

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 copy has manuscript annotations.

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

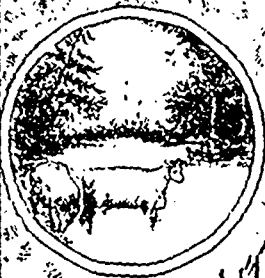
10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

While Agriculture is the First & Noblest of the Sciences
Stock Raising is the Right Arm of Agriculture

CANADIAN

NOVEMBER

1889.



Special Attention
given to the various Systems of
Feeding
Stock



Every department relating
to the Welfare of Live Stock
Receives most
Careful Attention

LIVE STOCK

&
FARM JOURNAL

Devoted Mainly to the Interests
of the Stock Raisers of the Dominion,
But Overlooking no Department
Of the Farm.

PUBLISHED BY THE J. E. BRYANT COMPANY (LIMITED), TORONTO, CANADA.

BUGGIES!

WE MAKE A SPECIALTY OF
PIANO BOX TOP BUGGIES

SPECIALLY ADAPTED FOR FARMERS' USE.

Our Annual Output is over 1,000.

Agricultural Agents will find it to their advantage to send for Catalogue and Price List.

ALL WORK IS GUARANTEED.

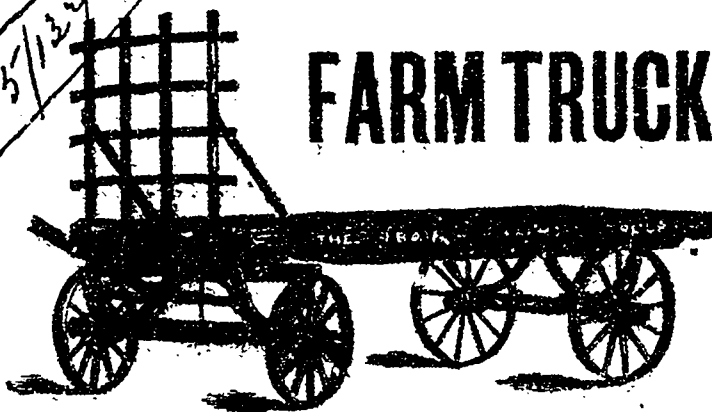
B. J. NASH & CO.,

Wholesale and Retail.
June.

111 1/2 YORK ST., London, Ont.

BAIN WAGON CO'S

FARM TRUCK



THIS Car represents the most convenient Wagon ever put on the farm, because it is suitable for all kinds of work, and always ready, no change being necessary. This wagon was invented and first introduced in Mich., U.S., and is very extensively used by leading farmers in the United States. Every wagon made and sold by us in Canada is giving entire satisfaction. For further particulars and prices address

BAIN WAGON CO'Y.
Woodstock, Ont.

BAIN WAGON CO., WOODSTOCK, ONT.



This paint is a rich brown color. It is the best paint in the World; covers double the surface, looks better and lasts longer than the best lead and oil paint manufactured.

PONIES FOR SALE.

One dark brown, 13 hands, 200 lbs., from T. R. mare and half Arab stallion. One light brown, 13 hands, 600 lbs., from a 4-minute trotting Edmoor pony mare, and a 1 1/2-hand Phil Sheridan Stallion, 40. Both very kind and nicely broken to saddle. Address: JAMES MCCOY, Esq., Eschol Grove Stock Farm, Chateaufort, P. O., Dundas Co., Ont.

Read the Publisher's Column, and obtain good reads for the winter.

CANADIAN PACIFIC RAILWAY.

ANOTHER SERIES OF
CALLAWAY'S

Personally Conducted
EXCURSIONS

To BRITISH COLUMBIA
WASHINGTON TERRITORY, OREGON AND CALIFORNIA

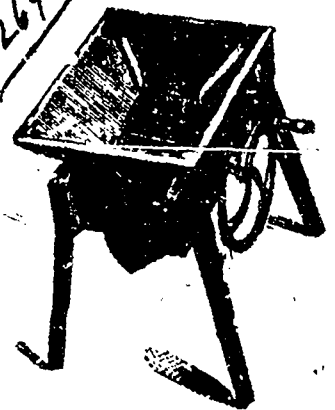
Oct. 22nd, Nov. 5th and 19th, and Dec. 3rd, 17th and 31st.

For berth and all information, apply to any Agent of the Company, or write

W. R. CALLAWAY, 118 King St., West, Toronto.

Read the Publisher's Column and see what we will do for you if you will help us.

TO STOCKMEN!



PAYD FEB. 2nd, '87.

PAYD FEB. 2nd, '87.

The "Speed" Root Cutter,

THE SIMPLEST, FASTEST CUTTING, AND EASIEST RUNNING CUTTER. In the Market.

CEGAR GROVE, Ont. May 28, 1889.
DEAR SIRS.—Your "Speed" Root Cutter that I got from you last fall is the best Root Cutter I ever saw. It works to perfection. I cut roots for seventy head of Jersey cattle last winter and I have never seen any cutter that is its equal for FAST CUTTING, and EASY WORKING. I sold the one I used last winter and I shall have another from you this fall.
Yours truly,
ROBERT REESOR,
Breeder of Jersey Cattle.
Write for circulars and prices. Liberal terms to dealers.
J. F. MILLAR & SON,
MORRISBURG, Ont.

LITTLE'S PATENT FLUID SHEEP DIP AND CATTLE WASH

CHEAP * CONVENIENT * AND * EFFECTIVE.

The best Non-poisonous Sheep Dip and Cattle Wash in the world.
"CHEMICAL FOOD" FOR THE WOOL. Rapidly increases the quantity and improves the quality. IT IS EASY TO USE, requires very little preparation, mixes instantly with cold water, leaves no sediment, no scum, no waste.
CERTAIN DEATH TO LICE, MANGE, and all insects upon Horses, Cattle, Calves, Pigs, Dogs, etc. Superior to Carbolic Acid for Ulcers, Wounds, Sores, Saddle-Calls, Sore Udders, etc.
EXTRACTS FROM SOME OF OUR NUMEROUS CANADIAN TESTIMONIALS.
"We think a great deal of it."—Prof. Brown, late of Agricultural College, Guelph.
"Sure death to lice on cattle and colts."—Robt. Marsh, Lomridge Farm, Richmond Hill.
"Gives great satisfaction."—W. Whitelaw, Guelph.
"Best ever used."—Jas. Russell, Richmond Hill.
17 GOLD, SILVER AND OTHER PRIZE MEDALS have been awarded to Little's Patent Fluid Dip in all parts of the world. Sold in large tins at 25c. Special terms to Breeders, Ranchmen, and others requiring large quantities.
MANUFACTURERS AND PROPRIETORS,

Morris, Little & Son, Doncaster, Eng.
Ask your nearest druggist to obtain it for you, or write for it, with pamphlet, etc.; to:
ROBT. WIGHTMAN, DRUGGIST,
OWEN SOUND, ONT.
Sole agent for the Dominion.
Parties writing to advertisers will please mention this JOURNAL

THE CANADIAN LIVE STOCK AND FARM JOURNAL

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

VOL. VI.]

TORONTO, NOVEMBER, 1889.

[No. 73



A PRIZE-WINNING AYRSHIRE HERD.

Owned by Mr. James Drummond, of Petite Cote, Montreal, P.Q.

Our Illustration.

Strange would it have been indeed if our artist had failed to produce such an excellent embellishment for our front page as adorns it this month with such capital models before him as the prize-winning Ayrshire herd of Mr. Jas. Drummond, of Petite Cote, Montreal, P.Q. This herd, besides being winners individually of a vast number of prizes, have made a clean sweep of all the herd prizes this year wherever shown, winning first at Kingston, the same again at Ottawa, yet again at Toronto, and finishing the truly glorious series with first at Hamilton. It is certainly a great honor to be the winners of such high honors, not to mention the many others that they have also separately won at these same fairs.

Standing down at the left hand corner in the above group Rob Roy 3971, at present the stock bull, displays his many qualities of personal merit. He is a get of the well-known prize-winning bull Promotion 3212, that was also imported by Mr. Drummond, and used in his herd with great success before Rob Roy attained to maturity. The dam of Rob Roy, Viola 3rd, a grand milker, that is shown in the above

group just above the bull. The head of Rob Roy is masculine in appearance, full of character, clean and free from all fleshiness. His quarter, in front, is all that a dairy bull should have, while his loin and body is by far better than that ordinarily met with, even in good dairy bulls. His ribs spring out well from the back and are lengthy, giving his vital organs plenty of room to work. The rudimentary tests are well placed, and his hind quarter wide, and legs well shaped. An excellent handler, with a skin and covering of the finest quality, he would easily be taken for the grand stock getter he is by even the merest novice.

In the right hand corner opposite appears a splendid milch cow and breeder, Lily of Hardiston 3628, another importation of Mr. Drummond's from the herd of Duncan Keir, Bucklyvie, Scotland. She is just the type of a cow that would fill the eye of any dairyman. She is mostly a pleasing red in color. From even a casual view at her milk making apparatus one would at once pronounce her a cow of immense capacity. She has a nice head and lean neck, but when her barrel is reached the conclusion is at once forced that she is a cow for work, though not without many attractions as far as bovine beauty goes as well. Her

body is excellent, roomy and deep, with a strong though thin loin. Her hind-quarter is wide which, in conjunction with her cat hams, gives her prominent udder every chance to expand. Few cows, indeed, possess an udder such as hers, and fewer yet are the Ayrshire cows that have such good sized teats. Her udder runs far forward, and is not at all fatty in its nature. Taken all in all she is a cow that adds much to the honor of the Ayrshire, and must prove a source of much revenue to her owner.

Viola 3rd 3822 is placed just above Rob Roy in the above group. If this cow had done nothing more than what she has done in producing Rob Roy she would at least be worthy of appearing in the above good company. She was imported by Mr. Drummond, and was bred by Chas. Ray, Gargunnoch, Scotland. She has a beautiful head, thin neck, light fore-quarter, and voluminous barrel. She possesses a back loin and quarter that would be hard to surpass, while her udder is of the first order, with teats of a fair size. Leading away from her udder those conduits of waste blood, the milk veins, are very noticeable, being large and tortuous in their course. In appearance she lacks but little, while her value as a breeder cannot be estimated too highly.

To the extreme right appears a heifer with high prospects before her, Lily D. 3834, one that has been bred by Mr. Drummond himself, sired by their former stock bull Promotion 3212, dam Maggie Sands 3627, imported by Mr. Drummond. This heifer is one of splendid promise, being of excellent breeding and of fine appearance. She is the owner of a neat and pretty head, mounted with a nice pair of horns. Though one would not expect to see her body fully developed, yet in length and spring of rib she will equal many a cow of riper years. In loin she is strong and wide between the hocks, indicating that the claims of maternity will be easily met by her. Her teats are of good size, and are a good distance apart. She is a vigorous and sturdy looking heifer, and will, no doubt, meet the great expectations that her present merits have given rise to.

Viola 5th 4540, another heifer of many good parts, stands in the left hand corner in the group above. She is of good stock, having been sired by Promotion, and out of Viola 3rd 3822. She, however, is worthy of such progenitors, for though yet young she gives strong indications of future worth in the dairy, and as a breeder of prime stock. Though strong in bone and robust in appearance she is of excellent quality throughout. She is light in the fore-quarter, and wide and deep behind. Her barrel is well ribbed and rounded, while her teats are all that could be desired. Over all she has a skin that indicates butter-giving qualities, being of a good color and pliant handling.

THE Canadian Live Stock and Farm Journal

PUBLISHED MONTHLY BY

The J. E. Bryant Company (Limited),

58 BAY STREET, - - TORONTO, CANADA.

Terms, \$1.00 per annum in advance.

To Subscribers.—The subscription price of THE CANADIAN LIVE STOCK AND FARM JOURNAL is \$1.00 a year, in advance. Single copies, 10 cents each; sample copies, free. The date to which each subscriber is paid is printed on the address-label of his JOURNAL. Subscribers continuing to take the JOURNAL from the post office after their time of subscription is expired, will be considered as desiring to renew their subscription. Notice to discontinue the JOURNAL should be promptly sent to the publishers by returning the first number received after the subscription has expired. The publishers reserve to themselves the right to continue sending the JOURNAL to responsible persons until all arrears are paid.

Remittances may be made in registered letters to our risk. The receipt of the JOURNAL will be sufficient evidence to subscribers that their remittances have been received. Never send money in unregistered letters. Money so sent must be at the sender's risk.

All communications should be addressed THE J. E. BRYANT COMPANY (LIMITED), 58 Bay Street, Toronto, Canada.

TORONTO, NOVEMBER, 1889.

The Best Always Commands a Good Price.

If there is one error which our farmers are more prone to fall into than another it is the production of what is only medium or inferior. What is medium only brings an average price, and what is inferior one that is less than the article is worth. But an article that is first class will bring the highest price going, and in almost every instance finds ready sale when offered. We have an illustration of this in the case of the sale of a pair of two-year-old grade Galloways, which has only recently come under our notice. They were bred by Mr. Keough, of Owen Sound, and when sold last spring they brought 6c. per pound live weight, at a time when good medium beef cattle were being picked up at 4½ cents per pound. They weighed 1,700 lbs. apiece. Here then we find \$100 each received for a pair of cattle not three years old, when the

average of three-year-old shipping cattle brought no more than \$73.00, and the farmer sold his half fattened steer of the same age to the local butcher for about \$45.00. It may be said that the difference between the price in the first and third instances was fed to the Galloway grades. We cannot think that such is true, for the cost of sustaining the life processes in the Galloways, as the replacing of waste tissue, was very much less than in that of the beasts sold to the local butcher. Again, beasts that gained so rapidly as the Galloway grades evidently must have made a much better use of every pound of food fed to them. We should never be content with the production of what is not really first in any line of life.

As It Ought to Be.

Some time ago we inserted a paper in the JOURNAL on growing clover seed, from the pen of Mr. R. C. Brandon, Cannington. We have been much gratified to learn that that article has rendered good service in the country. Mr. Brandon dwelt upon the importance of cutting at just a particular stage which he indicated. A farmer living near Heathcote, where alsike clover is now extensively grown, profiting by the directions given by Mr. Brandon, cut a large field in 1888, at that particular period; several of his neighbors allowed theirs to reach a more advanced stage before cutting, and thereby lost quite a portion of the seed from shelling in the harvesting. They also injured the quality of the hay for feeding. The gentleman to whom we refer considers that he profited to the value of two dollars per acre in this instance, to say nothing of the results that will be reaped in coming years. The farmers of that neighborhood will also doubtless profit in future from the results of his experience in the instance given. In how many different centres similar results have been reaped from the perusal of Mr. Brandon's letter we have no means of ascertaining. We always had a strong faith in the relative value of the writings of thoroughly practical men, and in their ability to give bread to the readers of their writings rather than husks. We can assure our readers that nothing gratifies us more than to know that we are helping our farmers toward the adoption of improved methods of agriculture, which are sure to be followed by better financial returns.

The Value of Improved Sires.

When pure bred sires were so dear that it required a sum equal to one-half the value of an entire common herd or flock to purchase one, those who hesitated are not to be charged with lack of enterprise. There was then a large risk incurred in investing in a sire, owing to the liability to accident in one way or another. Now it is entirely different. The prices of good sires are within the reach of any farmer who is really anxious to improve his stock. Why more attention is not given to this important matter is one of those things which it is not easy to answer. The advantages of growing improved stock are so apparent that the most careless observers cannot fail to have discovered this. Our cattle shippers will not go into a locality to look for stocks where a pure sire has not been kept for some time, and the same holds true of those who purchase sheep. Where good heavy draught sires are used there is no difficulty in finding a market for the offspring and at good prices, but where sires of mixed breeding, or of no special breeding, are in favor, the horse-buyer is seldom or never found. The gap in the prices for the improved and unimproved is also a large one. Take the prices for one week at the Chi-

cago live stock show yards, where oftentimes the arrivals sum up 12,000 head per day; while good fairly well-finished cattle bring from \$4.50 to \$4.60 per hundred live weight, the same day native cattle, a little older but considerably less in weight, sell for \$3.50 per one hundred pounds. To put it differently the well furnished steers of 1,400 lbs. averaged \$63.00 per head, while the native steers, considerably older, weighing 1,240 lbs. averaged \$43.40 per head. We feel quite safe in saying that the native steers cost the most to raise them, owing to their slower habit of growth, although the price obtained was \$19.60 less. Where the feed and care are right it is impossible to grow a pound of scrub meat as cheaply as a pound from an improved animal, as the habit of growth of the scrub forbids it. Every farmer in Canada should feel a patriotic pride in producing the best, to say nothing of the self-interest side of the question. Purchase a good sire if you are able, and if you are not patronize one though you should have to go miles in doing so.

An Ayrshire Stock Farm.

Accepting the historical data furnished us by the chroniclers of early times in rural life one cannot but be impressed with the wondrous progress that has been made in the improvement of the various breeds of domesticated animals, and if we were to single out one breed, confining our selection to cattle that show the greatest advancement considering their appearance and qualities fifty or seventy-five years ago, the now comely and vigorous Ayrshire would undoubtedly be our choice. It is but within the last century that those characteristics, that make them invaluable as a breed, have become fixed through constant selection to a definite type for a well defined purpose, and to meet the exacting conditions of their native district. Their progress may not be so marked in later days, but it is none the less sure, so that with each year the canny Ayrshire fills with greater honor her destined position on the farm—the thrifty and economical dairy cow. Thrifty in the sense of being rugged in constitution, vigorous in vitality, and with the ability to stand climatic severities; economical in the light of giving good returns for all food consumed whatever its nature.

Among the many that have been successful in breeding these cattle, for all with but few exceptions indeed have done well with them because of the easiness of raising and caring for them, the name of Mr. James Drummond, Parkhill, Petite Cote, Montreal, stands forth prominently. For the last twenty-five years Mr. Drummond has been a believer in the Ayrshire and an enthusiastic laborer for her cause, and during that time he has called into play all the powers that be to build up a herd of the best possible merit. About twenty years ago he began the work of importing them from their native heath, and the enterprise and selective ability shown in importing animals of the best qualities and type, coupled with intelligent breeding and skilful management, has brought his herd to the fore as attested to by the high stand they have always taken at the leading exhibition contests each year. Perhaps the most remarkable of these importations was the superior Ayrshire bull Promotion 3212, obtained from Jas. Weir, of Sandlands, Scotland, when but a calf. This bull has done much to build up the herd to its present high status, and though his place is at present taken by another the good followed his use in the herd will yet show itself for years. Three excellent cows imported in '83, two of which, Viola 3rd 3822, sired by Gallant Graham 255, and bred by Duncan Keir, of Bucklivie; and Lily of Hardinstan

3528, were very superior cows, both in breeding and individual merit, the latter having been sired by Young Baron 42b, by the noted bull Baron of Bucklivie, that never was beaten in Scotland.

In winning prizes this herd has by no means been playing the part of the laggart. At the Provincial held at Ottawa in 1879, with three cows bred by himself, Mr. Drummond had the high honor of capturing the silver medal given by H. R. H. the Princess Louise for the three best dairy cows. At Sherbrooke in 1885 they won, besides several individual prizes, the herd prize as well in strong competition. At the Provincial of last year Mr. Drummond was again successful in winning the bronze medal in the milking competition. The same year they were honored with the herd prize at Montreal, and coming on to Ottawa were there the winners of a like trophy. But this year even their glorious past record has been surpassed. At Kingston, Ottawa, and Toronto they took first and second on milch cows, first on aged bull, and bull of any age at Ottawa, and second at Kingston on the same. At Hamilton they won first on bull of any age and on aged bull, first on milch cow, first on bull and three of his get, second on year old bull, first on yearling heifer, and second on heifer calf. The crowning success of all has been, however, the herd prizes that have been won this year, as they secured no less than first at Ottawa, first at Kingston, first at Hamilton, and first at Toronto Industrial.

The farm comprises three hundred acres, all under cultivation, and the style of farming followed is that of mixed husbandry. The herd numbers seventy head of pure-bred Ayrshires. The farm is situated four miles north of Montreal; C. P. R. Mile End station is the nearest railroad station, which is about two miles distant. Mr. Drummond has on hand at all times young stock for sale, and owing to the great number kept can meet the wishes of all reasonable purchasers. The sales for the year have been many, among which we may mention that it was from this herd that the Dominion Experimental Farm at Ottawa made a selection of no less than five cows and heifers.

The General Purpose Stallion.

It is the universal practice throughout Ontario for our smallest fairs as well as our largest exhibitions to recognize this class, and make more or less allowance for them in their awards. This we hold is not only a needless expenditure of money, but is also harmful in its effects, inasmuch as it stimulates the production of a class of horses, useless in themselves, and worse than ciphers in respect to their breeding qualities.

The most complete definition of this anomaly that we have yet seen is given in the following words, taken from the prize list published by one of our exhibition associations: "A general purpose horse is understood to be a horse that is suitable either for the wagon, carriage, buggy, saddle, or plow." We have not a word to say against this clear explanation of the requirements of a stallion before he is worthy of the title general purpose, for the definition certainly covers all the ground, but what we do raise our voice against is the encouragement of a class of stallions that should not be recognized. The visitor from fair to fair has the fact pressed home to his mind that if the awards are made for this class for the purpose of establishing a fixed type of stallions possessing these many qualities required of them, they certainly fail woefully in their avowed object. The stamp of stallions that enter in this class vary greatly, just as the term general purpose horse varies with the requirements of each district in Ontario.

But what about the breeding of these stallions? Invariably they are nothing more than good grades by a heavy draught stallion out of a common mare. Now these stallions, ten cases out of ten, cannot be depended upon to transmit their few good qualities to their progeny. These attributes are not fixed by selection and careful breeding, and hence that paramount quality, termed prepotency, that has distinguished all valuable sires, is unknown to them. They may possess many personal attractions, but of what use we ask is any stallion, no matter how splendid in form, style, and quality, if he cannot be relied upon to transmit these to his progeny? Speculation at present is too rife in breeding without increasing it. It should be the breeder's aim to endeavor to eliminate, as far as possible, all chance work from his calling, and not increase it by the use of stallions of unfixed qualities through their breeding.

But the worse feature of the question is that these are the stallions that can afford to travel through the country stinting mares for what their owners may be pleased to pay for their services, and thus undermine the pure-bred stallions that must necessarily ask a higher fee. Our fair associations, by the prizes they offer and the honors they confer, must more or less aid in flooding the country with these cheap stallions of nondescript breeding. It is an easy matter for a jockey to fix up a stallion in good flesh, so that his failings in bodily structure may be mostly hidden, and as these general purpose stallions may be offered at a very cheap rate as they have cost their owners but very little to raise in comparison to what it costs the owner of a pure-bred stallion to assume proprietorship, it is not a matter for wonder that the former, in far too many cases, is given the preference. If our associations would withdraw their recognition of these stallions, and discountenance their production by not only refusing to provide prizes for them but also by giving greater encouragement to the owners of pure-bred stallions by larger prizes, we feel sure this would have a marked effect on public sentiment in this respect, and thus materially influence for the better our important industry of horse-breeding.

Fattening Sheep.

