water has not frozen in any of these stables during the present winter.

I found among Mr. Yuill's registered Ayrshires many descendants of the celebrated Carrick Lad that distanced all competitors at the Centennial, and also the Sultan, the vanquisher of Carrick Lad after his return to Canada. I must not forget to mention Nellie Gray, for she it was that won the medals from Holsteins, Jerseys, Durhams and other Ayrshires in the milk and butter test at the last Provincial. Mr. Yuill is justly proud of Nellie, and although he assured me that he had many equally good, he did not forget to show me the medals she won, and a score of letters (more or less) asking how she beat the Jerseys! Was she an exceptional Ayrshire, etc? To such questions her owner answered that she was from an exceptional herd.

Having occupied so much space I will not describe—

Mr. Yuill's Shropshire sheep and Berkshire pigs, but I will close what has proved a longer letter than I intended by saying to every young man who contemplates "leaving the old farm," that a present possession of 500 acres, 40 registered cattle and an abundance of everything found on a first-class farm, all made by himself, prove, in Mr. Yuill's case at least, that industry, aided by perseverance, based upon economy and tempered with honesty, will, through the blessings of Providence, overcome all obstacles of rank or fortune, and place old age in a position of ease and respect.

Harlem, Ont.

H. E. EVRE.

Correct Awards at Agricultural Exhibitions, and How Best to Secure Them.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—The very term "correct awards" conveys to us something of a progressive character, something new in the history of agricultural exhibitions, an object so much to be desired, a matter that at once commends itself to our serious consideration. It is something, if it could be obtained, that would do more to elevate and advance the interest and prosperity of our agricultural fairs than any one thing I can think of. And although correct awards, strictly speaking, may not be attainable, yet something might be done that would in a measure correct many of the more gross and glaring blunders so frequently made at all our exhibitions. Incorrect awards, in the minds of some, only exist at our smaller shows. They have an idea that the large shows invariably secure the services of competent judges. But such, unfortunately, is not the case. Errors are of as common occurrence at the large shows as at the smaller ones, of which I could give many convincing illustrations—and, in fact, are of a more serious character, there being more at stake; and any one who has attended as many shows as I have during the last twenty-five years, has long ago been convinced of the great injustice done exhibitors by incorrect awards. But the difficulty in obtaining competent judges at our large shows comes from the fact that the very best judges that our country can produce are the successful exhibitors at such shows, hence their services cannot be obtained.

There are others who would be fairly good, but their fitness for the position is not so well known, and their services are not procured. And while we believe directors of agricultural societies do, as a rule, the best they can under the circumstances, in the appointment of judges, yet it too often happens that they are chosen from some feeling of friendship rather than from their fitness for the position—a desire to honor a friend and not for the good of exhibitors and the credit of their society; and too often better ones are rejected from some petty jealousy toward some exhibitor, or in other cases with a view of obtaining favors for themselves or friends.

The same thing can be said of the smaller shows. There it often happens that the selection is left to those most interested in the several departments, and the choice made with a view of the most favorable results for themselves, or against some opposing competitor. And the fact that the Government and municipal corporations annually contribute large sums of money to agricultural societies for the encouragement of agriculture, the arts and manufactures of our country, very forcibly suggests to us the necessity of a system of more correct awards.

In this short paper we can only allude to a few of the evils resulting from incorrect awards. They not only bring agricultural societies into disfavor, but stamp them in the eyes of some as mere gambling institutions, with a want of confidence in their very existence. But that is not the way fair managers should look at the matter. It is for them to take hold with a strong arm, with a will and determination to do what *can* be done to remedy the evil. To guard them with a jealous hand from reproach and keep them in line in the forward march of progress of the age in which we live.

Incorrect awards impose on the inexperienced purchaser of animals or articles, by giving such animal or article a higher place than that to which they are entitled, often causing a beginner in a worthy undertaking to give up in disgust before he has fairly commenced. It oftentimes results in serious and material damage to our most worthy men, by placing a lower award on their animals or wares than they are justly entitled to—men who on

account of superior judgment and close attention to business have shown to the world improvements possible to be made; men who have spent as it were a lifetime in the improvement of the stock and manufactures of our country, resulting in an untold amount of good to the public, yes, and even to generations unborn. They are as a light set upon a candlestick that cannot be hid.

But, while it is so easily seen that incorrect awards are of common occurrence and much to be deplored, and that correct awards would be a boon to agricultural societies, so much to be desired, and their effects to be so easily traced, yet when we come to compound the remedy, we soon get to sea among the breakers. But notwithstanding all the ills arising out of incorrect awards, agricultural societies have done a good work in advancing the interests of agriculture and the arts and manufactures of our land.

Now for a few thoughts on the best way to secure more correct awards.

Many have been the complaints, and many the different theories advanced to improve upon the present system, and not least among them the expert, or one judge system, which has many things to commend it to our consideration. A strong argument in favor of it is, that in case of errors the one judge could not shirk the responsibilities by charging them to his colleagues. But the question is, where are the experts to come from? A known supply, especially in the live-stock department, is not in our land; and in order to supply them it would require to be made a sort of profession, and their services paid for, which of course would be but right—every laborer should be worthy of his hire. But the great question is, in the event of adopting this system, how are we to provide, and how are we to know he is an expert. I would not propose some professor of agriculture simply because he was a professor, and well up in theory, nor would I take some agricultural student, even although he had won a gold medal for general proficiency in the book theory of agriculture, but I think they should be required to pass an examination of a different character, one that would prove their fitness as an expert on one or more special classes. I would propose as a board of examiners practical men in the different lines of live-stock. A board like this could be found in our country, composed of men who have won for themselves the reputation of experts by their success in some particular lines of live-stock. And I have no doubt but applicants for examination would also be found. I would propose to examine them by actual tests on the different breeds of animals, as to merits of individuals along with a correct description of the peculiar characteristics of such breeds, and to give certificates according to proficiency. This I think would be the means of stimulating our young men to prepare themselves and acquire the necessary knowledge to fit them for an expert judge on one or more classes. But the greatest care would have to be exercised in constituting those boards. It does not always follow that every man who has been comparatively successful with a certain line of stock is a qualified judge of the same. The circumstances under which success has been attained must be duly considered. His success may have been due to business tact, to unremitting perseverance, to a long purse, or in relying on the judgment of some experienced person, or perchance in mere accident in procuring the services of some competent manager, herdsman or shepherd. We could cite to you scores of successful breeders as illustrations in support of this idea, but a few will suffice. Her Majesty the Queen of England, although a successful breeder of Shorthorns and Hereford cattle and other live-stock, would hardly be supposed to be a qualified expert judge in a show-ring. Mr. Nelson, the great publisher in Edinburgh, and proprietor of Bow Park herd of Shorthorns, may not be at all qualified as a judge of Shorthorns. Lord Walsingham and J. J. Colman, who have gained a world-wide reputation with Shorthorns in the show-rings of England, probably make no pretensions as judges of such stock; their success has been due to their money, their agents and their shepherds. But, on the other hand, such men as the Booths, Collings, Bates, Bakewell, Webb, and others, who accomplished so much in their day and generation, were undoubtedly, strictly speaking, expert judges. The men to be relied on as competent judges are those who, having commenced at the very bottom round of the ladder, so to speak, have, through their own efforts, pressed up and up, till the very top has been reached, and shown themselves able to maintain that position—those are the men qualified to judge the judges.

Now, in regard to manufactures. Expert judges for them could be more easily obtained. Correct awards in this class are as much to be desired as in any other, and incur not ones of as frequent occurrence. The same may be said of fruit and farm produce; and in fruit there are frequently very erroneous awards. And surely in this class the Niagara district could furnish plenty of experts, and thus prevent standard kinds of apples from being set aside and the prize given to another variety altogether, simply because it was larger.

And now we come to the fine arts department, a class of work that adds so much to the interest of our exhibitions, and is much abused for the want of correct awards. Think of an exhibitor with a natural taste and talent for the profession, spending months or years in acquiring the art, and then, after spending weeks of toil and labor with pencil and brush on some fine specimen of work to adorn the walls of an exhibition, finding himself obliged to submit to an incorrect award from a committee with not the slightest knowledge of the art. Now there surely would be no difficulty in getting an expert for this class. There are plenty of professionals in the country that would give a degree of satisfaction not otherwise obtained, and put a stop to advertising chromos being shown for oil paintings.

JOHN JACKSON.

"Woodside," Abingdon, Ont.

One of the Earliest Sheep Importations into Canada.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—As you requested of me when we last met, I send below a statement of the importation of thoroughbred Leicester sheep, which were imported into this section of country, and what became of them, so far as I can remember.

In the summer of 1853 I went home to Scotland and brought out nine sheep with me, four of which, three ewes and one ram, were purchased from Mr. McWilkins, of Tinneldowns, one of the first breeders of sheep in Scotland. He had also a farm in Yorkshire, England, and bred sheep on both places. One ram was bred by Mr. Lowry, near Dumfries, and one ram and ewe by Mr. Dalziel, of Kirk Michael parish. The lot also included a pair of Cheviot sheep, bred by Mr. Walter Cruthers, of Kirkhill, Wamphray parish. The three ewes I got from Mr. McWilkins I sold to Mr. Robert Ferrie, of Doon, as also the rams purchased from Mr. Lowry and Mr. Dalziel. The ram I got from Mr. Wilkins—Mr. James Cowan, of Clochmohr, took a half interest in him. He was kept till he was seven years old and then sold to Mr. James Wilson, of Cedar Creek, township of Dumfries, who kept him for two years, which I think is evidence that he left good stock behind him. The remaining Leicester ewe I kept myself. The Cheviot ewe my brother, James Shaw, of Hazel Bank, got, the ram having died.

The following year, 1854, I got out eight more—seven ewes and one ram, all Leicesters. Mr. Cowan, of Clochmohr, got four or five of the ewes, but what became of the rest I cannot remember, but I do not think the second lot were as good as the first ones.

The above is all I can remember about them, but I believe they were the first thoroughbred sheep imported into this section of the country.

ADAM SHAW.

Hespeler, 9th April, 1888.

We will give most earnest welcome to reminiscences of this nature. It would please us exceedingly if they could all be gathered up before it is too late. Those who know as to these early transactions in purebred live-stock will do us a real favor by communicating with us.—ED.

A Remedy for Kicking Cows.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I forward my experience on this subject, for publication, if you think best. For a cow that has a habit of kicking while being milked, I use a strap with a ring on it, buckled on the cow's leg and left there. Have the cow in the stanchions and behind her a few feet a steeple driven in the wall or floor with a cord attached long enough to go through the ring on the cow's leg and back to the staple and tied.

A. S. MCD.

Fingal, Ont.

"Agricola" at Sea.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Your correspondent, "Agricola," in his papers on the Shire horse, would do well to stick to his subject, and leave the Clydesdale alone, as he seems utterly at a loss for some clue to make them unpopular in the eyes of the readers of your valuable JOURNAL. How far does he, simple man, expect to succeed in denouncing the king of draught horses, viz., the Clydesdale?

"What is the difference between a Clyde and a Shire," he says, "is a question often asked, and then states that the Clyde of the present day is very closely connected with the Shire. I say, *vice versa*. A great many of the registered Shires of the present day are closely connected with the Clydes. He states that the late Lawrence Drew and many other farmers visited Derbyshire to bring Shire mares and take them to Scotland for breeding purposes. Does "Agricola" know who were the principal buyers at Lawrence Drew's annual sales during those years he went to the Shire breeders to buy mares? Let me tell him. They were principally Englishmen from the shires and counties where the Shire horses are bred. The writer was present and saw them and many other Clydesdales sold to go to England after having been in Mr. Drew's possession for a few months, and served by some of his horses. And let me inform "Agricola" that there were probably six Clydesdale horses went to England to improve the breed of Shire horses for every mare taken to Scotland.

Then, again, he quotes Burns' description of the old farmer's mare "Maggie," but, foolish man, what proof has he that "Maggie" was Clyde, or even one of the Scotch draught breed of that period? Does "Agricola" imagine that they breed nothing but Clydesdales in Scotland? Again, what proof has he that Prince of Wales is "half Shire"? His grand dam on the one side was the first prize mare at the Highland Society's show in Glasgow five years before "General" was foaled, and on the other "Kate" was purchased in a Scotch market. Again, he quotes to let us know how deformed the Clydes were in the year 1856, and how they varied in size. Does he not tell us in his first paper how the Shires vary in size? Why should they not? Are there not big whales and little ones in the ocean?

Let me draw "Agricola's" attention to the career of Topsman, not very long dead, a Clydesdale horse which was once in the possession of J. F. Crowther, Muirfield, Yorkshire, England, where, during the years 1877 and 1878 he gained over twenty first prizes, including the Lincolnshire £100 prize at Louth, right where the famous Shire horses are bred, and no doubt he also helped to improve the Shires. There is to be seen in this neighborhood a descendant of Topsman, which for substance and muscle, as well as nearness to the ground, will compare favorably with the most of the Shires.

Let me state in conclusion, as proof of the fame of the Clyde as a draught horse, that during last year nearly one thousand registered animals were certified for exportation, principally to the States and Canada, where I am certain Englishmen are more numerous than men born north of the Tweed. Let me again suggest that "Agricola" keep to his subject of booming the Shire breed, as they need it, and leave the far-famed Clydesdale alone.

CLYDESIDE.

Fiverton, Ont.

A Proper Standard Required.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Is our system of registry for pure-bred stock what it should be? We think not. What a state would the trade of our country be in if each branch of business were allowed to regulate the standard of weights and measures used by it in its particular business! We would have as many standards as there are now among the breeders of the different breeds of so-called pure-bred stocks.

Legislation was required to make the system of weights and measures what it is, and legislation is required to make our herd book standards conform one to the other. What has the readjustment of the Shorthorn herd book cost the breeders of the country? Would the standard adopted by the D. S. H. B. Association have been adopted had the breeders who had sold stock that were to be rejected been required to refund the purchasers the price received for the stock less their value as a grade? We think

not. If, then, as we claim, there is no more need of two or more standards in registering pure bred stock than there is for so many standards of weights and measures, how can the desired end be attained? We would suggest, as a means to this end, a meeting of the officers of the different associations at some convenient time and place, to discuss a standard; and when satisfied as to the standard required by them, let them organize as the Dominion Pure bred Live-stock Association, or some name to be agreed upon, and petition the Dominion Legislature for an act to incorporate them, under such standard as adopted, with proper provision for the punishment of parties who would sell as pure bred unless registered by this association.

The different breeds would of course come under their own different heading, in the books of the association, and as soon as the owner of one animal of a different breed from any now registered in the country, produced the necessary evidence that his animal was eligible for registry according to the standard of the association, the secretary would be required to open a new book for that breed. Provision would of course have to be made for the issue of the different herd books as required.

For the last two years one could hardly take up a stock journal or farmer's paper without seeing an article on stud, herd, or flock books, and in nearly every case a difference of opinion existed as to what the standard of the book in question should be. The Shorthorn men appeared to be as far apart as it was possible for them to be. If they could join hands over the breach, why not all the breeders of all the different breeds?

If some such action as we suggest is not taken at an early date, will the standards of some of the other associations not cause loss and trouble to new breeders, as the Dominion S. H. B. A. has done? Is it right that one's meat should have to be bred to such a perfect standard, and that the horse, the noblest of all animals, should require only four crosses on a shag-api to make its product eligible for entry in the records of the Canadian Clydesdale Association?

In an article in the last CANADIAN LIVE STOCK JOURNAL a hint is thrown out to those who think of forming a sheep association and flock book, that might be well for any association to keep in view; that is, "the adoption of a scale of points," as, if the object in raising the standard is to lessen the number of animals registered, it can very effectually be done in this way, as there are still in the Dominion S. H. B. A., and probably some in all the other herd books, that the adoption of a scale of points would shut out.

I am sorry to ask so much of your valuable space, but know you see the importance to the country of its stock interests, and will be willing to grant any reasonable space for the discussion of so important an interest.

JOHN SHARMAN.

Breeze Lawn Stock Farm,
Souris, Man., March 23, 1888.**Live Stock Insurance.**

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Will you kindly give me the name and address of a company insuring live-stock in Canada?

There is no insurance company in Canada giving much attention to this important branch of the farmer's business. A number of companies do a little in a way in this line, but none of them, so far as we are aware, pay much attention to it. Such a company is one of the wants of the country.

Removing Barrenness in Animals.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I have a mare 23 years old this spring which has not raised a colt for five years although given repeated trials every year. Having noticed in the JOURNAL that Mr. V. E. Fuller (I think it was) had used salts for barren cows, I thought I would try the same with the mare. She was given one pound of Epsom salts in the evening, and sent on a visit to the horse next morning, and produced a foal. I had another young mare that failed to get in foal during the season of 1887, and was treated in the same way with a like result.

ELGIN FARMER.

"Agricola" on the Right Track.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I notice in February and March numbers two papers on the Shire horse. They are very good as far as they have gone, but I find the writer is somewhat astray as to the pedigree of that noted Clydesdale, The Prince of Wales (673). I therefore, with your permission, will proceed to make a correction. He says the Prince of Wales (673) is half Shire; but that does not go far enough, for that horse had no less than four straight crosses of the very purest and best of Shire blood in him. And now, to prove my statement correct, I forward to you a copy of a letter written by Mr. C. T. Douglas, late of Toronto, which appeared in the *Mail* of July 5th, 1883, for which I hope you may be able to find room for the benefit of your readers.

Mr. McCrae neglected in every one of his letters on the Clyde to give the farming community that most necessary information, viz., which is the best breed of heavy draught horses, and the reasons which would lead him to form his conclusions. I do hope the writer on the Shires will come to the front in this respect, for the Shires are well worthy of attention.

DAVID MESSENGER.

Guelph, Ont.

We insert that portion of the article from the *Mail* which bears more directly on the point in question. It reads:

"But let us take a glance at the so-called leading Clydesdales and see if they do not inherit English blood to a great extent. Take, for instance, Prince of Wales (673), and who among Clydesdale men has not heard of him as a representative Clydesdale horse. If they will take the trouble to look up his pedigree they will find at least four Shire crosses in him. Then take St. Lawrence, Mr. Riddell's first prize horse at Glasgow this spring, who has, I believe, five English crosses. Then, again, Mr. Drew's Prince of Avondale, first prize three-year-old at Glasgow, with an equal number of registered English crosses. Lord Lyon, who probably got as many prize-winners as any stallion in Scotland, is full of English blood. After saying so much for stallions, let us turn to Mr. Drew's old roan mare Queen, who for years has shown up and down all over Scotland, and this season, though well up in years, is still to the front, also beating Clydesdale mares of every age and class. Queen was bred by Mr. Chappell in Derbyshire, and is Shire bred to the backbone.

"Mr. Drew, than whom no more intelligent and unprejudiced breeder lives, is rapidly gathering around him a large following, and propositions have been made to amalgamate the Clydesdale and the English stud books; and I believe advantages in the breeding of good horses would be the result. The stud book in Scotland is damaging Clydesdales greatly as far as size and substance are concerned, and to-day it is an impossibility to find a Clydesdale of the same class as used to be imported to Canada and the States. Everybody is agreed that draught horses in Canada are not increasing in size, and 1,400 lbs. is about the weight of the ordinary run; but to attain the English standard an active, useful gelding weighing at least 1,800 lbs. seems hopeless. My own idea is that it is impossible to improve on judicious crossing between Shires and Clydesdales. Mr. Drew, as I have shown in the beginning of this letter, has amply exemplified this."

Education of Farmers' Sons.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I, too, have my views on the education of farmers' sons, and perhaps you will allow me to make them known through the columns of the JOURNAL in the hope that they may be of service to some one.

An idea seems to prevail that farmers, as a class, are not as intelligent as other classes of the community, and though quite a number of our most successful and enterprising men are farmers, there are several things honestly considered which seem to give countenance to this opinion. Many farmers seem to have very limited views of what a farmer should know. The opinion is general that a common school education is quite sufficient for one who is only to be a farmer. It is not strange, then, that in the minds of young people, to acquire a good education implies engaging in some other pursuit. Nor is it matter for surprise that the bright, ambitious lads who would give tone and a

more honorable standing to farming, should leave the farm for other pursuits.

Too many have imbibed the idea that to obtain a sufficient education to enable one to appear to advantage in public life, his youth must be spent within classic halls. Though this should be of substantial benefit it is not the great essential in making a man. A youth who, till he has reached his majority, has been hedged within the limited circumference of the schools, is not possessed of that knowledge of men and things indispensably necessary to prepare him for grappling with the real difficulties of life. He is liable to be imposed upon at every turn, and though he may have a large fund of fine sense, if he lacks common sense he is like a ship without a rudder.

Let boys on the farm be taught first and last all that is necessary for them to know about farming, and if the more refined studies can be worked between the branches absolutely indispensable, so much the better. All who will may now-a-days drink deeply at the pure fountains of knowledge. Ignorance is a voluntary evil. By a proper improvement of time the ploughboy may lay in a stock of useful knowledge that will enable him to take a stand side by side with those who have grown up in the full glow of far superior advantages.

Very often we hear parents deplore the decisions of their sons to cast their lot amidst the perils and dangers of the city. If they are to have it different, they must attend to these requirements: 1. Abate the taskwork of labor; 2, aim at raising the maximum of crops and securing corresponding profits; and 3, surround the work with the exhilaration of intellectual progress. Let the country boy be as well educated in essentials for the farm as his city cousin for the bar, which will increase rather than hinder his success. Then indeed will farmers realise that for health and for substantial wealth, for rare opportunities of improvement, for long life and real independence, farming is the best business in the world.

DUNCAN McDUGALL.

Marvelville, Ont.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

The Shire Horse.

(Fourth Paper.)

The appended list is arranged alphabetically for convenience of reference, and has been compiled from the entries for the Canada Shire Stud Book, the appendix to the American Clydesdale Stud Book and other sources. The numbers in square brackets refer to the Canada Shire Horse Stud Book; letters in square brackets to the appendix of the American Clydesdale Stud Book; numbers without symbols to the American Shire Horse Stud Book, and the numbers in round brackets to the English Shire Horse Stud Book; the letters E. S. B. denote the English Shire Horse Stud Book.

LIST OF STALLIONS IMPORTED TO CANADA.

Abe Lincoln [26] (3413), black, white feet and white stripe. Foaled 1882; bred by James Cross, England Hill, Pilling, Lancashire. Imported by A. Fanson & Son, Toronto. Sire Lincoln (1350); dam Moss Princess (vol. vi., p. 326 E. S. B.), by Prince of Wales (1812).

Adam II. [21], bay, white stripe and white feet. Foaled 1882; bred by John Taylor, Ormskirk, Lancashire. Imported by Fanson & Son. Sire Adam (65); dam, Jane by Hannibal (992).

Bank of England [40], black. Foaled 1871. Imported by Peck, Stanley, in 1873. Sire Young Oxford by Samson (1922); dam by Tom Lincoln, by Goliath out of Beila by John Bull.

Ben Lomond [101], black, white on face, white hind legs. Foaled 1871. Bred by John Jenson, Garstang, Lancashire. Sire Farmer's Friend (Thompson's); dam by Shortlegs (2673). N. B.—This horse appears in the appendix of vol. iv. E. S. B. as not being eligible for the stud book.

Black Rocks [20] (3469), brown. Foaled 1882; bred by — Whitlock, White Meadows, Ashbourne. Imported by A. Fanson & Son. Sire Masterman (2464); dam Black Darling by Matchless (1536); g. dam by Hercules (1022).

Black Tom [K], black. Bred by Alex. Sims, Keith Hall, Aberdeenshire. Imported by John Thompson,

Canada. Sire, Black Tom, bred by J. Davis, and sired by Major (Fullard's); dam by Wonder.

Boliver [80] (3476), bay; foaled 1882. Bred by Rev. E. Manford, Farnah Hall, Derbyshire. Imported in 1884 by Hendry & Douglas, Hamilton. Sire, Champion (457); dam by Crown Prince (558).

British Champion [75], black; foaled 1866. Bred by James Smith, Marfleet, Eng. Imported by John Carrick, Haggersville, in 1868. Sire, Tom O'Lincoln, by Goliath; dam by True Briton.

Bromley [57] (4280), bay; foaled 1883. Bred by Joseph Wint, Rugely, Staffordshire. Imported by A. Fanson & Son. Sire, Staffordshire Lad (4705); dam, Miss Bromley by Shakespeare (2001).

Brown George [H], dark brown; foaled 1850. Imported in 1851, by I. Cooper, Davonport, West York. Sire, old Brown George, sired by Drayman and out of Smiler by Simpson's Farmers' Glory; dam, Blossom by Coates' Brown Champion; g. dam by Musson's Ploughboy (this is evidently Ploughboy (1726), foaled in 1818); g. g. dam by Goodwin's Samson.

Brown Stout [131] (2547), dark brown; foaled 1877. Bred by James Thomas, Ellesmere, Shropshire. Imported by T. Evans, St. Marys, Ont. Sire, Drayman (Williams', Marlet, Drayton); dam, Brown by Bold Will (Edwards', Caefach, Wales). Brown Stout stood 16½ hands high, and weighed 1,950 lbs.

Chalton Hero [115] (3530), brown, white face; foaled 1881. Bred by H. I. Grant, Biggleswade, Bedfordshire. Imported by Geary Bros., London, Ont. Sire, Baron Lincoln (105); dam by Champion (441).

Chance [105] (4957), brown; foaled 1884. Bred by — Foster, Atherton, Leicestershire. Imported by Ormsby & Chapman, Oakville, Ont. Sire, Waxwork (2314); dam, Belle by Robin Hood (3284).

Cœur de Lion (4964), bay; foaled 1885. Bred by Cole Ambrose, Stuntney Hall, Ely. Imported in 1887 by W. H. Millman, Woodstock. Sire, Merry Monarch (2842); dam, Stuntney Flower II (vol. v, p. 290, E. S. B.) by Matchless (1532).

Contender [T] [76], dark bay, black points, white on hind feet; foaled 1866. Bred by J. Erwin, High Splace, Newcastle-on-Tyne. Imported in 1871 by Geo. Shaw, Bowmanville. Sire, All Glory, owned by — Moffatt, and sired by Reed's England's Glory (730); dam by Nonpareil (1647), a Royal winner; g. dam by Farmers' Glory; g. g. dam by Carner; g. g. g. dam by Waggoner.

Contention [60] (4334), bay, white hind feet; foaled 1883. Bred by — Wheatefote, The Hollies, Wolverhampton. Imported by A. Fanson & Son. Sire, King of the Vale (1242); dam by Pride of England (1770).

Coroner [119] (4336), bay; foaled 1884. Bred by Averill & Wood, Cheadle, Stoke-on-Trent. Imported by A. Fanson & Son. Sire, Certainty (2738); dam, Julia, by Sweet William (2094).

Derbyshire [30], brown; foaled 1870. Bred by W. Graves, Whitby, Yorks. Imported by W. Long, Lansing, Ont. Sire, Derbyshire Champion.

Dick Turpin [29], bay; foaled 1865. Bred by T. Wallace, Wisbeach, Cambridgehire. Imported by T. J. Bell, Londesborough. Sire, Young Samson. Dam by Young Waxwork.

