

Technical and Bibliographic Notes / Notes techniques et bibliographiques

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

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

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

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

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments: /
Commentaires supplémentaires:

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

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

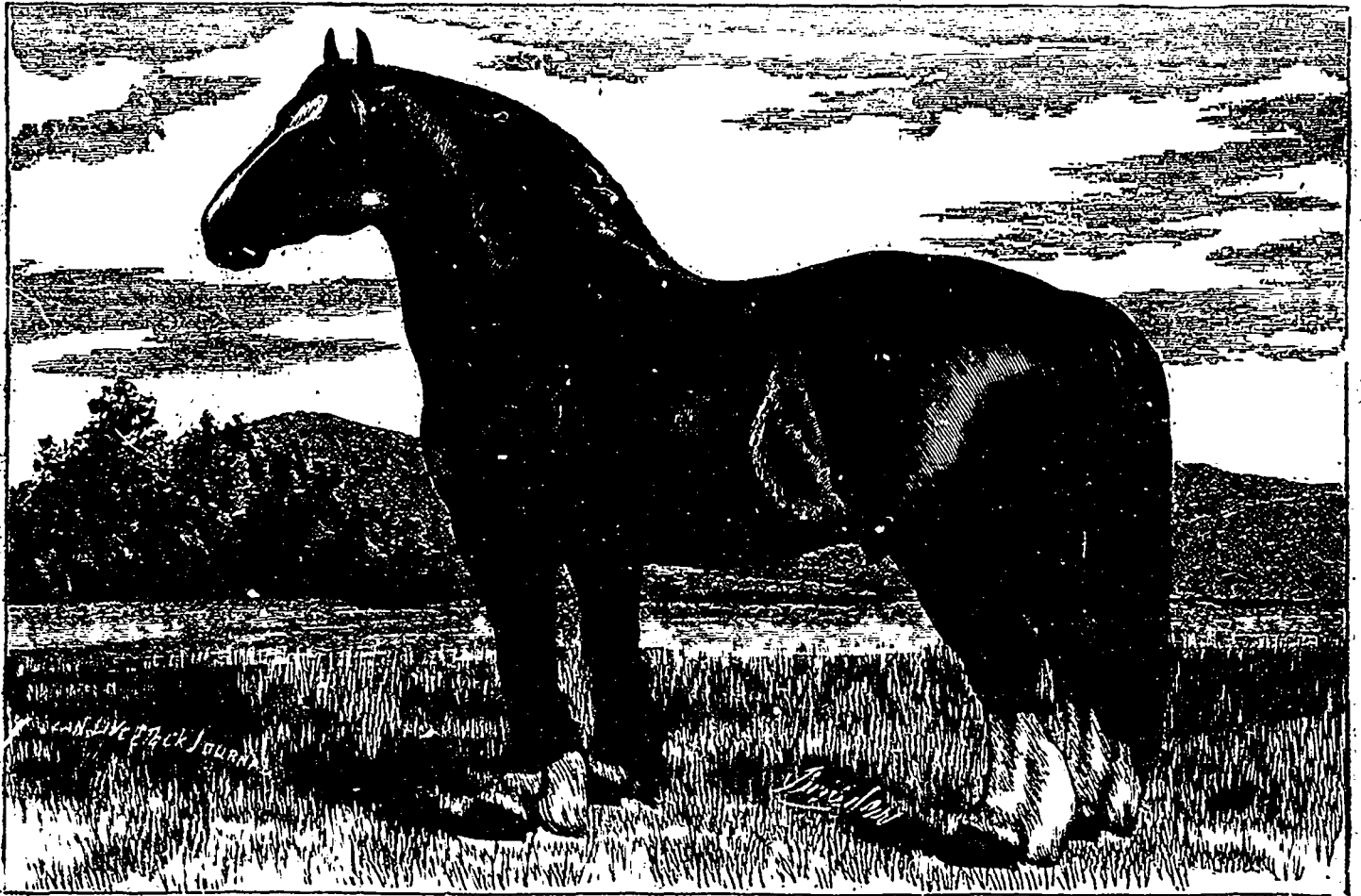
THE CANADIAN LIVE-STOCK AND FARM JOURNAL

DEVOTED TO THE INTERESTS OF THE STOCK-RAISERS AND FARMERS OF CANADA.

VOL. V.

HAMILTON, CANADA, OCTOBER, 1888.

No. 60



THE CLYDESDALE STALLION TEMPEST [822] VOL. XI.

Imported by and the property of Mr. Wm. Rennie, Toronto, Ont.

The Clydesdale Stallion, Tempest.

This beautiful specimen of the modern Clyde was bred by Mr. A. Shaw, Low Ardwell, Stranraer, Scotland, and imported along with a lot of other good ones by Mr. Wm. Rennie, the veteran seedsman, Toronto, in August of the present year. Foaled May, 1886, Tempest [822], Vol. XI, is in color a rich dark bay, with white markings. He is sired by Time and Tide (3263), with the famous Old Times (579) for g. sire, and the equally noted Lord Clyde (478) as g.g. sire. On the dam's side he is even more fortunate, being out of Jean of Low Ardwell (6723), rich in the blood of such famous ancestors as Lochfergus Champion (449), Farmer (284), Glander (338) and Broomfield Champion (95). The g. dam Polly is by Farmer (286).

He is finely and faithfully delineated in the sketch, though only in his two-year-old form. There is a calm style about him that is very pleasing, and a nobility of strength in his build that at once places him in company of the first order. His breast is massive,

and his strong, well made shoulder fills the collar full, his quarter is heavy, his bone strong and flat, and beautifully feathered. He possesses a heavy mane and tail, and has good action and a very mild temper. His quality is of the best, which, crowning his grand pedigree, and other fine points, should make him one of the most valuable of sires. He is only one of a large number of good ones, of both sexes, imported by Mr. Rennie, and kept at his stables, 88 Duchess street, Toronto. These are more fully described on an inside page.

Our Premium Offers.

We desire to call the attention of all our readers to our list of premium offers, published on another page, to those who may find time to assist in extending the circulation of the JOURNAL. That it will prove of advantage to every person engaged in breeding good stock by enlarging the market for the sale of the same needs no demonstration. We are very please

to learn that a number of these premiums have already been secured. There is no easier method that beginners can adopt of working into good stock. Some, while making their canvass, have made it a condition that the person subscribing would have the service of the animal at a certain fee, a very excellent arrangement. We are already offering over \$2000 in premiums, and can arrange to secure any kind of live stock in the country or of agricultural implements that canvassers may desire to secure, if they will but communicate with us. Let the boys of the farm come nobly to the front in this work.

Any canvasser who may desire it will be furnished with a copy of our beautiful lithograph of the Ontario Agricultural College and Experimental Farm, Guelph, by far the handsomest drawing of the institution ever executed. It is about 16 x 24 inches, and would form an adornment to any house. It will be given free to every new subscriber, and also to all old subscribers not in arrears. The picture is worth 35 cents.

Canadian Live-Stock & Farm Journal

PUBLISHED MONTHLY BY

THE STOCK JOURNAL COMPANY,

48 John Street South, Hamilton, Ont.

Terms, \$1.00 per Annum in Advance.

To Subscribers.—Subscription price, \$1.00 per annum in advance. Single copies, 10 cents each; sample copies free. No names will be removed from our subscription list when in arrears and without we receive instructions to that effect. Those in arrears will be charged \$1.25.

Clubs.—Any person is at liberty to form clubs. Clubs of five copies to any address, for one year, \$4.00. Clubs of ten copies to any address, \$7.50.

To Advertisers.—Advertisements of an appropriate nature will be inserted in the JOURNAL at the following rates: For a single insertion, 18c. per line, nonpareil (12 lines makes one inch); for three months, 15c. per line each insertion; for six months, 13c. per line each insertion; for one year, 10c. per line each insertion. Cards in Breeders' Directory, not exceeding five lines \$1.50 per line per annum. Copy of advertisements should reach us not later than the 25th of each month (earlier, if possible). If later, it may be in time for insertion, but often too late for proper classification. Transient advertisements payable in advance. No advertisement inserted for less than 75c. Contracts broken by insolvency or otherwise will revert to the usual rate of 18 cents per line per insertion.

To Correspondents.—All communications intended for publication in the JOURNAL should reach us by the 20th of each month—sooner if possible. We do not hold ourselves responsible for the opinions of correspondents.

Remittances may be made in registered letter at our risk. The receipt of the JOURNAL will be sufficient evidence to subscribers that their remittances have been received.

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

HAMILTON, CANADA, OCT., 1888.

OUR readers will please notice we are giving this year a beautiful lithograph of the Ontario Agricultural College and Experimental Farm, Guelph, about 16 x 24 inches. The picture, which is beautifully shaded, gives a very accurate view of all the buildings and the front portions of the farm. It will be given to all new subscribers whose subscriptions are forwarded by January 1st, 1889, and to all old subscribers not in arrears. Single copies of the picture will sell for thirty-five cents, and when framed will form a valuable adornment of any dwelling. Parties subscribing now will get the picture and the JOURNAL to the end of 1889 for \$1. In remitting, send by registered letter at our risk. Address The Stock Journal Co., Hamilton.

DURING the autumns of 1886 and 1887 the JOURNAL only, of all the papers in Ontario, printed the prize-lists of the leading exhibitions. We stood alone in the contention that so it should be, and as a matter of right, due the farmer. Our contention has already received complete vindication in the publishing of these lists this year by the principal papers in the country. Last year one of our agricultural monthlies charged the breeders for printing their prizes; this year it has printed them free in pamphlet form, and is pressing them upon farmers indiscriminately as a gift. We felt quite sure all along that our contention must succeed, but sooner than we anticipated has this end been attained. In this matter the farmer will henceforth get his due. What higher tribute can be paid the influence of the JOURNAL than what it has achieved in this direction?

We have no better axiom to offer the farmer than that of "Know your surrounding conditions." Be it in crop management, breeding animals, or any division of farm work, there is not another factor that so much influences success. We notice the great vim with which the different breeders extol the many excellencies of their favorite herds. One states—and he is a man of honor—that the Shorthorn is of all others

supreme; another of equal integrity asserts that none equal the Jerseys. On first thought we would think that statements, so markedly opposed, cannot be made consistent with each other; but when we note the variety of conditions existing on every side we are forced to withdraw our hasty conclusion. Similarity is unknown in nature. As each blade of grass differs more or less markedly from its nearest neighbor, so does each farm vary from that nearest to it in soil, aspect, etc. There is not a breed of any animal in existence to-day but have filled a vacancy or are doing so at the present time. Not a breed of domesticated animals exist but which, under certain special conditions, surpass all others. The vital question is to know your own requirements, as determined by your market, soil, etc., and knowing these, choose such animals as will best meet them.

PROBABLY there is not a term in the breeders' vocabulary of more importance than that of "quality." Every feeder knows that it is this that greatly influences the profits or losses, and consequently he always looks for it. By feel he expects to find that mossiness and mellowness characteristic of it; by sight he looks for compactness of bone, fineness of hair, and skin velvety in nature. We must not, however, confuse the indications of this requisite with those signs that denote weakness of constitution. Exceedingly fine bone and hair, with papery skin, are features peculiar to animals of constitutional weakness, and are easily distinguishable from the indications of quality above mentioned. The horseman, be his favorite the heavy draught or high-strung thorough-bred, always gives this requisite a prominent place. Of all differences, and they are many, existing between the scrub and the pure-bred, none are so marked as this difference of quality. Coarseness of bone, thickness of skin, coupled with coarseness of hair and looseness of build, are the marked features of the scrub as much as those that are the direct opposite of these are the strong features of the pure-bred. Why men continue raising animals possessing no redeeming feature, has always been a mystery to us, and it grows more so as years roll on. Our great consolation is, that these ideas, however obstinately persisted in, must in time give way to those which are the handmaids of progress.

It may be, and doubtless is, wiser for a majority of stockmen to breed grades rather than pure-breds, always taking care to use pure-bred sires of a good class. This does not arise from the fact that grades are superior or even equal to pure-breds in quality, but because of the first cost of getting the foundation and of the superior skill required in making the work a complete success. That the results in breeding from pure-breds, when the work is properly done, will be more certain than when grades are used on the side of either sire or dam, is a self-evident truism, or atavism counts for nothing. There need be no doubt but that where animals are bred upon an equal footing grades will produce more culls by far than pure-breds, or pure breeding must count for little. When we say that breeding pure-breds requires more skill than breeding grades, we mean first, that it is more difficult to make a corresponding improvement in the same time with the former, as the pure-breds are already much nearer a standard of excellence. The advance upon the present average attainment of society is slower than the elevation up to this standard from any gradation beneath it, because of the experience in the latter case, which is lacking in the former. The consequences of mistake are usually more serious, too,

in breeding pure-breds, for grades can bring their meat value any time when in condition, and their true value when of the beef breeds is seldom beyond this. The ordinary farmer who has demonstrated that he can breed grades successfully, is the proper person to invest in pure-breds when he makes his next purchase, for the principles of breeding both well are much the same, only in pure-breds a more advanced skill is necessary (or call it experience, if you please) for the reasons already given. It is always unfortunate when men undertake to breed pure-breds and do not make a success of it. The attempt not only brings loss to him who engages in it, but disrepute upon the breed.

Valedictory.

It is never altogether pleasant to be called upon to cut the moorings that have anchored us amid associations that have been of the most congenial nature, and to cast anchor in another harbor, the soundings of which are but partially known to us, although the surroundings may apparently be of the most attractive character. And yet this is precisely what we are called upon to do at the present time.

It has pleased the Ontario Cabinet to bestow upon the writer the management of the Ontario Experimental Farm, and to appoint him to the chair of agriculture rendered vacant by the resignation of Prof. Brown, as doubtless most of our readers know ere this, and before this paper has reached them we shall have entered upon the tremendous responsibilities of these respective offices.

This renders it necessary that we should retire from the editorship of this journal, which we have conducted without the assistance of an associate from its inception in August, 1883. Very many of our readers have journeyed with us from that date to the present, and we feel safe in saying that our associations by the way have usually been of the most pleasing character, so that to sever them now is a trial, neither light nor trivial. It is mitigated, however, by the thought that we are not about to leave the Ontario that we love, but to engage in the discharge of duties which will still bring us in contact with perhaps a larger number of the farmers of this province. The work will also be much in the same lines but in more advanced stages, and if properly done will wield a more potent influence on the progress of agriculture in the Province. Some of our readers, alive to the mighty influence of journalism, may shake their heads at the above enunciation; if so, all that we can say to them at present is, wait.

We hope we shall not be brought less in contact with the farmers of this province in our new sphere, while we can reasonably expect to be brought more in contact with their sons. If the fathers of our farmer boys feel that they can safely trust them in our hands, we should greatly like to make the acquaintance of at least two or three hundred of them this present season as students of the college. We promise them (and we know that all the members of the staff are of a similar frame of mind) that it shall be our constant endeavor to do them only good continually, and that they shall be sent back to their farm much better equipped for their life-work than when they came.

It is only reasonable, however, that we should expect good average boys. We have no confidence in our ability to manage a young man who will not obey his mother, and who has become insubordinate to his father; but if good, solid boys are sent to the college, with an average amount of brain in the form of raw material, we are quite willing that the finished product shall be judged upon its own merits. The work of the session will have commenced ere this writing reaches our farm homes, but we are quite safe-

in giving the assurance, that students will be received this year at least after the opening of the session. The outside cost per year need not be more than \$50, and the advantages reaped may be of untold value. Thus it is that we expect to enjoy a closer acquaintance with a large number of our young men of the farm, whom we have not yet been privileged to see face to face, or to grasp with the hand of friendship. Young men, come and see for yourselves. Come and spend a winter with us, and if you do not get a long way more than you give, you will not be asked to return.

It has been publicly announced by the Minister of Agriculture that it will be his aim in future to have the farm so conducted, that apart from the experimental work, it will at least prove self-sustaining. We endorsed this statement at the time, although it had not at that date been made public that the writer would be chiefly responsible for its justification. We are still of the opinion that the farm should be made to pay its way, barring calamitous seasons, and other accidental circumstances beyond human control. Repeatedly have we made the announcement that it should indeed be a model farm, and if those in charge do not make it so, it is their duty to step down and to step out.

We do not make these statements in the spirit of self-confidence, but because we deem them correct. We look upon the work we are entering upon as one of tremendous import, and approach it almost in a spirit of fear and trembling. The measure of success that will follow is the secret of the future, but in calm sincerity we have attempted to lay down the line with which we are willing to have that work judged. The tree can never be known otherwise than by its fruits, and no honest minded man should ever desire to have it otherwise.

These conditions once fulfilled, we say plainly to the farmers of Canada that the Ontario Agricultural College has a right to their loyal support. They should supply it with students of the right class, young men who are not afraid of work or study, and who are capable of both. The college can neither manufacture brains, nor habits, nor tastes, nor inclinations: it can only correct these and direct and develop them. It is no place for young men who have obtained the mastery of their parents; the house of correction is the place for them.

Our sanctum is already taken possession of by another editor, and although the CANADIAN LIVE-STOCK AND FARM JOURNAL is henceforth to be practically the product of another brain, our readers need have no fear regarding its future. It is to be conducted with increased energy, increased power, and, we believe, with increased success. Its principles, its aims, its endeavors remain the same, and its future will move in precisely the same lines, only with increased momentum. The needle guiding it still points to the star of supreme excellence. Better farming, better farmers, better men are the articles of its manufacture.

It would afford us unmeasured comfort to grasp the hand of every reader and in the living tones of spoken language to thank them for the assistance they have given us, but this being impossible we do what is in our power, thank them most sincerely through the medium of printers' ink.

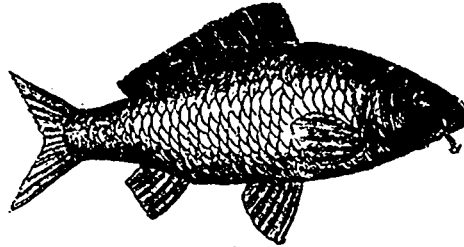
The editor's chair is vacated, but the pen is not to rust. Mightier problems and fields more vast are to give it abundant labor, and all in the lines of Canadian agriculture, and we hope for the benefit thereof. It is our present intention that when that faithful old comrade, the pen, shall cease to do its work, it will

be when it has fallen from a hand nerveless and without pulsations. There is a good hope, therefore, that in coming days so radiant with hope, we shall still have many pleasant meetings at the frequent intersections of the cross roads of this life.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Carp Culture.

BY D. NICOL, CATARIQUI.
(Third Paper.)



The Carp.

FEEDING THE CARP.

The natural food of the carp is chiefly water insects of almost any species, in all varieties indigenous to the ponds. In all stages of development, from the larva to maturity, they are consumed by the carp. They also greedily devour any other insects which may happen to come within their reach, such as grasshoppers, moths, locusts or flies, which may be by a breeze of wind or other circumstance thrown on the surface of the water; and where such food abounds in proportion to the quantity of fish in any pond, no other food is needed; but when in ponds stocked beyond the natural food supply, the fish must be fed artificially.

That carp, when hard pressed for food, will eat spawn and fry, there can hardly be any doubt. This is evidenced by the fact that when there is a great number of large fish in a small pond (as is the case with some of the French Government ponds at Versailles), there is seldom any increase. Hence the expediency of having in connection with each stock pond a spawning-pond in which should be placed only a few breeders. It has been asserted by some that the carp are vegetarian; this, however, is a mistake. They do eat delicate-growing water plants; the green scum common in warm weather on all ponds of stagnant water, and in many streams of running water inhabited by other fish, is never to be seen on ponds inhabited by carp in any considerable quantity, and when very hungry they will eat finely-chopped carrots or turnips and boiled potatoes, but I have never known them to take chopped grass or any coarse-growing vegetable leaves.

Any wholesome vegetable food in a farinaceous state, such as wheat flour, corn, bran, oat, pea, barley meal-bread, or the same substitutes prepared by cooking or otherwise, so as to be thrown to them in lumps or balls about half an inch in diameter, they readily appropriate, but they are certainly not vegetarian.

Any kind of flesh, either cooked or uncooked, chopped in small pieces, is always acceptable to the carp; and when thrown to them along with farinaceous food, as is frequently done in my ponds, I have never observed any discrimination in their selection, they take the one kind quite as readily as the other.

It has not yet been decided by science in carp-culture, what proportion of albumenoids and carbohydrates are most conducive to the health and growth of the fish. Yet we may reasonably conclude that whatever comes nearest to their natural food would be the most suitable substitute, and doubtless a variety is preferable as well as profitable.

When feeding carp any kind of food it is always advisable to place it in shallow water, say from nine to twelve inches deep, because in warm weather they dwell most there; while in cold weather, when they go into deep water, they do not take much food.

With young fry, the food must be reduced to small crumbs and placed in quite shallow water in places where they are known to dwell. For this purpose a mixture of meal and finely-pulverized boiled liver pressed and dried, is an excellent preparation. A very small quantity of this will supply thousands of young fish. It is needless to say that as the fish grow larger the quantity of food must be increased. Be it here observed that over-supply of food is not altogether lost, because it superinduces insect life in the ponds, which contribute the future food supply.

The offal from slaughter-houses boiled, mixed with meal, middlings, or the refuse matter from breweries, distilleries, or starch factories, pressed in cakes and dried, make excellent food for carp. Any green vegetable matter, piled in heaps and soaked with water, tend to breed insects in great variety, and when placed on the banks of the pond furnish a deal of natural food for the fish.

It is never advisable to throw much decaying matter, either vegetable or animal, into ponds, because by so doing there is great danger of poisoning the water, which may prove complete destruction to the fish.

THE CARP AS A FOOD FISH.

As regards food, wise people differ in their opinions and judgment. By many pork is considered unfit for human food, and I am of opinion that it should be eaten sparingly by persons of sedentary habits. Mutton is rejected by many, and there are but comparatively few who will eat bear meat unless at the point of starvation. Oysters are not universally relished, and frogs' quarters, perhaps the most delicious of all dishes, is looked upon by a great majority of the people with horror, so there is no doubt, taste is to some extent governed by prejudice. Some will not eat fish of any kind except salt-water salmon; but it is too expensive for common use among common people. The great mass of the people, however, enjoy fresh fish when it can be obtained in fresh condition; and that it is generally both healthful and nutritious there is abundant testimony.

It is a well-known fact that during the breeding season the quality of all kinds of fish is impaired, but more especially is this the case with kinds which breed only in warm weather. The carp in this climate breed in May, June, July and August, therefore should never be taken from the water to be eaten during those months. The carp is always at its best in the fall of the year, and at that season their quality compares very favorably with most kinds of fresh water fish, taken in their proper season. They are certainly quite equal in quality to the bass or the dore: and although perhaps not as desirable as the salmon-trout or the whitefish, they are undoubtedly more palatable than the pike or the perch.

Common sense will dictate to any one that carp grown in a mere mud hole will never be equal in quality to those grown in pure water. When raised in dirty water they should invariably be transferred to clean water for a time before being used as food. All fish should be bled to death as soon as they are taken out of the water, and not allowed to die a lingering death. A sharp-pointed pocket-knife inserted at the juncture of the head and body severing the spinal column, draws the blood and kills quickly, making the fish white and more palatable, besides humanely shortening their sufferings.

CATCHING THE CARP.

For this purpose many ingenious contrivances have been invented. Bag, hoop, and dip-nets are frequently used, but the seine, properly rigged with floats and sinkers, seem to be the most generally useful. They readily take the baited hook when merely allowed to touch the surface of the water. They are not particular as to the kind of bait. A small piece of flesh with the point of the hook projecting through it seems to answer the purpose very well. I have, however, caught them freely with small pieces of bread crust as bait. When hooked they are very gamey, and to land a three-pounder requires a good strong rod and line.

The fourth and last paper at present will be—Enemies of the Carp.

Erecting an Agricultural Hall in Toronto.

This paper was read by the Editor at the annual meeting of the Ontario Central Farmers' Institute, held in Toronto, February, 21st to 23d, 1888.

(Continued from September.)

If I were to be asked what is now, and what is likely to continue the great industry of this province, I would say, O agriculture, thou art this head of gold! If this be true, then, woe betide this country if the gold of that magnificent head is, through neglect, allowed to become dim. If one were to question what is to be the great source of revenue from Ontario's agriculture in the coming time, my answer is live-stock and live-stock products, and that is the answer of the figures of the 19 years of confederation rule, ending with 1886. Since that period began, the exports of live-stock from the Dominion have increased 225 per cent. while the exports of grain have increased but 37½ per cent., and the exports of the latter have actually decreased on an average 43½ per cent. from 1882 to 1886. This points to a time, not very far away, when from Lake Huron to the seaboard feeding stuffs will be bought rather than sold, in days when the live-stock trade shall have become superlatively great. Anything, then, that will help the live-stock industry, is of vital importance to the well-being of the country. During recent years Toronto has grown great among the cities. What is the secret of that greatness? Her commerce. Whence came that commerce? By the accident of suitable location. What sustains that magnificent wholesale trade? Why the farmers of Ontario more than any other class, for they are in numbers compared with all others nearly two to one. Every one of those converging lines of railway is but a feeder of the greatness of Toronto by the lake, an independent tributary carrying down the sands of the farmers' gold and pouring it into the one receptacle, Toronto. If Toronto, then, is to maintain a steadily increasing greatness, there must be a steadily increasing growth of Canadian agriculture. No citizen of Toronto can afford to be indifferent as to how many pounds of butter and cheese are made, or to the number of horses raised or cattle sold, or to the millions brought us by our egg trade every year, for just as surely as the gold of England and the United States goes into the pockets of the farmers, a proportion of it finds its way into this city in proportion to the extent of the wholesale and retail trade done, and sooner or later jingles on the counter of the merchant or in the pocket of the artisan. This great city, the wholesale trade of which is, I suppose, more than that of all the other cities of Ontario combined, is just to that extent interested more than they in the prosperity of agriculture.

The erection of such a building would, I believe, be a paying investment for the city of Toronto. Cities grow great with centralization, and most of all through the centralization of business. It is always a matter of concern to the business people of a town to draw the multitude, and more especially that portion of it who pay as they go, as farmers usually do. This idea is the secret of the large bonuses oftentimes given to exhibitors. The city of Toronto last year paid to the Industrial Exhibition many thousands of dollars, and without a doubt this money paid a return of one hundred per cent.

At the Smithfield show, of London, no less than 80,000 persons were in attendance last year, and the number of paid visitors to the Chicago Fat Stock

Show was 27,500. If the attendance at Toronto were but one-third that amount, and one-half of those were farmers, it would mean to the city the distribution of \$125,000 at but \$25 per head, and this is no immoderate calculation, for at the time of the holding of this show, if in December, they would all want to purchase winter supplies, and if in March, they would find it a golden opportunity to purchase seeds, and summer clothing. Then the limit of the business that would be done in sales of fat and breeding stock would only be the limit of our business capacity and energies.

In Great Britain live-stock sales are considered absolutely indispensable, and so will they be considered in Canada ere many years shall come and go. At the great ram sales held at Kelso every year, four animals are sold per minute during the continuance of the sale, and this sale is but one of a large number. If Great Britain can support public sales by the score why should not Ontario? The farmers will be compelled to adopt this system whether they will or no. Economy will compel them. When a farmer wishes to purchase a sire he cannot afford to pay half the price in traveling from herd to herd or flock to flock to attain this object. Public sales of live-stock must be held, if not in Toronto, at some other centre. But a score of such sales per annum, with an average attendance of but 500, would necessitate a pilgrimage of 10,000 people annually to Toronto, much of their cash finding its way over city counters and ultimately into city banks before they turned them homeward.

Then there would be the annual gatherings of all the live-stock associations that are now organized, with a more rapid diffusion of the breeds. If these could arrange to select the same week at the time of holding of the stallion or fat stock or bull show, or these combined, so much the better for the farmers, and none the worse for the city. To the former it would save much of life's most precious commodity, that is, time. What a grand gathering from all points would throng the hotels and business places during that one week, the presence of every one of whom would mean a deposit of cash. The poultrymen with their 6,968,915 birds would rally as never before, and the dairymen, with their 750,000 cows and over, would surely make arrangement for exhibits of dairy cows and dairy shows.

If the building could be so located, it might be utilized for a fruit-market in summer. In the fruit season it would become one babel of tongues, owing to the handling of the products of much of the 600,000 acres and more growing wholesome fruits, much to the advantage of the buyer and the seller, the country and the city.

There would be a tendency to centralization such as never before; and all the price Toronto is asked to pay, is to provide a building which could be used for other purposes much of the year. We believe at the same time that the farmers should expect to pay a reasonable rental, on some equitable basis, for the privileges which such a building would afford them.

The manifestation of interest on the part of the city aldermen and their chief in reference to this matter augur well for its future. A large number of them at a public meeting held in this city in December, stated that they would give this matter their most earnest consideration, and one of their number, Alderman Frankland, is working for it heart and soul. As proof of their sincerity the City Council have appointed an influential committee to confer with the farmers. The Council of the Agricultural and Arts Association have a standing committee to confer with both the City Council and the farmers, and our most respectful suggestion at this moment is, that this Institute, representing as it does all classes of the farming community, appoint a committee, with large powers, to confer with those of the councils of the city and of the Board of Agriculture, in the hope that, as a result of their conference, we may soon be provided with a building in the city of Toronto for holding our annual and other meetings, of which Toronto and the farmers and all Canada may feel justly proud.

(Completed.)

Feeding a Bull.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I have a pedigree bull seven months old. At present feed him all the grass he wants, and half a gallon of mixture (equal parts of crushed oats and bran) three times a day. Water him twice, morning and evening. Am I giving him enough to make him

grow fast? If possible please give amount necessary; also, how much to increase it until he gets 18 months old. When hay takes the place of grass how much oilcake is required? All particulars will greatly oblige,
"DUFFER."

N. W. T.

In determining the proper amount of meal to feed an animal such as the one referred to above much depends on the nature of the beast, the breed and other conditions. An easy keeper, with good feeding qualities, requires less than one which is naturally a hard feeder. The amount of meal mentioned seems to be about the right quantity for a beast of that age, which may be increased to twice the amount or more by the time he is 18 months old. The true art of feeding a beast successfully for a sire, depends more on so feeding him that he will be kept pushing well ahead from the first, without at any one time becoming laden with fat. The final development will be better. Two or three handfuls of oilcake a day should be enough.—
ED.

The North-west as a Farming Country.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I have just returned from a trip through British Columbia, the North-west and Manitoba, and so favorably have I been impressed with the country, viewed from a farmer's standpoint, that I feel it my duty to use the columns of your extensively circulated paper, with your permission, in the hope of catching the ear of some of our young men who contemplate moving westward, and it may be south of the boundary line.

The opportunity I had of visiting the several agricultural districts in the vicinity of Calgary, Regina, Brandon and the southern part of Manitoba, have impressed me favorably. I was greatly pleased to see the extensive fields of grain, more especially of wheat. In many places the land was sown to wheat as far as the eye could reach. It was a grand sight. I was much pleased to see the fine crops near Regina, which was looked upon at one time as not too favorable for farming purposes. The only drawback I learned was early frosts sometimes.

Mr. Greenway, the Premier of Manitoba, informed me that the Government have rented a portion of a new building opposite the Walker House, Toronto, for the purpose of keeping constantly on exhibition agricultural and mining products of the province of Manitoba. I find there is a great desire on the part of the leading men of these provinces that our young men leaving Ontario should go there. They are now offering every inducement for them to do so. From what I have heard and seen, I believe it would be better for them to settle in those provinces than in the neighboring State of Dakota.

The recent excursion of over 600 persons, principally farmers, will do a great deal toward making these countries better known in Ontario. They were astonished at the wonderful crops, and several have already determined to go and settle there.

IRA MORGAN,

(Pres. Ag. and Arts Asso.)

Metcalfe, Ont., Sept. 3, 1888.

"Hints to Beginners in Farming" Answered.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

The case stated by R. P. B. in *The Country Gentleman* is that of "persons new to farming," who "take up this profession" (sic) (vocation). Beside capital, their outfit is comprised in "energy, resolution, earnestness," and "a real taste for the life." In fact, "a love for it." With these resources "they begin the work with enthusiasm," believing that "all they have to do is to plow, harrow, manure or fertilize heavily." "Eagerly reading books and papers on the subject, they decide that high farming"—whatever that may be—"is the style to suit them. So they buy the latest style of improved implements, and follow these ideas." The result is that "plain neighbors" find occupation in watching them rapidly sinking money and fruitlessly expending time and energy, and in estimating how long they will last as farmers until sold out." They are admonished therefore (1) to "go slow." (2) "Not to buy any new implements if good second-hand ones can be got."

(3) "Not to buy anything more than their neighbor, a self-supporting farmer, uses." (4) "Not to do anything differently from what he does, and after copying him and his ways, say for three years, to begin to expend any money they may have made in carrying out their ideas of improvement—if they have any money left."

It is averred that, (a) "It takes several years for a person to know his own farm." (b) That, "What answers in one locality may be disastrous or unprofitable in another." (c) That, "It takes a beginner several years to know how to avoid wasting money." (d) And that, "About the only thing he can safely do at first is to haul manure to the spots that need it most."

Now it seems to me that among these "hints" are some which may profitably come under review. Let us look into them a little.

1. They are addressed to "beginners" in farming, not to specialists, but to those engaged in growing cereals, and the commercial staples of a mixed agriculture; and the "hint" is dropped that "possibly the beginner may make a successful farmer," and it appears that R. P. B.'s definition of such "success" applies to those only "who are accustomed to rely wholly on their farms for their living." This "living" is assumed to be that of "plain neighbors, methodical, unenterprising, wedded to old ways, and of close, economical methods," but the character of this "living" is assumed to be such, that it moves "the beginner to secret pity and compassion," and it costs him something to find out that those privations, and that extreme parsimony, are incidents of the kind of "success" he emulates, and would imitate. If, therefore, he is affected with "a real taste for the life," it cannot be for "the life" of the "successful neighbors" he thinks he must closely "copy" if he would escape defeat. But "the beginner," having got to the end of his purse, "must indeed grasp the realities of a farmer's life," however stern these may prove to be.

2. Now an acquaintance with the situation and circumstances of men reputed to be among the most successful of the practical farmers of the county in which R. P. B.'s article was written, discloses certain facts, and from them it appears that the degree in which such success has been achieved, has depended, among other things, upon the presence of some absolutely indispensable conditions, and some of these are:

(a) Upon the possession of good fertile soil, available for the use of "improved implements" and machinery, the "later" the better generally. (b) The possession of such sufficient quantity of *ap*-proved tools, implements and machinery as will accomplish the most and best work with the least expenditure of time, money and labor; and of skill in their use, and of conveniently arranged structures, adequate to secure such implements, and to operate the machinery and powers in bad weather. (c) Upon the extent to which they are accustomed to use machinery, to the exclusion of manual labor, in the preparation of land, the culture and harvesting of crops, and in the general farm economies.

As the result of examination, I hold and submit that the only profitable areas are those operated by machinery, and that such areas must carry the burden of all others on the farm, on which machinery cannot be used.

If this be true, then the attempt to carry on farming with hand labor, or with obsolete implements and defective apparatus, can only succeed where and when there is a large margin of profit in the business.

In other manufacturing enterprises, the competition is so keen that the question of success or failure is said to be controlled "by the selection of a site; by a single as compared with a double handling; by the slightest difference in freight rates, etc." and *The New York Tribune* informs us that in the business of canning, "the difference of a few ounces of solder, in a thousand cans, is considered important." Large producers, possessing ample equipment, and the best facilities, control prices and markets, (now that distance is nothing, and time annihilated in the modern miracles of transportation), and in industrial enterprises, the rule of the survival of the fittest is cruelly and inexorably enforced. If a rival, "wedded to old ways," insists upon prosecuting his business in competition with those employing modern methods, and under "the latest" first-class conditions, and sells his products in the same markets, "he may," to quote from R. P. B., "think he knows, but he will find he does not."

So far as my observation extends, an inspection of the buildings, implements and machinery, stock and general farm equipment owned, used, and considered necessary by farmers reputed prominently successful in the county under consideration, discloses a monetary investment on the part of each, that ought to, and would, appal any "beginner" who did not enter upon "the work," not only "with enthusiasm," but with a very long purse, and these experts are "plain" men "of close economical methods," of the highest repute for frugality and judgment, and not one of them could be induced to lay out a hard earned dollar upon a superfluity. The "beginner" will find that to "succeed" he needs all the aid he can possibly get, not only from the very best "implements," even if they happen to be "the latest" and most "improved," but from enough of them; and from the suggestions of the best experience, whether it be that of his "neighbors" or not. If, therefore, "the beginner," in his efforts at income and "success," has no better models to "copy" than are supplied by farmers whose "success" (such as it is) has been attained under "old fashioned ways," and old fashioned prices far higher than those now ruling; and with lands that made profitable crops without the expense of artificial fertilizers, and before the era of Indian competition, or of frozen meats, or of competition with the far West, and the extent of whose "success" has made it necessary for them, with all their accumulated facilities and experience, to confine their "living" expenses to a limit so narrow as to excite the "pity and compassion of the beginner;" and if he is prosecuting a business, with which he is unacquainted, without needed equipment, or even a knowledge of what the best equipment is, and without the structures to shelter and operate it; but being involved in this undertaking, is obliged to conduct it with make-shifts and manual labor, he cannot escape overwhelming loss, and "the work" begun "with enthusiasm" will certainly (as suggested) be ended in despair.