This branch of the live stock industry has received comparatively little attention at the hands of the Canadian farmer, especially in the winter season. It is one of considerable importance, or at least it might be made so. Lambs in this province are usually sold to the local butchers at about \$3.00 each in the autumn, when by following a certain line of management they might be made to sell for more than twice, or nearly five times, that sum before leaving the farmer's hands. Even now good lambs for the Buffalo and other United States markets will fetch readily \$5.00 in the autumn, but they are of a better quality than those which bring but \$3.00 each from our local butchers. There is no class of sheep better adapted for winter fattening than lambs which are ready for the market when about one year old. They need not of necessity come early, and will answer very well from common dams if from a pure bred sire of good individuality. The more rapidly they can be pushed along from birth, with a judicious haste only be it remembered, the more suitable will they be for the purpose of winter feeding. The ram lambs should be castrated when but a few weeks old.

They had better come to hand say in April or May, for then the percentage of loss of the young lambs is less, and their growth is likely to be continuous owing

to the plentiful supplies of grass. When they are weaned they should get a small grain ration in the field. This may consist of $\frac{1}{2}$ lb. oats, $\frac{1}{4}$ lb. wheat bran, and a little oil-cake each per day, which may be increased somewhat unless the pastures are plentiful. The aim should be to push them well ahead at this period, but not to fatten them, hence nitrogenous foods as oats and bran are the most suitable. The oil-cake may, or may not, be used at this period as convenient. It is of service in securing a laxative rather than a constipated condition of the bowels. Later, when the lambs are housed, it is valuable for laying on fat, in addition to its use in regulating digestion.

The lambs are housed when the ground becomes covered with snow, and the grain ration still further increased. It may be varied both in quantity and quality to suit the convenience of the farmer. Food grown upon the farm usually costs less than what can be purchased, and should therefore be fed where there is a supply.

A knowledge of the blending of these foods so as to make a proper ration is of much practical importance, otherwise much of the food will be wasted in the feeding. If either the nitrogenous or carbonaceous foods are fed in excess, the result stated above will follow.

Experience has hitherto been the sole guide of the farmer. Deductions from his own experience or that of some one else has directed him, and the wisdom of following such guides is certainly to be commended.

But we are by no means sure that the experiences of the Canadian farmer have here covered the whole ground. In fact we are quite sure that they have not. Many combinations of foods that may doubtless be fed with results that would be satisfactory, have not yet been tried.

In this we can see a fine field for experiment by the authorities of the Ontario Experimental Farm. When such experiments are undertaken they should have a due regard to the foods that are usually grown upon Ontario farms. To know about a suitable food ration of what is grown plentifully here, is of far more importance to our farmers than to know about one composed of foods, which in large measure have to be bought, and in some instances brought in from other countries.

Without desiring in the least to under-estimate the value of cotton seed meal and corn meal as food factors, we hold that it is vastly more important that our farmers should know how to feed peas, oats and barley to the best advantage, than to know the same about the former, because peas, oats and barley are likely in all time to form leading food factors in the fattening done in Ontario.

Different rations might be named for winter feeding of such as the farmer raises, but a mixture of peas, oats or barley, bran and oilcake, will answer very well along with some roots, good pea straw and clover, or clovery hay. The grain ration should vary as the feeding season progresses. The quantity of oats should predominate at the commencement of the indoor feeding season, and the quantity of peas should gradually increase, while the oat ration may remain stationary; the oilcake also should increase as toward the close of the feeding period; the object is to lay on fat rapidly, for which purpose both peas and oilcake are very well adapted. Alsike clover is very suitable, being finer than the common variety, and, therefore, more relished by the sheep. One feed of good pea straw per day will answer very well if fed in the morning, the residue being used for bedding.

The supply of water should be constant, as unless a quantity of roots larger than is necessary is fed, they will require a large amount of water.

Plenty of fresh air is indispensable, and also access to a yard in weather not severe, but so much liberty is not necessary as in the case of breeding ewes.

A lamb that is properly cared for should weigh, say 130 to 150 lbs. at one year, from which the selling price may be easily estimated, as lambs about one year old bring readily from 5 to 5½ cents per pound live weight. The price for older sheep is at least one cent per pound less. In this way a quick return is secured for the outlay. In the case of cattle the return does not come in for at least two years, and oftentimes not so soon. There is a wide opening here for the farmers if they choose to fill it. There can be no doubt but that the home markets for this kind of produce will continually increase with the growth of our towns and cities.

The Live Stock Industry

The condition of the live stock industry must always be of paramount importance to Ontario—she is so favorably situated for its growth. While Ontario cannot any more compete with the great North-West in raising wheat cheaply, she can hold her own in raising the superior grades of meat. It is well then to have Ontario stocked to her full capacity with beasts of the right stamp. Yes, that is it; beasts of the right stamp, if her farmers would only all realize its importance.

If the lands of Ontario were only stimulated to their utmost capacity by the aid of the soiling system and artificial manures of the right kind, there is no question but that the numbers of live stock kept would be more than doubled.

But numbers alone is not the great consideration. It is never so important as *quality*. A large number of animals may be kept on a farm at a loss, while a small number on the same farm might fetch a profit.

We do not then take it as a bad omen when we find in the 1888 report of the Bureau of Industries, that, while there has been an increase during recent years in the growth of almost every kind of food for keeping stock, there is a decrease in the numbers in every branch of the live stock industry as compared with 1887 except that of horses.

It is hopeful to note an increase in the number of horses at the present time, for two reasons. First, they have been bringing good prices in the market for some time past, at least relatively, and second, the staff of working horses on Ontario farms has been too few in number, and too light in body up to the present. Because of this the ground is not sufficiently tilled, hence the superabundance of weed life on every hand. Horse power is always the cheapest power that can be employed in driving weeds away to their own place.

There were 20,857 more horses in Ontario in 1888, than in the previous year, and of these 4,303 were working animals. We talk about liberating agencies of plant food, but, if we would only see it, there is indirectly no liberating agency under the sun that will compare with working horses when turning the land over and over, and through and through, thus preparing it for that comminution of weathered particles so favorable to the support of plant life.

During the same period the number of cattle decreased by 19,626 head. This decrease was chiefly in working oxen, store cattle and young animals. It is not necessarily a sign of retrogression. We have never lacked so much for numbers as in quality. A little improvement in quality would soon more than counterbalance any loss from so small a decrease in

numbers, and we have good reasons for believing that there is an increase in quality, owing to the increasing number of the good sires that are being used.

It is also encouraging to notice that while the whole number of the live stock in the country has decreased as mentioned above, there has been an increase of 33,238 head in the number of cows kept. From this it is apparent that dairying is on the increase, which is as it should be.

But while there is an increase in the number of cows kept the average milk yield per cow during the cheese factory season is less than in 1887, and even less than the average for the past six years. It amounted to 2,673 pounds for each cow against 2,740 pounds, as the average during previous years. Now, it would be clearly better every way to try just to increase the average milk yield than the number of cows. There can be no doubt but that 400,000 cows would do the work of the 781,559 cows now in the Province, if managed and fed according to the most approved rules. At dairy association meetings, line upon line and precept upon precept have been given to the people, urging upon them the wisdom of increasing the average yield per season per cow, and yet there has been no increase in this direction since 1882.

The falling off in the numbers of sheep kept in the Province is to be regretted, for we are now clearly under rather than overstocked in the line of sheep. The whole number of sheep in the Province is 1,349,044, as compared with 1,850,733 head in 1884, a falling off during that period of 441,689 head in five years, or nearly 90,000 head each year. This decrease has been constant, as well as large, and mostly in the coarse wool classes.

The number of sheep on every one hundred acre farm in Ontario on an average is clearly less than seven head, which is too small a number to perform well the office of scavengers. The odds and ends of pasture on every one hundred acre farm will keep more than seven head of sheep in prime condition. They will at the same time render good service in biting off many forms of useless and noxious weed life which are so fond of growing in fence corners and bye places. The sheep industry would in no way be overstocked, if the farmer kept as many for public disposal as at present, and raised half a dozen each year in addition for home use.

While there is room for a large extension of the sheep industry, there is also room for their improvement. Large numbers of highway sheep are still in the land. And wherever this state of things exist there is a class of sheep far below the average.

On the whole, however, the indications are hopeful. The growth of good food for stock is on the increase, while the numbers of the live stock is on the decrease. The export of coarse grains is also decreasing. The conclusion then is irresistible, that more is being fed to the stock, and therefore there must be an improvement in their quality. If the numbers of live stock were decreasing and there were also a decrease in the amount of food grown, there would then be just cause for alarm.

The Signs of the Times.

Sometimes it is well to take stock. It is a practice that will not harm any business, and to most pursuits it is very helpful. National stock-taking is quite as helpful to the nation as private stock-taking is to the individual. This, however, can never be done in any country where there is not a bureau of statistics.

Happily we in Ontario are thus supplied, and through the painstaking of the indefatigable secretary, Mr. Blue, we are enabled every year to lay the finger on the pulse of the prosperity of this Province, and hence discern pretty clearly the signs of the times.

Since the commencement of the existence of THE LIVE STOCK JOURNAL, which, by the way, was almost contemporaneous with the establishment of the Bureau of Industries, we have been advocating growing a less acreage of wheat, and a larger acreage of food adapted to the support of live stock. That the current has set in this direction is very apparent on reference to the tables of the Bureau.

Below we give the comparative acreage in the various farm crops for the years 1882 and 1888 respectively. It will be remembered that the report of the Bureau only goes back to the former year.

	1882.	1888.
Fall wheat.....	1,188,520 acres.	826,537 acres.
Spring wheat.....	386,817 "	367,850 "
Barley.....	848,617 "	855,432 "
Oats.....	1,387,487 "	1,849,868 "
Rye.....	185,276 "	84,087 "
Pease.....	560,770 "	696,653 "
Corn.....	206,755 "	222,971 "
Buckwheat.....	50,035 "	57,528 "
Beans.....	19,787 "	22,700 "
Potatoes.....	160,700 "	153,915 "
Mangolds.....	15,791 "	21,459 "
Carrots.....	9,955 "	11,524 "
Turnips.....	78,823 "	113,183 "
Hay and Clover.....	1,825,890 "	2,292,638 "
	7,381,566	7,616,350

From this table it is apparent that in every kind of food suitable for stock keeping the whole acreage devoted to its growth has increased very considerably. The largest increase has been in the acreage devoted to the growth of oats, where the increase of 1886 over 1882 is no less than 462,381 acres.

This is as it should be, for no kind of grain grown is devoted to so many uses as the oat. It is excellent for feeding horses either crushed or uncrushed, alone or in conjunction with cut feed. It forms one of the important factors in the diet of a calf, whether fed whole or ground as a part of a mixture, and is equally useful in the development of young cattle as in pushing on the growth of colts. It forms usually a part of the ration of the milch cow and the shipping steer. It is extensively used when ground to feed young pigs in conjunction with ground corn or pease, and is particularly helpful in producing that kind of pork having fat and lean, which has been advocated by Mr. Davies for some time past in our columns, with a judgment that is well timed. It is encouraging therefore, to note that in 1888 the yield of this crop was 65,466,911 bushels, or 9,469,486 bushels more than the average for the seven years for which we have returns. The future for the oat, at one time a crop that was pushed into the poorest fields and sown last, is widening, and it should widen in all stock-keeping countries. The oat is an important factor in the growth of green fodders, the area of which is extending every year.

The custom, too, is growing of cutting oats a little green, and feeding them to dairy cows unthreshed, and of cutting oats and peas when grown together at the same stage, and feeding thus to different kinds of stock, thus obviating the labor of threshing and grinding, for when thus fed, the cattle and sheep at least grind them most thoroughly for themselves.

It is a good indication to note the increase in the acreage of field roots which always will form an important factor in stock-keeping in countries which can grow them, and more especially where meat is an important object. The only serious objection that can be urged against their increasing growth is that

amount of labor connected therewith, but it is labor that brings its reward, which is especially apparent when we consider that this crop answers the purposes of a summer-fallow most completely, where the work is properly performed.

The increase in the acreage of hay and clover is a step in the right direction, for this means not only rest, in a manner, for the land, but also resuscitation, more especially where much attention is given to the growth of clover.

The whole acreage of wheat fall and spring, which in 1882 was 1,775,337 has fallen in 1888 to 1,194,387, or a reduction of 580,950 acres in that period. This, too, is as it should be. The country had, it is true, been largely indebted to its prosperity to wheat-growing, but that prosperity was being seriously curtailed by continuing the process too long. The resources of the soil were rapidly being transported to other lands. We hold it, therefore, as a most hopeful sign of the times, that the area devoted to wheat-growing has to so large an extent decreased.

This decrease cannot, of course, go beyond a certain limit, for a certain acreage is required for home consumption and for the production of straw for litter, but beyond this there is no occasion for attempting to grow wheat in Ontario. The farmers of those vast plains to the west of us can carry on this work, as they have so much more nitrogen, phosphoric acid and potash that they can spare than we have.

The increase in the acreage of pease is encouraging, as this is one of our best crops. A leguminous crop—it draws its food mostly from the atmosphere and is therefore not hard on the soil. The grain is very helpful in laying on fat. Pease may be used as a part of the ration with much advantage when this is the aim.

The increase in the acreage of buckwheat is also as it ought to be. The fowl industry is one of our most important, and buckwheat renders excellent service when fed to fowls. This crop is, however, more liable to damage than some crops, from frost or blight, from the strong sunlight when in blossom, which will always so far tend to hedge in the area of its cultivation.

The increase in the acreage of corn is also considerable, but less than its importance demands, and less than it will be, we confidently predict, when the fruits of the teaching of Professor J. W. Robertson, the great apostle of corn growing, will be more apparent. The dairy interest is ever growing, ever increasing, and an extension of its growth must be largely dependent on the extension of the growth of corn for silage purposes. The increase in the acreage of corn since 1882 is only 16,216 acres, which is less than the increase that will probably take place every year in the future for many years to come. It is now pretty clearly established that an equal amount of food for dairy stock, similar in value to that of ensilage corn, cannot be realized from the growth of any other crop of an equal area.

We have repeatedly said that Ontario must grow great through stock-keeping, and we rejoice to notice that there is a steady increase in the growth of all the essential food-factors that are identified with successful stock-growing in this country.

Canadian Exhibitors in the United States.

Of all the national traits that cling to the inhabitants of the "tight little island," there is none so marked as that which gives rise to the disposition to try anything, no matter how discouraging the prospects or how insurmountable the difficulties. An anecdote is

told of the Duke of Wellington which all Englishmen at least will believe, if we cannot quote the authority, illustrating this feature that enters so largely into the composition of the Briton. Wellington was riding with the Emperor Nicholas of Russia before the troops of the latter, which had been called out for review for the Duke's inspection, and as they passed before the Emperor's favorite regiment, composed of the finest men of the empire and excellently equipped, Wellington, with an expressed admiration and enthusiasm usually foreign to him, complimented the Emperor on the appearance of the men before them. "Yes," replied the Czar, "we think they are fine men; and I ask you to tell me whether twice the number of your British household troops could beat them?" "That," answered Wellington, "I do not know, but I do know that half the number would try."

Transplanted to our soil this characteristic has not languished, but has rooted deeper. Innumerable instances arise to mind to prove the assertion, but the one freshest in our memory is the foray of our stockmen on the prize honors offered by our neighbors across the line. It must be a source of much gratification and patriotic pleasure to the citizens of Ontario to learn of the successes that attended our live stock exhibitors when they came in conflict in the show-ring with the best our friends to the south could bring forward. At the exhibition recently held in Buffalo a very large proportion of first and other important prizes came to Ontario, as will be seen by the fuller report elsewhere, which we had to hold over owing to our crowded issue of last month. In Leicester sheep, John Kelly, jr., of Shakespeare, well-nigh bore down all opposition before him, and the same may be said of John Jackson, Woodside, Abingdon. Mr. Kelly won nine firsts out of a possible nine, and five seconds out of a possible seven. He then divided his flock, sending a portion to Canadian shows, where they won many prizes, and another portion to Detroit, to the dismay of all his opponents in that great show-ring. Mr. Jackson was over in Buffalo with a full contingent of his beautiful Southdowns, and won every red for which he entered them in competition, including the flock prize. He also divided his flock and utterly routed his opponents in Detroit, bringing home the most coveted honors in his line. Robert Marsh, of Richmond Hill, along with other prizes, brought back first for best ram and five of his get, but left most of his exhibit for the benefit of the flocks of that country, so eager were the shepherds of the Union to obtain the excellent blood which he has bred in much purity for many years. Peter Arkell, with his finely developed Oxfords, also came home with some good prizes.

In the horse classes a complete review is given elsewhere, and here we need not do more than state that our horsemen deserve great credit for the excellence of their exhibits, as testified to by the many honors they won.

But the crowning laurels for Ontario fell to Bow Park, whose able manager, Mr. Hope, has so frequently, on former occasions, come off victorious in competition with the whole American continent. On Sept. 11th, 1889, the following telegram, which tells its own tale, was received by R. Gibson, of Delaware: "Sweepstakes for best aged bull, beef breeds, also for best yearling bull, best cow, best two-year-old, best yearling, and best calf. First for aged herd and first for young herd." This herd was brought out in fine condition, and was the admired of all the beefing breeds on exhibition in that great show-ring. Journeying on to Detroit here again the invincible Bow Park beauties made conquest after conquest, putting Manager Hope in the position of the great Alexander, who, tradition says, wept because he had no more

worlds to conquer. Cupbearer won for him first in the class of aged bulls. Baron Waterloo sustained the herd's reputation by winning first in the two-year-old class, Haverling Nonpareil 2nd proved invincible in the class of aged cows; Isabella 3rd carried away the highest honors in the two-year-old heifer class; Julia 24th secured first and Lady Aberdeen 9th second in the yearling class, while in heifer calves Bow Park was again to the fore. Higher honors were yet in store for Bow Park, for Baron Waterloo was decorated with the first rosette, the young herd prize was similarly awarded, and to fittingly cap the whole series, the aged herd wrested from strong competitors the championship.

With such examples as these before us, we shall only say to those of our live stock breeders that Ontario and all Canada is proud of their achievements. So long as they can score records such as these in continental competition, we need not fear much for the live stock industry of Ontario.

With the Stockmen.

THE COMMENTS OF A RAMBLER.

There are few articles which justly may claim space in live stock periodicals that are more effective in exciting an interest and inaugurating new practices in the vocations they apply to than those partaking of the nature of reviews; for stockmen, as well as others, are always anxious to hear and read with avidity what their neighbors are doing, so that they may profit by the nuggets of experience that brightly gleam in the everyday practice of their distant though keen competitors. Recognizing this we have, not without some difficulty, secured the services of one competent in every sense to act as a reviewer, not one either of the laudatory or carping style, but a writer that, with a wide experience and extended acquaintance with our live stock industry, is able to draw conclusions and place their applications, so that we are not the least backward in asserting that before the series that this introduces is finished our readers will find much that they will do well to make their own and apply in their methods, not to say anything of the pleasant reading which the articles will undoubtedly afford all those in the least connected with our important live stock industry.—[EDITOR.]

MR. HUNTER'S SHORTHORNS.

Mr. James Hunter, of Alma, rightfully resting on past laurels, did not come out in the show-ring this year. His herd of strong, large, and good fleshing cattle numbers some 60 to 70 head. The feature of the herd at the present time is a large number of heifers of various ages, which would answer nicely to build herds upon but are not in show condition. For breeding purposes they are all the more valuable because of this, but it should not be forgotten by breeders that they are far oftener by having their stock under rather than over-fleshed. Let the animal be ever so good in conformation, and let it have a hundred crosses of the very best blood, if lean in flesh ninety-nine out of a hundred purchasers will pass it by.

The stock bull Sir Ingram, three years old, by the Bow Park Ingram's Chief, and out of the dam Queen May 9th, by Socrates, is a massive bull and of good parts. He is one of the heaviest bulls in Canada.

Mr. Hunter's Shrops are not numerous but excellent. His rams are very fine, being low, deep, well-covered on head, body and legs, and are withal of fine symmetry.

The young imp. Clyde stallion promises to do very well. If he prove as serviceable to Mr. Hunter as imported Gambetta, his predecessor, he will bring much gain to his owner.

The calves at Sunnyside are in goodly supply, and possess the framework in miniature of their ancestors, which gives so much room for the laying on of flesh in any desired quantities.

THE SHORTHORNS OF THE MESSRS. J. & W. WATT OF SALEM.

This firm, so favorably situated as to railway facilities, being only two miles or so from Elora Station, still retain a strong love for good Shorthorns. Some of the winners of other years are still in the herd and are doing well. A pretty two year Scotch heifer with calf at foot, attracted our attention, as did also a roan heifer calf. Old Bampton Hero is still active and retains his shape well, though fully twelve years old. It is just questionable if any bull in Canada ever produced so much stock of a character so excellent. At all events he ranks high amongst the foremost, as does the old Knight of Warlahy, Crown Prince of Athelstone, and the 4th Duke of Clarence. The lives of useful sires of any kind are all too short. The calves of the Messrs. Watt are very fine. Their loose but not papery hides and velvety hair produced in so much luxuriance indicate a thrift that denotes that quality so essential to success in beef production. The one-year bull, bred by J. Miller & Son's Vice-Consul, is deep and massive, but might do with a little more style. Oxford Down sheep are becoming quite a consideration with the Messrs. Watt, whose flock is large and promising.

I noticed here a very effective way of destroying Canada thistles, which seem to have a peculiar love for the deep soils of Wellington. The ground is summer-fallowed, and this is followed by a crop of roots. This process makes thorough work but it is expensive, unless when the summer-fallow is carried on in conjunction with green manuring for the purposes of soil enrichment.

THE ABERDEEN ANGUS CATTLE OF THE MESSRS. HAY & PATTON.

This famous herd of doddies is not very numerous, owing to heavy sales. It numbers some forty to fifty head. Mr. Davidson, the manager, has them as usual in a very presentable condition. He finds no difficulty in making good sales to western American cattlemen, who are more appreciative of their very excellent qualities than many of our Canadians.

The stock bull, now five years old, has a conformation peculiarly his own. Not large in size, but low and deep and broad, he possesses a shortness of limb almost unequalled. I am much mistaken if the use of this bull upon the strong dams of this herd does not give results in every way satisfactory. There is but one young bull of his grade on hand, and he is a wonder of perfection. A strong bribe in the form of a high price failed to take him away to Nova Scotia.

Mr. Davidson has some good, strong cross-bred steers of much excellence. This is as it should be. Scatter over this north country cross-bred steers, thick as the charred pine stumps that are yet unpuiled, and a spring harvest would be as sure to the farmers as the coming of the seasons. Go on, Mr. Davidson, and breed some fine show steers with Angus bulls as sires, and bring them out to our leading exhibitions to win. "Thou canst"

The few calves on hand are very fine. Mysie 2nd, of Kinnoul Park, from the famous old Chivalry 1765, and the dam Mysie, of Verulam, is one of the best.

Shropshire Downs from the flocks of J. Dryden, Brooklin, and others, are being introduced, they now number 69 head. The soil of this farm is in some places fair, in others light sand, and in others lighter sand. Mr. Davidson feeds it by growing rye. This is sown in August $3\frac{1}{4}$ bushels to the acre. It is

pastured in Autumn and Spring with sheep until well on in May. It is then allowed to grow on and is ploughed in. Some is cut in dry seasons, and cured for fodder, but before the ear is well shot out. It is cut with the self-binder.

MR. FLEMING'S HEREFORDS.

The Park herd of Herefords, owned by Mr. Fleming, of Weston numbers from 50 to 60 head. Most of the animals are running on pastures, and though in fair condition are not burdened with flesh.