Donald Dinnie II [37] [0], brown, star on face, one white foot; foaled 1873. Bred by — Blyth, Harwich, Scotland. Imported by S. Beattie, Markham. Sire, England's Glory (Taylor's) (723), a celebrated prizewinner. Dam, Bord. Queen, by Warnock's Young Campsie. (N.B.—I have been unable to find any trace of Young Campsie, and he was probably a Clyde.)

Drayman [12] [C], bay. Bred by W. Lidget, Navor, Lancaster. Imported in 1872 by John Kemp, Yorkville. Sire, Young Drayman, owned by Mrs. Howson, Bathley, by Old Drayman, bred by S. Gordon, of Berwick, and out of a superior Cart mare by Young Captain (Flowers'); dam bred by W. Wenn, of Grafton, and sired by A1.

Drummer [70]. Foaled 1880. Bred by R. Rowland, Creslon, Aylesbury. Imported in 1882 by I. I. Fisher, Benmiller, Ont. Sire, Colonel (2101); dam, Diamond by Waxwork (2272).

Duke of Lancaster [77] (2566), bay; foaled 1879. Bred by Robert Porter, Fleetwood, Lancashire. Imported by Hendrie & Douglas. Sire, Whatswanted (2332); dam, D.rby (vol. II, p. 137, E. S. B.) by Ploughboy (1745).

Duke of Wellington [94] [B], black; foaled 1856. Bred by Squire Topham, Yorkshire. Imported by

John Ashby, Whitby, Ont. Sire, Duke of Wellington (Booth's); dam by Jacob Wright; g. dam by Nobleman. Duke of Wellington was a noted prize winner, taking first at Lincoln, Eoanburg, and at the Irish Agricultural Society.

Earl of Lancaster [127] (4361), brown, blaze down face, white leg. Foaled 1834. Bred by the trustees of Mrs. Chatterton, Crowle, Lincolnshire. Imported in 1886 by Morris, Stone & Wellington, Welland, Ont. Sire, Lancaster (2607), dam Bute (Chatterton's) (Vol. vi. p. 210, E. S. B.), by Robin Hood (1874).

Eddystone [25], bay. Foaled 1882. Bred by John Taylor, Ormskirk, Lancashire. Imported by A. Fanson & Son. Sire, Columbus (503), winner of 2d at Royal. Dam, Polly, by Dragon alias Sweep (601).

Emperor [7] (3621). Bay, white hind feet, white stripe in face. Foaled 1881. Bred by Richard Ashcroft, Ormskirk, Lancashire. Imported by A. Fanson & Son. Sire Emperor 2d, alias England's Glory (697); dam by Leicester (1310).

England's Glory [97] (753). Bay. Foaled 1873. Bred by Fryer Richardson, Chatteris, Combs. Imported by Charles Harrison, Dairsville. Sire England's Glory (Amgood's); dam by England's Glory (733); g. dam by Wilson's Horse.

AGRICOLA.

(To be Continued.)

Calf Slipping.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Is their any disease that cows are subject to that will cause them to slip their calves. Have a number of cows that should "come in" about the first of May. Now fully one half of them have calved already. Some of them had every appearance of calving, such as making bag, etc, while others showed no sign at all. The calf is alive when it comes. My cows are properly attended, good feed, etc. This misfortune is not confined to my herd alone, others in this section losing like numbers of calves.

If you will answer in next issue of the JOURNAL you will greatly oblige.

SUBSCRIBER.

Manitoba, 11th April, 1888.

We have grave fears that the trouble referred to in the inquiry of "Subscriber" is that mischievous and but ill-understood disease abortion, a trouble that as yet has baffled the efforts of the ablest to subdue it at will. Amongst the exciting causes are indigestion, ill health, as tuberculosis, smut, ergot of rye or other fungi in the grasses. Some forms of it are contagious, hence on the slightest indications of its approach the infected animal should be isolated. Where it has taken place, every particle of the bedding and discharge should be burned, and the surroundings, as floor of stall and partitions cleansed and sprinkled with a strong solution of carbolic acid. It is well also to burn sulphur with the doors closed for half an hour. Sometimes it seems impossible to assign the exciting cause, although doubtless there is one. Its sudden disappearance is not unfrequently as marked as its unlooked for appearance. In the April number of the JOURNAL for 1885 Dr. Grenside has a useful article on this disease.

The Canadian Draught Horse Stud Book.

At the last meeting of the council of the Agriculture and Arts Association the secretary had been instructed to go on with this stud book when the number of subscribers fixed upon at the organization meeting in December had been obtained. So, on the 7th April last, the secretary called a meeting of the provisional Directors and subscribers to adopt a constitution and to fix a standard. The following were confirmed in the offices to which they had been provisionally appointed at last meeting: President, Chas. Jackson, Mayfield; Vice-President, A. Fanson, Toronto; Sec'y. Treas., Henry Wade, Toronto; Directors, James Gardhouse, Highfield; Chas. Lawrence, Collingwood; John Vipond, Brooklin; Dugald McLean, York Mills; W. A. Fanson, Toronto; F. T. Coleman, Arthur, and Thos. Natress, Mackville.

The constitution of the Clydesdale Association, with the necessary changes for name, etc., was adopted.

The annual membership fee was fixed at \$3. \$2 for members, and \$3 for non-members, is the fee charged for each registration in the stud book.

The following standard was agreed upon. Draught horses shall be received for registration on the following terms:

1. Stallions or mares having sire and dam both on record in either the Canadian Clydesdale Stud Book or the Canadian Shire Horse Stud Book or in the Canadian Draught Horse Stud Book.

2. Mares having four top crosses of recorded sires in any of the aforesaid stud books.

3. The produce of a recorded mare, if got by a recorded sire.

4. As many stallions were imported from Great Britain before any public records were kept, it is left to the discretion of the revising committee to accept such for registration in the Draught Horse Stud Book when they have been generally recognized as either Clydesdales or Shires.

The Canadian Draught Horse Stud Book is not so much a new work as it is the continuation of the appendix to the Clydesdale Stud Book, so expanded and modified by means of organization, as to suit the requirements of Canadian breeders. Heretofore the Clydesdale blood predominated, now no account is taken of the proportion of the bloods, only each individual cross must be in itself a recognized and registered animal.

It is hoped sufficient entries will be received to justify the Association in getting out a stud book this year, and with the appendix (vol. 1 and vol. 2 of Clydesdale Stud Book) as a nucleus, this should be accomplished.

The Most Pressing Needs of the Canadian Farmer at the Present Time.

(Continued from April.)

The complete remedy, then, for this state of things is two-fold. It consists first as we have said in the diffusion of a better education, and second, in the extension and strengthening of the Institutes. An educated people will not, cannot, submit to oppression. The imposition of fetters upon them is like the attempt to dam the waters of a mountain torrent while the rain falls fast on the heights above. Those waters refuse to be pent up. At first they leap over the obstructive dam in angry little rills. These are the leaders in the gathering movement to resist oppression. Then, with the ever increasing power that collective unity brings, with one mighty surge the obstruction is soon borne away, and no place for it is found.

Why do the farmers not perceive the advantages of the power of union, and why do they not secure them? Suppose the waters of Niagara were divided into ten thousand streams, each running in a separate channel. Why every manufacturer in the country would make them to subserve his purpose. Even the school-boy could laughingly direct them at his pleasure as they drove his mimic wheel. But see Niagara as it is. The commerce of a continent pays it respectful homage by standing still the moment its inlet and outlet are passed. The ten thousand streams of a divided Niagara are the farmers of Canada un-united. They are at the mercy of every middleman in the country, from the solitary grain-buyer, the only one in the place, to the rings and rings and rings of the other interests of the state. In this way, a man with roguery of intention hidden under a bland exterior, may fatten on the wrongs of a whole neighborhood of farmers. He is himself a king, a veritable Bomba, whose right to reign is never questioned. The waters of Niagara collected, as they roll on resistless with everlasting roar, are the farmers of Canada united. Knocking together at the door of Parliament, the Premier himself would be the first to run to open it. Then every man could sit under his own vine and fig tree, conscious of deliverance from the classes.

But as it is, behold the ignoble image that depicts the condition of the farming community. A gigantic lion on the highway roaring with pain from the gnawing of a hundred mice that have burrowed in his skin, without ever really having attempted to brush them off, which he might have done with a sweep or two of his tail. The school boy student of history has read about the seven wonders of the world. The image we have just depicted is the eighth wonder. The lion must be laboring under some strange hallucination as to his lack of strength, or he would secure his own de-

liverance. Fancy how the fox would laugh on the sly if the lion called to him to come and help him. He would no doubt come, but it would be to secure the mice rather than to relieve the lion. And this is about the amount of relief that farmers will get by calling in the aid of legislation so long as they remain the ignoble lion of the highway. But let the farmers once unite, and in the calm confidence which rectitude produces, wait upon the legislature of the day, and they will get just what they seek. The Government of Canada would no more think of hindering their wishes than would the peasant of the mountain side think of hindering the advance of the avalanche from its summit. The Government of the day is far too wise to put itself into antagonism to so grand a majority.

Ignorance and intelligence has each its own way of seeking redress. The market inspector of beef hides puts on his spectacles, and after rigid scrutiny in search of a "score-hack," thinks he sees the faint shadow of one, and marks the hide No. 2. Ignorance indulges in a shower of bluster, as harmless as a shower in April, or it may be in the "Tom Sayer's" style, seeks redress, with results—a visit to the lock up and a fine. Intelligence remonstrates—it is only tame cowardice that submits. It then appeals to the civil magistrate, failing here—to the higher court. It remonstrates through the press, and best of all, it tries to secure that unity of action which will sweep away the office of inspector of hides, and consign it to the ignominious sepulture which it long ago merited.

It is too true that in the past the farmers have not united, and hence the condition in which they are found. But it does not follow that in this respect the thing that hath been is that which shall be. Surely we shall never be so infatuated as to be forever playing "the running Amok." While the great issues of the day have been discussed, we have allowed the manufacturer to come along with his lancet and draw a lot of good, rich blood. At noon the railway interest has brought another vessel and filled it, and in the evening other corporations have come along and opened the veins again. And all this martyrdom has been submitted to because of the fact, the solitary fact, that there are two political parties in the country, and in our zeal for one or other of these, we have allowed ourselves to forget that we had interests not essentially connected with party.

(Concluded in next issue.)

Our Scotch Letter.

THE STAMPING OUT OF PLEURO-PNEUMONIA—BETTER PROSPECTS FOR BREEDERS.

(From our Aberdeenshire Correspondent.)

The Government has at last wakened up to a sense of its responsibility in regard to the suppression of pleuro-pneumonia—a disease which has for some years been threatening the very existence of British herds and their world renowned pre-eminence. An order recently issued compels the immediate slaughter of all affected herds, and of cattle with regard to which there may be a suspicion that they have been in contact, compensation to the extent of the value of the animal before slaughter being allowed out of the local sales, provided that in no case the value exceeds £40. Notwithstanding a very heavy outlay that will have to be incurred by various counties in carrying out the order, there is but one opinion among British stock owners as to the necessity of such a measure. Well, I believe there are a few insignificant exceptions, where a few city dairymen are clamoring against the stringency of the measures adopted, but these parties are blamed, and with some reason, with having been the means of spreading the attacks of this insidious disease to a serious extent in the past, and it may with confidence be anticipated that these plague spots, which have so long existed in city dairies and been a standing menace to the interests of stock owners, will now be swept out of existence. There is no county in Scotland that has from first to last been a heavier loser by pleuro-pneumonia than Aberdeenshire. The very fact that the disease has been allowed to linger so long in the country meant a heavy loss to our famous breeders of Shorthorn and Polled cattle, who were in consequence cut off from their best markets, not to speak of their having to carry on what at the best is a business subject to many unforeseen contingencies, in the constant dread of an attack of the disease. In one sense it is unfortunate for the

county of Aberdeen that the order should have been promulgated at a time when the disease prevailed to an alarming extent in this district, there being, I suppose, over thirty different centres in existence at the present time. That has not stood in the way of the county authorities loyally accepting the order, which has been rigorously put in force, and already about 300 animals have been slaughtered. It is estimated that the loss which will fall upon the county through the slaughter of affected and suspected stock will amount to some £8000, or nearly 2d. per £ on the entire rental. There is some talk of asking that the Imperial rate should be made to bear a proportion of the loss, and such a petition could be urged, at least by Aberdeenshire, very effectively on several grounds, as here the action of the local authorities has not been so lax as that of other authorities elsewhere, and already large sums have been spent in stamping out the disease. In some instances there has been an attempt to smother the effect of the order before it was put in motion by a proposal to adopt inoculation, which was falsely urged on the score of economy; but the views of such "faddists" have got a very cool reception from the government, which says that if anything is to be done in that way it will not be at the expense of the order, which must be carried out immediately, not only in England and Scotland, but in Ireland. Aberdeenshire breeders, and in fact the whole of the breeders and stock owners in the north of Scotland, have taken a very decided stand against any proposed measure of compulsory inoculation, which they condemn out and out. A well-known Shorthorn breeder in this district declared at a public meeting that if such a measure was adopted he would at once sell off his herd and retire from the business altogether, and the attitude of this gentleman pretty fairly represents the prevailing opinion in this part of the country. We have now "passed the rubicon," and it will not be possible for any government to stay its hand until the last vestige of the disease has been obliterated and the country has been relieved from the unwelcome presence of this much dreaded pest.

The spring sales of pedigree stock have been much more successful than the most sanguine could have anticipated. There has been an all round rise in prices of from 20 to nearly 40 per cent. Much surprise has been expressed at these results, which are not to be attributed to any improvement in the prospects or financial condition of our farmers, these being the reverse of hopeful. But adversity, as has been said, is an instructor, and it has taught many of our breeders a lesson which I have often thought they needed. It must have often occurred to many people who took an interest in the subject that the long-to-be-remembered period of fancy prices did not, unfortunately, help to advance the best interests of our native cattle in this part of the country. From observation I know that it lowered the character of our public sales and induced breeders to disregard the conditions of quality in their breeding stock. There was nothing of too low a standard in a bull that could debar him from being retained for service, and by failing to apply the principle of selection in the case of the females our breeders allowed these likewise to fall below the standard that should have been aimed at. All this is now changed. When the depression came and prices fell, inferior animals would not sell at any figure, and another policy has had to be followed by breeders, from which the best results have already flown. They have for some seasons been using the knife freely among their bull calves, and to this I attribute the marked improvement in the young sires which were sold by auction this year at Aberdeen and Perth. The quality was improved, and the numbers, which had for some seasons been larger than the local demand, were reduced, and the resultant, as I have already said, was a great advance in prices as compared with the corresponding ones of 1887, from which breeders have taken fresh encouragement; and as we may look forward to the speedy extinction of their old enemy, pleuro-pneumonia, the outlook for pure stock breeding in this part of the country is decidedly better than it has been for some time. This view is strengthened by the steadiness of prices for fat stock, which have been selling this year all through at from 60s. to 63s. per cwt.

April 2, 1888.

QUIDAM.

"I see the JOURNAL still keeps abreast of the times. It is a great treat to sit down and read each new issue when it comes to hand."—F. J. Ramsay, Dunville, Ont.

The London Shire Show.

(From our own correspondent.)
(Too late for last month.)

This exhibition, the great event of the year in Shire circles, was opened on the 28th February last at the Agricultural Hall, Islington. This is the ninth show held by the Shire Horse Association, and it is universally admitted to have been the best as well as the largest that has yet been held. It is worthy of note that out of 410 entries only 19 animals failed to pass the severe ordeal to which they were subjected by Prof. Axe and his colleagues, while at the first over 50 per cent. were disqualified, thus showing the benefit this examination has conferred.

The attendance was very large, and many Canadians and Americans were present. The class for aged stallions 16.2 and over, contained some grand specimens, as may be imagined, when such horses as Harold (last year's champion), Hitchin, Conqueror, Carbon, Surprise, Nabob, etc., had to be content with high commendations. The first prize fell to Prince William (3956), who shows to perfection when put in motion, and afterwards the Elsenham challenge cup for the best animal in the yard was awarded him, thus repeating his victory in 1886. Julian (3766) was placed second, although some preferred Harold (3703); Carleton Blaze 3d, (5652) and Hatherton 4th (4443). In class 2 for stallions under 16.2, foaled previous to 1884, Stanton Hero (2918) (the 1886 champion) was easily first; Hydrometer (3744), a dark brown, wide, blocky horse, sired by the noted Premier (2040) was placed 2d; Bold Briton (3475), by Warnor (2689), 3d; and Sir Garnet (4037), a good mover, by Chatteris Black (485), 4th. Class 3 (four year-olds) had only 17 entries, as compared with 32 last year. Laughing Stock (4516), a massive bay of good quality, easily captured first, second falling to Don Pedro (5002) a shortlegged black by Don Carlos (2416); while Real Briton (2641) by True Briton (2684), secured 3d, and Carlton William by William the Conqueror (2343), got 4th. Class 4 (three-year-olds) was a good one. All Here (4829), a bay, with perhaps a little too much white on his legs, but with stylish action, was placed first; Don Juan 2d (5784), a thick, short-legged colt, 2d; Mahomed (6173), a well-known winner at the Royal, 3d, and Roseberry (5306), 4th. Class 5 (two-year-olds) were a good lot, and much speculation was indulged in as to which would take places, which was ended by Hailstone Pride (6194) a black with a white marking, and one likely to be heard of again, taking 1st; Salt Royal (6354), a stylish, well-fashioned colt, 2d; Union Jack (6505), 3d, and Leake Admiral (6040), 4th. In the yearling class, Governor, a bay, sired by the now noted Premier (2646), with good, flat bone and plenty of hair, was easily 1st, 2d falling to Leake Topsman by Duke of Hitchin (3063), and 3d to Beacon, a bay by Vacillator (4767). A great improvement was also apparent in the classes for mares and fillies, the cup for the best mare going to Lord Ellesmere's Blossom 2d.

The following is the list of winning sires: William the Conqueror (2343), heads it with 4 winners to his credit; Hydraulic and Premier, 3 each; Bar None, Don Carlos, Thumper and True Briton, 2 each; Ambassador, Bismarck, Canute, Chatteris Black, Duke of Hitchin, Decoy, Duke of Cambridge 2d, Great Britain, Harold, King Charles, Lord Byron, Merry Lad, Oak Branch, Royal Albert, Royal George 2d, Shrewsbury, Thorney Tom, Vacillator, Warrior and Western King, one each.

The auction sale proved a great success, prices ruling high. Many buyers, both from the continent

and America, were present, and purchases were made both for Canada and the United States.

The English Shire Horse Stud Book.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I see in your last JOURNAL, under the heading of "The Shire Horse, p. 68," the following: "The English Shire Horse Stud Book is probably accessible to but few persons." Please let me know whether I could get the produce of a pure-bred Shire mare registered in the old country book. I am very anxious to know all about it.

JOSIAH HALLAM.

Washington, Ont.

The sentence quoted by Mr. Hallam in "Agriculturist's" letter, means that owing to the limited number of persons in Canada in possession of the E. S. H. S. B., but few are consequently accessible to it. The following are the conditions of entry for stud book, vol. ix, the volume which has just been distributed to the members of the association.

For Stallion.—A stallion foaled in 1880 or previously, will be admitted if his sire or dam's sire be in the stud book. A stallion foaled since 1880 will be admitted if his sire and dam be in the stud book. (Should the dam of the stallion be not registered it will be sufficient if her sire be in the stud book).

For Mare.—1. A mare foaled in 1880, or previously, will be admitted if she complies with one or more of the following conditions:

(a) That she is by a registered sire.
(b) That her dam is registered, or is by a registered sire.

(c) That she or her offspring (which must not be of less age than a yearling) being of the Shire breed, has gained a prize in an open class at any show in the kingdom.

2. A mare foaled in 1881 or since: that her sire be registered and her dam be either in the stud book or be by a registered sire.

3. A mare registered in previous volumes that has since had a foal by a registered sire, is eligible for entry.

N. B.—The editing committee are empowered to reject the entry of any animal of which there is a doubt as to its being of the "Shire" or old English cart horse breed.

The secretary of the Shire horse stud book is Mr. J. Sloughgrove, 11 Chandos street, Cavendish Square, London W., England.

Silos and Ensilage.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—In reference to Mr. Cheesman's article on the above subject, in the March number of the JOURNAL, I would like to ask for information as to the sowing of the corn. He says, "Seed should be sown in the planter in rows 42 inches apart, and six inches apart in the drills." Is one grain of corn sufficient or are a number of grains deposited at these intervals of six inches in the drills? I have been in the habit of sowing three to three and one-half bushels to the acre.

Can I cure to save for winter use the balance left from feeding my cows in the fall of the green stalks? I have no silo, but would like to grow some for winter use. Will the B. and W. corn suit this country? PEEL.

Brampton, Ont.

We presume Mr. Cheesman intended that there should be but one grain in each place, and that it will answer every purpose to use an ordinary grain drill in depositing the seed, stopping up all the tubes not wanted in the operation. About half a bushel of seed (shelled) will suffice for one acre, or perhaps a little more where land and seed are not both in the most perfect condition. We have tried this method among others, and got good results from its adoption, and will try it this season again with twenty acres. But one essential must not be forgotten—that is, frequent and thorough cultivation after the corn is up.

It can be saved quite well for winter use, but not without considerable labor. Cut it when the corn

is in the glazed condition, and put up in stooks. Before the wet weather of late autumn, if there is room, it may be drawn inside. If it can be stood up two or three tiers deep, the sheaves standing upright, it will keep. Then on the top of the many mows it may be stood upright, if in sheaves, or if not in sheaves, but in the latter case it cannot well be deposited in mows. If one has rye straw, cut a little on the green side, it can be readily put into sheaves. Some put the sheaves into narrow stacks kept well heaped in the middle, and about three waggon loads in one stack. Mr. J. Fothergill, of Burlington, adopts this system. The old method of putting three or four or more stooks into one when the smaller ones are cured, and leaving in the field till winter, is good for the straw; but in time of sleet or rain, followed by cold and deep snow, these are difficult to remove.

The B. and W. corn will answer for the county of Peel. The Sweet Southern has found favor with some on account of its excellent milk-producing qualities.

Veterinary.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

Horse Breeding.

BY F. C. GRENSIDE, V. S., GUELPH, ONT.

The irrational practice of breeding and keeping scrub cattle is continually being severely commented upon; and the effort to show farmers that they are standing in their own light, in not endeavoring to improve their herds in some definite line, has borne considerable fruit. To such an extent has the unwisdom of this course been ventilated, that few men care to acknowledge that they use an unimproved bull.

There is quite as much room for improvement in the course that is pursued in the production of horses. Scrub horses are decidedly in the ascendant as regards numbers in this country.

It is the exception to find a farmer that has not a horse to sell, and it is much rarer that one can be found, with a good specimen of any class, that is begging for a purchaser.

It is an established fact that good specimens of any of the various classes are never a drug on the market, because they are so scarce.

Admitting, as all must, that there is an element of uncertainty in breeding; that is, that one cannot foretell with certainty what the result of mating two animals will be, and that the progeny of the same parents vary considerably in value, this variation in the qualities of offsprings is perhaps more frequently observed in the horse than in other farm animals. Still there is sufficient reliability, if a proper course of selection is carried out, in order that the profit of horse raising may not be compromised by this drawback.

The chief cause of horse raising not being more of a financial success, in Canada, is the lack of judgment or knowledge in not breeding definite classes of horses, or those which are in demand at paying prices, and not adopting the proper course in mating mares with suitable sires in order to get what is wanted.

There is a natural inclination for men to become biased in favor of the particular breed in which they have a financial interest, or which from taste they have a particular liking. This often causes them to disparage other classes of horses, by denouncing them as comparatively useless, and urging that there is no profit or benefit in raising them.

In the opinion of the writer it will serve some useful purpose to draw the attention of breeders to the

different grades of horses that are in demand, and point out how each class can be most successfully produced.

It may seem rather presumptuous to attempt this task, even although one has given a good deal of attention to the subject, and has had considerable experience. It is but right to preface the following remarks with the statement that the author of them lays no claim to infallibility on the subject.

Although the case may be inaccurately stated in some particulars, it is nevertheless desirable that it should be brought before the public in order that it may force itself upon the attention of breeders and induce them to give it the thought that it deserves.

The axiom in breeding that like begets like is useful to bear in mind, particularly in breeding pure-breds. But in the application of this principle to the production of horses whose chief value is from the work they may perform, we must remember there is considerable difference.

The time has not arrived in the equine history of this country when we can afford to do our work with the different pure-bred classes. Without discussing the question as to whether any of the different breeds are particularly suitable to accomplish any of the various forms of work which we require of them, better than crosses from them, it is sufficient to say that they are out of our reach, in most cases, for such a purpose, their money value being so high. For instance, some people consider the Cleveland Bay, as a carriage horse, *par excellence*, but good specimens of them being worth from a thousand to two thousand dollars each, they are out of the reach of any ordinary man's pocket.

Leaving race horses and trotters out of the question, for the breeding of them in a way that will pay is the work of specialists, as also the production of draught animals that will register, our chief concern is how can we best mate the mares that we have at the present time, in order to supply the various grades of horses that are wanted at paying figures. It occurs to us that this can best be discussed by taking up the various classes one by one, commencing at the heavy draughts. Anyone that knows anything of the horse markets of this country recognises that they are required, and at paying prices too.

That their money value is subject to fluctuation has been amply demonstrated in this country during the last ten years. Four or five years ago it did not require a very extra specimen of a young draught horse to bring two hundred dollars. An animal of equal merit is now sold at about one hundred and fifty. It is safe to say that they have declined in value, on an average, fully twenty per cent. Without explaining the cause of this, which can easily be done, it can be shown that raising of draught horses still pays. This decrease in value indicates that the supply has caught up to the demand, and in the present state of the market, only good specimens meet with ready sale at remunerative prices.

The time has now arrived when the haphazard system of breeding unsuitable mares to heavy draught sires should be abandoned. Allured by the high prices of the past, many have been and are tempted to breed mares to large draught animals that show an absurd disparity in size. It is not at all uncommon to see mares of ten or eleven hundred weight bred to horses of seventeen or eighteen hundred, the progeny resulting being, in the majority of instances, heavy, coarse-legged, light-middled, ungainly animals that will not sell, and which are a burden to keep. Even something less of a difference would be irrational mating, and not likely to result in draught breeding being found a success. In exceptional instances a useful

horse may be produced in this way, but hardly ever a high priced one, and at any rate the principle is a bad one.

It is not the intention to convey the idea that it is impossible to successfully grade up the weight of a horse stock. For instance, if a breeder of horses wants to get into a heavier class of animals without going to the outlay of getting the proper class of mares to breed from at once, he can do so in time, but in order to do so successfully he must guard against extremes, and use a light type of draught horse to begin with, the majority of Percherons and Suffolks being of suitable weight. Importers do not usually bring out small specimens of the Clyde or Shire breeds, but there are plenty of them in the old country, particularly of the Clyde, which suit very well for the purpose under consideration.

The progeny of a lightish mare and a small type of draught horse can usually be successfully bred to the larger grade of horse. The market here is so constituted that there is as much demand for the lighter grade of draught horse as for the heavier. A good large horse is usually worth more in any market than a good small one of any class, for they are usually scarcer, and such is the case with the draught horse. Although the money value of a good heavy draught is greater than that of a good light draught, still for most purposes on the farm, the light draught is most popular.