The reasons for the injunction to "buy no new implements if good second-hand ones can be got," are neither stated nor perceived. No dealers keep a stock of such for sale at reduced price. The progress of invention, and the improvements in agricultural implements and machinery, are so important and so rapid that few "beginners" will find it to their interest to spend time and money in attending public sales, in the hope of finding what they ought to buy, for sale at a bargain. And does not the admonition that he is engaged in a pursuit so hazardous, that even the necessary "tools of the trade" cannot prudently be bought except at second-hand, serve to chill the "enthusiasm" of "the beginner" who has embarked thousands of dollars in the venture from which he hopes wholly to make his "living"? Does he know of any other occupation of which this may be affirmed? What is there in the history of agricultural successes in this locality, which furnishes either a basis for "enthusiasm" or for the caution which fixes the danger line at the difference in price between new and "second-hand implements"?

No "beginner" should undertake the conduct and assume the risks and liabilities of such business, until he has well informed himself regarding the best methods, and learned by observation and study what particular tools, implements and machinery are approved, and in successful and extensive use in the leading centres of production, and then are very far off from where the article now commented upon was written. A knowledge, either theoretical or practical, of the use of the best of these is indispensable to the prosperity of "the beginner." Such are only to be found in the hands of men who need all the money that is to be made by a profitable management of their business, and are determined to have it, and in aid of this purpose they are constantly seeking counsel and advice from competent sources, thousands of miles distant from their own field of operations, when they cannot get such instruction at home. And in prosecuting his inquiries "the beginner" will not fail to accidentally discover how hopeless is a competition handicapped by ignorance of the efficient tools in successful use, and coupled with persistence in raising crops for sale with the aid of implements and processes discarded by extensive producers as unprofitable compared with those which have superseded them.

What would become of the lawyer or physician, too inert to keep abreast of the times, but who undertook to conduct the affairs of clients to a successful issue? Would he not find his income rapidly dwindling under competition with those who paid due heed to new

remedies and new decisions? So it would appear to follow that the advice, "do not do anything differently from what your neighbor, a self-supporting farmer does," must be taken with important qualifications. It can only be available to the "beginner" who is possessed of adequate equipment, for it will not be conceded that any "success" is possible without it, in any branch of production or manufacture to-day. He will have no "manure" to "haul" unless he is supplied with animals, and the old adage, "No stock, no manure; no manure, no crops; no crops, no stock," will have a direct application to this case. In this industry it is especially true that

"One link broken, the great chain's destroyed,"

and the possession of any quantity of manure implies that farm operations are going forward, either at a profit or a loss. If the farmer postpones his operations until he is able to procure what apparatus he needs at "second-hand," what is the inevitable monetary cost of such waiting? What implements and facilities is he using to accomplish what he does effect? What reason has he to believe that he will ever be able to properly equip himself with second-hand tools? If he can carry on his work profitably without the tools he seeks, then it proves that he does not need to buy them, even at "second-hand."

The farmer who insists upon adhering to "old-fashioned ways" while obliged to take new fashioned prices, will, if he is compelled to "rely wholly on his farm for his living," have to reduce the scale of that "living" to a hard-pan point, so low as to move "the beginner to a pity and compassion" which shall not be "secret" at all, but very open and avowed, and if he can do nothing better than haul his cereals and staples away from his farm for sale in competition with such as are Western grown, no machinery that he can buy, and no skill in its use, can save either him or his land from rapid impoverishment. This is submitted as a fact, without a shadow of doubt. Without the presence of sufficient stock, even existing fertility cannot be maintained, and it is indispensable that clover and leguminous plants should be grown, fed off and ploughed under, and the land allowed to remain as long as practicable in sod. Grubbing and cleaning must be thoroughly done. The purchase of bran and of feeding stuffs, and of artificial fertilizers cannot be avoided if improvement is expected. Fodder crops must be grown, and everything raised (except the little wheat "made") must be fed on the land.

No income is possible except from the sale of animals or their products. Not a pound of straw, fodder, hay or grain must leave the farm except on the animals to whom it has been fed. The aim must be to raise larger crops on smaller areas under tillage.

The advice given to owners of lands which will not raise paying crops, nor "take" with grass, without the application of artificial fertilizers, to discontinue purchases of these, is in most cases an indirect method of advising them to abandon their properties and betake themselves to other callings.

If such farmer has not a sufficient supply of barnyard manure, he will, without artificial fertilizers, simply waste his time, labor and seeds, and subsist himself and his stock to no purpose, in the preparation of land on which he can either get no "catch" from the seed he sows, or no crops worth harvesting, or such as, if sold, would not return their cost, and it has become a serious question whether large areas heretofore under cultivation, must not now be relegated to a long and indefinite "rest." They are already "damnesa hereditas." If, therefore, "the beginner" has committed himself to "the chances of success" in an undertaking requiring the large amount of capital required to buy land, buildings, stock, equipment, fertilizers, seeds, labor, etc., and the working capital necessary, and maintains the property as a residence, and is determined to bring it into a paying condition, the rational inquiry would seem to be, not "how little machinery and implements can I get along with?" But, "how much can I use with increased profit?"

Mr. Editor, admonitions drawn from the theory that "success" in farming is monopolized by the class described in this article, and is denied to "beginners" (who may, nevertheless, be trained business men), who follow methods therein reprobated, invite criticism from those in other pursuits. Knowing, as they do, of the unremitting toil which the routine of its duties involves, they regard the man who voluntarily adopts this vocation, professing "a love for the life," and has grit enough to conform his habits to its re-

quirements, as "infatuated," and as little better than a "crank."

Such are not impressed by sentimental considerations drawn from its supposed poetical aspects, nor are they affected by any belief in its "peculiar dignity." Its financial prospects, as described by R. P. B., are quite enough to satisfy them, and a drudgery so barren of results they insist upon treating as a life of laborious idleness.

Instead of regarding the achievement of "making two blades of grass grow where only one grew before" as *meritorious*, they declare it to be *vicious*, and in support of this view they point to the present misery caused all over the world by excessive agricultural production.

The grounds of the exalted and exclusive character asserted for it, and which formerly influenced the planter to seclude his residence from public view, and to establish it remotely from ready access, are not now understood, and "the early policy of agricultural isolation, investing the land with a peculiar sacredness, and its owner with patriarchal dignity," would require special exposition to be appreciated to-day. The "real taste for the life" which formerly sought expression by the patrician of the planting States, does not now induce its adoption, but it is a sentiment cherished in the abstract, and based upon conditions and recollections of ante-bellum days. No thing could draw back to a residence on the farm the son of the proprietor who has found other occupation, and the daughter tosses her pretty head in derision when the suggestion is made that she marry into that vocation.

The "success" which begins farm work at four in the morning is not alluring in this day and generation, nor are the fireside comforts alluded to by "R. P. B." overwhelmingly attractive. But let us encourage the hope, sir, that these historic and beautiful forest-crowned estates, now forsaken by the polite and cultured proprietary classes, will again be the centres of a graceful social life (the material for which so royally abounds,) and that

"The harp which once through Tara's halls
The soul of music shed,"

will again be attuned to strains even sweeter and loftier. Let us patiently wait the dawn of that commercial evolution (now in motion, oh so swiftly!) in the expectation that the "turn of fortune's wheel" may bring again strong motives for the resumption of a rural life which shall present financial inducements as well as social amenities, etc., which shall attract the refinement of the character and the culture, now absorbed by the towns and cities, and shall not a large hospitality of new ideas be a salient feature of this new regime, Mr. Editor? Is this dream too utopian? God speed the day!

Virginia, U. S.

PIEDMONT.

FOR THE CANADIAN LIVE-STOCK AND FARM JOURNAL

Shorthorn Pioneers.

BY D. MACRAE, GUELPH, ONT.

ROWLAND WINGFIELD.

It is interesting to note how different sections of our country have taken up different lines of special farming. One is noted for good butter, another for its cheese factories, excelling both in number and merit; another for horses and cattle. Guelph has long claimed special excellence in cattle. Guelph beef has a reputation which extends not only over all Ontario, but has reached all the cities of Quebec, and is well known in St. John and Halifax, the cities by the sea. At the fat stock shows of Christmas and Easter are exhibited choice animals in great numbers. Many a good judge does not hesitate to compare a joint of juicy Guelph beef to the best of the "roast beef of Old England." This good feeding stock is not confined to the immediate vicinity of Guelph, but embraces an ever-widening circle in the counties of Wellington and Waterloo. For breeding pure-bred stock no place has a wider reputation over the whole continent of America, and none have sent over the borders as many representatives as have the herds of Shorthorns, Herefords, Galloways and Devons of this district. Why is this? Some may say this is because

it is specially adapted for a grazing and feeding district. This is true. The outcrops of limestone—so abundantly mixed with the soil—insures herbage rich and nourishing. Limestone lands are noted as good pasture lands. Another says, "They feed because they can grow so many turnips and roots—such excellent crops of swedes, mangolds, carrots and sugar-beets." It is true that the section grows great crops of roots, but may not this be a result of the feeding and of the beef trade rather than a cause of it? Roots are needed for the economical feeding of stock, and are therefore grown in large quantities. To me it seems as if the beef trade of the district owes its development to the fact that the first really good cattle that ever came to Canada came here. This gave the breeders a start—gave them a name for good stock, and they have kept and improved it. This was due to Rowland Wingfield, the pioneer importer of Shorthorns to Canada—one whose name for this reason deserves to be better known among the stock-breeders of America.

In 1831, four years after John Galt and his band of pioneers had cut the first tree on the site of Guelph, came Rowland Wingfield, in search of land for a farm and home. He was a sharp, lively young fellow, slim, and very active. Was well educated and well connected. His uncle was Lord somebody, and his father was Vicar of Rhudbon, in Denbighshire, just over the border of Wales. He himself was courteous and affable; the best of company; his cheery, hearty laugh is still a pleasant memory with old settlers. He searched carefully for a homestead. None of the Canada Company's land was available near Guelph in a block to suit him, but meeting with Daniel Gibson, who surveyed part of Puslinch, he was advised to examine a block of land in that township, about five miles from Guelph. After going over it he proceeded to Toronto and bought a block of 800 acres. Returning, he had the corners marked with substantial stone posts, selected the place for his first clearing, and the site of the future homestead. He arranged with Mr. Shade, of Galt, to have sixty acres chopped, cleared, and put in crop for the summer of 1832, and to have the timber prepared for a new house. He then left for England to purchase his stock for the farm, resolving to have the very best that money could buy.

Next we hear of him in Liverpool making arrangements for shipping. He chartered the Bolover of Belfast, a three-masted vessel in the Quebec timber trade. On her were placed the hardware and fittings required for his house—iron frames for the windows, the glass, nails, hinges, and every requisite for the building. On deck he had stalls constructed in the most substantial manner, with stanchions, chains, feed and water-boxes for the cattle; a pen for the sheep, with the ship's long boat bottom up for shelter, in case of rain: large roomy coops for the fowls, and good quarters for the pigs. With him came several settlers and servants. Amongst these were Thos. Phillips, who had first charge; Wm. Thompson, who settled in Puslinch, and whose family are still alive; Harry Hoskins, John Perry, two families of Smiths, who afterwards settled in Hamilton—20 passengers and 19 of a crew. His farming outfit was perhaps the most complete that ever left the Mersey for Canada. In addition to the cattle he had a flock of Southdown sheep. His pigs were Berkshires, not of the uniform color and markings that we now see in the breed, but several of them were of a red, foxy color. Turkeys, geese, ducks, a lot of game fowls, and a quantity of pigeons. Nor was a dog forgotten. The exploits of "Stranger," the collie, are still told by many a fireside. He was a star even among collies, and well

versed both in English and Welsh. They left Liverpool first of June, 1833. Off the north coast of Ireland they encountered a heavy storm which lasted three days. After that they had pleasant weather, and in 8 weeks and 3 days were at Quebec. On reaching Montreal the stock were driven and articles carted to Lachine, where they re-embarked for a sail up the Ottawa to Bytown, then a small village, now our capital, Ottawa. Here they were put on barges and taken through the Rideau Canal to Kingston. During this passage the only unpleasant accident occurred. The barge with the cattle run on a snag and stuck fast. All efforts to move it were unavailing, and the cattle had to be run off and guided ashore. This was anything but agreeable; the men were almost as wet as the cattle. They were taken and well provided for by a hotel-keeper near, who supplied an abundance of provender and other good things, and refused all pay, because he had not seen such cattle since he left his old home in England, and it did his heart good to see the like of them again. Arrived at Kingston, a week was spent before they got the lake boat for Hamilton.

A relative of Mr. Wingfield was an officer in the British regiment then quartered at Fort Frontenac. Through his kindness the whole party enjoyed the rest very much. At Hamilton they took the road again, the cattle and sheep walking to Guelph, where they arrived 1st September, 1833, having been just three months on the journey from England.

There were fourteen Shorthorns. Mr. Phillips says that some were of Bates blood. Some were bred by a Mr. Harris, and others were from the herd of a clergyman, probably the Rev. Henry Berry. They were all pedigreed cattle, and the pedigrees were all brought with them. There were three bulls. Comet, the largest and finest, was white; Forester, roan. He was sold by Mr. Wingfield and went to the States. The third was Farmer, a red and white. Ten of the females were two year old heifers. Favorite was roan, and had afterwards a broken horn. Daisy, roanish red. Cowslip and Dairymaid were names of others. There was one cow, white; she calved the day before they went on board at Liverpool, and milked so well that she fed the calf and gave milk enough for the tea and coffee of the ship's passengers and crew. The animals were large and well-proportioned. All who remember them coming to Guelph speak specially of their very large size—much bigger than any Shorthorns now imported—and all say that they made a more marked improvement in the cattle of the country than any other lot of cattle that ever came across the Atlantic. Probably part of both these qualities—size and quality—has grown by contrast, and by distance. When these came the cattle of the country were small and poor, mostly descendants of Lower Canadian stock. The Shorthorns were very different; the contrast was great, but by the time any others came the blood had made its mark. The animals were good grades. Then we know that the boy who leaves home in the old land has a vivid impression of his home and the village shops he leaves to wander over the world, it may be. When, in after years, he revisits that home and that village, he is amazed how small they are compared with what memory had pictured them. Allowing for both these natural errors, the fact remains that they were exceptionally large, fine cattle, and did more than any other shipment to improve the cattle of Canada.

"Although not a farmer I read your paper carefully, and am convinced that such literature must have a beneficial effect on our agricultural interests."—Dr. R. A. H. Mackeen, Cow Bay, N. S.

Breeding True to Type.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

The *Breeders' Gazette*, quoting from the London *Live-Stock Journal*, England, says in regard to the exhibit of Shorthorns at the Royal show, "Mr. Thompson, of Inglewood, near Pentith, takes five out of the eight first prizes, winning the champion prize for females and holding reserve for that on males. Hardly ever before in the history of the society have so many of its honors gone to one man, and the Inglewood winners were curiously alike."

Now, if it be a feat to accomplish, to have bred a lot of cattle with a very strong family likeness running through the whole, and to have ensured that that type is a very fine one, Mr. Thompson, thanks to a very impressive sire, has achieved that feat. Beau Benedict, the sire of said winners, was bred at Sheriff Hutton by my father, and has been a Royal winner himself, consequently is of a most excellent type, and yet this is the very type that my father and myself have been moulding for more than fifty years.

W. LINTON.

Aurora, Ont.

This letter brings to mind a subject on which we have concluded to write for some time past, that is, the wisdom of offering prizes at our shows more frequently for animals bred by the exhibitor. According to the present arrangement a skilful breeder is not likely to get his due. Many of the animals in the herds having come from other herds, the name of the breeder is seldom made prominent, while the exhibitor gets all the credit. By this arrangement the most skilful breeders do not always win the prizes. Oftentimes these are men of limited means, and while they may have some animals of much excellence, they may not have a sufficient number to carry them through.

By such an arrangement, not only would the most skilful breeders be made more prominent, but the most useful types would receive the attention which their merit deserves. There would be family resemblances in herds which do not now exist, hence the superiority of impressive sires which beget them would be the more apparent.

Useful types cannot be too well known. It is not the degenerate descendants of animals famous many years ago, that should be used in fashioning the herds of to-day, but rather those of present potential excellence.

Feeding Value of Beans.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Would you or some of the readers of the JOURNAL kindly inform me, through your columns, the feeding value of beans as sheep fodder? We know that sheep are fond of beans, also of bean-stalks. I have not seen them recommended, but in my opinion, if they are good fodder, there can be nothing grown in some localities by which sheep can be fed more economically.

W. J. MOHR.

Fitzroy, Sept. 8, 1888.

Beans are what is commonly called a "strong food," or more scientifically, a food rich in albuminoids. The bean plant belongs to the same order of plants as clover, peas, vetches, etc., and, like them, it is very rich. Peas and other like food are very often mentioned as valuable fodder for sheep, but beans, although equally nutritive, have not, as our correspondent mentions, received due credit in this respect. However, to feed all such concentrated foods economically, they must be mixed with foods more bulky and less rich. It has been found by continued experiment that between the different constituents of foods, viz., albuminoids, fats and carbohydrates, a certain proportion should exist. The proportion of digestible albuminoids compared with that of the digestible fats and carbohydrates is termed the nutritive ratio. In comparing foods or in determining their value, it is necessary to know this

ratio, so as to have a uniform basis on which to compare them or judge of their value. Further, it has been found that the proportion of these constituents must vary mainly with the different species of animals, their age, and the object aimed at in feeding. As regards the first, sheep being ruminants, require a food that gives the necessary bulk to insure complete mastication. Again, the nature of the food must vary with the production aimed at, whether wool or mutton. In feeding for the former the best results are obtained in quality and quantity when the sheep are kept in good condition. In fattening, however, it has been found that a food comparatively rich in albuminoids gives a rapid and economical gain. The nutritive ratio recommended by Armsby for fattening is 1:5 during the first period, and 1:4.5 the last period of fattening. The nutritive ratio of beans is 1:2.2, so that it can easily be seen that they require to be fed with a fodder more bulky but not as rich, such as hay. When properly combined with the latter, best results are obtained. As regards the bean-stalks, their nutritive ratio is about 1:7.3, which is too poor to alone meet the demands of a fattening sheep.

Agriculture in Our Rural Schools.

(Continued from September.)

This paper was read by the Editor at the annual convention of the Teachers' Association, held in Toronto, 16th August, 1888.

The best mode of introducing agriculture into our common schools is a consideration of the utmost importance. I regard it as the very central point of the argument, the eye that must be pierced if a high score is to be made. Under this head will be found the very marrow of the argument, if it has any marrow at all. There is no doubt in my mind as to the best mode of introducing agriculture into our common schools, though I am not so clear as to all that the medium of introduction should contain. It should be introduced through means of a text book worthy of the name. I do not in the meantime favor the erection of any additional schools of agriculture, but I do favor the wholesale utilizing of the rural schools we have for teaching agriculture. When this is done, the want of departmental instruction in the higher schools will force itself upon public attention, and these for the time being will become nurseries for the Agricultural College.

There need be no unsettling of the present order of things, in fact no perceptible disturbance of it. As peacefully as the waters of a river-feeder, creeping through the level valley, glide into those of the main stream, so should this study blend in happy harmony with those already taught. The other branches will be all the better of the presence of the stranger, and will give her kindly welcome. Her influence will be elevating and ennobling and stimulating if there is anything of these in nature the great parent of agriculture.

I do not know who the writer of that text book will be, but I can tell you, as already stated, that he will be a Canadian, and his hands will bear upon them the marks of hard and honest manual toil. No one but a practical man can give this book the inimitable touch which betrays its origin, and which will so much tend to commend it to the practical farmer.

As to the style of this book, it will be written in the plainest Anglo-Saxon, its language so simple that a child will understand it, and in so pleasing a manner that both young and old will love to read it. The nature of the subject renders this a happy possibility. Although treating of a great variety of subjects, some of them requiring very delicate handling, this will be done with that inimitable skill so easy to a master hand, and in a way that can give no offence to the finest and most sensitively constituted mind.

It will be rather under than over scientific, bearing upon its every page the stamp of the intensely practical. The strong meat of science is rather for maturer minds, though if finely minced, some of it is good for children. This book may gently lead them through the entrance into the building. When once inside they will of their own accord want to examine it.

The practical, as taught in this book, should be

with the design to supplement the practice of the farm where incomplete, and to correct it where erroneous. This feature being of immense importance, it will be prepared with a jealous care. It is almost impossible to convince the average farmer of Ontario that a cattle beast during the first year of its life, when properly fed, will gain two pounds of flesh per day on a less feed ration as readily as it will gain one pound during the third year of the same, but there will be no difficulty in convincing his boy if taken in time. It is a hopeless task the endeavor to convince the farm matrons of Ontario that their methods of making butter are defective, but their daughters may be easily convinced if we take them young. These truths, simple as they are, mean millions to Ontario every year.

The matter of this book must be massed with a skilful hand, and in a regular succession, always from the less to the greater. The stepping-stones adapted to the growing measure of youthful feet, the gradual unfolding of its truths as pleasant as the unfoldings of the rose. Commencing with the most simple and elementary truths, it might end with what is more abstruse and complex, but there should not be much of the abstruse or complex in it at all, just enough to give the pupils an inkling of the unmeasured depths that lie beyond.

It should be a teachable book in an eminent degree. No one can prepare such a text book on any subject so well as an old teacher, for none know so well the character of this requirement, and its great importance. Its truths should lie upon the surface, or so near them that a little child should pick them up at sight, or at least with a little brushing to and fro of the garden rake of the mind. Its facts should be so arranged as to admit most readily of a succession of questions and responses, a style of teaching which for attractiveness and effectiveness in our common schools, will throw the lecturing style forever into the background.

As to the contents of this book we shall not attempt to give a complete resume, but will refer to some branches of the great tree of agriculture that we consider indispensable in such a work.

It will treat of the soils of Ontario, their formation, composition, and more especially the crops which they are best capable of producing, hence the style of farming to which best adapted; give the different modes of draining them, and of tillage most suitable to them, noting in a general way the allowances to be made for the class of farming adopted, whether mixed or special.

It will treat of a rotation of crops, having a due regard to variations of soil and sub soil, the disturbing influences of climate, and the resources to which recourse must be had when this rotation is interfered with through lack or excess of moisture, snow or frost, causing failure to one or a number of crops.

The principles that underlie successful farming will be made prominent. Here we refer to adaptation of animal and plant life to locality, having reference to market facilities as well, and sustaining them in an ever increasing vigor, the proper utilization of labor and labor facilities, and the great wisdom of being forehanded in everything. It will include the wide subject of fertilizers, and the deep subject of the principles of feeding animal and plant life. The right treatment of this section will throw fire brands into the scrub stock system, and thin the ranks of land robbers who are ruining the agriculture of our country, and will slay the intruding weeds of Canada by the hundreds of thousands.

There will be a chapter on weeds and insects, their habits, and the best means of destroying them, with plates of the most dangerous of the intruders. Then will our children know much more of the vagrants of weed and insect life in Canada than their parents know to-day. The methods of destroying them must have a due regard to locality, for those almost diametrically opposite succeed best in different localities sometimes.

A goodly section will treat of live stock and products, possibly of their origin, certainly of their utility, characteristics, and a summary of principles of management. If sketches of the most prominent were given, these would make a charming study for the boys. The principles of cheesemaking and butter making should be outlined in condensed epitome, from the sowing of the seed to the completion of the finished products.

A chapter might well be devoted to farm architecture, with plans and drawings. We have good models of dwellings and out-buildings now. A description of the most suitable modes of fencing would be valuable, and so much at least of forestry as treats of wind-

breaks, and the trees most suitable for re-foresting this country.

Fruit culture will come in for its share of attention, including useful varieties, adaptations and outlines of management. Here, again, the effects of good sketches will be magical. It will set many a boy and girl to growing raspberries. The farmer's garden with a diagram will serve an excellent purpose.

There might be room, too, for the statement of the general principles that govern bee-keeping, and the beautifying of home and surroundings.

There should be no veterinary department in this book. The subject is beyond the reach of most school children, and a statement of general principles here will avail but little. The same is true of land surveying, levelling, and agricultural chemistry. These are sure to work their way after a time into our higher schools.

Nor is my statement of contents complete. But says one, "will it not be too bulky?" Not necessarily. It should not, need not, go beyond 250 pages. It should be a statement of fact rather than an explanation of fact. It must needs be a summary of condensations. Do not say the task is hopeless—it isn't; that it can't be done, for it can.

(To be continued.)

Mr. Rennie's Clydesdales.

It is not often we have the pleasure of passing in review before our horse-loving readers such splendid animals as those that are the property of Mr. Rennie, of Toronto. This gentleman, although not such a veteran in the importing line as in that of seeds, yet in the short time he has been at it, he has won for himself the name of being an importer of animals the best that skill and money can obtain, and which combines ancestral and individual qualities of the first order. Personally he has visited Scotland frequently to make selections, although he always employs an agent in Glasgow to buy for him any animal purchasable that comes up to the high standard of pedigree and individual merit that he has established. Mr. Rennie holds all his horses for sale. Having his stables in Toronto (88 Duchess street), he has rare facilities for shipping either by land or water.

In giving a description of these animals, age and perhaps merit give first place to Bravissimo (4876), of which a lifelike sketch and extended description has been given in the last December number of the JOURNAL, and hence no further comment is needed.

As a noble companion to the former, we would mention Gay Boy (5028), foaled June, 1884. This animal was sired by Trademark (3269), having for a granddam the renowned Prince of Wales (673). Gay Boy is a solid dark bay in color, with white stockings and face. Though weighing 1850 lbs. in ordinary condition, yet this does not impede his action, which is superior.

Star O'Stewarton (5376), foaled May, 1885, was sired by such a famous prize getter as Darnley (222). His dam, Nell (1536) was sired by Lord Lyon (489), and he by Hercules (373). Star O'Stewarton possesses many features in which he closely resembles his famous sire, as compact build, with short legs, and flat bone.

Knight of the Shire (5120), foaled May, 1885, is a bright bay, with narrow stripe of white on his face, has white hind points and front feet. He was sired by the Knight of Snowdon (2212). His dam, Jane (5249), is by Warrior (902). This animal is very handsome, possessing a silver mane and tail. Combining as he does both quality and size, he is likely to prove of value as a stock getter.

Next we present The Real Mackay (912), foaled 1885, and by the famous What Care I (912), by Prince of Wales (673). His dam, Lovely of Barnuloch (4777), is by Lord Lyon (489). As may be seen by this horse's pedigree, he is descended from a

very fashionable strain of Clydesdale blood, and is individually a horse of rare merit. He is well coupled, not too rangy, with grand feet and pastern.

Undy Boy (637), foaled 1886, is one of the most promising youngsters of this stud. His sire, McCannon (3818), is by the famous Blue Ribbon (1961), by the yet more famous Darnley (222). His dam was Love Cecil (4377), by Lord Cecil (1192). Like his noted sire, Undy Boy is a powerful horse, of the best quality. He is a grand mover, and possesses fine bone, with an abundance of silky hair.

Sorn (6309), foaled March, 1886, is a more stylish horse than the former. He is of superior breeding, having for a sire King of Craigie (2906), by Good Hope (1679), by the great Darnley (222), dam, Lucy of Darnley, by What Care I (912), who in turn was sired by the Prince of Wales (673). Medium in bone and hair, he lacks nothing in pedigree.

Day Time (5699), foaled May, 1886, sired by Darnley (222), is a large even horse, with splendid shoulder and good action.

Neptune (6101), foaled 1886, sired by the Young Duke of Hamilton (4122), g.g. sire Prince of Wales (673). He claims relationship on the side of dam, with such animals as Campsie (119), and Johnnie Cope (416).

As Tempest [822], appears as our frontispiece, and is there fully described, we need not repeat ourselves here.

Warfanger [823], foaled May, 1886, by What Care I (912), by Prince of Wales (673), lacks nothing on his sire's side, nor does he on his dam. She, Nellie of Mahaar (6573), was sired by Clydesdale Tom (180). Warfanger is a grand mover, of flat bone and fine hair.

We now come to the younger members of this excellent stud. One of the best is Springhill Monarch [826], foaled 1887. He was sired by Springhill Darnley (2429), by Darnley (222). Being a very muscular colt, he does credit to his illustrious sire, Springhill Darnley.

Closely related to the preceding horse is Springhill Knight [825], foaled 1887, also sired by Springhill Darnley (2429). His dam is by the noted Lord Erskine (111). This is a very likely colt, of good size and quality. His limbs in every respect are excellent.

Townsend Chief [827], foaled 1887, stands well, with little daylight under him, and also aids in upholding the high standard of this stable. Sired by Laird Darnley (3748), by Darnley (222). His dam, Queen of Townsend (3722), is by Young Lord Lyon (994). Auchmore [824], foaled May, 1887, is also closely related to Darnley, having for his sire St. Nicholas (3989), by Sanquhar (2393), by Darnley (222). Combining as he does the two great well springs of Clydesdale prize winners, viz., Darnley (222), and Prince of Wales (673), on the dam's side, he has a very valuable pedigree, which is upborne by individual excellencies.

The following are the mares of this stable: Bella Harper [250], foaled April, 1884, was sired by Harold (2854), by Young Lord Lyon (994). In ordinary condition Bella Harper weighs 1800 lbs., and has been a successful prize winner. She is bred to Bravissimo.

Lady Sceldont [407], foaled May, 1885, was sired by Breadalbane (1978). This mare is evenly balanced and is bred to Star O'Stewarton (5376).

Laurestina [644], foaled 1887, is by Master of Erskine (4577).

Blackline Beauty [642], foaled May, 1887—the last of the females, is by St. Nicholas (3889), with Darnley (222), as g.g. sire. Her dam, Blackhill Kate (6290), was sired by None Such (1721), by Prince David (643), by Prince of Wales (673). Her breeding is of the best, and her appearance upholds her pedigree as well as it could be done.

It is said to be human nature to delight in extremes; if so, Mr. Rennie is no exception to the rule. Not satisfied with the lofty and massive Clyde, this gentleman also goes to the very opposite by keeping a number of handsome Shetland ponies, also for sale. Mr. Rennie has just issued a catalogue of his horses, which can be obtained by application for such.

The Journal.

Perhaps it is not assuming too much when we say that the JOURNAL has reached what may prove an era in its progress, with the change of editor, hence a brief reference to its past may not be out of place.

Its first regular number appeared in November, 1883, when the principles of its advocacy were clearly and fearlessly enunciated, and to the present these principles have been adhered to with unswerving fidelity. It has never been the policy of those conducting it to trim its sails to catch the popular breeze. We have never had the slightest ambition to perform the ignoble mission of the camp follower, living on plunder won by other hands. We have never had any ambition on the low level of certain water-fowl who watch the incoming tide and feed upon the carrion which it brings. We have never lashed the breeders of good stock at one time and sat with rent garments and dust upon our heads at another, seeking their forgiveness. It has never been our policy to grin at one time and snarl at another, and snap at everything coming in our way, under the pretentious plea that we were protecting the interests of the farmers of Canada. We have left these things to those to whom they were congenial, and have sought from the very first to lead in things pertaining to a progressive agriculture.

How far have we succeeded? Let results speak for themselves. Two sections of the Shorthorn breeders, at that time ready to take each other by the throat, are pulling together at the car of Shorthorn progress, building up the mightiest live-stock interest in the whole Dominion. The Ayrshire breeders, who then had two herd books, deeply-tainted with the heresy of imperfect pedigrees, are now agreed practically upon a common standard. Impure blood is virtually excluded from their records, and we have every confidence that by and bye, when the impurities of Ayrshire diplomacy have time to fall, as sediment, that the two books will merge into one. A Clydesdale Breeders' Association has been organized, freighted with the fruits of the most auspicious promise, and the same may be said of the Canadian Draught Horse Association. An association of the breeders of Holstein-Friesians is under way, and also a Sheep-breeders' Association for the whole Dominion, and in each of these movements the JOURNAL has either led or pushed with all its powers, but usually it has led.

Since the inception of the JOURNAL a Creameries Association for Ontario has been organized, of which we were the first public advocates, and we have done what we could to advance the interests of the eastern and western Dairymen's Associations. We have always had a good word for the fruit growers, the Beekeepers' Association, and that of the breeders of poultry.

From the first we have advocated with all our powers the promotion of a higher education for the farmer, the introduction of a text-book into our common schools (soon to be a consummated fact), and sustaining, with an ever-increasing vigor, the efficiency of the Ontario Agricultural College, and Experimental Farm, believing that were the healthfulness of this institution to become impaired that it must react disastrously upon the progress of Canadian agriculture.

But nowhere has the JOURNAL led in any enterprise equalling in importance that of the establishment of the Farmers' Institutes. Already there are sixty-five of them in Ontario, and others in progress of organization. This we regard as the great ship of the farmer's hope. May it be manned with brave and trusty seamen. We have always set our face against deceit and double-dealing. Again and again have we

exposed frauds cunningly planned to entrap the farmer. We were the first to expose the gigantic Red Lyon wheat swindle amid a shower of legal bluster, and on several occasions when we had learned that designing men had unknowingly on our part used the columns of the JOURNAL to aid them in their wickedness, have we hung their rascality up on the tree of shame, in the full view of all our readers.

From the initial number we have waged war upon the scrub, that insidious parasite that is forever sucking at the life-blood of the Canadian farmer. How many thousands and tens of thousands that have already fallen may never be fully known, and how many tens of thousands more have been transformed in their progeny by a process of rational evolution, consequent upon the use of improved sires, may never be fully estimated, but the number is very great.

But the greatest work, perhaps, accomplished by the JOURNAL, has been through its influence on the agricultural press. Better paper, better print, better subjects, better matter, better engravings have come to all of them since 1883, and the use of the shears and paste-brush in their construction are evidently on the wane. All this will redound to the advantage of the farmers of Canada. We stated at the outset that we would be satisfied with nothing less than *immortalizing* the agricultural literature of Canada. This object is surely under way, for the foremost agricultural writers that we have in the Dominion are regular contributors to the JOURNAL, and we make bold to say that nearly everything in this line of value to posterity has appeared in the columns of the JOURNAL.

We have frequently been asked where the LIVE-STOCK JOURNAL staff got its training. We have but the one answer. In the world's wide field of originality, the mould in which distinctive workmen are usually cast. This distinctiveness, untrammelled by any of the traditions of the journalistic schoolmen, followed by a persistency of purpose that knows no variation, has enabled the JOURNAL to lead from the first, and to mould unconsciously to an approaching similarity the agricultural journals which at first, pursuing in the distance, barked loudly at its methods. The co-operation of the farmers has been most cheering, and with all the powers of our being we thank them for their patronage, and trust they will always find the JOURNAL no less worthy of it, in future, whatever changes may take place on its staff, or whatever may be the modifications on its directorate. Its aims are the same, its purposes are unaltered, like the runner in the race, with settled purpose its eye is only on the goal of a higher progress in Canadian agriculture, and a greater prosperity to Canadian farmers.

The Farmers' Condition.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—The condition of the average farmer, materially and socially, is susceptible of much improvement. A word from my pen on this subject, written in a kindly spirit, will, I trust, be received in the same spirit by my fellow-farmers.

That farmers do not hold positions in life which they should, is due too frequently to their own indifference and wanton waste of opportunities. On exhibition days we too often find the young men of the farm around a striking-machine, throwing at dolls, or amusing themselves in some other way equally trifling, when they should be improving the time by examining closely and carefully animals on exhibition, with the object of learning how they may improve their own stock.

By the term "animals" we do not mean those in the horse-ring alone, although of course useful lessons may be learned from this source. The mistake here consists in too much patronage being given to this par-

ticular branch of stock-raising. It would be much to the advantage of the whole country if farmers generally could be induced to breed a heavier class of horses.

Let farmer visitors inspect the cattle carefully, and they will soon see how much there is to be learned there. It would be well for them to compare the different breeds and then decide upon which of those they will choose for purposes of improvement. Some may answer, "What good will come of this when I have not the money to buy?" While they may not have the money for purchasing, this examination will help them at least in two respects: It will tend to prepare them for the time when they will be able to purchase, and will give them a desire to take better care of the stock which they have.

From the cattle let them go to the sheep, pigs, poultry and farm and garden produce, indeed to each of the agricultural departments of the show, and they must soon be convinced there is much room for improvement in their own practice in each of these departments. But how few there are, comparatively, who attend exhibitions for the purposes of improvement mainly. The reason is that farmers are not sufficiently alive to their own interests, and often those who stand most in need of improvement show the least concern.

Poverty is not a sufficient excuse for negligence in stock-improvement. We have read in your columns, Mr. Editor, the case of a man who went in debt to import a stallion from Great Britain, who is now worth \$25,000. If others would show equal spirit the ability to improve would oftener come.