The foundation of this herd consisted of imported stock, bred by such men as John Hill, Felhampton Court; John Mutlow, Torrington; Thos. Fenn, Ludlow; T. R. Griffiths, Jamesfield; A. R. Boughton, Knight; and Thomas Rogers, of Leominster, England.

There are two stock bulls in use, one of these, Lord Fenn 29030, bred by Mr. Fleming, is out of imp. Lady Fenn 29030, and by the sire Corporal (4175) The second of these, Wilton Hillhurst, was bred by the Hon. M. H. Cochrane. He is out of the dam Jessonda 11357, by Cassio 6849, and the sire Ottoman 18364. Both are fairly good bulls, but not equal in all round excellence to several of the females, which are decidedly superior. Calves of both sexes are making good all round progress.

The park and its surroundings are picturesque, and eminently fitted for the purpose to which it is devoted. It is only half a mile from Weston on the G.T.R., and but 7 miles from Toronto, the great metropolis of Ontario.

THE SHORTHORNS OF JAMES RUSSELL & BRO.

The Shorthorns of James Russell & Bro., Richmond Hill, are, many of them, superlatively good. The stock bull Stanley, first winner at London, is very complete. He is a fine roan in color; he is large without coarseness, deep without being chubby, broad without under prominence of shoulder, has a well arched rib without corpulency, a broad loin and yet smooth hocks, a long quarter without hollowness, a firm leg without coarseness, and admirable smoothness and style without any delicacy of frame; his quality is extraordinary. The Campbell bull, Killerby, with a strong spice of purest Booth blood, is a roan in color, and two years old.

Several of the females are equally worthy of more than a passing notice, but space forbids.

The calves in this herd are very excellent, and well deserving of the high honors which they won at the leading exhibitions. Indeed for smoothness, substance and quality, one could desire but little more.

Many of the best animals in this herd are descended from females of Kinellar breeding. It usually numbers about 50 head.

MR. ISAAC'S SHORTHORNS.

The strong points of the herd of Mr. John Isaac, Markham, are these: The large number of well-bred Campbell cows which it contains, the healthy breeding condition of the same, and the strength of the young bull calves in the herd.

The stock bull Baron Linton was bred at Sittyton. He is large and has good quality, but is not so smooth all over as some.

Mr. Isaac's herd is not very large, as he usually finds ready sale for all he can produce. He has found it to his advantage to be content with good rather than to seek extravagant prices, and hence it is but seldom that he is found wasting food on yearling bulls that can be as well sold when calves. It is taking some of our stock-breeders a long time to learn that one year and two year bulls have a particular faculty of eating up meal for which no other return is obtained usually,

if they are to be sold, than the worth of the manure. There are seven bull calves and three heifer calves in this herd.

Mr. Isaac has just completed a beautiful barn, with two side-drives. It is 95 x 56 feet wide, and is neatly painted. Mr. Worden had charge of the carpentering, and Mr. Pearson of the mason work. These gentlemen belong to Manchester, Ont., and each is noted in his respective line.

MR. DAVIDSON'S SHORTHORNS.

Mr. Davidson, of Balsam, the veteran importer and breeder of Cruikshank cattle, has not a very large supply of his favorites on hand, not more probably than twenty-five head, but enough to put him very soon in possession of an extensive herd, as he has some very pure Cruikshank females, and one of the best bred Cruikshank bulls that can well be found. This bull, Hospidar by name, is some 5 years old, a roan in color, of fine proportions, possesses excellent quality, and has proved himself a valuable sire. Hospidar is by Dunblane (47792), dam Golden Lady, by Champion of England (17526). There are three young Cruikshank bulls in this herd of fine quality. Mr. Davidson has imported 185 head, first and last from the famous Sittyton herd, without losing a single animal in the transit. But for his labors in this line the merits of the Cruikshank cattle had never been so well known in America.

A remark dropped at this genial Balsam fireside arrested my attention. I wish all our young stockmen to hear it. It was to the effect that there are only some of the many famous families at Sittyton from which Mr. A. Cruikshank would ever choose his bulls. Thus indicating very clearly that some families of pure-breds may be capable of producing good females without being able to produce sufficiently impressive sires.

MR. JOHNSTON'S SHORTHORNS.

Mr. A. Johnston, of Greenwood, is still strong in Scotch Shorthorns, his breed numbering some 60 to 70 head, a large proportion of the herd consists of imported animals. The work of importing has engaged the attention of Mr. Johnston for many years, although he breeds largely as well. Of the females six are Nonpareils, and a number are Minas. Several belong to the famous Victoria tribe, some are Lancasters straight through, and others are of mixed breeding, but all are strongly Scotch in their composition. This will be clearly apparent when we mention that the sires include such bulls as Gladstone (43286), Baron Lenton (49081), imp. Duke of Lavender (51135), Premier Earl (48454), and Gravesend (46461). Several of the females of this herd are excellent, and owing to the large number of families which it contains gives wide room for choice in selecting stock when purchasing. We regard Lady Wimple, a roan heifer of 1886, as amongst the best. She is out of the dam Wimple's Pride, by Baron Brawith (46385), and by the sire imp. Royal Victor (53611).

The heifer calves are very good, some of them being as neat in form and well made up in pedigree as could be desired.

The stock bull Indian Chief, a roan, is from Sittyton, of the Victoria family, and has for sire Cumberland (46144), by Pride of the Isles (35072), by Champion of England.

THE SHORTHORNS OF JOHN MILLER & SON.

The herd of John Miller & Son, Brougham, is in a good state. He has, as we see it, a fortune in that remarkably even and level Cruikshank stock bull Vice-Consul. He is proving himself a remarkable getter, as is evidenced by the shapely and beautiful calves so nearly resembling one another that it is not easy in some instances for a stranger to distinguish

them for any length of time when they are running together. It is the old story over again, get the sire right and improvement under rational conditions is sure. A younger Cruikshank bull bought by Mr. Miller in Chicago is shapely.

The Shropshire sheep are found, one would almost conclude, everywhere about the farm. They number some 250 head, of which 70 head are imported. Mr. Miller remarked to us that he always liked to have about him enough to supply a car load on short notice. He is also doing a good business in imported Clydes, of which there are several head on hand of both sexes.

(To be continued.)

The Shire Horse and His Origin.

Read by F. GREEN JR., before the Shire Horse Association.

(Concluded from last issue.)

In the year 1566 heavy horses in England appear to be superior to those of any other country, and we have a fuller description of the "Great horse" by Thomas Blundeville, who in the quaint old English of his day says: "Though not finely, yet strongly made, he is of a great stature, the mares also be of a great stature, strong, long, large, fayre and fruitful, and beside that will endure great labor in their wagons, in which I have seen two or three mares go lightly away with such a burden as is almost incredible; but now to content the country man his desire, which seeketh to breed horses for draught or burden, where should I wish him to provide himself of mares and stallions better than here in England," and adds, "I have seen better proportioned horses in their carts than I have known to be finely kept in stables as jewels for the saddle." In the reign of James I. A. D. 1603, we have further evidence that the English draught horse of that period was superior to the Flemish horse, as a mention contained in the Herbert Manuscript, is made that 10,412 horses would be required to carry the baggage of the army, which was to be sent to the Continent to support the claims of the Prince Palatine to the crown of Bohemia, and of a proposal being made to the council that a part at least of these horses should be obtained where they and their drivers could be hired by the day in the low countries (*i.e.* Flanders). It was also suggested that "in addition 200 strong horses, such as cannot be hired, should be bought outright," thus contrasting the superior merit of the English over the foreign horses of that day. It is worthy of note besides that the low country horses, together with their harness and furniture, were valued at £9 a piece, while the English horses were each estimated at £15. About 40 years later the Duke of Newcastle, in a book written by him, describes the "Great horse" as having large limbs, heavy crest, silky-haired fetlocks, and flowing mane and tail, characteristics which our present Shire horses still possess. Coming to more recent times Arthur Young, in the latter part of the last century, in describing his tours through the counties of England and Scotland, mentions only two varieties of cart horses as deserving attention, *viz.*, the large black old English cart horse, the produce principally of the Shire counties in the heart of England, and the sorrel-colored Suffolk Punch, thus completely ignoring the Clydesdale horse as either not in existence or else not coming under the category of a cart horse at that time; while the *Sporting Magazine*, in the year 1796, in an article under heading of "Operations of British Horses," says:—"We have a large and strong breed in the more fertile and luxuriant parts of the Island, and there is no country can bring a parallel to the strength and size of our horses destined for the draught, as there are instances of single horses that are able to draw the weight of 3 tons." From the foregoing brief extracts I think that sufficient evidence has been adduced to show that our present Shire horse is the closest representative of, and the purest in descent, from the oldest form of horses in Britain, and is the direct descendant of the steeds which nearly 2,000 years ago assisted our forefathers in repelling the attacks of the invader, Julius Caesar. It must not be understood that I wish to imply that the horse of that date was an exact representative of our present Shire horse, but there can be no doubt that he must have been an animal possessed of great power and activity to have drawn the attention of Caesar, who must have been familiar with all horses of the then known world, inasmuch that he exported some of them to Rome where

they excited great admiration. Since that time almost constant attention has been paid to increasing the size and strength, until in the year 1566 we have a breed which for the draught could not anywhere at that time be excelled, and it is worthy of note that this was accomplished principally by judicious selection. This being the case their character has become permanently fixed, a very important point, for experience has certainly proved that the longer a type has been established the more certain it is to reproduce itself. Mr. R. S. Reynolds, M. R. C. V. S., the Veterinary Inspector of the Corporation of Liverpool, amongst other reasons for his preference of the Shire horse, strongly asserts his belief, that the original type of every other draught breed being of much lighter build than the existing race, the tendency of the progeny of all other breeds to revert to the original form, will not only be marked when bred amongst themselves, but when crossed with mares of other blood which are deficient in bone, degeneration will be still more rapid. An instance of this may be seen at the present day amongst the Clydesdales. In the earlier volumes of the Scotch Clydesdale Stud Book, horses having Shire blood were freely admitted, but at the time when a resolution was passed to decline all further entries having alien blood in their veins, it was prophesied by many that the result would be a deterioration in size, and their prognostications have proved correct, for at the present time a marked diminution is apparent. I am aware that this has been denied, and that the present Secretary of the Scotch Clydesdale Stud Book has repeatedly written letters to the press to the effect that such is not the case, yet if it is not so it appears strange that at a meeting of the Scotch Clydesdale Association held a short time ago one of the members should have brought forward a resolution to the effect that Clydesdale judges should be requested to lay more stress on size when making their awards, and at the same time it was mentioned that they were now doing so, and it is still more strange that a dealer from Scotland should be present at the last London Shire show purchasing stallions with a view of breeding geldings from Scotch mares for the granite paved streets of Aberdeen, while the following week Mr. Geo. Robb, of the Caledonian Railroad, the largest buyer of heavy draught horses in Scotland, should be in England buying geldings, and moreover that these gentlemen should assert that at the present time there is no such thing as good Scotch-bred gelding to be found on a Scottish street, and further, that the rank and file of Scotch colts, if castrated, would be utterly unable to perform the heavy lorry work of their cities. Much more could be written on this subject but enough has, I think, been said to prove that there is no breed so well calculated to produce animals fit for the lorries, and I know no other breed that should prove so prepotent in impressing his enormous bulk, his prodigious muscular strength, and his lamb-like docility on his offspring as the Shire horse.

For the CANADIAN LIVE STOCK AND FARM JOURNAL.

Canadian Live Stock at Buffalo Fair.

Buffalo International Exposition has closed and the general verdict given by all who have visited it, that were the exhibit of live stock from Canada taken away, there would be a very poor show left, and this is more especially true of the heavy draught horses, for here we find that by far the biggest share of the money awarded in premiums went to swell the coffers of some of the more enterprising of our Canadian breeders and importers. The following is a list of the premiums carried off by Canadian exhibitors.

Clydesdales.—In the class for stallion and four of his get there was no representative for Canada, and both prizes went to horses owned in New York State. In aged stallions the blue rosette was awarded to P. Farrell, of Woodstock, Ont., for Custodian, a short-legged, low-set horse, showing very heavy bone and lots of hair, but hardly, in our opinion, equal in smoothness and quality to the second prize horse, Laird o'Logan, owned and exhibited by Charles Dalgleish, of Chesterfield, Ont. Laird o'Logan is a smooth compact horse with nice quality of bone and hair, and had the opinion of the spectators been taken, we hardly think the judge's decision would have been sustained.

Three year old stallions: In this class, however, even a greater surprise was in store for the spectators, who had almost unanimously agreed in giving the coveted honor to a colt shown by P. M. McGregor, of Brucefield, Ont., for the judge, Mr. Davidson, the well-known dog fancier, selected a colt, owned by Walter & Mitchell, of Tilsonburg, Ont., and got by the well-known sire McLamon, for the first place, the second going to Andrew Marshall, of Ayr, Ont., for a nice smooth horse sired by Ghillie Callum; McGregor's colt which was undoubtedly the superior of either of these in quality and action, was placed third.

Two year old stallions: There was but one Canadian competitor, Andrew Marshall, and he was awarded the blue; while in yearlings, the only Canadian, a colt got by Laird o'Logan, out of a grade mare, was not placed, the imported colts proving too much for him.

In aged mares, Alexander Innes, of Clinton, Ont., came first with a six year old mare weighing some 2160 pounds. While another of Laird o'Logan's get, a two year old filly, took fourth place in her class.

Shires.—The competition in shires was a good deal stronger than in Clydes, some of the best studs in America being represented, still the Canadians managed to take away over half the premiums. The largest exhibitors from Canada being Messrs. Ormsby & Chapman, of Springfield-on-the-Credit, Ont., who showed nine head of colts and fillies and took away eight prizes, *viz.*: 3rd in three year old stallions; 2nd and 4th in two year old stallions; 1st and 2nd in yearling stallions; 5th in aged mare, with a three year old filly, and 1st and 2nd in yearling fillies. Next to them came Messrs. Morris, Stone & Wellington, who took 3rd in aged stallions; 5th in year old stallions; 3rd and 4th in aged mares; and 3rd in yearling fillies. While Messrs. Jas. Gardhouse & Son of Malton, Ont., took 1st for stallion and four of his get; and 5th in the aged stallion class, and W. H. Millman, of Woodstock, Ont., 5th in three year old stallions; and 2nd in aged mares, the 1st in this class being taken by Green Bros., of Innerkip, Ont., with their chestnut mare Georgia, by Royal George II., winner of 3rd at Islington last year. Besides these the 1st and 2nd prizes for the best heavy draught teams were awarded to W. H. Millman and Messrs. Morris, Stone & Wellington, with representatives of several other draught breeds.

Light Horses.—The Canadian exhibit of light horses was confined to the carriage and saddle classes, but some capital specimens of both were shown by Messrs. Moorhouse and Pepper, of Toronto; F. C. Grenside, of Guelph; W. H. Millman, of Woodstock; and Jas. Matthews, of Acton, Ontario. The first mentioned gentlemen, especially, deserving a great deal of credit for their exhibit of light harness horses and hunters, their horse Roseberry winning the high jump with 6 ft. 6 in. to his credit.

Cattle.—As usual, John Hope was present with a contingent from the famous herd at Bow Park, and rightly worthily did he maintain the character of Canadian Shorthorns, for the Bow Park herd was awarded not only every premium for which they competed in their class, but also both the sweepstakes for old and young herds in the beef breeds contest. We might mention that the Bow Park exhibit was headed by the famous bull Cup Bearer, purchased last spring by Mr. Hope at the dispersion sale of Luther Adams, by whom he was purchased from his breeder, Mr. Wm Duthie, of Collynie.

Sheep.—In sheep, Canada was again well represented. Messrs. John Jackson, of Abingdon, and Robert

Marsh, of Richmond Hill, Ont., taking all the premiums offered for Southdowns in the face of a strong American competition; while in Leicesters Jno. Kelly, of Shakespeare, carried off all the premiums excepting two or three for which he did not compete. Besides these, Hugh Crawford, of Canboro, was awarded several prizes for his Cotswolds, and R. Gibson, of Delaware, several H. C.'s and V. H. C.'s for Shropshires.

Swine.—Although there was a large exhibit of swine, there was not a single exhibit from Canada, this being doubtless due to the fact that the quarantine regulations are very strict with regard to hogs passing from the United States to Canada.

“VERITAS.”

For the CANADIAN LIVE STOCK AND FARM JOURNAL.

What Sires Shall We Use to Improve Our Harness Horses?

It can hardly be controverted that the importations of stallions of different breeds have not proved as great a benefit to this country as they might have been had a more judicious system of breeding been pursued. The practice that has been followed in many and indeed in a very considerable portion of the country might be defined as experimental mating, and the result, if we are to judge by the animals one meets on the roads, is certainly not encouraging; and yet what can be expected from an admixture of perhaps Clyde, Percheron, Trotting, etc., topped off with a cross of the thoroughbred? It was not by such a system that the thoroughbreds, for which England is now so celebrated, were formed, but by breeding with a fixed and definite object kept well in view. Some years ago Dr. Monagle, in his evidence before the Agricultural Commission, deprecated the practice of making violent crosses which is so common in this country, and the advice with which he concludes his testimony is worthy of note, for he urges all to breed with a specific purpose, and if one is the owner of a heavy horse not to seek to convert him into a race horse, and *vice versa*. Among the different breeds of horses whose claims have been advocated as being the best cross for improving the ordinary stock of the country, perhaps none have of late years been more pressed than the thoroughbred, the latest incentive being the breeding of remounts for the English army. It is needless to point out that this last consideration is of very little moment when it is remembered that these remounts must be *unquestionably sound*, and that defects which are not considered detrimental in this country are in England regarded as coming within the definition of unsoundness; besides the prize is too low, horses which would pass such an inspection being worth more in this country; again it is very doubtful whether that market will be permanent, as the horses purchased in Canada cost when delivered more than what is paid for such horses in England. It is difficult to see in what way the thoroughbred will improve the ordinary stock of horses in Canada, for looking at the average class as one drives through the country one is struck by their weedy appearance, usually too much daylight under them and no middle pieces to speak of. It must not be understood that I am entirely opposed to the use of the thoroughbred, as, on the contrary, I am greatly in favor of him as a sire when one has mares of the right kind, but these, more the pity, are not numerous but are rather to be found few and far between. Mr. Burdett Coutts is of opinion that even in England the uninterrupted breeding and in breeding from thoroughbreds, has gradually produced a class of horses which is of very little use for any purpose what

ever; the exceptions being horses with bone and sizes to make hunters; and the exceptions to these again are the horses that turn out good jumpers, with good manners, and sound enough to stand breaking in to hunting; but that a great number of horses are left all over the country high on the leg, light of bone, with no shapes for harness, with no action for harness, and consequently almost worthless. Now, if by the injudicious use of thoroughbreds, that is the case in England where abundance of mares with plenty of substance are to be found, what may be expected where the mares partake too much already of the character above mentioned? The question then arises how shall we improve our light horses? It is possible that we may gain a hint from some of the records of the English shows. Let us take the Islington show, one of the best in England, and we find that for years past in the 15.2 harness class—a class which represents the best specimens of an enormous class of horses used for all sorts of purposes in England—the winners (and it is a very important fact that there is absolutely no restriction as to the way in which a horse is bred in this class) have been bred from Hackney sires, and probably on both sides.

From all horse-buyers of carriage-horses we hear a cry for action rather than speed, and a well-bred Hackney whose pedigree can be traced for years is certain to transmit not only action but more substance also to his offspring. Although the Hackney stud-book is but of recent formation, the Hackney has long been an established English breed of determined character, and many records of old tests are extant, such as 3 miles trotted in 9 minutes, to stand at the stone and start; 17 miles in 56 minutes, carrying 13 stone (this was Marohland Shales, who was master of 20 stone); 16 miles in one hour, carrying 16 stone (this was Wroot's Pretender, the sire of Ramsdale's Performer, the origin of the Yorkshire Hackney); while the following description of a stallion given by Richard Laurence in 1816 is well illustrated by Reality, the modern champion at three London shows:—"The proper stallion for breeding road horses should have a small head, and well-turned neck, issuing high out of his breast, shoulders deep, and not too narrow at the upper part of withers, rather a broad chest, especially behind the elbows, long muscular arm, and short shank. He should go light in hand with great liberty in his shoulders, the knee should be elevated and advanced during the trot so as to be seen by the rider projecting beyond the breast. His hack should be short and ribbed home, his girth large, his belly round, his hindquarters should be bold and muscular, and not too long in the thigh or leg."

Size is certainly somewhat wanting in the Hackney, and pure-bred Hackneys that can raise the standard above 15.2 are not numerous; many people, indeed, held the opinion that no Hackney should be over 15.2, and the Royal Agricultural Society of England also limited the Hackneys in their prize list to that height until their show held at Norwich in 1885, when, at the request of the Hackney Stud-book Society, a class of 15.2 and over was allowed, which was well-filled. The thoroughbred has increased in average height about 3 inches in 150 years, and in the same way the Hackney, which was no doubt formerly about 14 hands and even less, has by judicious selection of animals, by care and proper feeding, likewise increased in size. An important item in favor of the Hackney is the report of Mr. Hallon, general superintendent of the horse-breeding department of the Indian Government, in which he states most strongly that the Hackney horse is doing immense good on the small country mares, and getting the best horses for cavalry and all army purposes in India. A few Hackneys

have been imported to Canada, and annually the number imported is increasing, as their merits are quickly becoming known not only in this country but also in the States, and there can be little doubt that from the use of these horses we shall in time obtain mares of some substance from which good results may be obtained from a cross of the thoroughbred.

AGRICOLA.

For the CANADIAN LIVE STOCK AND FARM JOURNAL.

Our Manitoba Budget.

(From our own Correspondent.)

THE FALL FAIRS.

The fall fairs of the North-West have made, the last fortnight especially, a very busy season. Beginning with Stonewall, 25 miles north-west of Winnipeg, where the Governor-General went out to see his first pioneer exhibition, and "open" the show; and running on to Neepawa, on the Manitoba & North-Western Railroad, I am glad to be able to record the best lot of local shows I have ever seen in the country. It began to rain just as Lord Stanley got this side of Port Arthur, and was a miserably damp drizzly night when he came into Winnipeg, but ever since the Indian summer has been with us in perfection, and the fine weather combined with the early close of the working season, has drawn out the biggest crowds of farmers with their families ever seen here. There was rain enough three weeks ago to stop threshing for over a week, and in some few places to check ploughing, but now it looks almost as dry as ever, the sun rapidly absorbing all that fell, as it could have done three times the quantity.

What had we to show? Those of your readers who have taken note of the awful drought to which we have been subjected, would have been astonished. I have been myself, at half a score of these shows, and seen some droll exhibits. Peacocks on canvas, sewed in gilt beads, trees in glass cases with foliage of goose down, and other equally rare works of art, and from that down to the biggest and ugliest potatoes and turnips. At Gladstone, one man had 90 different exhibits of garden and field produce; at Neepawa, another farmer showed 50 varieties of fine potatoes; at Manitou 1500 entries, at Pilot Mound 95 entries of grain and 103 of butter, and so on all round. It is easy to explain this great improvement of our shows in a bad year. In 1887 we had such a big crop to handle that the most enthusiastic supporters of the shows could only give them a few hours attention, and then hurried back to their farm work, bringing in only one or two colts and next to no cattle. Time was too precious to be wasted on shows, and they shrunk into a poor thing. This year the season was early and the crop in too many instances a poor one, and every one brought all he could show. Farm work was not pressing, and everybody that could be spared from home went to the fair, though it might be 20 miles off. Prairie life is monotonous and we need far more of such gatherings.