Many that have been breeding to draught horses and have got something not very saleable, owing to some defect, consider that a lighter stamp of horse, with greater activity and more vitality would do the general work of a farm more conveniently. However this may be it is undoubtedly wise for a farmer in breeding horses to try and produce something that can be made useful for some kind of work on a farm, in the event of the existence of a defect that renders the market value low. It is also desirable to look to this with the object of getting a horse to earn his living between the ages of three and five. A better horse is produced if a colt is steadily but judiciously worked from three to five, and in addition, it is necessary, in order to give good manners, while waiting till an animal reaches his most marketable age, which is in almost all cases, five years. Although it should always be the aim to produce a useful horse, if horse raising is to be made to pay, the market should never be lost sight of.

In summing up with regard to draught horses we are safe in concluding that the future of producing this class of horses, with financial success, is only to breed the best whether of the heavy or light draught type. We are fortunate in this province in having many good specimens of dray horses to choose from. Undoubtedly greater progress has been made in securing a good class of draught sires for this country than in any other particular in horse raising.

Doubt is sometimes cast upon the purity of some of the draught breeds, but of the four, viz., the Clyde, Shire, Suffolk and Percheron, there is no cause for anxiety, for they all leave to a marked extent the impress of their characteristics when crossed with our common mares, and this is the surest indication of pure breeding. Many, however, are not careful enough with regard to the purity of the sires which they use, and many nondescripts are mated with our mixed-bred mares, thus adding very much to the unreliability of the nature of the produce. The farmer that breeds his mares to any but members of some of the established breeds of horses is adding very much to the uncertainty as to what the character of the progeny will be. Fortunately a good deal of

attention is being paid to quality in heavy sires now-a-days. It is being more regarded with them in this country than it is amongst the light classes, not because it is any more important, but public attention has been drawn to it forcibly at exhibitions; and it is beginning to be realized that coarse-skinned, wiry-haired, round-boned, gummy-hocked, flat footed horses are more subject to disease that renders them permanently unsound; and in addition the market discriminates considerably in giving a readier sale and more money for a horse without coarseness. It is, of course, one of the natural tendencies for heavy animals to show undue coarseness, but a great deal can be done by careful selection, and it is even better to sacrifice a little of the great desideratum, weight, than to run the risk of encouraging roughness.

(To be Continued.)

The Farm.

AS POTATOES are scarce and dear this spring, the temptation will be strong amongst growers to cut the seed very small. In seasons when seed is plentiful many plant medium potatoes without cutting and conclude that by so doing they get better results. But when seed is so dear this is not absolutely necessary in order to get a good crop. It is the practice of Mr. T. B. Terry, Summit Co., Ohio, a very successful potato grower, to cut the seed to one eye, but he wants good large seed for the purpose. His view is thus expressed in a recent issue of the *Country Gentleman*: "My experience is that the set, or little plant, from a large thrifty eye, such as is found in a large sound potato, is as much better than the little weak set from the eye of a small potato, as a large, strong cabbage plant is better than a little, puny one. Either may be made to grow and do well under favorable enough conditions, but the latter will be most exacting in regard to conditions, just as one-eye sets from large potatoes require better conditions, all around, than whole potatoes." In view of these statements it is well that those preparing to grow potatoes largely should expend a little more in getting good seed and in putting in suitable sets. It would be much better to curtail the acreage of planting than to cut the seed unduly small to save buying more.

THERE is no crop on the farm that is more useful for a variety of feeding purposes than that of oats, and yet singular to say, there is no crop so sure to be sown on the poorest parts of the farm. This is accounted for in part in the fact that wheat has long been looked upon as the great staple, and that therefore it should receive the larger share of attention in its production. Dairying and meat and wool production, and the growing of horses are now becoming of far more importance than the growth of wheat, at least in the older Provinces, which must lead to a corresponding change in the relative amount of the coarse grains grown. Oats are good in one form or another for almost every class of live stock, and there is no kind of grain grown that can be fed with so much advantage in its natural condition. To the stockman a good crop of oats is absolutely indispensable, and due preparation should be made for growing them. When the ground is plowed in the autumn the crop is much more certain, and it is important that it be sown early in the season, if possible when the frost is coming out. When sown thus early the crop is seldom a failure, and the straw is sure to be bright and good.

The Farmer's Health.

The farmer's health is vastly more important than the health of his stock or the dimensions of his purse. Next to a sure and certain provision for the great beyond, the health of the farmer and that of his household should be his *first* concern. Oftentimes he makes it his *last* concern. His table might be spread with the purest and most health-giving food in the world, and yet oftener it groans beneath heaps and heaps of dyspeptic germs in great variety. But this is rather for the consideration of the farmer's wife than for that of the farmer. Then that cesspool of abominations, the receptacle of the slops of the house, is again, on the approach of warm weather, commencing its work of death. The air above it becomes contaminated with the virus of disease, which finds its way into the farmer's lungs, and preys upon his vitality. Then its hidden percolations find their way perchance into the well, and ultimately into the system of the inmates of the house. The farmer is by nature so situated that he might enjoy a larger measure of health than any other class, and yet he does not. The extra vigor given him by a perpetual inhalation of fresh air is more than neutralized by improper conditions of living, self-imposed, and these, like a stern miner chipping away at the fountains of existence, deprive him of his great strength.

Now that the warm season is at hand these things should receive the earnest attention of the farmer. There is no item of farm expenditure that runs up so fast as a doctor's bill, and nothing so destructive of the material interests of the farmer as the deprivations of sickness.

Flax Culture.

The *Empire*, of March 29, is out with an article on "The Flax Industry," which speaks in glowing terms of the profits of the business. If the profits were such as represented in the article to which we refer, our farmers who have land suitable and yet fail to embark in the business, certainly stand in their own light; but we say most unhesitatingly that the writer has painted the industry in what we consider too glowing colors.

He says: "In Canada it has been cultivated for seed and its straw. The average price paid for the seed is about \$1 per bushel, and for the straw \$12 per ton. The average crop per acre is about twelve bushels, and two tons of straw, thus giving the grower a good \$36 per acre, or a larger return than can be obtained for any other kind of cereal crop. As compared with hay it shows a return of fully double the value of that crop."

We frankly acknowledge that we have had no experience in growing the crop ourselves, but we cannot but think that this is too good to be real. If the farmers who grow flax can realize a return of \$36 per acre, it is difficult to see where more than two-thirds of that amount can be expended for seed, labor of cultivation and marketing. This would leave a return of \$12 net per acre to the flax-grower. If this were so, the secret would leak out some way, and neighborhoods where flax is grown would not only be given up to its cultivation, but its growth would also extend to all localities with a favorable soil. Such has not been done, however. It has been cultivated largely in Waterloo county, in Ontario, for years, and in some other German settlements in Bruce, Huron and Perth, but its growth has not become general throughout the Province, although the attention of our people was called to its importance as early as 1862, largely through the efforts of Mr. J. A. Donaldson, of the Dominion Em-

igration Agency, Toronto. The Mennonites are growing it extensively in Manitoba, where the soil is peculiarly favorable for its growth, and in that Province it is likely to become a staple.

As flax seed contains one-third of its weight in oil, it will never cease to be an important factor in cattle feeding, and its growth should receive due attention at the hands of the farmers. We cannot but think that for this purpose if one quart of the seed were sown per acre along with a mixture of one-third peas and two-thirds oats, that the farmer would get the resultant mixture when threshed to grind for feed, in about the shape best suited to his wants. Those who have mills of their own could do their own grinding, thus obviating the necessity of buying either bran to any great extent or oilcake, and these are usually the two principal items of expenditure from the farm for feed. The misery of buying feed largely for the farm does not consist so much in the price paid usually, as in the time lost in cartage, but sometimes the price makes one smart. When we have to pay more than \$12 per ton for bran, we feel very much like leaving it in the mill, notwithstanding its acknowledged manurial value. The one objection that presents itself to our scheme of thus producing cattle food is, that the flax straw would be some hindrance in feeding the mixed crop, but it would in part be compensated by the flax helping to keep the peas standing on their own feet. The binder will cut the crop, which is a long way ahead of harvesting peas in any other way.

Corn or Roots—Which?

The question is frequently discussed whether we should grow corn or roots, and which can be grown most cheaply. We shall not undertake to answer that question just now, but will content ourselves with calling attention to the wisdom of growing both, unless when a silo has been built, the corn being fed in the green state, and mainly to dairy stock. For average feeding corn will not answer all the purposes of roots, and *vice versa*. Again, one season is favorable to the growth of corn and not so much so to the growth of roots. In a poor season for roots we may get a good crop of corn, but if depending alone on roots, our stock would fare all the worse. The farmer's table is never so well spread in winter as when his cellar is well supplied with a good store of vegetables. Likewise his stock can never fare so well as when his barns are well stored with a suitable variety of food. We should not be so much governed by the crops which give the best returns in the abstract in a good year, in determining what we shall sow or plant, as by the necessity of providing a variety of crop suitable for food for stock. This is not inconsistent with the practice of giving more attention to some special lines than to others.

The Price of Wages.

We are frequently asked what should be the wages of a farm hand at the present time, with or without board. To give a very definite answer in such a case is impossible, owing to the difference in the capabilities of individuals, and to the other difference no less than the former, the way in which they apply these. We find one individual willing to give the use of his muscles for a consideration, but unwilling to give the use of his mind. We find a second willing to lend the use of both mind and body for a consideration. A third wants the hire, but does not want to give any consideration beyond what he can get out of. One is competent to overtake a great deal of work physically, but has no generalship; another, with much less

strength, gets through his work to much better advantage, and is more serviceable every way. It is apparent, then, that the price of wages is a relative term, and has a regard (1) to competency; (2) to willingness; and (3) to the state of the general farm returns. When the country generally is prosperous the farm work hand should share in that prosperity by an increase of wages, but when farming is less profitable he should be content with lower wages.

There is a sore evil in this connection that we would like exceedingly to have removed. We refer to the tendencies to equalize wages without a regard to the service rendered. Capacity and fidelity should be abundantly rewarded while the opposite of these also should have their price, and a very insignificant one it should be. This will be the work of the farmer rather than of the work-hand, for the tendency in human nature is strong to regard itself as equal at least to the average of humanity. We know some herdsmen who are not dear at \$300 a year and keep, and others who would be dear if the service were rendered free. It cannot be too distinctly borne in mind on the part of the farmer that the willing and capable servant should get full price for the service he renders, and he who lacks these should be paid accordingly.

There is at the same time a general average for the average man, and no one can give us that so well as Mr. Blue, the Deputy Minister of Agriculture, one of the hardest worked and most useful men in the Province of Ontario. According to the statistics compiled by Mr. Blue on the subject, the average of a farm hand for 1886 was \$158 with board per year, and \$251 without board. Wages this year should be less if the average was the right thing last year, owing to the short crop reaped, and when a good return is realized they should advance again. Pay a good, diligent farm hand a good wage. It is not honesty or morality to do anything else; but he who is careless, indifferent or incompetent, must be taught the exact amount of the discount on these things by the employer of labor.

FOR CANADIAN LIVE-STOCK AND FARM JOURNAL

The Fanning Mill.

BY J. OSBORNE, WYOMING.

If the full history of the fanning mill could be written, and reliable returns obtained of the numbers annually built in the province of Ontario alone, we would have for the first point an "illustrated" idea of the wonderful improvements that have been made, within the recollection of some still living, in farm implements; while the second point would furnish a significant index of our agricultural pursuits, and would not fail in convincing outsiders of what we are satisfied of ourselves, namely, that we are a great people, possessing a country of great possibilities which are being more and more developed every year.

The beautiful and effective fanning mills of the present day that lend grace to the interior of a barn, whether full or empty, have been worked up from small beginnings. Among the many devices of cleaning grain in the past, we readily notice the same principle, namely, the wind pervades them all, for if we turn to the oldest work on agriculture, and the one that is the oldest on every interest that has a bearing on the life that is now and that which is to come, we find the Jewish mode of cleaning grain was both simple and natural. "The oxen shall eat clean provender which hath been winnowed with the shovel and with the fan." In this work two persons would be required, one to toss up the grain and the other, with fan in hand, to strike a blast of wind at the right moment.

Whether the Jews borrowed their methods of cleaning grain from other nations, or other nations borrowed from them, I am not prepared to say, but as far back as history reaches there is evidence that fans were used by the Hebrews, Egyptians and scattered tribes of India, in cleaning grain, and an agricultural writer of the last century asserts that "Europe is indebted for the winnowing mill to China, and that it reached this island (England) by way of Holland."

Very likely this is correct, as the Chinese have been for ages noted experts in the manufacture of fans, while the Dutch windmill shows that the farmers of Holland were very ingenious in devices for utilizing the wind.

There are several exposed eminences in Scotland that still go by the name of the Shieling-hills. These, like the wells of Canada, were centres for wide districts of country to which the farmers repaired with their grain for the purpose of winnowing it, but as wind and weather were often uncertain, the Shieling-hills gave place to small barns as soon as the means of the farmer admitted of it. These barns with two opposite doors were found more convenient, as the only requisite was a favorable draught between the doors. Still even this had its drawbacks, and a feeling pervaded the rural population of Scotland and England, that the method of cleaning grain could be improved on. Several devices more humorous than useful were got up during the early part of last century, but as far as can be ascertained, the honor of inventing the first fanning mill in Great Britain belongs to Andrew Rogers, a retired farmer, on the estate of Cavers, in Roxburgshire. The date of the invention is 1737, and although the "fanners," as they were called, were destitute of any screen, riddle or shake, they were hailed as a boon by many practical farmers. Yet, strange to say, the religious element of the day rose in arms against Mr Rogers and his "diabolical wind-machine." A passage in the prophecy of Amos was commented on in the pulpit and discussed by the fire-side, that led to a great deal of persecution of the unlucky inventor.

"He that formeth the mountains and createth the winds, the God of hosts is his name," and for man to dare to create wind by any kind of machinery, was flying in the face of Scripture, imitating the Divine Being, and was a sure proof that the man who would dare to do so was in league with the Prince of Darkness.

A remnant of this old superstition is handed down in Old Mortality, by Sir Walter Scott, where he represents Mause Headrigg speaking to her mistress about "A new fangled machine for dighting (cleaning) the corn frae the chaff, thus impiously thwarting the will o' Divine Providence by raising wind for your ladyship's use by human art, instead of soliciting it by prayer, or patiently waiting for whatsoever dispensation of wind Providence was pleased to send upon the Shieling-hill."

Notwithstanding the opposition of rigid sectaries, Mr. Rogers and his successors went on making and selling "fanners" both in England and Scotland, and when the threshing machine (which will be noticed by-and-by) was added to the few implements of husbandry of that day, a wonderful improvement was the addition of a winnowing machine.

It would indeed be interesting to know how many of these useful implements our Province requires every year, but in the absence of reliable data, we may obtain an idea of the vastness of the whole business if we look at the work done by one firm alone. The Manson Campbell factory, of Chatham, has been established 19 years, and has turned out between 15,000 and 16,000 mills, giving an average per year of about

300. The yearly business has been steadily increasing, as the following figures show; 1854, 1,000 mills sold; 1855, 1,330 mills sold; 1856, 1,840 mills sold; 1857, 2,300 mills sold; while for the present year the purpose is to turn out 3,000.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

Alsike Clover Growing.

BY R. C. BRANDON, PEARLDALE FARM, CANNINGTON, ONT.

Since you request for publication our methods of growing and handling alsike clover, we have at our earliest convenience, from observation and experience, compiled a short paper for our old friend, the JOURNAL.

Blessings in disguise are oftentimes unappreciated, and we toil on through our busy farm life instituting research and calculating minutely, as it were, on the probable outcome of our business forecasts. Circumstantial surrounding and vicissitudes consequent on change (how shrouded with characteristic mystery, the word change!) keeps the energetic husbandman ever on the alert, ever in an attitude to combat his many foes, meteorological, insectivorous, commercial, financial and political, and a score and one other enemies which conspire to impede our passage, difficult at best, up the slippery path of agricultural prosperity. Yes, 'tis a difficult road, wanting a strong boot, a sure foot, a steadfast will, and withal a love for our industry intensified with a determination to succeed. But with all these obstacles the progressive farmer is succeeding, though slowly, in throwing up a little earthwork, a little barricade, an occasional fortification to better his position and protect his substance in some measure from the many agents of destruction which follow in his wake.

These little adjuncts to our social and financial happiness will be found generally in cultivating with a fostering hand, not only our ordinary round of farm crops and especially some favorite, some pet crop which will compensate the toiler handsomely for the love and labor bestowed upon it.

Favorites in the line of stock-raising, dairy pursuits, or fruit culture, are a success in many hands. We shall, if governed by the most forcible proofs, leave the care and cultivation of our old standby in the crop line, wheat, to the tender care of people in other localities than Ontario, as a meagre yield and more than meagre prices, with the impoverishing of our soil, make the cost of production overlap the profits derived from its cultivation. So we are forced reluctantly to cut the mooring which anchored us to some of the old landmarks, moorings which brought many rich rewards during the past twenty years of agricultural history in our country's development. However, we have been preparing for the change, and for ten years the little alsike plant with its delicate pink blossoms surmounting its bright green oval-shaped leaves, borne on a soft though buoyant stalk, fluttering in our exhilarating Canadian breezes, and withal its pleasant aroma surcharging the atmosphere for miles around, giving the meditative farmer and way-worn traveler a vivid idea of rural enjoyments and pleasant anticipations, has been a constant sojourner with us.

While collecting some data for this paper we find rather an interesting collection of knowledge in the admirable work on grasses and forage plants, compiled and published by Prof. Flint, of Mass., in 1864, who says: "Curious as it may appear, the artificial grasses (clovers) were cultivated first in point of time in England, the red clover being introduced there about the year 1633; sanfoin, 1651; yellow, 1659, and

white, 1700; and about sixty years later orchard grass and timothy were introduced from America." So that in this particular a few generations will carry us back to the time when nature in her wild luxuriance provided with a generous hand for the wants of her children, at least in the temperate zones.

Analytical tables of nutritive virtues in the grass families have not been arranged until more recently; the first attempt at such having been directed by the Duke of Bedford at Woburn Abbey, in England, and conducted by, his gardener, Mr. Sinclair, and Sir Humphrey Davy in 1824. Analyses made still more recently by Profs. Way, Voelchers and Laws, on examination, will put any inquiring mind in possession of most reliable information as to the feeding values of the different natural and artificial grasses. Bous-singault found 32.50, and Way 35.39 per cent. of lime in the inorganic constituents of red clover, so that we may consider clover to be most tenaciously a lime plant, and will succeed best on soils with a large per centage of loam and clay in its composition, though it is an energetic grower on most dry soils.

We will now consider alsike in its origin and official duties. *Trifolium Hybridum*, the Latin name, is from *tris*, three, and *folium*, a leaf. The word alsike is derived from a parish, north of Stockholm, in Sweden, where it was first discovered, and is said to be a cross between red and white clover. Now, if memory serves us, a Mr. Young, who was a commissioner from Sweden to the Colonial Exhibition, and thence to America in the interests of bee-keeping, said that white clover was not indigenous to or cultivated in his country, notwithstanding the temperature would warrant its propagation so far north. However, as to its origin, we do not stay to question. One Mr. George Stephenson introduced it into England in the year 1834, but of course the atmosphere of that country is of too humid a character to propagate clover seed.

The official duties of the clover plant are now forcing themselves prominently upon our attention. They say to the agriculturist, "Devote a small share of your attention to me; only give me birth-right in your homestead; succor me for a season in mother earth, and direct my energies. In return I promise by indomitable pluck and perseverance to wage incessant warfare on the hidden and as yet unavailable elements of vegetable nutrition locked up in the subsoil of your exhausted farm. The ammonia and manurial gases generated from the exhalations of a thousand barnyards, and surcharging the atmosphere, shall be arrested and absorbed by the inviting influence of my rich and succulent foliage, shall be incorporated with my very existence and compelled to contribute to a vegetable growth which will not only fill your barns, supply the wants of your domesticated animals and cause pleasant recollections for the care bestowed on me, but I will do infinitely more, by caring for and enriching the very earth that gave me existence, by shading and protecting it from the scorching rays of mother sun, and from the penetrating influence of the searching winds. The invigorating influence of the natural decay of my sub organic nature will cause my very burying ground to yield fresh and abundant material for future use, and, phoenix like, from my own ashes, I shall reappear in a new formation."

Alsike as Hay. Under this head we have had a varied experience, and though we have annually for the past ten years cured and stored from eighty to one hundred and forty tons, yet we can only recall three occasions when its growth was enormously dense, in the season of 1883, on a low lying twelve acre field of heavy loam, the extent of the crop simply defies de-

scription. The timothy grass was completely obscured, while armfuls of clover could be lifted at will measuring 5 feet 4 inches, and this off a long stubble. The past year gave another magnificent crop, as did 1885. Just here let me remark that when well cured, as hay, it is preferable to red clover, and for obvious reasons. The stalk or body, of a delicate nature, to the touch soft, and free from that woody feel, which at once impresses you when handling the coarser clovers.

Let us not be understood as giving entire preference to alsike in this capacity, for though it has many inviting characteristics, especially its uniform ripening with timothy, and as a fodder it stands the weather much better than any plant we are acquainted with, yet the aftermath, the green, velvety, inviting aftermath, so highly prized by every farmer, so highly relished by his bovine friends, is almost entirely absent in this branch of the grand family of leguminous plants.

(To be Continued.)

Remedies for Smut in Wheat.

It is very encouraging to note that while political parties in the Houses of Legislature and out of them are arranging themselves in the order of battle over unrestricted reciprocity, the greatest of the economic questions of to-day, the protection of the farmer from the ravages of the many foes he must needs meet in carrying on his arduous calling is not being forgotten. A Bulletin, No. 3, from the pen of James Fletcher, F. R. S. C., has been issued by the Central Experimental Farm, Ottawa, which treats of smuts affecting wheat. It is a valuable contribution on this subject. Every farmer should send for a copy, which will be furnished free, on application to Mr. William Saunders, director Central Experimental Farm, Ottawa. We would fain find room for the whole pamphlet, but must forbear. We can only get space for the remedies given. And we should certainly feel thankful that safe remedies and practicable may be used.

It is claimed that by paying due attention to the use of the remedies given, the crop may be effectually protected. Mr. Fletcher submits them in the following language:

All grain for seed should, of course, be procured as free as possible from smut; but where there is the slightest doubt about its presence, the trouble and expense of treating the seed are so small that there is no excuse for not doing so.

The condition in which the smuts pass the winter, is in the shape of the minute black spores produced in the ears of wheat. These spores either adhere to the ripe grain of adjacent wheat plants, or falling to the ground remain there, in an undeveloped condition, until the young wheat plant has attained the proper growth for them to begin their attack. By a proper system of a rotation of crops, wheat would not be grown on the same land for about four or five years, or more, and by this time it is probable that most of the spores from smut upon the previous wheat crop would have perished.

The remedies which have been most successful are those in which methods have been adopted to destroy the spores adhering to the seed-wheat previous to sowing. To accomplish this it is necessary to wash the grain thoroughly or to steep it in some weak poisonous solution, so as either to remove or to destroy the fungous germs without injuring the germinating qualities of the seed, and, moreover, it seems highly probable that a sufficiency of the material used for this purpose will adhere to the seed and protect it against the attack of any spores which may be present in the soil at the time the wheat is sown.

Of a great many remedies which have been tried with more or less success, I select the three following as being in my opinion, the best both for efficiency and convenience. The first and second I have myself frequently tried with manifest success. The third is given on the authority of Mr. Worthington G. Smith.

1. SULPHATE OF COPPER, ALSO CALLED "BLUE-STONE" OR "BLUE VITRIOL."

This substance can usually be procured in any part of Canada from druggists or general store-keepers, at about 10 cents per pound, so that the cost of treating seed with the strongest solution recommended below, would not exceed 2½ cents per bushel. The different methods of applying this substance to the grain vary slightly; but the differences are merely with regard to the extent to which it is deemed advisable to wet the seed. Some advise soaking the grain; but it would appear from the results of many experiments that this is not necessary. Mr. Worthington G. Smith advises the following: "1 lb. of bluestone dissolved in 5 quarts of boiling water is sufficient for a sack of four imperial bushels. The wheat is soaked for ten minutes, or the ten pints of solution may be poured over till all is absorbed."

Mr. S. A. Bedford, of Moosomin, N. W. T., who has had considerable experience as a farmer in Manitoba and the Northwest Territories, tells me that the following method has proved successful in his district.

"One pound of sulphate of copper is dissolved in a pailful of hot water, which is then sprinkled by one person over 10 bushels of wheat placed in a waggon box, whilst some one else keeps the grain well stirred. Should a large amount of smut be detected in grain required for seed, the solution is made stronger, double the quantity of bluestone being used."

The chief advantage claimed for this method is that in a few hours the grain is sufficiently dry to sow with the drill.

Mr. C. S. Plumb, of the New York Experimental Station, used 4 oz. of Sulphate of Copper in one gallon of water, and reports that "seeds soaked seventeen and a half hours in this solution were found to produce a slight amount of smut. Soaked forty hours all germs of the fungus were killed."

It is to be noted that Mr. Plumb's experiments were with oats, in which, from the fact that the seed is contained inside a comparatively loose husk, there is much more difficulty in removing or destroying all the smut-spores than is the case with the smooth and naked grains of wheat.

2. BRINE AND LIME.

A remedy generally available at country farm houses and from which good results have been secured, is to soak the grain for 10 or 15 minutes in brine of the ordinary strength used for pickling pork (i. e., in which a fresh egg will float). If well stirred many of the smut spores, smutty and imperfect grains, etc., will rise to the surface, and can be skimmed off and destroyed. After the brine is poured off, the wheat must be dried by dusting lime over it until all the grains are white.

It is claimed that sprinkling the brine on the grain instead of soaking it as above, before dusting it with lime, has been found successful; but I have never tried this method.

3. ALKALINE WATER.

It might happen that none of the above mentioned materials were obtainable, and in such case the mere washing of the seed would be beneficial. Mr. Smith says, "as the spores are lighter than water, steeping in brine or even pure water is often effectual, as the spores float, and are easily washed away. Some alkaline ley should be added if water is used, as the oil on the surface of the spores combines with the alkali and forms a soapy substance which is fatal to effectual spore germination."

An alkaline ley suitable to the above purpose may be made by adding to three or four gallons of boiling water, in any suitable vessel, one gallon of hard-wood ashes and stirring frequently until the alkaline properties of the ashes are extracted; or an alkaline solution of sufficient strength may be made by dissolving about 2 lbs. of ordinary washing soda in a pailful of water.

"Your journal has improved greatly this last year, and its arrival is anxiously looked for every month here. It should be subscribed for by every farmer, for it is full of valuable instruction to our rising generation. I trust those writing on ensilage and dairying will give us readers all the information they can, as I intend building a silo this season." - A. Young, Princeton, Ont.

"I am much pleased with the JOURNAL, as I find very much valuable matter therein." - George Davey, Westbourne, Manitoba.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Weeds.

BY PROF. J. HOVES PANTON, ONTARIO AGRICULTURAL COLLEGE, GUELPH.