This indifference will never be banished from our midst as long as farmers are ignorant of what is best for their own interests. This is certain, that if they would read some of the books selected for agricultural examinations it would help them to see many of the defects of the system they are carrying out. They should also take and read some illustrated agricultural paper. Nothing will better educate the young mind, or even that of riper years, than having the pictures of good animals placed before them with a suitable explanation. This will do much to dispel the illusion that has arisen in the minds of many, that book-farming is a thing to be despised. When the farmers combine science with practice they will make a great advance in conducting their business, and those of them who look well to the education of their families with a view to qualifying them for their future life work, will leave them a better inheritance than accumulated wealth would be.

Binbrook, Ont.

H. CLARK.

Will Twin Heifers Breed?

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I have a good Jersey cow that dropped two fine calves on last Sunday week. I have been informed that they will not breed. Can you inform me through your valuable JOURNAL whether you have known twin heifers to have calves?

Halifax, N. S.

JOHN WHITE.

Our experience is that they will without doubt breed. We have at present in our herd twin heifers, and they have proved themselves as good breeders as any of our other cows.—ED.

Curing Corn Fodder.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—In reply to the inquiries of one of your correspondents in last month's JOURNAL as to the best method of preserving Indian corn for winter fodder without the use of a silo, I take the liberty of suggesting the following method, tried and found satisfactory: Cut the corn before it is touched by the frost. Then after it has been allowed to lie open for a day or two in the sun, set it up in shocks, binding it securely. After allowing it to remain until late in the fall, draw it in and put it in a mow previously prepared for its reception by spreading a layer of straw about two feet deep in it. On this put a thin layer of corn stalks and cover this with chaff or cut straw, and so continue layer after layer until all is housed. By this method it will be found that the corn will keep in splendid condition, and further, that the chaff or cut straw used in preserving it will be almost as good as the corn for feeding. Sheep especially will eat it readily.

Randolph, Ont.

JOHN CAMPBELL.

Agricola's Reply to Mr. McNeillage.

(Too late for last month.)

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR: Mr. McNeillage appears to have taken up the gauntlet, *vice* "Clydeside," retired, who apparently was unable to give any particulars of registered Shires having Clyde blood in them. Mr. McNeillage, more fortunate, is able to point out three instances, out of more than three thousand entries, which he claims to have a dash of Clyde blood, viz., Princess of Wales, and her offspring, and Paragon. I am always to acknowledge if I am wrong, and I believe he is correct in his statement with regard to Princess of Wales and her offspring, and also have no doubt that the Editing Committee admitted the pedigree in perfect good faith; this is corroborated by the fact that Vol. II. of the Shire Stud Book was published in 1881, while Vol. V., of the Scotch Clydesdale S. B., in which Tom o' the Gills is registered, was not published till 1883. With regard to Paragon (1707), Mr. McN. merely gives his own assertion, although he objects to any one else's. It also appears strange that if Tom o' the Gills was so eagerly patronized as Mr. McN. asserts, his name does not appear much more frequently in other pedigrees; surely Mr. McN. must have been misinformed, or else he could not have proved a sure foal-getter. In respect to Princess of Wales' (673) ancestry, Mr. McN. makes assertion freely, and is apparently of the opinion that no credit is to be attached to a writer who uses a *nom de plume*. May I ask him if the same rule applies to himself, when writing under the signature of "Rayenswood," etc.? I have no expectation of convincing him, as none are so blind as those who will not see, but rather address myself to your impartial readers, and allow them to draw their own conclusions. Mr. McN. commences by disparaging Mr. Dykes' statements, on the ground that nothing was said by Mr. Dykes with regard to his Shire ancestry until after he had severed his connection with the S. C. S. B., and asserts that he gives no evidence that Kate was a Shire mare. In another letter Mr. McN. says "there can be no question that Mr. D. is an authority on what the Clydesdale of 10 years ago was, as he was then in the thick of all Clydesdale exhibitions, and studying the matter carefully. Mr. Dykes, in a late number of the *Breeder's Gazette*, quoting from a letter written by Mr. I. N. Fleming, of Knockdon, the breeder of Prince of Wales (673), says: "It will settle another apparently vexed question that the mating breeder and foaling breeder writes, 'although Mr. McN. questions it, it is an undoubted fact that both the g. dams of Prince of Wales were English; he has a further English strain through his g. sire Samson.' This is in every way confirmatory of the statement of the late Mr. I. Craig, as given to me with Darling, the Prince of Wales' dam, in my presence at Knockdon, long before Clydesdale Stud Books were dreamed of, and the present jealousy, which is a market jealousy, did not exist." Mr. McN. gives himself away, when, in his next letter he replies that he is sure that Mr. Fleming would not have written such a letter if he had known it would have been used against Clydesdales. In the introduction to the Select Clydesdale Stud Book, that *belle noir* of Mr. McN., is a history of the Clydesdale horse, in which is contained the following extract: "The splendid qualities of Prince of Wales are unquestionably due to the blending of the English and Scotch blood, for his g. dams on both sides were English mares, having both been purchased in Warwick;" while in the same volume appears an extract from a letter written by Mr. I. N. Fleming, in which he says: "I have read with much interest the proof of the introduction. I consider you have forcibly dealt with the subject of the best draught horses. It is to be hoped your Society will be able to clearly demonstrate to the farmers the advantage to the Clydesdale horse of a judicious admixture of Shire blood." There are other letters also approving of the proof of the introduction, amongst others, one from the factor of the Marquis of Londonderry. The reason of Mr. McN.'s hostility to Mr. Riddell is doubtless well known to your readers, and it is needless to refer to it. I do not know why Mr. McN. should call upon me to answer his question about studs of Clydes being kept in England, and the reverse: such queries are no proof of the superiority of any breed, if it were, there are instances where Clydesdale horses have been given up, and Shires taken in their place, but I am not aware of a single instance of the converse. Who can account for the hobbies of wealthy noble-

men? It may be owing to the national prejudice, which is always strong in the Scotch race, or to the persuasions of their stewards or farm bailiffs, themselves also often Scotch; two of the instances mentioned by him are of Scotch descent. It may perhaps interest Clydeside to know that the celebrated Topman (886) has also Shire blood in him, as have many others, but as I have before said, I have had no desire to excite a controversy between the two breeds, but only demand that honor be given where honor is due, *i.e.*, to the Shire.

AGRICOLA.

The Provincial and Toronto Industrial Exhibitions.

The two great exhibitions of Ontario are over for another year, and though the exhibits of stock at both of them were magnificent in almost every class, the same complaints have been heard regarding imperfections appertaining to the existing methods of exhibiting. At Kingston, the superintendent responsible for the arrangements relating to preparing stables for stock and supplies for them was loudly and openly blamed, and if guilty, should be removed. Some of the exhibitors had to extemporize protection for their stock, and the lack of bedding supplies was tantalizing. At Toronto there was the same confusion of jumbling the exhibits in a heterogeneous mass, particularly in the exhibit of horses, so that even with the superintendents as guides, one might search for hours before a particular animal could be found. The boards of directors have yet very much to do before arrangements relating to the live-stock exhibits shall have been anything like perfected, but we fully believe that they are trying to better these, and in due time will no doubt succeed. If the exhibitors would only make their entries in time, it would help the directors and themselves more than they can well imagine.

THE PROVINCIAL.

SHORTHORNS.

The morning of Wednesday, the 11th September, opened threateningly on the Limestone City, and it appeared as if the Provincial was to have its usual luck in the way of bad weather, when the sky suddenly cleared, and the sun coming out, the judges were able to get to their work with comfort. Short-horns turned out in great force. The Bow Park herd, as usual, was in the pink of condition, winning every prize they competed for. In aged bulls Baron Warlaby 78878, a dark red, lengthy bull, with well-rounded barrel, was placed 1st, and subsequently captured the silver medal for the best bull of any age, Sir Christopher, the sweepstakes bull last year at the Industrial, having to be content with 2d, while 3d went to Baron (52434), a roan bull of Campbell breeding. Two-year-old bulls were not a really strong class, first going to Mr. Redmond's roan, who was, we believe, subsequently purchased by Mr. J. Russell, of Richmond Hill. Yearlings were a better class. Mr. Watts' light roan, a bull of great quality and grand thighs, by old Bampton Hero, being placed 1st, Mr. Dryden's red and white Aboyne, 2d, and Mr. Russell's red bull (which was not in Mr. Russell's usual show condition), 3d. In bull calves Bow Park came to the front with a dark roan bull calf in the highest condition, sired by Baron Warlaby, Messrs. Frank, 2d, and Mr. Dryden's red calf by Vensgarth taking 3d. In aged cows, imported Lady Isabel, the roan Bow Park cow, it was easy to see, would be 1st. She is a massive animal, with wonderful wealth of flesh. A white cow, owned by Messrs. Watts, was placed 2d.; Mr. Lister's roan cow (who was fancied by some for 2d place) getting 3d. There was a large exhibit of three-year-olds; the Bow Park white cow, imported Isabella II., a very even cow of great quality, sired by the celebrated Lord Zetland (43896), was soon picked out for 1st; Mr. J. Russell's red and white Isabel X., a good cow, but hardly as smooth as is desirable, 2d, to a roan owned by the Messrs. Watt. In two-year-olds the competition lay between the Bow Park imported Lady Oxford Waterloo 5th and Messrs. Watt's roan, by Lord Lansdowne, a very even, thick heifer of true Scotch type, but a trifle plain in the head.

The judges finally decided in favor of the Bow Park cow, who also afterwards won the diploma for the best female, Mr. Edwards' roan getting 3d. Bow Park took 1st and 2d in yearlings with Isabella III, and White Socks respectively, both sired by Ingram's Chief 81433, a red heifer, sired by Vensgarth and owned by Mr. Dryden, being placed 3d. Fourteen heifer calves appeared in the ring. Mr. J. Russell's red calf eventually captured 1st: a neat red heifer, bred by Mr. Dryden, 2d, while 3d went to Mr. Nicholson's white, which would undoubtedly have taken a much higher place had she not been gone in the legs. Bow Park, as was expected, was awarded the herd prize; 2nd to Messrs. Watts, and 3d to Mr. Dryden.—The judges were Messrs. Snell, Hyde and Sangster.

HEREFORDS.

This breed was well represented, and we are pleased to note a steady improvement, not only in numbers but also in quality. In aged bulls, Cassio (6849) it need hardly be remarked, came out at the top, and also secured the silver medal for the best bull of any age. He is, if anything, in better trim than last year, and still displays the same even smoothness and quality; 2d fell to Mr. Cochrane's Marshall Grove, sired by Cassio, and 3d to Mr. Benson. Two-year-olds made the worst exhibit in this class; only two competed, both being by Cecil 18469, 1st going to Mr. Henry; 2d to Mr. Mackie. Yearlings were a good class. Mr. Cochrane's Commodore took 1st; Mr. Benson taking 2d with a bull rather better over the shoulder than Mr. Fleming's son of Corporal, which was placed 3d. Bull calves were a strong class and gave the judges some trouble in deciding between Mr. Drew's Conqueror calf and Mr. Fleming's Earl Fenn. At last the red ticket was awarded to Mr. Drew's, a good backed, lengthy calf, but somewhat high off the ground, a decision we hardly coincided in, a calf belonging to Mr. Benson, which will probably be heard of again, being 3d. All three prizes for aged cows were won by imported animals. Miss Broady (Fleming), who was also awarded the diploma for the best female; Cinnamon II (Mackie); Lily VI (Fleming), were placed in the order above. In three-year-olds the two imported daughters of Monarch (7858) owned by Mr. Cochrane, won 1st and 2d, Mr. Fleming's cow, which might have been better filled up between the hocks and the tail, being 3d. Four herds competed, the 1st prize going to Mr. Cochrane's herd headed by Cassio; 2d to Mr. Fleming, and 3d to Mr. Mackie's, headed by Cecil, the silver medal bull in 1886.—The judges were Messrs. Green, Hunter and Graham.

ABERDEEN-ANGUS.

There was no competition in this class, Mr. Cochrane being the only exhibitor. It is needless to say that what were there were good; but where were the Ontario herds that used to make so grand a display? We trust they have not forsaken the Provincial! Mr. Cochrane's exhibit was composed of the aged bull Lord Hillhurst (3961), two females by Paris 3d, and three females by Lord Hillhurst.

GALLOWAYS.

We were pleased to see a vast improvement in this breed, not only in numbers, but also in condition and quality. For many years Mr. McCrae has had it nearly all his own way, but this year Mr. Kough is making him look to his laurels. In aged bulls Mr. McCrae wins 1st with Current Coin, a bull better filled up behind the shoulder than any we have seen previously exhibited. He is sired by Crusader (2858), his dam being of the Sybil family. Mr. Kough takes 1st in two-year-olds with imported Claverhouse (4250), also 1st for bull calves with General Gordon, a remarkably good-backed and even calf. In the female classes we particularly noticed Mr. McCrae's imported Violet III., of Tarbreoch, which was the 1st prize two-year-old, and afterwards won the diploma for the best female of any age. She is undoubtedly one of the best females in Canada. Mr. Kough seems strong in calves, and Miss Stedo V., a good, level heifer by Croochs (673) pulls out the red ticket; while Mr. McCrae is successful in capturing both 1st and 2d in the herd prizes.

DEVONS.

This class was not well filled, Messrs. Rudd and Harper being the only competitors. The medal for the best male of any age was awarded to Lord Lansdowne, owned by Mr. Rudd, who also won the 1st prize for aged cows as well as the diploma for the best female, with his cow Beauty 800; Mr. Harper

winning both 1st and 2d prizes in two-year-old bulls, three-year-old cows and yearling heifers.

GRADES.

Mr. T. Shaw, of Hamilton, and Mr. T. C. Clarke, of Gananoque, were the only exhibitors in this class, the majority of the prizes going to Mr. Shaw, who also captured the herd prize.

The competition in fat cattle was small, and in some of the sections there were no entries.

DAIRY BREEDS.

Ayrshires.—The exhibits were good, but not as strong as last year, the female sections being better than the male. The principal exhibitors were Messrs. Guy, Smith, Youill, Stewart and Nicol.

The silver medal for best bull of any age was awarded to Mr. Guy, the diploma for best female going to Messrs. Smith's cow Empress. The first prize herd also belonged to the same firm, and was headed by the bull calf Toronto Chief, which was exhibited and won first as a yearling, although under twelve months old, Mr. Guy, who for seven years has owned the first-prize herd, having to be content with a blue ticket.

Jerseys.—The principal exhibitors of Jerseys were Mrs. Jones, Messrs. W. A. Reburn, B. W. Folger, and G. N. Deeman. The animals shown were excellent, and attracted much attention. The silver medal for the best bull of any age was won by the yearling bull Romeo's Hugo 19318, owned by W. A. Reburn, who also exhibited Jolie St. Lambert 5126, which not only won first in her class and diploma for the best female, but also won in the milking competition the silver medal for the best Jersey, as well as the silver medal for the best milch cow of any breed. The first-prize herd was composed of Jolie St. Lambert, her two daughters and Dora of St. Annes, headed by Romeo's Hugo, Mrs. Jones' herd, headed by Rioters Pride, taking second. The judges were Messrs. Robertson, Cheesman and Burgess.

Holsteins.—Were a fine lot; the bulls were good, but were not as numerous as the females which came out strong, especially in the aged cows. The principal exhibitors were Messrs. Folger, Smith Bros., MacCrae, Curtis, Graham and Brown.

The medal for best bull of any age was awarded to Mr. W. B. Folger, who also owned Nixie L 5155, the winner of the diploma for the best female. Mr. Folger's herd, headed by Sir Archibald's son, won first prize, Mr. McCrae's herd being second.

THE MILKING COMPETITION.

The tests were from the two milkings on the 13th, the same method of chemical analysis as last year being adopted. Mr. Cheesman was the sole judge and his awards were:

Ayrshires.—J. Youill, Portu Lacca, silver medal. J. Youill, Nellie Gray, bronze medal.

Jerseys.—W. A. Reburn, Jolie of St. Lambert, silver medal, and Jolie of St. Lambert 3d, bronze medal.

Holsteins.—F. H. McCrae, Merrie, silver medal; B. W. Folger, Nixie L, Bronze medal.

Devons.—S. Harper, Rose of Coburg, silver medal.

Sweepstakes Cow.—Silver medal, W. A. Reburn with Jolie of St. Lambert.

The following is the order of merit in which the silver medal cows stood.

Cow.	Breed.	Years.	Milk per day lbs.	Solids—Per Cent.	Wgt. S'ld.—lbs.	Fat—Per Cent.	Wt. of Fat—24 hours.	Days Calved.	Days of Gestation.	Scores.
Jolie St. L.	Jersey.	14	25	17.67	4.41	8.89	2.22	167	62	113.38
Portu Lacca	Ayrshire	8	38	13.81	5.24	3.74	1.41	283	131	105.09
Rose of C.	Devon.	6	32	13.60	4.35	4.13	1.32	187	167	92.15
Merrie	Holstein	6	32	12.50	4.75	3.29	1.23	130	53	84.65

SHREEP.

The sheep breeders are not open to the taunt of want of enthusiasm in the good work they are doing to improve the flocks of our country. If the quality and quantity of their exhibit, and especially the former, be accepted as a true criterion of the position of Ontario's flocks to-day, then she has reason to feel proud of the work that has been accomplished in this direction.

LONG WOOLS.

Oxfords.—They were represented by two flocks, 27 in number, owned by Peter Arkell, Teeswater,

Ont.; the other consisted of 6 rams and 10 ewes, the property of J. Tolton, Walkerton, Ont. Both flocks could easily stand criticism.

Lincolns.—W. Oliver, St. Mary's, Ont., and W. Walker, Ilderton, were the chief exhibitors of this breed. The former had a flock of 16 head, while the latter's number 17 in all. A number of fine animals doing honor to their owners were here observable.

Leicesters.—Mr. J. Kelly, of Shakespeare, Ont., has on exhibition a splendid lot of Leicesters, 23 head first-class animals.

Cotswolds.—Mr. J. G. Snell & Bro., of Edmonton, Ont., are upholding the Cotswold's pennant, and right worthily do they do it. Mr. Crawford, Canboro, with a flock of 16 head, also supports them in their well directed labours, with a fine exhibit of imported Royal winners.

MEDIUM AND SHORT WOOLS.

Shropshires.—This breed was well represented both in quality and numbers, and it would perhaps redound more to the credit and pocket of our other breeders if they would display a like vim in placing their favorites before the public. The principal contestants were M. J. Campbell, Woodville, Ont., who shows a pen of six splendid ram lambs, besides eighteen others; Mr. J. Dryden, M. P. P., Brooklin, shows a flock of 22 head; Mr. W. H. Beatty, London, Ont., has 14 head, while Mr. J. Miller, Brougham, swells the number by a contribution of 18.

Southdowns.—Excellent quality was shown by the breeders of these. The flock of Mr. J. Jackson, Woodside Farm, Abingdon, Ont., has the grand record of winning 869 prizes during 3 years. Mr. R. Shaw, Glanford, also has an even flock of 13 Southdowns, all homebred.

Merinos.—This breed, the only one America has the honor of producing, was well represented. Mr. R. Bailey, Union, had on exhibition a fine flock of 30 head. Mr. G. & B. Deo, of New Sarem showed a flock of 17, headed by their grand ram, Midnight, bred by E. Randall, Michigan, whose fleece was not wanting in texture or weight. Twenty-eight head of fine quality were also shown by W. Smith, of Fairfield Plains. Mr. Bailey's flock carried highest honors.

SWINE.

Berkshires.—Mr. George Green, Fairview, was the strongest and most successful exhibitor of Berkshires, carrying off many prizes. Messrs Simmons and Quirie, of Ivan, Delaware, had an excellent exhibit, though few in number. The quality was of a high order. They divided the prizes.

Suffolks.—A. Frank & Sons, The Grange, showed an excellent lot of Suffolks, mostly home-bred, and carried off highest honors. Messrs. R. Dorsey & Son, Summerville, and J. Featherston, Credit, also got each a goodly share of prizes.

Essex.—Mr. J. Featherston, Credit, had things all his own way in this class.

Poland Chinas.—R. Dorsey & Son, Summerville, and W. M. & J. C. Smith, Fairfield Plains, were the strong men here.

Yorkshires.—J. Featherston, Credit; R. Dorsey & Son, and Ormsby & Chapman were the leading exhibitors. The latter with improved Yorkshires had some good specimens of this rising breed on exhibition.

The exhibit, though fine in quality, was not represented numerically in a way calculated to convey to the visitor an adequate idea of the capabilities of this country to produce good swine.

TORONTO INDUSTRIAL.

SHORTHORNS.

Never before has there been a better display of Shorthorns, was the universal remark, and good as was the exhibit of this favorite breed at the Provincial it was surpassed by that at the Industrial. We have sometimes heard a fear expressed that the breeding of Shorthorns, and in fact of all pure breeds, was being overdone, yet we find that notwithstanding the depression in the prices of all kinds of stock, our breeders are not discouraged, but have realized the fact that there is always room at the top of the tree, even if the bottom be rather crowded, and with praiseworthy pluck are striving to stay there. We were also pleased to see that the animals were numbered and that a well intentioned attempt was made to keep the spectators informed as to which were the prize-winners by means of numbers inserted in a frame, which,

however, proved rather abortive in some of the classes owing to the lack of sufficient attendants. There was also an improvement in the catalogues, the names of most of the animals being given, but there is yet much to be desired before they can be called perfect. There appeared to be a large enquiry for bulls, and we think we are justified in saying that more sales were effected at this exhibition than at any previous one.

Aged bulls were a grand class as may be imagined when such animals as Sir Christopher =2429=, last year's silver medal bull, Warrior, 55173, and Baron (52434) were unnoticed. Here, for the first time this year, the Bow Park bull Baron Warlab, 78878, had to give way to Mr. Miller's Vice-Consul, a very even fleshed, thick bull, of the Victoria family and of the color so beloved by our neighbors on the other side, imp. Eclypo (49526), a massive bull of great depth, taking third. Two-year-olds were a fair class, 1st going to Crimson Knight, a red bull slightly deficient in flank; 2nd to Moneat, who won 1st at the Provincial, and 3rd to the roan bull Victor Hugo Ingram. Yearlings were a good lot, Perfection, a light roan, again repeating his victory at Kingston; Aboyne, a red and white, a trifle flat in the ribs, taking 2nd; Roan Boy 9567, getting 3rd. Calves as usual were a strong class. There were 43 entries but only 13 entered the ring. Here, as at Kingston, Bow Park secured 1st with Baron Waterloo, and also 3rd with Master Ingram, sired by Sir Arthur Ingram, while a roan calf, owned by Messrs. Morgan and Son, was placed 2nd, although many expected to have seen him placed a step higher. For the sweepstakes the red bull Vice-Consul, the red bull Red Knight and the light roan Perfection were led out, and, as was expected, Vice-Consul received the red ticket.

In the aged cow class Lady Isabel had to lower her flag to Havering Nonpariel, of the Bates family, a grand cow, combining both size and quality, and a whilom champion at the Royal, Mr. Watt's Moonlight taking 3rd. Three-year-old heifers were a good class, the prizes being awarded to the same animals as at the Provincial, as were likewise the awards for the 2-year-olds, with the exception that Messrs. Russell's Mina took 3rd in the place of Messrs. Edward's heifer, which was not shown here. In yearlings the Bow Park heifers Isabella 3rd and White Locks were respectively 1st and 2nd, a red heifer by Vensgarth (47192) getting 3rd. Twenty-nine heifer calves were entered but only 17 were led into the ring, and after much consideration the judges placed Messrs. Russell's red calf Rosabel first, the same position she occupied at Kingston, the red Bow Park calf Lady Aberdeen having to be content with 2nd, while 3rd went to the red calf Sadie, by Vensgarth (47192). Four herds competed and the judges had no difficulty in deciding the 1st, which fell to the Bow Park herd, as fine a lot of females as ever stepped into a judging ring. Second went to Messrs. Watt's herd, headed by the yearling bull Perfection, Mr. Dryden having to give place to Messrs. Russell, who had strengthened their herd since exhibiting at Kingston by the purchase of the 1st prize Provincial two-year-old bull Moneat. The judges were Messrs. Hugh Thompson, of St. Marys; J. C. Snell, of Edmonton, and R. Collicutt, of Tyrone, and a difficult job they had of it; in fact, just now the Shorthorn ring is rather a hot corner. They, however, got through their duties satisfactorily, we believe, to all, and we heard of no protest being put in.

HEREFORDS.

The exhibitors of this breed were the same as at the Provincial, with the exception that Mr. Benson's lot did not put in an appearance. More interest appears to be taken in this breed than formerly, and as a good attendance of spectators surrounded the judging ring, it would lead to the supposition that this valuable beef breed is gaining in popularity. As the prize animals were nearly all identical with those at Kingston, we shall simply refer to some of the more important changes; the first of these occurred in the class for bull calves. Here, as we anticipated, the decision at Kingston was reversed, Mr. Fleming's Earl Fenn being placed above Mr. Drew's Harmony Wilton, by Conqueror, the Hereford stock bull at the Agricultural College at Guelph, Mr. Mackie getting 3d with Volunteer. In aged cows Cinnamon II., who has for a number of years been placed 2d to Miss Broady, now begins to show the effect of her age, and had to give way to the younger cow, imported Lily VI. Mr. Cochrane's exhibit was in fine order, and all had the neat head and horns that are so taking to the eye in

the show ring. At the Provincial he was successful in taking everything he showed for, with the exception of the diploma for the best female, and we are informed he intends again trying for it, so that next year will probably see the contest renewed with increased vigor. By the way, how is it that there is no diploma or medal offered at the Industrial, in any of the classes, for the best female? It is always an interesting competition, and even if no money is given, the card is highly esteemed by the fortunate winner.

The judges were Principal Mills, of Guelph College; F. Green, jr., Innerkip, and J. Hogarth, of Whitby.

POLLED ANGUS.

Here Mr. Cochrane, who had no opposition at Kingston, meets the Hay & Paton contingent, and a good lot they were. We were amused by hearing a bystander remark, "Why, they are just as hard to judge as Shorthorns," and so indeed they were. In aged bulls, the well known Chivalry (1765) again pursues his unvanquished career by winning 1st in his class, and silver medal for the best bull of any age; it will be remembered that this bull was sold to Mr. Mossom Boyd, and has since been re-purchased by Messrs. Hay & Paton, Mr. Cochrane's Lord Hillhurst receiving a blue ticket. Messrs. Hay & Paton are the only exhibitors in bull calves, and their first prize bull calf, Bognie of Kinnoul Park, has, we believe, been purchased for the Guelph Agricultural College. In aged cows, Emma of Kinnoul Park, who has never been beaten since 1884, takes first. She is a grand, smooth, well-fleshed cow, with a massive frame, Morlich Isabel being 2d, and Lady Hillhurst, a good, short-legged, smooth cow, but a trifle high at the tail end, being placed 3d. In yearlings, Mr. Cochrane's Jeanette, which was 2d at the Provincial to Valentia, won 1st, Emma's Darling 2d, while Valentia was placed 3d. The judges were Messrs. I. King, of Brantford; Arthur McNeil, of Edgely and C. Brodie, of Bethesda.

CALLOWAYS.

The same competitors as at Kingston exhibited here, but the Provincial awards were not in every case confirmed. Current Coin again took first in his class, and also silver medal for the best bull of any age. In bull calves, Mr. Kough's General Gordon still maintains his position, and it would not surprise us to meet with his name in the prize list another year. In two-year-old heifers the judges placed Mary Anderson first and Violet III of Tarbreoch second, a decision that was not concurred in by all. In yearling and heifer calves the decisions at Kingston were also reversed, while in the herd prizes, Mr. McCrae as at the Provincial took first, but failed to obtain the second, which was won by Mr. Kough's herd headed by Claverhouse (4250). The judges were the same as for the Polled Angus.

DEVONS.

Do not appear to gain ground, only twenty-eight head being shown altogether. Messrs. Rudd, of Eden Mills, and Harper, of Cobourg, being the only two exhibitors. In two-year-old bulls but one animal was shown, and he was only considered worthy of a second prize. The two-year-old class appeared to be the weakest in each class exhibited, and we are at a loss to account for it, as there are usually plenty of good animals in the aged classes. The majority of the first prizes were won by Mr. Rudd, the silver medal for the best bull going to his aged Lord Lansdowne. Mr. Harpur's Fanny B, a very smooth, neat heifer calf, we were much pleased with. She was placed first over Mr. Rudd's Frances, which won first at Kingston. The judges were the same as for the Herefords.

AYRSHIRES.

This class was represented by about fifty head, and included some very choice animals, and although many of the exhibitors at the Provincial did not appear, yet a strong reinforcement arrived from the herds of Mr. McCormick, of Rockton, and W. Gerard, of Hamilton, and counterbalanced the defection. Mr. Guy here retrieved his defeat at Kingston by winning the first prize for the best herd from Messrs. Smith, of Fairfield plains. The silver medal for best bull of any age was once more awarded to General Grant (983). In aged cows the famous Empress is retired to the third place, Mr. McCormick's Maggie being placed first with Oshawa Lass II second.

JERSEYS.

The dainty Jerseys always attract a great deal of attention and their stalls are usually favored with a

visit from the ladies with whom they are especial favorites. There are hardly as many exhibited as last year. Mrs. Jones' herd did not arrive, neither did that of Mr. W. A. Reburn whom we would have been pleased to welcome to our western exhibitions, but the stalls are well filled with sixty-eight entries. The majority of the prizes were won by the Oaklands' Jersey Stock Farm. The silver medal for the best bull of any age was awarded to Canada's John Bull 8388, who also took first in his class. Altogether the exhibit of Jerseys was one of the best ever seen in Toronto. The judges were Messrs. G. Leith, of Carville, Hugh Clarke, of Brampton, and W. H. Dodd, of Eglington.

GUERNESEYS.

This breed, although popular in England is not known much in Canada, but now promises to make a push for popular favor. They are larger in frame than the Jerseys, and the cows have every appearance of being good milkers. The milk veins are well developed, and their bags and teats are of a very rich yellow color. The only exhibitor is Mr. Davis, of Toronto, who shows a herd of six head, which are, we are informed, the first ever exhibited at Toronto.

HOLSTEINS.

The exhibit of this breed was considerably stronger than last year, and although some of the breeders did not put in an appearance, yet the competition was not only numerous—being almost double of that last year, but also excellent in quality. The Oakdale Stock Farm, which comprised the imported bulls Presto and Advance, was successful in taking the lion's share of the prizes. Messrs. Smith, the next largest exhibitors, with sixteen head, came next. Major Foster's herd of five head, headed by Prince Rutherford 2554, are remarkably interesting from the fact that they are ensilage fed, and we are informed that the animals were turned out in the spring actually fat and in far better condition every way than if they had been put through on ordinary feed.

GRADE CATTLE.

Mr. T. Shaw, of Hamilton, exhibited a herd of Grades nearly all bred by himself. Amongst them were some good animals, particularly the first-prize two-year-old heifer Gretchen, and the first-prize, red heifer calf Tiny Gretchen, which also occupied the same position at Kingston. Messrs. McQueen's herd was as usual in fine trim, as was also Mr. Oke's. Messrs. Hay & Paton exhibited a Grade Polled Angus heifer which won second in the two-year-old class. The judges were Messrs. T. I. Hobson, of Mosborough, J. R. Matheson, of Brooklyn, and W. Dow, of Whitby.

FAT CATTLE.

The exhibit of fat cattle was good, but was hardly, we think, up to that of previous years. But little interest was displayed by the spectators and the class was soon disposed of. The judges were Messrs. C. S. Collard, of Toronto; E. B. Morgan, Oshawa, and A. J. Thomson, of Toronto.

HORSES.

In attempting to give a reliable and comprehensive yet succinct report of the horses shown in Toronto, one is confronted with many difficulties. First, there is the great variety of classes, and sections in each class. Then a section from each of the fourteen distinct classes may be in the ring at the same time, the great number competing in many of the sections, and the merits of the exhibits being in many cases nearly on a par. These circumstances all tend to confuse the unfortunate reporter, and render his account hazy. The question is, what should be the character of a report on horses in a live-stock journal? It is not intended as an advertising medium, because papers don't advertise for nothing, and if there is a desire to encourage those who evidently pay, in a way, by giving their support as patrons to the paper, it could not be carried out, for the reasons already mentioned. It might have a beneficial effect to follow the awards of the judges, and criticise them, giving the whys and wherefores of the criticisms; but for obvious reasons this is impossible. It is equally impossible to write a word of commendation of all exhibits of merit, so we must be content with giving a brief and general statement of our impressions within the limit of our observation and knowledge.

We did not hear anybody say, and we cannot con-

ceive of anybody saying, after an impression gained by three steady day's close observation in the ring, but what this year's show of horses was, on the whole, a credit to the Dominion of Canada, and particularly to the Province of Ontario, for practically this province furnished all the exhibits. Some good judges of horseflesh, who had been at the Buffalo International, asserted that the show on the American side, of equines, was not to be compared to that at the Industrial. The Toronto show has borne fruit in the way of showing the people of the country what really good stock is, and that it is useless to take anything but superior animals there. Further than this, it has demonstrated to the farming community what classes of horses are required in the market; and if it only shows them the way to mate in order to produce the various classes, it will indeed be achieving a good work.

The Clydes.—Of the various classes on the ground, both from the number exhibited, and the individual merit of the exhibits as representatives of the Scotch horse, the Clydes undoubtedly represented the greatest money value in the market. In the aged stallion section the number shown was smaller than in former years, but their standard of excellence was equally high.

We have but to mention the names of Messrs. Beith & Co., W. Rennie, Innis, of Bradford and Graham Bros., as being amongst the exhibitors, to give assurance of the high class of the stock. Messrs. Geo. Moore, of Waterloo; D. McIntosh, of Brucefield; Alex. Servos, of Niagara, acted as judges, and, in our opinion, they had the most difficult task of any set of judges on the ground. It is but fair to state that they acted in the most painstaking and careful manner, and showed that they were the right men in the right place, by the knowledge they displayed in drawing nice distinctions where the difference in merit was not very great. They were not deceived by grossness or size, or misled by attaching too much importance to the desirable point, symmetry, but decided in favor of usefulness every time; that is, every point that was an evidence of weakness or proneness to disease was seriously considered, and much attention was paid to the great desideratum, *quality*. Of the six horses that came into the ring, four of them were hard to beat, and it was only after careful examination and comparison that Beith & Co.'s bay horse, St. Gatiere, was awarded first; W. Innis's, Bradford, Hard Times, second—a beautiful dark brown, and Beith & Co.'s Bounding Willow, third. The latter horse is a bay roan, and quite as heavy a horse as the first and second prize winner.

In the three-year-olds some very symmetrical, large, handsome colts had to give way to smaller ones possessing superior quality.

In the two-year-old stallion section the number shown was much larger than in any other. In the neighborhood of twenty faced the judges.

Amongst the females there were a number of fine ones, and it was a splendid opportunity for those showing animals with defects to realize their imperfections.

English Shire Horses.—This breed was poorly represented as regards the number of exhibits, but there were a number of fine specimens of the sturdy and massive breed. In the aged and three-year-old classes there were only three on hand.

In the two-year-olds there were five entries. Messrs. Ormsby & Chapman, of Oakville, showed three in this section, of their recent importations, and captured first and second honours. This firm also took first in the two-year old filly section.

Heavy Draught Horses.—*Canadian Bred Only.*—Entries were very numerous in this class, especially of youngsters and females. There were some magnificent foals, large and well formed, and if they don't deteriorate in quality as they grow older there will be more entries and finer specimens in the older sections in years to come. The Canadian bred mares were a first-rate lot, with plenty of quality, and only required a little more weight to make them matrons fit for any company in a show ring.

Percheron or French Draught Horses.—Every year seems to bring fewer exhibits in this class. There were hardly enough of these flashy colored fellows to make a contrast with the more sombre hue of the predominating bays and browns. To show how unfashionable and uncommon greys are it may be of interest to point out that there were not half a dozen of that color on the grounds outside of the French horses.

Suffolk Punch.—The Suffolk horse had as few rep-

resentatives as the French horse, and those shown are pretty familiar to exhibition visitors. Mr. Wm. Saddler's veteran show horse, Young Hero, was put in second place for the first time, if our memory serves us, in this country, when shown against Punches, Messrs. Irving & Christie's Gold Dust securing 1st. He is a much smaller horse than either Young Hero or Mr. Carson's Palmer, but is a well balanced, active animal with no prominent defects. Mr. Beck, of Thorndale, had his peerless brood mare Vanity on hand.

Thoroughbreds.—One who has attended the Toronto Industrial since its inception some nine years ago must be struck with the great increase in the number of thoroughbred stallions shown, and the excellence of the exhibits in this section. Where there only used to be two or three, this year fourteen faced the judges, and with very few exceptions they were a most desirable lot to let loose on the country as stock-getters. Last year nine horses were shown, and imported Superior took first honors, but this year did not secure a place, although he was in much better show condition. He is a grand large symmetrical horse, with plenty of bone, but has not the pin-wiry appearance of some others that were shown, so was not placed in the honor list, but nevertheless, he is a very valuable sire, and will get colts out of fair sized mares fit for anything, whether saddle, carriage, roadster, or agricultural purposes. We have not space to criticise the award made by the judges, in placing Mikado 1st, Rock and Rye 2nd, and Top Gallant 3rd. In our humble opinion they could not have done much better.