Cheese and butter factories have not this year made up to last year's production, and in cheese at present prices, about 9½ or 10 cents, I don't see much chance of any expansion of the business. But our farmers' wives, especially those within 30 miles of the Winnipeg family trade, can, and do make choice home dairy butter, for which the year round a good maker may reckon on 25 cents a pound. In the country it will not go much over half that figure, and some of it is dear even at less than that figure. Even at a fair I have seen a greasy over-worked and over-salted tub put into competition, but most of that sort goes in

"trade" to the storekeeper who has much trouble in getting rid, even at less than cost, of such samples. Few of us have decent dairies; the cellar flavor gets into the milk except when Cooley cans are used, and considering our opportunities it is surprising to find such lots of choice butter put on exhibition. The prairie herbage ensures a fine flavor, and it is a hard task even for an expert to do level justice. I would like to see a standard of honorable mention set up in which every maker within 70 per cent. of perfection should have a place, with a chance of moving it a peg or two higher in case she had not got full justice on the first review.

In vegetables I have seen bushels of potatoes over 2 lbs. each, plenty of onions over 1 lb., cabbage 25 lbs. dressed, and cauliflower 10 lbs. dressed, from a small farmer's garden.

Grain from 66½ lbs. a bushel for Red Fife, and 66 lbs. on White at Portage la Prairie, to bright plump large grain from nearly the northern limit of wheat cultivation, north of Neepawa. Oats and barley are low in weight as well as in yield, as compared with former years, the Experimental Farm at Brandon showing the best samples of these to be found in the country.

Horse flesh is the most conspicuous feature at all our fairs, and we go a good deal more on the business than the fancy article. Farmers, as a rule, have too little money and too much sense to be led into the trotting business, though a few very respectable men do gratify their leanings that way. Our main stallion and bull shows are held in spring, and it is only at the smaller shows that entire horses figure. Brood mares and colts are always a full and good show, but mostly of the general purpose tribe. A good few high-priced Clyde mares have been coming in, some of them in foal to very good horses, but those foals make extremely little noise at fairs, and I suspect at home too. Most of them, I guess, have been brought here in a pampered, over-fed condition, have had too little regular exercise and a consequent difficulty in foaling. These fancy mares and over-big horses are the best friends to the veterinarians we have yet seen here, and I cannot find any big returns made by their importers. Every-day mares put to moderate sized and well-mettled horses, give a perfectly good account of themselves, and will in time, save us a good deal of the money that has been, these last two years, finding its way to Ontario to buy horse flesh. I guess most of us are pretty well loaded up, or rather, loaded down with our last year's investments in showy teams of mares, and you will not sell us so many next season.

Shorthorns are our mainstay in cattle. We are at the general purpose stage of cattle experience and they fill nearly the whole field, with a few Ayrshires, Angus, Holsteins, and Jerseys. George Smellie, of Binscarth, and J. E. Smith, of Brandon, are in the front-line as breeders and importers, the Sharman's, of Plum Creek, who have turned out some very good stock, being, I regret to say, about to go out of business. Messrs. Lister, Middle Church, a new man; Lynch, Totogan, our oldest, and Frazer, Minnedosa; Shanks, Nisbet and Mansfield, Rapid City; Barron, Carberry; Leask, Proctor and Routledge, Virden; all showing very good, well-handled stock at our local fairs. The finest lot of working oxen I have ever seen were last week placed at Minnedosa, where an Icelandic immigrant got first for a beautiful pair of blacks. Sheep and pigs are few in number as compared with cattle and not likely to multiply under present conditions. Altogether our fall fairs have been capital with no exceptions known to me. I find cases now here and there on the Portage plains with good areas, having up to 40 bushels per acre of yield and

fine quality. In a good many cases smut shows to a serious extent, and where threshed in damp weather, the price has been pulled down a good few cents in consequence. There are men here who have sown wheat for fifteen years without developing any smut and it is now in order for us to find out why the others are infected.

FOR THE CANADIAN LIVE STOCK AND FARM JOURNAL.

Clydesdales.

By D. McCRAK, Guelph, Ont.

The past year has been a fairly satisfactory one for the Clydesdale breeders and importers. The losses to importers in crossing the Atlantic have been very much less than usual. The percentage of loss for this year must be much smaller than many former years. This may be accounted for by the fact that the season has been especially favorable, as weather goes on the Atlantic, and also by the greater experience of importers. The class of horses brought out has been fairly good. The heavy draught classes at the late Provincial Show at London was a walk-over for the Clydes. It was simply the Clydes *first* and the rest *nowhere*. In the female classes in which Clydes and Shires came into competition, only one of the latter came in for a third prize. Suffolks and Percherons—the bare-legged draughts—were very little better. At the Toronto Industrial show of Clydes was also very much superior to that of any other draught breed. The Canadian farmers have certainly shown a very marked preference for the best of the draught breeds.

The public taste is gradually coming to prefer quality to size—feet and legs to a big beefy body. Quality of bone and good action are more looked to than formerly, and over-fed, sleek, shiny bodies do not now weigh much in the scale when accompanied by round bone, coarse hair, a wide, straggling gait, and thin, poor hoofs under straight, upright pasterns. This is a tendency in the right direction. If the patrons of our best draught horses would give the preference to those animals that had during the winter done a great deal of hard work in harness, it would be another step in the right direction. This seems at present a good way off. There is no doubt but many animals would be much healthier and would breed much better stock—with more vitality—if, instead of a winter's pampering in idleness, these same animals were put to good, useful, hard work.

Color in Clydes is not yet a fixed quantity. There was a splendid show of two-year-old fillies at Toronto, very uniform in color—white stripe on face, two white hind-stockings, a little white on one fore-foot, and bodies a rich bay. This seems to be about the most fashionable type in color at present. Bay with black points, without any white, are not desirable. It is rare to find a first-class horse of this color. Roans are not scarce. In some sections of Scotland there are many Clydes of light color—a great deal of white, or light roans. The old saw is there often quoted: "A good horse is never a bad color." Yet a good horse is more saleable when his color is pleasing to the eye of his buyer, and this is a point not to be despised. Family traits have not yet become fixed factors in Clyde breeding, but that time is coming, and will probably be here soon when they will so be.

The show season is now well over in Scotland, and "Ravenswood" has been summing up the results in the *Chicago Breeders' Gazette*. He takes the prize-winners at the following shows in Scotland: Glasgow

Spring and Fall, Ayr, Kilmarnock, Maryhill, Edinburgh, Aberdeen, the Highland Society Show at Melrose, and the Royal of England at Windsor. In placing the winning sires, account is taken of the number of prizes and relative value. The following is the roll of honor: 1, Darnley (222); 2, Prince of Wales (673); 3, Macgregor (1487); 4, Prince Lawrence (Vol. VII.); 5, Top Gallant (1850); 6, St. Lawrence (3220); 7, Prince of Avondale; 8, Lord Erskine (1744). Of these eight sires which make the short cut, only two are now alive—Macgregor and Lord Erskine. Darnley has for several years kept first place. This year there are no yearlings got by him, and of course, as his produce become older, he will drop back from his present position. The animals which did best of his produce were Flashwood, Ensign, Eastfield Stamp, and Royalist, in stallions, and the mares Chrystal, Laura Lee, Vanora, Sunrise, and Scottish Rose. One point in all the list is made very clear—the widespread influence exerted in Clydesdale breeding by the mare Keir Peggy (187), the dam of Darnley, and to go a step back, by Samson (741), *alias* Logan's Tom, the sire of the dams of Darnley, Prince of Wales, Old Times, and Prince Charlie, and of the historical horse, Lochfergus Champion (449).

A great deal has been written of late years about the need of fresh blood among the Clydes. Some very foolish statements have been made about the Shire blood in Scotch horses, and how breeders lost much by excluding cross-bred animals from registry. Some thought that the best type was the produce of the best Shire mares, crossed by the old Prince of Wales (673). Several of these Scotch shows do not require animals shown to have any pedigree, but allow such cross-bred horses to compete. There is one of these in the above list, No. 7, Prince of Avondale, and of all the good horses bred in the way mentioned—Prince of Wales crossed on selected Shire mares—this is the only one that gets a place out of 52 stallions that take good places as sires at the Scotch shows of 1889. Enough said.

The next rank contains the following: 9, The McCamon (3818); 10, Castlereagh (Vol. IX.); 11, Springhill Darnley (2429); 12, Titward Lord Lyons (3321); 13, Good Hope (2146); 14, Sir Wyndham (4728); 15, Flashwood (3604); 16, Goldenberry (2828); 17, El Ameer (3591); 18, Belted Knight (1395); 19, Arduacraig (4812); 20, Garnet Cross (1632). Those in the rear rank are: 21, Young Lorne (997); 22, Gallant Lad (2781); 23, Lucky Getter (1483); 24, Westfield Chief (6390); 25, Lord Lyndoch (4530); 26, Macfarlane (2988); 27, Duke of Hamilton (2074); 28, Taste All (2460); 29, Baron O'Shreeve (3404); 30, Crookston (5676). This is a valuable list and is well worth keeping for easy reference. Clydesdale breeders owe thanks to the secretary for compiling such a table, though there are a few more shows that might have been included, especially some in the south-west. As to tribes from the above list, he sums them up as follows: 1, Darnley; 2, Prince of Wales; 3, Lord Erskine. We are fortunate in having in Canada a good deal of the blood of all three.

The Most Northern Pure-bred Herd in the World.

The Binscarth Shorthorn herd in Assiniboia belonging to the Manitoba and North-Western Railway, occupies the very unique position of being the most northern herd of pure-bred cattle in the world. But some three years ago, the site of the large farm of 4,000 acres was wild prairie, over which but few

white men had ever trod. Going up from Portage la Prairie, we left all other breeds behind us—the Gallows being the last we saw, some fifty miles further south, and these were too coarse, and were giving place to the Shorthorn, and we then looked upon as fine a lot of good constituted, massive, and hardy cattle as any country could show. It says much for the Shorthorn breed that this record can be written—that in the most northern spot in the whole world in which a breed of pure bred cattle is to be found, there the Shorthorn thrives. He need fear no competitor. The herd itself consists of 200 head of pure-bred animals and improved grades. These are kept for the use of the new settlers, either by sale or hire. The pedigree stock is all registered in the Dominion Herd book, all having been bred in Canada, though from stock originally imported from England. At the time of our visit (September 3rd, of last year), the chief sire of the herd was Prince Arthur, a massive and symmetrical roan, of which we give an illustration. He was calved on March 16th, 1881, and bred by Messrs. J. and R. Hunter, of Alma, Ontario, his sire being Knight of Warlabby 2914, and his dam Lady Mary, by Lord Aberdeen. He is just the stamp of animal required for the country, being not only massive and well-proportioned, but hardy and robust in constitution, and with good hair. It is not to be wondered at, therefore, that his show record was one of unbroken successes, having taken first at all the shows in Ontario and Manitoba at which he was exhibited. In the latter province his calves had last year won over fifty prizes at the leading shows. We are sure our readers will be pleased to have so good a portrait of such a famous bull in such a note-worthy herd. We would only add that the manager of the farm and herd, Mr. G. L. Smellie, reported that a ready sale is found for good animals, and that the herd will gradually become entirely pure. New blood is constantly being imported, several of the animals so bought costing over £100. —*Mark Lane Express.*

Norfolk Red Polls.

Editor CANADIAN LIVE STOCK AND FARM JOURNAL:

Fredericton, N.B., 1889.

DEAR SIR,—I noticed in the September issue of your valuable magazine an appreciative reference to the Norfolk Red Polls. In 1870 the Government of this province introduced this breed of cattle, and they have always been kept at the Provincial Stock Farm. They are very much liked. If the person who buys Mr. Hall's bull, advertised in your columns, wishes to obtain pure bred heifers I shall be very glad to give him the names of those persons in New Brunswick from whom they can probably be obtained.

Yours truly,

CHAS. H. LUGRIN.

Secretary Department of Agriculture.

New Glasgow Exhibition.

THE LIVE STOCK INDUSTRY OF NOVA SCOTIA IS MOVING AHEAD.

Editor CANADIAN LIVE STOCK AND FARM JOURNAL:

We are just over our Exhibition, taking in as it did the County of Antigonish, Colchester, and our own County of Pictou, and the efforts of the management have been truly successful; the improvement since the last show here, four years ago, is almost past belief. This year the New Glasgow Agricultural Society decided to put up permanent buildings, and they have done it, securing property adjoining Prospect Driving Park, and with it certain privileges from the Park Company, as to use of the grounds and track in addition to their own during Exhibition time; and as I say, the first exhibition under the above conditions is just over, and if a wonderful attendance of satisfied people is any indication of successful effort then the New Glasgow Agricultural Society are to be congratulated on their efforts as successful caterers of amusement and instruction to the people. The attendance was large, the exhibit bounteous, and of grand quality.

The horse show was a marvellous improvement over past efforts. We Nova Scotians are a horse-loving people, so that this may in a measure account for the great improvement manifested in the grand showing in this department.

The Clydesdale man would have been happy in looking over the exhibits of Messrs. Bell, McIntosh, McKay, and Dover. A pair of brood mares, owned by Mr. McIntosh, were a marvel of strength and beauty of proportion. Mr. McKay's youngsters were a source of wonder to hundreds of sightseers; A. C. Bell's Harlequin, a three-year-old, won first in the stallion class, and is surely a grand representative of the Land o' Cakes, Messrs. Sutherland and Chisholm showed a finely proportioned Percheron, black as night, in the stallion Potentate, active as a cat yet docile as a kitten; the Amherst Stock Improvement Company showed the Gold Spray, a grand sample of the Norman—in color white as the snow drift, and his general action was the admiration of all who admire graceful movement. Truly he would put to shame the machine-like motion of the trotter; there can be but few finer lookers than Gold Spray in the world; there may be, still I have not yet met them. A fit monarch he would have made for knights of old, aye, who knows but "Richard Cœur de Lion" may not have ridden an ancestor of Gold Spray. Truly such a horse would be worthy of even such a warrior of old.

The driving and Standard bred classes were fully represented. Heck 5354, a son of Melbourne King 1962, out of a daughter of Jay Gould, won first honors in the stallion class over all ages; his only son, John Davis, out of Bertha, by Daniel Lambert, winning first in the sucking colt standard class, beating the winner at the Moncton Maritime Exhibition. Heck is a handsome chestnut, three-year-old past, and his speed promise is very great; he is the product of Brookside Farm, but owned by Mr. Hugh Murray, New Glasgow.

Mr. A. C. Bell's young stallion, Israel, by Ram part, out of Jessica, won the 3 mile race at the Exhibition in 2.41. Considering his limited education and his heavy stud season the performance is considered very promising, and although he is but five years old there are a large number of very promising colts after him, the oldest being one year old past, principally bay in color, of good size and grand finish. Israel is one of the most promising young standard bred trotting stallions in the province, and there is no doubt at all if he is withdrawn from the stud for a season, and put into active training that he will trot in 2.25 or better, for he is perfect in gait, and a resolute fellow that carries in his breeding the will to do or die.

Mr. John McDonald, our Ayrshire man, just out-did himself. Such a showing of Ayrshires were never seen here before; grand to look at, and undoubtedly grand milkers; Messrs. Cameron Bros. had a grand showing of Holsteins; Bell & McKay, and McKay & McIntosh, Durhams; Mr. Scott Fraser, Polled Angus; all good, all looking fit for a show ring. The showing of Jerseys was large. Ex-Mayor Walker showed some choice specimens; Mr. Murkland a full herd; the Jersey showing was full and choice.

The sheep pens contained a flock of Shropshires that were fit to be shown at your best Ontario shows. And too much credit cannot be given to their owner, Mr. McKay, for the care and pains he must have given to his flock to bring them up to the present great standard of excellence. One such, who breeds up his flock by individual effort, effort of brain and forethought, is of more good to the real advancement of improvement than a dozen men who buy the prize winner with money, and only show the production of somebody else's work.

To name over all of those who were prize winners would take up more space than you would permit in this communication, the efforts will be duly noted and made public, and desirably so through the regular report of prize winners in the different classes. Suffice to say that it showed to all who attended it, either as exhibitors or onlookers, that we are moving ahead, and that if we continue on in our work of well-doing we shall have nothing to complain of in not being up to the mark as stock breeders, even in far away Nova Scotia.

"FARMER JOHN."

The Standard Bred Trotter.

ENLISTS IN ITS FAVOR THE PEN OF A FRIEND FROM DOWN BY THE SEA

Editor CANADIAN LIVE STOCK AND FARM JOURNAL

THE LIVE STOCK JOURNAL has paid so much attention to the breeds of animals, more properly called farm animals, that it has appeared forgetful of the existence of the light breeds of horses. A notable exception occurred in the series of letters on the

Morgan family of trotting horses, and later the JOURNAL has given us a portrait and notice of a trotter, so that it is clear the standard bred horse is not a forbidden subject, although hitherto, from design or accident, not much considered.

Now, with all due respect to the Clydesdale, the Shorthorn, and the Shropshire, we may say that we love the trotting horse more than either, and that we consider him as standing higher in the order of creation than any of these.

The high bred horse is more of a companion to man than any other animal, excepting only the dog, and in majesty of appearance and nobility of character he surpasses the dog. There is no littleness about a well bred and fine horse. He is surely, of all the animal creation, that one on which man may confer the honor of friendship and companionship.

The highest bred of all horses is the English thoroughbred, unless we admit the claim of his Arab progenitor, to superiority in intelligence, docility and good breeding; but he is almost exclusively the horse of the race-course, and it is only in his days of neglect and downfall that he becomes the horse of the saddle or buggy, the horse of our every day association.

Hence it seems to me that the highest type of horse, which we all know and use and admire, is the trotter; and I feel that the JOURNAL should devote far more space to the history and daily doings of that animal, and the more as this breed of horses is now approaching its fixed form, passing rapidly to that point in development of form, speed, and intelligence, where its progress will be stayed. Moreover, this subject will justify the devotion of much space, even if considered solely from the standpoint of money value.

No other breed of animals offers such large prizes for successful endeavor of the breeder, and no other so soon and so surely repays his skill. At the same time there are ample rewards for the breeder who has only moderate success, as valuable indeed as the highest prizes in many another department of breeding. But while it is most satisfactory to note these substantial rewards, it is still true that altogether apart from these, there is every inducement, both in the pleasure and usefulness of the pursuit, to stimulate us to aim at improvement in the breeding of all animals, and particularly of the horse.

The trotter, sometimes called the American trotter, is a creation of the last fifty years, and in some respects we might say, of the last twenty-five years. However, for the last fifty years, breeders have been selecting strains of blood and families with increasing success, until now a trotter may be bred as surely as a Short-horn.

Still, while men are so far agreed that they are breeding with almost absolute certainty, they are widely opposed in the theories which they teach and believe. And singularly enough their several theories, practically limited to two, are a positive and a negative; not two diverse theories, but one theory and its converse. Thus some, indeed many, breeders believe that the foundation blood in the trotter is, and must be, thoroughbred blood; the blood of the English thoroughbred, or as he is more aptly and expressively called, the blood horse.

The other school bitterly denounce such talk as trash, and speak of the thoroughbred element so much desired by the first party, as running bred foolishness, and think and say that the thoroughbred cross should be studiously avoided. Now there is, as is usual, a good deal of reason in the two opposite opinions thus expressed.

In the first place, the trotting horse of to-day has a pedigree running at the first, second, third, or fourth generation, to a thoroughbred sire in almost every instance. In the second place, where this does not occur the pedigree ends sooner or later in unknown blood, or in a pacing progenitor. In the third place, the probability is that the mares of unknown breeding, which occur so frequently in these pedigrees, are either thoroughbred or of thoroughbred descent, as they usually exhibit qualities of speed, gameness, and propensity in fixing their color and qualities in their offspring, which would be strange if found in animals of mongrel breeding.

In all probability a new race of trotters could be produced, using the thoroughbred and the pacer as foundation elements, in less time than it has taken to produce the trotters of to-day. Indeed, to use a simile, engrafting, practised so largely in the vegetable world, by which the vigor and hardihood of the stock is diverted to other and more convenient use in the product of the season, is very much like the process which has produced the trotter.

On the thoroughbred stock the trotting action has been fixed by crossing with the pacer, and the result is a new thoroughbred, with all the power, speed and endurance for which the race is noted, but with a new way of going. And this being so the reasoner who argues that the trotter owes most to the thoroughbred is right. But the battle between believers and unbelievers is about the proper course to follow in the further improvement of the trotter, rather than about the foundation stock on which the trotter has been bred. There are some who believe that the merit of the trotter being largely due to the thoroughbred, that merit must be increased by calling on that same blood for assistance, and can be as well done in no other way; while there are others who abhor the thoroughbred, and one might almost say all his works; although, of course, that cannot be so if the trotter be admitted to be one of these works. The principal and most bitter opponent of the thoroughbred is John H. Wallace, editor of *Wallace's Monthly*, and registrar of the Board of Censors by whom the American Standard Trotting Horse Register is compiled. He should be the best informed of all authorities on the trotting horse, but has apparently allowed his earnest advocacy of the claims of the pacer to warp his judgment so far as to prevent his giving that measure of credit to the thoroughbred which is due. Mr. Wallace earnestly advises breeders to breed to and from trotters if they wish to produce trotters, and in so doing he follows the recognized canon, that like produces like. Mr. Wallace accepts the recognized trotting families of to-day as sufficient foundation stock whether qualities of size, speed, and beauty be considered, and believing that sufficient out-crosses to prevent evil effects from in-breeding can be secured, he objects to the introduction of any new blood, and particularly thoroughbred blood. However, there are breeders, and some of them most successful in obtaining results, who believe that the highest class of trotters may be obtained in two generations by the use of trotting bred sires on thoroughbred mares. Of these the most successful is Governor Stanford, of California, and he has done enough, we think, to demonstrate that the true outcross for the trotter is the thoroughbred horse.

This outcross should not be resorted to unnecessarily and only with moderation, but when used with judgment we believe it to be capable of producing trotters superior to any we have yet seen.

Now, this opinion has some value to Canadians if correct. In Canada we have not a leading position as producing trotters, but we have the natural advantages which have enabled us to produce horses of the best quality of their kind. We have besides the two foundation breeds from which the trotter has descended, the thoroughbred and the pacer. We thus have the raw material required to produce trotters of the greatest excellence, and we might produce a race which would become famous entirely from our own resources.

In the light of experience, however, that would seem not so wise a course as to use the advantages gained with much expenditure of time and money by our American cousins. We should, by all means, import American-bred horses, and mate these with our thoroughbred or part bred mares. If we, in Canada, had the means, or rather if we had the courage, to buy the best stallions, and that would, of course, require a long purse, there could be no doubt as to the resulting profits. With the enormously rapid increase of wealth, and the equally rapid spread of Anglo-American fashions in horseflesh, a world-wide market for the highest class American trotter is assured, and in no department of live stock breeding can such profits be expected.

M. R. L.

Veterinary.

For the CANADIAN LIVE STOCK AND FARM JOURNAL.

Choking in Cattle.