VI.

CLASSIFICATION OF WEEDS ACCORDING TO NATURE AND HABITS.

Lappa major (Burdock). This common, coarse weed, with its large burs full of seed, frequents the fence corners around the barnyard, and is so well known from its great large leaves like those of rhubarb, that it requires no description to identify it. Being a biennial, it is not difficult to overcome by cutting a little below the crown of the roots and below the surface 2 to 3 inches about the time of flowering. It is a great mistake to merely cut these weeds near the ground, as it increases their vigor instead of lessening it.

Chicorium intybus (Chicory). This perennial is becoming common in several parts of the Province, its beautiful showy blue flowers resting upon the stem, apparently without a flower stalk, give it a



1. *Chicorium Intybus* (Chicory). 2. A separate head:

striking appearance, and render it readily identified. The flowers are usually well expanded in the morning and in cloudy weather. The plant has been grown in the old country for the purpose of using its deep root as a substitute for coffee. It has escaped from the gardens and found its way elsewhere, so that we have it quite common along the roadsides, with a tendency to invade the fields. It grows 2 to 5 feet high, and branches considerably, the branches bearing a large number of light blue flowers about 1¼ inches in diameter, leaves something like those of the dandelion. Thorough cultivation and watchfulness in sowing clean seed are necessary to keep free of this weed, where it has got a foothold.

Rudbeckia hirta.—This perennial plant resembles, to some extent, the ox-eye daisy in general outline

but the rays are yellow instead of white, and the central portion is brownish and more raised. It occurs sometimes in the hay fields, but is not very common, and being conspicuous it can be readily pulled.

Leucanthemum Vulgaris, ox eye daisy. A very common weed in some places. Its large flowers, bordered by white rays, having a yellow disc in the centre render it readily identified.



Leucanthemum Vulgare (Ox eye Daisy).

It is a perennial with stems one to two feet high, but sometimes bears flowers when only three inches high, where it has been repeatedly cut down. It is a difficult weed to master; the seeds are numerous and tenacious to life, and the roots last from year to year, consequently where it once gets a good foothold it is difficult to eradicate.

1. A good many have great faith in constant pulling, so as to prevent the plant from seeding, and such have in time succeeded in overcoming the pest. In doing this it is well to remember that this daisy retains its white petals after the flowering season has passed, and time allowed for maturing the seeds, consequently the gathered weeds should not be left to lie upon the ground or thrown in fence corners, but should be destroyed.

2. Some recommend pasturing sheep in affected fields, but it seems a poor substitute for food.

3. Plough the sod thoroughly and plant a crop requiring the hoe; cultivate it at least once a week. Next year sow and plough in two crops of buckwheat. The third year plant corn, and if still weedy repeat buckwheat to plough under. This will leave the land in good condition, and extirpate the daisy.

4. A good rotation kills it, especially with hoed crops that can be worked by horses, so as to keep stirring up the ground weekly. Clover well seeded will also aid in the rotation.

Taraxacum Dens-leonis (Dandelion).—This is one of the most common of weeds, and requires no description. We never look upon it with any degree of suspicion, but are rather pleased to see its golden flowers decorating the sides of ditches and sloping hills by the way. It seldom invades the fields, but some times gets rather plentiful on the lawn. Its perennial root has been often used by some as a substitute for coffee. A few years ago there was much said about dandelion coffee. Few plants are

so common in all soils, but it soon disappears where thorough cultivation is followed.

Achillea Millefolium (Yarrow, Milfoil).—This perennial plant occupies a rather doubtful position in economic botany. By some it is considered a worthless weed, by others a valuable plant in the pasture field. Seedsmen in England sell it among their grass mixtures, believing it has a good effect upon the general health of animals. Canadians give it no attention, but view it as a weed by the wayside. The plant by many is believed to have a medicinal value, and consequently it is frequently gathered for the purpose of making a tea reputed to have an excellent effect in toning up the system. It grows from two to three feet high; the foliage is very much cut, and in spring, before the flower appears, bears some resemblance to a fern. When matured it presents a mass of small white flowers clustered together in a mass something like tansy or the garden flower Sweet William. Sometimes the flowers have a purple tinge instead of white. It is seldom seen in cultivated fields, but sometimes grows in fence corners, and in some cases becomes too common on lawns. It has a vigorous rootstock, which, when once established, maintains its hold under apparently very adverse conditions. This weed should be cut in early summer, before the formation of rootstocks has begun for its perpetuation the next season.

Tanacetum Vulgare (Common Tansy).—Another perennial, in some respects resembling the yarrow, but bears a mass of yellow flowers and has a decidedly strong odor. The foliage is a deep green, and you generally find the plants growing in groups. As a weed it seldom proves troublesome. By some it is esteemed for its medicinal value, as a source from which an excellent bitter can be made. Some horticulturists apply a strong decoction of it upon cabbage, when affected with the cabbage-worm, with good results. Where it has become obnoxious it can be soon overcome by constant cutting and pulling.

Solidago Nemoralis (Golden Rod).—This perennial, growing from two to three feet high, is very common in fence corners and newly cleared fields; flowering late in the season it adorns many places with its golden flowers when all others have gone. The railway track in many places is greatly improved in autumn by the presence of this almost "last rose of summer." Flowering late, it is of economic value to bee-keepers, who will be a friend to this plant, if others look upon it as a worthless weed. Its golden flowers, its location in fence corners and along the railway track, together with blooming late in the season, serve to identify and recall it to the general reader without a technical description of the plant. It is easily overcome by good tillage, but in fence corners, etc., other modes of extermination must be adopted, such as cutting and pulling. We seldom hear much complaint against this plant, but a great deal in its favor on account of its affording bees a last opportunity to provide for a coming winter by gathering honey from its golden flowers. The genus *Solidago* is represented by many species which yield abundance of rich golden honey that has a good flavor.

Erigeron Annuum (Fleabane).—A weed becoming very common in some parts of Ontario. It finds its way into fields as well as holding in some cases a monopoly in waste places. This genus has three representatives—*Annuum*, *Canadensis*, and *Philadelphicum*. Around Guelph, especially in the direction of Elora, whole fields are covered with Fleabane, which no doubt is robbing the soil of nourishment that should go to the growth of more useful plants. Every precaution should be exercised to check its increase. Its

seeds are numerous and the root perennial, consequently thorough cultivation and constant vigilance requires to be exercised. It flowers in summer and is readily known by the innumerable flowers it bears, each about half an inch in diameter; yellow centre and surrounded by a great many narrow rays of a somewhat pale reddish purple color. The plant is about 2½ feet high, considerably branched above, rather hairy, and leaves much longer than broad.

(To be continued).

Salt as a Fertilizer.

In answer to an enquiry on this subject we give the following on the application of salt and its effects:

For wheat, an application of 300 lbs. per acre will be found to give best results. It should never be applied at the time of seeding, nor used as a top dressing when the plants are young, as it will then injure them. Early spring is the best time to apply it. Two hundred lbs. to six hundred lbs. is the range for rye; nine hundred lbs. will lessen the crop. Root crops, especially mangolds, are greatly benefited by using from five to six hundred lbs. per acre. Dr. Voelcher's experiments show that the effect of salt on grass (unless the growth is rank) is not good. Contrasted with vegetable matter it gives best results. Apply at the rate of three hundred to five hundred lbs. per acre.

Salt has been found injurious to a number of plants, particularly so to potatoes. It not only gives a decreased yield when used for this crop, but the quality is also injured, making the potatoes waxy instead of mealy. Melon vines are killed outright by moderate applications.

Voelcher's experiments show further that solutions of twenty-four grains to the pint produced favorable and marked results on bulbous plants, and also on plants with succulent leaves, such as cabbages, onions, etc. The asparagus plant is noted for being able to stand very large dressings of salt. Best results will be obtained, particularly from grain crops, by applying it to light land after the latter has received a dressing of farmyard manure. It should be noted that the manure is well rotted, as one of the most noticeable actions of salt is to check fermentation. It may be applied just before sowing the grain by hand or sown at the same time as the grain with a drill for the purpose. On land for roots it may be applied just before ridging the land. It has a bad effect on those soils that bring their grain, root and grass crops slowly to maturity, such as cold, wet soils. The salt would tend to prolong the vegetation period and delay the arrival of maturity.

On limestone soils it is most profitably employed. When applied to such soils, what is known as double decomposition takes place, the calcium of the limestone exchanges places with the sodium of the salt. One of the resultant compounds being able to render silica soluble, the latter is taken up by the plant, giving that brightness to the grain and stiffness to the straw that can only come from applications of salt. Brightness and stiffness of straw are always conducive to the production of a good sample of grain.

Experiments in Growing Potatoes.

The Ontario Agricultural and Experimental Union, composed principally of ex-students of the O. A. C., Guelph, have decided to carry on the following experiments with potatoes the present season, in which they ask the co-operation of any who are interested in the growth of this most important tuber:

No. 1, Planting large, whole potatoes; No. 2, planting small, un-cut potatoes; No. 3, planting small potatoes, all eyes cut out except one; No. 4, planting medium potatoes cut in two; No. 5, planting medium potatoes fresh cut, two eyes; No. 6, planting medium potatoes old cut, (five days), two eyes; No. 7, planting medium potatoes, cut with one eye; No. 8, planting medium potatoes seed ends.

As the committee are anxious to have uniformity in the manner of conducting the test, they propose that it shall be conducted subject to the following regulations:

Nos. 1 and 2 to be planted twelve inches apart in rows. Nos. 3, 4, 5, 6, 7 and 8 to be planted eight inches apart in rows.

Plant that variety which does best with you. Potatoes to be planted on eight adjoining rows, where land is uniform. Give same manure and cultivation as rest of field. Each row to be seven rods long.

In digging, be careful to weigh accurately and forward results to N J Clinton, Windsor, Ont.

The results should be tabulated in conformity with the subjoined form :

	Answers.	No. of Rows.	Wght of crop	Rem'ks as to size etc.
Give date of planting.....		1		
Give date of digging.....		2		
Give Crop in 1887.....		3		
Give Crop in 1886.....		4		
Give Weather.....		5		
Give Variety.....		6		
Give Surface Soil.....		7		
Give Subsoil.....		8		
Give dist'nce b'tween rows.....				

How do you prepare seed for planting?.....
 How do you cultivate your potatoes?.....
 Name..... P. O.

Essay on Slip-shod Farming.

BY D. NICOL, CATARIQUI, ONT., READ AT GANANOQUE FARMERS' INSTITUTE, JAN. 11, 1888.

More than half of the people and much more than half of the capital of the whole world is employed in agriculture, and as a matter of course there are various classes of men engaged in the pursuit of farming. Besides the practical or scientific farmer, we have the gentlemen and theoretical farmers.

It is a deplorable fact that we have also slip-shod farmers. Of them there are various classes, and I fear the number of such is on the increase. That is my reason for bringing the subject before you.

That agricultural science has made and is making rapid progress throughout Canada, is indisputable. There are many enterprising, spirited, industrious farmers. Yet that many who lay claim to the appellation are on a retrograde movement, is also quite evident.

I have known nearly all the farms in the frontier townships between Cornwall and Kingston. In all that range of fine country I find the number of farms now in possession of members of the third generation of the first settlers to be very few indeed. The pioneers cleared off the forests, erected buildings, and, by perseverance and economy made for themselves comfortable homes, competent livelihoods, and generally left their families well provided for. But the fact that the virgin soil which was rich in the accumulated plant food of centuries, afforded an easy means of obtaining abundant crops with few failures, had a tendency to make the rising generation careless, not realizing the fact that the richness of the land was being exhausted, and that the farms would not continue to produce abundantly under the treatment then adopted; that of taking from the soil all that it would produce and returning little or nothing to it.

As civilization advanced, and social conditions improved, needs increased. The sons were not content to live as their fathers did; large and better houses were built. Sometimes neighbors would vie with each other in riding in the finest carriages, which necessitated the spending of much time off the farm, often at a busy season of the year. This custom had a tendency to create a repugnance to farm labor, consequently the expenditure of the second generation very frequently exceeded the income, and as expenditure increased, the income from the neglected farm was sadly diminishing; hence a mortgage had to be given on the farm, and when the interest was eight per cent., a second mortgage soon became necessary. An exhausted farm with a mortgage on it is a poor inheritance for a son untrained in the science of farming, or to habits of industry. He is soon discouraged, becomes careless and indifferent. That is one of the reasons, perhaps the chief reason, why there are so few of the third generation now occupying the land which their grandfathers cultivated.

I could point out to you hundreds of instances of farms let slip merely for want of economy, and which are now occupied by industrious tillers of the soil, many of whom were servants of the former own-

ers, whose sons are now peddling patent rights, patent humbugs, keeping saloons, or acting as agents for disreputable establishments.

The provident farmer winters all his animals in comfortable quarters, believing, not only that by such treatment there is economy in feeding, but that they thrive better and mature earlier. But I know of some so-called farmers, who winter their young cattle and colts without any other protection than that to be found on the leeseide of a straw-stack. There may be instances when such treatment is unavoidable, but when it is practiced on the principle (as I have frequently heard it argued) that it makes animals tougher and harder than those which are well cared for during severe winter weather, the law regarding punishment for cruelty to animals should be enforced.

Do we not, at the opening of spring, annually see, about some barn-yards, the carcasses of creatures that have died during the toughening process? Do we ever see animals raised under this slip-shod method that are not of inferior quality? A well-bred, well-cared for and properly fed dairy cow produces 6,000 or more pounds of good milk per season, which, being made into cheese, is worth from \$50 to \$60—some herds average this. But Mr. Slip-shod's half-starved, hump-backed scrubs, yield about 1,700 pounds of poor milk yearly, worth at the factory only \$8 or \$9. He, of course, says that dairying don't pay. He can make more money drawing cordwood.

This indicates the necessity for a breed of cows that will produce much more abundantly on very little food. Some seem to be eagerly waiting for the discovery of this breed; they are farmers' sons; what may we expect from future generations of this class?

The practical farmers are the bone and sinew of every nation that has emerged from the darkness of barbarism. They are the producers of that on which a civilized nation chiefly exists. Throughout the history of the world do we not find that whenever husbandry has assumed importance, the men of true moral power—the men of force and sterling integrity—the true patriots, have come from the farm. Intellegently and judiciously pursued farming is the occupation which yields the greatest amount of good, true national interests. It is the occupation best calculated to inculcate habits of truthfulness, temperance and honesty. That cannot by any means be said of slip-shod or scrub farming. It has a tendency to dwarf the intellect, engender sloth and foster boorishness. It has pernicious effects in every way. It is not only demoralizing and degrading to the human race, but it brings down with it the deterioration of all kinds of live-stock. There can be no standstill in the matter of stock-breeding. If there is no effort being made to improve the common stock of the country, it will certainly degenerate.

It has been said that the real secrets of a farmer's character can be judged by the condition in which he keeps his animals. I believe the statement is to some extent correct. I think, however, that a farmer's capabilities can be more correctly estimated by the quality of the stock he breeds, for it is certainly true that if one keeps scrub cattle, which have been proved over and over again to be less profitable than the improved, he is either an ignorant or a non-enterprising man, or both. But we do not need any surer index to a farmer's true character than the condition of the land on which he lives. There can be no mistake with this indication. Poorly cultivated farm, poor family, intellectually as well as financially.

A good farmer with small means, thoroughly cultivates a small piece of ground, and he very generally succeeds in bettering his condition.

(To be continued.)

The Culture of Potatoes.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I can only find time to give an imperfect synopsis of our method of growing potatoes, though desirous of acceding to your request in reference to the reproduction of this favorite tuber.

The growing of potatoes has of late years become one of Canada's great industries, and if the duty of fifteen cents per bushel for potatoes going into the United States were removed, there is no saying to what extent this industry would grow. The soil of the great North-West, now being opened up, is favorable for the culture of potatoes, and the millions of bushels raised annually are but a fraction of what that country is able to produce, to say nothing of the suit-

ability of the Maritime Provinces for growing this crop.

The first requisite in the culture of potatoes is a rich soil. Sandy-loam is considered the best in our locality. Secondly, to obtain a good crop of potatoes a liberal supply of rich barnyard manure is necessary. A person must exercise his own judgment as to the amount of manure the soil requires. The lighter the soil the more manure necessary, while the heavier, as a rule, because stronger, requires less. I would recommend plowing down clover from six to eight inches high, previously top-dressing the land with a good coat of manure.

I have invariably received good results from this practice. The land should be ploughed as long as possible before planting, in order to give the clover and manure time to rot. Too much work cannot be put on the land. Where clover is ploughed down the best mode of working is to first roll the land; this helps it to retain the moisture, and then thoroughly harrow and cultivate. The more work put on the land, as a rule, the better the results obtained.

After the land is prepared for planting, the next thing is to work it. A common corn marker is generally used. The rows are marked three feet apart the long way of the piece, and two feet nine inches the cross way. An ordinary narrow plough is used to furrow out preparatory to planting. The furrows should be run the long way of the field from four to five inches in depth. This is for sandy soil.

The advantages of marking the land both ways are important. First, the cross marks serve as a guide in dropping; secondly, it facilitates the cultivation of the potatoes and the destruction of weeds, which otherwise necessitates much hard labor.

TO KEEP THE CROP CLEAN.

I approve of the method of cutting the potatoes a few days before planting, and spreading them out on the floor to heal over, care being taken not to leave them in piles so they will heat, or in the heat of the sun, when they lose too much of their moisture. Many varieties are cultivated at present. Here again I would appeal to the reader's judgment. What would suit sandy soil probably would not do well on heavy soil, and vice versa. It is only by carefully experimenting that it can be demonstrated which are the best varieties for different soils.

They should be planted the first week in the month of June. Of course this is for a late crop. A shovel plough is used to cover them over on sandy soil, but it will not answer so well on heavier soil. Just before they come up they should be harrowed crosswise with a light harrow. This stirs the ground and destroys the weeds until the potatoes have reached a sufficient height to admit of cultivating. Weeds form one of the most serious obstacles with which the grower has to contend, and should be kept under control from the outset. Potatoes require to be thoroughly cultivated. If properly done and at the right time, it will save hand hoeing them.

The potato bug is another great difficulty with which the grower has to contend. I have used successfully a mixture of Paris green and plaster of Paris, one pound of Paris green to one hundred and fifty pounds of plaster of Paris. It is applied to the leaves while the dew is on in the morning, dry, by dusting it. After the potatoes have attained a height from eight to ten inches they should be shovel-ploughed the long way of the field. This forms a support for the stalks and throws the earth in round the hills.

Some prefer the method of ploughing them in. The manure is spread on the clover and ploughed under as before, only this time the potatoes are dropped in every third furrow. Good results follow this practice, but they can only be cultivated one way, and therefore it is more difficult to destroy the weeds.

Late potatoes are generally dug about the first of October or a little later. They are placed in pits, covered lightly with straw and earth, and left for a few days to sweat. Apertures are left in the top of the pit to allow the steam to escape. They are then removed to the cellar or elsewhere at will.

This is only a mere outline of the science of growing potatoes, but at some future date I may give further information on the subject. I think I can safely say, that if any person follows these simple instructions, exercising a little forethought, with a favorable season and soil, he will receive fair returns for the time and labor expended in raising the crop.

ANDREW SOULE.

Southend, Ont.

The Dairy.

EVERY farmer in the Dominion should grow some supplemental crop, and more especially those engaged in dairying. The dairyman who expects to get along from year to year without doing so is about as wise as the boatman who expects to float his bark over shallows in the river-bed in the time of drought without first having dredged a deeper channel. We cannot control the elements, causing them to shower moisture upon our pastures, but we can grow succulent food to feed our cattle in seasons when moisture is a scarce commodity. Those supplemental plots should not get the go-by until other work is done, but should be made objects of special care. There is no part of the farm that will give a better return for the labor expended upon it than the supplemental fodder plot. It should be made as rich as necessary, most carefully worked, and sown in season according to the crop designed to be grown upon it.

Success in any line is seldom if ever wholly accidental, but follows consequent upon the use of means. Denmark is a butter-exporting country, and very largely so, which was not the case a few years ago. She has virtually for the time being captured the British market. Some men of mind have made butter-making a study. In this way best methods have been discovered. Now intelligent young farmers' sons serve a regular apprenticeship to the best butter-makers in the country, and once having mastered the business, they are sent out to the different districts to teach the people. This leaf in the book of Danish practice we may well copy. There may be a dearth of places where first-class butter is made as yet, but certainly we have one place where it is made on most approved principles, and that is the Ontario Agricultural College, Guelph, in charge of a professor of dairying who is a thorough master of his business.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL

Canada's Butter Markets.

BY JAMES CHEESMAN, TORONTO.

Standing in the crowd of busy men and women who jostle each other on the noisy streets of London, Liverpool or Manchester, one often hears the praises of Canadian cheese sounded, and as often the excellences of the butter products of Sweden, Denmark, and other exporting countries. He never hears of Canadian butter, unless it is an extra poor lot, or of some bad butter which has been called Canadian because the quality of Canadian butter is so variable. The proportion of really good butter of Canadian make being so small, it is often hid under some other name, just as in other years our cheese was shipped to England *via* New York, as best State make, and as northern New York's best makes of cheese are now shipped to England *via* Montreal as Canadian. This is the price New York State pays for the luxury of making skims and filled cheese, or cheese made from separated milk which has been charged with cotton seed oil, or lard.

If one goes through the grocer's stores, or the St. Lawrence market of Toronto, to look for butter of extra quality, or that would rank as fairly first quality, such as one could buy in London or Manchester, for 32c. to 38c.; or in Boston, New York or Chicago for 27c. to 32c. per lb., in quantities of two to three tubs, he would come away sick and sorry at his disappointment. You enter what is without doubt one of the best stores in the market for a retail and jobbing trade, and you see butter in every conceivable shade, from pale cream to deep, dull, railroad paint

yellow. The bright, fresh, dainty-looking mutton suet from kidneys, is much more attractive in every way than the pale western tub parcel. On its edges you observe a bleached tallowy tinge, which is so significant that you do not venture either to smell or to bore it. Such butter can be bought for 17c. retail. It must have cost more to make this butter than it did to make the best. Then we come to another parcel about the shade of pale winter cream from cows getting about three pounds of bran and a few pounds of hay per day, straw without stint, and no succulent food of any kind. This butter was made up in little lots before Christmas, and in some respects reminds one of confectioner's cakes of varied form and color. The tub is made in about seven layers, some porous, some well salted, and in others many specks, but all of different scents and flavors. This can be bought for 18c. You pass on, ascending the scale, and reach the top price in this store, of 35c. per lb. There is another store up town where butter is sold for 45c.

Three times this winter milkmen have come to me asking if I would recommend some farmer who would make butter for them the year round. I have always asked, what do you want to pay, 15c. or 45c., or some figure in between? As they never told me definitely what they wanted, I never recommended anybody. I know a few good butter-makers on farms, but they are few indeed. I know some farmers within one hour's ride of Toronto, who could market fair butter if they would not feed turnips. As it is, they get 26c. for their butter. I know three men within 25 miles of this city whose butter sells for 35c., but they don't feed turnips. One of these sells to a restaurant about 60 lbs. a week. They want 500 lbs. Another sells about 40 lbs. per week: his customers could take 400 lbs. per week; the third sends in a 50 lb. box, and his buyer requires 300 lbs. weekly. This is the testimony of three buyers only, so it is quite evident that a good butter supply creates its own demand. To get a good piece of butter in Toronto you have to be on the privileged list of "bespoked goods." Why should this be? We have a climate equal to any in the world, and specially suited for breeding good stock, growing the best of food, and a home market for all we can produce of GOOD butter.

My revered friend, the late Prof. Arnold, had in his lifetime been called upon to judge many thousand samples of butter at exhibitions and conventions. While in his death-chamber, full of that faith and enthusiasm which he always had in the dairy profession, he wrote what proved to be his parting words to the New York State Dairy Association. He described the high character of the butter which he and his colleague, Mr. E. Norton, of Connecticut, judged at the Bay State Fair, Boston. Of all the butter he ever examined, he says he does not know of more than four which received the full 100 points of the scale. At this fair the first prize butter was awarded the perfection limit of 100. A few weeks after the awards were made the judges saw in a New England farm paper that the maker had for some time been selling his butter in Boston for 80c. per pound.

Now the kind of competition we want in Ontario is one of intelligence. Everybody knows what sort of land the New England, and especially the Massachusetts, soil is. I imagine the Yankee farmer would gloat over such farms as we have in York, Ontario, Peel, Halton, Wentworth and Wellington counties; and that if they were growing butter within 100 miles of Boston or New York they would be worth \$150 to \$200 an acre. There are farms in N. Y., near Little Falls, sending milk to cheese factories which are worth that. In Massachusetts some of the farms

sending butter and milk to Boston are worth more. How many of our Ontario farmers will try and make some of this eighty cent butter? We don't want so much more of the 25 cent goods, but something which will rank higher up in the market. The highest price paid in Toronto is 45 cents, but that is not the limit of the market. High grade butter might be sold still higher if any could be found to awaken the highest sensibilities of the nose and palate.

I shall not soon forget the experience of last fall's fairs in judging dairy cows. At all three exhibitions I used the same method, which I believe ranked higher in quality points than any ever used on the continent of America before or since. Objection was taken that it favored quality too much. According to my scale every cow's butter was awarded 30 points per pound of butter, but if the butter had ranked according to quality, and had been graded for the New York market, or even for Toronto, some would have received at the rate of 30 points, others 35 and 40, and the other 50 points per pound. Such a method could only be put in force by the judge referring the question of quality of butter to a board of jurors who were dealers in fine butter. The butter I made from Mr. Fuller's Jersey cow Catherine was one of the most delicately scented, flavored, and colored of any I ever tasted, and would have ranked pretty high up in the nineties if judged by a butter scale.

A former State Director of Art Education in Boston was asked by a friend of mine in 1882 to give a practical definition of technical education. He pointed to the fact that the cook in Boston's favorite hotel was hired at \$10,000 a year. I have been laughed at by some of our dairy friends at the college, conventions and exhibitions, for speaking of 45c., as if much butter could be sold at that price. It is true the market may be limited, but it is better to aim high at the 45c. target and hit on the 30 or 35c. ring, than to point no higher than 25c. and reach somewhere about 19c. or 20c. Butter is a product of dairy art as much as the production of the florist's bouquet. You can buy flowers at any price you choose, and a bouquet may be bought at one dollar or ten. The difference in value is due to the degree of art merit each possesses.

In the early history of Canadian Jerseys there left our land for Wisconsin in 1871 old Victor Hugo 197, the sire and grandsire of our best cows. He began the work of dairy reform up there, and to-day Wisconsin creamery butter made from high grade Jerseys stands out in judgment against us. We make 32,000,000 lbs., Wisconsin makes 40,000,000, while Iowa makes \$5,000,000 lbs. per annum. In Wisconsin 25 per cent. of the State make is creamery butter, in Ontario it is about 8 per cent. Ontario has 55 creameries, and we make less than 3,000,000 lbs.; Iowa has 495 creameries, and makes 85,000,000 lbs. for use at the Atlantic seaboard and export.

The Ayrshire Herd Books.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I do not propose to occupy much valuable space in the JOURNAL, or time, to follow in detail the erroneous representations found in Mr. Wade's lengthy communications, so put and calculated to mislead and divert the attention of readers from the simple facts of the case.