Top Gallant was perhaps more admired by lookers on than any of the others, and it would be hard for anyone to be indifferent to such a clean, well-balanced horse, with such admirable action. He is only four years old, and will doubtless develop more size and substance in another year, which at the present time he has done enough to carry. Had he been a little heavier horse it would have been hard to keep him so low down in the honor list. Mr. Wylie, of Bowmanville, is to be congratulated for being the owner of such a wonderfully good one.

Mikado is a grand, powerful looking horse, with quarters, back, middle, shoulders, neck and head that are hard to beat. Without being hypercritical, one would like to see a little more timber in his legs, although the quality of what he has is good.

Some considered that Mr. J. C. Smith's fine big chestnut should have been cast on account of the large bony deposit on the pastern. As the horse is broken down in that leg, it appears to the writer that there has been quite sufficient exciting cause to account for the presence of the ring bone, and allay any fear of its being of a hereditary character. Without making any further comment upon this class, and referring to the many other good ones there were in it, we would like to add, that if the former consult their own interests, and want to build up a light horse stock in this country that will give us an enviable reputation as a horse-producing country, they will give these horses unstinted patronage with their best mares.

Carriage Horses.—The show of horses on the halter was far in advance, both as regards numbers and quality, to those exhibited in the harness sections. It is very evident that very little attention is paid in this country to the production of good carriage horses. It is undoubtedly no easy task to match horses closely and get them right in every particular, but if there were a few more in the country to choose from it might be more frequently accomplished than it is. There were a number of gentlemen on the grounds ready to pay from \$600 to \$1000 for good, sound pairs, but they were not to be had for love or money. In the single class from 15.3 to 16.2 there were a few about right. In the sections shown on the halter the two-year-olds were well represented and they were a good lot. There were two imported colts amongst them that are registered in the Cleveland Bay Stud Book. A. Marsh & Son, Richmond Hill, had a very well grown imported horse there that secured 1st. The judges had some difficulty in deciding between him and the other imported one owned by Mr. A. Wilson, of Paris. The latter was not so well furnished as the former, but when he gets another year over his head will be a hard one to beat in a show-ring. He is a typical Cleveland as regards color, range, and action, and possesses more quality than is usually seen in a coacher. He beat Mr. F. J. Fisher's Extra for 2nd place. This is an exceedingly handsome colt, as full of quality as a thoroughbred. He is a beautiful dark brown, with no white, and his sire is the imp. thoroughbred Orange Boy. There were also two nice

brown colts, got by the thoroughbred horse Chancellor. Wm. Pearse, Carleton West, owns one he calls King Tom, and Mr. B. Ainsworth, of Toronto, the other.

Roadsters.—There were more entries in the roadster class than in any other.

In single roadsters there were thirty-five nominated, and, as might be imagined, there was a keen contest.

In the double roadster class there was a pair that Ontario had the honor of sending to the Buffalo International and taking first prize with.

Buffalo, in addition to its enormous wealth, has the reputation of being one of the greatest centres for roadster horses on the Continent, consequently it was no small honor for Mr. Jas. Mathews, of Acton, to go over with his spanking chestnuts and take first. In Toronto, Mr. Dixon, the photographer, took first with his blacks, Mr. Mathews taking second.

Roadster stallions were numerous and of high quality in all the sections.

Hunters and Saddle Horses.—Perhaps the judging of no other class of horses at the show excites more interest than the above, judging by the way every available seeing point is taken advantage of to watch the jumping and the paces being gone through.

A good saddle horse is always an attractive animal to a lover of horses, and if he likes the pig skin as well, a mettlesome, well-bred one has an increasing charm for him.

The turnout of saddle horses was a fairly good one this year, but we have seen much better in Toronto, and it is well to inform the farmers that do not already know it, that there is a great demand for such horses, and at very remunerative figures.

The horse that took first prize in the heavy weight hunter class, was sold on the ground for \$400, and there were a number of gentlemen present ready and anxious to procure saddle horses.

Any of them that saw the horse referred to as being sold for \$500 would readily see that he is fit for any kind of farm work, for he weighs fully twelve hundred.

You will occasionally get a fairly good saddle horse that is not by a thoroughbred, but it is very exceptional, and the only safe way to breed them is to mate an ordinary good sized mare with a thoroughbred of fair substance.

PRIZE LIST.

The following is the prize list of live stock at the Toronto Industrial, carefully revised:

THOROUGHBRED HORSES.

Stallion, 4 years old and upwards, best calculated to improve the breed of horses in Canada—1, James Beatty, Cobourg; 2, J. C. Smith, Toronto; 3, John Wyllie, Bowmanville.

Stallion, 2 years old—1, W. Hendrie, Hamilton; 2, J. R. Martin, Cayuga; 3, Geo. H. Carter, V. S., Guelph.

Stallion of any age—Jas. Beatty.
Mare or gelding, 4 years old and upwards—1, John Dymont, Orkney; 2, A. Smith, Toronto; 3, John Dymont.

Three years old filly—1, Geo. D. Scagel, Owen Sound; 2, W. Hendrie; 3, Geo. H. Carter, V. S.

Two years old filly—John Dymont.
Yearling filly or gelding—1, John Dymont; 2, Chas. Lynde, Brooklyn.

Brood mare with foal by her side—1, John Dymont; 2, John Dymont; 3, Robt. Wilson, Brampton.

Foal of 1888—1, John Dymont; 2, John Dymont.
Best mare of any age—John Dymont.

ROADSTER HORSES.

Stallion, 4 years old and upwards, not less than 15½ hands—1, Henry Crozier, Owen Sound; 2, John Carrol, St. Catharines; 3, J. Craig, Hamilton; special—1, Arch. Wilson, Paris Station; 2, R. Beith & Co., Bowmanville.

Stallion, 3 years old—1, W. Henry, jr., Cheltenham; 2, A. Matheson, Tilsonburg; 3, John Alex. Mackenzie, Presque Isle.

Stallion, 2 years old—1, W. Cowper, Dundas; 2, S. Shunk, Edgely; 3, W. Hendrie.

Yearling colt, entire—1, O. A. Coates, Bothwell; 2, Geo. Gooderham, jr., Meadowvale; 3, John E. Armstrong, Don.

Stallion of any age—Henry Crozier.
Three years old gelding—1, W. C. Short, Salem; 2, Joseph T. Loughheed, Derry West.

Three years old filly—1, M. H. Aikins, M. D.,

Burnhamthorpe; 2, Thellar Johnston, Britannia; 3, Thomas Bell & Sons, Equestrian.

Two years old gelding—1, J. J. Stewart, Mount Charles; 2, R. Dorsey & Sons, Summerville; 3, Thomas Read, Victoria Square.

Two year old filly—1, William Hendrie, Hamilton; 2, W. Fulkinghorn, Elora; 3, W. Husband, Nassagaweya.

Yearling filly or gelding—John Milton, Paris.
Brood mare with foal by her side, not less than 15½ hands—1, John Palmer, Richmond Hill; 2, R. J. McLean, Todmorden; 3, James Smith, Waterdown.

Foal of 1888—1, M. H. Aikins, Burnhamthorpe; 2, Jas. Smith; 3, Rogers & Welsh, St. Catharines.
Pair Matched Horses (geldings or mares) in harness, 15½ hands and under—1, S. J. Dixon, Toronto; 2, James Matthews, Acton; 3, R. H. Howard, Toronto.

Single horse (gelding or mare) in harness, 15½ hands and under—W. J. Fletcher, Alliston; 2, Geo. Andrews, Oakville; 3, John Palmer, Richmond Hill.
Best mare of any age—Jas. Matthews, Acton.

Best stallion of any age, with five of his progeny of any sex or age—1, Henry Crozier; 2, John Carrol, St. Catharines.

CARRIAGE HORSES.

Stallion, 4 years old and upwards, 16½ hands and over—1, W. C. Brown, Meadowvale; 2, E. A. Brickman, Redderville; 3, Henry Hammond, Cainsville.

Stallion, 3 years old—1, Irving & Christie, West Winchester; 2, D. D. Wilson, Seaford; 3, Alex. Allen, Ancaster.

Stallion, 2 years old—1, A. Marsh & Son, Richmond Hill; 2, Arch. Wilson, Paris Station; 3, T. J. Fisher, Georgetown.

Yearling colt, entire—1, Daniel Campbell, Bradford; 2, Wm. Chew, Weston; 3, D. Neeland & Sons, Hornby.

Stallion of any age—Irving & Christie.
Pair of matched carriage horses (mares or geldings), not less than 16½ hands—1, Charles Brown, Toronto; 2, H. V. Cawthra, Toronto.

Pair matched carriage horses, not less than 15½ hands and under 16½ hands—1, W. G. Gooderham, Toronto; 2, W. T. Murray, Toronto; 3, The B. G. Tisdale Co., Brantford.

Gelding, 3 years old—D. Campbell, Brantford.
Filly, 3 years old—1, Richard P. Wilson, Sheridan; 2, John Milton, Paris station; 3, W. J. Wilson, Dunkerron.

Filly, 2 years old—1, D. Campbell, Brantford; 2, James Clarke, Brampton.
Yearling filly or gelding—1, John Clark, Alloa; 2, D. Campbell.

Brood mare, 16 hands and over, with foal by her side—M. H. Aikens.
Single carriage horse (gelding or mare), in harness, 15½ to 16½ hands—1, C. A. Burns, Toronto; 2, A. J. Fulton, Toronto; 3, W. Dcherty, Clinton.

Single carriage horse (gelding or mare), in harness, not less than 16½ hands—1, George Pepper, Toronto; 2, Thomas Brownridge, Lisgar; 3, B. G. Moore, Oakville.

Best mare of any age—M. H. Aikens.

HORSES FOR GENERAL PURPOSES.

Stallion, 4 years old and upwards—1, Wm. Sadler, Galt; 2, Matt. Ramage, Strathaven; 3, D. A. Bawtinhamer, Copetown.

Stallion, 3 years old—Frank Moore, Brampton.
Stallion for general purposes, any age—W. Sadler, Galt.

Brood mare with foal by her side—1, Neil Smith, Woodhill; 2, John Clark, Alloa; 3, Geo. Hopkins, Claremont.

Foal of 1888—1, Geo. Hopkins; 2, Neil Smith; 3, John Clark.

Matched team (geldings or mares) in harness—1, Alph Bush, Jordan; 2, Clark Bros., Toronto; 3, B. E. Clarke, Fairbank.

Best mare of any age—Alph Bush.
Best team of general purpose horses (geldings or mares)—R. J. McLean, Todmorden.

AGRICULTURAL HORSES.

Stallion, 4 years old and upwards—1, Joseph Vance, New Hamburg; 2, J. & G. Dolphin, Tara; 3, Ed. Dixon, Weston.

Stallion, 3 years old—1, Thomas A. Robinson, Carlton West; 2, Wm. McDermott, Living Springs.

Stallion, 2 years old—1, Fothergill & Sons, Burlington; 2, Ed. Barker, Dollar; 3, W. V. Brown, Shanty Bay.

Yearling colt, entire—1, Henry Boag, Queensville; 2, Jas. A. Boag, Queensville; 3, William Duncan, Emory.

Stallion for agricultural purposes, of any age—Joseph Vance, New Hamburg.

Filly, 3 years old—1, John Swain, Ravenshoe; 2, Geo. McHugh, Lindsay; 3, J. & R. McQueen, Salem.

Filly, 2 years old—1, J. A. Boag; 2, Neil Smith, Woodhill; 3, R. McCowan, Scarboro.

Yearling filly or gelding—1, John Swain; 2, Jas. Clarke, Brampton.

Brood mare, with foal by her side—1, John P. Boag; 2, Mounsey Bros., Woodbridge; 3, John Clark, Alloa.

Foal of 1888—1, Mounsey Bros.; 2, Isaac Dolery, Fairbank; 3, Thos. Whiteside, Ellesmere.

Matched farm team (geldings or mares), in harness—1, R. J. McLean; 2, David Lawrie, Purpleville; 3, W. J. Might, Britannia.

Best mare of any age—John Swain.

CLYDESDALES (IMPORTED OR CANADIAN BRED).

Clydesdale stallion, 4 years old and upwards—1, R. Beith & Co, Bowmanville; 2, Wm. Innis, Bradford; 3, R. Beith & Co.

Stallion, 3 years old—1, Graham Bros., Claremont; 2, R. Beith & Co.; 3, Thos. Meagher, Doncaster.

Stallion, 2 years old—1, Graham Bros.; 2, R. Beith & Co.; 3, Alex. Cameron, Ashburn.

Yearling colt, entire—1, R. Beith & Co.; 2, Graham Bros.; 3, Wm. Rennie, Toronto.

Clydesdale stallion, any age—R. Beith & Co.
Filly, 3 years old—1, Graham Bros.; 2, John Gilmour, Toronto; 3, D. & O. Sorby, Guelph.

Filly, 2 years old—1, T. W. Evans, Yelverton; 2, D. & O. Sorby; 3, Thos. Meagher.

Yearling filly or gelding—1, T. W. Evans; 2, Graham Bros.; 3, W. Rennie.

Brood mare, with foal by her side—1, D. & R. McGeachie, Castlemore; 2, Peter McDermaid, Pickering; 3, Neil Smith.

Foal of 1888—1, John Davidson, Ashburn, 2, Peter McDermaid; 3, Neil Smith.

Mare, with two of her progeny, all to be *bona fide* the property of the exhibitor—D. & R. McGeachie.
Span of Clydesdales (geldings or mares)—1, D. & O. Sorby; 2, John Roach, Yorkville.

Best imported or Canadian bred Clydesdale stallion of any age, with five of his progeny, any age or sex—Neil Smith, Woodhill.

SPECIAL SWEEPSTAKES FOR CLYDESDALES.

Best Clydesdale stallion, any age, registered in the Clydesdale Stud Book of Canada—R. Beith & Co.

Best Clydesdale stallion, 4 years and upwards, bred in the Province of Ontario—G. W. Curtis, Lindsay.

Stallion, 2 and under 3 years—John Davidson.
Stallion, 1 and under 2 years—John Davidson.

Stallion, under 1 year old—John Davidson.
Best mare, 4 years old and upwards—John L. Howard, Sutton West.

Mare, 3 and under 4 years—John Bone, Edgely.
Mare, under 1 year old—John L. Howard, Sutton West.

ENGLISH SHIRE HORSES.

(Imported or Canadian Bred.)

Stallion, 4 years old and upwards—1, Jas. Gardhouse & Sons, Highfield; 2, Thos. Downey, River-view; 3, Morris, Stone & Wellington, Welland.

Stallion 3 years old—1, Edward Small, Jessopville; 2, Chas. Jackson, Mayfield; 3, T. J. Smith, Tormore.

Stallion, 2 years old—1, Ormsby & Chapman, Oakville; 2, Ormsby & Chapman; 3, W. H. Millman, Woodstock.

Yearling colt, entire—1, Ormsby & Chapman; 2, Morris, Stone & Wellington.

Stallion, any age—J. Gardhouse & Sons.
Filly, 2 years old—1, Ormsby & Chapman; 2, Ormsby & Chapman.

Yearling filly or gelding—W. H. Millman.
Brood mare with foal by her side—Morris, Stone & Wellington.

Foal of 1888—Morris, Stone & Wellington.
Mare, with two of her progeny, all to be *bona fide* the property of the exhibitor—Morris, Stone & Wellington.

Span of Shire horses—W. H. Millman.
Best heavy draught stallion of any age, with five of

his progeny, any sex or age—Jas. Gardhouse & Sons.

SWERPSTAKES FOR HEAVY DRAUGHTS, ANY AGE OR BREED.

Best heavy draught stallion, any age or breed—R. Beith & Sons.

Best heavy draught mare, any age or breed—1, D. & O. Sorby, Guelph.

HEAVY DRAUGHT HORSES.

(Canadian bred only.)

Heavy draught stallion, 4 years old and upwards—1, G. W. Curtiss, Lindsay; 2, R. R. Newborn, Mimico.

Stallion, 2 years old—1, John Davidson, Ashburn; 2, D. & R. McGeachie, Castlemore; 3, D. S. McFarlane, Claremont.

Yearling colt, entire—1, John Davidson; 2, John P. Boag; 3, Thos. McMichael, Seaforth.

Heavy draught stallion, any age—John Davidson.

Filly, 3 years old—1, John Bone, Edgeley; 2, W. Foster, Humber; 3, W. Foster.

Filly, 2 year old—1, Geo. McHugh, Lindsay; 2, J. Gardhouse & Sons; 3, Wm. Martin, Ida.

Yearling filly or gelding—1, D. & R. McGeachie; 2, W. McDermott, Living Springs.

Brood mare with foal by her side—1, J. Gardhouse & Sons; 2, D. & R. McGeachie; 3, John Howard, Sutton West.

Foal of 1888—1, John P. Boag; 2, D. & R. McGeachie; 3, Thos. Tales, Brampton.

Mare, with two of her progeny, all to be *bonu fide* the property of the exhibitor—J. Gardhouse & Sons.

Span of heavy draught horses (geldings or mares)—1, J. Gardhouse & Sons; 2, Hendrie & Co., Toronto.

SPECIAL PRIZES, SUFFOLK PUNCH, FRENCH DRAUGHT AND CANADIAN BRED HEAVY DRAUGHTS.

For the best Canadian bred heavy draught, French draught or Suffolk Punch stallion, of any age, with five of his progeny, any sex or age—1, R. R. Newborn, Mimico; 2, E. A. Brickman, Rednerville.

SUFFOLK PUNCH HORSES, IMPORTED OR BRED FROM PURE IMPORTED STOCK.

Stallion, 3 years old and upwards—1, Irving & Christie, W. Winchester; 2, Wm. Saddler, Galt; 3, John Carson, Kingston.

Stallion, 2 years old—Wm. Saddler.

Stallion, any age—Irving & Christie.

Mare, 3 years and upwards—1, Jos. Beck, Thorndale; 2, Irving & Christie.

Filly, 2 years old—Henry Logie, Lindsay.

Yearling filly or gelding—A. & J. W. Salmon, Thorndale.

Foal of 1888—Jos. Beck.

Best mare, any age—Jos. Beck.

PERCHERONS OR FRENCH DRAUGHT HORSES.

Stallion, 3 years old and upwards—1, Walker & Shantz, Hayesville; 2, E. A. Brickman; 3, E. A. Brickman.

Stallion, 2 years old—A. L. Shore, Thornbury.

Yearling colt—1, E. A. Brickman; 2, J. W. Anderson, Rossmore.

Stallion, any age—Walker & Shantz.

Mare, 3 years old and upwards—E. A. Brickman.

Foal of 1888—1, E. A. Brickman; 2, J. W. Anderson; 3, E. A. Brickman.

Matched team (geldings or mares) in harness—1, E. A. Brickman; 2, E. A. Brickman.

Best mare, any age—E. A. Brickman.

DOG CART, COBS AND CAVALRY HORSES.

Dog cart horse, style and action (mare or gelding), 4 years and over, not under 15½ hands, to be shown in harness—1, W. T. Murray, Toronto; 2, F. A. Campbell, Toronto; 3, Sanderson Percy, Toronto.

Cobs, in harness (mare or gelding), 4 years and over, not under 14 hands and not exceeding 15 hands, must be stoutly built and have style and good action—1, John Holderness, Toronto; 2, John Holderness; 3, Arthur Hanscome, Toronto.

Cavalry horses, the best and best trained charger, to be shown with cavalry accoutrements and to be ridden by officers or privates in uniform—Skirrow & Son, Toronto.

PONIES.

Pair of ponies, in harness, 12 hands and under—1, S. B. Orson, Toronto; 2, C. T. Robinson, Napanee.

Pony, in single harness, over 12 hands, up to 13½ hands—1, W. Wright, Toronto; 2, Waldie Steed, Streetsville.

Pair of ponies, in harness, over 12 hands, up to 13½ hands—1, Turnbull Smith, Toronto.

Pony, in single harness, over 13½ hands, up to 14½ hands—1, Frank Daily, Sutton West; 2, Col. W. D. Otter, Toronto.

Pair of ponies, in harness, over 13½ hands, up to 14½ hands—R. H. Hemstreet, Aylmer; 2, Jos. Gabey, Toronto.

TANDEM.

Best tandem of horses and turnout, style and skill in handling, etc.—1, J. D. Hay, Toronto; 2, F. A. Campbell, V. S., Toronto.

For the best tandem of ponies and turnout, style, skill in handling, etc.—G. W. Robinson, Kingston.

CATTLE.

DURHAMS.

Bull, three years old and upwards—1, John Miller & Sons, Brougham; 2, Thomas Nelson & Sons, Brantford; 3, J. Gardhouse & Sons, Highfield.

Bull, 2 years old—W. Shier, Sunderland; 2, Joe. Redmond, Peterborough; 3, Thos. Mackay, Richmond.

Bull, 1 year old—1, J. & R. Watt, Salem; 2, Jno. Dryden, Brooklin; 3, Ephraim Groff, Waterloo.

Bull calf, under 1 year—1, Thos. Nelson & Sons, Brantford; 2, John Morgan & Sons, Kerwood; 3, Thos. Nelson & Sons, Brantford.

Cow, 4 years old and upward—1, Thomas Nelson & Sons, Brantford; 2, J. Russell & Bro., Richmond Hill; 3, J. & W. B. Watt, Salem.

Cow, 3 years old—1, Thos. Nelson & Sons; 2, J. Russell & Bros., Richmond Hill; 3, J. & B. W. Watt.

Heifer, 2 years old—1, Thos. Nelson & Sons, Brantford; 2, J. & W. B. Watt, Salem; 3, J. Russell & Bro., Richmond Hill.

Heifer, 1 year old—1, Thomas Nelson & Sons, Brantford; 2, Thos. Nelson & Sons; 3, John Dryden, Brooklin.

Heifer calf under 1 year—1, J. Russell & Bro., Richmond Hill; 2, Thos. Nelson & Sons; 3, John Dryden.

Four calves under 1 year old, bred and owned by exhibitor—1, Thos. Nelson & Sons; 2, John Dryden; 3, J. & W. B. Watt.

Herd, consisting of one bull and four females, over one year old, owned by the exhibitor—1, Thos. Nelson & Sons; 2, J. & W. B. Watt; 3, J. Russell & Bros.

Bull of any age—John Miller & Sons, Brougham, silver medal.

HEREFORDS.

Bull, 3 years old and upwards—1, M. H. Cochrane, Hillhurst P. Q.; 2, M. H. Cochrane; 3, R. J. Mackie, Oshawa.

Bull, 2 years old—J. O. Henry, Oshawa.

Bull, 1 year old—1, M. H. Cochrane, Hillhurst; 2, F. A. Fleming, Weston; 3, R. J. Mackie, Oshawa.

Bull calf, under 1 year—1, F. A. Fleming, Weston; 2, L. G. Drew, Oshawa; 3, R. J. Mackie, Oshawa.

Bull of any age—1, M. H. Cochrane, Hillhurst, Que.

Cow, 4 years old and upwards—1, F. A. Fleming, Weston; 2, F. A. Fleming, Weston; 3, R. J. Mackie, Oshawa.

Cow, 3 years old—1, M. H. Cochrane, Hillhurst, Que.; 2, M. H. Cochrane, Hillhurst; 3, F. A. Fleming, Weston.

Heifer, 2 years old—1, M. H. Cochrane, Hillhurst, Que.; 2, F. A. Fleming, Weston.

Heifer, 1 year old—1, M. H. Cochrane, Hillhurst; 2, F. A. Fleming, Weston; 3, R. J. Mackie, Oshawa.

Heifer calf, under 1 year—1, M. H. Cochrane; 2, F. A. Fleming; 3, F. A. Fleming.

Herd, consisting of 1 bull and 4 females, over 1 year old, owned by the exhibitor—1, M. H. Cochrane; 2, F. A. Fleming; 3, R. J. Mackie.

POLLED ANGUS.

Bull, 3 years old and upwards—1, Hay & Patton, New Lowell; 2, M. H. Cochrane, Hillhurst.

Bull calf, under 1 year—1, Hay & Patton; 2, Hay & Patton.

Bull of any age—Hay & Patton.

Cow, 4 years old and upwards—1, Hay & Patton; 2, Hay & Patton; 3, M. H. Cochrane.

Cow, 3 years old—1, Hay & Patton, New Lowell; 2, Hay & Patton.

Heifer, 2 years old—1, Hay & Patton; 2, M. H. Cochrane, Hillhurst, Que.; 3, M. H. Cochrane.

Heifer, 1 year old—1, M. H. Cochrane; 2, Hay & Patton; 3, M. H. Cochrane.

Heifer calf, under 1 year—Hay & Patton.

Herd, consisting of 1 bull and 4 females over 1 year old, owned by the exhibitor—1, Hay & Patton; 2, M. H. Cochrane.

GALLOWAYS.

Bull, 3 years old and upwards—1, Thomas McRae, Guelph; 2, W. Kough, Owen Sound; 3, Thomas McRae.

Bull, 2 year old—1, Thomas McRae; 2, W. Kough; 3, Thos. McRae.

Bull, 1 year old—1, Thomas McRae; 2, Thomas McRae; 3, Thomas McRae.

Bull calf, under 1 year—1, Wm. Kough; 2, Thos. McRae; 3, Thos. McRae.

Bull of any age—1, Thos. McRae.

Cow, 4 year old and upwards—1, Thomas McRae; 2, Wm. Kough; 3, Thomas McRae.

Cow, 3 years old—1, Wm. Kough; 2, Thos. McRae; 3, Thos. McRae.

Heifer, 2 years old—1, Thomas McRae; 2, Thos. McRae; 3, Thos. McRae.

Heifer, 1 year old—1, Wm. Kough; 2, Thomas McRae; 3, Thos. McRae.

Heifer calf, under 1 year—1, Thos. McRae; 2, Wm. Kough; 3, Thos. McRae.

Herd, consisting of 1 bull and 4 females, over 1 year old, owned by the exhibitor—1, Thos. McRae; 2, Wm. Kough.

DEVONS.

Bull, 3 years old and upwards—1, W. J. Rudd, Eden Mills; 2, Samuel Harper, Cobourg.

Bull, 2 years old—2, Samuel Harper.

Bull, 1 year old—1, W. J. Rudd; 2, S. Harper.

Bull calf, under 1 year—1, W. J. Rudd; 2, S. Harper; 3, W. J. Rudd.

Bull of any age—1, W. J. Rudd.

Cow, 4 years old and upwards—1, W. J. Rudd; 2, S. Harper; 3, W. J. Rudd.

Cow, 3 years old—1, S. Harper; 2, S. Harper; 3, W. J. Rudd.

Heifer, 2 years old—1, W. J. Rudd; 2, W. J. Rudd; 3, S. Harper.

Heifer, 1 year old—1, S. Harper; 2, S. Harper; 3, W. J. Rudd.

Heifer calf, under 1 year—1, S. Harper; 2, W. J. Rudd; 3, W. J. Rudd.

Herd, consisting of 1 bull and 4 females, over 1 year old, owned by the exhibitor—1, W. J. Rudd; 2, S. Harper.

AYRSHIRES.

Bull, 3 years old and upwards—1, Thos. Guy, Oshawa; 2, Thos. Guy; 3, Andrew Gerrard, Hamilton.

Bull, 2 years old—1, Thos. Guy; 2, Jas. McCormick, Rockton; 3, Andrew Gerrard.

Bull, 1 year old—1, Nichol Bros., Plattsville; 2, Jas. McCormick.

Bull calf, under 1 year—1, Andrew Gerrard; 2, Thos. Guy; 3, W. M. & J. C. Smith, Fairfield Plains.

Bull of any age—Thos. Guy.

Cow, 4 years old and upwards—1, J. McCormick; 2, Thos. Guy; 3, W. M. & J. C. Smith.

Cow, 3 years old—1, Andrew Gerrard; 2, J. McCormick; 3, W. M. & J. C. Smith.

Heifer, 2 years old—1, Thos. Guy; 2, Andrew Gerrard; 3, J. McCormick.

Heifer, 1 year old—1, Thos. Guy; 2, J. McCormick; 3, Andrew Gerrard.

Heifer calf, under 1 year—1, Thos. Guy; 2, J. McCormick; 3, Thos. Guy.

Herd, consisting of 1 bull and 4 females, over 1 year old, owned by the exhibitor—1, Thos. Guy; 2, J. McCormick; 3, Andrew Gerrard.

JERSEYS.

Bull, 3 years old and upwards—1, Oaklands Jersey Stock Farm, Hamilton; 2, A. McLean Howard, jr., Toronto; 3, Oaklands Jersey Stock Farm.

Bull, 2 years old—Oakdale Stock Farm, Pickering; 2, Oaklands Jersey Stock Farm; 3, James Clarke, Brampton.

Bull, 1 year old—1 and 2, Oaklands Jersey Stock Farm; 3, W. Rolph, Markham.

Bull calf, under 1 year—1 and 2, Oaklands Jersey Stock Farm; 3, R. L. Spencer, Eglinton.

Bull of any age—Oaklands Jersey Stock Farm.

Cow, 4 years old and upwards—1, 2 and 3, Oaklands Jersey Stock Farm.

Cow, 3 years old—1, Wm. Rolph Markham; 2, A. McLean Howard, jr., Toronto.

Heifer, 2 years old—1, Wm. Rolph; 2, R. L. Spencer, Eglinton; 3, A. McLean Howard, jr.

Heifer 1 year old—1, Oaklands Jersey Stock Farm; 2, W. Rolph; 3, Oaklands Jersey Stock Farm.

Heifer calf under 1 year—1, Wm. Rolph; 2, Oaklands Jersey Stock Farm; 3, John Turner, Oakville.

Herd of 1 bull and 4 females, over 1 year old, owned by exhibitor—1 and 2, Oaklands Jersey Stock Farm; 3, Wm. Rolph.

GUERNSEYS.

Bull, 3 years old and upwards—Wm. Davies, Toronto.

Bull calf, under 1 year—Wm. Davies.

Bull of any age—Wm. Davies, Toronto.

Cow, 4 years old and upwards—1 and 2, Wm. Davies.

Cow, 3 years old—Wm. Davies.

Heifer, 1 year old—Wm. Davies.

Herd—Wm. Davies.

HOLSTEINS.

Bull, 3 years old and upwards—1, Oakdale Stock Farm, Pickering; 2, Oakdale Stock Farm; 3, Smith Bros., Churchville.

Bull, 2 years old—1, A. A. Farewell, Oshawa; 2, Major E. H. Foster, Davenport; 3, Ed. Macklim & Sons, Fenella.

Bull, 1 year old—1, Smith Bros.; 2, Ed. Macklim & Sons.

Bull calf, under 1 year—1, Oakdale Stock Farm; 2, Oakdale Stock Farm; 3, Oakdale Stock Farm.

Bull of any age—Oakdale Stock Farm.

Cow, 4 years old and upwards—1, Smith Bros.; 2, Oakdale Stock Farm; 3, Oakdale Stock Farm.

Cow, 3 years old—1, Oakdale Stock Farm; 2, Oakdale Stock Farm; 3, Oakdale Stock Farm.

Heifer, 2 years old—1, Smith Bros.; 2, Major E. H. Foster; 3, Major E. H. Foster.

Heifer 1 year old—1, Oakdale Stock Farm; 2, Oakdale Stock Farm; 3, Smith Bros.

Heifer calf under 1 year—1, Smith Bros.; 2, Oakdale Stock Farm; 3, Oakdale Stock Farm.

Herd of 1 bull and 4 females, over 1 year old, owned by exhibitor—1, Oakdale Stock Farm; 2, Smith Bros.; 3, Oakdale Stock Farm.

For the best Holstein bull, any age, and five of his progeny, any age—Oakdale Stock Farm.

GRADE CATTLE.

Grade cow, 4 years old and upwards—1, John Morgan & Sons, Kerwood; 2, Thos. Shaw, Hamilton; 3, Jas. Oke, Alvinston.

Cow, 3 years old—Thos. Shaw.

Heifer, 2 years old—1, Thos. Shaw; 2, Hay & Patton, New Lowell.

Heifer, 1 year old—1, Jas. Oke; 2, W. Lockhart, Alma; 3, Thos. Shaw.

Heifer calf under 1 year—1, Thos. Shaw; 2, John Campbell, jr., Woodville; 3, Thos. McKay, Richwood.

Four females, over 1 year old, the property of the exhibitor—1, J. & R. McQueen, Salem; 2, Thos. Shaw.

FAT CATTLE, ANY BREED.

Fat ox or steer, 3 years old and over—1, Wm. Snyder & Sons, Brampton; 2, Weir & Weir, St. Marys.

Fat steer, under 3 years old—1, James Oke, Alvinston; 2, James Oke; 3, Weir & Weir.

Fat cow or heifer, 4 years old and over—1, W. C. Short, Salem; 2, Heber Rawlings, Ravenswood; 3, John Morgan & Sons, Kerwood.

Fat heifer, under 4 years old—1, Jas. Oke; 2, J. & R. McQueen, Salem; 3, J. & R. McQueen.

Pair of fat cattle, of any age, neither of which are entered in other sections—1, Weir & Weir; 2, J. & R. McQueen; 3, Weir & Weir.

SHEEP.

COTSWOLDS.

Ram, 2 shears and over—1, Laidlaw & Jackson, Wilton Grove; 2, J. G. Snell & Bro., Edmonton; 3, Hugh Crawford, Canboro.

Shearling ram—1, J. G. Snell & Bro.; 2, Heber Rawlings, Ravenswood; 3, J. G. Snell & Bro.

Ram lamb—1 and 2, J. G. Snell & Bro.; 3, H. Crawford.

Two ewes, 2 shears and over—1 and 2, Laidlaw & Jackson; 3, J. G. Snell & Bro.

Two shearling ewes—1 and 2, J. G. Snell & Bro.; 3, H. Crawford.

Two ewe lambs—1 and 2, J. G. Snell & Bro.; 3, Laidlaw & Jackson.

Pen of Cotswolds, 1 ram, 4 ewes and 2 ewe lambs—J. G. Snell & Bro.; 2 and 3, Laidlaw & Jackson.

LEICESTERS.

Ram, 2 shears and over—1, John Kelly, Shakespear; 2, W. J. Somers, St. Marys; 3, Wm. Whitelaw, Guelph.

Shearling ram—1, John Kelly; 2, W. J. Somers; 3, D. Harvey, West McGillivray.

Ram lamb—1, John Kelly; 2, Nichol Bros., Plattsville; 3, John Kelly.

Two ewes, 2 shears and over—1, D. Harvey; 2, John Kelly; 3, W. J. Somers.

Two shearling ewes—1, John Kelly; 2, D. Harvey; 3, W. J. Somers.

Two ewe lambs—1, John Kelly; 2, D. Harvey; 3, W. J. Somers.

Pen of Leicesters, 1 ram, 4 ewes, and 2 ewe lambs—1, John Kelly; 2, D. Harvey; 3, W. J. Somers.

LINCOLNS.

Ram, 2 shears and over—1, John Wood, Freeman; 2, Wm. Oliver, Avonbank; 3, James Murray, Clanbrassil.

Shearling ram—1, Wm. Walker, Ilderton; 2, John Wood; 3, Wm. Oliver.

Ram lamb—1, Wm. Oliver; 2, Wm. Oliver; 3, John Wood.

Two ewes, 2 shears and over—1, W. Walker; 2, Wm. Oliver; 3, James Murray.

Two shearling ewes—1, W. Walker; 2, W. Walker; 3, Wm. Oliver.

Two ewe lambs—1, W. Walker; 2, W. Oliver; 3, W. Walker.

Pen of Lincolns, 1 ram, 4 ewes, and 2 ewe lambs—1, W. Walker; 2, W. Oliver; 3, James Murray.

SHROPSHIRE.

Ram, 2 shears and over—1, John Dryden, Brooklin; 2, John Campbell, Jr., Woodville; 3, John Campbell, Jr.

Shearling ram—1, John Campbell, Jr.; 2, John Miller & Sons, Brougham; 3, John Dryden.

Ram lamb—1, John Miller; 2, John Dryden; 3, John Dryden.

Two ewes, 2 shears and over—1, John Miller & Sons; 2, D. G. Hammer & Sons, Mount Vernon; 3, John Campbell, Jr.

Two shearling ewes—1, John Miller & Sons; 2, John Dryden; 3, W. H. Beatty, Wilton Grove.

Two ewe lambs—1, John Dryden; 2, John Campbell, Jr.; 3, John Miller & Sons.

Pen of Shropshires, 1 ram, 4 ewes, and two ewe lambs—1, John Miller & Sons; 2, John Dryden; 3, John Campbell, Jr.

For the best pure bred Shropshire ram, and 7 of his offspring, viz.: 2 ram lambs and 5 ewe lambs, also pure bred. Special prize, presented by the Shropshire Sheep-Breeders' Association of England, silver cup, value \$50—John Dryden.

OXFORD AND HAMPSHIRE DOWNS.

Ram, two shears and over—1, Peter Arkell, Teeswater; 2, James Tolton, Walkerton; 3, P. Arkell.

Shearling ram—1, Smith Evans, Gourlock; 2, Jas. Tolton; 3, Jas. Tolton.