By F. C. GREENSIDE, V.S., Guelph.

At this time of the year cases of choking are by no means infrequent, so that a description of the causes, symptoms, treatment, etc., will not be unreasonable.

Instances of this casualty are rare in the domestic animals except in the ox tribe. Being voracious feeders, and largely fed on roots, and being capable of

swallowing a considerable sized piece—which ability they are apt to impose upon—renders cattle particularly liable to this accident.

Ordinary sized apples appear to be of very convenient shape for swallowing, and being tempted by this, cattle often attempt to swallow a larger one than the calibre of the gullet will admit of, so it becomes lodged in some portion of that canal. Sometimes a beast having scooped at a whole turnip, will attempt to bolt the remainder, before it is sufficiently reduced in size, but in the majority of cases slicing with a spade or in some such way, produces pieces of inconvenient shape for swallowing, so that cut roots are more frequently the cause of this accident than uncut, unless they are pulped, or cut into finger like pieces. Carrots, mangels, and potatoes also occasionally act as offending bodies. Choking gives rise to great distress and occasionally causes fatal results, so that humanity, as well as pecuniary considerations demand that owners of stock should be in a position to promptly detect and relieve a case of this kind.

The distress varies somewhat according to the situation of the offending body. If it is just at the entrance of the gullet, it seriously interferes with breathing, and may result in smothering the animal. When lower down along the neck portion of the tube, or in that part of it which passes through the cavity of the chest, the symptoms are not so apparent unless bloating becomes extreme, nor are the consequences likely to be so serious unless the coats of the canal become strained, which will interfere with the process of swallowing after the obstruction is removed.

An attendant can generally correctly detect a case of choking, particularly when the circumstances are known to him. Occasionally we have known people mistake the somewhat hard and prominent organ that is situated between the branches of the lower jaw, and at the commencement of the wind-pipe, for some foreign body, where there was a cough or some bloating that gave rise to a slight resemblance to the symptoms of choking, but usually the evidence of obstruction is very plain.

There is a cough, and if the source of trouble is at the commencement of the windpipe, it is a very distressing one, and the other symptoms are aggravated. There is champing of the jaws, a profuse flow of saliva, staring eyes, bloating, voiding of feces, and urine frequently, but in small quantities, all of which is accompanied by more or less restlessness. If the bloating becomes very extreme it may so interfere with breathing so as to cause death. Liquids poured down will soon return. If the foreign body is in the neck portion of the gullet, it can be readily felt on the left side. It is usually not a difficult matter to afford relief, unless the arrested body is very large, or of awkward shape. If at the entrance to the gullet, it will have to be drawn up as it cannot be shoved down. The hand is the only suitable instrument.

By getting the head held by a couple of strong men, or tied to a post on each side, one is quite safe in passing the hand into the mouth, and placing it sideways, with the thumb up, towards the roof of the mouth, and the little finger placed right on the floor, in the space between the grinders and the tongue. It can then be forced back into the space behind the mouth, and the body felt and removed. This is a safer plan if one understands it and has the confidence, than using the ordinary appliances for keeping the mouth open, such as a clevice, for in knocking about, the instrument is apt to turn, or get out of the mouth, when the protection to the hand will be lost. Occasionally handling the neck over the body will cause it to move, and pass down.

The lubricating and softening effects of oil poured down will also sometimes move the obstruction. As a rule, however, a more effectual means has to be employed in the shape of what is called a probang. This is a flexible tube six or seven feet long, with perforated ends, one of which is cup-shaped and the other round. The round end should not be used when there is a body to be dislodged, as it is apt to slip to the side of it, and the pressure used will be likely to stretch the coats of the tube, and perhaps permanently injure them. The cup-shaped end cannot go past, so is much the best for moving the body onward. A gag with a hole in the centre is always sold with a proper probang. A mouthful of oil facilitates the passage of the instrument into the stomach. The foolish practice of using ropes, whip-stalks, and other unsuitable instruments cannot be too strongly condemned, as they often cause serious if not fatal results, by injuring the entrance to the gullet.

The Farm.

Wheat Growing in Ontario.

It is questionable if the export of wheat can continue for very many years from the United States. The population, it is stated, has increased 20 per cent. during the last ten years, while the area devoted to wheat has only increased three per cent. There is no likelihood that this increase of population will be less in the future than in the past, while the same will not hold true as to the increase in the production of wheat only to a limited extent. The area for its production will still extend with the settlement of new territory, but this extension cannot, in the nature of things, last very long. Again, the areas devoted to wheat may be stimulated to produce a higher yield, but this is not likely to keep pace with the growth of the population. It is not improbable then, that within two or three decades the United States will want all her own wheat and perhaps a little from us, which will be good news to the people of our own North-West. While in the meantime, it is wiser for us to grow what will remunerate us the most highly, having a due regard to the maintenance of the fertility of our land. We must continue to grow a certain amount of wheat for home consumption, and to provide straw for litter, but over, and above this, with our splendid facilities for raising stock, we can afford to leave the growing of wheat for export to our Manitoba friends and their neighbors further west.

Variations in Grain Yields.

There are few things more perplexing to the farmer in the management of his work than the difference in results obtained from the same variety of crop when sown in different localities. Take fall wheat, for instance, during the past season, and we will find this difference most marked. The Manchester gave a fair yield in the vicinity of London, while in the vicinity of Guelph it was scarcely worth harvesting. The Garfield did remarkably well in the neighborhood of Toronto, but not so well around Hamilton. The Surprise did well pretty generally where sown. The Democrat gave a good crop on stiff soils, but was not very successful on loams. In this way we might continue the enumeration indefinitely. The farmer reads that a certain kind of wheat has given an extraordinary yield in one locality, and he naturally concludes that he should get some to sow, for which a high price is

paid. The next year he is probably disappointed in the result. The most perplexing feature is this, that regardless of difference in soil, difference in locality seems to make a marked difference in returns. What then, is the farmer to do? Why, to get a small quantity of one, two, or three new varieties that have done very well in some localities, and sow them under similar conditions. He then has a test such as no Experimental Farm is able to give him, to guide him in his next year's operations. It is of vital importance for every farmer to keep abreast of the times in the growth of good cereals, for the improvement in these is far more rapid than the improvement amongst men.

Seed Inspection.

Seed inspection in Great Britain and other continental countries receives careful attention, but as yet has attracted but a limited amount of interest in Canada. In the State of Delaware, where seed inspection has been adopted by the legislature, it has been found that the condition of the seed trade is much better than was expected. We apprehend that in Canada its condition is not so bad. Sometimes a farmer may feel chagrined that he gets mustard instead of rapeseed, and now and then grain may be purchased, the vitality of which has in some way been destroyed, but usually the purchaser gets what he buys. If seeds are purchased from a reliable seedsman, he is usually willing to guarantee them, and if he will not, some other seedsman will, who is therefore, more worthy of patronage. Some argue that the farmer should test all the seeds he buys before sowing them, but this should not be necessary. It may be inconvenient for him to do so, and he may not have time between the period of purchase and that of sowing. The seedsman for his own sake should test his seeds, when his guarantee should satisfy in all ordinary purchases. We think it will generally be found that when bad seeds have been purchased, it is oftener the grain-dealer who has supplied them or some one whose principal business has not been dealing in seeds. The age at which the vitality of seeds ceases, is still a hazy question, as the literature upon the subject is not a very large quantity. Grass and clover seeds deteriorate rapidly with age, and soon become very much impaired in value. In purchasing seeds it is important to have them fresh as well as good in appearance.

Corn Notes.

It was our pleasure this summer to view a capital field of Mammoth Southern Sweet corn at the farm of Mr. John Stewart, Felton P.O., Ont. This we learn has yielded at the rate of 58½ tons to the acre. Our informant tells us that it was probably over that, as the sixteen square feet that was taken as a basis for the calculation was not by any means the heaviest of the field. This corn, as all that which grew right along this season from first to last, was sown on land that was in sod the year previous. Corn is by nature a rank feeder, and hence responds best when fed with plenty manure, either from the barnyard, compost heap or derived from ploughing under a good thick sod. It is a coarse grower and, like turnips, it should be fed liberally to keep it pushing ahead. To either of these crops the manure for the rotation may be applied as they are greatly benefited; while in the case of the grain crops the growth of too much straw is sure to follow heavy applications of manure. There is, however, a limit to the feeding of the corn crop. It should not be fed too liberally, or forced

too much in its growth, as this will react on the value of the crop by decreasing its nutritiousness. If pushed too much it does not attain to maturity before the frost forces it to be harvested. Corn that does not produce ears in our climate, or in other words does not mature and yields a vast bulk, is more watery and less valuable as a food than a variety that tassels out and forms ears under our conditions.

The value of planting the rows further apart than three feet has been pressed by some, especially those that sowed their corn on ground that had not been well purged with plough and cultivator. Such had to stop cultivation as early in some cases as June. The aim should be as far as consistent with an eye to maturity, as well to encourage the growth of leaves, and this can be best done by liberally manuring and long-continued cultivation, and to carry out the latter the rows should be from 3½ to 4 feet apart.

It was noticeable this spring that owing to the cold damp spell shortly after corn sowing in a number of districts the kernels were very slow in germinating, and some did not grow at all. Dr. Sturtevant claims as the result of much experimenting on his part that it is not the cold that kills seed corn but that this merely checks its growth, giving time for the moulds to act upon the seed, and so cause its decay in the damp soil. His work shows that by drying corn in the fall at a high temperature, in the near neighborhood of 100° Fahr., the kernels will sprout quicker, and be able to resist the attacks of these moulds that causes the seed corn to rot if the season is damp and cold. It is certainly worthy of trial as it could be easily done in a common stove oven.

The Wild Oat.

The wild oat (*Avena fatua*) is supposed to be a native of Southern Europe. How it came to this country is not known, but weeds like evil seem to follow in the wake of man. Whatever we may not know about it, we know, to our sorrow, that wild oat is here. It flourishes in all kinds of soils, and will even make a bold fight for supremacy in strong clay, where some other kinds of weed life can only eke out a very precarious existence. It bears a considerable resemblance to the common oat (*Avena sativa*), which latter some persons think, originated from it. This, however, is not probable, for the presence of this bold marauder only calls forth effort for extermination, rather than improvement, which would not likely be the case if the plant was so susceptible to improvement.

There are several distinct points of difference between the two in structure and habits. In the wild oat the chaff scales which adhere to the grain are thick and hairy, in the cultivated oat they are not so thick and are hairless. The former has a long stiff awn usually twisted near the base. When dry it is coiled closely upon itself, but when moistened by dew or rain it slowly uncoils, causing the seed to sprawl about upon the ground. This curious property gives them oftentimes the appearance of an animated existence, which is due, however, only to the operation of a natural law of expansion and contraction. One who watched their movements at such a time would almost suppose they were possessed. This much, however, is certain that even though they act independently, both are intent on harassing man.

It is an annual and very hardy, and one of the most difficult of weeds to destroy. This arises in part from the difficulty of recognizing it when growing amongst other grains before coming out in head. It ripens earlier than most other cereals, and the seed

falls to the ground almost as soon as ripe. Indeed the grain will fall out of that portion of the head which ripens first while other grains in the same head are immature. It is unsafe, therefore, to allow a crop of barley even to ripen which is infested with wild oats, or the ground on which it has grown will be so strewn with the seeds that it will prove a long and laborious task to destroy them.

As the wild oat is an annual, it can certainly be destroyed, for if none of the seeds are allowed to ripen, the time must come when the last one will have sprouted and been destroyed; but this process must prove expensive, as, like the mustard seed, the seeds possess the power of retaining their vitality for a long time.

Several methods have been adopted by which this daring invader can be overcome. We give some of these below:—

1. Sow with barley and cut the same a little green. This prevents the wild oat from ripening, but to make doubly sure, the food should be cut and steamed before using, or threshed and the grain ground for feeding. Follow with a hoed crop allowing none of the plants to escape. Sow again with barley, and seed to clover, treating the barley crop as in the former instance, if necessary. As the clover is cut before the wild oat ripens, none of the latter are thus allowed to reseed. The process may commence with a hoed crop where everything is suitable. Cultivation with a view to cleansing the land the preceding autumn will prove advantageous, and frequent harrowings preceding the sowing of the roots in the spring encourages the oats to sprout and so destroys them.

2. Grow a soiling crop as rye. Cut this when in the early bloom for fodder. Follow with a crop of rape sown in drills and carefully cultivated. Sow to barley and treat as in the first instance, if necessary, and follow with a clover crop succeeded by roots.

Both of these methods proceed on the assumption that the soil is suited to the growth of barley and roots, which it may not be. The mode of procedure in a stiff clay will, therefore, be manifestly different, hence, we give another mode of destroying this weed well adapted to any kind of soil.

3. Break up sod about the end of June which may have been either pasture or hay land, work it well on the surface through the summer, and sow to winter wheat. If the surface cultivation has been thorough prior to the time of sowing the wheat, but few, if any of the oats will appear next season, and if they do, they will not mature if the wheat is of good growth. The wheat is sown to grass and the hay is mowed one season, the ground being pastured the second year, when, to make thorough work, it may be followed by a soiling crop cut early enough to prevent the oats from ripening, or by a hoed crop where the soil is suitable. In very stiff clays the pasture may be ploughed in June and treated as the sod land in the first instance, or two crops of hay may be cut preceding the season for pasturing.

This method has been practised with complete success by Mr. Joseph Atkinson, formerly of Egmondville, County Huron, Ont., to whom we are largely indebted for our information regarding this third method of fighting the invader.

It should be remembered that here, as in all methods of destroying weed life, that the value of the work is in proportion to its completeness, hence it is wise in farms that have been infested with the wild oat, that the fields of grain be gone over after the wild oat has headed out, that the last stray stalks may be secured.

There is no form of weed life which will not ultimately succumb to the adoption of intelligent methods

of destroying them. Indeed, there is nothing to hinder all Ontario from obliterating the most pernicious forms of weed life but the apathy of her farmers. Let no one, then, look so discouragingly upon the condition of his farm, as to consider the effort to clean it effectually a hopeless task. What is so hard as a rock, and what is so soft as water, nevertheless hard rocks are hollowed out by the agency of soft water.

Chemical Analysis of Soils.

The popular idea that the chemical analysis of a small quantity of soil taken from a field will furnish a true basis of the value of the soil of the field, has fallen before the increasing light that experimental research in chemical analysis has brought to us. The idea was apparently based upon two assumptions. The first was that much of uniformity would characterize the compositions of soils in the same field that were similar in appearance to the eye, and the second, that plant food in soils containing the same ingredients in equal proportions, was in an equally available condition.

The fallacy of both assumptions will be readily apparent to the reflective mind. A quantity of soil may be taken from a field, and another plot from a spot not ten feet distant, that will give in analysis results that are quite different. This may arise from the different quantities of organic matter which these contain, because of the decay of living substances which once they held in different proportions. It may arise from various other causes which we stay not to mention now, but to get to the bottom of which would take us back to the time when the rocks were ground to powder by the action of the glaciers, or to those pre-historic periods when the currents of receding waters gamboled in channels that are long since dry.

But we are not to conclude that chemical analysis of soils of a field that are similar in appearance and texture in the different parts of it are of no value at all, for though the analysis of soil from one portion may not be a sufficient guide, the analysis from different portions of the same, when their average is ascertained, should give us a fair idea of the general nature of the contents of the soil of such a field.

The idea that plant food in soils is equally valuable on the basis of quantity, regardless of condition, can only find a hiding place in minds that have not yet looked beyond the horizon over which the sun of agricultural light has not yet arisen. Any practical farmer must have noticed that when one part of a field is ploughed early in autumn and exposed to the action of sun and frost and rain, that the crop sown upon it in the spring will, in ninety-nine cases out of a hundred, be much better than the crop sown upon another portion of the field ploughed in the spring, although the respective portions may have been sown the same day.

The lack of most soils is not a lack of fertility in the abstract, so much as a lack of available fertility, and the farmer should bear in mind that no influences are so potent primarily in unlocking latent fertility as the plough in autumn, the cultivator, harrow and roller in the spring, and the hand and horse hoe in the summer. The chemist may tell the farmer that his soil contains certain elements of plant food, and that these elements are requisite to the growth of certain crops, but the chemist can but partly tell him the elements that are in an available condition. This, however, he can ascertain in the way that we have indicated. We would not, however, have the reader

understand that old Jethro Tull was right when he said that the soil contained in itself all the elements requisite for the continuous growth of crops for an indefinite period, and that because of this all that was requisite in growing crops was mechanical cultivation after a system which he prescribed, for if any soil contain a certain amount of plant food, locked up or unlocked, it is quite plain that if some of it is carried away every year, that the time eventually comes when the whole supply will be gone, and the entire surface soil will be poorer than a church mouse, though the stores of the subsoil may be abundant beyond the lower line of the plough.

Another method of what may be termed practical analysis for determining the fertilizing needs of soils is by dividing them into plots, applying fertilizers of different kinds to these plots, and judging of the needs of the soil by the difference in the yield of the plots. Theoretically this sounds well, but in practice it does not always stand the test, since plots side by side and similarly treated as to fertilizers sometimes yield results quite a little different. Differences in results are caused by variations in sunlight, a slight difference in the mechanical or chemical condition of the soil, the number of plants grown, different degrees of moisture, and other causes. Again, the condition in which a fertilizer is applied may cause some variation. If the fertilizer which is applied is not in the most available condition, it would be an easy possibility to come to a wrong conclusion as to the wants of a soil regarding it.

Another doctrine extensively promulgated, especially by the manufacturers of fertilizers, is that a complete fertilizer—one containing in itself all the elements of plant growth—should be used by the farmer. The objection to this course lies in the fact that some soils are only lacking in certain elements, and so do not need a complete fertilizer. We can readily understand that land which may not require the application of barnyard manure, a complete fertilizer, may be benefited by the application of lime, which in itself is far from being a complete manure.

Another theory of chemical analysis, which, however, is not generally accepted, is that the amount of certain ingredients contained in the plant itself, furnishes a basis on which to judge of the needs of the soil; that is, if a plant contains a plentiful supply of any one ingredient, it is an indication that the same is present in sufficient quantity, but that if the converse of this is true it is an indication that the soil is lacking in a supply of the same. It seems to us that some potent objections may be raised to this seemingly very plausible theory. A difference in season and in the mechanical condition of the soil, will make a difference in the vigor of the plant, and so of its power to build up its structure on any ingredient, as it otherwise would.

Are we to infer, then, that the chemical analysis of soils is of little or no practical value? Not by any means. Chemical analysis will tell us whether soil has plant food or not, after the husbandman has failed to get good crops. It will also tell us whether there is an abundant supply or a great lack of any one or other of the ingredients necessary to plant growth; it will indicate whether the infertility is due to injurious acids in the soil or not, and it will tell us whether a subsoil within easy reach of the husbandman may afford him supplies for the surface by the adoption of a certain course that will render them of practical use; but in all such experiments it is the result of the average of several analyses from different portions of a field that should be relied on, rather than the result of one analysis.

For the CANADIAN LIVE STOCK AND FARM JOURNAL. How to Make a Good Binder Cover.

By F. J. SLEIGHTHOLM, Humber, Ont.

Procure sufficient ten-cent cotton to cover your machine, sew it together in proper shape, and tack it to the side of a building or to the floor of a mow of the barn. With a suitable brush give it a coat of *boiled* linseed oil, and, after allowing it to dry, two or three days is usually enough for this, give it a second coat, putting on all it will take in each time. Do not allow the sun to shine upon it while drying. When the second coat is dry it is ready for use. The cost will vary with the size of the machine to cover. The following estimate is for a six-foot binder: 24 yards, yard wide, cotton @ 10c. = \$2.40; 1½ gallons @ 90c. = \$1.35. Total, \$3.75. Sheeting cotton is to be preferred before the other, and costs but a trifle extra. Be generous with cotton, and let the oil be put on without stint. If these directions be followed the writer guarantees the cover will keep the machine dry in any weather. It will hold water like a tub, and prevents the harmful effects of dew and sunshine. The shape of the above cover is four yards wide by six long.

Its use is very evident. If an unexpected shower comes it is ready in a moment. The average man requires twelve to fifteen minutes at least to put the canvas on to an ordinary binder, this cover can be put on in one, and no canvas need be touched. Experience delights the user.

The Banner Oat.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL:

SIR,—In response to the letter of Mr. Hutchinson, of Aylmer, in the October number of the JOURNAL, I would say that I started to grow Vick's American Banner Oats with a ten cent package of seed sown in the garden a few years since. On the product last spring I sowed some 15 or 16 bushels on nine acres of clay loam soil, and though not yet threshed the yield will probably be over 60 bushels to the acre. It was one of the finest fields of oats I have ever seen, heads being well loaded with plump heavy grain (white); stalks not crinkling or lodging, and being covered with broad leaves, making the straw excellent food; straw bright and free from rust and ripening almost two weeks earlier than other varieties. In fact, this oat gives promise of being a valuable addition to the grains of this Province.

Derwent, Ont.

JAS. D. THOMPSON.

The Dairy.

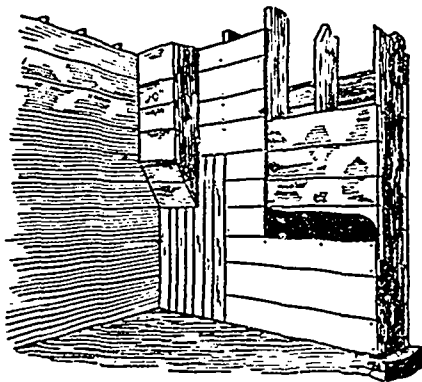
Remarkably Rich Milk.

While the Jersey is known as a giver of milk of the richest nature, yet few would expect from even the best of these useful beauties the wonderful results that have been the outcome of a late test of the cow Toltec's Fancy 27172, the property of Maury Jersey Farm, Columbia, Tenn. She yielded milk so rich in butter fat that five pounds of it gave one pound of butter containing about eighty-five per cent. butter fat. A sample of the same milk that averaged the above good results was analysed by an expert chemist and was found to contain the high percentage of the 16.32 of butter-fat. This is remarkably high, as the normal percentages with the general run of other cows is between four and five per cent. The test was conducted on fair principles and there are no reasons whatever for doubting the truthness of the results. This cow was sired by Toltec 6831, the sire of no less than eight other cows that have yielded fourteen

pounds or over of butter in a week, while the dam of Toltec's Fancy is the remarkable butter cow Landseer's Fancy 2876, that tested 936 lbs. 14 $\frac{3}{4}$ oz. in a year, and 29 lbs. $\frac{1}{2}$ oz. in seven days, besides being the dam of many others noted for their wondrous butter-giving powers.

A Chute Instead of a Door for the Silo.