The Canada Ayrshire Herd Record was commenced in Montreal in 1870 by Ayrshire importers and breeders from both provinces. It is the only work in Canada devoted to pure-bred Ayrshires. It is not a sectional or party work in any sense. Among its sixty members we find the different parties, nationalities, and religions. Its meetings are most cordial, and devoted purely to Ayrshire business. It was not till a few met in Toronto, September, 1886, to or-

ganize the Dominion Association, when Mr. D. Nichols was the first to approach me on the subject of rules, etc., for its management. I then expressed the opinion, and still hold to it, that our association and our Canada Ayrshire Herd Record was the best, and one would suffice for all Canada. This he admitted. We were willing to have them join with us and revise their work. We met them, and it was agreed that our book be taken as a nucleus for future work, to be carried on here under my supervision till it was complete, and for that purpose the books and the entries were to come here.

This arrangement was prematurely disturbed by the unfair means adopted by Mr. Wade and others, without notice, in the absence of all but five of our members, who relied upon the honorable observance of the agreement till revision was complete and a basis of future work established by entries in our second volume. Their action had the effect of hindering further amalgamation progress as an independent Ayrshire Breeders' Association.

The breach of faith committed cannot be justified by mere subterfuge, saying that a rule "aiming at importations on the side of sire and dam," having with it a condition to use as a "nucleus" our book, that limits entries in it to pure-bred Ayrshires, could be considered as authorizing the entry in it of mixed breeds and grades.

The inconsistency of that course is now evidenced by the fact that the same parties now admit that future work on the Dominion book must be divided into two classes—first, the pure-bred; second, all the others—and in those others it is intended to put the very ones they would willingly break up amalgamation rather than let them be excluded from the list of pure-bred Ayrshires entering in our second volume.

Would it not have been as well to have respected the agreement made for working out amalgamation, and let the Dominion book alone? Continue the work under way of entering all good pedigrees of pure-breeds in the second volume of the Canada Ayrshire Herd Record. Let Ayrshire breeders conduct their own business, and save the large expenditure about to be incurred in wages, stationery, printing, etc., by the Agricultural and Arts Association of Ontario. Would it not be better for that association (if they saw fit) to contribute a certain sum to breeders, and thus be rid of a grave responsibility, bringing trouble to their office and much loss? The second volume of the Canada Ayrshire Herd Record is here for entries and for preparation for the printer.

Accept our thanks for affording this space to end the controversy.

WM. RODDEN, Pres. A. B. Ass'n of Canada.
Plantagenet, Ont., April, 1888.

Building a Silo.

As ensilage is becoming a burning question, we give what we consider a good description of a silo suitable for the purposes of ordinary dairying, which appeared in the March number of the *National Live-Stock Journal*:

"A silo 20 by 8 ft. and 14 feet deep, contains 2,240 cubic feet of space, and would hold 50 tons, if filled so solidly that the ensilage would not settle below the top of the wall. The most economical form will be to make it 16 feet wide instead of 8 feet, as this would give double the capacity and add only about one-fourth to the expense of the wall. A first-class silo can be built out of sand, gravel, shell rock, and waterlime or cement. It may be sunk a few feet if it can be drained perfectly. For convenience of filling the silo with ensilage it would be well to excavate 4 to 6 feet, and scrape this earth out on one side, so as to make an elevated driveway where the cutter could be set, and the green feed deposited for cutting and filling the silo. For building the concrete wall, excavate 1 foot or 15 inches beyond the proposed wall all around, then cut a narrow channel 6 inches deeper all round, to form a drain to carry off the water that may settle there.

"The wall for a silo 16 x 20 x 14 feet should be 14 in. thick. Set the standards 2 x 6 in. or 3 x 6 inches, and 15 feet long, in pairs, so as to reach a foot above the wall, one on each side of it, 17 inches apart, so that when the boxing planks, 1½ inches thick and 14 inches wide, are placed inside, the space will be just 14 inches for the wall. These pairs of standards may be 8 to 10 feet apart. The best way to fasten these pairs together is to nail a piece of lath on the bottom,

which will lie flat under the wall; then, with a bracket nailed across the top over the wall, the inside edge of the standards is plumbed accurately, and they then stay lathed in position.

"The silo walls should be plastered with cement mortar on the inside. This will make the walls smooth and even on the inside, so that the ensilage will settle even."

We apprehend that silos can be more cheaply built, more readily filled, and placed more conveniently for feeding in conjunction with bank barns, than when not so situated. We fail to see why a portion of an ordinary bank barn basement, walled in, would not answer every purpose, but to hold a large quantity should be sunk deeper than the other part of the floor.

More Light on Ensilage.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

Your correspondent "Oxford" asks, how is ensilage to be got up sixteen feet without costly appliances, in a cut or uncut condition?

I never saw corn cut except in an ensilage corn cutter, which invariably has an elevator attachment whose angle and position can be adjusted to suit any case. There is plenty made all over the States, and I think your advertiser, Maxwell, of Paris, also makes them.

(2) Will a common roof on such a narrow building be a hindrance to filling? The question has reference to the form of silo most common in Wisconsin. Any kind of a roof that will keep out rain and be moderately wind proof would answer. In dividing such a building with three pits, it would be necessary to have openings near the top for the purpose of partially filling them on alternate days. At the end of the building the openings may run from base to top like a town or city ice house. Their size should be governed by the owner himself, and may be large enough to admit a wagon, but they must be air tight when closed. All the silos I have seen have formed part of the barn buildings. One cannot lay down plans in an article suitable for all, as size, existing buildings and other considerations of convenience will vary on almost every farm.

(3) Any kind of weight will do, but earth answers best. I have seen great boulders used, and barrels of sand or bags of feed. Swale, or marsh hay, has been used in the States, but I am not sure of the results and do not recommend it.

(4) Men of small means should try and work up some sort of a co-operative club. If one of ten neighbors bought a horse power, another an ensilage cutter, and the other eight gave their pledge to hire these implements and help harvest each other's ensilage corn, say four or five acres each, the matter would be simplified. If this be done, the corn must be planted in rotation so as to avoid a dead ripe condition in that cut last. The cutters will cut in half-inch lengths five tons an hour.

Unfortunately the number of "practical" men (by which I presume your correspondent means farmers practising ensiling) in Canada is small. I have travelled some miles to see silos, but do not remember that the process has many wrinkles. It is very simple and easy if adherence to the general principles laid down in the March article be followed. Every man who desires to practice it must take some trouble and do some thinking for himself, and so evolve his own details. Of all the correspondence and investigations I have engaged in, I cannot find that the cost of ensilage when taken out of the silo has any where exceeded \$1.60 per ton. The total dry solids in corn ensilage varies from 14 to 40 per cent, the average being about 20 per cent. In roots, the dry solids vary from 11 to 17 per cent, the average being about 13 per cent. This is for turnips, mangels and carrots.

For a moment please return to the silo construction. In looking over the March article I notice a very important omission. In separate and distinct buildings the divisions in the pits should be built of two inch plank doweled. An opening of thirty to thirty-six inches may be left in the centre of the divisions. As the ensilage is cut down, boards may be removed so as to keep the division openings level with the height of the ensilage. All questions of strains and pressure on the sides of the building had better be referred to a local carpenter in cases where the farmer does not feel himself to be mechanic enough to grapple with them.

Messrs. Maxwell, of Paris, or some other manufacturer might construct a portable silo at the fall fairs and exhibit the method of cutting, elevating and filling there. I got the Toronto Industrial to offer a prize for cutters, and not less than fifty pounds of ensilage. Perhaps a gold medal might be added for an extra.

JAMES CHEESMAN.

Ayrshire Breeders' Association of Canada.

The annual meeting of this association was held in Montreal on the 27th of March, 1888, and was largely attended by members from both Provinces.

Mr. W. Rudden presided, and Mr. S. C. Stevenson was secretary *pro tem*.

The chairman stated the objects of the meeting, and said they were so well understood by members it would only be necessary to give any further information that might be required as questions came up.

A committee was appointed at the last meeting to consider and act upon the proposals made by Mr. H. Wade on behalf of the Agricultural and Arts Association of Ontario, and of several Ontario breeders.

The report of that committee was considered and unanimously adopted. Its conclusions were, that they could not recommend the acceptance of the terms and conditions proposed for removal of the work to the office of the association at Toronto, as it would not be in the interest of the Ayrshire breeders of Canada to accept the same, but considered it of the utmost importance to continue to record only pure-bred Ayrshires in the Canada Ayrshire herd record.

Application was received from Mr. Wade for the return of the two second volumes, books of record, received from the Agricultural and Arts Association of Ontario. Mr. Rodden said they were ready for delivery on being authorized to do so. It was resolved to authorize their delivery, but to retain the books of the Canada Ayrshire Breeders' Association.

Letters from Mr. Wade were read asking for entry papers received from owners of Ayrshires; also for copies of many pedigrees in the second volume of the Canada Ayrshire Record, and for particular information he needed to assist him in perfecting entries in his books to correspond with the same in the Canada Record.

It was resolved, that on payment being made for entries not paid for, that were required, and made to complete others from Mr. Wade, copies and certificates of the same, and other information may be furnished, all at the rate of payment the same as is paid for entry fee and certificates by members of this association.

The following officers were elected:—President, Wm. Rodden, Plantagenet, Ontario; vice-president, James Drummond, Petite Cote, Montreal; Secretary, George Leclere, Quebec; Treasurer, S. C. Stevenson, Montreal. Executive Committee—Hon. Louis Beaubien, Thomas Irving, Thomas Brown, Montreal; Robert Ness, Howick; A. E. Garth, St. Therese; John Hay, Lachute; John Morrin, Belle Riviere.

It was resolved to provide funds for the completion of the second volume, and make it ready for the printer under the supervision of the president, to whom entries may be forwarded, or to S. C. Stevenson, 76 St. Gabriel street, Montreal, and George Leclere, secretary, Quebec city.

The president said there was now a good list of members—31 from the Province of Quebec, 13 from Ontario and 7 from other places. Some of the young men should take an active part in the work. He desired soon to be replaced, but would endeavor to see that the second volume was made ready for publication.

The executive committee was authorized to prepare by-laws adapted to the constitution of the association and its business.

Some details were arranged, and the meeting adjourned.

Poultry.

PERSONS who are about to invest in poultry should purchase, whether eggs or birds, only from reliable breeders—men who are not afraid to advertise from time to time or year to year, as occasion may require—men who have no more fear of their reputation than

the latter has of them. When ordering, there should not be too much impatience manifested in reference to the filling of the order, as sometimes it is impossible to make haste, and do it honestly. A good man will not send stuff that is not the right thing. Poultry-keeping is becoming a business of much magnitude in Canada, and the limits of its expansion can not even be accurately surmised.

POULTRYMEN who are going to succeed must be fully alive to the importance of keeping abreast of the times. With an eagle eye they must keep a look out for any indications of disease, and combat them at once. Lice oftentimes infest poultry as badly as they did the Egyptians of old. Whitewashing the poultry houses in spring is a useful preventive, and is better when a solution of carbolic acid is added to the mixture. A correspondent gives the following as a good cure for body lice: "Rub lard on the head and neck, and dust insect powder in amongst the feathers." Timely remedial measures prevent much loss, and what is about as bad, to a spirited man, the chagrin of failure.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Cross-Bred Fowls.

BY H. B. COCKBURN, ABERFOYLE, ONT.

I have tried as an experiment several crosses of the different breeds, to ascertain which made the most satisfactory crosses, and also in the hope of producing a general purpose fowl. That is, a good-sized bird, good for the table, a good layer and a handsome fowl—a bird as near perfection as possible. But no cross as yet has filled the bill. The nearest, however, was my last experiment, using a male Plymouth Rock and Brown Leghorn females. About the middle of May we set fourteen of these eggs, out of which were hatched thirteen chicks, all of which lived and were used as broilers, except six pullets.

The cross produced a medium sized bird, darker in color than the pure Plymouth Rock, large, erect combs, in the males; in the pullets inclining a little to one side; pure yellow legs and bills. They are lively birds, and like the Leghorn's mature early, feather very rapidly, and make very good broilers, although not so good as the Rocks. They are hardy, good foragers, and thus far have proved very good layers. Reverse the cross and the result would be a pure black fowl with smaller combs than the above, a little larger bird and we might venture to say the greatest layers the age ever produced—that is, the first cross. In many cases this cross will give good results, but afterwards the chances are many worthless birds. Cross two non-setters and you will get worthless fowl. Take one year after another for the best results, and it will be found that these are obtained by keeping each breed pure.

Selling Eggs by Weight.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL

SIR,—Will you oblige the writer by printing this letter in your valuable paper, and in this way call the attention of the public to a matter of no small importance. A large egg costs no more than a small one although it contains a greater amount of substance. If eggs were sold by weight, the purchaser would get the exact value of his money, while the seller would receive a price only in proportion to what he furnishes. Of course it would not always be an easy matter to weigh a pound of eggs, but that is no real obstacle, as the eggs could still be sold by the dozen with the price based on the weight. If eggs were 24 cents a dozen and eight eggs weighed one pound, a dozen would be worth thirty-six cents. The purchaser would get no more nor less than the full amount by weight equivalent to the price, and the poultry men would

not lose. Hens that lay the largest eggs do not usually lay so often, and those that lay small eggs very probably make up in number what they fail to produce in size. Eggs, as now sold, receive no consideration except for numbers, a dozen small eggs being as much as a dozen large ones, except when the buyer is wise enough to make a distinction, or when the producer considers his own interest by asking a fair price for the large eggs, which really cost him more than the small ones.

I may add a word in regard to setting hens. They should always be kept from the laying ones. It can be accomplished by building a house say 8 x 8 feet, and on one side coops 4 x 2 feet, putting nest boxes in one corner. When you have a hen that wants to sit, put her in one of these coops with plenty of feed and water, where she will not be disturbed by the laying hens.

WILLIAM COLLINS.

Union, Ont.

Pekin Ducks.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Please allow me to call the attention of Mr. Cockburn, of Aberfoyle, to a great mistake he made in his article in March issue of the JOURNAL, re color of Pekins. He says any other color than creamy white is a disqualification. This is a great mistake; the clause reads, "Plumage any other than white or creamy white." This is understood by all competent judges to give the preference to white, and we have often seen the awards made with too much "accent on the white," so much so, that inferior birds otherwise, were given the preference on account of the pure white plumage. We do not sanction this, but it shows that the standard is interpreted as giving pure white the preference instead of making it a disqualification as Mr. C. states.

J. W. BARTLETT.

Lambeth, Ont.

The Apiary.

Should Farmers Generally Keep Bees?

The *Canada Bee Journal* of March 21st has the following, bearing on this subject:

"We have always advocated that farmers should keep bees. We think that if there is any right place for them at all, it is on the farm. Ever since we can remember, our advice to farmers having two or three grown up sons or daughters, was to give them, or to whoever of them was best adapted for it, the management of a few colonies of bees."

This is certainly very true, but with limitations. Farmers under the circumstances indicated may well afford to keep bees, to furnish them with a home supply of honey, and some to sell to neighbors who may be disposed to buy, but they should be guarded lest they are so drawn into the business as to have it absorb the larger share of their time. In this sense there is only room for a certain number of bee keepers in any one country. It is one thing to gather honey and another thing to market the same. On the principle that it is cheaper for the farmer to raise his own vegetables than to buy them, it is cheaper for him, where favorably situated, to raise his own honey than to buy it. Otherwise the sweets of the blossoms which his soil sustains may go back again ungathered, a fruitless offering upon the soil which produced them.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

May Amongst the Bees.

BY ALLAN PRINGLE, SELBY, ONT.

May is the month of inspiration and of opening life and activity, and to the apiarist the beginning of the honeymoon—that is to say, the season's honey flow. Although April yields its pollen, it is not till May, usually, that the coveted nectar begins its annual flow from the fields and forests to the hives. But, promising and romantic, May sometimes has its prosaic drawbacks. In this climate it occasionally turns

out cool and backward, yielding little honey, scarcely enough for the support of the bees, let alone a surplus for the bee keeper.

By this time (May 1st), the bees are being removed from their winter quarters, at any rate in Canada and the Northern States. Those wintered outside, protected by packing and in other ways, had better be allowed to remain in their packing till the end of May, or until the weather gets warm and settled. They must, however, be overhauled now, cleaned out, supplied with food if necessary and then fixed up again comfortably warm. Those carried out of the cellar or other repository require similar treatment. The overhaul-and-fix-up should be done the same day they are set out, after they have had their cleansing flight, or as soon thereafter as possible. Sometimes the accumulation of dead bees and debris on the bottom board during the winter is so great that unless the colony is very strong the bees are unequal to the task of clearing it out, and getting apparently discouraged and disgusted with their unclean home they "swarm out" and leave. This is one reason for attending to them soon after they are put out. Another is, they may require "crowding up," for it not infrequently happens that when they have far too much room and many more combs than they can cover, this, too, causes them to "swarm out" and leave their hive, especially as the change of temperature from the cellar to outdoors may be considerable.

In overhauling, instead of cleaning out each hive containing the colony, it is better to have one clean, empty hive ahead all the time. The frames, bees and all, can be then lifted from the occupied to the empty hive, clearing from the frames at the same time any dead bees or mold which may be adhering. And in transferring the colony from the one hive to the other, keep out such empty frames as are not needed by the bees, and only give them the frames containing brood or honey—as many as they can nicely cover, and no more. Crowd these up snugly together—that is, leaving space enough between the combs (the brooding part of the combs) for the bees to pass freely. Some, of course, will require more frames than others, depending on their strength—from, say, 6 to 8 frames for the strongest down to 1 or 2 for the weakest. The frames taken away from them can be added again from time to time as they require them.

Having adjusted the number of frames to suit the strength and condition of the colony, leaving them plenty of food, and crowding them up in snug shape, pack them up around and on top as warmly as possible to retain the heat, and contract the entrance to small dimensions, both to keep the heat in and the robbers out. As work progresses, the entrance can be enlarged as required. In covering the frames in spring with the winter quilts, I often spread newspapers between them to more effectually retain the heat, and leave them on sometimes till the middle of June or later, till the weak colony gets thoroughly built up and ready for swarming. Keeping the bees warm in the spring is one of the most essential conditions of getting them through safely and avoiding the dreaded "spring swindling." At this season of the year they are, or ought to be, actively brooding, and as the old bees are dying off rapidly, the temperature of the hive is very apt to go below what it ought to be for the safety of the young brood. The result is "chilled brood" and probably the loss of the colony. This point needs emphasizing, especially with beginners, and even those with more experience. By all means keep the bees warm in the spring. Some days and nights will be warm enough for the brood without any extra protection,

but there will be occasionally cool days, and even cold nights, when the brood will get chilled unless it is properly protected. How can this be done? In any way by which the escape of the heat from the hive can be prevented. Remember, you cannot supply the bees with heat from without, further than that imparted by the sun for a few hours during a warm day. But you must direct your efforts to prevent the escape from the hive of the animal heat generated by the bees themselves. True, when you supply them with food you indirectly supply them with heat, the food being the source of the animal heat. Where the colony is very strong in numbers they are able to keep up the necessary degree of heat, by increased consumption of food, without extra protection. But it is hardly safe to place much reliance upon that fact, for there are, comparatively, but few such colonies at this season, and hence the necessity of extra protection. Besides, a colony may be very strong in numbers just after being set out of the winter repository, and in the course of a very few days be very weak in numbers. This may be due to the fact already noticed, that the depopulation sometimes goes on very rapidly after the old bees have once begun active exercise on the wing.

I have found the following an effective and inexpensive method of spring and fall protection for the bees: I make "skeletons" of rough lumber larger than the hive, so as to set loosely over it, slanting back a little so as to shed the rain, and fill or pack the spaces all round with chaff or sawdust. Above the frames are placed, first the summer quilt, and over this the winter quilts or sawdust cushions. Movable roofs—shingled or otherwise—may be made to fit over the skeletons, to keep all dry and warm. These can be lifted off at any time when necessary to examine the colony. They also answer as shades in hot weather.

The honey gathered in May comes mostly from fruit bloom. The maple, willow, alder, dandelion, etc., yield more or less according to season and locality. But the apiarist need not count on any surplus in May. When they get enough to support themselves and their brood through this month they do very well. Often they do not get enough for that, and must be fed. I had occasion one season to feed my bees right up to the clover bloom, which commenced that season, about the 10th of June. There is sometimes more danger from starvation about the first of June than during the winter. Between the fruit and clover bloom there is little flora in Canada to fill the gap, and at this time the colonies short of stores must be watched, especially should the season be unpropitious. A full colony of bees freely breeding will consume more food per diem than a novice would imagine, and under such circumstances, when there is no honey coming in, such a colony would very speedily get away with a dozen pounds of honey and starve. Nor will the average colony of bees breed freely when no honey is coming in, and the supply on hand is all deficient, unless stimulated by daily feed. And this brings us to

SPRING STIMULATION,

which has both its advocates and its opponents. They are both right and both wrong, inasmuch as feeding to stimulate brood rearing is, under some circumstances proper, and others improper; sometimes wise and sometimes otherwise.

When the colony has plenty of stores and a good queen, stimulation is entirely unnecessary perhaps worse than useless. But when a colony is backward when it ought to be rapidly coming forward—from shortage of stores, inferiority of queen, or other cause

artificial stimulation is useful. A little liquid food, supplied daily (in the evening to prevent robbing) will have a magical effect in hurrying up such colonies.

The prime object in spring management is to get every colony strong in numbers by the time the clover honey flow commences, and not much before that time. As this particular period varies with season and locality, no amount of chronological calculation will enable us to hit the mark every time. I find, however, that in this district it is pretty safe on an average to make the middle of June the object (time point of time). But it is well to remember that it is much better to come out with your working force a little ahead of the flow than behind it.

Horticultural.

Notes on Grapes.

E. D. SMITH, WINONA, ONT.

The season of 1887 was an extremely favorable one for grapes. We had California dryness, and it is astonishing what an amount of drought grapes will thrive under. The rot was nowhere seen, as this attacks the grape only in wet seasons; and that other scourge of which so little has been known, the mildew of the leaf, or technically, *Peronospora Vitiscola*, was also injurious only to a very slight extent. This mildew is sometimes called "leaf blight." First small patches of downy white mildew are seen on the under side of the leaf, which subsequently turns brown as if scorched, and falls off before the fruit is ripe; consequently, of course, the fruit never does get ripe. This mildew is worse in wet seasons, whilst the mildew on the grape is worst in dry seasons if the nights are damp, which was not the case last year, so we escaped it, too; consequently the grapes were all very fine in quality.

Now the lesson to be learned from this is to have the vineyard on dry ground to have fine grapes. Too thorough and deep underdraining cannot well be done. The best known remedy for leaf mildew is to throw on the leaves about July 10th, and again in two or three weeks if rain has washed it off, the following mixture, with a whisk or broom. It is not necessary to cover the leaves, a drop or two on each will suffice. In 22 gallons of water dissolve 18 lbs. sulphate of copper. In another vessel 34 lbs. lime with six or seven gallons of water. Pour the two mixtures together and mix thoroughly. This has been used in France, it is said, with splendid results. I used it extensively last season, but owing to the dry weather the leaves did not mildew under any circumstances, so I had my labor for my pains; but as I have lost several crops of Delaware and Roger grapes from this disease I shall repeat the application the coming season.

The Leabusca family of grapes are not troubled with this disease, their leaves being too tough and leathery. The Leabusca comprise grapes of the type of the Concord, Worden, Moore's Early, Leady, Early Victor, etc. I think the Leabusca are more liable to rot than other types. Another lesson that has been beaten into our heads, harder than ever, too, last season, is the necessity of placing on the market only good eating grapes. I have contended for years that every pound of Champion grapes placed on the market displaces five pounds of good grapes, which might have been sold to the poor unfortunates who were so misguided as to invest ten cents on the former. These sour grapes are the earliest to turn black (not necessarily to ripen), they are hustled on the market while sour enough to make a pig squeal, and in such large quantities as to sell cheap, so a great concourse

of people over the land buy a treat of these, the first grapes of the season, and, perchance, carry a basket home to utterly disgust the whole family, who, in their turn, make a merit of treating all their friends, and so it comes to pass that the grape eating public all get a taste and want no more grapes until at least two or three weeks later when somebody suggests that grapes have now got good. Then the price rallies, but not till then. Now, if these first grapes had been luscious, sweet and enticing, the eating public would have been back for more day after day, for two weeks or more, which are now lost to the producer—the very best season of the year, when fruit is scarce, the weather is warm and everybody wants grapes. Champion growers say: "Oh! we don't care, we make money out of the Champions, they yield so heavy;" and this miserable, selfish and utterly mistaken policy will, I presume, continue until the grape eaters can distinguish a Champion from other good varieties.

I believe that in five or six years Champions will be unsalable, except for wine. I would urge most strongly upon grape growers to sell Moore's Early only when fully ripe, to put them up with care, and mark the name distinctly upon each basket. By this means the public will learn in a few years to know the grape at sight, as it is so much larger than the Champion, when well grown; and when that time comes, Moore's Early will pay so much better than Champion, that those who wish to may continue to grow sour grapes if they like, but very few will care to buy them. I would like to urge upon any one planting vines for market, to be sure and plant only varieties of good quality. There are plenty of them ripening at all seasons, commencing with Moore's Early. The following afford abundant opportunity for selection, ripening in the order named. Black, Moore's Early, Worden, Concord, Roger 44, Red, Brighton or Lindly, for early; then Delaware, Salem, Roger 15, and last, Catawba or Iowa, White, Leady and Niagara.

All of the above are of prime quality and have more points of excellence than most of the well-known sorts. The new Moyer grape is claimed to be a week earlier than Brighton, and of excellent quality. It is a red grape, a little larger than Delaware, and very sweet. I would advise all who have Champions or other worthless varieties to experiment with grafting the vine to better sorts. If a graft starts, it will make a new vine in two years. We have here as yet little certain knowledge of the art. A good grafter, who would guarantee ninety per cent to grow, would get all he could do here in the spring, I think. The plan which presents the most probability of success is one practiced by Dr. Staymer, of Leavenworth, Kansas. It is as follows:

Cut away all the old vine to the ground then dig a hole, say eighteen inches across, around the stump, cutting off the surface roots. Now cut the stump off square as low down as you can to leave say three inches of straight trunk to work on, now make a sloping upward cut on one side with a sharp knife, so the cut extends one and a half inches down from the top, and cuts of say three-eighths inch of one side of the stump at the top. Now set the knife on the top of the stump, say one-eighth inch from the edge of the slope, and drive it down, splitting the stump. If the stump is too knotty to split, use a fine saw and saw it down. Now take grafts which have been kept fresh, of large wood if possible, and cut a corresponding slope and split the same as the stock, and push them into the stump, being careful to have the inner bark to match. If the stock is heavy, put a graft in each side, wind with soft twine and bank up the dirt to top bud of graft, the great requisite to success being moisture, which can only be obtained by grafting as low down as possible.

*The Home.***"Life Hath its Barren Years."**

Life hath its barren years,
When blossoms fall untimely down,
When ripened fruitage fails to crown
The summer toil, when nature's frown
Looks only on our tears.