Ram lamb—1, P. Arkell; 2, Smith Evans; 3, Jas. Tolton.

Two ewes, two shears and over—1, P. Arkell; 2, Smith Evans; 3, P. Arkell.

Two shearling ewes—1, Smith Evans; 2 and 3, P. Arkell.

Two ewe lambs—1 and 2, Smith Evans; 3, P. Arkell.

Pen of Oxford and Hampshire Downs, 1 ram, 4 ewes and 2 ewe lambs—1, Smith Evans; 2 and 3, P. Arkell.

SOUTHDOWNS.

Ram, two shears and over—1, John Jackson, Abingdon; 2 and 3, Robt. Shaw, Glanford Station.

Shearling Ram—1 and 2, John Jackson; 3, Robt. Shaw.

Ram lamb—1, Jno. Jackson; 2 and 3, Robt. Shaw.

Two ewes two shears and over—1, Jno. Jackson, 2, Robt. Shaw; 3, Jno. Jackson.

Two shearling ewes—1, 2 and 3, Jno. Jackson, 2, Robt. Shaw; 3, Jno. Jackson.

Pen of Southdowns, 1 ram, 4 ewes and 2 ewe lambs—1 and 2, Jno. Jackson; 3, Robt. Shaw.

MERINOS.

Ram, two shears and over—1, Rock Bailey, Union; 2, W. M. & J. C. Smith, Fairfield Plains; 3, W. M. & J. C. Smith.

Shearling ram—1, Rock Bailey; 2, W. M. & J. C. Smith; 3, G. & B. Deo, New Sarum.

Ram lamb—1, W. M. & J. C. Smith; 2, G. & B. Deo; 3, Rock Bailey.

Two ewes, two shears and over—1, Rock Bailey; 2 and 3, W. M. & J. C. Smith.

Two shearling ewes—1, W. M. & J. C. Smith; 2 and 3, G. & B. Deo.

Two ewe lambs—1, Rock Bailey; 2 and 3, W. M. & J. C. Smith.

Pen of Merinos, 1 ram, 4 ewes and two ewe lambs—1, Rock Bailey; 2, W. M. & J. C. Smith; 3, G. & B. Deo.

DORSET HORNED SHEEP.

Ram, 2 shears and over—Oaklands Jersey Stock Farm, Hamilton.

Shearling ram—Oaklands Jersey Stock Farm.

Ram lamb—1, Oaklands Jersey Stock Farm; 2, W. Rolph, Markham; 3, Oaklands Jersey Stock Farm.

Two ewes, 2 shears and over—1, Oaklands Jersey Stock Farm; 2, W. Rolph.

Two shearling ewes—1, Oaklands Jersey Stock Farm; 2, W. Rolph.

Two ewe lambs—1, Oaklands Jersey Stock Farm.

Pen of Dorset sheep, 1 ram, 4 ewes and 2 ewe lambs—1, Oaklands Jersey Stock Farm; 2, W. Rolph.

FAT SHEEP.

Two fat wethers, 2 shears and over—1, John Rutherford, Rossville; 2, John Campbell, jr., Woodville.

Two fat wethers, under 2 years—1, J. Rutherford; 2, W. H. Beattie, Wilton Grove.

Two fat ewes—1, Jas. Murray, Clanbrassil; 2, D. Harvey, West McGillivray.

PIGS.

IMPROVED BERKSHIRES.

Boar, over 2 years—1, Geo. Green, Fairview; 2, Simmons & Quirie, Ivan and Delaware; 3, George Green.

Boar, over 1 and under 2 years—1 and 2, George Green.

Boar, over 6 and under 12 months—1, George Green; 2, Simmons & Quirie; 3, George Green.

Boar, under 6 months—1, Simmons & Quirie; 2 and 3, George Green.

Sow, over 2 years—1 and 2, Geo. Green.

Sow, over 1 and under 2 years—1, Simmons & Quirie; 2 and 3, George Green.

Sow, over 6 and under 12 months—1 and 2, Geo. Green; 3, Simmons & Quirie.

Sow, under 6 months—1, Simmons & Quirie; 2 and 3, George Green.

Best improved Berkshire boar and 2 sows, of any age—1 and 2, George Green.

SUFFOLKS.

Boar, over 2 years—1, A. Frank & Sons, The Grange; 2, A. Frank & Sons; 3, R. Dorsey & Sons, Summerville.

Boar, over 1 and under 2 years—1, R. Dorsey & Sons; 2, A. Frank & Sons; 3, Joseph Featherston, Credit.

Boar, over 6 and under 12 months—1, W. H. Reid, Lockton; 2, J. Featherston; 3, A. Frank & Sons.

Boar, under 6 months—1, R. Dorsey & Sons; 2, R. Dorsey & Sons; 3, A. Frank & Sons.

Sow, over 2 years—1, R. Dorsey & Sons; 2, A. Frank & Sons; 3, A. Frank & Sons.

Sow, over 1 and under 2 years—1, R. Dorsey & Sons; 2, A. Frank & Sons; 3, A. Frank & Sons.

Sow, over 6 and under 12 months—1, A. Frank & Sons; 2, A. Frank & Sons; 3, R. Dorsey & Sons.
Sow, under 6 months—1, A. Frank & Sons; 2, A. Frank & Sons; 3, R. Dorsey & Sons.
Best improved Suffolk boar and two sows, of any age—1, R. Dorsey & Sons; 2, A. Frank & Sons.

ESSEX.

Boar, over 2 years—1, Jos. Featherston; 2, Jos. Featherston.
Boar, over 1 and under 2 years—Jos. Featherston.
Boar, over 6 and under 12 months—1, Jos. Featherston; 2, Jos. Featherston.
Boar, under 6 months—1, J. Featherston; 2, J. Featherston.
Sow, over 2 years—1, J. Featherston; 2, J. Featherston.
Sow, over 1 and under 2 years—1, J. Featherston; 2, J. Featherston.
Sow, over 6 and under 12 months—1, J. Featherston; 2, J. Featherston; 3, J. Featherston.
Sow, under 6 months—1, J. Featherston; 2, J. Featherston; 3, J. Featherston.
Best improved Essex boar and two sows, of any age—1, J. Featherston; 2, J. Featherston.

POLAND CHINA.

Boar, over 2 years—1, W. M. & J. C. Smith, Fairfield Plains; 2, W. M. & J. C. Smith.
Boar, over 1 and under 2 years—1, W. M. & J. C. Smith; 2, R. Dorsey & Sons.
Boar, over 6 and under 12 months—1, R. Dorsey & Sons; 2, R. Dorsey & Sons.
Boar, under 6 months—1, W. M. & J. C. Smith; 2, W. M. & J. C. Smith.
Sow, over 2 years—1, W. M. & J. C. Smith; 2, W. M. & J. C. Smith; 3, R. Dorsey & Sons.
Sow, over 1 and under 2 years—1, W. M. & J. C. Smith; 2, W. M. & J. C. Smith.
Sow, over 6 and under 12 months—1, W. M. & J. C. Smith; 2, R. Dorsey & Sons.
Sow, under 6 months—1, W. M. & J. C. Smith; 2, W. M. & J. C. Smith; 3, R. Dorsey & Sons.
Best improved Poland China boar and 2 sows of any age—1 and 2, W. M. & J. C. Smith.

LARGE YORKSHIRES, CHESTER WHITES, OHIO IMPROVED CHESTER WHITES, AND OTHER LARGE BREEDS.

Boar, over two years—1, J. Featherston, Credit; 2, Daniel DeCourcy, Bornholm; 3, Ormsby & Chapman, Oakville.
Boar, over 1 and under 2 years—1, J. Featherston; 2, R. Dorsey & Sons; 3, Ormsby & Chapman.
Boar, over 6 and under 12 months—1, J. Featherston; 2, Daniel DeCourcy; 3, Ormsby & Chapman.
Boar, under 6 months—1, J. Featherston; 2, Daniel DeCourcy; 3, J. Featherston.
Sow, over 2 years—1 and 2, R. Dorsey & Sons; 3, J. Featherston.
Sow, over 1 and under 2 years—1, J. Featherston; 2 and 3, Ormsby & Chapman.
Sow, over 6 months and under 12 months—1, J. Featherston; 2, Daniel DeCourcy; 3, Ormsby & Chapman.
Sow, under 6 months—1 and 2, J. Featherston; 3, Daniel DeCourcy.
Best improved Yorkshire boar and 2 sows, of any age—1, J. Featherston; 2, R. Dorsey & Sons.

FIELD GRAINS.

WHEAT.

For the best collection, consisting of fall wheat (red or white), spring wheat (red or white), barley (6 rowed), oats (black or white), and small field peas, all the growth of exhibitor, two bushels of each—1, Gaylord Greeniaus, Sheridan; 2, Thomas & J. Manderson, Myrtle; 3, Charles Grant, Thornbury.
Best 10 bushels of white winter wheat. The first prize is presented by the Canada Company of Toronto—1, Robert Tuck, Freeman; 2, Wm. Tuck, Waterdown; 3, Geo. Baker, Simcoe.
Wheat, white winter, two bushels—1, M. Harrison, Brampton; 2, Thos. & J. Manderson; 3, Wm. Tuck.
Wheat, red winter, 10 bushels—1, George Baker, Simcoe; 2, Walter Hartman, Clarksburg; 3, Robt. Tuck, Freeman.
Wheat, red winter, 2 bushels—1, Enoch Erb, Waterloo; 2, Geo. Baker; 3, Thomas & J. Manderson.
Wheat, spring, Scotch Fife, 6 bushels—1, W. Mc-

Cowan, Scarboro; 2, Gaylord Greeniaus; 3, Robt. Tuck.

Wheat, spring, white Fife, 2 bushels—1, Gaylord Greeniaus; 2, Archibald Londry, Thornbury; 3, T. & J. Manderson.

Wheat, bald spring, 2 bushels—1, Gaylord Greeniaus; 2, Robt. Tuck; 3, John Duff, Myrtle.

Wheat, bearded spring, 2 bushels—1, T. & J. Manderson; 2, Chas. Grant, Thornbury; 3, Archibald Londry.

BARLEY.

Barley (two-rowed), 2 bushels—1, Wm. Tuck; 2, Enoch Erb; 3, T. & J. Manderson.

Barley (six rowed), 2 bushels—1, O. W. Laird, Orangeville; 2, Stephen Cotton, Bowmanville; 3, Robt. Tuck, Freeman.

RYE.

Rye, winter, 2 bushels—1, Rock Bailey, Union; 2, R. P. Wilson, Sheridan; 3, J. Duff, Myrtle.

Rye, spring, 2 bushels—1, J. Duff; 2, C. Grant, Thornbury; 3, T. & J. Manderson.

OATS.

Oats, white, 2 bushels—1, John Duff, Myrtle; 2, Gaylord Greeniaus, Sheridan; 3, Charles Grant, Thornbury.

Oats, black, 2 bushels—1st, Enoch Arb, Waterloo; 2, Simpson Rennie, Milliken; 3, J. W. Laird, Orangeville.

TARES.

Tares, bushel of—1, J. Brewls, Ringwood; 2, R. P. Wilson, Sheridan; 3, Charles Grant, Thornbury.

BUCKWHEAT.

Buckwheat, bushel of—1, Oliver Beaudry, St Alexis, Que.; 2, J. D. Lutz, Stoney Creek; 3, J. Brewls, Ringwood.

PEAS.

Peas, small field, 2 bushels—1, R. Tuck, Freeman; 2, Hiram Dymont, West Flamboro; 3, Enoch Erb, Waterloo.

Peas, Marrowfat, 2 bushels, white—1, J. Duff, Myrtle; 2, J. W. Laird, Orangeville; 3, Charles Grant, Thornbury.

Peas, Marrowfat, 2 bushels, blackeye—1, Gaylord Greeniaus, Sheridan; John Duff, Myrtle; 3, J. W. Laird, Orangeville.

Peas, field, 2 bushels of any other kind—1, John Duff; 2, W. J. Law, Solina; 3, S. McKenzie, Beaverton.

BEANS.

Beans, small white field, bushel—M. Harrison, Brampton; 2, Enoch Erb, Waterloo; 3, Jno. Duff, Myrtle.

Beans, large white field, bushel—1, Jno. Duff; 2, Geo. A. Weese, Albany; 3, Enoch Erb, Waterloo.

Veterinary.

Was the Treatment the Best?

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—If you can spare the room in your valuable paper I will give you some account of our troubles with live-stock this spring. Perhaps you will be able to give me some information that we may not trip over the same straws again. About April 15th one of our best horses got kicked in the hock-joint. It did not look at all serious, but there was a little clear watery substance running out. It would mix readily with water, so of course we thought it could not be oil. We bathed it well with hot water and put lime on the opening. To all appearance it was doing well, and the discharge was almost entirely stopped. A day or two after I spoke to a veterinary surgeon about it, and he pronounced it oil, without seeing it, and said we were treating it wrongly. He blistered it around the opening, and had us bathe it with cold water. The oil or watery substance now flowed freely, and the horse, instead of getting better, grew worse as fast as possible, and in about three weeks he pronounced him incurable, but gave us the privilege of calling in another vet. The new man started to syringe the opening or openings, as by this time there were two, with carbolic acid and water, and to bathe about five or six times daily with hot water. He also cut away the proud flesh with caustic. We kept on bathing for about two months till we got down to one

hour daily, and used the syringe occasionally. The horse cannot put his foot to the ground yet. It is almost as hard as bone and nearly as large as three natural hocks; but the discharge stopped some time ago. The horse is a skeleton, though he has had grain regularly, about 1½ gallons per day. If you can throw any light upon this case it would oblige the writer and might be of use to others.

Mortality has also been rather serious in our sheep this season. First, we lost a pure-bred Leicester ram during March. We think his lungs were affected. He breathed very heavily, and died in a few days. His passages were natural. The next was a ewe. She put out a water bag about a week before her time was up for lambing. Of course we thought she must have been pained, but could not lamb, and so assisted her, taking the lambs away. She died, as also the lambs. On relating the case to an old Scotchman, who had been a shepherd in his younger days, he said he had only known one case like it before; that case was left to nature and the ewe lambed all right in about a week, and got along well.

The next was a ewe on the grass, with a pair of lambs about a month old. She was sick about a day. On opening her we found her liver had been partly inflamed. Her paunch next to it was also inflamed, and the food inside seemed to be in a state of fermentation. The veterinary surgeon said she might have got an over feed of narcotic food, or might have strained herself jumping. I suspect he didn't know very much about it. The lambs lived all right.

The third was a ewe with a pair of lambs about the same age. A swelling appeared in the left half of her bag. She seemed to be pained quite a bit, but was healthy in other ways. Two veterinary surgeons said to bathe with hot water and poultice. It did not seem to take any effect. The swelling did not come to a point, could get nothing but blood by probing, and very little of that. The ewe died, but lingeringly.

The fourth was a very fine ram. His trouble was in his throat. He did not breathe freely, and it took about two months to wind him up. The veterinary surgeon said it was in the bronchial tubes. We gave him a powder composed of ammonia, carbonate, ginger, potash chlorate, liquorice pulv., gin in milk three times a day, but it did not help him, apparently.

The fifth case was that of a ewe with a bag exactly the same as the other, so this time I called in my shepherd friend. He said he had never seen a case like it, but thought that if we put in a rowel it might help it. We put a liniment on the rowel to make it run, but it took no effect. We then put a little croton oil on, and that started it, and the ewe was soon all right again.

A YOUNG FARMER.

County Grey, Ont.

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

There is no doubt that it was a case of "open joint," as the treatment adopted would not of itself cause the disease to take the course it did. It is an error to suppose that what is vulgarly called joint oil will not mix with water, for this fluid really contains very little oil, being principally made up of water and an albuminous substance; which latter gives it its lubricant action, in facilitating the movement and preventing the friction in joints. So much depends upon the stage at which one is called upon to treat a case of open joint that it is impossible to state what course should be adopted without examining the particular case in question. The opening of important joints like the hock or stifle, although the wound may look trifling, is always a serious matter, and the successful treatment of such frequently baffles the skill of the most experienced and skillful, particularly if they do not get the case in hand from the beginning. The wound should be closed immediately, in order to prevent access of air into the joint; but if some time is allowed to elapse before doing this, the application of a blister is usually followed by the best results. It looks like rather heroic treatment to apply a blister, but experience justifies its use.

We cannot say anything about case number two—in Leicester ram—but think that most likely your supposition, with regard to the lungs being the seat of trouble, is correct. A *post mortem* would have shown. Case number three—in ewe where water-bags were presented. We would always make an examination, if the water bags were presented and no progress is made towards delivery; and in most cases some oil will be required to be given at once.

Cases numbers four and five we cannot throw any light upon, from description given.

The Farm.

AGRICULTURAL societies may obtain any prize in our Premium Offers by sending the required number of names.

THE series of articles on weeds, from the able pen of Prof. J. Hoyes Panton, of the Ontario Agricultural College, concludes with this issue. Those who read them attentively cannot fail to have very greatly profited by their perusal. As will have been observed, the most dangerous ones were sketched by our artist, that they might the more readily be detected by those not acquainted with them on their first arrival. Weeds should receive the treatment that is meted out to a foe by an Indian bent on seeking revenge. They should be pursued by an unsparring hate and slaughtered wherever they are found. The numbers of the JOURNAL containing this series of articles should be laid away with an especial care for future reference.

THE waste of decay going on continuously on all farms is a serious item, and should, wherever possible, be counterbalanced by growth which is even more rapid than decay. Fences will become unsightly. The frost heaves the posts, the boards decay, and the wires get broken or unstrung. To renew this waste there should be a more than corresponding growth. Trees most suitable for growing posts may be planted, and in a few years will be large enough for the purpose. The walnut will soon become large enough for posts, and none of the trees need be cut for this purpose except the thinnings of the plantation. The larch, owing to its erect growth, also answers a good purpose where living posts are wanted. The gleanings from a larch plantation are very useful as rails, or as poles taking the place of scantlings on the top of posts. Other varieties may be grown adapted to the locality. In these northern latitudes the question of fencing for the future is a more perplexing one than in latitudes where hedges grow more readily. Of course there may always be the resource to the barbed wire fences, but these have their disadvantages. It is not improbable that, with our immense stores of iron, fences of this material may be used in the form of post and bars. In the meantime let us, so far as we can, provide for the renewal of constant decay by continuous growth.

Manurial Value of Gypsum or "Plaster."

We are asked to give information as to whether land plaster when kept long in bags, or otherwise, deteriorates in value as a fertilizer for clover. We remark, the gypsum would not decrease in fertilizing value kept as stated, provided it was not exposed to rain.

Gypsum, being somewhat similar to lime in composition, acts almost the same as the latter. It has also a direct and an indirect manurial value. In the former case, it furnishes the plant with calcium and also with sulphur; this latter constituent giving it great value for clover, turnips, etc., as it enters largely into their composition. Clover and other leguminous plants contain large quantities of albuminoids, and one of the constituents of the latter is sulphur; and hence it is claimed that the beneficial effect of gypsum on plants of this nature is due to the sulphur present. It acts indirectly by setting free potash and other constituents already in the soil.

The results of the experiments of Sir John Bennet Lawes, at Rothamstead, as to the effect of different

manures on different fodder plants, was that gypsum exerts a very marked effect in increasing the growth of leguminous crops, such as clover, peas, etc. A very light dusting of gypsum on young clover is said to produce a good effect as regards its growth. When applied in this manner— $\frac{1}{4}$ to $\frac{1}{2}$ bushel is the quantity used per acre. Otherwise, 1 to 4 bushels per acre is the usual rate of application.

Lime as a Fertilizer.

We are sometimes asked by correspondents our opinion as to the value of lime as a fertilizer, conditions under which it should be applied, modes of application, etc. A word or two on this subject would therefore not be amiss.

Perhaps of all manures none are affected more by conditions than that of lime. Quantities varying from 10 to 50 bushels per acre may be accepted as a safe and economical range for its application, although we have records of quantities as large as 400 bushels giving good results on the stiffest of clay land. As in the case of most manures it acts in two different ways, directly and indirectly. Directly, by the plant food which is contained in it; indirectly, by rendering food already in the soil fit for plant growth, and also by improving the mechanical condition of the soil, making it more mellow. As regards its value as a direct manure, it is of secondary importance, as the only element it contains of value to plants is a small quantity of the element calcium, about 40 lbs. in 100 lbs. By setting free plant food which would otherwise be of no use to the plant, it performs a very important function in the soil. It is apparent that for lime to give the best results it should only be applied to land that does not lack nourishing food for plants; but owing to the insoluble nature of this food, or perhaps owing to its poor mechanical condition, the plant is unable to grow. Further, new land or reclaimed swamps are much benefited by liming, as the lime in this case furnishes a base for the formation of nitrates. This power of neutralizing injurious acids makes it of great value for the purpose of sweetening sour lands.

As to its effect on the crop, it does not produce any marked result on any special part of the plant, such as the grain or straw, but favors the general growth and health of the plant, thus increasing the yield. It has been credited with being of value for the prevention of rust in wheat, and the finger-and-toe disease in turnips, but it is only unfavorable to these diseases in so much as it improves the health of the plant. It was thought that this element calcium contained in lime was capable of taking the place of potash, a very important element in plant growth. Such, however, has not been found the case, although it is now accepted that it is one of the necessary elements for plant life.

Manurial Value of Soap Factory Refuse.

In answer to a correspondent of Prince Edward Island, as to the value of the liquid refuse from a soap factory, we give the following: In the manufacture of soap the practice usually followed when ashes are used is to leach the ashes and then boil the lye with fat. As a result of the boiling the fat changes to a fatty acid and unites with the potash, forming a soap. This latter is thrown out of solution by the addition of common salt to the mixture. The liquid that remains, and to which our correspondent refers, is what is known to chemists as glycerol; a substance consisting of carbon, hydrogen and oxygen. As these elements are abundant in nature, the carbon and oxygen in the atmosphere, and the hydrogen and oxygen in water,

they are not considered as being of any commercial value as fertilizers. The only value that this liquid would have, would be given it by the very small quantity of potash and soda contained in it that did not enter into combination with the fatty acid. Owing to the very small quantity of these elements, however, we do not think it would be worth anything as manure.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL

The Education of Farmers.

BY J. H. SMITH, ANCASTER, PRESIDENT OF THE ONTARIO TEACHERS' ASSOCIATION, 1887-8.

(Continued from September.)

To get a correct view of education we must consider it in regard to the manner in which it is obtained, and of its value to us as individuals. This subject naturally presents itself to our minds under two forms, the one being that education which requires an effort on our part to obtain, and the other that which costs us no effort. To the former we may apply the term conscious education, to the latter, unconscious, indicating by these terms the manner in which we receive our education. By the term conscious as applied to education we mean that education which we obtain, (1) by means of observation, (2) by means of study, and (3) from conducting experiments. Not many will take exception to the statement that comparatively few people are close and careful observers. The majority apparently belong to that class "who have eyes and see not." Observation, to be valuable, must be close, accurate and comprehensive. Close, so that no important details are omitted; accurate, that our information shall be trustworthy; comprehensive, that a sufficient number of facts shall be gathered, then the conclusions at which we arrive will undoubtedly be along the line of truth. Successful men, in whatever station in life—most of necessity cultivate this faculty. The ceaseless intellectual faculty of childhood is evidently quickened by an eager desire to know and understand; that is, to observe and examine. This habit, if judiciously cultivated in early life, will lead to the accumulation of a vast fund of valuable knowledge, increase the mental power, and improve the intellectual development of the person thus trained. The observant mind, like the closely-woven net of the skilful fisherman, encloses and retains the living treasures of thought which lie scattered in endless profusion throughout the realm of nature. The careless or unobservant spectator, like the five foolish virgins spoken of in Scripture, has no oil in his lamp, and no means to furnish it, hence he is left in the darkness of ignorance and superstition. The five senses are the avenues that lead to the mind, and it is through them that the mind is furnished with its proper mental food. As the powers of the mind increase and the various faculties are developed, it becomes capable of evolving new ideas and thoughts out of the mental food that has already been secured by the senses. These processes continue through life, and this leads us to the consideration of study as an educational instrumentality. The value of study for purposes of mental discipline, and the acquisition of useful knowledge is so self-evident that no proof is necessary to maintain the truth of this statement. If, however, such proof were demanded, we have only to refer to our schools and colleges to attest the value that we, as a people, place upon it. While we may agree upon the general principle that study is valuable, yet when we attempt to define, or lay down a course of study, we find ourselves in the midst of very divergent opinions, and contradictory notions. By study we have

access to that vast fund of knowledge which has been left us as a legacy from the past This knowledge is second-hand, while that which we obtain by observation is in reality our own. After observation comes investigation; this leads to study and experiment, and these bring in their train that valuable thing called experience, which, after all, is but another name for wisdom. Some writer, I think it is Bacon, has said that "knowledge is power," but knowledge and wisdom differ. The poet expresses this thought beautifully when he says:

" Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own;
Knowledge, a rude, unprofitable mass,
The mere materials with which wisdom builds,
Till smoothed and squared and fitted into place,
Does but encumber whom it seems to enrich."

That we are unconsciously being educated by our surroundings may not be so clearly seen as the effects that follow what we have called conscious education, yet the influence of these surroundings in moulding and fashioning our character and habits of life, though silent, are in nearly every case constant. The effects of these silent and constant forces are worthy of our most careful consideration.

The limits of this paper preclude anything like a full discussion of this point, and I can therefore only direct the attention of thoughtful minds to it. Let me, however, give utterance to a conviction that has long been on my mind, that we, as a people, do not devote enough attention to making our homes and schools pleasant in all their surroundings. It is too often looked upon as a waste of money and time, if things that are only pleasant and agreeable to look at receive much attention. We want more attention paid to these silent but powerful influences that are constantly at work developing either good or bad traits in the character and thought of our young people. The object, then, of all true education, is to cultivate the observing faculties, strengthen those of reflection, enlarge the powers of expression, correct the judgment, and so regulate the will-power that the highest type of manhood, the Christian gentleman and lady, shall be developed. This can only be done when the conscious and unconscious elements of our education work together in harmony, and for the grand object of elevating and ennobling one common humanity.

The means for obtaining this education are (1) our homes, (2) the public schools, (3) the professional schools and universities. But the limits of this paper preclude the possibility of enlarging upon these subdivisions.

(To be continued.)

Early Varieties of Barley and Oats.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Being a subscriber to the LIVE-STOCK JOURNAL, I thought I might take the liberty of asking you to do me a favor. I want to get some early heavy-yielding variety of white oats and barley for seed, and thought I could not ask a better person for the information. Up here we want the earliest seed we can get. I have grown the "Welcome" oat for three years, and it answers the purpose of earliness, but does not yield heavy enough. I tried the "Racehorse" oat this summer, but it has the same fault as the "Welcome." If you know of any good, early, heavy-yielding white oat and a good kind of six-rowed barley I wish you would let me know their names and who I could purchase the seed from, and greatly oblige,

WM. B. STULL.

Calgary P. O., N. W. T.

The variety of oats that we would recommend to you is the "Calder." This originated near here, and as it has not been supplied extensively to the trade yet, the above is only a local name. Besides being a heavier bearer than either the "Racehorse" or "Welcome" it has also the reputation of being earlier. Another variety that we have found in our experience to possess in a high degree the qualities you seek, is "Carter's prize" oat. The "Improved six-rowed barley" would, we think, meet your requirements. It is an early ripening variety, yielding a bright berry and good straw. Messrs. John A. Bruce & Co., of this city, can supply you with all the above.

Weeds.

BY PROF. J. HOVES PANTON, ONTARIO AGRICULTURAL COLLEGE, GUELPH.
XI.—THE MOST COMMON WEEDS IN ONTARIO IN A TABULATED FORM.

ORDER.	SCIENTIFIC NAME.	COMMON NAME.	SOIL FAVORABLE.	DURATION.
Ranunculaceae	Ranunculus acris.....	Buttercup	Clay, loam, lime..	Perennial.
"	R. sceleratus	Cursed crowfoot.....	Loam.....	Annual.
"	R. bulbosus.....	Bulbous buttercup	Sandy, lime.....	Perennial.
"	Aconitum Napellus.....	Monkshood.....	Loam.....	"
Cruciferae	Camelina sativa.....	False flax.....	".....	Annual.
"	Capsella Bursa Pastoris.....	Shepherd's purse.....	".....	"
"	Lepidium Virginicum	Pepper-grass.....	".....	"
"	Thlaspi arvense	Penny cress.....	".....	"
"	Sinapis arvensis.....	Mustard.....	".....	"
Papaveraceae	Papaver Rhoeas.....	Corn poppy.....	Sandy.....	"
"	Chelidonium majus.....	Celandine.....	Loam.....	Perennial.
Hypericaceae	Hypericum perforatum.....	St. John's wort.....	Clay.....	"
Caryophyllaceae	Lychnis Githago.....	Corn cockle.....	Loam.....	Annual.
"	L. dioica.....	Campion.....	" lime.....	Perennial.
"	Silene inflata.....	Bladder campion.....	" ".....	"
"	Cerastium arvense.....	Fi'd mo'se-e'r, obi'kw'd.....	".....	Annual.
"	Stellaria media.....	Chickweed.....	" sand.....	"
Portulacaceae	Portulaca oleracea.....	Purslane.....	".....	"
Malvaceae	Malva rotundifolia.....	Mallow.....	".....	Perennial.
"	M. sylvestris.....	High mallow.....	".....	"
"	M. moschata.....	Musk mallow.....	".....	"
Anacardiaceae	Rhus venenata.....	Poison sumach.....	".....	"
"	R. toxicodendron.....	Poison ivy.....	".....	"
Rosaceae	Potentilla anserina.....	Silver weed.....	Lime, loam.....	"
Onagraceae	Oenothera biennis.....	Evening primrose.....	Loam.....	Biennial.
"	Epilobium angustifolium.....	Great willow-herb.....	Sandy.....	Perennial.
Leguminosae	Vicia.....	Wild pea.....	Loam.....	Annual.
"	Medicago lupulina.....	Black medick.....	Sandy.....	"
"	Melilotus alba.....	Sweet clover.....	Loam.....	"
"	M. officinalis.....	Yellow clover.....	".....	"
Umbelliferae	Daucus carota.....	Wild carrot.....	Clay, lime.....	Biennial.
"	Cicuta maculata.....	Cow-bane.....	Loam.....	Perennial.
"	Conium maculatum.....	Poison hemlock.....	".....	Biennial.
Compositae	Senecio vulgaris.....	Groundsel.....	".....	Annual.
"	Ambrosia artemisiaefolia.....	Ragweed.....	".....	"
"	Maruta cotula.....	Mayweed.....	".....	"
"	Sonchus oleraceus.....	Sow-thistle.....	" iime.....	"
"	S. arvensis.....	Corn sow-thistle.....	".....	Perennial.
"	Erechtithes hieracifolia.....	Fireweed.....	".....	Annual.
"	Lappa major.....	Burdock.....	Clay, lime.....	Biennial.
"	Cichorium intybus.....	Chicory.....	Lime.....	Perennial.
"	Rudbeckia hirta.....	Cone flower.....	Loam.....	"
"	Leucanthemum vulgare.....	Ox-eye daisy.....	Clay.....	"
"	Taraxacum Dens leonis.....	Dandelion.....	Loam.....	"
"	Achillea Millefolium.....	Yarrow.....	".....	"
"	Tanacetum vulgare.....	Tansy.....	".....	"
"	Solidago nemoralis.....	Golden rod.....	".....	"
"	S. Canadensis.....	Common rod.....	".....	"
"	Erigeron annuum.....	Fleabane.....	".....	Annual.
"	E. Canadense.....	Fleabane.....	".....	"
"	E. Philadelphicum.....	Fleabane.....	".....	Perennial.
"	Cirsium arvense.....	Canadian thistle.....	".....	"
"	C. lanceolatum.....	Bull thistle.....	".....	Biennial.
Dipsaceae	Dipsacus sylvestris.....	Teasel.....	Clay, lime.....	"
Plantaginaceae	Plantago major.....	Plantain.....	Loam.....	Perennial.
"	P. lanceolata.....	Rib-grass.....	".....	"
Scrophulariaceae	Verbascum Thapsus.....	Mullein.....	".....	Biennial.
"	Veronica arvensis.....	Speedwell.....	".....	Annual.
"	Linaria vulgaris.....	Toad-flax.....	".....	Perennial.
Verbenaceae	Verbena hastata.....	Vervian.....	".....	"
Labiatae	Leonurus Cardiaea.....	Motherwort.....	".....	"
"	Nepeta Cataria.....	Catnip.....	".....	"
"	Brunella Vulgaris.....	Self-heal.....	".....	"
Borraginaceae	Lithospermum arvense.....	Pigeon weed.....	Clay, lime.....	Annual and Biennial.
"	Cynoglossum officinale.....	Hound's tongue.....	Loam.....	Biennial.
"	C. Morisoni.....	Beggar's lice.....	".....	"
"	Echinosperrum Lappula.....	Stickseed.....	".....	Annual
"	Echium vulgare.....	Blueweed.....	Lime.....	Biennial
Convolvulaceae	Convolvulus arvensis.....	Bindweed.....	Loam.....	Perennial.
Solanaceae	Datura Stramonium.....	Thorn apple.....	".....	Annual.
"	Solanum Dulcamara.....	Bittersweet.....	".....	Perennial.
"	S. nigrum.....	Woody nightshade.....	".....	Annual.
Asclepiadaceae	Asclepias Cornuti.....	Milkweed.....	".....	Perennial.
Euphorbiaceae	Euphorbia.....	Spurge maculata.....	".....	Annual.
Chenopodiaceae	Chenopodium album.....	Lamb's quarters.....	".....	"
"	Bitum capitatum.....	Strawberry blite.....	".....	" and Biennial.
Polygonaceae	Rumex crispus.....	Dock.....	".....	Perennial.
"	R. acetosella.....	Sorrel.....	Sandy.....	"
"	Polygonum Persicaria.....	Lady's thumb.....	Loam.....	Annual.
"	P. aviculare.....	Knot-grass.....	".....	"
"	P. Convolvulus.....	Climbing buckwheat.....	".....	"
Amarantaceae	Amarantus retroflexus.....	Pigweed.....	".....	"
Urticaceae	Urtica dioica.....	Nettle.....	".....	Perennial.
Gramineae	Avena fatua.....	Wild oat.....	Clay.....	Annual.
"	Bromus secalinus.....	Chess.....	Loam, lime.....	"
"	Setaria glauca.....	Foxtail.....	".....	"
"	Triticum repens.....	Couch grass.....	Loam.....	Perennial.
"	Panicum Crus-galli.....	Barnyard grass.....	".....	Annual.
Equisetaceae	Equisetum arvense.....	Horsetail.....	Sandy.....	Perennial.

Manure for Turnips.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Can you give me any information as to what is the best artificial manure to be used with 20 loads of barnyard manure to the acre for turnips? The land is a clay loam, rather dry. I would like to increase my crop and work less land. The manure was ploughed in by the 23th of May and well rolled. I will plough again, and then drill. When should I spread—before I plough, or before I drill? Almost any kind of fertilizers can be bought here. Do you consider common barrel salt as good as coarse bag salt for the purpose? Please give the amount of each to be sown, if not too much trouble.

EDW. CUFF.

Allandale, Ont.

The above communication arriving too late to prove of use to the enquirer this season, we have held it over to the present number, our columns having been very much crowded in the past. Twenty tons farmyard manure, well saved and rotted, contains more than a sufficient quantity of food constituents to feed an average crop of turnips. But experience has proven that turnips have little power of assimilating the combined phosphoric acid in a soil, and hence it is that manures rich in this give such good results. The manures that best supply this phosphoric acid are superphosphates, ground phosphate or bones. Of the first mentioned, about 300 lbs. per acre is the usual quantity applied. It proves most beneficial for turnips when used as a topdressing. Ground phosphate or bones, although rich in phosphoric acid, would be almost useless to apply to your soil. Owing to their insolubility they are only beneficial when applied to soils rich in vegetable matter, or when composted with farmyard manure. The humic and carbonic acids produced in the fermentation of farmyard manure acting on the bones, renders them more soluble and fit for plant food. As a manure, no difference in value exists between the different salts you mention. The coarser may not be as soluble in the chemical laboratory, but the difference would be so slight as not to be noticeable in practice. In reference to rate of application, etc., we refer you to the May number of the JOURNAL, where, under the title of "Salt as a Fertilizer," you will find this fully discussed.

Permanent Pastures.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Our grass seed has failed to catch this year again. Although it started nicely in the spring, it has all been killed by the drouth, and there is nothing left for us but to re-seed with rye. Your excellent advice given some time ago in the Toronto Mail strengthens my conviction that such would be a wise course. In addition to suffering from drouth last summer the fire burned over a large acreage of wood and permanent pasture lands. We have always after fires in our woods or pastures, seeded them soon after, and thus get excellent pastures amongst the lying timber. Almost everything said on permanent pastures has therefore been of much interest to us, and as opportunity occurred we have sown many varieties of seeds. Nothing, however, stays with us except timothy and cocksfoot or orchard grass. The clover goes in two years unless allowed to reseed itself. Having so much pasture land, over 3,000 acres, we manage to let some of it re-seed itself every year. June grass beats every other grass in this district, and when it increases so as to get possession, our neighbors say the land is "run out." However, we find, although the yield is less in weight, it is not so in fattening qualities.