The question as to whether it is better to take the silage from the top of the pit or through a door at the bottom has given use to more or less differences of opinion. It is claimed by those that advocate the former that there is less chance for the ensilage to spoil, and it was found that a door to a silo acts like a damper to a stove when open, by admitting a strong draught of air. The others advance the argument that it is far easier to feed from a door, and for this reason, if for no other, they have adopted it. Prof. Shelton, of Kansas, in a bulletin from the Experimental Station of that State, advances an idea that will undoubtedly turn the scale in favor of feeding from the top of the silo. We append an illustration which will clearly explain how the ensilage may be got out of the pit by means of a chute. Describing it



he says: "The operation of feeding from the silo is usually performed from the door, as shown in the cut. In feeding, it is well to remember that if a silage surface is left exposed to the atmosphere for a number of days, it moulds quite rapidly, and not infrequently a considerable loss results. On this account I prefer to feed from the top of the silage, so that more or less of the entire surface can be fed every day. To accomplish this purpose I have planned in the new silo, the chute, shown in the cut, over the door of the silo. It consists simply of a 2 x 10-inch plank spiked on edge securely to the silo, 20 inches from the corner. Twenty-inch pieces of shiplap lightly tacked to this projecting plank connect it with the adjacent wall, thus forming a 10 x 20-inch chute which passes through the inner door of the silo. We expect to shovel the silage constantly from the top, emptying the silo through this chute. As the silo empties, the pieces of shiplap may be removed, thus saving the lifting of silage to the top of the chute."

While at Guelph Agricultural College a short while ago, we saw an idea there carried into practice by Prof. Robertson in a new silo, that will be found to even surpass the plan outlined in the above illustration. Instead of building a separate chute on the inside and thus materially lessening the capacity of the silo, Prof. Robertson used the space between two of the uprights of the wall for this purpose. In this case it is best to use two of these spaces so as to have two chutes, so that the strength of the wall may not be in the least weakened. To further provide against this tendency to weaken the walls, the inner wall of the chute, which is identical with the inner wall of the

silos, has only alternate places where the boards may be pulled out to pass the silage down, and these places that may be so opened are so arranged that they are never opposite each other on the two chutes, but alternate, and thus preserve the strength of the wall.

Stable Floors.

A tight lasting floor is one of the most valuable features of a good stable. It means that the latter will be warm, for the draughts of cold air come in most freely from the bottom; and it further guarantees that the liquid manure will be prevented from escaping, and also saved by the aid of straw and gypsum. No need for tanks, expensive and troublesome, if these agents, a close floor, plenty of straw, and free use of gypsum, are employed. They furnish a cheap method for the complete saving of manure, a matter of more importance to the farm and farmer than most are willing to concede.

A correspondent makes inquiries as to the best floor for horse and cow stables, and desires to know how to lay a good cement floor. As a rule it is best to make the floors of horse stables of wood, either cedar blocks or planks. The former are most in favor, though after a time they become uneven and soggy. Their lasting properties may be greatly increased by a coat of hot tar, mixed with fine clean sand to give it enough body, put on as soon as they are laid down. It should be a matter of care to see that the blocks are sound, and that the sand is well packed between them, as the thoroughness of the work in the first place determines the amount of trouble and fixing that may follow after. When cement floors are laid in horse stables the calks of the horse's shoes begin after a time to chip the floor and break it up, and to prevent this it has been recommended that if used for this purpose a small quantity of tar be mixed with it, so as to give it a slight elasticity. Considering the cost the cedar blocks give as good results if not better than any other form of flooring for a horse stable.

For floors of cattle stables Portland cement is far better than cedar blocks or plank floors, for the reason that cow manure is very moist, and the liquid manure plentiful, and owing to this the flooring, being dry and wet alternately, rots very quickly. The best plan in laying the foundation for the floor is to fill to within eight inches of the height desired when finished with clay, or if the site is damp, coarse hard gravel. This should be made as firm as possible by hard pounding. Over this should be laid a six-inch layer of broken stones, the harder in nature the better, about the size of hens' eggs. This is also thoroughly pounded down and made level. Portland cement and the best of clean sharp gravel, in the proportions of one of the former and three of the latter, is then scattered over the surface, and washed into the spaces between the broken stones so as to make it level. In laying this use a level and straight edge, and make the grade just as you desire to have it when the job is completed. For the next two inches use fine clean sand and Portland cement mixed dry, so as to insure thorough mixing, in the proportions of two of sand to one of cement. Wet but a little of the mixture at a time as it soon hardens. This last coat should be laid in narrow strips, say two or two and a half feet, so that it is easy to reach across. By kneeling, when at work, on a two-inch plank and filling just even with the top of it, uniform thickness may be maintained. A trowel should be used to smoothen the last layer, and where much is to be done it will pay to hire one who can use the latter quickly. It is to be remembered in mixing, or in laying it on, that the cement

sets rapidly. If the basement is at all warm no danger need be thought of in respect to the frost getting into it, and so causing it to break up when the cattle are put upon it. To secure a good straight drop behind the stalls into the gutter it makes a complete job to face the end of the stall with a row of flat cut stones. Very hot or dry weather is apt to cause the cement to dry too rapidly, and is just as bad as cold weather in its effects. The cattle should not be put upon it until it is thoroughly hardened, which will vary from two weeks to a month.

Foods for Milch Cows.

Editor LIVE STOCK AND FARM JOURNAL.

I would like to know in the next number of the JOURNAL how cornmeal compares with cracked foods for milch cows, and also of the different roots which is the best for feeding. Yours, etc.,

SUBSCRIBER.

Charlottetown, P. E. I.

The feeding value of all foods is largely determined by the amount of albuminoids, fats, or carbohydrates that they contain. The relative scarcity of the albuminoid or nitrogenous substances in plants, as well as their importance in the animal economy, gives them a first place when considering the value of foods, with fats second, and the carbohydrates, which include the sugars, starches, etc., are the least valuable of the three mentioned. The composition of cornmeal may be stated to be as follows: water 14.50, albuminoids 8.25, fat .44, carbohydrates 77.12, fibre .32, ash 38. By the term "cracked foods," we infer our correspondent has reference to crushed oats, peas, or barley. The analysis of the oats would be as follows: water 12.96, albuminoids 9.82, fat 5.24, carbohydrates 56.97, fibre 11.91, ash 3.10. Peas contain the following: water 13.2, albuminoids 22.4, fat 3.0, carbohydrates 52.6, fibre 6.7. Barley contains, water 10.92, albuminoids, 12.39, fat 1.86, carbohydrates 69.38, fibre 2.57. Comparing cornmeal with these, it will be noticed that in carbohydrates or carbonaceous substances the cornmeal contains by far the most, while it is deficient in albuminoids, especially so when compared with the peas. A milch cow, to do her best at the pail, must be given very nutritive food, and this cornmeal, in conjunction with meadow hay or silage, would not supply. On the other hand, such a food as pea meal or crushed peas would be too rich and expensive to feed in the same manner, without other grain. To make the best use of her food a cow must have it well balanced; that is, one set of the substances, such as the albuminoids, should not be greatly in excess of the others, but should be given as near the proportions that experience as well as experiment says it should be, namely, one of the digestible albuminoids to 5.4 of the digestible carbohydrates and fats. If a cow is fed food varying much from this, suppose the above proportion was reversed and the albuminoids given in greatest proportion, then her system, being unable to utilise this extra quantity of albuminoids, would be unnecessarily taxed and there would also be a great waste of food, as that which she could not make use of would pass out in the manure. While crushed peas or oats are undoubtedly more nutritious and better foods for a milch cow than cornmeal, yet it is when a combination is made so that one kind may meet the shortcomings of the other that the best results are obtained. Now, an even mixture of pea meal, chopped oats and cornmeal would make an evenly balanced ration, and experience has proven this mixture to be a good one. Wheat bran might be substituted for the pea meal, but the proportion would be better increased so that the mixture would be two of bran, one of chopped oats, and one of cornmeal.

We suppose our correspondent limits the latter part of his query to those roots that are suitable for feeding milch cows. The two kinds that are most useful for this purpose are turnips and mangolds, though others, such as carrots, may be fed occasionally for variety. Between the two kinds mentioned there is but very little difference as regards their composition, as the following analysis will show: mangolds—water 88 per cent., albuminoids 1.1, fat 1, carbohydrates 9.1. Turnips—water 91.5, albuminoids 1.0, fat .15, carbohydrates 5.8. The mangolds are less watery and slightly more nutritious. The general practice is to grow both, and feed the turnips first until the last of February, when the mangolds are fed, as it is claimed that the latter after being stored for a few months become sweeter and the cattle like them better. Considering cost of growing and the many other items that are entailed, there is no doubt that ensilage for milch cows is a better food than any of the roots.—Ed.

Clover For Hogs.

The idea still clings to a number of our stock-raisers that the pig is only of use as a general scavenger to live on sour swill and the general garbage of a large farm. While the pig, owing to its extra development of digestive power, is able to abstract nourishment from food that would starve other animals, yet, it does not follow that they should only be fed refuse matter to get the best results. Mr. Stephen Favill, of Delevan, Wisconsin, favoured the Wisconsin Dairy-men's Association with his views and practice in respect to growing pigs. After describing at some length the method of curing the clover and storing as practiced by him, he speaks of the feeding of hogs in the following words:

"They will eat the kind of hay I am talking about and do as well on it, especially store hogs; one feed a day should be given, and they will be much more healthy and less likely to get that dreadful scourge, the cholera, than if fed entirely on corn. But it is not from the winter feeding that we get the best results from hogs with clover. It is for summer pasture that it gives us the greatest profit. I suppose that the statement that more pounds of pork can be made from an acre of clover than from an acre of corn would be thought extravagant: but the facts and figures will warrant its being made. Let us use our pencil a little. Fifty bushels of shelled corn would be fully an average yield per acre, and twelve pounds of pork for a bushel of corn (fifty-six pounds) would be fully up to the average. That would give us six hundred pounds for the acre of corn.

"An acre of fair clover will pasture eight hogs from the time the clover starts in the spring till fall, and anything of a good hog that weighs when turned out, say 100 pounds, will gain another 100 pounds by fall, without any other feed, and that would give us 800 pounds as against 600 pounds for the corn. The question of whether it is best to feed hogs when running to grass is still an unsettled one, some good farmers claiming that it is better to give no other feed; only plenty of water and salt. But my opinion and practice is to feed a little corn every day; not enough so they will depend much on it, but enough to neutralize to some extent the gas in the stomach caused by eating the clover. From one to two pounds a day is enough, and it should be fed regularly the first thing in the morning. Hogs are creatures of habit, like the rest of us, and will soon get to look for their feed only at the regular time.

"Many make a mistake in letting the clover get too arge before the hogs are turned out. They want to

be put on it as soon as it is up a fair bite, if not it will outgrow them and get too cold. They should have free access to salt and ashes mixed, keep it under cover, and those that have not tried it will be surprised at the amount they will eat. It will be understood from what I have written, that I consider clover as the sheet anchor of the dairyman and the hog-raiser, and in order to get the most from it, it must be *cut early and not dried too much in the sun*. Another advantage of early-cutting is the second crop. The chances for a crop of seed, and certainly for a second crop of hay are very much better if the first is out of the way.

Keeping Records.

This practice is one that should find more general favour among our dairymen, considering the amount of benefit that follows from its adoption and the small amount of time and trouble it gives rise to. Those that conduct their work on business principles, recognize the need of well established data as to the milking capacity of each cow in the herd, but there are a number that let the little trouble that has to be taken stand between them and the collection of statistics of the work of each animal. That there is a vast difference in the amount of milk cows will yield or butter that their milk will give, is a fact apparent to all, and it is equally so that it is unreliable to guess at the amounts and so form conclusions as to the relative worth of each cow. Continual culling out of the herd is necessary to secure the best results, and to aid in determining which ones shall be disposed of when the opportunity arrives, the past records kept are almost infallible guides. There is nothing that will tell with more effect on an intending purchaser than to refer him to the records of the animal that one is desiring to sell, or even to the dam and sire's dam, showing him what each has been doing for days or even years past. Keeping records infuses the dairyman with a deeper interest in his work. The slightest shrinkage in the milk yield will be at once noticed and this springing on an investigation which in itself may not only remove the cause but lead to greater production. A small spring balance and a note-book are all that the beginner will find necessary, though by these means only the yield of milk may be determined, but its quality could be gauged by the churn. The data collected by the weighing of each milking, though by no means an infallible guide as to the comparative worth of the different cows as dairy animals, it would greatly aid one in arriving at right conclusions in that respect. Our Jersey and Holstein friends have certainly adopted the right idea in paying so much attention to the compilation of records, and the patrons of other breeds not omitting the ordinary dairyman with no special breed to champion, might well pursue a like course. A reputation built on the records of a herd, is one reared on hard rock and not on sand. If we were to call Princess 2nd merely a good butter cow, it is not nearly so expressive and so convincing as the record of 46 lbs. 12½ oz. of butter in one week that should follow her name, nor would the first-mentioned appellation be of much value to those breeding her descendants; the name of Pierterje would not now be known throughout the dairy world, nor her kin so highly valued, but for the enormous record she made of 30,328 lbs. of milk in a year. Records when honestly and carefully entered, are of immense worth. Every dairyman, whether breeding pure-bred stock for sale or not, and especially the former, should not begrudge the little time and care it may take to collect such information about his own herd.

Dairy Husbandry.

By Prof. JAMES W. ROBERTSON.

[FIRST PAPER.]

While dairy farming is perhaps the most profitable branch of agriculture in our Dominion, it has only lately received the same relative notice and recognition that have been given to the other departments of animal husbandry and soil cultivation. Until quite recently, there has been no general, systematic or comprehensive effort put forth for the improvement of the methods or the investigation of the principles that underlie those practices that invariably lead to success and profit. This is all the more remarkable when the value of dairy farming, as a source of the nation's supply of food, as well as a means for the conservation of the fertility of the land, is thoughtfully considered. The true aim of all farm operations that are wisely planned is directed to the attainment of a three-fold object; (1) the production from nature of an abundant supply of wholesome appetizing nutritious food, in such a way as to leave a satisfactory profit to the owners and tillers of the land; (2) the preservation and where practicable, the augmentation of the available fertility of the soil; and (3) the providing of remunerative occupation for a large population upon the area that is cultivated.

In the following up of that aim the intelligent farmer will call to his aid the service of domesticated animals that are able to change into food suitable for his use those parts of most crops which in their natural state are unsuited for consumption by him. During the early stages of human experience upon the earth, many tribes subsisted mainly upon roots and the fruits of the forest. These were meagrely supplemented in some cases by the game from the hunter's traps, arrows, and spears. But as man emerged into a higher state of civilization, the powers of both mind and body naturally were turned to the production of a more varied diet, as well as the establishment of a more controllable and dependable source of supply. In the ancient historical documents that have come down to us, mention is made of the use by man of the products of animals domesticated for the meeting of these newer desires of his appetite. Nowadays the nations in the front rank of civilization and influence, subsist upon the most varied and substantial articles of diet procurable. Bread without butter does not satisfy. Flesh-meat of some sort accompanies the dinner vegetables, and throughout the whole of the extensive bill of fare, in even the plainest homes of American and European people, animal products are spread upon the table with the purely vegetable foods. To provide the former kinds in the most economic way is the purpose and place of dairy farming. The more particular products of the dairy, such as milk, cheese, and butter, are not the only foods that are provided for human consumption by this kind of husbandry. Since experience has demonstrated that animals of the cow kind must be kept to consume the coarser crops of the farm and elaborate them into such substantial delicacies as milk, butter, cheese, and beef, it follows that all these are the special but not the only kinds of food from the production of which, profits should arise from this branch of agriculture.

Milk is universally recognized as the perfect food, containing all the elements of nutrition required for maintaining life and supplying energy requisite for the demands upon human strength, and all in proportions best suited for assimilation by the organs of the human system. As an article of diet for furnishing life-sustaining energy, 3½ lbs. of ordinary milk may be reckoned as equal to 1 pound of flesh-meat from well-fed steers. The 3½ pounds of milk can be produced at less cost

to the farmer, and, therefore, during the coming years, will prevail in the keen competition for popular favor between the different articles obtainable as food, by the great masses of wage earners. One pound of cheese and half a pound of bread will furnish more strength to the eater than two pounds of flesh-meat. The cost of the former to the producer is lower than the latter, as also is the price at present required from the consumer.

As an evidence of the trend of popular preference for foods, the fact may be cited that the city and town consumption of milk in both Ontario and Great Britain is now almost five-fold as great per head of the population as it was twenty years ago. The consumption of cheese on this continent has increased almost five-fold per head of the population within the same period. There will be no danger of a lack of market or a lack of consumers for fine articles of dairy products for all time to come.

Then the by-products of the dairy, such as butter-milk, skim-milk, and whey, can be elaborated by pigs into another article of diet highly relished by most people. These by-products may be cheaply supplemented by parts of the same forage crops as are grown for the feeding of cows and by the cheaper coarse grains that can always be successfully raised upon a dairy farm whose land is enriched by the plentiful supply of barnyard manure.

In the endeavor to produce large supplies of food without exhausting the fertility of the soil, the farmer can best attain this end by the selling of such products as remove from his fields the least amount of valuable plant-food. At this stage of discussing the subject, a single illustration will suffice to indicate the adaptation of dairy farming to conserve the fertility of the soil. When 1,000,000 bushels of wheat are exported from any district they carry away in the substance of the grain, plant-food to the value of \$240,000. In other words, the elements or substances of fertility removed in the wheat, if replaced by the use of commercial fertilizers, would cost the previously mentioned sum. Whereas, when butter to the value of \$1,000,000 is exported it carries away from the place where it was produced less than \$50 worth of the substances required in the soil by crops for their growth.

It is evident that the production of a \$1,000,000 worth of butter will give occupation to a larger number of persons than the production of a quantity of wheat equal in value. The difference between the two amounts, which represent the value of the fertility removed, can be applied to the payment of the extra labor employed. A larger rural population may certainly be occupied in remunerative work by dairy farming than by any kind of exclusive grain growing. The culture of fruit, and market gardening alone offer equal facilities and opportunities for the profitable employment of labor in the production of food from nature's storehouse and resources.

These facts have been recognized by many of our leading farmers for the past quarter of a century. A knowledge of the underlying principles upon which they rest, is now being systematized and made widely available by means of co-operation and organization among farmers for this purpose. The Farmers' Institutes so popular among those living in the most progressive and prosperous districts on the continent, are largely the outgrowth of successful co-operation among dairymen. The cheese-factories were the first agencies through which this co-operative principle was first made practically useful in a wide-spread degree for the profit and improvement of the ordinary farmers. The first one on this continent was erected near Rome, N. Y., in 1851, by Mr. Jesse Williams. The late and deeply-lamented H. Farrington, of Norwich, Ont., had the

honor of introducing co-operative cheese-making into this Province. His factory which was erected near his home, began its operations in 1867. About this time the Ontario Dairymen's Association was organized. It held an annual convention and was subsidized by the Provincial Government. Its efforts were directed towards the extension of co-operative dairying, and the giving of information and encouragement to beginners in the erection and equipment of suitable factory buildings. Instructions were given at its conventions by competent persons, on the best methods of feeding and rearing stock suitable for dairy uses. It promoted the organization of Dairy Boards of Trades at which the products of the factories could be sold to the best advantage. In 1877 the first Association by mutual agreement among its members became divided into the Dairymen's Association of Western Ontario and the Dairymen's Association of Eastern Ontario. Each of these then received an annual grant of \$1000 from the Provincial Government. In 1886 the Ontario Creameries Association was organized to promote the creamery interests of the Province. At first it received a grant of \$500. During the current year the Government appropriations to these Associations are \$2,500 each to the Dairymen's Association of Western Ontario and the Dairymen's Association of Eastern Ontario, and \$1,500 to the Ontario Creameries' Association. The need for the enlargement of the grants made by the Government arose from the employment of inspectors and instructors by these organizations. Now eight competent and experienced men spend their whole time during the summer months visiting the cheese factories, inspecting the milk, and advising with the cheese-makers as to the best methods for the manufacture of cheese and the management of the factories. The Creameries' Association employ two men to render similar service to the Creameries of the Province. The work of these inspectors has been extremely valuable to the farmers interested in dairying. The quality of our cheese has been generally improved to such an extent that during this season, market reports reveal the gratifying fact that the cheese of Ontario on the average has sold for more than three-quarters of a cent per pound higher than the cheese of the adjoining States, of the same month's make and at the same time. Three-quarters of a cent per pound on the total season's make, will represent over \$475,000 of increased revenue to the patrons of the cheese factories of this Province.

During the current year the Dominion Dairymen's Association was organized. A grant of \$3,000 was made to it by the Dominion Government. Its special line of work will be to look after the inspection of the milk for factories, to distribute literature on the best methods of preparing the same for delivery, to take such steps as will secure new markets for our products—for instance those of China, Japan, East Indies and South America—to search out the needs of markets which we already supply, to direct the skill of our manufacturers and the enterprise of commerce to meet these needs in order that our customers in all the markets to which our goods find access may be encouraged into the further development of trade relations mutually satisfactory and profitable.

Quality of Holstein Milk.

EDITOR CANADIAN LIVE STOCK AND FARM JOURNAL.

We have a great deal of inquiry from practical dairymen who take an interest in what the *Breeders' Gazette* appropriately calls the "double deckers," that is, Holsteins, in respect to the quality of their milk, there being no doubt as to the large quantity they are capable of giving. In order to answer such questions intelligently, we have tried to obtain impartial and

competent opinion as to the quality of our own herd. As our milk goes to a cheese factory and the greater part of it is Holstein, we asked our cheesemaker (who, by the way, is a first-class maker) how our milk came in. The answer was, "Very good." As it is our aim to obtain a breed of cattle capable of giving large quantities of good milk to keep pace with our great and growing cheese industry, his answer should be satisfactory; but, being in an inquiring frame of mind, we wanted more light to that end, so we took at one milking samples from four different cows, as we would not consider it fair to judge a breed from the performance of one member. The samples were strained into jars immediately after each cow was milked, the cows being of course milked dry, and a portion of each cow's milk taken. The samples were the same day taken to Woodstock and placed in the hands of A. McLay, M.D., milk inspector and health officer for that town. Only the amount of "butter-fat" was obtained. He reported one sample normal, another slightly below, and two of the samples tested six per cent. of butter-fat. As 3.50 to 4.75 per cent. is the Government standard normal, it will be seen that our cheesemaker's opinion of "very good" is fully warranted, and also confirms the opinion that, like all other breeds, the Holsteins vary in the richness of their milk. It is amusing to one who knows to see how some will jump to the conclusion that because a cow gives a large quantity of milk it must necessarily be at the expense of quality. Our limited experience with Holsteins and grade dairy cows brings us to the conclusion that the quantity given has very little to do with it, and every practical dairyman may know, if he observes his own herd, that the richest milkers are invariably heavy milkers, if not the very best. That this is so with Holsteins we will give a few instances. The Holstein cow, Clothilde, in her time had one of the largest milk records ever made, and at a late New York dairy fair test made more butter than any cow of any breed. And later, Jewel, who has always been a great milker, giving in "the quiet of her own home" from 85 to 100 pounds of milk a day, and at the great Buffalo Fair of 1888 taking the milk prize for the three days' test, open to all breeds by averaging 71 pounds per day, and this after being in milk six months. This year she has demonstrated that she is making a record of 31 lbs. 5 ozs. for seven days; and this fall, at the great butter tests in Iowa, winning against the other great "doers" all the prizes for the "blacks and whites," although not giving as many pounds of milk, probably owing to not using in as good form and on different food. We are proud that we have a direct descendant of this great prize-winner and "doer" at the head of our herd.

MESSRS. A. & G. RICE.

Currie's Crossing, Ont.

Poultry.

Clover For Fowls.