Life hath its faithless days,
The golden promise of the morn,
That seemed for light and gladness born,
Meant only noontide wick and scorn,
Hushed harp instead of praise

Life hath its valleys, too,
Where we must walk with vain regret,
With mourning clothed, with wild rain wet,
Toward sunlight hopes that soon must set
All quenched in pitying dew.

Life hath its harvest moons,
Its tasselled corn and purple weighted vine,
Its gathered sheaves of grain, the blessed sign
Of plenteous ripening bread and pure rich wine,
Full hearts for harvest times.

Life hath its hopes fulfilled,
Its glad fruitions, its blest answered prayer,
Sweeter for waiting long, whose holy air,
In drawn to silent souls, breathes forth its rare,
Grand speech by joy distilled.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL

The Ontario Farmer.

BY A. K. MAYNARD, MONTREAL, EX-STUDENT O. A. C.

This is a pretty big subject and admits of endless diversity of handling, but I will confine myself to one line of thought: an examination of how far his life contains those elements of happiness, purity and grace which go to make up that complex thing which we call refinement; and if found wanting, of means conducive to their growth.

In what does refinement consist? If I were to define my conception of it I would say, to possess refinement is to have a mind set upon high and beautiful things—to love Beauty in all her various dresses.

I think it hardly needful to labor the question of the value of such a possession to an Ontario farmer, for though it could not be set down in dollars and cents, we must all agree that whatever is known to make life purer, sweeter and better worth living must be good for him as for every other member of the human family. That he is often found sadly wanting in this grace will also, I think, be admitted on all hands; and that for many places in the country we may put up the prayer in Tennyson's words:

"Ring in the nobler modes of life, with sweeter manners, purer laws."

It is for the rising generation of farmers to remove the stigma which in this respect lies upon their class.

Let us now consider some means by which he may fulfil this mission; we will consider them first in the home, then in the community in which his lot happens to be cast, and finally in regard to the country at large. As charity should first be exercised at home, so should every good thing, and the farmer must first secure refinement in his own home before going out to preach the gospel of refinement in his neighbor's. He must commence by reverencing his home and especially her who shares it with him. There must not be a plank or a flagstone which she gets down upon her knees to scrub which is not an object of reverence in his eyes. He will not, then, lightly bring dirt into the house upon his boots, and he would undergo a good deal before he would spit upon the floor. If his house is the worthiest of all houses, and his wife the worthiest among women, it must follow that he will consider none but his best manners good enough for home, and as far as the nature of his work will allow it he will always appear at the meals which he takes with the partner of his joys and his children with clean hands and face and neat apparel. Not only will he

give no quarter to bad language in the presence of his loved ones, but even discountenance what is loud and rough. He will endeavor to surround his home with every refining influence he can, and these things though seemingly insignificant will not be found unimportant. Let an air of happy peacefulness pervade the home and it will become so ingrained in the nature of his children that when they wander from the paternal roof they will never be satisfied with anything less. During the hours of the long winter evenings he will be thrown more than at any other time into the society of his wife and children. What a tax of golden fruits should be levied upon these hours? Let him, then, enter heart and soul into the education of his children. I don't mean dry sums or drier rules of grammar. I mean by education, "the leading out" of their young minds into all the fair and fruitful fields of knowledge, especially those of natural science which they can understand. Let him tell them of the wonders of their own bodies, and, with a father's interest, teach them how to preserve it for good service in the years of manhood and womanhood. Let him take them out on clear nights to view the stars, and then by the cheerful glow of the stove help them to grasp the power and sublimity of these things and of their Creator. Let him talk to them about the rocks and the flowers, and all the wondrous beauties of the world in which we live, and a love of these things will abide with them through life and they will never view them without thoughts of home, of its purity, its love and its peace. There is one other point in this division of our subject which can only be mentioned. Let the surroundings of the home be in keeping with the interior. We need only to see and know Beauty to love her, and the man whose childhood has been spent in a bright, peaceful home, and who finds himself a pilgrim on the face of the earth, will not be content to remain so, but, filled with an insatiable longing to share such a pleasant home with loved ones of his own, will never rest until he has got it.

Now we come to consider the mission of the enlightened farmer in the refinement of the neighborhood in which he has taken up his abode. This mission finds only a very small part in putting his name on church subscription lists and the like. It has a greater kinship to service than money. To maintain a pure and refined home among his neighbors is his first duty, but there are others. Being refined himself he must seek, not obtrusively, to extend that refinement to others. He must not stand aloof if he is asked to take a part in public business, for it may open up to him many an avenue for working improvement in the conditions of life of his neighbors. Especially should he interest himself in the education of the young, the great lever by which mankind is to be lifted up. He must be zealous in seconding means which may be devised for supplying the intellectual wants of the community and of putting opportunities of wholesome recreation within the reach of all.

Lastly, the Ontario farmer has a mission to perform towards his country. He must take an intelligent interest in the acts of the government which represents him; he must do his share in promoting the election to parliament of highminded and capable politicians; and ever be found an unswerving advocate of a policy which is at once honorable and unselfish and productive of the good to the nation. By these means he will aid in raising the tone of his country and her place in the esteem of the nations of the world.

We have now come to the conclusion of our inquiry. We have pointed out that the rising generation of farmers of this country, or at least such of them that possess the great boon of refinement, have a mission to

perform for the benefit of those less favored; first, by establishing in their midst that most beautiful of all earthly things, a pure, refined home; secondly, by work along the lines of giving pleasing instruction and wholesome recreation to all in the little world in which he moves; and lastly, towards the greater community, the nation to which he belongs by throwing in his weight with a high-minded policy. Let him try in whatever place he may be to become a centre of light and leading to his fellow men, and though he dies unknown beyond the corner of the world in which he has lived, he will not have lived in vain, for he will have brightened the lives of many who have crossed his path, and shown to many more who survive him how life may be enriched by high aims and self-denying usefulness.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL.

The New Barn.

It was to be built before haying, and through winter's cold and snow all preparations were being made. It was to be the first frame barn in the settlement, the lumber used being all sawed by hand. The busy springtime was approaching, as the warm sun and dissolving snow testified.

The day of rest, hallowed by its sacred influences, came round, and the farmer thinking more of his barn than of his God's command, came with oxen and sleigh to the village store to carry home the kegs of nails for its construction. To aggravate the offence, he was a native of that land whose reverence for the Sabbath has long been noted, and one who professed to uphold the honor of Zion.

The barn was completed and with pride exhibited. It looked well, and pains and trouble were forgotten in the finished result. Was it a dream, that as I looked I saw a shadow fall across it, and felt a curse pronounced? Years had passed, and the farmer's hair had silvered; his shoulders bend; age's seal on the once strong form. I asked for the boys of the olden time, varying, as I knew them, from young manhood to the baby, but my answer was a look of suffering. The barn still stood; the timbers, once so fresh and new, now weatherbeaten and dark. Through moaning wind, pattering rain, and winter's icy darts, those nails have kept their places, but nevertheless the curse has rested on the home. The grain growing day by day, getting sun and rain from the bountiful Giver, has not been withheld, although that Giver's command was broken, and impure and unclean has stamped the farmer's barn.

The Sabbath work for the new barn bore its fruits. Children are quick to see, and soon knew the Sabbath was not kept "holy." The wedge was entered, and it went deeper in. The boys knew where they could be corrected, and, as it often is, Sabbath-breaking was the first sin. One thing to another, and still another, till in anguish of heart the parents asked in what could they trust their boys. Then, bitterest hour of a parent's heart, they learnt, in nothing. Instead of honor came dishonor, dissensions, careless indifference, and other evils in their train. We trust such a dream may never be fulfilled, and that now the evil may be repented of, and but the scar remain.

FOREST LEAVES.

The Toronto Industrial Fair.

The Industrial Fair for the present year is to be held at Toronto, from the 10th to the 22d of September next. The directors and officials are energetically pushing forward their preparations to make it sustain the reputation it has already secured. The prize list has been revised and sent to the printer. Although the amount of prizes was very largely increased last year in view of its being the Dominion

Exhibition, the amount has not been reduced, the Association being determined to keep up the prize list. In the horse department the list has been increased over that of last year, all the special prizes offered for competition the first week having been retained, and three new classes added, one for Clydesdales, one for Shire horses, and another for agricultural horses, the latter class being to provide for those horses that are too heavy for the general purpose class, and too light to be classed as heavy draught. A large number of new special prizes have also been added in the horse department. The prizes for cattle, sheep and pigs, remain very much the same as last year, except that the special herd prizes offered for competition the first week have been dropped, so as not to interfere with the exhibit of cattle at the Provincial. It is probable that the new Governor General, Lord Stanley, will open the exhibition, and the directors, assisted by the Toronto City Council, are making strenuous efforts to secure more ground, so that the present park may be enlarged in time for this year's fair.

The special attraction committee, encouraged by the liberal patronage the association received last year, and the general approval of visitors with the attractions offered, are entering upon their arrangements for new features, with renewed energy. An improved catalogue will be published this year for the live-stock department, and no animal will be recognized by the judges unless it has on the catalogue number. In order that the catalogue may be complete, it has been decided that no entries shall be received after the date for closing, which is the 18th of August.

Jottings.

Exhibition Convention.—A convention of the Fair and Exhibition Associations of Canada will be held in Toronto, on 2d and 3d May. An interesting programme is being prepared. All necessary particulars may be obtained from the secretary, Mr. Geo. McBroon, London, Ont.

Fruits of Advertising.—"We think the catalogues of our horses you assisted us in getting up last fall, and the help the JOURNAL has given, has been of much service to us. We have sold at this date (12th April) double what we have ever done before.—Gratham Bros., Claremont, Ont."

Tiles for a Drain.—"Editor C. L. S. JOURNAL. SIR,—Will you please in your next issue state if tiles answer the same purpose as wood or iron to carry water from a well under ground a distance of 800 feet, and oblige J. Camber, Fredericton, N. B." In point of durability tiles, properly burned, will answer better than either wood or iron, and will be cheaper than the latter. They will answer very well.

Pleuro-Pneumonia.—This insidious disease has been most effectively stamped out in the Western States. It is now confined principally to the great cities of the Atlantic seaboard. It is a striking instance of the great energy which the American people bring to bear upon any work which they undertake. One result is renewed activity in handling the better grades of stock, in the benefits of which Canada will doubtless participate.

Fanning Mill.—The Manson Campbell Fanning Mill is certainly a very complete mill. Although the output last year was more than eight mills for every day in the year, it will be exceeded this season. No less than 500,000 feet of lumber have been used in making up the stock of 1883. It only weighs 200 lbs., and, as stated in the advertisement in another column, runs light and cleans very fast. It is claimed for it that in cleaning wheat it removes the chaff and cockle.

Ostrich Farming.—This is becoming quite a business in California. In the neighborhood of Los Angeles there are no less than five ostrich farms, on some of which there are 125 birds. The feathers sell from \$40 to \$60 per pound, and a crop is produced every seven months. The flesh is reported as good as that of turkeys, but it will be a long time before it will pay to use it as food. The food given consists of alfalfa, cabbage and corn. The weight of the birds is said to be from 200 to 450 pounds.

Judges for Exhibitions.—The one judge system is growing in favor in the United States. In live stock matters at least it will prevail in the exhibitions of next autumn in Ohio, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Nebraska and Kansas. Several of the live stock associations are preparing a list of experts in their line whom they consider competent for the work. A copy of this list will be submitted

to the various exhibition associations, which will tend very much to lighten the duties of committees appointed to select judges.

Test of Merit.—The *Breeders' Gazette* tersely remarks that "the best proof of the merits of a paper is that its friends work for it." Gauged by this test the JOURNAL has certainly much to be thankful for. If there is any one thing more than another which encourages us, it is the loyalty of our constituency. While we again tender our warm thanks to all who are so nobly assisting us, we take the liberty of reminding them that in reference to stock improvement, "The Canaanite and the Perizite are still in the land."

British vs. American Purebreds.—A controversy is now current in British and American papers as to whether American Shorthorns are as good as those of the mother country. As to that they must settle it themselves. We in Canada sell a good many sires to head herds in the United States, and it has up to the present, been the practice of our best breeders to go to Great Britain for their sires. So long as these practices continue the Old Country breeders need not worry as to who raise the best Shorthorns.

Improvement in Prices.—At the recent sale of Ardert Abbey Shorthorn bulls, belonging to Mr. Talbot, Crosbie, Tralee, the 20 animals sold averaged £32 5s.; the highest price paid was 58 guineas. The average at the sale of 1887 was £16 17s. 6d. Improvements in prices have been indicated at other sales of late, as at Birmingham, where in several instances young bulls brought from 90 to 100 guineas. At the Perth sale Shorthorn cattle averaged £6 8s. 5d. over the average of the previous year, and Aberdeen-Angus Polls £4 10s.

The Oat Swindle.—A correspondent of the *Toronto Mail* says that notes were taken from the farmers for hullless oats sold them to the extent of \$20,000 to \$30,000 are in the hands of certain parties in Belleville, and as they are maturing, as a matter of course the farmers are troubled. Their being troubled will not avail. Their only resource now is to pay the notes and mourn their folly in not having taken an agricultural paper, which would have kept them well posted on the nature of those swindles.

A Mutual Benefit.—"EDITOR C. L. S. AND F. JOURNAL.—Dear Sir: I may say for the benefit of your valuable journal that Mr. A. Kennedy, of this neighborhood, since taking it, has bought a pure Holstein bull from Messrs. Cook & Sons, Aultsville, Ont. Mr. Cook is thus getting the benefit of your labor.—S. QUARTS, West Winchester." This letter affords another illustration of what we have repeatedly tried to impress upon our stockmen that every permanent subscriber furnished, in all probability, adds another to the list of purchasers of good stock at some time or another.

Farmers' Institutes in Michigan.—The Farmers' Institutes in Michigan are all arranged for and directed by one man, Mr. Wm. Morrison, a farmer, who now gives his whole time to the work. The appropriation by the State for this purpose is \$12,000 per annum. It is claimed the instruction given through them in butter-making and the use of the silo has been worth many thousands of dollars to the State. At one stage of each Institute an expert practical butter maker actually churns, salts, works and packs for market a batch of gilt-edged butter, explaining carefully every detail of the work from the feeding and milking of the cows to the final sale of the product.

A New Kind of Lard.—Our American neighbors have been racking their brains for the production of a new kind of lard, and have succeeded. But they prefer giving it the old name, "lard." One experimenter uses a large amount of cotton seed oil and stearine. Another makes his lard out of hogs that have died of their own account, the lard being extracted from the whole carcase—hair, head, entrails and marrow. Such is the purport of evidence brought out before the Congressional committee of investigation at Washington. It is one of the compensations of farm life, with all its hardships, that those engaged in its prosecution do not require to use either of those brands of lard.

Holstein Beef.—In bulletin xxv., from the Ontario Agricultural College, Guelph, Prof. Brown gives the results of beef production from the use of a Holstein sire. One steer, out of a common cow, at 886 days old scaled live weight 1790 lbs., or a daily gain of 2.06 lbs. A second, out of a Jersey grade cow, made 1339 lbs in 605 days, or a daily gain of 2.18. Both were allowed to suckle their dams and were treated liberally, subject to conditions as to feed which usually govern the production of good beef. The first mentioned dressed when slaughtered, 62½ per cent. of live weight. The second still lives. The

above is certainly a good record. In the face of it the claims of the Holsteins as beef producers cannot easily be set aside.

Our Sketches of Live Stock.—These, we are very pleased to notice, are commanding attention outside of Canada, on both sides of the Atlantic, having in many instances been reproduced in other journals. We learn from Mr. John Campbell, jr., Woodville, that Mr. Curtis, of the A. & M. College of Texas, U. S., has sent for the electro of his group of Shropshires, which appeared in the October number of this journal, 1886. It is to be used in a book which is being published there. Parties desirous of having sketches of their stock appear in the JOURNAL should communicate with us a month or two in advance. Those desirous of having the use of our pages for this purpose for some particular month should communicate with us several months in advance.

Selling Live Stock by Weight in Great Britain.—Slowly, toilsomely, laboriously, with a little advance made amid strange opposition, the bill passed to establish "weigh-bridges" in Great Britain is dragging along its toilsome length. It has found a temporary check in the diversity of weights and measures in the kingdom. We can have no stronger evidence of the tenacity of the prejudice that binds that ancient people to the practices of their ancestors, many of which should have been obsolete long ago. Where the advantages are so apparent, one would suppose that the grave-clothes of ancient systems would be thrown away, that more modern and more rational ones might take their place. Here in Canada many of our farmers have weigh scales at their own doors, and put up at their own expense. Nor are our people cumbered in their arithmetic with the awkward "stones" and "quarters" that make the arithmetic of the people of Great Britain so awkward.

The Dominion Shorthorn Herd Books.—We cannot but conclude that it will be to the interest of the Shorthorn breeders to adopt some means that will hasten the publication of the volumes of the herd book. The last report gave the number of pedigrees on record to July, 1887, as 22,000. Of these vol. i. contains 3,301, and vol. ii, not yet to hand, 4,427. The balance of the 22,000 would fill about four volumes. Then there are the pedigrees that have come in since July, 1887, enough no doubt for another volume—that is, pedigrees on hand at present for five volumes. Now, though two volumes should be brought out each year, it will take five years to get even with newly entered pedigrees. Can we afford to wait? Couple with this a depleted treasury. We may as well look the matter straight in the face, and shoulder the difficulty like men.

Oranges.—From a writer in the *Farm & Fireside* we learn that there are "nearly 40 varieties of oranges grown in Florida, differing greatly amongst themselves in size, shape, color and quality. A few are inferior, being coarse, thick-skinned and sour; others are smooth, thin-skinned, juicy, sweet and deliciously flavored. Several of the most interesting of these varieties belong to the kid glove species, so called because the loosely attached skin may be easily removed and the segments of the fruit separated and eaten without soiling one's gloves. These kid-glove oranges are small to medium in size, somewhat flattened in shape, and of a deep reddish yellow color. They have a peculiarly spicy flavor and an aromatic fragrance. The trees are dwarfish in size, but prolific bearers. Upon one small bearing tree on exhibition hung nearly 500 oranges." It seems somewhat of a privation to have to pay 20 per cent. of an ad valorem duty on this delicious fruit coming from the United States when it cannot be grown in Canada.

Stock Notes.

Parties forwarding stock notes for publication will please condense as much as possible. If written separate from other matter, it will save much labor in the office. No stock notes can be inserted that do not reach the office by the 23d of the month preceding the issue for which they are intended.

Alderman G. F. Frankland the veteran cattle exporter writes under date of 12th April: "We are shipping 30 bulls averaging 2700 lbs. this day, and 40 steers averaging 1,450 lbs., by way of Boston for Liverpool, Great Britain, as the weights require the present cool weather to move them. The first steamers do not leave Montreal till about the 8th of May, and Halifax, the next seaport that is open at all times, is 1,276 miles of railway journey. Of course the 70 cattle will be treated as Americans and slaughtered on debarkation." The worthy alderman leaves about May 8th, with a cargo of cattle from Montreal, where some nine steamers will follow in same port weekly. His stay in England and Scotland will continue about three months.

Horses.

Mr. John Duff, Everton, Ont., whose stallion Reform (3947), appears with description on the first page of this issue, has just written us that this horse beat MacArthur the first prize stallion for Ontario, at the Elora Spring Show, and that the five men who acted as judges were unanimous in their verdict.

Since then he has taken the first prize on him at Hillhurst, on the 20th; 1st at Acton, on the 24th, and a diploma for the best horse of any breed at Guelph, on the 26th inst.

Mr. I. Hos. Good writes to say that he has sold to G. N. Kidd, Carp P. O., his 3-year-old Clydesdale stallion, Lord Carleton 2496, for \$1500. Lord Carleton is a grand horse, lofty and stylish and an elegant mover. He has the honor of being the first pure bred Clydesdale bred in the county. He is a bright bay in color with very little white about him, and has for sire the well known and famous Sir Wm. Wallace (806), and for dam Bell of Richmond, imp., (2527), by Prince of Wales (3304). Mr. Kidd deserves credit for keeping this fine animal in his native county.

Messrs. D. & O. Sorby, Guelph, Ont., report the following sales of Clydesdales since those mentioned in the April issue. To D. Mooney, Tarkio, Mo., U. S., Gallant Boy imp. (314) (4387), foaled 1883, sire Top Gallant (1850), dam Jess of Burland (2093), to John Davidson, Ashburn, Ont., Kate Hill imp. (212) (4124), foaled 1880, sire Young Surprise (1034), dam Garret Marc, by Prince of Waterloo (674). Kate Hill is supposed to be in foal to Boydston Boy, imp. (216), 1872, (111). These last are the correct stud book Nos. of Boydston Boy incorrectly given in last issue.

The Messrs. Graham Bros., Claremont, Ont., report a most encouraging season in the sale of their Clydesdales. These are as follows: The magnificent Macarthur (3815), the sweepstakes horse of all Canada for 1887, has gone to Messrs. Stover & Reidel, Waterloo Co., Ont. Macarthur was foaled in 1883, is by the great Macgregor (1487), and from the dam Bet of Auchengoll (2417). The beautiful Macinnes (5183), foaled 1885, also by Macgregor (1487), and the dam Lally Hill (4904), by Farmer-Drumflower (286), was bought by McGeirgrie Bros., Orms-town, P. Q. The handsome Golden Gem (5053), foaled 1885, by Goldenberry (2828), dam Lovely II of Boreland (262) by Lochfergus Champion, was sold to Chas. Bennett, Floss, Ont. James Henderson, Beeton, Ont., bought the 3-year-old Lord Ullin (5179), by Darnley (222), and out of the dam Larbrax Tibbie. Lord Ullin is a horse of grand bone and substance. Wm. Ogilvie, Verona, Wis., bought Macraith (5201), a horse of great promise, foaled 1885, by the sire Macgregor (1487) and the dam Rosie of Hermiston (3640), by Dundonald (256). The blocky yet lively 5-year stallion Grange (3671), by the fine old stock horse, Jacob Wilson (2178) and the dam Rosie of Netherlands (4825), foaled 1881, with medium size and splendid quality, went to O. E. Taylor, West Union, Iowa. He also is by Jacob Wilson (2178) and the dam Sypland Bet (317). Mr. Taylor also captured Royal Blue 510, 5 years old, a well proportioned, easy stepping horse by Blue Ribbon 1011 a son of Darnley (222). Royal Crown (Vol. 8), three years old, by Crown Jewel (2708), and the dam Dora (1292), very perfect in build, was bought by E. C. Johnson, Marshalltown, Iowa. The 4-year-old Fred Archer (430) was bought by Lee & Artridge, Highgate, Ont. From the famous sire What Care I (912) and the dam Honora by Lord Lyon (480), individually he is a thick set horse of grand quality. The 5-year old Macadwand (4551), a sure and tried horse by Prince Albert (616), and the dam Darling (1153), by Lord Lyon (480), went to Edwards Bros., Watford, Ont. Bright Smile, foaled 1881, by Prince Henry and the dam Bess, by Sampson (1574), was sold to F. & T. Collin, Speaker, Mich. He is a massive horse of some 3100 pounds in weight. Hatfield, 3 years old, with good style and action, was bought by J. M. Lott, Edgar, Ont. He is sired by Honorable Charlie 3693, and out of the dam Tarbrooch Darling (74). T. J. Little, Mono Road, Ont., bought Freedom, a horse of uniformly high merit and 5 years old. Foaled 1883, and sired by Liberty (222), he is out of the dam Maggie of Tarbrooch (4543). Montrose Chief (5222) went to C. Bennett, Iris, Ont. A grand horse in any company, he is sired by Charmer 2014 and from the dam Darling of Lwynholm (2884). A Cameron, Ashburn bought Macindoe, foaled 1886. He is a large, well ribbed colt by Macgregor (1487), and out of the dam Maybloom (5367). W. L. Taylor, Malton, bought the beautiful Jessie Macgregor, foaled in 1886, and sired by Macgregor (1487) and from the dam Bonnie Scotland (440), by Pride of Galloway (601). Mr. Taylor owns a mare of fine style and form and unrivalled action. Along with Jessie Macgregor he took Local Gem, foaled 1883, by Sir Michael (1530), out of the dam Rosie (1712), and with that fine action that characterizes horses of Darnley descent. Amongst the horses retained in the Cambridge stud are the magnificent Mariphal (4567), the full brother to Macarthur (3815), and not a whit behind him in all round merit; also Marmion (6074), now two years old. A colt of rare merit and by Lord Marmion (2620), and the dam Jess of Newton (764), he has won a host of first prizes already, including the champion cup at Glasgow, where he wrenched first honors away from the hitherto unbeaten The Macaulay, and first at the last Toronto Industrial. The terms of service for Marmion (6074) are \$25 each for a limited number of mares.

Shorthorns.

The Messrs. Graham Bros., Ailsa Craig, Ont., write: "Our stock is doing very well. The herd bull Rosy Prince 6th, is giving the best of satisfaction. His calves are all very much alike. Parties who bought at our sale are expressing themselves as being well pleased with their purchases."

Mr. W. Whitelaw, Guelph, Ont., has 10 calves, he reports, from 25 small Shorthorn cows, by the Border Prince. Last autumn he imported a number of Border Leicesters, bought at the famous Kelsu sale. It is not able to supply the demand at present. Had 40 lambs, March 25th.

Mr. John Ferguson, North Keppel, Ont., has recently purchased a dark roan bull, a Shorthorn, from Mr. Jas. Brown, Galt, sired by Duke of Sharon 10th, dam, Rose, by Marquis of Lorne. He was calved 30th December, 1886; weight March 10th, 1350 lbs.

Mr. F. Birdsall, Bellevue Stock Farm, Birdsall, Ont., writes as follows: "My Shorthorn cattle wintered very nicely. I have a couple of good S. H. calves bred from cows Blanche and Daisy Deane, and imported bull Inkerman, bred by S. Campbell, Kinellar, Switland. C. Belle of Bellevue weighed when dropped 75 lbs., and at 121 days old weighed 460 lbs., she gained 80 lbs. last month. B. C. Chief Pundash weighed when dropped 82 lbs., and at 121 days old 424 lbs. He gained 95 lbs. last month."

Advertising Rates.

The rate for single insertion is 18c. per line, Nonpareil (12 lines make one inch), for three insertions, 15c. per line each insertion, for six insertions, 12c. per line each insertion, for one year, 10c. per line each insertion. Cards in Breeders' Directory, not more than five lines, \$1.50 per line per annum. No advertisement inserted for less than 75 cents. Contracts broken by bankruptcy or otherwise, shall revert to the regular rate of 18c. per line.

Copy for advertisement should reach us before the 25th of each month (earlier if possible). If later, it may be in time for insertion, but often too late for proper classification. Advertisers not known at office will remit cash in advance. Further information will be given if desired.

JAMES McCREIGHT, Cherrywood, Ont., breeder of Durham cattle and South Down sheep. Young stock for sale. 5-6

FOR SALE—YOUNG SHORTHORN BULLS, COWS AND HEIFERS. Prices to suit the times. THOS. SHAW, Woodburn P. O., Co. Wentworth, Ont.