Do you know of any permanent pastures of any age over six years, that are not mostly June grass? I shall try some alsike and lucerne this time. We have dry loam land on limestone, and bottoms more or less soft, some of which is drained. Do you know by actual experience—your own or that of other persons—the kind of grass that will stand for six years or over against June grass?

G. LAIDLAW.

The Fort, Victoria Road, Ont.

What Mr. Laidlaw has written concerning the non-permanence of permanent pastures on the European plan is in keeping with the experience that has usually confronted us when investigating this matter amongst our farmers. We do not consider that these mixed grasses will be of much service after the third year, either for hay or pasture. We favor sowing them in reasonable quantity for the increased value of the hay crop during the first and second seasons, but not in the hope of their abiding for a term of years. No one of these foreign grasses will hold out for six years in the conflict with the elements under average conditions, unless it be orchard grass, which is both hardy and aggressive, but not so valuable unless early in the season as some other varieties of grass.

Nor do we look very hopefully on the future of lucerne in this country. It does not, somehow, take very kindly to our soil, but it is well to go on experimenting with it until certainty is reached. The best grasses that we have for average purposes that require to be sown, are timothy, red alsike and clover, the latter being better adapted to damp low lands than the former, and retaining its hold longer. Let us stimulate the growth of these to the utmost, and in seasons when they fail to catch, grow supplemental foods in the greatest possible quantity.

Report of the Judges on the Prize Farms for 1887.

BALSAM LODGE.—(continued.)

The stock consisted of three span of working horses, one of which are imported Clydesdale mares, and one span for driving, several young horses, three imported Clydesdale stallions and an English cob. One of the Clyde stallions, Prince of Airds, is a magnificent fellow, which this year captured 3d prize at the Royal of Newcastle, and in 1886 the same at the Highland and Agricultural Society's Show, of Scotland. The cob, Little Wonder, a beautiful bay with black points, was imported from his native Westmoreland by Mr. Fothergill, and this year made a most successful season, having been used mostly on half-blood mares of the leggy order. The results cannot fail to be watched with a great deal of interest. Those stallions were bought for service in the neighborhood. Sheep and sundry other kind of stock are kept, but in conjunction with the other farm.

The live stock feature of Balsam Lodge, at present, is the milch cows, of which there were on hand about forty head, to be increased to fifty head with the arrival of a more propitious season, and the adoption of a more complete soiling system. The price paid for the milk delivered at the Oaklands dairy is twelve cents per gallon for the winter months and ten cents for the summer. The following are the returns for the months May, June, July and August:

Gals. Milk.	Price.	Return per month.
May..... 7,939	10c.....	\$193 90
June..... 2,498	10c.....	249 80
July..... 2,143	10c.....	214 30
Aug..... 7,968	10c.....	196 80
Return for 4 months.....		\$854 80
Average for 1 month.....		213 70
Average per cow per month....		5 34

The above is not a very large return, but we must consider, (1) that the cows were all picked up this year and have not yet been subjected to the weeding process; (2) that the season was phenomenal in its dryness; and (3) that the arrangements for soiling are not yet perfected.

As to management, the cows are simply pastured until July 1st, when they were given one quart chopped oats and bran each, twice a day. About the same time they were fed oats and vetches, until the second week in August, after which they were given green corn cut with the mower, and fed in a sod field twice a day. It is Mr. Fothergill's intention, next year, to soil altogether, commencing with rye, following this with oats and vetches, and then corn; to cease growing barley and to grow oats instead.

The crops of the farm were good, notwithstanding the unsparring drouth, the corn in hills being particularly so, the tillage clean, with the exception of now and then a lonely thistle, and all obstacles to cultiva-

tion completely removed but two or three remnants of stone piles which would have looked better somewhere else.

The rotation will be substantially the same as that given last year, with the modifications already indicated. The meadows are mowed one or two years and pastured one or two, usually lying three years in grass. When broken up, which is done in autumn, oats are sown the following spring, followed by hoed crop, and seeded with the crop that will follow. Summer fallow comes after oats or sod, and is thorough, the number of ploughings being gauged by the existence of weed life, but it is usually not less than five. That system of culture has given Mr. Fothergill thirty sure wheat crops in thirty-one years. The averages of the crops for three years, as given in the report of 1886, were, winter wheat 32 bushels, barley 50 bushels, oats 60 bushels, corn in the ear 150 bushels. These averages were fully maintained this year, save in the case of oats, while twenty acres of the wheat grown averaged 40 bushels, as it had been threshed by the time of our second visit, Sept. 9th. The varieties were the Roger and the Democrat. Corn has always been a mainstay in the management of this farm, and under altered conditions will become more so than ever. The amount of first-class feed in it, those only know who have tried it.

The only produce now sold off the farm is milk and wheat, while a large quantity of bran is purchased with its rich fertilizing properties. Artificial manures have been tried here, but it is rather the aim to produce more on the farm. Salt has been found of much service applied to turnip ground before drilling, at the rate of ten to twelve hundred pounds to the acre for turnips, and three hundred to five hundred pounds for corn ground, spread over and harrowed into the surface soil. The ground intended for roots is also fed with fifteen or sixteen loads of well rotted manure, applied and ploughed in in the fall. The manure is drawn into heaps in winter and applied on the summer fallow before it is ploughed, the residue is kept piled in the yard and applied as above.

Mr. Fothergill does not grow mangolds because he has found them too laxative in their tendencies when fed in conjunction with cut corn stalks. Has this been the experience of others who grow corn?

The greatest strength of Balsam Lodge, in a competition of this nature, consists in the fact that it is an all round farm, strong in every department. It lacked the absolute order and perfect neatness of "Hill Crest," but its barns in September were better filled, an excellent indication in such a season.

There were none of those patient and costly experiments being carried on as at "Maple Avenue," the first Silver Medal Farm at Waterford, and which, had their success been set at rest, would have given Balsam Lodge a second place, but its outbuildings we considered more convenient, and its methods had more of a regard for universal adaptation.

Mr. Fothergill moved on to this farm in 1878. He found it a dirty heritage, while now it is clean. He found it with staggering fences, now these are neat and strong. He has drained its wet places, built its barns, enriched its fields, and brought it into a state of cultivation such as fittingly becomes a first-prize farm. His is the fitting reward of a perseverance that is to be praised. In the group competition of 1881 he only succeeded in winning the bronze medal for the county. In the sweepstakes contest of 1886 he was placed third on the list, and now in the group contest of 1887 he has won for Balsam Lodge the proud distinction of the Gold Medal Farm.

(To be continued.)

The Construction of Outbuildings on the Farm,

WITH A VIEW TO THE COST OF ERECTION, ECONOMY OF SPACE, AND CONVENIENCE FOR FEEDING STOCK. AN ESSAY BY MR. THOS. SHAW, TO WHICH WAS AWARDED FIRST PRIZE BY THE AGRICULTURAL AND ARTS ASSOCIATION.

(Continued from September.)

HORSE BARN WITH PLAN.

It is not creditable to the profession, that in the construction of horse barns, the improvements made do not correspond with those in other lines of stock-keeping. Horse fanciers seem to have been more absorbed in the past with the improvement of the horse than of the quarters in which he is kept; hence in the whole province it is difficult to find a horse barn of which it may be said that it furnishes anything very



Residence and Outbuildings at The Briars. The Property of Dr. F. C. Sibbald, Sutton West, Ont.

neath and between the boughs of which bewitching glimpses of the sky blue waters of the lake may be obtained. Directly in front it spreads out like a mirror, calm or troubled as the atmosphere above it, and always in sympathy with it. The wooded Island of Georgina arrests the further vision, where the remnants of a once powerful tribe of forest braves are passing through the evolving stages of a growing dissolution. As one gazes upon this calm, soft panoramic scene, the thought of a paradise lost fades from the memory, and the subdued thrill of the hope of a yet higher and still lovelier scene will not be put away. We do not know whether it is more beautiful viewed in the glory of morning sunshine, or amid the softened shadows of evening, the shades of cloudland or the mellow light of softening moonbeams. The waves quietly beat upon this pebbly shore and sigh like human restlessness, apparently for a nobler something that as yet is unattained.

This capacious mansion, with its thirty-two rooms, is even more attractive within than without. The lover of antiquities can revel amid the scenes of many lands and other ages, from paintings and sketches by the masters in the art. Here are reproductions from Raphael, Titian and Corregio; sketches from the best that Japan and China can produce, relating to all phases of human life; carved work and costly vessels, some used in the service of the Tychoon of that long-beclouded island a thousand years ago; views of forests and temples hoary with antiquity, and multitudinous sketches, diverse and grotesque as the peoples to whom they relate. Here one might fancy himself walking through the gaities of Parisian life, the ruined temples of old Greece and Rome, and the resurrected streets of old Pompeii; the rugged glories of the Tyrol; the softer beauties of the Cantons; Spain in the days of brilliant Moorish architecture; Italy when the Doges ruled, and the sea-girt island of our fathers, through these wonderfully progressive epochs crowned with the glories of the present.

A taste that is at once neat and singularly correct confronts one at The Briars at every turn. There is neatness in the lawn, the pruning of the shrubs, the design of the dwellings, and in the entire spacious enclosures and its surroundings. It could not be otherwise than a place of pilgrimage for the lovers of the beautiful, from far and near.

THE LIVE STOCK AT "THE BRIARS."

But something more than adornment is sought at The Briars. Dr. Sibbald has not only cleared and stumped and stoned and drained many of its fields at a prodigious expenditure of labor, but he stocked it with a very useful type of Shorthorn cattle, the first draft sale from which will be held on October 18th.

The foundation of the herd was laid by the purchase of several females in 1884. Some of the foundation animals came from the herd of Col. Tyrwhitt, near Bradford; some from that of Mr. M. Sibbald, Sutton, including the stock bull Duke of Athol, got by Bampton Senator, dam Atha Belle, by Sir Arthur, and whose weight was 1740 lbs. at 24 months; but the major portion were bought at the sale of Mr. John R. Bouchier, Sutton, in March, 1886. The Lady Constances were all represented, some of which were sired by Ercildoune—593—. Others are from that fine old cow, Christmas Eve, by Bell Duke of Oxford 6499. The Warlabys are represented by Lerna Doone, by Ercildoune—593—, and Heroine, by British Hero (39506), and their descendants. Nearly all of the young stock are by the Duke of Athol, who has proved himself a most useful sire.

The herd is not in high flesh, and never has been unduly crowded with over-feeding. This accounts for its very marked prolificacy witnessed in the large crop of calves of both sexes, some 17 head, many of which are to be sold at the sale, and which are sure to go on improving in a way that cannot fail to be encouraging. The whole herd will register in the new Do-

minion Shorthorn herd book, and it is to be hoped that many of our farmers will avail themselves of the opportunity afforded them at this sale of replenishing their herds, or of securing pure-bred sires for grading purposes. Catalogues have been issued, which will be furnished on application.

The Dairy.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

The Improved Fat Test.

BY JAMES CHEESMAN.

Those who have used the lacto-butyrometer for milk fat analyses, have often experienced trouble with the milk of individual cows, and the discouraged feeling engendered has, in many cases, led to its abandonment altogether. The tube invented by Dr. Caldwell, and the method of manipulation advised and practised by him, overcomes much of the objection which applies to the Marchand's tube. The form of the tube being narrowed at the upper part of the stem, allows a closer reading of the fat than would be possible in the Marchand's.

Closing the lower mouth of the tube with a pure rubber cork, ten cubic centimeters of a well-mixed sample of milk are delivered into it with a graduated pipette; then 8 cubic centimeters of ether (Squibb's strong) and 2 c. c. of 80 per cent. alcohol. Close the smaller mouth of the tube with a cork, and mix the liquids by thorough shaking for four minutes. Both corks must be held in place firmly by the fingers during the agitation, removing the smaller one carefully

every thirty seconds to ventilate. Add one cubic centimeter of ammonia liquor diluted with its bulk of water, and mix as before by shaking; then add ten cubic centimeters of 80 per cent. alcohol, and mix again thoroughly by moderate shaking, holding the tube from time to time in an inverted position while the lighter portion of the liquid rises to the surface.

Now put the tube in water at 102° to 104° Fah. till the ether fat solution separates; the separation will be hastened by transferring the tube to cold water at 60° Fah. after it has stood in the warm water for a few minutes, and then returning it to the warm water. Finally, transfer the tube to water at 70° Fah., and as the level of the liquid falls in the stem by the contraction of the main body of it in the bulb, gently tap the side of the tube below the ether fat solution, to dislodge any flakes of solid matter that may adhere to the walls; then as this solution finally takes its permanent position in the tube, its volume will not be increased by the presence of such foreign matters. The readings are to be taken from the lowest part of the surface to the line of separation between the ether-fat solution and the liquid below it.

The following table gives the percentages of fat corresponding to each tenth of a cubic centimeter of ether-fat solution down to 1. c. c. and for each $\frac{1}{10}$ of a cubic centimeter after:

Reading.	Per cent Fat.	Reading.	Per cent. Fat.
3.	1.	9.	2.43
4	1.23	10.	2.67
5.	1.47	11.	2.91
6.	1.71	11.5	3.03
7.	1.95	12.	3.15
8.	2.19	12.5	3.27
14.5	3.75	13.	3.39
15.	3.87	13.5	3.51
15.5	4.00	14.	3.63
16.	4.13	18.5	4.78
16.5	4.26	19.	4.91
17.	4.39	19.5	5.04
17.5	4.52	20.	5.17
18.	4.65		

With herd milk this method is found to be very satisfactory, and to approximate very closely the accuracy of gravimetric analysis. It cannot be trusted for close results when the milk of individual cows is operated upon.

For very rich milk, testing over five per cent. of butter fat, it is best to dilute it by making a carefully measured mixture of equal parts of milk and water; when the reading is obtained, multiply by 2 and the result will be found.

In the case of cream of ordinary quality, take one volume of cream and three of water, carefully measured, and operate on ten c. c. of the mixture, and proceed as with milk. Then multiply by 4 and the result will give the content of butter fat found in the cream. With cream having 20 per cent. of butter-fat this process will answer, but if it is supposed to be richer, use one part cream to four of water, and if richer still, then one of cream to five of water. The last mixture, if the cream tested 28 per cent. of fat, would give reading 18., which is equal to 4.65 of butter-fat. This, multiplied by 6, would show 27.90 per cent.

Notes on the Cheese Trade.

BY JAMES ROBERTSON, PROFESSOR OF DAIRYING, ONTARIO AGRICULTURAL COLLEGE.

Our vast and valuable cheese-making business, the pride of the dairy agriculture of the province, is in danger of losing its hard-earned prestige by the carelessness and indifference of the makers. The commercial primacy of Canadian cheese, both in price and in quality, has been with difficulty established in the English markets. Now the demand for it is being interfered with by Swedish, New Zealand and American products. The following present themselves to my mind as some of the causes that are leading to, and which, unless stayed in time, are likely to end in, our

losing the immense advantage of superlative reputation:

I. The employment of inexperienced, incompetent men to manage factories.

II. The relentless cutting down of the remuneration of the makers, until the able men are leaving the occupation.

III. The unmistakable penny wise and pound foolish policy of using poor furnishings in the process of manufacture simply because they happen to be a very little lower in price.

IV. The inadequate and unsuitable "help" engaged by the cheese-makers.

Not more than one-fourth the number of youths who now begin the apprenticeship possess the requisite qualifications for being successful. So much additional trouble, loss, worry and disappointment result from the putting of men without aptitude or experience in charge of large factories that I strongly urge the proprietors to exercise the utmost care and caution, and to invariably inform themselves as to the fitness of an applicant by enquiry of a reliable expert or cheese-buyer. No factory should incur needless risk of a loss of reputation, of patronage, of prestige, of price or of profit.

It is still possible to remedy the damage to our reputation in the matter of June and July cheese by the production of fancy quality during September and October. I ask every cheese-maker to do what he can to aid in that, and for the refreshment of his knowledge I offer these paragraphs.

(a) In the matter of making-rooms, at the cost of a little labor, lumber and building-paper, let them be made so close in the walls that the inside temperature can be regulated at will. Provision for thorough ventilation is also necessary.

(b) Let the floors be made clean by occasional scouring with lye or ashes, and let them be kept in that state. The inspectors report a great many factories with dirty floors. It will not be creditable to a factory to be so described and distinguished in the annual report of the superintendent to the Association.

(c) The outsides of the milk vats are in some cases reported as being painted with invisible paint. Where the paint is still on the wood of the vats, presses and hoops, let it be made visible.

(d) Press cloths have been neglected, so that their condition could not be a reflection on the untidiness of the presses.

(e) I have done a few factories some service by asking for the immediate putting of the sink cloths in the fire. Sink cloths are essential, but it is essential that they be clean and sweet.

(f) Curing-rooms need better ventilation, and during the cold weather of autumn it is necessary that a uniform temperature of 65° be maintained.

(g) Bitter-flavored cheese are usually the consequence of chilling in either the making-room, press-room or curing-room. Let the cause be prevented and the consequence will be unknown.

A few years ago "October cheese" became in England the synonym for all that is objectionable in those made during the autumn. A bitter tallow like flavor, a porous, soft body, a texture like the grain of paste and putty without their uniformity, a mottled appearance, and a shape doughy and indescribable are all qualities still too often suggested to the English importer's mind by the mention of October cheese. Such an impression should receive no further justification from the character of the article produced. Cheese can be made as firm and fine during October as during any part of the season. The following instructions will be of service to that end:

(1) Let the milk be well matured by the retention or application of heat before the rennet is added.

(2) The addition of sour whey to hasten the maturing is most objectionable and should never be resorted to. Old milk, which has become well ripened, and nearly sour to the taste, may be added, but loppered or thick milk should never be used.

(3) Rennet should be added in sufficient quantity to coagulate the curd fit for cutting in from 45 to 50 minutes at 88°, and should be diluted to the volume of at least one gallon of liquid for every vat before being added to the milk.

(4) After coagulation is perfect, the curd should be cut finer than during the summer. The application of heat should be delayed for fifteen minutes after the stirring is commenced. The temperature should be raised to 98° and maintained at 98° until the whey is drawn off.

(5) Pains should be taken to cook the curd particles so dry, before the development of acid is perceptible, that after being pressed in the hand and released they fall apart when slightly disturbed.

(6) The curd should be stirred while in the whey and after it is out of the whey until the whey is so well out of the curd that it is dry enough to squeak when bruised between the teeth or otherwise.

(7) After removal of the whey, the curd should be kept at a temperature above 94°. If the temperature be allowed to fall below 94° the development of acid is retarded and excessive moisture is retained in the curd during its development. The presence of such extra moisture in the curd at this stage will leave the cheese with a weak, or pasty, or tallowy body, according to the degree of acid development permitted.

(8) A rack placed in the vat or a curd sink with steam pipes seem the simplest and most effective provisions for keeping the curd warm without risk of scorching.

(9) Just after the removal of the whey the curd should be hand-stirred till the free moisture has drained off. After the curd is dry or firm enough it may be allowed to mat into one mass, but not before that stage is reached.

(10) It should then be frequently turned and packed close, till the layers of curd are four or five deep. Whey should never be allowed to gather in small pools on the curd at this stage. The close packing in layers four or five deep with frequent turning prevents the outside of the matted pieces from becoming chilled or more deeply colored than the rest of the curd.

(11) The proper degree of change has taken place when the curd feels mellow, velvety and "slippy," and shows a texture passing from the flaky or leafy into the stringy or fibrous. If the curd be too moist or soft it should be cut or ground at a rather earlier stage, and hand-stirred some time before the addition of salt.

(12) Not less than $2\frac{1}{2}$ lbs. salt per 1,000 lbs. of milk should be used; and when the curd is on the soft or moist side, 3 lbs. per 1,000 lbs. of milk should be added.

(13) Immediately after the application of salt the pieces of curd become harsh and gritty on their surface; then in from 15 to 25 minutes the harshness gives place to mellowness. At this second stage—and the temperature should not be under 88°—the curd should be hooped and pressure applied. Delay at this stage or coldness of curd destroys the desirably rosy flavor and imparts to the cheese the bitter taste of the salty white whey.

(14) Particular care should be taken to use only pure, warm water when turning the cheese for bandaging, before the rinds are fully formed.

(15) All cheese should be finished of symmetrical shape and kept in the presses until the rinds are smooth and the corners free from any projecting edges or "shoulders."

(16) No cheese-maker should continue to excuse the presence of soft, or hard, or open, or leaky, or cracked, or any kind of inferior, second-class cheese on his curing-room shelves by saying or thinking that every factory must have a few of such.—From Bulletin XXXV.

Poultry.

The Essex Poultry Farm, Managed as We Understand It.

BY ARTHUR HARRINGTON, RUTHVEN, ONT.

(Continued from August.)

But right here is where the beginner fails to realize how important a factor time is in calculations. A machine that requires twenty hours careful attention every day to bring about reasonable results, leaves but little time to attend to other necessary things, needful rest, recreation, etc., being far out of the question; and with the majority of incubators now on the market, such a state of affairs is apt to exist. After experimenting many years ourselves, and having the benefit of an acquaintanceship with a person who has used nearly all of the better class of machines, we selected as our last purchase a "Monarch," made by James

Rankin, South Easton, Mass., and shall attempt to give an intelligent description of it.

Imagine a case about 7 feet long, 3 feet wide, and 2 feet deep, with 3 ventilators and connecting rods on top; a copper boiler and 2 lamps in front, and you have a good general idea of its outside appearance. Extending over the whole top of the machine is a galvanized iron tank about 1½ inches deep, packed above and around with heavy felting. The under side of this tank is made concave to insure an even temperature in every part of the egg-chamber; as it is well known that the centre of any large body of heated water is considerably warmer than the edges, unless means are taken to obviate it. Under the tank, and about 6 inches away, lie the eggs (four trays side by side, each holding 150 eggs). About 8 inches under the eggs lies a coil 30 feet of 1½ inch lead pipe, which is connected to the tank by a short piece of pipe at the back end, and is also joined to the lower end of the boiler. On the front end of the tank a 3 inch tube (leading down into the tank) is placed, containing a float made of very thin brass foil. This float rests on the water with which the tank is filled, and from which the heat emanates. As the water in the boiler becomes heated, it expands, of course, and begins to circulate, raising the float, which in turn opens the ventilators, and cuts off the flame to the lamps, thus effectually preventing the egg-chambers from becoming too hot. Quite automatic and so simple in management, it is deservedly popular, while the results obtained prove that it is constructed on scientific principles. It is capable of such extreme nicety of regulation, that we have known it to go two days without a particle of attention, and on opening find but one degree variation. Heat is more volatile than most people suppose, and a machine wherein the temperature can be evenly maintained requires experience to be rightly appreciated. But there is one serious drawback to its usefulness, which we are astonished the inventor, who is a practical man, has not remedied. The nursery is far from being perfect. We omitted to mention that in all first-class hatcheries a nursery is built in the bottom to accommodate the chicks for 12 or 15 hours before going into the brooders. This (the nursery) being cooler, and more airy than the trays, is almost indispensable; and its construction is of as much importance in our estimation as any other point in the incubator. In the "Monarch" the chicks seem to have unbounded facilities (and which they are not slow to avail themselves of) for jumping into the moisture pans, and of course drowning; but this difficulty could be easily overcome. As it is, it has solved the feasibility of artificial incubation for all time to come. The chicks invariably hatched larger and stronger than when brought forth in the natural way, and at the age of two months the difference is quite marked.

From influences beyond our powers we are sorry to announce this ends, perhaps forever, our series of articles on poultry matters, and we only hope that the instruction imparted may have been put to profitable use. We have done our best. We have given you practical knowledge, which, if faithfully followed, will render poultry-keeping a pleasure, and tend to advance a business-refining influences, and decidedly helpful to advancing civilization. Farcw:ll.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Poultry at the Provincial and Industrial Exhibitions.

BY J. W. BARTLETT, LAMBETH, ONT.

THE PROVINCIAL.

The fact that the Provincial Fair is held but once in a place makes it almost impossible to provide facilities for exhibiting equal to those where the fair is held annually in one place; and as poultry usually takes not second or third place, but the last place in the minds of the board of management of agricultural fairs, it is not strange that the accommo-

datlon should be inferior. But this year the Provincial board certainly were guilty of gross neglect. There are many farms that could, without a day's notice, provide better quarters, and more accommodation for fowls than was prepared up to the first day of this show, and but for the push and capacity of the superintendent, Mr. Wm. McNeil, of London, great inconvenience would have been experienced.

The exhibit was not as large as we have seen, but was fair in numbers. On the whole the quality could not be considered A 1, and in several classes the winners were not worth half the prize-money. The various breeds were represented as follows:

Old Dorkings, white, 2 pairs; Dorkings, silver grey, 3, colored, 4; Polands, white, 3; Polands, golden unbarred, 3; ditto barred, 3; Polands, silver, unbarred, 2, barred, 4; Polands, white crested, black, 3; P. Rock, 9; Light Brahma, 11; Dark Brahma, 2; Cochins, buff, 4; Cochins, white, 3; Cochins, black, 3; Cochins, partridge, 7; Houdans, 6; Langshans, 5; Wyandottes, 1; LaFleche, 2; Rosecomb, Dominique, 2; Games, black breasted or other reds, 6; Games, Dorking, 4; Pile game, 5; Leghorns, white, 8; Leghorns, brown, 8; Black Spanish, 5; Hamburg, golden pencilled, 4; Hamburg, silver pencilled, 4; Hamburgs, golden spangled, 5; Hamburgs, silver spangled, 8; Hamburgs, dark, 4; Dimon Creepers, 1; Crevecoeurs, 2; Bantams, 7; Golden Sebrights, 4; silver do., 5; Black breasted or other reds, 8; Bantams, pile, 7; Duckwing, 6; Japanese, 1; Black African, 6; Turkeys, any color, 7; turkeys, white, 5; turkeys, wild, 3; turkeys, bronze, 5; Geese, Bremen, 8; Toulouse, 9; wild, 3; ducks, Aylesbury, 8; Rouen, 1; Pekin, 7; Cayuga, 5.

The showing in chicks, as regards numbers in the different classes, being almost similar to those given above, we omit them. The pigeons, as a class, were very fine, and much above the average.

THE INDUSTRIAL.

The management of this exhibition is certainly justified in styling it "Canada's great Fair." All over the grounds, from centre to circumference, were to be found landmarks of Canada's progress, and evidences of Canada's greatness. But while the throng admire the massive Durhams, beautiful Herefords, or fawn-like, cream-laden Jersey, the ponderous Clydesdale, or fleet-footed thoroughbred, away in an obscure corner of the grounds, in a low-roofed building, cackles and crows the poultry, seemingly happy in the knowledge that although greatly neglected, and by many despised, their importance in determining Canada's wealth is second to that of no other industry. The exhibit is grand, and (we can once more use the hackneyed term truthfully) the finest ever shown in Ontario; scarcely a class that does not worthily bear the honors awarded it. So far is this the case, that if we were to mention each choice exhibit, it would embrace the members of every class and almost every section. This is as it should be. It is also a pleasing fact to note that a goodly proportion of the prizes awarded to poultry at the great International Exhibition at Buffalo were carried away by the same exhibitors that won in their respective classes at this fair. There are about twelve hundred birds on exhibition, and as a consequence, much better accommodation is required. The superintendent and assistants are the right men in the right places, especially the former, Mr. Daniels, kind, courteous and obliging to all, and dispensing special favors to none.

Artificial hatching is a feature of the exhibit. The Gerred incubator has hatched some three hundred chicks during the fair, all of which are smart and frisky, and are a pretty sight indeed, cuddling in the chaff, happy and contented in the warm embrace of their artificial mother. We have long advocated artificial hatching, and this machine comes nearest to our ideas

of what an incubator should be. Surely in view of the great strides poultry is making and the indisputable returns showing their wealth-producing capacity, our Experimental Farm at Guelph cannot afford to ignore them longer. While they experiment largely in cattle, which take three to four years to develop, they have not yet done anything in the matter of fowls, which develop so rapidly that one year gives results of experiments in breeding. Think of this, ye professors, and govern yourselves accordingly.

Color Disqualification in Pekin Ducks.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL

SIR,—I had thought this matter near enough understood to be allowed to drop. That I must prove Mr. Cockburn wrong seems necessary. I therefore forward you a copy of the American standard of excellence, the acknowledged authority on poultry judging. I ask you to turn to page 230 and read the disqualification of Pekin ducks. Notice that the last clause *only* refers to color, and reads, "plumage any other color than white or creamy white"; which is what I have claimed from the first, and which Mr. C. steadfastly disputes, and cries loudly for me to retract my statements. Now I have looked up the revision of 1878 and find it the same as the present standard, so Mr. C. could not have been led astray by that. He further shows that he is not very well posted regarding the standard when he speaks of that of 1884, as there was a revision in 1883, and no more until 1888, which is not yet in print. To cut the matter short, I have sent you a copy of the last standard, which sustains me. Now, if Mr. C. has a standard which sustains him, let him send it to you. The price is \$1, but as one, like he quotes from, would be a curiosity, I enclose you herewith \$2, which you will please send him for it, and forward the curiosity to me (I do not expect it to show up though); and even if he produces such a standard, I will forfeit \$10 to \$20 to any charitable institution in your city if I can not prove it a misprint, over the signature of the person who was secretary of the American Poultry Association at that time, providing Mr. C. will forfeit an equal sum to such institution if I do so prove it.

He refers to a standard that appeared in the JOURNAL in 1884. I very much fear this is what led him astray. On looking up the number he refers to, I find it there as he quotes it, but this does not make it correct. The writer of the article referred to is a good authority on poultry, but the error is there all the same, very likely a typographical one.

Concerning the color of most Pekins being creamy white, that is not the point at issue. I undertook to correct Mr. C. when he misquoted the standard, thinking it was a mistake; but he persistently attempts to sustain the erroneous quotation. I trust I have now done enough to prove to you and your readers that I am right and he wrong, and unless he forwards a standard to prove that he is honestly mistaken, I cannot afford to pay any more attention to him.

J. W. BARTLETT.

Lambeth, Ont.

The Apiary.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

October Work—Burying Bees, and Other Matters.

BY ALLEN PRINGLE, SELBY, ONT.

THE FALL.

Since midsummer it has been as wet as it was dry from that back to March. The result of the abundant rains, accompanied by warm temperatures, is that there has been a good fall flow of honey; and although early frosts in certain localities in September cut off considerable buckwheat, the bees have pretty generally stored enough for winter; in some favored places giving a little surplus. This certainly makes things look much brighter for the bees next winter and spring. The season's honey crop is of course a failure, but the bees will go into winter quarters in much better shape than was expected two months

ago. Brooding has been very well kept up during the fall. There will be, perhaps, more than the average proportion of young bees for winter, while otherwise the colonies seem in good healthy condition.

OCTOBER PREPARATIONS FOR WINTER.

Where the work of supplying deficient stores for winter has been neglected till now, that ought to be done first, and at once. Where you have spare frames of comb-honey, give them to those in need in preference to feeding syrup. The latter is attended with risk so late in the season, as it is more liable to remain in the cells uncapped unless the October temperature is unusually high. However, where the comb-honey is not available, syrup from number one granulated sugar may be fed. Feed on warm evenings and pack the colony up warm while it is storing and capping. From the middle to the end of October all colonies ought to be re-weighed, as almost always a few, to the owner's astonishment, will be found short, after having been supplied a month or two before with what was at the time considered an abundance of stores for winter. It never pays the apiarist to "skimp" his bees of winter stores. And it must be remembered that enough to put the bees through is not enough, economically considered. Like the Dutchman's beer, in wintering bees "too much is just enough." That is to say, the bees ought to have so much stores over and above their actual needs that they will not fear to begin to brood freely in the cellar in the spring, and keep it up till the fields again begin to yield.

After supplying all deficiencies of food, the next most important work for October, where it has not been already done, is to pack the bees up warm and dry, and then leave them alone till it is time to carry them into the cellar or other winter repository.

HOW TO WINTER.

This is the great problem of bee-keeping. It is the hackneyed subject of apiarist literature, but it will always be in order till bees can be wintered without unnecessary loss. The apiarist who can carry his bees successfully through the winter and spring is the one who will make bee-culture pay. There are various methods, most of them possessing more or less merit; and the best method will, of course, vary with climate and other conditions. For our Canadian climate my own preference is for *cellar wintering*.

During the past twenty-five years I have tried several methods, and have settled down upon the cellar as the best. I can winter bees outside on the summer stands either in double-walled, packed-hives, or otherwise packed in chaff or sawdust, but there is much more work and a little more risk than in the cellar. A good cellar for wintering ought to be frost-proof, dry, and well ventilated. True, success may be achieved with either one of these conditions absent, provided all other conditions are favorable. The first named is the most essential, ventilation next, and dryness last. When the temperature of cellar is right, and the colonies properly fixed up, humidity can do but little harm. If the apartment maintains a temperature between 40° and 50° through the winter, it will do. An even temperature of about 45° would be better, at all events up to about the first of March, when brooding commences; then and thenceforward it ought to be a little higher.

TIME TO SET IN.

Bees ought to be placed in winter quarters before the hard freezing weather sets in. I have been getting mine in earlier and earlier from year to year, with good results. As a rule November is the month, though it may be prudent to put them in in October

sometimes. The lower tier ought to be up a foot or two from the cellar floor, and the strongest and heaviest colonies should be placed in the lower tiers. The lightest should be on top so that they may be readily supplied with stores should they run short, and for the additional reason that they will be warmer on top. As to the vexed question of removing the summer propolized quilts, or not in the case of strong colonies in a good cellar it makes but little difference. From weaker colonies they had better be removed, substituting therefor clean cotton quilts, on top of which place several thicknesses of warm woolen quilts. A space should be left below the quilts for a bee passage across the frames. This may be made by simply placing 2 or 3 inch-square sticks across the frames under the quilts. In placing the hives in tiers one above another, the second tier should not quite touch the upper quilts of the lower tier, and so on to the top. Close the entrances of hives before carrying them in, and carefully avoid all jarring or disturbance of the bees. After carrying them in, and just before leaving the cellar or apartment, reopen all entrances wide. Where the cellar will admit of it, the portion occupied by the bees ought to be partitioned off entirely apart from that used by the family for vegetables, etc.

BURYING BEES.

This mode of wintering I have never practiced, and do not think much of. I have no doubt, however, that it may be made successful when properly done, especially in higher latitudes than ours. Though the sensational news has of late been coming to us from the northern regions of Canada and from Sweden that bees may be buried in a hole in the ground apart from their combs and without any food, or covered in that condition by snow in a straw "skop," and frozen solid all winter, and come out alive and all right in the spring under the thawing influence of the sun—though this information is coming to us, apparently reliable, I still have my doubts in the matter, and would like a "feeder more evidence."

Mr. H. J. Stalhammar, a leading Swedish apiarist, in a late issue of the *Canadian Bee Journal*, p. 449, says, "The result of burying bees has been very good indeed, when properly made, and a total loss when improperly made." He proceeds to give the following as the proper method:

"The best place for burying bees is a gentle sandy slope, where the ground can be kept dry. When the bees have ceased to fly, the frosty nights are just come, you will make the ground plain, and cover it with sufficient boards (1 inch) laid close to each other on scantlings, 2x3 inches, 3 inches down on the ground. Upon these scantlings the hives are placed in two rows, the extremes against each other, and 12 and 18 inches distant. The boards below wide and long enough to hold the hives. On each side of the hives are put in the ground poles or scantlings 3x4 inches to form a "ridgelead," each pair at four or five feet distance from each other. The empty room between b. and c. and the back end of the hives are packed with snow as well as over the tops of the hives, but before this last packing you have to place boards upon scantling over the hives, when the straw will not fall down between the hives and shut them up, those entrances always to be kept open to full width. This done, you have to cover the scantlings above with boards and then you have got a roof over all the hives. Now you have to cover the end of the stack with six or eight inches of straw, dry, and four to six inches thick upon the boards all around and bend it over the top boards on each side. Then you have to dig a ditch around the stack, this to be opened not more than 15 inches from the scantlings upon which the boards are laying, the ditch to be sufficiently deep and broad to give sufficient earth for covering the stack 12 inches thick, the earth to be well packed all around. When you have given an outlet for the water of the ditch, the working is done.

"Of course you will have to place the hives in the stack-place in the evening time, when the bees are quiet, and if then disturbed it is best to leave them there until next morning early, when they are to be covered."

THE EXHIBIT AT TORONTO THIS YEAR.