The *Poultry Keeper* says the best substitute for green food in winter is clover. Steep the clover over night in hot water, first passing the clover through a cutter, cutting it as fine as possible. The tea made by steeping is valuable. For every 12 hens add a handful of linseed, a teaspoonful of red pepper, half a cup of powdered charcoal, and salt enough to season. Then add a mixture of one part bran and two parts corn meal until thick enough to throw to the fowls. This is a complete food for laying purposes. Feed it in the morning. Fowls will eat the softened clover greedily, especially with a little meal mixed with it.

Eggs All the Year Round.

When one lives so far from market that a large broiler can be sold for no more than ten cents, as is the case in my vicinity, then there is no profit in raising them. Eggs pay better, as they can be shipped to distant cities; where, if an honest dealer be found, or engagements be made to furnish private families with eggs whose freshness they can rely upon,

then the farmer's wife will find it to her interest to turn her attention in that direction.

To those who have come to this same conclusion yet have not had time to investigate the subject very closely, I should like to offer a few suggestions in regard to the breeds of fowls best adapted to farm life, and the ages at which they can be most profitably kept.

What we want is a hen that will sit upon her own eggs in the spring, raise enough chickens to supply the family the year round, and spend the remainder of the time, summer, fall and winter, in producing eggs. This model, general-purpose fowl, has not come within the somewhat limited range of my experience. If any one else has found her I should be glad to know about it. The Plymouth Rock is the nearest approach. The hen is a fair winter layer, begins to sit at the proper time in the spring, and raises her chicks in the most orthodox manner, but the trouble is she wants to keep this up all summer, that at the moulting season instead of busying herself with the renewal of her attire she is apt to be hid off in the weeds covering a nestful of eggs, or escorting a young family around that she has hatched in spite of you. This puts back her moulting considerably, so that when the rest of the flock are gorgeous in new dresses she presents a most dilapidated appearance, and often does not get herself into good condition for egg-production until Christmas. In order to fill up this wide gap so as to keep a regular engagement for eggs, we must employ one of the non-sitting varieties. The Brown Leghorns will do this admirably; being active thrifty little birds, not at all troubled with the sitting fever they accomplish their moulting without interruption, and are in good trim for fall work. But when the penetrating north winds come, and the ground is covered with snow, the Leghorns, being more delicate, feel the cold so intensely that every particle of surplus food goes to making heat instead of eggs. So that unless we had some arrangements for heating the poultry house it would not do to depend upon them alone for winter layers, and they in their turn must be complemented by one of the heavier breeds, as Langshans, Brahmans, Plymouth Rocks or Wyandottes. As a rule, those varieties that have the thickest coats of feathers are the best winter layers, their warm clothing rendering it necessary to generate a smaller quantity of heat, so that the surplus food can be used for making eggs. The Langshans are especially recommended for this purpose, as their abundant feathers which lie close to the body in many overlapping layers are remarkably warm, soft and downy.

As there are so many different characteristics to be taken into consideration, it is not strange that no one breed gives perfect satisfaction in every respect. Some have tried to remedy this by crossing judiciously one of the non-sitting varieties which lay well except in winter, upon one of the Asiatic breeds which are exceptionally good winter layers, and profess to be quite successful in obtaining excellent layers at the most profitable seasons of the year.

Now let us consider the question, "At what age is it most profitable to keep hens for winter layers?" The wise ones tell us that pullets of any of the better varieties that are hatched early enough in the season to reach maturity, and begin laying in the fall, will continue throughout the winter with short periods of intermission, provided, of course, that they are fed and cared for in such a manner as to promote the egg-making process. We are also told that hens of the heavier varieties are at their best when two years old, and that a larger per cent. of their eggs are

fertile, and produce finer, healthier chicks than those hatched from pullet's eggs. Of the smaller and more active, the non-sitting breeds, hens can be kept with profit until five years old.

This winter I am going to keep 75 hens for eggs; 25 of this number are Plymouth Rocks over one year old, handsome, broad-breasted, dignified matrons; the second 25 are Brown Leghorns, lovely trim little birds with white earlobes, and great crimson combs and wattles; the third 25 consists of early hatched pullets that were apparently grown in size the first of September, nearly all of which are a cross between the Plymouth Rocks and Brown Leghorns, having the colors of the former though somewhat darker, and the white earlobes and tall red combs of the latter.

I should like to keep them in separate pens, then the experiment would be complete; as it is, however, I shall have to judge of their performance as best I can from observation. The color of the eggs of the pure breeds will testify to their prowess, those of the Plymouths being tinted, and the Leghorns pure white, but the eggs of the third lot will not be so decided. Still, if one goes about the poultry house now and then it is very easy to tell which kind is oftenest on the nest. At any rate I feel pretty sure that among them I shall be able to keep a regular engagement for eggs. Indeed they appear to have the business in question so very much at heart that, although they are at present busily moulting, there is a cheerful sound of cackling coming up from the poultry yard almost all day long, and at evening a goodly number of eggs is the result. —A FARMER'S DAUGHTER, in *Country Gentleman*.

The Apiary.

FOR THE CANADIAN LIVE STOCK AND FARM JOURNAL.
November and Other Notes.

By R. F. HOLTERMANN, Romney, Ont.

Bee-keeping, to be a success, depends largely upon the careful doing of little things, and making an effort to do them at the right time. November is a very trying month for bees, and a large portion of the success in wintering may depend upon management for this month. As has before been stated, the hives should have been packed about with chaff or saw-dust, and if it is intended to place them into a winter repository, it should be done as quickly as the indications are that the bees can be kept sufficiently cool. If bees are allowed to chill they will manifest symptoms of dysentery and be weakened, or if they cannot fly, they will through restlessness, daubing of combs, etc., cause the other bees in the hive to have the disease, and, as we all know, an attack of this malady will result either in death to the colony or very serious decimation.

All old cloths and quilts should be removed from the hive and fresh porous ones put in their place, unless it is intended to winter them in a repository, when the advisability of the step advised above may be questioned. When the propolized cloth is removed, the new cloth or quilt should have enough packing above it to prevent the warmth from passing off readily from the bees.

Bees, should, as far as handling combs is concerned be left alone. Even now, after opening a few hives, the results are very unpleasant. Bees will, after being disturbed, try to rob one another, and sting people and horses for some hours upon very slight

provocation. Just here it may be a question how much of an inconvenience a bee-keeper may allow his bees to become. My bees were close to a lane, through which a great many people and horses passed. The honey season passed without giving any trouble, there being an incessant flow of honey until the first night of severe frost, when next morning the bees found themselves out of employment and in a very pugilistic state of mind on account of the mipping of the flowers. The bees stung several horses and people, and one man came to me saying: "I want no trouble, yet I want you to move your bees away from there." I knew I had the law on my side and could not be made to move the bees, yet considering it was only just and right that I should do all I could to prevent any unpleasantness, and my neighbor having by his courteous, out-spoken speech made it none the harder to do what I could to meet him, I moved them away from the lane, and thus ended that little unpleasantness. The bees, too, as all bee-keepers should know, soon became reconciled to having no honey to gather and quieted down.

THE AMERICAN INTERNATIONAL BEE ASSOCIATION.

The above Association will meet at Brantford, Dec. 4th to 6th next, the first session being at 2 p.m. on the 4th. This promises to be one of the best bee-keepers' conventions ever held. Reduced hotel rates may be secured at the Kirby House, and reduced railway rates may be secured by applying to me for railroad certificates, which must be used before starting for Brantford. The programme is already partially complete, and is as follows: "Bee-keeping as an Occupation for Women," by Miss F. F. Buller, Campbellford, Ont. Mr. E. Root, Medina, Ohio, will treat on "Riding Hobby Horses," and "Bee-keeping, a Recreation from other Pursuits and an Antidote for Disease." Mr. R. McKnight, Owen Sound, Ont., promises a paper upon "Cellars. Outdoor Wintering." Prof. A. J. Cook, Agricultural College, Michigan, will lecture on "The Alimentary System or Apparatus of the Honey Bee." Prof. Cook is a most pleasing lecturer and has a world-wide reputation as a scientific and practical bee-keeper. Mr. S. T. Pettit, Belmont, Ont., will give a paper upon "The Specialist and his Relation to Progress of the World." Mr. F. H. Macpherson, Beeton, Ont., will give in a paper his experience in "Shipping Queens," a matter of much importance, directly or indirectly, to all bee-keepers. Thomas G. Newman, Chicago, Ill., will give an address upon that important subject, "The Disposal of the Honey Crop." This should be a bill of fare palatable to every bee-keeper. Then there will be times for the discussion of questions asked by bee-keepers, and this alone should attract many. The Rev. L. L. Langstroth, that father of modern bee-keeping, has been invited to attend, though his poor health may prevent his being present.

MOULD OF COMBS AND HIVES.

A subscriber wishes to know how to get rid of mould in combs and hives. If it is the mould that is found in combs and hives in the spring, I dry out the hives and combs, and perhaps afterwards scrape the hives; then put the combs into strong colonies, alternating them with good combs, and the bees will do the cleaning out. It is better not to put too many of these combs in a hive at a time, as it may cause a swarm to abscond. However, give them to strong colonies (hives and combs) when perfectly dry and all will be well, the bees at a time the better. If the hives or combs have become mouldy in other ways, treat in the same manner, unless rotten, when destroy.

Horticultural.

Rules for Naming Vegetables.

From the Department of Agriculture at Washington there has been issued a circular giving the result of the work of a committee appointed to devise methods for co-operative work in horticulture. This committee enlisted the aid of the Experimental Station horticulturists, and the outcome of their consultation over the naming of vegetables has been the drafting of the following rules, which they hope all horticulturists will observe in naming new varieties:

1. The name of a variety should consist of a single word, or at most, of two words. A phrase, descriptive or otherwise, is never allowable; as, *Pride of Italy*, *King of Mammoths*, *Earliest of All*.
2. The name should not be superlative or bombastic. In particular all such epithets as *New*, *Large*, *Giant*, *Fine*, *Selected*, *Improved*, and the like should be omitted. If the grower or dealer has a superior stock of a variety, the fact should be stated in the description immediately after the name, rather than as a part of the name itself; as, "*Trophy*, selected stock."
3. If a grower or dealer has procured a new select strain of a well-known variety it shall be legitimate for him to use his own name in connection with the established name of the variety; as *Smith's Winningstadt*, *Jones' Cardinal*.
4. When personal names are given to varieties, titles should be omitted; as, *Major*, *General*, *Queen*.
5. The term *hybrid** should not be used, except in those rare instances in which the variety is known to be of hybrid origin.
6. The originator has the prior right to name the variety; but the oldest name which conforms to these rules should be adopted.
7. This committee reserve the right, in their own publications, to revise objectionable names in conformity with these rules.

Wintering Apple Trees Procured in the Fall.

The principal advantages that advocates of fall planting of orchards urge are due to the fact that the trees are bought in the fall, and not that the season is the best one for planting the trees. Our climate is rather opposed to fall planting, but at the same time there are many benefits that result from purchasing the trees in the fall. As a rule you can buy the stock cheaper, and the nurserymen are able to give your order better attention than in their busiest season, which is spring, and so you are likely to get better stock. On the farm, too, the fall season is less busy than that of the spring, and so the preparatory work may be mostly done at this time, and not interfere with other work of the farm. While the question of fall planting varies in its solution with the differences of soil and climate, it is yet a settled question that it is a good plan to procure the trees in the fall and bury them, so as to have them on hand for early spring.

The delay of the nurseryman in filling orders in spring time often keeps the work back materially, so that there is a value in having the trees at hand when wanted. Green's *Fruit Grower* gives the following method of burying the trees when bought in the fall, and kept until the next spring:—"Choose a dry spot where no water will stand during the winter, a dry

knoll is preferable, and with no grass or rubbish near it to invite mice. Dig a trench, 18 inches wide, 4 feet long, throw out enough dirt to admit one layer of roots below the surface, and place the trees in it, inclined at an angle of forty-five degrees. Dig a new trench directly in front and close to the previous trench, throwing the fine soil among the roots in position. Place another layer of trees in the trench, reclining the tops on the others, and so on, until all are in the trench. Then finish by throwing up more soil. It is also well to bank up the earth around the sides to insure more thorough protection. Care should be taken to fill solid all the interstices among the roots. In the spring the roots will be found to have formed the granulations necessary to the production of new spongoles, and when planted at the proper time will start to immediate growth. Use only finely pulverized soil. In severe climates the entire top is covered, so that nothing can be seen but a pile of soil."

Storing Apples.

A fruit room is needed by every farmer, so that he may be able to provide his family with fresh fruit all the year round. Unless some attention is given to the fitting up of a room especially for this purpose, there is always more or less loss from rotting and otherwise spoiling of the fruit, so that it becomes a matter of necessity to reserve a separate room, or part of one, for this purpose. It is not a very difficult matter for the fruit grower who only seeks to supply his family wants in respect to fruit to make a room suitable for storing. Many make use of a part of the cellar, or partition off a section of another room for this purpose, and if attention is given to the few details that should be considered, it becomes an easy matter to modify such apartments to satisfy all the needs of a perfect store room. It is a harder matter for those growing fruit on a large scale, who desire to withhold their fruit from the market until spring, to construct a building that will answer all requirements of temperature and ventilation.

In a store room, when it is but desired to keep the family supply, the important consideration of having it handy is an additional one to those of dryness and suitability of temperature, that are so necessary in all cases. To secure a dry floor few would care to go to the expense of laying one of cement, though it would be beyond question the best; but a good plank or gravel floor will answer for the purpose and be far cheaper. To secure good ventilation so that the temperature may be easily regulated, there should be two windows, hung on hinges, in the room, and if they are opposite each other so much the better, as it then becomes an easy matter to secure a draught of air from one to the other. The temperature should be carefully regulated by these windows so that it may vary but little and be constantly a few degrees above freezing point. There is nothing that will cause apples to rot quicker than sudden changes of temperature, and to guard against this a thermometer should hang at all times in the fruit room.

Of all the different ways of storing apples, a wooden rack with a series of shelves one above the other will be found best for the person only keeping a few for family use, and this method, even for larger growers, will be found preferable to barrels for the saving of the poorest keeping sorts, as those that soon begin to decay cannot be removed after they have all been packed away solidly in a barrel. A rack of this kind built in the centre of the room, with a passage on each side, will be found to meet most requirements, though it might be well in some cases to range them along

the side. When stored in this way it becomes an easy matter to run through the lot occasionally and remove any of them that are showing signs of decay, and thus by prompt removal of these the others may be easily kept sound until well on towards spring. Modifications of this plan are to be found, one of them being the use of small open boxes with slatted bottoms, about 1½ by 2 ft, a size which is easy to handle. They should be about 3 or 4 ins. deep. They are easily handled in the orchard, where the apples may be placed in them, but in respect to economy of space in the store room the shelves are certainly preferable. Some have combined the two ideas, having boxes somewhat larger than these fit into a rack, so that they become drawers, each one of which holds a bushel. To hold this much they should be three inches deep and the sides three by three and a half feet. This is a neat and handy method and possesses an advantage over the open shelves in that the temperature may be easier regulated and the fruit protected from strong draughts, which alone are very important considerations.

Forestry.

Editor CANADIAN LIVE STOCK AND FARM JOURNAL:

SIR,—The following article from the *New York Garden and Forest* is of importance to Ontario, as we have made too many errors of a similar nature in clearing. Perhaps you would allow it space in your columns. It is from the pen of one of the best informed writers in the United States.

Toronto, Sept. 27th, 1889.

R. W. PHIPPS.

FORESTS AND CIVILIZATION.

We might have had some real forestry here in the State of New York if we had been sufficiently advanced in the art of living; if we had had the interest in the public welfare and the perception of our obligation to coming generations, which are necessary to the development and persistence of civilization. The entire Adirondack Wilderness should have been held permanently in the possession of the State. Then a real school of forestry could have been established somewhere in the woods, and young men could have been trained in the practice of this art, and they could have been employed in the care of the forests and woodlands of other portions of the country. The whole tract of 8,000 square miles was originally heavily wooded. The timber could have been cut off as the trees matured, and, of course, should have been so cut off. Nothing could be more absurd than the notion that trees should never be utilized or removed. Whenever a tree has come to its best it should be cut down, and its wood applied to some useful purpose, so as to obtain its value, and in order to provide for a succession of generations of trees, and thus for the permanent life of the forest.

If the Adirondack forests had been thus intelligently managed and administered they would now have been for a long time yielding an increasing revenue to the people of the State. The whole population would have been greatly benefitted by the reduction of taxation. Every man and woman in the State would have been richer to-day—would have had more of the means of subsistence and of comfort and happiness than at present. Every child in the State would have been born to a better inheritance, and into more favorable conditions than now. The forests would have been better now than ever before, and they would have gone on increasing in value to the people of the State, with the increasing density of population, and on account of the exhaustion of the timber supply in regions fit for agriculture.

The Adirondack region is not fit for agriculture. No part of it is suitable for any other than forest-conditions, and these should have been maintained forever. It is indeed impossible to disturb these conditions very extensively, or to remove the forests permanently, without destroying the region itself and annihilating everything that makes it of any value. I doubt if an instance of more obvious and complete adaptation of a region to a special and particular use can be found in the whole world. Nature made this region for the permanent and everlasting growth of forests, and this sole and exclusive adaptation to a most important function should have been recognized.

* A hybrid is the product of two species. There are few, if any instances of true hybrids among common garden vegetables. The union of varieties gives rise to a cross.

As I said years ago, if the Adirondack forests could be saved by legislation, one of the best possible measures would be "An Act for the Discouragement of Agriculture in the North Woods." The lumber business is not by any means the only destructive agency at work here. Tens of thousands of acres, entirely unfit for any use but forest-growth, have been stripped of trees, and by cultivation and pasturage have been rendered incapable of reproducing the only crop for which the land ever had any adaptation. It is strange—if anything in human folly is strange—to see so many people persist in the effort to "farm" where the soil is so meagre, and the country so high and cold, that no profitable return for their labors is possible. The thin film of soil disappears after a few years, leaving only the bare, inert sand or gravel, and as most of the "farming land" here is rolling or hilly, the slopes soon begin to break down and wash away. Great gullies are formed, which grow wider and deeper every year, till vast waterless tracts of shifting sand, or of clay and gravel, varied only by rock-ledges and boulders, stretch before the unhappy traveller where once grew noble forests fed by perennial springs.

The region was meant to be let alone. It has no natural fitness for agriculture. It is pitiful to see the scanty growth of vegetation which the farmer's toil produces here cut off by frosts in both spring and autumn, and in many places, even in the middle of summer, while in the Southern States of this country there are millions of acres of fertile soil lying untilled beneath most genial skies. The effort to farm these inhospitable lands has also been the source of a large proportion of the fires which have destroyed so much of the remaining forest. Land is cleared by being burned over, and in a dry time the fire extends from the fallow to the woods, despite the best efforts to keep it within bounds, and it is a common saying in the woods that such a conflagration is often a convenient accident for the farmer, as he plants corn the next spring in the burned woods without any clearing whatever, and raises a crop in the ashes. A great deal of the "farming land" here has been brought into cultivation in this way. It is all, from beginning to end, a most wasteful and suicidal process, and the inevitable end, the ruin and disappearance of the soil itself, is speedily reached. Man has no power to create a new world. He has not yet learned how to take care of the one which he inherits, but his ability to wreck and exhaust it is very great.

J. B. HARRISON.

Young Stockman's Department.

Books for the Boys.

We feel quite sure there are many farmer's sons who would like to read good books on agriculture, but they neither know the names of the books nor the place where they can be got. Farm books of high merit are not very plentiful and they are not kept at all by a good many booksellers.

We believe that we can help our boys in this matter if they will only help themselves. We are offering any one of the following books delivered through the Post Office free, to every person who mails to us in a registered letter \$2.00 along with the names of two new subscribers for one year:

1. *The Soil of the Farm*, by Scott & Morton.
2. *The Crops of the Farm*, by Scott & Morton.
3. *The Chemistry of the Farm*, by Warrington.
4. *Hand-book of Agriculture*, by Wrightson.

Although these books are used as text books at the Ontario Agricultural College, Guelph, they are so simply and so clearly written that they are easily understood by any careful reader, and they contain a large amount of useful information on a great variety of agricultural subjects.

Sample copies of THE JOURNAL will be sent to those who ask for them to aid them in the canvass. The remaining numbers of this year will be given free from the date of the subscription to all parties who subscribe for the year 1890.

Our Prize Essay.

CARE OF BREEDING EWES FROM TIME OF HOUSING UNTIL LAMBING TIME.

By ADDISON H. BAIRD, Chesterfield, Ont.

This subject is of great importance, as the spring crop of lambs depends almost entirely on the care which is bestowed on the sheep during our long and severe winters. In the first place, the sheep should be in a good, thrifty condition when housed in the fall. A small quantity of oats and bran given daily, commencing a few days before putting them with the ram, will not only improve their condition, but will insure more and stronger lambs.

As sheep do not like close, warm stables, it is a good plan to let them have the run of the barn-yard when the other stock is stabled. If they do not take exercise enough themselves, drive them around gently for a while each day, as the exercise taken by them has a great deal to do with the strength of the lambs at birth. One year we kept our sheep very closely confined, and the result was that although the ewes produced a great many lambs, nearly one-half of them were dead when dropped, or died within twenty-four hours. Since then we have given them plenty of exercise, and we seldom if ever lose a lamb.

After the ewes are safely in lamb, remove the ram to a rooey enclosure, as the latter are sometimes vicious and may injure the ewes while feeding at the trough.

The main food should be good early-cut clover hay, with a few roots night and morning until about a month before lambing time, then reduce quantity of roots and give in two feeds, about a quart of oats and bran to each ewe. Always have plenty of good fresh water before them and let them have free access to salt.

Rise to Your Opportunities.

It pleases us to know that there are but few boys on our Canadian farms that would knowingly be guilty of an unmanly action, but there some, we are happy to think they are not many, that are inclined to make little of the work of their parents and their abilities, and there are many more that do not value highly enough the labor that their fathers have expended, the troubles they have passed through, and the hardships they have endured for the sake of "the boys." Amid the great quantity of writings that have seen the light, urging the parents on the farm to give their sons an education, few have ever said a good word for the parents that labored and are yet toiling to give the boys a chance.

Boys, think of the chances your fathers had and you will inwardly feel gratified at ever seeing the light in these days of wondrous enterprises and inventions. When around the warm fire, the coming cold nights, have them tell you, if they have not already done so, of the trials that they have withstood, the necessities they denied themselves, and the laborious days they lived; and your farm as it is now, will appear an Eden, your home a palace, and the simplest dainties the richest luxuries. Think of the slow-going oxen they had to drive, when you are out with the colts; remind yourself of the toil it must have taken to hew out the farm from the virgin bush, when sitting on the horse rake or binder; and remember the way they had to travel the coldest of mornings, to the neighbors to get a brand when the fire went out in the days when matches were rarities, as you doze over the cosy kitchen fire. Ponder thoughtfully on the fact that books were rare in the most cultured of homes, schools were but dotted here and

there at rare intervals over the land where your fathers and mothers lived and fought the battle of life in their younger days. Revolve these things over and many more that will arise in your mind and you will be the better for it and rise to the opportunities that you have at present.

During the coming winter you have the long evenings to yourself to master some of the standard works in agriculture that are at present plentiful. It is not absolutely necessary that you should attend a college to become a man of mark, for many are the men whose names will never cease to be household words in all countries that have received their education through their undying energy and untiring industry. The graduates from the "University of Adversity" are many in the world's roll of fame. If any one quality runs as a strand through the lives of all illustrious men, that of constancy of purpose is perhaps the most noticeable. They had an object before them and all their spare time was given and energy spent to secure it.