FOR SALE JERSEY BULL CADEAUX No. 5124, Vol. VIII, J. C. C. R. Apply to J. H. PILLAR, Russell, Ont. my-1

JOHN FENNELL, Berlin, Ont., offers for sale a few well-bred fresh JERSEY COWS, also a fine ST LAMBERT BULL CALF, 7 months old. ap-2

FOR SALE—HOLSTEIN BULL

Five years old Good animal Very quiet. ap-3. Address, ELIAS PANNAHECKER, HESPELER, ONT.

BERKSHIRES.

We now offer for sale some really fine spring pigs, either singly or mated for breeding in pairs, at reasonable prices, and bred from our imported prize winning herd. ap-2

W. H. & C. H. McNISH, Lyn, Ont.

YOUNG BERKSHIRE SOWS FOR SALE Autumn litters and markings right Pedigrees unexceptionable. Prices very low.

THOS. SHAW, Woodburn P. O., Co. of Wentworth, Ont.

Ohio Improved Chester Whites

From imported stock. Young pigs for sale.

ap-3 R. & J. GURNETT, ANCASTER, ONT.

ENGLISH PEDIGREE STOCK.

Shire Horses, Hereford Cattle, Shropshire Sheep, Berkshire Pigs and Colley Dogs are bred and can be supplied by mar-4 T. S. MINTON, Montford, Shrewsbury, England.

A. J. C. C. H. R. JERSEYS

All ages, at reasonable prices; f. o. b. with feed, without extra charge. For sale by ALBERT P. BALL, Lee Farm, Rock Island, Stanstead Co., Que. may-1

Shorthorn Bulls for Sale.

TWO of the noted *Constance* family, and ONE from an imp. Torr Waterloo Cow. All ready for service, besides some younger. Will be sold at farmer's prices. Address

RICHARD GIBSON, DELAWARE, ONT.

IMPORTED SHEEP

The undersigned, having decided to visit England, is now prepared to take orders to bring any kind of sheep from there. Write at once for particulars. JOHN JACKSON, Woodside Farm, Abingdon, Ont. my-1

FANCY BERKSHIRE PIGS

CHOICE litters, ready for shipping. Young Boars ready to use. Sows in farrow to prize boars. All from Large English Prize-winners, and all at Low Prices. Satisfaction guaranteed.

W. G. CAVAN, Box 127, GALT, ONT.

GRADE COWS AND HEIFERS

FOR SALE From thirty to fifty head with from 3 to 12 pure crosses by first-class bulls. All in breeding condition. Will be sold cheap to make way for pure Shorthorns.

THOS. SHAW, Woodburn P. O., Co. Wentworth, Ont.

Clydesdales For Sale.

One Clydesdale Stallion, 2 years old, one Clydesdale Stallion, 1 year old, one Clydesdale Mare, 10 years old. All grand animals, and registered in the and vol. C. S. Or

WILL EXCHANGE FOR CLYDESDALE FILLIES.

ap-3 Address, W. C. B. RATHBUN, Deseronto, Ont.

STUMP AND STONE MACHINES.

FOR all classes of work. Also BRUCE'S SPINNING WHEEL, for hand spinning and twist ing. Price list, etc., on application. Address,

my-yr J. W. ANDERSON, BARRIE, ONT.

Mr. Walter Stevenson, Fenelon Falls, Ont., writes: "I never regret spending a dollar when I know I am going to get a good investment on the return. But for the CANADIAN LIVESTOCK JOURNAL I could not keep abreast of the times, but with it am as level up as circumstances will permit on seventeen acres of land and four head of (D. H.) registered Durhams. Do you accept stock notes from a person that has not advertised yet, or has no card?" We welcome stock notes from any subscriber in a condensed form, who is trying to improve his stock and has something interesting to say about them.—Ed.

Mr. John Isaac, Kinellar Lodge, Markham, Ont., writes: "Shorthorns doing well, have made the following sales at good prices within the last few months. 1 bull calf to Neil Stewart, Chesley; 3 heifer calves to J. & W. Russell, Richmond Hill; 1 heifer calf to J. C. Snell, Edmonton; 1 imported heifer to W. Mackintosh, Burgoyne; 1 imported bull and 2 heifers to John Ackroyd, Highfield; 1 heifer to Arthur Johnston, Greenwood; 2 imported cows and 2 calves to F. Davis, Red Wing, Minnesota; also 1 pure bred Clydesdale filly to W. C. Miller, Markham, and 1 Clydesdale colt to Mr. Owens, Iowa."

Mr. W. J. Biggins, Elmhurst Farm, Clinton, Ont., writes: "I have sold the following Shorthorns this spring: To Mr. Hugh Thomson, St. Marys, Baron Roseberry, a good show calf, took first prize at the North-Western exhibition and also first prize at the Central exhibition in Clinton last fall; his dam was Matchless of Elmhurst 6th. Mr. Thomson also purchased Baron Ingleby, dam Matchless of Elmhurst 8th, etc. Mr. James Young, of Rossburn, Man., purchased the two-year-old Field Marshall, a first prize winner at the South Huron Spring show last April, and also first prize at the Clinton spring show. The cattle are doing well and are dropping some fine calves to imp. Excelsior (51233), bred by E. Cruickshank, Letheny, Aberdeen, Scotland. Excelsior is the present stock bull, he is of the Booth Mantilini tribe.

We are in receipt of the 1888 catalogue of the West Montrose herd of Shorthorns, owned by F. Lowell & Son, Galt, Ont. It states that the West Montrose herd was established in 1863. Among the first females selected were Red Rose 7th, by imp. Third Duke of Cambridge (5941), and Young Velvet, imp., by Marquis of Bute (11788). From the Moreton Lodge herd, Guelph, came Marchioness of Gloster 3rd, Isabella 9th, Sanspareil 9th and Sanspareil 11th, of the Sanspareil family, of which the firm are still breeding when they consider the best animals of the herd for milk and beef combined. Of the 12 females catalogued to be Sanspareils and two Isabellas. Waterloo Duke 12th, a pure Waterloo, bred at Bow Park and sired by 4th Duke of Clarence (33597), heads the herd. The bull calves, Silver King 3rd, 4th and 5th, all Seraphinas by Waterloo Duke 12th, are yet on hand.

Mr. Wm. Lovell, West Montrose Stock Farm, West Montrose, Ont., writes: "Below is a correct list of calves recently bred by us: Seraphina 22nd, red heifer calf, by Waterloo Duke 12th, named Seraphina 29th; Seraphina 27th, red heifer calf, by Waterloo Duke 12th, named Seraphina 30th; Seraphina 20th, dark red heifer calf, by Waterloo Duke 12th, named Seraphina 31st; Seraphina 24th, dark red bull calf, by Waterloo Duke 12th, named Silver King 3rd; Seraphina 26th, red bull calf, white marks, by Waterloo Duke 12th, named Silver King 4th; Seraphina 25th, roan bull calf, by Waterloo Duke 12th, named Silver King 5th. These are the finest lot of calves we have ever bred and we have been breeding for over twenty-five years. We have some Isabellas yet to calve, of the family that Mr. Wm. Warfield, Lexington, Kentucky, in his letter to the *Chicago Breeder's Gazette*, speaks of thus: "The yearlings of Mr. Jas. Russell, of the Isabella family, were in my opinion the finest I saw on my recent visit to Canada." They are descendants of Isabella that won the gold medal at the Centennial, Philadelphia."

The Shorthorn sale of Mr. T. C. Patteson, Eastwood, Ont., held on 25th April, was on the whole quite successful. The morning was very unfavorable, and doubtless kept away a large number who would otherwise have been there. The stock were simply in good breeding condition and judging by the number with calves at foot and those carrying calf, they were all true breeders. Mr. E. A. M. Gibson, Delaware, was auctioneer and did his work creditably. The sale commenced at 1:30 p.m. and by 3:30 p.m. the entire lot was disposed of. The following is a list of the animals sold: Females: November Flower, calved 1878, with c. at foot, B. Hutchin, Nassagaweya, \$100; Lady Lorne, calved 1878, B. Hutchin, \$100; Ruth, calved 1885, G. Steven, Virden, Man., \$100; Moss Agate, calved 1886, G. Steven, \$80; Kalista, calved 1886, B. Hutchin, \$85; Fame 3rd, calved 1880, withdrawn at \$150; Faith, calved 1886, Jos. Thompson, Salem, \$155; Fashion, calved 1887, J. Y. Ormsby, Oakville, \$85; Mary of Argyle, Wm. Canfield, Vandecar, \$140; Alpha xi, calved 1883, Jas. Brown, Thorold, \$150; Alphabet, Geo. Steven, \$95; Alma, calved 1887, J. Y. Ormsby, \$75; Her Majesty, calved 1885, with c. at foot, Thos. Inglis, Clinton, \$95; Knoyle Rose 8th, with c. at foot, L. Cowan, Galt, \$100; Connemara, calved 1886, G. Steven, \$80; Knoyle Rose 15th, calved 1886, not sold; Galatea, calved 1883, J. C. Pettit, Burgoyneville, \$130; Godiva, calved 1886, Chas. Campbell, Bradshaw, \$125; Genesta, calved 1887, Thos. Inglis, \$70; Aurora, calved 1881, withdrawn at \$125; Pandora, calved 1884, withdrawn at \$100; Pansera, L. Cowan, \$65; Princess Ninetzin, G. Steven, \$125; Nina, calved 1887, J. Y. Ormsby, \$70; Housemaid, calved 1885, C. Campbell, \$105; Cordelia, calved 1884, with b. c. at foot, G. Steven, \$125; White Violet, calved 1885, B. Hutchins, \$70; Princess, calved 1879, withdrawn at \$85; Princess Royal, calved 1887, G. Steven, \$70; Blanche, calved 1880, Jas. Brown, \$80. Twenty-seven animals sold summed up \$2700, or \$100 each.

The Shorthorn herd of Mr. Joseph Thompson, Salem, Ont., numbers 14 females. The greater part of them have for foundation Beauty, imported in 1835 by Adam Ferguson, Waterdown, Ont. She was got by Snowball (2647). The bull at head of herd at the present time was bought from Geo. Miller, Markham, Ont., and got by Ericldoune—595—, dam Innocent 2d, by Filligree Duke—355—, g. d. Innocent 2d, vol. 1 P., 527, by Gem Prim 31234. The sires made of bulls this year were Grand Duke to Jos. Jackson, Mitchell, dam Cherry, by Under Sheriff—416—, Royal Duke to J. Pricell, Egerton, dam Red Rose

by Manfred 2d, -1257-; Duke of Selem to Edmund Fitzpatrick, Damascus, Ont., dam Adela 2d, got by Manfred 2d, -1257-; Irvine Duke to Bartley Taylor, Clifford, dam Sweet Clover, by Bold Buccleugh -757-; Conductor to Gro. Martin, Belwood, dam Lena, by Bold Buccleugh -757-. The prices obtained were remunerative. His flock of border Leicesters consists of 22 ewes, so far all having twins (31st, March), and two triplets, all doing well. The ram used at present time was bought from Wm. Oliver, Plattsville, Ont. He has also two Clydesdale stallions imported from Scotland and selected by himself Morven (3018), vol. vi, bred by Durcan Reid, Smith Hill, Migvie. He is an excellent type of the old Clydesdales, with grand action and great ambition, sire Lonoeh (470), vol. i, dam Bell (2839), vol. vi, sire of dam Knooch (441), vol. i. The second Isonomy (3702), vol. vii, bred by Geo. Bean, Balquhain, Mainis Pitcaple, sire Strathleven (1538), vol. v, p. 480, dam Grace Darling (694), vol. iv, p. 8 and 9. She was got by the world's famed Riddle's Darnley (222), a great prize-winner, and sire of very many noted horses. Isonomy has never been travelled, having all the mares wanted brought to his own stable.

Messrs J. & W. Russell, Richmond Hill, Ont., have recently sold to Mr. Francis Davis, Red Wing, Minnesota, the one-year-old heifer Miss Rambler 1st, by Gravesend (4661), dam Miss Rambler, by British Flag (4600), bred by Sylvester Campbell, Kinellar, Scotland, imported by themselves. The one-year-old heifer Isabella 16th, by the pure Booth bull Royal Booth 2d, -371-, dam Isabella 6th, by British Statesman (42847), bred at Spring Brook Farm. The one-year-old heifer Roan Betty 2d, by Baron Lenton (4098), dam imported Roan Betty, by Champion (47566). To Mr. Douglas, Campbellford, the young Shorthorn bull Prince Imperial, dam 4th Rose of Autumn, by High Sheriff 2d, 280; also to John E. Smith, Brandon, Man., the pure bred Clydesdale mare Maggie of Richmond Hill, winner of the silver medal for mare and two of her progeny at Toronto Industrial in 1887. Mr. Davis also bought from Mr. John Isaac, Markham, the Shorthorn heifer Ury Girl (recently imported), by Vermont (47913), dam Ury Princess, by Golden Prince (38393), with her young red bull calf Prince Ury of Kinellar, by Gravesend (4661). The heifer calf Mermaid of Kinellar, by Baron Lenton (4098), dam imported Mermaid by Vermont (47913); also the imported cow Mina of Aberdeen, by Ladstone (42286), dam Mina 4th, by Luminary (34715). This cow has been an extra good breeder. Her first calf, a heifer, sold for \$500. J. & W. Russell refused \$400 for her next h. c. at one year old. Her 3d calf, a bull six months old, owned by the Messrs. Russell, Mr. Davis remarked was the best young bull he had seen in Canada in his judgment. An extra good heifer calf bred by Mr. John Miller, of Brougham, made up Mr. Davis' lot. No doubt Mr. Davis will meet with a fair share of success, his purchases being made up almost entirely of Kinellar bred cattle, which have so often stood first at many of the principal show grounds of Canada.

Herefords.

The Hon. M. H. Cochrane, Hillhurst, P. Q., will hold the first of a series of annual sales of pure bred stock at Hillhurst, P. Q., on Wednesday May 16th, 1888, when 30 head of Hereford cattle and an equal number of Aberdeen Angus will be sold as stated in advertisement in this issue. The Herefords comprise imported cows in calf and yearling heifers and young bulls by Cassio (6849) 11353, one of the best, if not the best, Hereford bull in America, both in pedigree and in individual merit. The young stock are of the fashionable Grove 3d and Lord Wilton strains, and include two prize winning rarities. The Polls include richly bred in calf heifers by Paris 2d and Lord Hillhurst, two excellently finished sires of the very best blood; also the red polled herd, comprising 14 females and sires of the same color, all registered in the Am. Ab. Angus Herd Book. They were bred for some years past from imported red cows to provide bulls for crossing with grade Shorthorns whose owners preferred to stick to their favorite color. By using a red sire on these, Mr. Cochrane has succeeded in getting a uniformly red crop of calves, the majority of which are of the third generation. They are now sold to make room for the constantly increasing herds of other sorts during recent years. Our readers will remember that Mr. Cochrane's herds, both of Herefords and Angus, cattle were singularly successful at Toronto Industrial last year, carrying easily the herd prizes and diplomas in both. We are glad to notice the plan is being adopted by some of our foremost breeders of late to sell at home. This is the natural and healthy way of carrying on a business of this nature where central combination sales have not been established, and we hope this first annual sale of Herefords and Angus cattle at Hillhurst may be an unqualified success. Hillhurst is easily accessible, being only one mile from Hillhurst station on the main line of the G. T. R.

Aberdeen-Angus

Messrs. Hay & Paton, Kinnoul Park Stock Farm, New Lowell, Ont., write that they have, during the past month, sold and shipped every animal they could possibly spare from their fine Aberdeen Angus herd. Among the animals disposed of we may note the sale of their fine show bull, Master Peter of K. P., to A. McKinnon, Esq., of Wellington Co., Ont.; Gordon Fyvie of K. P., their Fyvie Gem yearling bull, shipped all the way to Winnipeg; Exemplar, of the Erica family, Harold, of the Bognie family, Laird, of the Drumlin Lucy tribe, Fairy Prince, a Kinnaird Fanny, Heather Prince, of the favorite Heatherbell strain, Baron Hawthorne, of the Bognie family, Champion, out of the invincible Mary of Knoekiemill and Simcoe Chief, a Ruby of Methlick. All the above 8 bulls have been sold and shipped to Ohio, to Benton Garringer, Esq., Washington Court-house, the owner of the famous Woodlawn herd of exhibition Aberdeen-Angus cattle. Besides the above lot of bulls, Mr. Garringer has also purchased from Messrs Hay & Paton five females, including the splendid imported cows Heatherbell 3d of Aberlour, and Princess 5th of Pitgair. They say it is indeed very encouraging to find such a vigorous demand for the Dodies in the face of continued dullness in most lines of business. They are sold out of everything they could be induced to part with, and they are just arranging for a large purchase of the "thrifty blackskins" to supply the demands of their customers. They think it also only fair to state the simple fact that the JOURNAL does all their advertising. They had not a word of advertisement in any other paper on either side of the line. They were to join Messrs. M. Boyd & Co., of the famous Big Island Stock Farm in their grand sale at Chicago on the 23d and 24th of May, but they have now great pleasure in being able

FOR SALE. TWO IMPORTED HORSES

ONE Cleveland Bay, 3 years old, weighs 1470 lbs., 16 hands high; winner of 3 first prizes and 1 silver medal. One Clydesdale, 2 years old, weighs 1,580 lbs., 16 1/2 hands high, and registered in 10th vol. C. S. B. of G. B., also C. S. B. of Canada, winner of 4 first prizes; also 12 varieties of pure-bred Poultry, at low prices. Bronze Turkeys a specialty. Correspondence answered by sending 3 cent stamps. Address, MAJOR THOS. HODGSON, Port Perry, Ont. Ja-3

NINETY PURE-BRED SHORTHORN & HEREFORD BULLS

FOR SALE
At reasonable prices. Single animals or by car load.

Good Animals and first-class Pedigrees Also COWS and HEIFERS.

F. W. STONE, 42 Gordon St., GUELPH, ONT.

AUCTION SALE HILLHURST FARM

Compton, Prov. Que., Canada.

The subscriber will sell by auction, on

Wednesday, May 16th, 1888

THIRTY SUPERIOR Hereford Cattle

Comprising imported Cows in calf and Yearling Heifers and young Bulls by the celebrated sire CASSIO (6849) 11353, including some fine show animals of both sexes.

Thirty Pure-bred ABERDEEN-ANGUS CATTLE

Choice two-year-old Heifers in calf, young Bulls suitable for sires, and a herd of 14 RED Cows and Heifers, all registered in Am. A. H. B. Three generations RED-calves at foot by RED sire. Sold for want of room.

N.B.—This is not a draft sale, as some of the most desirable animals at Hillhurst will be offered. Stock bought in Canada enters United States duty free. Catalogues ready May 1st.

M. H. COCHRANE, HILLHURST, QUE., CANADA.

VALUABLE STOCK FARM FOR SALE

ONE and a half miles from Morris, county seat, a town of 1500 inhabitants. Morris has three railroads, good schools and churches, two banks, and it is a good shipping point for stock and grain. Farm consists of 600 acres—200 acres plowed ready for crop, 200 acres in tame grass, 15 acres timber, balance natural meadow and pasture. Well watered. Large modern built barns, accommodating 180 head of cattle and horses. Handsome dwelling on bank of beautiful lake.

Farm house and all necessary buildings for first-class farm. Farm is highly improved, well fenced and drained. Stock and machinery sold with farm if desired. Price reasonable and terms easy. For further information apply to

LEWIS H. STANTON, MORRIS, MINNESOTA.

EDWARD C. RYOTT, Auctioneer and Stock Salesman, TRENTON, ONT.

THOROUGHbred or Pedigreed Stock Sales a specialty. Sales attended to in any part of Canada. Satisfaction guaranteed every time, having 15 years valuable experience in leading Canada sales, and 3 years with Mr. George Freeman, the great stock salesman, Yorkshire, England. Correspondence solicited. Terms favorable.

to give up their place in the sale to one of the most enterprising firms of Doddie men on the American continent, Messrs. Geo. and John Geary, of Brookfield, Mo. They have also gone heavily into sheep husbandry since writing last, the particulars of which will be given for the June number.

Holsteins.

The Messrs. Smith Bros., of Credit Valley Stock Farm, Churchville, Ont., have been testing their 3-year-old Holstein heifer, and find that she gives 70 lbs. milk in one day, 47 1/2 lbs. in 7 days, and 1944 lbs. in 30 consecutive days.

Messrs. A. C. Hallman & Co., New Dundee, Ont., write: "Holstein Friesians are fast becoming the leading breed of cattle in the Dominion. They are forcing their way into new stations everywhere and are becoming more and more admired every day. Since our last report we had an unusually strong demand and made the following sales: A shipment to Mr. Alfred Wing, Everest, Reaburn, Man., about 30 miles from Winnipeg, consisting of 4 head, 1 bull and 3 females. The bull Emperor of Canada, grandson of Netherland Prince, is of unusual fine quality, took first prize at London in 1887, as a yearling. The cows are also of very fine quality. Lady Rosemond an excellent breeder, one of the first cows we ever imported, Vida Rooker, an Aggie, a very beautiful cow and of great promise, and Vida Rooker 2d, a very stylish heifer which took first prize in London in 1887, and stood in herd that won the diploma. The bull Artus Aggie Prince, two-year-old, we sold to B. Bricker, Roseville, Ont. His g. dam Aggie Rose' milk record 20,223 lbs. 3 oz. in one year, and 22 lbs. 8 1/2 oz. butter in one week. The imported bull Blair Athol to Mr. I. Parliament, Cannington, Ontario Co. This bull is a very valuable breeder, his calves are well marked and of good quality. Our herd is doing well, have 11 calves dropped, 4 males and 7 females. They are of excellent quality, sired by bulls of different families, Aggie, Netherland and Artis, three bulls of superior breeding and fine quality. Parties wanting stock should inspect our herd and consult our prices, we can suit the more particular. Have some choice bulls for sale yet.

The Bollert Bros., of Cassel, Ont., write under date of April 20th: "Now that the busy time of spring has again come, we anticipate that stock matters will rest for a while, although enquiries are still coming in with every mail. In looking over the transactions of the past season, we must say that we have been very successful. Our sales were very satisfactory and numerous, so much so, that we were compelled to make three importations during the last six months. This we attribute mainly to two causes. The first is (I must beg your pardon for saying so) the marked superiority of our stock, which is clearly visible to every one who inspects our herd, and last but not least, it is the advertising in your valuable JOURNAL. We receive at least twenty letters of enquiry through the advertisement in the JOURNAL to every one of the other papers we advertise in. This clearly shows that you are not laboring in vain, for only two years ago it was nearly the reverse. We hope that these results may be of some encouragement to you to continue in your beneficial work. The seed you have been sowing is already beginning to bear its fruit, and everyone who, through the influence of the JOURNAL, is induced to improve his stock will be thankful to you in the near future. Our late importations include some of the finest animals that ever came to this country. Among the cows are most prominent a daughter of the famous Glenburnie, who in ten consecutive months gave 20,138 lbs. of milk, and made 21 lbs of unsalted butter in seven days in the severe cold weather of January. The daughter has a milk record of 80 1/2 lbs per day, and tested 18 1/2 lbs. of butter in seven days. She was sired by one of the most famous stock and prize bulls in Holland, Peter 103, N. H. B., who was awarded 1st and 5 sweepstakes at all the prominent shows in Holland. Another good one is Gilderje, with a milk record of 84 lbs. per day, and butter record of 19 lbs. in seven days. Both her dam and sire's dam have records of over 90 lbs per day, and butter records of nineteen pounds in seven days. Among the younger ones are three daughters of the unequalled Barrington, a granddaughter of the noted Hamming, and several others, combining the Aggie, Barrington and Billy Boelyn blood. In these selections we kept true to our principle and selected only the very best from the good ones, with these our herd will number nearly 40 head."

Sheep and Pigs.

Mr. John Campbell, jr., of Woodville, writes: "The lambing season is over (April 6th), and the crop averages 1 1/2 lambs to each ewe." Mr. Campbell's flock is large, numbering over 60 head.

J. C. Snell, Edmonton, reports an improved demand for Cotswolds. He has recently sold 21 head to John T. Moore & Co. Crescent Lake, N.W.T., one ram to J. Whitcombe, Hillsboro, Oregon, and one ram and 5 ewes to C. W. Cook, Unity, Montana.

John Snell's Sons, Edmonton, Ont., have recently sold Berkshires to J. J. Hill, St. Paul, Minn.; E. V. Miller & Co. Morley, Iowa; W. J. Samuels, Bardstow, Ky.; J. C. McArthur, Ravenna, Ont.; H. Q. St. George, Oakridge, Ont.; W. Trestant, Strathburn, Ont.; Wm. Douglas, Caladema, Ont.

Mr. W. G. Cavan, of Galt, Ont., writes as follows: "Among the show boars at the head of my herd is Lord Derby, winner of 1st at Toronto, Ottawa, and Hamilton exhibitions, as boar over two years. He was also winner of the sweepstakes at Ottawa, for boar of any age. He looks as well as ever, and though a very large boar, is very active. I am using him extensively on my herd. Among other leading winners of 1887, was Model Sallie, winner of 1st at Toronto, Ottawa, and Hamilton shows, as sow under twelve months. She looks as well as ever, and has grown to be a grand sow. All my show pigs are doing well, as are also my younger stock, especially my spring litters, they are doing extra well, and I have begun shipping them. The litters out of my family of Hilda sows are, I think, the best I ever raised for growth, evenness and marking. Sales have been good and enquiry strong."

REYCROFT & STONE, Highgate, Ont., breeders of Light and Dark Brahmas and Plymouth Rocks. First-winning stock for sale. Eggs, \$1.50 per 13. Write for wants. apr-3

EGGS for hatching from prize-winning Silver and White Wyandottes, \$2 per 13. P. G. KEYES, Ottawa, Ont. apr-3

PLYMOUTH (Light) BRAHMAS, BLACK BRAHMAS, BAMBURGS EGGS, \$1 for 13. Carefully packed in baskets. Satisfaction guaranteed. Address, G. H. RICHMOND, 125 King Wm. St., Hamilton, Ont. FOR SALE—A few birds of the above varieties. First prize strains.

EGGS FOR HATCHING. LANGSHANS and BLACK MINORCAS (Abbot's strain, from imported eggs). \$1.00 for 13 eggs. J. C. MCKAY, Georgetown, Ont. my-2

Eggs from Standard Wyandottes. Of the Piquonock strain, \$1.50 for 13. Cash to accompany order. Write for wants. JAS. I. POOL, Muirkirk, Ont.

PLYMOUTH ROCKS FOR SALE. Pullets, cockerels and eggs in any quantity, cheap and good, and of a very fine laying strain. THOS. SHAW, Woodburn P. O., Co. Wentworth, Ont.

HENRY BAILEY, Highgate, Ont. Breeder of WHITE LEGHORNS (Lee's strain) and WHITE CRESTED BLACK POLISH. Eggs \$1.50 per 13.