Upon entering the apiarist department of the exhibition this year it was obvious that something was wrong. The tons upon tons of honey, as of former

years, were nowhere to be seen. This was all due to the excessive drouth of the past summer and the absence of a familiar face and prominent exhibitor, D. A. Jones. Having seen the magnificent exhibits of honey and apiarist supplies of every description which Mr. Jones was accustomed to bring to the Toronto Exhibition, one can easily imagine how greatly his exhibit was missed. However, considering the general and almost total failure of the honey-crop the present season, the exhibit at Toronto was very creditable to the few exhibitors who made it up. Mr. McKnight, of Owen Sound, especially had a really splendid display, particularly extracted honey. His linden honey, of which he was so fortunate as to get a good crop, was as fine a sample as I have ever seen. The other exhibitors, Mr. Holterman, of Brantford, and Mr. Smith, of Muskoka, also had very good exhibits considering the season. E. L. Gould & Co., of Brantford, had a limited exhibit of apiarist supplies, and Jacob Spence, of Toronto, was on hand with a full assortment and variety of honey-glasses, some of which were novel, attractive, and fairly moderate in price. Mr. McKnight also had a few samples of superb honey-glasses, imported direct from France.

PREMIUM OFFERS FOR 1888-9

More than \$2,000 offered in Live-Stock Premiums.

As intimated on the first page of this issue, and for the reason given there, we have decided to offer a list of live-stock and other premiums to friends of the JOURNAL who are desirous to aid in extending the circulation, without parallel in the annals of agricultural journalism in the Dominion. In making these offers we feel that we are consistently working in the line of the policy we adopted at the very outset, and to which we have strictly adhered. It will afford an easy way of making a start in improved stock to those who are of limited means, and of thus laying the foundation of increased prosperity.

Making these offers on our part is but an *advance* step in the line of our effort to improve the live-stock of Canada, in which we confidently lay claim to a consistency that is deserving of support, and which some of our contemporaries have failed to show. We have not slandered the live-stock interest at one time in the hope of getting the support of another class in the community, nor, failing in this, have we at another time sought to conciliate them, by the bribe of purchasing from them what they might have to sell. We have without hesitancy or faltering, given the first place to the live-stock interest in the JOURNAL because we thought it the most important, and every day but strengthens that conviction.

The premium list published below is at present incomplete. It is our desire so to extend it in future issues as to enable any one to secure stock of any class who may desire it from any of the breeders of the Dominion who are advertisers in the JOURNAL.

It will be observed that unlike some other offers that are being made, those who secure lists for us have the privilege of getting stock from any of our advertisers who may have them for sale, and as these advertisers have unquestionably the best stock in Canada, it enables them to secure of the very best.

Any person forwarding to us lists of new subscribers containing the requisite number in any of the clubs mentioned below, will have his choice of any of the pure-bred animals mentioned in connection with the respective lists.

Five Names and \$5.

Plymouth Rock, Light or Dark Brahma Cockerel, value..... \$3 00

Ten Names and \$10.

A pair of Plymouth Rock fowl or Pekin ducks, male and female, value..... 6 00

Fifteen Names and \$15.

A pair of Bronze Turkeys or Toulouse geese, value. 8 00

Twenty Names and \$20.

A trio of mammoth Bronze Turkeys or Toulouse Geese, value..... 12 00

Thirty Names and \$30.

A pure-bred Berkshire boar (from 2 to 6 months), or a pure-bred ram lamb of the Leicester, Lincoln, Cotswold, Southdown, Oxford, or Shropshire breed, value 16 00

improved lines of all vehicles are made, from the two wheeled gig to the democrat of 1,800 lbs. carrying capacity. The prices are moderate and the terms liberal.

Exportation of Stock to Canada.—The Liverpool Journal of Commerce of Friday says "About a fortnight ago Col. Davis Cooke, on behalf of the Canadian Agricultural Colonisation and Coal Co., Alberta, sent out 110 polled Aberdeen bulls. He has just made arrangements at Liverpool for the shipment of no less than 900 rams, comprising a very choice selection of Shropshire Down sheep from the celebrated flock of Mr. Thos. Fenn, Downton Castle, Ludlow, and the others are to be selected from equally well-known breeders of Cheviot and Border Leicester sheep. These will be despatched immediately to Alberta, and mated with 45,000 ewes which are now being purchased in Montana. The bulls and rams will be placed at the eleven farming stations that have just been formed by the company, and will be in a complete state when the animals arrive at their destination. The numbers of pedigree cattle and sheep in these consignments have never been equalled in the annals of the export trade."

Annual Sale of Live Stock at Ont. Ag. Col.—On Wednesday, Sept. 5th, 1888, the Ontario Agricultural College, at Guelph, disposed of their surplus stock by auction sale. The sales, on the whole, were not as good as in former years. They were all sold at farmer's prices. As a means of improving the standard of excellence of the flocks and herds of Ontario, this annual sale has been in the past a very important factor, and it is hoped will continue to be so. We note the following as regards the animals sold: Rob Roy 2d, calved Feb. 12th, 1888, sold for \$101, Wm. Aitchison, of Guelph, being the purchaser. Mr. W. J. Palmer, of Charlottetown, P. E. I., bought Conqueror 5th, calved Nov. 12th, 1887, for \$73. The Holstein bull Adanac, calved Mar. 20th, 1882, bred by Jan Bakker, Wieringerwaard, N. H., was purchased by Wm. Leys, of Kingston, for \$70. Of the sheep the Shropshires brought the highest prices. Mr. L. Cowan, of Galt, bought an aged ram, imported, for \$45 and three lambs for \$55.

Prize Studies of Tornadoes—The American Meteorological Journal, desiring to direct the attention of students to tornadoes, in the hope that valuable results may be obtained, offers the following prizes. For the best original essay on tornadoes or description of a tornado, \$200 will be given. For the second best, \$50. Among those worthy of special mention \$50 will be divided. The essays must be sent to either of the editors, Professor Harrington, Astronomical Observatory, Ann Arbor, Michigan, or A. Lawrence Rotch, Blue Hill Meteorological Observatory, Readville, Mass., U. S. A., before the first day of July, 1889. They must be signed by a *nom de plume*, and be accompanied by a sealed envelope addressed with same *nom de plume* and enclosing the real name and address of the author. Three independent and capable judges will be selected to award the prizes, and the papers receiving them will be the property of the journal offering the prizes. A circular giving fuller details can be obtained by application to Professor Harrington.

Farm Bells.—Last year we offered amongst other things as premiums to those getting subscribers—as we are doing this year also,—one of Armstrong's Farm Bells, manufactured at Guelph, Ont. Amongst those who secured them we may mention the names of two, Mr. F. R. Hamilton, Cromarty, and Mr. John Dauncey, Allsaw, both of Ontario. In regard to them Mr. Hamilton says: "I am well pleased with the farm bell that I received as a premium from you. I think there are many farmers and farmer's sons who might get up a club and secure a prize with very little trouble. They would not only be benefiting themselves, but also be doing their neighbors a good turn by getting them to subscribe for the best agricultural paper in Canada." Mr. Dauncey writes: "The bell which you sent as a prize for obtaining subscriptions for the JOURNAL arrived safely, and is now mounted on our school house. We are well pleased with it. Its tone is good, and while it does not sound harsh to those near it, it may be distinctly heard 1/2 or 1 mile distant. We desire to convey to you our hearty thanks for the promptness you have shown in sending the bell, and for its every way carrying out what you advertised. The bell exceeds our expectations, and we wish you success in your work, which we recognize as of much benefit to the farmer, as the JOURNAL is fully up to the mark, and is a thoroughly practical work." We hope that many others may find opportunity to secure these or other premiums that are offered.

List of Live Stock and Dairy Meetings to be held during the American Fat Stock Show, Chicago, 1888.—The American Clydesdale Association, at the Grand Pacific Hotel, Nov. 14th at 7:30 p.m. Charles F. Mills, Sec'y, Springfield, Ill.; the American Cleveland Bay Society, at the Leland

Hotel, Wednesday, Nov. 14th, at 7 p.m., R. P. Stericker, Sec'y, Springfield, Ill.; the American Lincoln Breeders' Association, at the Sherman House, Wednesday, Nov. 14th, at 8 p.m., L. C. Graham, Sec'y, Cameron, Ill.; the American Leicester Breeders' Association, at the Sherman House, Wednesday, Nov. 14th, at 8 p.m., A. J. Temple, Sec'y, Cameron, Ill.; the Western Circuit State Fairs, at Sherman House, Wednesday, Nov. 14th, at 8 p.m., R. W. Furnas, Pres., Brownville, Neb.; the National Swine Breeders' Association, at the Sherman House, Wednesday, Nov. 14th, at 2 p.m., Phil. M. Springer, Sec'y, Springfield, Ill.; the American Shire Horse Association, at the Sherman House, Thursday, Nov. 15th, at 7 p.m., Chas. Burgess, Sec'y, Wenona, Ill.; the Red Polled Cattle Club of America, at the Grand Pacific Hotel, Thursday, Nov. 15th, at 8 p.m., L. F. Ross, Pres., Iowa City, Iowa; the American Duroc Jersey Swine Breeders' Association, at the Grand Pacific, Thursday, Nov. 15th, at 7 p.m., Chas. H. Holmes, Sec'y, Beatrice, Mo.; the American Shetland Pony Association, at the Sherman House, Friday, Nov. 16th, at 8 p.m., R. Lee Wilson, Sec'y, Olney, Ill.; the American Hereford Cattle Breeders' Association, at the Leland Hotel, Friday, Nov. 16th, at 7:30 p.m., C. R. Thomas, Sec'y, Independence, Mo.; the American Aberdeen Angus Breeders' Association, at the Leland Hotel, Friday, Nov. 16th, at 7:30 p.m., Thos. McFarlane, Sec'y, Iowa City, Iowa; the Victoria Swine Breeders' Association, at the Sherman House, Friday, Nov. 16th, at 7:30 p.m., Henry Davis, Sec'y, Dyer, Ind.; the National Stockmen's Association, at the Exposition Building, Saturday, Nov. 17th, at 10 a.m., A. S. Alexander, Sec'y, Chicago, Ill.; the American Breeders Ass'n. Jacks and Jennets, at the Sherman House, Saturday, Nov. 17th, at 7:30 p.m., Chas. Leonard, Pres., Bell Air, Mo.; The French Draught Horse Association, at the Sherman House, Tuesday, Nov. 20th, at 2 p.m., Chas. E. Stubbs, Sec'y, Fairfield, Iowa; the American Percheron Horse Breeders' Association, at the Sherman House, Tuesday, Nov. 20th, at 2 p.m., S. D. Thompson, Sec'y, Wayne, Ill.; the Illinois Shorthorn Breeders' Association, at the Grand Pacific, Tuesday, Nov. 20th, at 8 p.m., A. B. Hostetter, Sec'y, Mt. Carroll, Ill.; the American Sussex Association, at the Sherman House, Tuesday, Nov. 20th, at 8 p.m., Overton Lea, Sec'y, Nashville, Tenn.; the American Shropshire Registry Association, at 10 p.m., Tuesday, Nov. 20th, M. Levening, Sec'y, LaFayette, Ind.; the American Cotswold Association, at the Sherman House, Tuesday, Nov. 20th, at 7:30 p.m., Geo. Harding, Sec'y, Waukesha, Wis.; the American Shorthorn Breeders' Association, at the Grand Pacific, Wednesday, Nov. 21st, at 8 p.m., J. H. Pickrell, Sec'y, Chicago, Ill.; the American Association of Importers and Breeders of Belgian Draught Horses, at the Sherman House, Wednesday, Nov. 21st, at 10 a.m., J. D. Bonner, Jr., Sec., Wabash, O.; the American Essex Swine Breeders' Association, at the Sherman House, Wednesday, Nov. 21st, at 7:30 p.m., W. M. Wiley, Sec., New Augusta, Ind.; the Convention of Holstein-Friesian Breeders, at Grand Pacific Hotel, at 3 p.m. Thursday, Nov. 22nd, T. B. Wales, Sec., Iowa City, Iowa; the Consolidated Cattle Growers' Association, in Chicago, A. H. Sanders, Sec., Chicago, Ill.

Stock Notes.

Horses.

RECENT IMPORTATIONS.—We learn from an English contemporary that Prof. Smith and Mr. Jas. Torrance, of Toronto, had shipped them by Mr. Beattie, six Clydesdale and Shire stallions and two thoroughbred blood mares.

Mr. A. Jeffrey, Whitby, Ont., breeds Clyde horses, Leicester sheep and Shorthorns. The four brood-mares on the farm are registered, and the horse used is the splendid sire Ambition, in the stud of Jeffrey Bros. The Shorthorns are grounded on the purchase of a Kinellar cow at the sale of the late John Thompson, Whitby. Mr. J. also breeds Shetland ponies.

Messrs Pandas & Granby, Yelverton, Ont., shewed some fine specimens of imported Clydes this year, and were quite successful with them. Of these, a two-year-old, first at Toronto spring show of 1888, sired by Breadalbane, is a fine easy mover. Gen Wolf, by St Lawrence, is active and strong. Marmion by Lord Hopetoun is a capital mover and shapely. A 2-year filly, Lorian Gem, was 1st at Kilmarnock as a yearling. McNair, by Macgregor 1487, dam by Ivanhoe, is a good doing colt. Lady Renwick, by Lord Erskine and dam by Prince of Wales, is along with her mate as good as their breeding and are old country prize-winners. These are all two-year-olds. Then there are some fillies by Sir Hildebrand, prize winners in the old land. The stud numbers 14 animals.

Mr. T. Blanchard, Appleby, Ont., is extending the work of breeding Shire horses. He regards them as more active than the Clydes. The stud consists of 5 head. The stallion Protection, 6 years, is registered. From these 2 some six head of young ones. He also keeps a coach stallion, 2 years old, from imported stock. The Shorthorns number some 24 head, with the bull Ury, the 10th Duke of Fairholme, 3 years old, at the head. The flock of pure Leicesters numbers 20 head. They are built upon an imported foundation. See breeder's card newly inserted.

The Messrs. Graham Bros., Claremont, Ont., has this year imported 21 Clydesdales, of which 13 are stallions and the balance fillies; also two English road horses and eight Shetland ponies. These comprise the gets of McGregor (1487), Crown Jewel, Lord Marmion, Harold and a number of others of equal merit. The English Hackneys are aged five and three respectively. The former showed at the leading exhibitions of England and Scotland, and up to the present time remains unbeaten.

Messrs. A. & J. Bell, Athelstane, are now the owners of 13 pure Clyde stallions four years and over, of which seven or eight are imported. They travel in that eastern country and with results that are exceedingly satisfactory. From time to time sales are being made as opportunity offers. Have now a number of young stallions and mares for sale. The whole lot comprises some 49 head young and old, one of the largest lots in any stud in Canada. This firm have usually much success in breeding, having lost but one foal out of eleven head this season.

The Clydesdale stallion, Self Esteem (5344) (377), 3 years old, by Lord Erskine (1744), and owned by Glendinning & Whiteside, Ellesmere, is giving much satisfaction as a stock horse. He carried 1st honours last year at the Toronto Industrial, in a class of 22. Several of his colts were shown this year, and came in for a share of the prizes. One owned by Mr. J. M. Whiteside, is an animal of much promise. The colts, like the sire, are strong and vigorous.

Messrs. R. Beith & Co., Bowmanville, Ont., exhibited nine head of good Clydes at the autumn fairs, from a stud numbering between 20 and 30 head. Of these St Gatini (3988) is the plum, a four year-old by Old Times; a grand horse with a grand body and limbs. He was highly commended at the Highland Society's Show this year. Bounding Willow, 5580, four years old, by Good Hope (1679), was second at the Glasgow Society Show, and the Dalbeattie Society Premium horse of 1888. Royal Scotsman, 5317, a bay 3 years old, by Douglas Prince (2603), is a neat horse, the Brechin Society horse of this year. Gay Prince (5796), a brown 3 year-old, has a noble pedigree, sired by Prince Edward (1254), his dam is t. Ribbon (1961). He was the Sanquhar Society horse. A Saw (6057), a bay by Garnet Cross, 1662 and Lord Coleridge (5931), and Candlemas, are all useful horses and young. These did good service in the show-rings of Canada, also the two hackneys, Firefly, 3 years, and The Gem, 8 years, are beauties. The N. B. Agriculturist said of the importation of this year, that it was the best lot that ever came to Canada at one time.

Mr. John Howard, one mile from Sutton, Ont., who has a fine 400 acre farm, and good barns with windmills, (see breeder's card newly inserted), is a successful breeder of horses. In the stud, at present numbering 11 head of pedigreed animals, are two imported stallions. One, Ace of Picks, 3 years old, was imported by A. Russell, Carville, Ont. He is by Prince Charlie. The other, Old Rob the Ranter, was imported by Mr. Douglas, then of O. J. ridge, many years ago. He is an old veteran than has done excellent service in that country. The Shorthorn herd numbers are at half-a-dozen. Forty head were sold from it in the spring of 1887 to go to the North-West. The present lot are essentially Booth. The bull Lord Cecil was bought at the sale of the late Mr. Thompson, Whitby. Mr. H. has of late years been a successful exhibitor of Clydes at the Toronto Industrial.

Messrs. Irving & Christie, West Winchester, Ont., have been importing and breeding Suffolk horses, Cleveland Bays, Clydesdales, Shires and Hackneys. They have been importing Cleveland Bays for about 12 years past. They own 6 Suffolks, of which 4 are stallions and 2 are brood mares; 4 are Cleveland Bays, of which 2 are three years old, and all are registered; 2 are Shires, four years and three, and these also are registered.

The Messrs. J. Gardhouse & Sons, Highfield, Ont., have this year again been very successful at the Toronto Exhibition, winning six first prizes and one second on draught horses. They were very successful in getting good colts this year again. The Shorthorn herd numbers some 40 head, with the splendid bull Eclipse at the head, until recently sold to the Messrs. Green Bros., Innerkip.

Mr. John Davidson, Ashburn, Ont., exhibited three Canadian bred stallions at the Toronto Industrial this year, and won three first prizes and four medals on them. Lansdowne, a two-year-old, bred by D. & O. Sorby, Guelph, Ont., was first in his class, and won the American Silver medal. Prince of Gourcock, a one-year, was first in his class, first as best of any age, and won the American silver medal. Gladstone, a foal, came first in imported class, and American silver medal.

The Russell Bros., of Richmond Hill, are doing a flourishing business in the handling of fine Clydes. Amongst the good ones imported by them are Darnley, 2 years, by Darnley King (2717), and a very strong horse; a 2-year Star of Fintroy, of fine build, by Donald Dinnie (2717); a good Canadian bred, winner of 2 firsts, 2 year old, by Lochiel (2950), dam Daring, imp., by Luckall (510); a 1-year Tarves Prince, by McAmmon (3818); Darside Chief, 1-year, by Rakerfield (4190). They own several others of equal merit, which we do not stay to name now.

Messrs. A. Earchman & Son, Epsom, exhibited at Toronto the Clyde stallion Puritan 6065, three years old, a dark brown, by Cavalier (4158), s. sire, Macgregor (1487), g. g. sire, Darnley (212), dam Nell of Gilchristland (2046), tracing to Lochfergus Champion (409), and Loffy (457). This horse made a good season at Uxbridge and neighborhood this year. Like the noble ancestry from which he sprang, he is of good parts, bone of the right stamp, and good coupling, and is a spirited mover. They also have in their stud Grand Master (imp.) from the sire Prince Rufus, by Prince Charlie, a big lofty horse. He has given much satisfaction during the past 3 years as a stock horse. The third, New Stamp (2723), three years old, by Newman (2705), a half brother to Darnley (2722). His season this year was successful. Being a low set, blocky horse, he is a favorite with many.

Shorthorns.

Mr. A. Ritchie, Inverary, Ont., is the owner of eleven head of Shorthorns. The foundation was laid on those of James G. Wright, Guelph, in 1880, when he bought a two-year heifer. The increase has all come from this female. The present stock bull Britannia Duke 4th, was bought from W. Douglas, Caledonia. The calves are from this bull. Mr. Ritchie also breeds Southdowns, originally purchased from the flock of Mr. Thos. Wilkison, at present the very successful manager of the farm at the Asylum, Hamilton.

Mr. John Currie, Everton, Ont., owns some 15 head of Shorthorns. At the head is the Kinellar bull The Baron. This year again Mr. Currie did well in the show-rings, notably at the Ottawa exhibition.

Mr. W. C. Edwards, M.P., Co. Russell, Ont., is now the owner of 23 head of good Shorthorns. Got a lot of 8 from J. Dryden, M.P.P., 1887 and 1888, comprising cows, heifers and calves. The bull Chancellor 9549, by Red Emperor, dam Coral, heads the herd. They came out in good shape to the shows this year. Mr. Edwards has also a herd of Ayrshires, about 20 head, and he contemplates adding the breeding of draught horses.

Messrs. J. & W. Watt, Salem, Ont., own some 60 head of Shorthorns. They are hard men to overcome at the shows. Their cattle are mostly Scotch bred, and mainly Cruikshank. The bull Perfection, one year old and by Barmpton, heads the herd. A good crop of calves is on hand again by old Barmpton Hero and Lord Lansdowne.

Mr. Eli Wilson, Green River, Whitevale, is the owner of a herd of Shorthorns numbering some 35 head. His father, Mr. John Wilson, has been breeding Shorthorns for the past 18 years. They are grounded on stock owned by the late Geo. Miller, and bred by A. J. Alexander, Kentucky. Another branch is the Minnie, from Kinellar. The number of calves is nine from the stock sire Duke of Ontario, bred by Major & Son, Whitevale. There is also a flock of 57 head of Southdown sheep, grounded on those of Mr. F. W. Stone's breeding. There is also a number of Canadian bred Clydesdale mares. The farm consists of 285 acres.

Mr. A. Brockie, Fergus, owns a select herd of Scotch Shorthorns of very fine breeding. The cow Fancy Drop, bred at Kinellar, produced the stock bull now in use by Lord Lansdowne. The two-year stallion Balmiedie, imported by Mr. Brockie and sired by Darnley King, is soon to be in the market. See card newly inserted.

Mr. H. Rawlings, Forest, Ont., has now a fine herd of 25 head of Shorthorns. The cows are of Bates and Booth foundation with top crosses from Kinellar. The bull Minister Eclipse, first at Toronto in 1887, is evidently a fine getter. Mr. Rawlings also breeds Cotswolds and Shropshires. He has a large flock of the latter. His three years draught horse Craighendrach, bred at Sittytown, and imported by Mr. Dryden, M.P.P., Brooklin, is doing admirably. Mr. R. has brought much excellent stock into that country.

The Messrs. R. & S. Nicholson, Ont., are now the possessors of some 40 head of Shorthorns, notwithstanding that within two years past they have sold from 50 to 60 head at good paying prices. The show contingent was this year good as usual. The bull Warrior, imp., keeps his shapes well, and has been found a very useful sire. This firm did well in the show-rings. Their young stock are well forward.

Messrs. C. M. Simmons & Quine, Ivan, Ont., are the possessors of about 30 head of Shorthorns, a number of them Strathallans and some Kinellars. Sir Christopher is at the head in fine form, and useful as any animal can well be. This firm have some 30 head of Berkshires, and have also good Shorthorn grades.

Mr. J. Dryden, M.P.P., Brooklin, has some 85 head of pure Shorthorn, a lot of them imported, and nearly all of straight Cruikshank breeding. There are also some 60 head of Shrops, all that are left from an importation of some 200 head, sold already principally to the Western States. Mr. Dryden is well furnished with young bulls and heifers, which those who purpose to build up herds will do well to remember.

Messrs. Thos. Ballantyne & Son, Stafford, Ont., have a nice lot of Scotch Shorthorns, all imported or bred directly from imported. The herd has very largely bred bull calves, which has hindered its more rapid increase. It now numbers 12 head without a single cull. The bull Prince Royal, bred by Edward Cruikshank, Letheny, Scotland, and imported by J. Dryden, M.P.P., heads the herd. He has made great growth, and promises to be of much use.

Mr. G. F. Benson, Point Cardinal, Ont., with some Shorthorns and Herefords at the Provincial, Kingston, took a share of the prizes. The Shorthorn bull Cicero (52618), =2817=, of Kinellar blood, 4 years old, heads the herd. The Hereford sire, Rambler 6th, 13514, leads the Herefords. A goodly lot of young ones are on hand from both herds, which are numerically strong.

Mr. Thos. McKay, Richwood, Ont., has now a nice herd of 14 Shorthorns. The bull Victor Hugo Ingram, a roan, bred by G. B. Bristow, Rob Roy, heads the herd. He is got by Sir Arthur Ingram—3453—, of show yard fame, and is of the Village Belle family. He has won thus far eighteen first prizes, including Provincial firsts. The herd is in good shape, and a number of nice young ones are on hand.

Mr. Jos. Redmond, Peterboro, Ont., is the owner of a nice herd of 26 Shorthorns. Fanny B is nicely topped Princess 7th, a red, was calved in 1884. Princess of Wales 8th, calved 1885, is by Goldfinder (47976), as are the other two. Goldfinder was bred by Mr. Wm. Handley, Greenhead, Eng., and is by the great Sir Arthur Ingram (32490). Goldfinder was first as a yearling at the H. and Ag. Soc. Show, and as a two-year-old. He went to Mr. Hill, Minnesota, and is yet unbeaten. This firm were quite successful in showing.

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.

JOHN L. HOWARD, Sutton West, Ont., breeder of registered Clydesdales and pure Shorthorn cattle. 72

E. W. & G. CHARLTON, Duncrief, Ont., importers and breeders of pedigreed Clydesdale and Coach horses. 72

JOHN TURNER, Lakehurst, Jersey Farm, Oakville, Ont., breeder of A. J. C. C. Jerseys of the best families. 72

A. TELFER & SONS, Springfield Farm, Paris, Ont., importers and breeders of Southdown and Shropshire sheep. 72

KAINS BROS., Byron, Ont., breeders of Ayrshire cattle, Shropshire sheep and Colored Dorking fowls. 72

J. W. ROBINSON, St. Marys, Ont., importer and breeder of pedigreed Clyde horses, Shorthorn cattle and Shropshire Down sheep. Stock for sale. 72

D. HARVEY, West McGillivray, Ont., breeder of Yorkshire pigs, Leicester sheep and Shorthorn cattle. 72

W. WALKER, Ilderton, Ont., importer and breeder of pure Lincoln sheep. Winner of flock prize at the Toronto Industrial, 1888. Stock for sale. 72

A. GERRARD, Hamilton, Ont., breeder of pure Ayrshires. Bull calves sold young and cheap. 72

A. BROCKIE, Fergus, Ont., breeder of Scotch Shorthorns and Oxford Down sheep. Stock for sale. 72

THOS. BLANCHARD, Appleby, Ont., breeder of Shire horses, Shorthorn cattle and Leicester sheep. 72

G. BALLACHEY, Brantford, Ont., offers some choice Shorthorns, Shropshires and Berkshires cheap. 72

FOR SALE—Fine Pedigreed Berkshire Swine and September litters. Can furnish boars and sows not related of these young litters. THOMAS SHAW, Woodburn P. O.

JERSEY GRADE COWS AND HEIFERS WANTED

In exchange for Pure-bred SOUTHDOWN SHEEP. oct-1 JAMES NEIL, Collingwood.

For Sale—Shorthorns and Southdowns.

Young Shorthorn Bulls and Heifers, got by imp. Cruickshank and Campbell bulls. Good color and good animals. Also a lot of choice Southdown Rams and Ewes, bred from imported stock. Prices to suit the times. JOHN MILLER, Ma. 1887, Ont. oct-1

FOR SALE—COTSWOLD SHEEP and BERKSHIRE SWINE, bred from imported stock. Apply to GEO. M. SMITH, Haysville P. O., Ont. Hamburg Shipping Station, G. T. R. oct-2

Cotswold Rams and Berkshire Boars

bred from first-class importations, shipped to order. Satisfaction guaranteed. JOHN SNELL'S SONS, oct-1 Edmonton, Ont.

PURE-BRED (eligible for registering) **SUFFOLK PIGS** for sale, 6 weeks old, at \$5 each or \$8 a pair. Some fine large pure-bred **LEICESTER RAM LAMBS** for \$3.00 each. **SHROPSHIRES**, from imported ewes and rams, \$12 each. Send orders at once. Satisfaction guaranteed. F. J. RAMSEY, Moultondale Stock Farm, oct-1 Dunville P. O., Ont.

FOR SALE—The entire flock of Shropshire Down, consisting of ewes, ewe lambs and some ram lambs. All imported or bred from imported. THOMAS SHAW, Woodburn P. O., Ont.

FOR SALE—6 young Shorthorn Bulls, a lot of Southdown and Leicester Rams, also a number of Berkshire Pigs. These are all choice animals, bred with care, and will be sold cheap. Send for prices. EDWARD JEFFS, Bond Head, Ont. sep-2

FOR SALE.

A number of choice Southdown Shearling and Ram Lambs, bred from first prize and imported stock. Also a few Durham Heifers and Heifer Calves. Prices to suit the times and satisfaction guaranteed. R. RIVERS & SON, sept-3 Spring Hill Farm, Walkerton, Ont.

SHROPSHIRES FOR SALE CHEAP.

from imported ewes, 5 two-shear rams and a shearing ewe. All choice animals. Address: ISAAC N. COBER, Hespeler, Ont. 37-6

Amongst the transfers effected at the last Industrial Exhibition was the sale by Messrs. Gardhouse & Son of the imported Eclypse (49526), to Messrs. Green Bros., of Innerkip Eclypse (49526), was bred by Mr. W. Duthie, of Collynie, Aberdeenshire, and was sired by the celebrated Earl of March (30807), winner at the Highland Society's and other shows, his dam being the show cow Eliza 7th, by Forth III (11685). Eclypse has never been beaten in the Old Country save by the famous bulls Goldfinder and Field Marshall, and in this country has always secured a place on the prize list. We must congratulate Messrs. Green Bros. on their new purchase as we know of no herd in this country containing two such celebrated bulls as the Earl of Mar (47815), and Eclypse (49526).

W. Major & Son, Whitevale, Ont., bred pure Shorthorns. The herd numbers about 15 head. Founded about the year 1865 on purchases from Mr. John Miller, Brougham, and importations by the Messrs. Beattie & Miller from the herd of Sir C. Sampson, England. The young stock are from a Campbell bull imported by Mr. Miller. They have also a large flock of Shrops numbering 70 head, 56 head of which are imported this year. Thirty-six of them came from the flock of Alfred Mansell, including the first-prize shearing ram at Bournemouth, and the balance came from Mr. Everill. There are at present 5 head of pedigreed Clydes, of which two are stallions. See breeder's card newly inserted.

We are in receipt of a catalogue containing pedigrees of some of the Shorthorns Mr. H. Thomson, of St. Marys, intends to sell by auction at his farm on Wednesday, Oct. 17th, 1888. The animals are stated to be all regular breeders, and are either with calf or have calves at their side. All are entered in the Dominion Herd Book. Among the several good females mentioned in the catalogue we notice the following: Eda, red; calved June 10th, 1884. She was bred by her present owner. She possesses a pedigree of unusual length, tracing back through 17 removes to the famous old Hubback (319). Another heifer, Bessie 7th, roan; calved April 4th, 1882, was bred by S. Campbell, Kinellar, Scotland. She was got by Vermont (47193), bred by A. Cruickshank. The animals, comprising cows, heifers, calves and young bulls, are nearly all of Scotch blood, and imported or from imported. Those of them we saw at London were representative animals. The trains arrive at St. Marys as follows: From the east at 3.32 a.m., 10.50 a.m. and 12.37 p.m.; from the west, 5.12 a.m. and 8.20 a.m.; from London at 8.20 a.m. All trains stop at St. Marys. See advertisement.

Galloways.

Mr. Thos. McCrae, Guelph, is the owner of some eighty head of Galloways at the present time, of which no less than thirty head have been imported this season. The very beautiful and well finished three year bull, Current Coin, weighing 2240 lbs. on coming out of quarantine, stands at the head. Mr. McCrae has gone the rounds of the shows with twenty-six choice animals, and has carried off very many prizes.

Herefords.

Mr. L. Drew, Oshawa, owns 40 head of Herefords. The young calves, 15 in number, are by King Hal, a Horace 5th bull. One of these, of fine promise, by the Experimental Farm bull Conqueror, won 1st at Kingston Provincial. Mr. Drew has made good sales of late to the grazing regions of Muskoka.

Mr. R. J. Mackie, Oshawa, Ont., went the rounds of the fairs with 12 head, out of a herd of some 50 or 60 head. He carried a fair share of prizes at each of these shows. Cecil, not in heavy flesh, is doing grand service in the herd this year. He is one of the famous getters of heifers in the American continent. The herd was crippled for showing in its best form by recent sales to Mr. Satham, in the west, and to others in Canada.

Mr. F. A. Fleming, of The Grove, Weston, Ont., has now about 70 head of pure Herefords in his herd. At Kingston Provincial with 12 head, he captured a number of the prizes, including 1st on the celebrated Miss Broady 3d, imp., who is now suckling her fourth calf. He also succeeded well at the Toronto Industrial and at London.

Devons

Mr. S. Harper, Cobourg, Ont., owns twenty-one head of Devons. Made the rounds of this year's shows with fourteen head. At Kingston won three firsts and nine seconds. The herd were in good show shape.

Mr. W. J. Rudd, Eden Mill, showed 14 head of Devons this year from a herd of 22 head. They are all grounded on his father's herd, and tracing to imported through stock formerly owned by Mr. Spencer, Brooklin, Ont. Mr. Rudd, along with Mr. Harper, of Cobourg, won the prizes in Devons at the autumn fairs.

Holsteins.

We are indebted to the Smith Bros, Credit Valley Farm, Churchville, Ont., for a catalogue of their Holstein-Friesian cattle. These gentlemen have been successful in obtaining many valuable prizes on the animals composing their herd. Their selections have been made from the best herds in America. Pedigree, although considered of great value, has not been made subservient to form and appearance. The records given of the milk produced by the cows of this herd is a credit to their owners.

Mr. Samuel Curtis, Harwood, has been breeding Holsteins for five years past. He bought at first from B. B. Lord, Sinclairville, and has now 14 head. The stock bull Quarantine, imp. in dam, now five years old, heads the herd.

Mr. R. S. Stevenson, Lancaster P. O., Ont., being captured by the many excellencies of the Holsteins, has founded a herd numbering nine in all, and headed by a bull bred by Messrs. Chaffey & Twitchell, New York state, from an imported dam and sire. Three of his heifers are imported direct from Holland, and one of them, Mona Barrington, was sired by the famous Barrington, whose dam had a daily record of 99 lbs. milk. Mr. Stevenson has tested one of his cows under ordinary conditions and she gave a daily average of 60 lbs. of milk.

Ayrshires.

Mr. J. Yuill, Carleton Place, Ont., owns sixty head of Ayrshires. The bull Jock (1606), four years old, bred by Jas. Drummond, Petite Cote, P. Q., heads the herd. At Kingston seven prizes fell to the herd. Mr. Y. also took silver and bronze medal in milk tests.

Although our eastern breeders appear to have been more susceptible to the good qualities of the Ayrshires, yet it is with pleasure we note that our western men have not been wholly blind to their excellencies. Mr. Ware, residing about three miles from Hamilton, in the direction of Burlington, possesses a superior herd of these animals. They number thirty-eight head, and are in fine form. Considering the unfavorableness of the season for stock, and especially dairy animals, it betokens an aptitude for this work on Mr. Ware's part beyond that ordinarily met with. Perhaps the oft heard claim of the Ayrshire upholder that they are easily kept, is also a factor in accounting for their good condition. At present he has on hand a number of young bulls and heifers, and hope to have several more additions to his herd during the winter, as a number of his finest heifers are expected to come in at that time. Mr. Ware is prepared to furnish animals of superior quality for dairy purposes. If one's handiwork is to be accepted as a proof of skill, Mr. Ware certainly does not lack such testimonials.

Mr. A. Gerrard, Hamilton, Ont., has been for two or three years past breeding Ayrshires, the stock coming from the herds of Mr. T. Guy, J. Jardine and G. Thompson, of Bright. They are of a neat, smooth class and are good milkers. The bull used is from imported stock originally from the herd of J. Yuill of Carleton Place. The herd succeeded well in the show-rings.

Mr. Thos. Guy, Oshawa, showed 13 head of Ayrshires this year from a herd of about 40. Ayrshire Lass and Violet were amongst the best. The bull Butterfly, raised by Mr. Guy, is an excellent specimen. Mr. Geo. Steel, Glenborough, Manitoba, bought some seven head from this herd last spring, and Mr. Guy, as usual, won a goodly share of prizes on Ayrshires.

The Ayrshires of Messrs. D. Nicol & Son, Catarqui, are doing splendidly. We had the pleasure of scanning that portion of the herd shown at Kingston Provincial. They looked very well and milking heartily, and therefore only in good condition. The two year bull Norsemar (1728), came 1st, also the two year heifer Dido (1981). The cow Rosina (1931), came 2d. The herd numbers twenty-eight head, the three-year-olds especially being a very fine lot.

Sheep and Pigs.

Mr. E. B. Switzer, of Switzer, Ont., breeds large Yorkshire pigs. Has a large lot of them, strong and vigorous.

Mr. Wm. Oliver, Avonbank, Ont., with fifteen head of Lincoln sheep carried three firsts and four seconds, also the flock prize and silver medal at the Kingston Provincial. This very fine flock numbers all told about thirty-five head.

Mr. Robt. Shaw, Glanford Station P. O., owns thirty-four head of Southdowns. Mr. Shaw is an old veteran in the show-rings, and at Kingston this year won three first and four third prizes in a ring where prizes are not easily won.

Mr. D. Harvey, West McGillivray, Ont., brought out twenty-one head of Leicesters this year in fine form, out of a flock of forty head. A number of them were imported. They won a number of prizes at the different shows.

Mr. John Kelly, Shakespeare, showed at Kingston and other exhibitions twenty-three head of beautiful Leicesters out of a flock of eighty-one head. At Kingston Provincial he captured all the firsts and silver medal along with other prizes.

Mr. John Campbell, jr., Woodville, Ont., made the journey of the fairs this year with twenty-four head of very fine Shropshire sheep from a flock of some seventy head. He won silver medal at Kingston Provincial for Canadian bred pen, along with other valuable prizes.

Mr. Wm. Walker, Ilderton, Ont., was out at the exhibitions this year with seventeen head of Lincoln in fine form. The home flock is also choice, and numbers at least fifty head. At the Kingston Provincial he won 4 first, 2 second and 4 third prizes.

Messrs. G. & B. Deo, Evergreen Stock Farm, New Sarum P. O., Co. Elgin, made the circuit of the shows this year with 17 head of Merino sheep selected from a flock of 144 head. They came at first from the flock of Mr. Rock Bailey, Union, and at the head is the imported ram Midnight, from the flock of Mr. E. D. Randall, Michigan.

Mr. W. H. Beattie, Wilton Grove, Ont., is the owner of some seventy head of Shrops, grounded on importations. In 1837 and 1838 Mr. B. selected them in person. The splendid shearing ram Corston Pride, commended at the English Royal Show at Nottingham, and bred by D. Butler Cooper, Angus, Scotland, heads the herd. The lambs of this flock are strong and vigorous.

Mr. Peter Arkell, Teeswater, Ont., is the possessor of seventy head of Oxford Downs. Notwithstanding the large sales made to Michigan for show purposes, 27 head were out on exhibition. At Kingston four 1st and three 2d prizes came to the flock. Mr. Arkell's Shorthorn herd is about eighty strong, of which seventeen are calves, and sired by the exceedingly well-bred two-year-old Red Prince, half-brother to a bull that took 2d in a competition of two hundred bulls at Birmingham Show.

Mr. Jas. Tolton, Walkerton, Ont., owns about thirty head of Oxford Down sheep, and had sixteen head on exhibition. At the Kingston Provincial he won the pen prize for Canadian bred, along with two firsts and four seconds. The herd of thirty head of Shorthorns is progressing nicely. Mountain Hero, bred by Mr. David Rae, Speedside, stands at the head of the herd. He is a son of Barrington Hero.

LEICESTER RAM LAMBS

—FOR SALE—

A number of very superior Ram Lambs for sale. Correspondence solicited. Prices very reasonable. Address, sep-2 MUNGO McNABB, JR., Cowal P. O., Ont.

SHIRE MARES FOR SALE.

Three thoroughbred registered Shire mares, two imported, all young. First prizes Central Exhibitions. To be sold on account of no Shire stallions within reach, and scarcity of feed. sep-2 G. LAIDLAW, Victoria Road, Ont.

BERKSHIRES FOR SALE.

A choice lot of Berkshire boars and sows, of different ages, at very low prices, considering quality. Bred from superior stock. sep-1 J. E. BRETHOUR, Burford, Ont.

BULL FOR SALE.

Durham or Shorthorn bull, Prince Rex, registered in Dominion Herd Book. Calved in 1883, sire, Baron Barnington (28502); dam, Juno 2nd. Color, rich roan. One of the finest animals of the kind in the Dominion. To be seen at Libbytown, 3 miles from Ayer's Flat, on Passumpsic Railway, near Sherbrooke. Will be sold cheap as proprietor has two others, his progeny. Address, W. H. DAVIDSON, Libbytown, P. Q.

MESSRS. T. & S. BRADBURNE,

ASTWOOD HILL, REDDITCH, WORCHESTERSHIRE, ENG.

Breeders of high-class SHROPSHIRE. Pedigrees strictly kept. We have bred many prize-winners, and breed from such rams as The Rector (1766), The Dean (2356), The Judge the Second (2363), and The Duke of Wellington (2821), all Royal winners. Large stock for sale. Visitors made welcome. Correspondence invited.

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, a year old, weighs 1580 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, sep-3 MAJOR THOS. HODGSON, Port Perry, Ont.

Table of Contents.

STOCK DEPARTMENT:	PAGE
Agricola's Reply to Mr. McNeillage	215
Agriculture in our Rural Schools	273
Breeding True to Type	273
Carp Culture	269
Curing Corn Fodder	275
Editorial Notes	268
Erecting an Agricultural Hall in Toronto	270
Feeding Value of Beans	273
Feeding a Bull	270
"Hints to Beginners in Farming" Answered	270
Mr. Rennie's Clydesdales	274
Our Premium Cifers	267
Prize List	279
Stock Notes	272
Shorthorn Pioneers	272
The Farmer's Condition	275
The Journal	274
The Clydesdale Stallion Tempest	267
The North-West as a Farming Country	270
The Provincial and Toronto Industrial Exhibitions	276
Valedictory	268
Will Twin Heifers Breed?	275
VETERINARY DEPARTMENT:	
Was the Treatment the Best?	282
FARM DEPARTMENT:	
Early Varieties of Barley and Oats	284
Editorial Notes	283
Lime as a Fertilizer	283
Manure for Turnips	285
Manural Value of Soap Factory Refuse	283
Manural Value of Gypsum	285
Permanent Pastures	285
Report of the Judges on Prize Farms for 1887	286
The Briars and its Shorthorns	286
The Construction of Outbuildings for the Farm	285
The Education of Farmers	283
Weeds, XI	284
DAIRY DEPARTMENT:	
Notes on the Cheese Trade	286
The Improved Fat Test	286
POULTRY DEPARTMENT:	
Color Disqualification in Pekin Ducks	289
Poultry at the Provincial and Industrial	289
The Essex Poultry Farm	288
APIARY DEPARTMENT:	
October Work, Burying Bees, etc.	289
MISCELLANEOUS:	
Advertisements	293-298
Jottings	291
Premium Offers	290

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.

Mr. C. W. Neville, Newburg, Ont., showed at Kingston some twenty-five head of Cotswolds. The early stock came from Mr. D. Fraser, Earnestown, now in the N. W. T. The silver medal for best pen Canadian bred, came to this flock along with some other prizes. Mr. N. also breeds Shorthorns and large Yorkshire pigs. The first cow, Minnie Scott, by imp. Scottman 2d, from the herd of D. Birrell, was bought in 1880. Then followed a bull of Cruikshank blood bred by R. Collocutt, Tyrone.

Mr. Rock Bailey, Union, Ont., owns 150 head of pure Merinos. He showed thirty head at Kingston, and won four 1st, three 2d, and five 3d prizes; also silver medal for pen. The stock rams came from the flock of Mr. E. Randall, Armada, Mich. A fleece on exhibition, from the four-year-old stock ram, the product of one year's growth, weighed 32 lbs., and the fleeces of two three-year ewes weighed 23 and 24 lbs. respectively. The price of such wool is twenty cents per pound.

Messrs. John Miller & Son, Brougham, Ont., are the owners of 200 head of pure Shropshires, of which 100 are imported and made up of selections from the flocks of Bradburne, Pulley, Knowles, Nock, Gibson, Brown and others. They are strong in lambs. Some 60 or 70 head of Shorthorns make up the herd, the splendid Cruikshank bull, Vice Consul, at the head. Six Clydesdale stallions and one mare were imported this season, and there are on hand ten stallions in all. The 1st prize on pen of Shrops came to Mr. Miller at the Provincial.

J. G. Snell & Co., of Edmonton, showed 16 Cotswolds, all imported, at the Kingston Provincial, and carried on them all the firsts and all the seconds but one. The flock now numbers 65 head, noble animals. Many are from the flocks of Mr. Bagnell and Mr. Jacobs, O. n. At the head is one of the most beautiful rams that ever came to America. The Messrs. Snell have a goodly number of Berkshire pigs yet, though sales have this year been more than usually rapid. The Shorthorn herd numbers about fifty head, with the three-year-old Sityton bred Endymion at the head.

Messrs. Ormsby & Chapman, Oakville, Ont., showed Improved Yorkshire pigs of a goodly length at the shows this year, with long and deep sides much in favor with the packers of to-day. They are finding ready sale for them.

Messrs. R. Dorsey & Son, Summerville, Ont., went the rounds of the fairs this year with 6 large Yorkshires, 13 Suffolks, and 6 Poland Chinas. They succeeded well at Kingston, Toronto, Hamilton and other local shows, and deservedly so.

Messrs. A. Frank & Sons, The Grange, Ontario, made the circuit of the fairs this year with the finest lot of Suffolks which they ever showed. It comprised 2 aged boars, 2 one year, 4 under one year, 3 under 6 months, 2 aged sows with fine litters, 2 over one year, 2 under one year, and 3 under 6 months. He was very successful, particularly at Kingston and deservedly so, for they were truly a fine lot, and all bred by himself. After 12 years of continued improvement, this lot has come out in better form than when they carried the sweepstakes and diploma at the Centennial in 1876. This firm also breed good Shorthorns.

As evidence that Cotswolds are still holding their own in the race for early maturity and heavy weights, the Messrs. Snell of Edmonton write us that their imported shearing ram Champion, 1st prize winner at the Royal Show, and also of the championship over all breeds at the Oxfordshire Show, 1888, after making the round of the English shows and a trip across the ocean weighed three hundred and eighty pounds, and three imported ram lambs weighed respectively 190, 196 and 201 lbs. Can any breed beat this record?

Among Cotswold breeders we are pleased to note that Mr. Petch, of Black Heath, Haldimand Co., has attained a prominent position. No further guarantee for the quality of his animals is necessary other than to state that this gentleman has made draughts on the flocks of such breeders as Messrs. Laidlaw & Jackson, of Wilton Grove, and Mr. Teasel, Thornhill, for rams to head his flock, which at present numbers twenty head. Already two rams for his flock have been purchased by gentlemen in the States for breeding purposes. We are pleased to note further that Mr. Petch is breeding heavy draught horses of Shire and Clyde blood, and uses as sires such horses as those of Mr. Hendrie, of Hamilton.

Those who subscribe now for the "Journal" for 1889 will get it the remainder of this year free; also our beautiful picture of the Ontario Agricultural and Experimental Farm.

FARMERS' INSTITUTES.

The Secretary, President or any member of any Farmers' Institute is hereby invited to send for copies of the Journal, which will be mailed free, to distribute among its members with the view of forming clubs for the Journal—a list of ten subscribers, at least, could be got at every institute in Canada. Clubs of five for \$4.00 and clubs of ten for \$7.50. Farmers' Institutes, agricultural societies, or any person wishing any of our live stock premiums can have them delivered now by guaranteeing the required number of subscribers.

Important Public Sale

Hereford & Shorthorn Cattle

AT GUELPH, ONT., CANADA,

Wednesday, Thursday and Friday,

NOVEMBER 7-9

MR. W. F. STONE proposes to offer for sale on the above dates about 150 to 180 head of his pedigree Herefords and Shorthorns. Full particulars in the Nov issue of this JOURNAL. Catalogues will be ready about Oct. 20, and may be had on application to MR. STONE, Guelph.

J. R. MARTIN'S GREAT ANNUAL.

AUCTION SALE

Durham and Grade Shorthorn Cattle, Horses of all kinds, Sheep and Pigs,

WILL TAKE PLACE ON HIS CLAREVILLE STOCK FARM, CAYUGA,

On Thursday, 18th day of October, and the following day if necessary. Sale commences at noon sharp. Refreshments on ground. Catalogues and breeding list furnished at sale.

Also, 1 Horse Power, and other Farming Utensils. J. WIGG, Auctioneer.

SHORTHORN SALE.

To be sold by public auction,

TUESDAY, OCTOBER 23, 1888,

on County Line between Middlesex and Elgin, one mile west of London and Port Stanley Gravel Road, six miles north of St. Thomas,

12 DURHAM CATTLE

4 bulls and 8 females, good individuals, registered in the Dominion Herd Book. Also

5 GRADE CATTLE AND TWO COLTS

Sale at one o'clock. Terms—12 months' credit, without interest, on furnishing approved notes. Seven per cent. discount for cash. Catalogues on application to

GEORGE AXFORD & SON, or J. G. MUNN, Proprietors, Talbotville P. O. Auctioneer.

PUBLIC SALE OF STOCK

At MOULTONDALE STOCK FARM, 2 miles east of Dunnville, Ont., Co. Haldimand,

ON THE 25th OCTOBER,

20 Head of Durham Cattle, including 1 imported pure Bates bull and several fine young bulls and heifers.

1 Young Holstein Bull Calf and 1 two-year-old Heifer, eligible for American Herd Book.

15 Head of Purebred Leicester Ram Lambs and Shropshires, bred from imported ewes and ram.

A number of Suffolk Pigs, eligible for registration.

All will be sold, as I intend giving my attention wholly to the breeding of horses and sheep.

12 months' credit on approved joint notes.

F. J. RAMSEY, DUNNVILLE P. O.

PUBLIC AUCTION SALE

On October 17th, 1888.

Owing to the extremely cold and stormy day my sale in January last was not as successful as it should have been; and as feed is scarce and I am short of stable room, I intend selling about 20 head of my

DURHAM CATTLE

by Public Auction, at my place,

ONE MILE EAST OF ST. MARYS,

On Wednesday, 17th Oct., 1888.

I would call the attention of breeders to the excellent quality of my cattle. They are either imported from or descended from the well-known herds of Cruickshank and Campbell. They are all regular breeders. My bull calves are a particularly fine lot, combining both quality and pedigree. Catalogues ready about the middle of Sept. All will be sold without reserve.

ALEX. BROWN, Auct., HUGH THOMPSON, Prop., Avonton P. O., Ont. Drawer D, St. Marys, Ont.

sep-1

SALE OF CATTLE AND HORSES

—AT THE—

BRIAR'S FARM

Sutton West, Ont.

ON THE 18th OCTOBER

Will be sold about

70 HEAD OF SHORTHORNS

all registered in D. H. B., equal in pedigree to those registered in the English Herd Book; also

17 HORSES

preparatory to the owners leaving for China. Catalogues will be issued.

SALE OF

Purebred Cattle and High Grades

W. R. Davis has received instructions from Mr. W. H. Gill, lot 32, South Thames Road, Fullarton, Mitchell Station, Russelldale P. O., to sell by public auction, on his farm,

THURSDAY, OCTOBER 11th,

6 Shorthorn Bull Calves and year olds, 7 Cows and Heifers, all registered in the new Dominion Herd Book. Also a number of High Grades. Sale at 1 p. m.

TERMS—Cash, or fourteen months' credit, will be given by paying 6 per cent. interest and furnishing approved notes. W. R. DAVIS, Auctioneer. W. H. GILL, Proprietor.

Dispersion Sale

BY AUCTION

On Thursday, 11th Oct., 1888

Of the entire herd of the undersigned, consisting of four young bulls and twenty females, of the latter 16 are of a beautiful dark red color.

For the last fifteen years we have used nothing but the stock bulls of John Dryden, M.P.P., all of which were bred by Amos Cruickshank, Sittyton, Aberdeen, Scotland.

The principal sires of herd are: Vensgarth (47192), Lord Glamis (48192), Royal Bampton (45503), Victor Royal (52299).

This sale being a dispersion sale there will be no reserve, and it will afford an excellent opportunity for purchasing choice breeding stock.

Sale to begin at 10 o'clock.

Trains met on day of sale at Brooklin station (G. T. R.) and Myrtle station (C.P.R.)

Catalogues sent on application. Correspondence invited.

Address, SAMUEL HOLMAN & SONS, Columbus, Ont.

LORRIDGE FARM SOUTHDOWN SHEEP.

Flock first established 1857. Commenced exhibiting 1867. Since then have taken over 1,200 prizes, including a large number of medals and diplomas.

Imported Rams used only.

Stock for sale.

ROBERT MARSH, Proprietor.

RICHMOND HILL, Aug. 27th, 1886.

A. FRANK & SONS

Cheltenham Station, C. P. R. and G. T. Railways.

The Centennial Sweepstakes herd of

SUFFOLK PIGS, greatly improved. All registered.

Thoroughbred Horses

Shorthorns, of Cruickshank blood, and Southdown Sheep from Webb's stock. Young stock of all the above for sale. All orders promptly attended to.



Daniel DeConroy BORNHOLM, ONT. IMPORTER AND BREEDER OF OHIO IMPROVED CHESTER WHITE SWINE. Stock for Sale. Registered pedigree.

The Corbin Disk Harrow.



IN OVER 30 FIELD TRIALS WITH OTHER DISK HARROWS THE PAST YEAR, THE CORBIN WAS SOLD AND SETTLED FOR. EVERY FARMER SHOULD INSIST ON A TRIAL WITH THE CORBIN BEFORE BUYING ANY OTHER.

READ THESE EXTRACTS.

MR. THOS. SHAW, Editor *Live-Stock Journal*: "No farmer will make a mistake in investing in this Harrow."

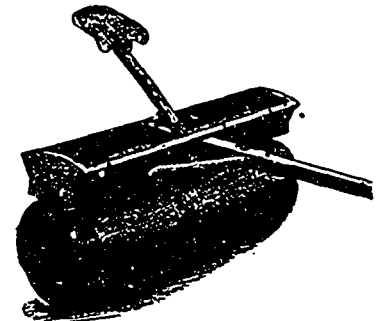
THOS. SABIN, ESQ., Eglinton, Yorke Co., Ont.: "I put in a crop of wheat a year ago on pea stubble, going over the ground three times, and secured as good crop this fall as I ever raised."

C. H. OSBORN, ESQ., Concession, P. E. Co., Ont.: "Have cultivated about 500 acres with my Harrow (2 years), and am sure it is good for a thousand acres more without repairs. I have discarded my gang plow, as the harrow does the work much better, easier and faster."

THADDEUS SMITH, ESQ., Prop. Vin-Villa Vineyards, Pelee Island, Lake Erie: "This harrow is invaluable in a large vineyard."

SEND FOR CIRCULARS.

The Corbin Steel Roller



The Corbin Steel Roller

Cannot break, has finished bearings, rabbitted boxes, weight box, grass-seeder attachment (not shown in cut). Strongly recommended by those who have bought them.

THE ST. LAWRENCE MANUF'G CO., Prescott, Ont.

General Agents—Nicholles & Renoaf, Victoria, B. C.; Van Allen & Agur, Winnipeg, Man.; All Agents of Massey M'g Co. in the North-west; R. J. Latimer, Montreal, Que.; Johnston & Co., Fredericton, N. B.; and 200 Local Agents in Ont.

COMPARE METHODS.

THE ST. CATHARINES BUSINESS COLLEGE is the only one in the Dominion which has no theoretical department, but giving a whole course in **Actual Business**. The rooms have not the least school-room appearance, but are like a large business office, with an army of clerks. Young men wishing to prepare for positions should obtain information concerning this College before entering some inferior school because it chances to be convenient. Circulars free.

W. H. ANGER, B. A., Principal.

WRITE to C. A. FLEMING,

Principal of NORTHERN BUSINESS COLLEGE, of Owen Sound, Ont., if you desire to obtain a thorough business education that will be of use in any circumstances of life. Annual Announcement, etc., containing full information, mailed free on application. This is the only Business College in Canada owning their College Building. oct-3

Agents Wanted

In every locality in Canada, to canvass for the

Canadian Live-Stock & Farm Journal

Good salary can be made by good men. Sample copies free.

Write for particulars to

STOCK JOURNAL CO., Hamilton, Ont.

CLAREVILLE STOCK FARM



Lying between Canada Southern Railway, and Grand Trunk Air Line, Cayuga Stations.

I breed and have
FOR SALE

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

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

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

D. ALEXANDER,

Brigden, Lambton, Co., Ont.



My Shorthorn herd now consists chiefly of imp. Lady Violet Lustre and seven of her daughter's, and two daughters of imp. Beauty 15th, almost all sired by one bull, and of one character, thick, and fine quality. Can furnish a splendid young herd, including an imported bull. Trains twice daily. Station one mile.

BOW PARK HERD



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.

C. G. Charteris & Son,

BEACHWOOD FARM CHATHAM, ONT., BREEDERS OF

Pure SHORTHORN CATTLE

The splendid young roan bull (both Earl of Darlington, bred at "Belvoir," and possessing the blood of the Darlington, Oxford, Airdrie and other famous strains, at head of herd.

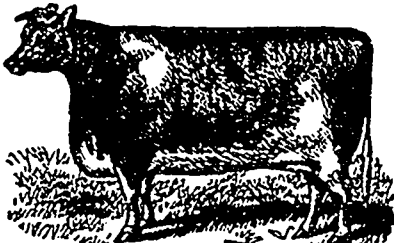
Four bull calves for sale, sired by Crown Prince (12366) and Lord Byron (8821), and a few heifers, all registered in the new Dominion Herd Book.

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

Visitors met at station.

307-72

ARTHUR JOHNSTON,
Greenwood, Ont., Can.



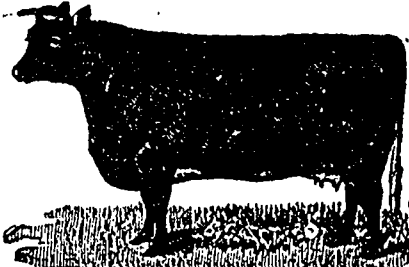
I HAVE still on hand and for sale an excellent lot of imported Bulls, Heifers and young Cows, besides an exceedingly good lot of home-bred Heifers and Bulls—all by imported sires and mostly from imported dams.

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.

J. Y. REID, HILLSIDE FARM,

(2 1/2 miles south from Paris.)

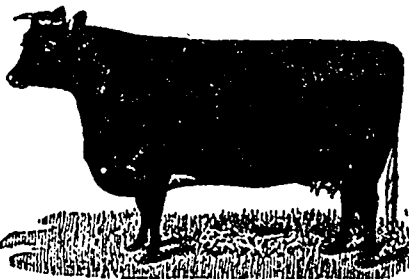


BREEDER of Shorthorn Cattle, all registered in the new Dominion Herd Book. The highly bred Bates bull, 7th Earl of Darlington, bred at Row Park, at head of herd. The herd is composed of a choice lot of young cows and heifers, all of the ROAN DUCHESS strain. Young stock at all times for sale. Apply to

James Geddie, Manager, PARIS, ONT

FRANK R. SHORE & BROS.,

R. R. STATION, LONDON. P. O., WHITE OAK.



SHORTHORNS AND SHROPSHIRE

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

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

WYTON

Stock-Breeders' Association

BREEDING OF PURE

HOLSTEIN AND FRIESIAN CATTLE

A SPECIALTY.

We have the only pure breed of Aaggie Stock in the Dominion, the head of our herd being Gir James of Aaggie, No. 1457, H. H. B., Vol. 6. Also Aaggie Ida, No. 2600, H. H. B., Vol. 6. This family is noted for its exceptionally fine milk producers.

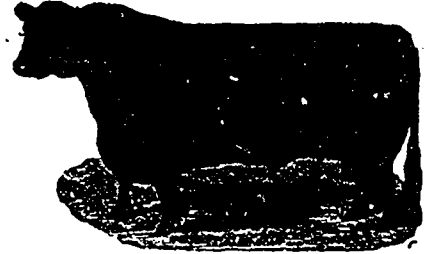
The largest herd of Holstein cattle in Canada, from which we are prepared to sell bulls and heifers. If you are in want, come and see us. Prices reasonable. Correspondence solicited.

Address **WM. B. SOATCHERD,** ap-88 Secretary, Wyton, Ont.

Sale Catalogues, Pedigrees, Letterheads, Business Cards, Envelopes, etc., etc., executed with neatness, dispatch and at reasonable prices. HORSE BILLS Neatly and Promptly Executed. Estimates furnished. Address

STOCK JOURNAL CO., HAMILTON, ONT.

ABERDEEN-ANGUS POLLS



The undersigned 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 last 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,
New Lowell, Co. Simcoe, Ont., Canada.

GALLOWAYS FOR SALE.

13 Head of Galloways, comprising ten females and three males. The majority were imported, and are registered in the Scotch Herd Book. All are registered in the American Herd Book except four, and these can be.



Full particulars on application to **N. H. MEAGHER,** HALIFAX, N. S.

A. C. HALLMAN & CO.,
NEW DUNDEE, WATERLOO CO., ONT.



HOLSTEIN-FRIESIAN CATTLE.

Herd headed by the noted prize-winner Prairie Aaggie Prince H. F. H. B. No. 2, first prize at the Industrial and Provincial in 1886; 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 24 lbs. to 24 lbs. 13 oz. in one week, and from 81 lbs. to 106 lbs. 12 1/2 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.

BROOKSIDE FARM

New Glasgow, Pictou Co., N. S.

STANDARD-BRED TROTTERS

American Cattle-Club Jerseys.

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 30th 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.

IMPROVED YORKSHIRE PIGS

SHIRE AND CLYDE HORSES.

SHROPSHIRE SHEEP.

J. Y. ORMSBY, V. S.,

ORMSBY & CHAPMAN,

GEO. S. CHAPMAN.

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

ONTARIO LODGE,
OAKVILLE, ONTARIO.

Imported and home bred stock for sale.
Every pedigree guaranteed. Prices low.
Correspondence promptly attended to.

All our pigs registered in the English Herd Book.

"Good Stock with Straight Pedigrees," our motto.

HILLHURST HERDS

HEREFORD,

Aberdeen-Angus and Jersey

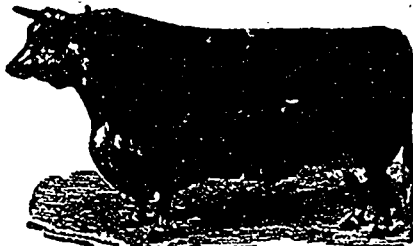
HEIFERS, COWS AND YOUNG BULLS FOR SALE

At reasonable prices. Send for new catalogues.



M. H. COCHRANE, Hillhurst, Que., Can.

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 Rambler 6th (6630) 23514.

SHORTHORNS

Heifers and bulls for sale, mostly sired by imported Duke of Hazelcote 68th, 65707.

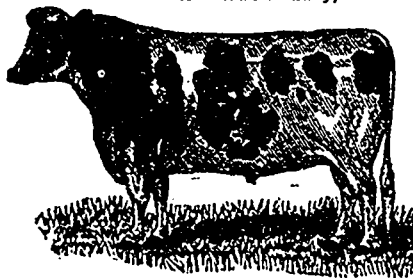
Also a number of fine Hereford grade heifers and young bulls.

G. F. BENSON, Cardinal, Ont.

J. E. PAGE & SONS,

AMHERST, NOVA SCOTIA,

On line Intercolonial Railway,



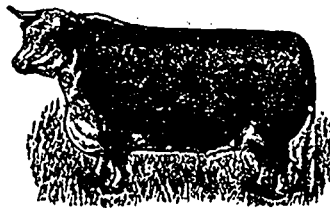
Importers and Breeders of

HOLSTEIN-FRIESIAN CATTLE

Including strains of the best milk and butter families living. Herd headed by CLOTHILDE and's ARTIS, whose dam Clothilde and, 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. 17oz. unsalted butter; sire, Netherland Prince. Prices low for quality of stock.

THE TUSHINGHAM HERDFORDS



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.

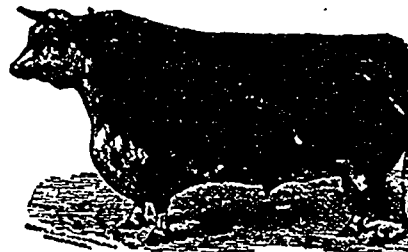
J. W. M. VERNON,

Tushingham House.

Waterville, P. Q.

WATERVILLE is on the main line of G. T. R., not far from the United States boundary.

The Park Herd of Herefords,



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

F. A. FLEMING,

Weston, Co. York, Ont.

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

JAMES HUNTER, ALMA, ONT.

Importer and Breeder of

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

Stock of both sexes for sale.

JAMES DRUMMOND,

Petite Cote, Montreal.

Importer and Breeder of
PURE-BRED

**AYRSHIRE
CATTLE**



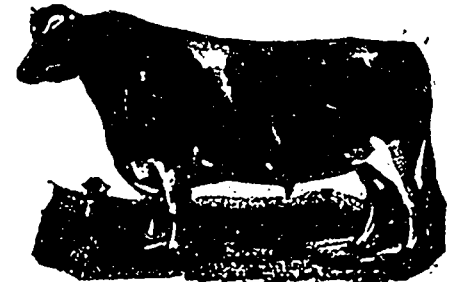
Of Large Size, and from Choice Milking Strains.

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.

CREDIT VALLEY STOCK FARM.

SMITH BROS.



CHURCHVILLE, (PEEL 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.

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. RITCHIE,

Ste. Anne la Perade, Co. Champlain,

on line C. P. R., near Quebec.

No Reserve. All stock for sale, and in A1 condition.

PROSPECT HILL FARM

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

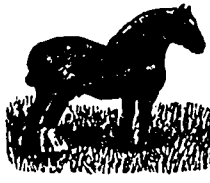


JOHN CAMERON,

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.



PERCY & YOUNG,

Bowmanville, Ont.,

Home of the Provincial Renowned Manfred (1758).

Have on hand for sale, on very reasonable terms, their 1887 importation, consisting of 8 very choice and carefully selected

REGISTERED CLYDESDALES

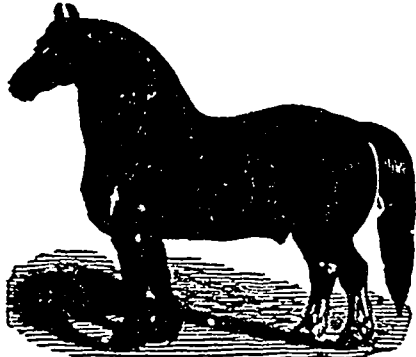
prize winners, of very superior quality, form and finish, consisting of 3 two year old stallions, 2 one year old stallions, 1 four year old mare, 1 filly two years old, 1 one year old filly.

Our importation consisted of the get of Lord Erskine, Cairnbrogie Keir, Good Hope (by Darnley), Crown Jewel and other noted sires.

We invite the attention of intending purchasers to the rare individual merit and excellence of our stock.

Also two very fine Canadian-bred Stallions, 3 and 4 years old, almost solid colors, sure foal getters.

SHIRE BRED HORSES



MORRIS, STONE & WELLINGTON

IMPORTERS, offer for sale choice Stallions, Mares and Fillies, which are registered in the English and Canadian Shire Stud Books, including prize winners at the Royal Agricultural in England, and the Industrial at Toronto.

MORRIS, STONE & WELLINGTON, Welland, Ont

GRAHAM BROS., CLAREMONT, ONT.

RESIDENCE ONE MILE FROM CLAREMONT STATION.

Importers of Registered

Clydesdale

STALLIONS AND MARES

constantly on hand and

FOR SALE

At reasonable terms.

The importations of 1887 comprise a large number of one, two, three and four-year-old registered stallions and mares, the gets of such sires as Macgregor (148-), Darnley (222), and Prince of Wales (673). Also a few choice **SHEPHERD PONIES**.

Correspondence solicited, and visitors always welcome.

J. F. QUIN, V. S., Erampton, Ont. Ridgling horses successfully operated upon. Write for particulars.

CRICKSHANK SHORTHORNS,

CLYDESDALES

AND

Shropshire Sheep

IMPORTED AND BRED BY

JOHN DRYDEN,

BROOKLIN, ONT.

FOR SALE—Superior show Cows, Heifers and Bulls, of the best Cruickshank families.

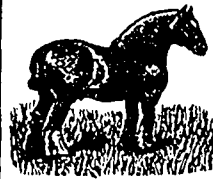
Purchased in England, for arrival in August, 175 Shropshire sheep, including Rams and Ewes, winners at the great Royal show and other exhibitions.

Inspection invited

Catalogues on application.



GEORGE G. STEWART, IMPORTER,
Howick, Chateauguay Co., Prov. of Que.



OFFERS FOR SALE On Reasonable Terms Choice **STALLIONS AND FILLIES**

Which are registered in the Clydesdale Horse Society of Great Britain and Ireland. One of my present importation is Duncan Bruce, winner of the first prize at the Stormont Union Show, Scotland, last year as a year old.

Correspondence solicited, and visitors always welcome.

Imported Clydesdales For Sale.

FROM one to four years old, stallions and fillies from the best studs in Scotland, including get from Macgregor, Harold, Knight of Snowdon, Sovereign, Crown Jewel, McMaster, What-Care-I, Clyde, Scotts, Laird Craford, etc., etc.

The stock is selected by myself with great care. Parties wishing to purchase would do well to inspect personally before deciding.

Also a few **Shetland Ponies.** Correspondence Solicited. HOWICK STATION, C. A. R., on the farm. (G. T. R. one mile from Howick also.) Address, ROBERT NEV. & Woodside Farm, Howick P. O., Pro. of Que.

JAMES GARDHOUSE & SONS,

MALTON, ONTARIO, CAN.

Beeders and importers of **CLYDESDALE & SHIRE HORSES,**

Shorthorn Cattle and Berkshire Pigs. Young Stock for sale. Terms reasonable.

JAMES GARDHOUSE & SONS, MALTON STATION, Highfield P. O., Ont.



fe-tf

Clydesdales

FOR SALE

Importation of 1887.

Not long arrived, a superior lot of

CLYDESDALE STALLIONS & MARES

Ranging from one to five years old, including gets of the celebrated Lord Erskine, Belted Knight, Sir Wyndham, Warrior, Goodhope, Lord Kirkhill, Old Times, Pride of Galloway and Macgregor. Prices reasonable. Catalogues furnished on application.

ROBERT BEITH & CO., Bowmanville, Ont.

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

CLYDESDALES, SHORTHORNS AND SHROPSHIRE.

JOHN MILLER,

Brougham, Ont.,



has on hand for sale a large collection of prize-winning animals of the above breeds. The Clydesdales are large and of the best quality. The Shorthorns are of the best Scotch families and of superior individual merit.

Particular attention is called to our Stallions and young Bulls, which will be offered at moderate prices. Terms easy.

Residence, 3 miles from Claremont Station, C. P. R., or 7 miles from Pickering, G. T. R., where visitors will be met by telegraphing us at Brougham. Correspondence solicited.

D. & O. SORBY,

GUELPH, ONT.

Breeders and Importers of

Clydesdales.



35 PURE-BREDS on hand and for sale, including gets of the following sires: Lord Lyon (189), What-Care-I (912), Belted Knight (1395), Goldenberry (2828), Corsewall (1420), Prince Charlie (629), Sir Michael (1530), Scots-Wha-Hae (4000), Macpherson (3825), Good Hope (1679), Lord Erskine (1744), Macneilage (2992), Golden Treasure (4417), Gallant Lad (2781), of which 13 are Stallions and Colts. Several of our mares are supposed to be in foal to our well-known Boydston Boy (111), sire of the celebrated Lord Erskine (1744).

COLDSTREAM STOCK FARM,

Whitby, Ontario.

We have on hand and for sale a superior lot of imported and home bred

Clydesdale Stallions

and mares. Several of them were prize winners at the leading shows in Scotland and Canada.

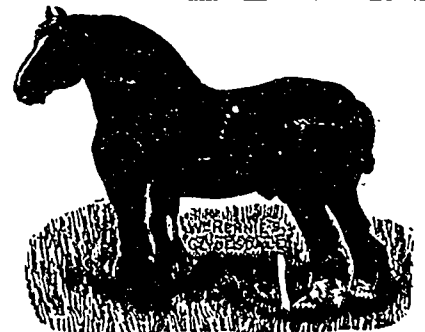


ALSO A FEW CHOICE SHETLANDS.

Prices to suit the times.

Address,

JEFFREY BROS., Whitby, Ont.



IMPORTED CLYDESDALE HORSES

of superior breeding and quality

FOR SALE AT REASONABLE PRICES

both Stallions and Mares, from 1 to 4 years of age, all registered in Scotch and Canadian Stud Books, bred from the following noted sires: Darnly (222), Belted Knight (1395), Breadalbane (1978), What-Care-I (912), McCammon (3818), Harold (2854), Trademark (3269). Inspection solicited.

WM. RENNIE, Toronto.

Stables, 88 Duchess St.

P. S.—Also SHETLAND PONIES.

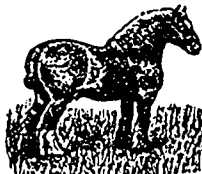
Imported Clydesdales FOR SALE.

Prices moderate and terms to suit purchasers.

Not long arrived, a superior lot of registered

CLYDESDALE

Stallions and Fillies



from 1 to 3 years old, and with the exception of three all have been prize winners at leading shows in Scotland. Including gets of the celebrated sires Darnley, St. Lawrence, Lord Hopton, Macgregor, Old Times, Gallant Lad and What-care-I.

Our horses are all selected with the greatest care from the best studs in Scotland. We pay a little more for our choice than those who buy in job lots. Parties wishing to purchase superbly bred animals should inspect our stock.

DUNDAS & GRANDY,

Velverton P. O.,

Pontypool station on the C. P. R. 50 miles east from Toronto.