Geo. Lee, Highgate, Ont., breeder of WHITE LEGHORNS exclusively. My yard for this season contains 10 extra fine hens and pullets, mated with "Admiral," score 95 1/2. Eggs only \$1.50 for 13. mar-3

A. G. H. LUXTON, OF THE BARTON POULTRY YARDS, is prepared to supply eggs from thorough-bred Light Brahmas, Buff Cochins, Plymouth Rocks, Houdans, Black Spanish, White and Brown Leghorns, Golden Sebright Bantams and Cayuga Ducks, at \$1.50 per setting, carefully packed. See January number for prizes won. ap-2

W. B. COCKBURN, ABERFOYLE, ONT. BREEDER OF

Plymouth Rocks and Toulouse Geese. My Plymouth Rocks won first prize on both old and young birds at Guelph last fall, only place exhibited. Eggs from these only—\$2 for 13. mar-3

WESTMINSTER POULTRY FARM. J. W. BARTLETT, Proprietor, Lambeth P. O., near London, Ont.

Eggs for hatching DARK BRAHMAS and WYANDOTTES. Stock equal to the best. Have won wherever exhibited. At the late Ontario Show my Brahmas won seven out of a possible nine prizes.

PRIZE-WINNING BIRDS FOR SALE. LIGHT and Dark Brahmas, Plymouth Rocks, Langshans, W. F. Black Spanish, Houdans, White and Brown Leghorns, Colored Dorkins, Black Minorcas, Bronze Turkeys, Rouen and Pekin Ducks, Toulouse Geese. Upwards of 60 prizes at the recent Poultry Shows.

EGGS FOR SETTING NOW READY. From the highest scoring birds in the Dominion. Send three cents for circulars. Birds and prices right. W.M. HODGSON, BOX 12, BROOKLIN, ONT.

LAKE ERIE POULTRY YARDS. L. W. EDSALL, Proprietor, SELKIRK P. O., ONT. I. and D. Brahma, P. Rock, S. G. Dorkins, Wyandottes, Langshan, Polish, Leghorns, Houdans, S. S. Hamburgs, I. Spanish, and all kinds of Bantams, Pekin, Rouen and Aylesbury Ducks, Mammoth Bronze Turkeys.

EGGS from fowl, \$2 for 15; from ducks, \$3 per 15; from turkeys, \$4 per 12. Single birds, \$2, \$3, \$5 and \$10. Per pair, \$3, \$5, \$7 and \$10. Per trio, \$5, \$7, \$10 and \$15. A few choice birds for sale now. mar-6

LIVE STOCK Sale and Purchasing Agency.

JOHN DIMON respectfully announces to gentlemen who desire to purchase horses of all classes, and other animals of all kinds, also carriages and harness, that he will receive orders for the transaction of such business for a commission of 10 per cent. Office, 25 Adelaide St. (at his stables), Detroit, Mich. He will also attend auction sales, in any State, in the interest of his customers, and he feels that his experience of 38 years in the breeding, purchase and sale of horses, cattle, sheep, etc., and his experience as expert judge on live stock at the leading fairs in the U S and Canada, together with his extensive acquaintance with gentlemen, breeders and manufacturers should be of great value to intending purchasers as well as to farmers, breeders and manufacturers who wish to sell. References as to ability and responsibility cheerfully given.

Table of Contents.

STOCK DEPARTMENT: Return (3047) 127, Editorial Notes 126, Ventilation for Stables 128, The Class of Emigrants Most Wanted 129, The Merits of Galloway Cattle 129, Clochmohr and its Shorthorns 129, Cattle Stanchions 130, A System of Partial Soiling 130, Don't Leave the Farm Boys 130, Correct Awards at Agricultural Exhibitions 131, One of the Earliest Sheep Importations into Canada 131, A Remedy for Kicking Cows 131, "Agricola" at Sea 132, "Agricola" on the Right Track 132, A Proper Standard Required 132, Live Stock Insurance 132, Removing Barrenness in Animals 132, Education of Farmers' Sons 132, The Shire Horse (fourth paper) 132, Calf Slipping 133, The Canadian Draught Horse Stud Book 133, Stock Notes 133, The Most Pressing Need of the Canadian Farmer 134, Our Scotch Letter 134, The London Shire Horse Show 135, The English Shire Horse Stud Book 135, Silos and Ensilage 135. VETERINARY DEPARTMENT: Horse Breeding 135. FARM DEPARTMENT: Alsike Clover Growing 135, Corn or Roots—which? 137, Editorial Notes 136, Essay on Slip-shod Farming 141, Experiments in Growing Potatoes 140, Flax Culture 137, Remedies for Smut in Wheat 139, Salt as a Fertilizer 140, The Culture of Potatoes 141, The Fanning Mill 137, The Farmer's Health 137, The Price of Wages 137, Weeds, VI. 159. DAIRY DEPARTMENT: Editorial Notes 142, Canada's Butter Markets 142, The Ayrshire Herd Books 142, Ayrshire Breeders' Association of Canada 143, Building a Silo 142, More Light on Ensilage 143. POULTRY DEPARTMENT: Cross-bred Fowls 144, Editorial Notes 144, Pekin Ducks 144, Selling Eggs by Weight 145. APIARY DEPARTMENT: Should Farmers Generally Keep Bees? 144, May Amongst the Bees 144. HORTICULTURAL DEPARTMENT: Notes on Grapes 145. HOME DEPARTMENT: Life Hath its Barren Years 146, The New Barn 146, The Ontario Farmer 146. MISCELLANEOUS: Advertisements 148-154, Jottings 147, The Toronto Industrial 146.

CLAREVILLE STOCK FARM



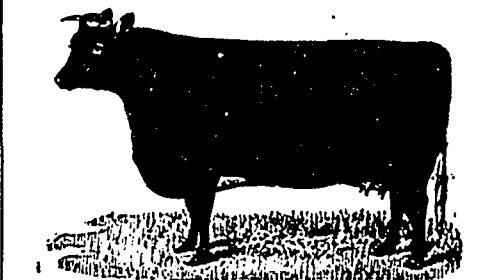
CAYUGA, Lying between Canada Southern Railway, Dean's Station, Cayuga Station, Grand Trunk Air Line. I breed and have

FOR SALE A-1 Shorthorns, Baron Constance 10th heads the herd. Leicester and Cotswold Sheep, Berkshire Pigs, HEAVY AND LIGHT HORSES OF ALL KINDS.

Young Bulls a specialty. Supply always on hand. Come and See. D2

J. R. MARTIN, CAYUGA P. O., ONT.

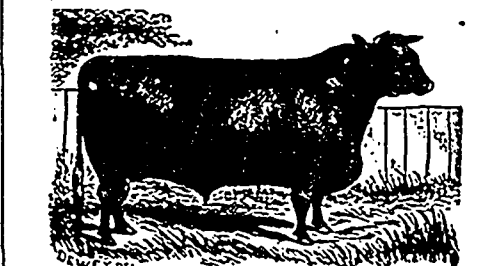
FRANK R. SHORE & BROS. R. R. STATION, LONDON, P. O., WHITE OAK.



BREEDERS OF SHORTHORNS AND SHROPSHIRE

Have a grand lot of bull calves sired by our imp. Cruickshank bull Vermilion (50587), and a very choice lot of heifers, now in calf to Vermilion; also shearing rams and ram lambs from imp. sire and dams. Prices moderate. Terms easy.

RUGBY FARM



J. S. WILLIAMS, Knowlton, P. Q. BREEDER OF

Shorthorn Cattle and Berkshire Hogs

Herd headed by the Bates bull Duke of Rugby, and bred with strict reference to individual merit and milking qualities. Animals recorded in both American and I. A. herd books. My Berkshires are of the choicest breeding—large sire and grand individual. For prices and other information, address as above. Aug-v

THE BRIARS FARM

Sutton West, Ont. Choice of 50 head of SHORTHORNS, Including three yearling bulls, by Butterfly Duke 6th, he by 4th Duke of Clarence o Bow Park fame; all from the best strains, and registered in the Dominion Herd Book. Also young Horses and Pigs. Inspection invited. F. C. SIBBALD.

CAUTION.

AN INFRINGEMENT having appeared in the County of Middlesex, farmers who wish to avoid law suits are warned against buying or USING a Bag-holder not duly stamped "The Dandy," and "Patented 1887," as required by law. Price of genuine article, 75c., free by mail or express. C. W. ALLEN & CO., "World" Building, TORONTO, ONT. may-6

Shorthorn Bull for Sale.

VICE-CHANCELLOR #9925, red and little white, calved Jan. 10th, 1887. Large, smooth and stylish. Proved good worker and sure. Price and terms easy. Come and see, or I will ship to order and guarantee satisfaction. J. C. SNELL, (Brampton Stn., G. T. R. and C. P. R.) EDMONTON, ONT.

Colonus Stock Farm.

Shorthorn Cattle of the highest breeding and individual merit, and

OXFORD DOWN SHEEP.

Young stock for sale of both sexes. WM. MURRAY, CHESTERFIELD, ONT.

CATTLE AND THEIR DISEASES

By A. J. MURRAY, M. R. C., V. S., Late Professor of Veterinary Medicine, Royal Agricultural College, of England; late Demonstrator of Anatomy New Veterinary College, Edinburgh, Scotland; late Inspector for British and American Governments, Veterinary Editor Breeders Gazette, etc. A new book for cattle growers, giving the "Breeding and Management of Cattle," and "Diseases of Cattle and their Treatment," with several illustrations, invaluable to the Farmer and Breeder. For sale at this office for \$2.50, the publisher's price. Address,

THE STOCK JOURNAL CO., Hamilton, Ont.

THE GLEN STOCK FARM,

Innerkip, Oxford Co., Ont.

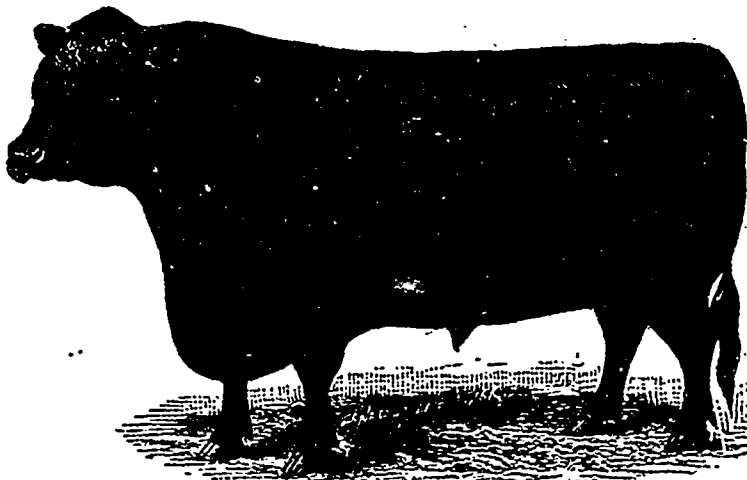
**SCOTCH SHORTHORNS,
SHIRE HORSES,
BERKSHIRE PIGS.**



Herd headed by imported Earl of Mar (47815), winner of the gold medal at the Grand Dominion and 39th Provincial Show, and numerous other prizes. P. O. and Telegraph Office at Innerkip. Farm is one mile from Innerkip station on the C. P. R. (Ont. div.), and a short distance from Woodstock station on the Canada Pacific and Grand Trunk R. R.

GREEN BROS., THE GLEN, INNERKIP.

CANADIAN HOME OF THE ABERDEEN ANGUS-POLL



Imp. Chivalry (1765).

The Champion Bull Chivalry (imp.) (1765) 2691 [2]

Winner of First Prizes, Medals, Diplomas and Sweepstakes at Barrie, Collingwood, Ottawa and Toronto. Sire of Miss Charcoal, Mary 3rd of Knockiemill, Master Peter of K. P., and the invincible Emma of K. P. 8174.

IN wishing our friends and patrons the compliments of the season, we take the opportunity of saying that we are in a position to supply young Bulls of the above excellent breed of cattle at prices within the reach of all, and as to their quality we need only mention that our herd finished this season by taking the medal and diploma, for the fifth year in succession, at the Provincial Exhibition, held in Ottawa. Send post card for our Illustrated Catalogue, and give us a call before investing.

HAY & PATON, Proprietors, Kinnoul Park Stock Farm, NEW LOWELL CO SIMCOE, ONT., CANADA.

IMPROVED YORKSHIRE PIGS

SHIRE AND CLYDE HORSES.

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English Shire Horse Society.
Dominion Clyde Horse Association.
English Nat. Pig Breeders' Association.
American Shrop. Sheep Breeders' Assoc.

ORMSBY & CHAPMAN,

ONTARIO LODGE,

OAKVILLE, ONTARIO.

All our pigs registered in the English Herd Book.

SHROPSHIRE SHEEP.

GEO. S. CHAPMAN.

Imported and home bred stock for sale.

Every pedigree guaranteed Prices low.

Correspondence promptly attended to.

"Good Stock with Straight Pedigrees," our motto.

POINT CARDINAL HERDS.



HEREFORDS

Selected with great care from the celebrated herds in England. At the head of the herd stands the imported Marlow bull Ramler 6th (6630) 13514.

SHORTHORNS

Heifers and bulls for sale, mostly sired by imported Duke of Hazelcote 68th, 65797.

Also a number of fine Hereford grade heifers and young bulls.

G. F. BENSON, Cardinal, Ont.

JAMES HUNTER, ALMA, ONT.

Importer and Breeder of

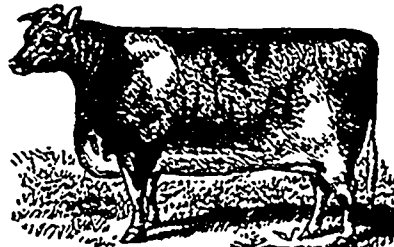
**SHORTHORN CATTLE,
CLYDESDALE HORSES,
AND SHROPSHIRE DOWN SHEEP.**



Stock of both sexes for sale.

ARTHUR JOHNSTON,

Greenwood, Ont., Can.



I HAVE still on hand and for sale an excellent lot of imported Bulls, Heifers and young Cows, besides an exceedingly good lot of home-bred Heifers and Bulls—all by imported sires and mostly from imported dams.

I can supply intending exhibitors with first-class show animals of either sex and of various ages, from calves upwards. I have also a good lot of imported CLYDESDALE STALLIONS and MARES for sale.

Claremont Station, C. P. R., or Pickering Station, G. T. R. Write or wire me, when and at which station to meet you. Send for catalogue. No business, no harm.

For Sale at this Office.

Large cuts of Stallions suitable for posters. Small cuts of Horses, Cattle, Sheep, and Swine.

Send for Specimen Sheet. Address,

STOCK JOURNAL CO., HAMILTON, ONT.



G. C. Charteris & Son,

BEACHWOOD FARM CHATHAM, ONT.

BREEDERS OF

Pure SHORTHORN CATTLE

The splendid young roan bull 10th Earl of Darlington, bred at "Belvoir," and possessing the blood of the Darlington, Oxford, Airdrie and other famous strains, at head of herd. Four bull calves for sale, sired by Crown Prince (12366) and Lord Byron (8821), and a few heifers, all registered in the new Dominion Herd Book.

2 Miles from Chatham on the G. T. R.

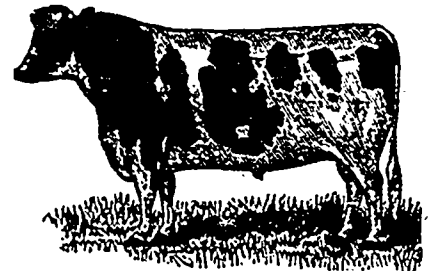
Visitors met at station.

nov-12

J. E. PAGE & SONS,

AMHERST, NOVA SCOTIA,

On line Intercolonial Railway,



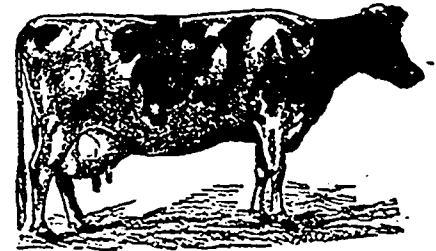
Importers and Breeders of

HOLSTEIN-FRIESIAN CATTLE

Including strains of the best milk and butter families living. Herd headed by CLOTHILDE 2nd's ARTIS, whose dam, Clothilde 2nd, gave at 4 years old 23,602 lbs. of milk, and made 23 lbs. 4 oz. of unsalted butter in seven days when six years old. G. dam, Clothilde, winner sweepstake prize at New York Dairy Show, has milk record of 26,080 lbs. of milk and 28 lbs. of unsalted butter in seven days. Sire, Artis, winner first prize at New York Dairy Show.

Young stock, all ages, for sale, including Carlotta's Netherland Prince, dam Carlotta, with butter record of 22 lbs. 1 oz. unsalted butter; sire, Netherland Prince. Prices low for quality of stock.

The Manor Stock and Dairy Farm



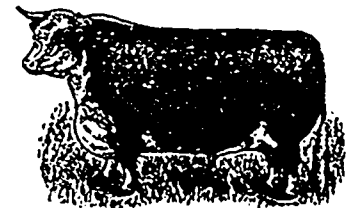
HOME of the imported Holstein-Friesian bull MARS ELLIS No. 661, Vol. 1, H. F. H. B., selected in North Holland by special request, and whose 3 calves secured first prizes at the Dominion Exhibition, held at Sherbrooke, Que., Sept. last, 1886.

Parties wishing to secure bull calves or yearlings from such a grand individual, and out of nothing but imported Holstein-Friesian cows, will find it to their advantage to write to

F. N. RICHIE,
St. Anne la Perade, Co. Champlain,
on line C. P. R., near Quebec.

No Reserve. All stock for sale, and in At condition.

THE TUSHINGHAM HEREFORDS



THIS herd, grounded on selections from the best blood in England, is remarkable for the number and uniformity of the good calves that it has produced during the three years of its existence, owing in a great measure to the excellence of the stock bull Tushingham (8127), by Charity 3rd (6350), by The Grove 3rd (5051). Several young bulls of his get are held for sale.

J. W. M. VERNON,

Tushingham House, Waterville, P. Q.
WATERVILLE is on the main line of G. T. R., not far from the United States boundary.

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New Glasgow, Nova Scotia (on line of the I. C. Railway).



JOHN CAMERON,
Importer and Breeder of

HOLSTEIN-FRIESIAN CATTLE,

All stock registered in the Holstein-Friesian Association of America. Foundation stock imported direct from Holland. Young stock, male and female, for sale. Correspondence solicited.

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NEW DUNDEE, WATERLOO CO., ONT.



Importers and Breeders of Thorough-bred

HOLSTEIN-FRIESIAN CATTLE.

Herd headed by the noted prize-winner Prairie Aggie Prince H. F. H. B. No. 2, first prize at the Industrial and Provincial in 1885, dam, Prairie Flower, 5 yr. old butter record of 20 lbs. 1 oz. unsalted butter per week. This herd has been crowned with more honors in the show-ring than any other herd in Canada. Selections made from the finest herds and most noted milk and butter producing families in America. Every animal selected for its individual merit—symmetry, size and weight a special object. Our motto, "QUALITY." Stock for sale. Visitors welcome. Correspondence solicited.

OAKLANDS 'JERSEY' STOCK FARM
(All registered in the American Jersey Cattle Club (Herd Register.)



Cows with well-authenticated test of from 14 lbs. to 24 lbs. 13 oz. in one week, and from 51 lbs. to 106 lbs. 12½ oz. in 31 days are in this herd. Young bulls (registered in the above herd book) for sale from \$100 to \$500 each.

A herdsman always on hand to show visitors the stock, and the stock-loving public are always welcome.

no-y VALANCEY E. FULLER, Hamilton, Ont.

JAMES DRUMMOND,
Petite Cote, Montreal.

Importer and Breeder of
PURE-BRED

AYRSHIRE
CATTLE



Of Large Size, and from Choice Milking Strains.

The herd numbers 65 head, and for three years in succession has won Provincial or Dominion prize as best milkers. The imported bull PROMOTION (3212) at head of herd.

Young Stock on hand at all times for sale. fe-1y

CREDIT VALLEY STOCK FARM.
SMITH BROS.



CHURCHVILLE, (PARK CO.) ONTARIO,
Breeders and Importers of Pure-bred Registered

HOLSTEIN-FRIESIAN CATTLE
SADDLE and CARRIAGE HORSES.
Stock always on hand for sale. Send for catalogue. Visitors always welcome. jnc-6

WYTON

Stock-Breeders' Association

BREEDING OF PURE
HOLSTEIN AND FRIESIAN CATTLE
A SPECIALTY.

We have the only pure breed of Aggie Stock in the Dominion, the head of our herd being Sir James of Aggie, No. 1452, H.H.B., Vol. 6. Also Aggie Ida, No. 2600, H.H.B., Vol. 6. This family is noted for its exceptionally fine milk producers.

The largest herd of Holstein cattle in Canada, from which we are prepared to sell bulls and heifers. If you are in want, come and see us. Prices reasonable. Correspondence solicited.

Address
WM. B. SCATCHERD,
Secretary, Wyton, Ont.

ap-68
The Park Herd of Herefords,



THIS herd embraces over fifty head of choice animals. All registered. Catalogues sent on application.

F. A. FLEMING,
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Farm, half a mile from C. P. R. and G. T. R. Stations, eight miles from Toronto.

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BROOKLIN, ONT.

BREEDER AND IMPORTER OF



Shorthorns,
CLYDESDALES
AND
Shropshire Sheep.

IMPORTATIONS the past season include 111 Shropshire Sheep, and the entire herd of 41 Shorthorns owned by E. Cruickshank, Lethenty, Aberdeenshire. The best lot of young bulls ever received at Maple Shade are now offered for sale. Also a few choice cows and heifers.

Inspection invited Catalogues on application.

BROOKSIDE FARM
New Glasgow, Pictou Co., N. S.,

STANDARD-BRED TROTTERS
American Cattle-Club Jerseys.

MAPLE LODGE STOCK FARM

We breed and have

FOR SALE

Shorthorn Cattle
Leicester Sheep



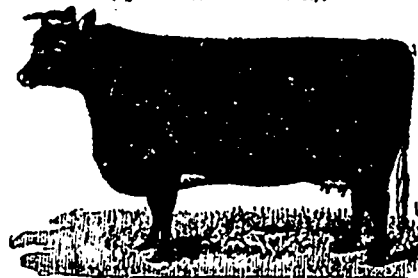
of the choicest quality and best breeding. Duke of Colonus = 9282 = heads our herd.

Our Stables are one mile west of Lucan Crossing, on Grand Trunk and London, Huron and Bruce Railways.

We have Five extra good Rams, which we will sell now very reasonable.

Come and see us. **JAS. S. SMITH,** Maple Lodge P. O., Ont

J. Y. REID, HILLSIDE FARM,
(½ miles south from Paris.)



BREEDER of Shorthorn Cattle, all registered in the new Dominion Herd Book. The highly bred Bates bull, 718 Earl of Darlington, bred at Bow Park, at head of herd.

The herd is composed of a choice lot of young cows and heifers, all of the ROAN DUCHESS strain. Young stock at all times for sale. Apply to

James Geddio, Manager, PARIS, ONT

BOW PARK HERD
OF



PURE-BRED SHORTHORNS

Have at all times a number of both sexes for sale. Catalogue of young bulls recently issued.

ADDRESS, **JOHN HOPE, Manager,**
my-y. Bow Park, Brantford, Ont.

100 PURE-BRED ABERDEEN-ANGUS CATTLE

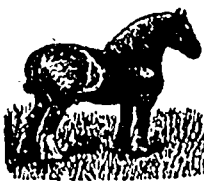


MOSSON BOYD & CO.,

BIG ISLAND STOCK FARM,
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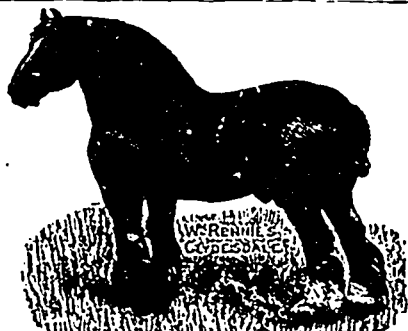
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prize winners, of very superior quality, form and finish, consisting
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Also two very fine Canadian bred Stallions, 3 and 4 years old,
almost solid colors, sure foal getters.



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of superior breeding and quality

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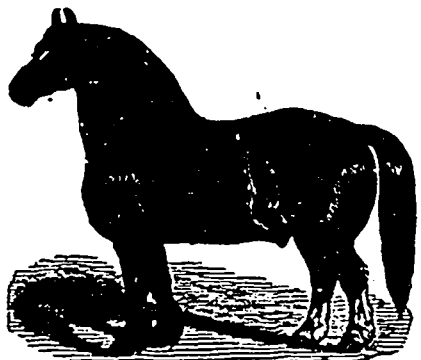
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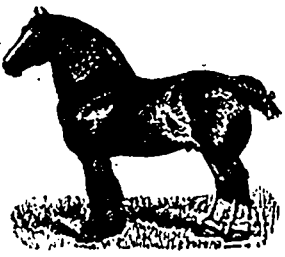
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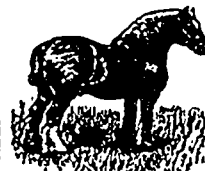
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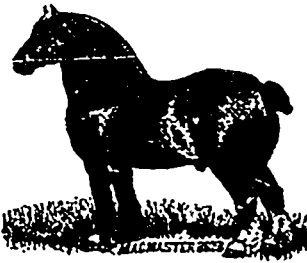
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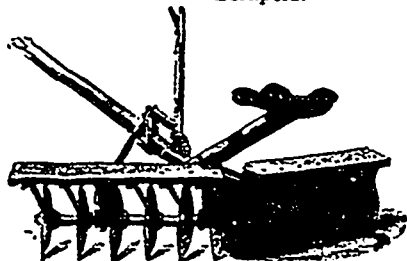
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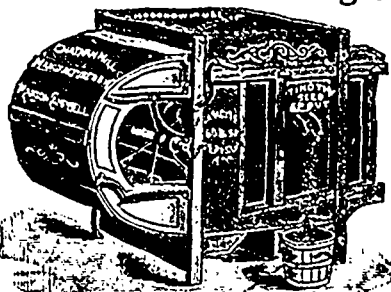
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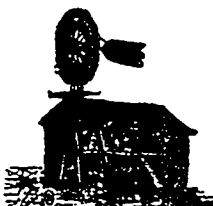
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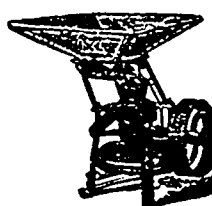
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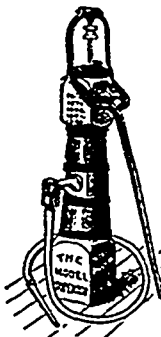
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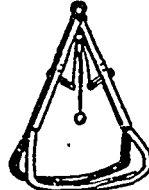


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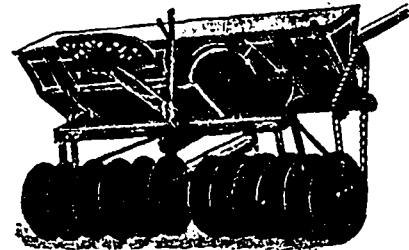


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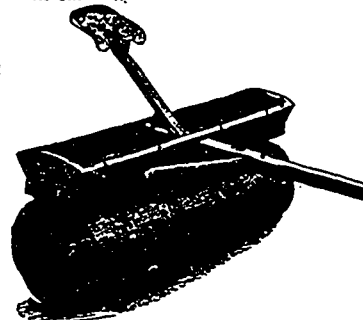


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