Prize Essays from our Boys.

You will remember boys that in the October number of the JOURNAL, we offered a prize for the best essays on:

1. Curing Pork for House Use on the Farm.
2. Care of Breeding Ewes from the time of Housing until Lambing time.

We are very pleased to be able to say that although the time was short, three essays have reached us on the second of these subjects. The one to which the prize was awarded appears in this department.

The subjects for Essays to appear in the December issue as stated in last number are:

1. The Feeding, Care, and Management of Fowls during the Winter Months.
2. The Feeding, Care, and Management of a Foal during the Winter Months from Weaning Time until Spring.

The subjects for Essays to appear in January are:

1. The Feeding, Care, and Management of Lambs from Birth until Weaning Time.
2. The Feeding, Care, and Management of Breeding Sows while Carrying their Young.

To the writer of the essay winning the first prize in each instance will be forwarded by mail, free of cost, any one of the following books, the retail price of which is about one dollar:

1. *The Soil of the Farm*, by Scott & Morton.
2. *The Crops of the Farm*, by Scott & Morton.
3. *The Chemistry of the Farm*, by Warrington.
4. *Hand-book of Agriculture*, by Wrightson.

These books are all used as text books at the Ontario Agricultural College, Guelph, and they contain much useful information for those who are engaged in farming. The first prize essays will be published in the Young Stockman's Department from time to time.

It should be remembered that the essays should not exceed in length one column of the JOURNAL and that they should reach the office of publication not later than the 15th of the month.

Now, boys, brush away the cobwebs, up in the morning early, and give us a lot of essays for December. Though you should fail to win, your labor will not be lost.

Watches for the Farm Boys.

The boys of the farm vary in their tastes. One wants a gun, another a dog, yet another a watch, and some, not too many we fear, want a book. A

favorite equipment, however of an average farm boy, is a watch. He is not in a position to look up at a town clock several times a day. His only clock is the sun and on his dial the boy cannot always read the hour of the day. It is a great misfortune to come home to dinner too late, when the dumplings are cold and nothing on the table that was brought there hot is in the best of condition. A watch is the great companion for a farm boy.

Now, boys, we can put you on an easy method of getting a good watch. We have made arrangements to get good running watches with hunting case, at such rates as will justify us in making the following offer:

To every boy who sends us the names of ten new subscribers to the JOURNAL for one year and ten dollars, we will send a good guaranteed watch with hunting case, and for the names of twelve subscribers and twelve dollars forwarded to us, we will send a watch with plain case and glass face, but with superior finish to the first. The names may belong to different positions, and those who subscribe will get the JOURNAL from the date of subscription until the end of 1890 for one dollar.

We can assure you, boys, that the watches are really good. We cannot afford to tarnish our name by sending into the country an article that is not first-class in exchange for subscription lists. The writer many years ago bought a watch with hunting case at twenty-five dollars which he considers was not one whit better than those which we are now offering for the names of ten new subscribers and ten dollars.

Drop a postal card to the J. E. Bryant Publishing Co., 58 Bay St., Toronto, asking for sample copies of the JOURNAL to aid you in your canvass, and they will be sent to you, and commence the canvass at once. Every farmer's boy who wants a good watch need not be long without one, when it can be got on terms so easy.

Press Notices.

THE CANADIAN LIVE STOCK AND FARM JOURNAL has removed its headquarters from Hamilton and is now published in Toronto. This JOURNAL has for a long time held a high place among American stock journals, and is thoroughly up with the times in all matters of breeding as well as the various branches of agriculture. *The Eastern Chronicle*, New Glasgow, N. S., Oct. 10th, 1889.

THE October number of THE CANADIAN LIVE STOCK AND FARM JOURNAL, containing the awards at the Toronto Industrial and Provincial at London, will be more than usually interesting to the stockmen of our country. Cattle and horsemen who wish to keep up with the movements weekly and daily occurring in stock, will find the JOURNAL indispensable, but short pointed articles on every department of farm life permeate the number from beginning to end. *The Free Press, Forest Out.*

It is satisfactory to note that the evidences of progress are month by month apparent in THE CANADIAN LIVE STOCK JOURNAL, the headquarters of which were recently transferred from Hamilton to Bay Street, Toronto, where it is now published by the J. E. Bryant Company. In every department the JOURNAL aims at a high standard of excellence, keeping in view not live stock alone, though that is the distinguishing feature, but the general interests of the agriculturists of Canada. *The Western Advertiser*, London, Ont., Oct. 11th, 1889.

From C. G. Boynton, Georgeville, Que :

"I took your journal for a time some years ago, and by reason of some mistake in the Post Office it was discontinued. It is a good paper and one every farmer should have."

Jottings.

Prize Silage. The winner of the first prize given by the Ensilage Congress at Cleveland, John Finzel, describes his method as follows in the *Rural New Yorker*. The silo is built of wood, lined inside with two thicknesses of lumber, with tarred paper between. The corn was leaning and almost matured. It had been planted in drills, from two to three stalks to the foot, three and one-half feet apart, cut about the middle of September, in seven eight inch lengths. Every load or alternate load was levelled and tramped down. I put in 150 tons, covered it with tarred paper and about eighteen inches of straw.

Unbelievers in Silage. - At the Maine Ensilage Convention, Hon. Rufus Prince said: "There are two classes of farmers who do not believe in silage. One of these classes believes that book farming is a humbug, they keep their stock in old barns to make them tough, and year after year will drive their cattle through drifting snows to the nearest brook to drink, rather than, at small expense, provide water in the barn or yard. The same class believe that you can make more money raising steers from scrub stock than from the noble Shorthorn or Hereford, and that they make better cows than the slick Jersey."

The Poultry Monthly. - This paper is one that always is replete with information in regard to the poultry yard and rarely is devoid of interest to the poultry fancier. It contains a Canadian department as well as an American, so that the reader is treated to the best practices and doings on both sides of the line. The subscription price is but one dollar. A dollar expended by a poultry raiser in this way, will return itself in a short while. Our readers should notice an advertisement now running in our columns that calls attention to the merits of this paper, which is certainly a credit to agricultural journalism.

Milch Cows for Britain. Mr. Wm. Bulloch, Cockburn, Springburn, Glasgow, Scotland, is trying an experiment just now of some interest to Canada. He (Mr. B.) brought out some Clyde horses a short time since, conveying them on to Michigan, and on the return trip is taking home a carload of milch cows well forward to calve. The cows chosen are good specimens of Shorthorn grades. This class has purposely been chosen, so that if any of the cows meet with a mishap resulting in the loss of their calves, or if they prove poor milkers, they may be sold for beef. It is quite possible that a trade of some importance may spring up in this line. At any rate it is to our interest in every way to raise only good cows that are fit for any market.

A High Priced Stallion. - The highest price that has ever been known to have been paid for a horse of any description was given to Charles W. Williams by a syndicate for the standard bred trotter Axtell 212. This stallion was foaled March 31st, 1886, and was sired by William I., a get of the great George Wilkes, and full brother to Guy Wilkes 215 1/2. His dam was Lou by Mambrino Boy 226 1/2, a son of the renowned Mambrino Patchen. Lou never gave any indications of merit as a trotter, further than that she was a mare of great endurance and could travel in the near neighborhood of four minutes. When five years of age Charles W. Williams bought her for \$75. She was sent to Lexington, Ky., and there served by William L., and Axtell was the offspring.

Death of Mario, 51713. A report has reached us just as we are going to press to the effect that the celebrated Shorthorn bull Mario 51713, belonging to Mr. C. W. Brierley, of Rosedale, Tenbury, has just died very suddenly. Mario, as every one knows, was the champion Shorthorn bull at the Royal and Highland Society's shows of last year, and he was again first in the aged bull class at Windsor this year. He was bred by Mr. William Duthie, Collynie, and was sired by the famous bull Field Marshal 47870, which was brought back to Collynie a few days ago after a lengthened service in the Royal herd at Windsor. Mario was a grand, massive, level bull, and has proved a most impressive sire, the calves left by him, both at Rosedale and at Newton of Inch, being of the very highest order of excellence. - *N. B. Agriculturist.*

Literary Note. - The National Magazine for November will contain, among other articles, "Comparative Philology," by Prof. Schele de Vere, Ph.D., J.U.D. of the University of Virginia; "Political Science," by Prof. Raymond Mayo Smith, A.M., of Columbia College; and "Shakespeare," by F. W. Harkins, Ph.D., Chancellor of the new National University of Chicago, whose instruction by mail and University Extension System for non-residents, now meeting with such favor, will also be explained in this number. In future numbers will appear a symposium comprising articles by prominent scholars and statesmen, giving their opinions on leading questions, such as "Darwin's Theory," "The Chinese Question," "Socialism," and "Should Immigration be Restricted?" Published the first

of each month, at 147 Troop Street, Chicago. Subscription price, \$1.00 a year. Sample copy 10 cts.

Horsemen's Meeting. - A meeting of the directors of the Dominion Draught Horse Breeders' Society was held in the Rattenbury House, Clinton, on Tuesday, Oct. 8th, President John McMillan presiding. A large amount of routine business was transacted. It was decided to close the acceptance of entries in Volume II on March 1st, 1890, when the volume will be immediately put in print; and to recommend to the annual meeting, to be held in December next, that the standard of the next volume require three crosses of accepted sires in either stallions or mares presented for registry. A notice of motion was made to define more clearly at the annual meeting that the progeny of stallions or mares registered in the books of the Society shall also be eligible for registry in the same or succeeding volumes. The books of the secretary and treasurer show the Society to be in a first-class financial condition, and the directors, report for the coming annual meeting will be most satisfactory to the Society.

Two Good Papers. - No better scheme could commend itself with more vigor to the Canadian public to arouse in our young folks a patriotic love for their country and its traditions than that adopted by John Dougall & Son, the proprietors of the *Montreal Witness*. Liberal prizes were offered for tales illustrative of pioneer life in Canada, and it is pleasing to know that there was a hearty response to the strong inducements which were hung forth. The Dominion prize, a type writer, was won by Miss May Selby Holden, of St. John's, and the second honor was awarded to Norman L. Cork, of Gay's River, N.S. The best story from each of the several provinces made their writers the recipients of a set of Parkman's works, writings that should be in every Canadian home. Each county winner received a set of Macaulay's works, and the *Northern Messenger* was offered for the best tale in every school in the Dominion. This firm publishes one of the most readable papers in Canada to-day, the *Montreal Witness*. The subscription to the daily edition is \$3.00, and to the weekly \$1.00. They also publish a bright and nicely illustrated weekly, the *Northern Messenger*, at the low subscription price of 30c. a year.

The Farmer and Stock Breeder. - Those of our stock men who had the pleasure of meeting Mr. Alex. Macdonald last year, who was then editor of the *Mark Lane Express*, of London, Eng., will be pleased to know that he has assumed the proprietorship and shall edit in person a long-established English agricultural periodical, formerly known as *The Farmer and Chamber of Agriculture*, but now bearing the title given above. This paper has been established since 1843, and we feel assured that under the supervision of its new editor its field of usefulness will materially widen. In all matters pertaining to live stock, their history, breeding, and management, we must acknowledge that from our English friends we have much to learn, for they are the residents of a country that is unequalled for the production of high class stock of all breeds. From the pages of this publication we have no doubt many of our stockmen would be able to glean much of great value to them; a statement which the past editorial work of the *Mark Lane Express* leads us to freely express. They would certainly receive good value for the money expended, as the subscription price is only \$2, post free, to any place in Canada. The address is 325 Strand, London, W.C., Eng.

The Maritime Agriculturist. - Of the many periodicals that adorn our files, there are few indeed that we read with as much interest and pleasure as a brightly-colored semi-monthly coming from the thriving town of Backville, in our sister province of New Brunswick, and bearing as its title *The Maritime Agriculturist*. The editorial chair is filled by an able graduate of our Guelph Agricultural College, Mr. B. Eaton Paterson, B.S.A., and the business management is under the charge of Mr. R. J. Gilbert. The editorial work bears the impress of a vigorous and original mind, and we have no doubt but that this paper will fully attain to that position in agricultural journalism that the many Ontario friends of Mr. Paterson feel justified in expecting of it as long as he remains the caretaker of its character and the director of its views. Certainly the early numbers augur well for a future of power and usefulness, and we feel sure that as long as the agricultural wants are so thoughtfully ministered to as in the initial numbers, our maritime farmers will no doubt appreciate the efforts that are being put forth in their behalf, and recognize that of all things required by a journal of this character stands foremost the unanimous co-operation of those whose calling it defends, whose rights it nobly fights for, and whose work it materially advances.

North-West Possibilities. - Mr. John White, ex-M.P., gave *The Empire* to-day a piece of information testifying to the immense possibilities of our North-West country, which, if the reliability of the source from which it springs were not well-known, might easily be questioned. Mr. White was travelling

SUPPLEMENT

— TO THE —

Canadian Live Stock and Farm Journal

TO BOYS AND YOUNG MEN

An important proposal, well worth looking into, and acting upon :

A Chat, Boys, with You.

Boys, Read the Other Side.—Boys, we want you to read the other side of this sheet—it contains much that will interest you.

The Stock Journal is for You.—If you are going to be farmers and stockmen the JOURNAL is for you; and we want you to reap all the advantage you can from it.

These Rewards are for You.—Every boy reading this page can get one of the fine watches here described, if he only makes up his mind to do so. This means that you, young friend, can have one if you wish.



Watch No. 1.

NOTE.—Some of these watches are plain faced, some have ornamental faces.

FORM OF GUARANTEE FOR WATCH NO. 1

KENT BROTHERS,
WATCH MANUFACTURERS AND IMPORTERS
168 Yonge Street,
TORONTO, CANADA.
No. sent this day to of
and WE AGREE to keep it in good running order for
one year from this date, unless damaged or broken by
accident.
[Signed] KENT BROS.

What the Rewards Are.—The rewards are handsome, strong, serviceable watches. Read what we say about them on the other side of this sheet; look at the engravings of them on this page; read also the guarantees which Messrs. Kent Bros. give of them, printed also on this page; read also what we say further on.

Watch Number 1.—Watch Number 1 will give you excellent satisfaction. The movement in it is a very good movement, quite as good, so Messrs. Kent Bros. say, as is ever put in an \$18.00 or \$20.00 watch.

Its Case.—Its case is a strong hunting-case with stem-winding attachment. But instead of being solid silver, it is of a composition which is only partly silver, but which is white like silver, and being THE SAME ALL THROUGH, will wear like silver and always look as well as silver.

Moreover, It is Strong.—Moreover, it is very strong, and is just suitable for work on the farm, being able to stand the rough usage which farm work always inflicts upon a watch.

And It is Guaranteed.—Remember that we offer the watch to you on the strength of the reputation of Messrs. Kent Bros. of 168 Yonge Street, Toronto, whose watch-making business is one of the older and most reliable in Canada. Before the watch is sent you, it will be taken apart by Messrs. Kent Bros. examined by them, and put in good running order, and every watch will be accompanied by their written guarantee.

Value of the Watch.—This watch is sold by Messrs. Kent Bros. at \$10.00. This is their regular price for the watch.

For What This Watch is Given.—This watch will be given to any boy or young man who secures for us TEN NEW SUBSCRIBERS (that is TEN SUBSCRIBERS NOT ALREADY ON OUR BOOKS) at the regular rate of \$1.00 a year. Subscribers sent in before January 1st, will receive the numbers for the remainder of the year free of charge; so that all subscriptions will end with December 1890.

Cash Must Accompany the Orders.—The cash, in every case, must accompany the orders; but the orders need not be sent in all at once. When the ten orders are sent in and paid for the watch will be shipped.

How the Watch Will be Sent. The watch will be sent by express to the nearest express office of the one who earns it, directly from Messrs. Kent Bros.' establishment.

Trial Orders.—THE LIVE STOCK JOURNAL will be sent ON TRIAL to any person for SIX MONTHS for 25 cents, provided the person understands and agrees that should he take THE JOURNAL beyond the six months he will do so at the regular rate of \$1.00 a year.

Blank Forms.—We have blank forms both for "regular subscriptions" and for "trial subscriptions," and we shall be glad to send a supply to any one who will send us a post-card, asking us to do so. USE THE FORMS WHENEVER POSSIBLE. They will save both you and us a lot of trouble.

How Trial Orders Count.—Trial Orders count this way: THREE "Trial Orders" will be accepted by us in lieu of ONE Regular Order. So in making up your list of ten, every three "Trial Orders" will count as one "Regular Order." This makes it all the easier for you to secure the requisite number of orders.

Watch Number 2.—WATCH NUMBER 2 is smaller than WATCH NUMBER 1, but its case is SOLID SILVER. It is a very handsome watch, well finished and with a good movement.

Its Case.—Its case, which, as we said above, is solid silver, may be had either in the hunting-case style, or open-faced. The watch may be had also as a stem-winder or a key-winder.

Its Value.—It is sold by Messrs. Kent Bros. at \$10.00 also. We have examined the watches carefully, and would recommend the open-faced watch, as, for this size, somewhat the hand-some. But it is a matter of taste, and some would prefer the hunting-case. It is all the same to us; the choice remains with you.

What this Watch is Given For.—This watch is one which Messrs. Kent Bros. have marked down low and made a specialty of when they sell it at \$10.00. It costs us more than the other. But we will give it to you for TWELVE NEW SUBSCRIBERS, that is twelve new names not already on our books.

Remaining Conditions.—The remaining conditions are just the same as for the other watch. Each order must be a bona fide new one. Every order must be accompanied by the

cash. The orders may be sent in at any time, and when all are in and paid for, the watch will be sent to the owner of it. Each watch will be taken apart by Messrs. Kent Bros. before it is sent out, examined, put into good running order, and sent by them direct by express to the one entitled to it. At the same time a written guarantee will be sent with the watch.

How Trial Orders Count.—Trial orders count for this watch precisely as for the other, viz., three "Trial Orders," as equivalent to one "Regular Order."

Forms for Entering the Names.—We have specially prepared for this purpose a ruled form, which our young friends will find most useful in writing out the names and addresses of their subscribers. We shall be glad to send a supply of these forms and also of Trial Order forms to any one sending us a post-card saying that they are desired.



Watch No. 2.

FORM OF GUARANTEE FOR WATCH NO. 2

KENT BROTHERS,
WATCH MANUFACTURERS AND IMPORTERS
168 Yonge Street,
TORONTO, CANADA.
No. sent this day to of
and WE AGREE to keep it in good running order for
one year from this date, unless damaged or broken by
accident.
[Signed] KENT BROS.

A New Watch for Christmas.—There are six good clear weeks before Christmas. Now who will treat himself to a new watch for a Christmas present?

How to Send Money.—Send money every time by POST OFFICE MONEY ORDER, or in a REGISTERED LETTER. NEVER send money in an UN-REGISTERED letter. If so, you must do it at your own risk, and the chances are that you will lose it.

Remember Our Address.—Remember our address as given below. But, if you send to us for order forms, we will send you a supply of DIRECTED ENVELOPES which will save you from making mistakes.

Go in to Win.—Now, boys, remember that ENERGY IS THE KEY TO SUCCESS, and enter upon this business with a determination to succeed and you will succeed.

ADDRESS ALL LETTERS TO

The J. E. Bryant Company (L'td),

Publishers of "The Canadian Live Stock and Farm Journal,"

58 Bay Street, Toronto.

ENERGY

tells more powerfully in the struggle to get on in this world than any other human quality. If a man or boy has energy he is sure to find a scope for his abilities, and his merits will, sooner or later, be recognized

and rewarded with success. As a practical illustration of the force of this truth we would announce that we are ready to reward liberally the energetic efforts of any of our young friends who may be willing to devote some time and pains towards increasing our circulation. Read to the end, young folks, and you will see.

IS there anything which a boy or young man more desires to have than a good, reliable, respectable time-keeper? We know of nothing; and believing this we have devised a plan by which every boy or young man taking *The Live Stock and Farm Journal* may obtain a good watch for himself, and that without the expenditure of a cent of money, but only by the expenditure of some of that native energy of his by which alone he can win success in any path of life. And the reason why we ask the young people to help us is that we are building for the future, and we want those who in the future will be the enterprising farmers and stock raisers of the Dominion to become interested in *The Live Stock Journal* now, while they are young, so that when they are grown up to man's estate and man's responsibilities they will look upon *The Live Stock Journal* as an old friend, a tried friend, and a friend of their youth, and one that they will be very unwilling to cast aside. Therefore we say, we want the young to help us, and therefore to the young people we make this appeal, an appeal which we are sure will be very warmly responded to. A perusal of the following will explain everything.

THE

KEY Plan is this. *The Live Stock Journal* never was so good before. It never was so popular. It is recognized by every farmer interested in making a good profit out of his farm, to be well worth the money many times over. Every department is filled. Every number contains most valuable information about horses, cattle, sheep, pigs,

poultry, grain crops, root crops, soiling crops, fruits, dairy work, and veterinary matters. Every thing put in the *L. S. J.* is written specially for it, and so is doubly useful to Canadian farmers. Its motto is "Nothing but What is Useful, and of What is Useful Nothing but the Best." For this excellent farmer's helper we want **New Subscribers**; and for getting us these **new subscribers** we are willing to pay handsomely. Here then, you have the

KEY

to our scheme. Work for us and we will pay you, and pay you well. There is not a boy who reads *The Live Stock and Farm Journal* and knows its merits but is quite able to obtain ten new subscribers; that is, to get ten neighbors and friends who do not already subscribe for *The Journal* to take it for a year. Now boys, who

read these lines, point up your friends, and see if you cannot think of ten men, interested in farming, and anxious to make the most of their farm work, to whom *The Journal* would be a blessing, and who might take it for a year provided you recommended it to them and pointed out to them all its merits and how useful it was to you and to all your people. Having made up your list, go forthwith

TO

each one of them and talk to them in a business-like, straightforward way, telling them all about *The Journal* and how useful it is, how instructive it is to anybody who will take the pains to study its pages. Tell them frankly that you wish to get ten names, and ask each one to make one of the ten. You may not succeed at first. Nobody ever does succeed at first. If you

always give up because you don't succeed the first, or even the second time that you may try for anything, you will prove a failure, not only in this but in everything else. If everyone succeeded with every enterprise he undertook, the first or second time he tried to put it into effect, every boy would be successful and well off. But as a rule only the few are successful and well off—and the reason is that only the few stick at a thing till they eventually succeed in it. Remember

SUCCESS

only comes to those who merit it; and meriting a thing means pretty much the same as sticking at a thing till you have accomplished with it just what you

want. Therefore, young folks, if you wish to win our reward. Stick at the List all you get ten men everyone of ten to put down their names on an order sheet (that we will send you on application) and give you ten dollars. For that dollar we will send to every man whose name appears on your list *The Live Stock and Farm Journal* for a year, and if the order is given before the end of this year we will give, in addition, the numbers of *The Journal* published between then and the end of the year, thus making all orders count to the end of 1890, so that every subscriber will get not only his twelve numbers for 1890, but also one or two extra numbers for 1889, or thirteen or fourteen in all. In sending in these ten orders you must, of course, send in also the ten dollars paid you for them. Now what shall we give you for going to this trouble? We will give you a valuable and reliable watch worth in itself \$10.00, so that for the \$10.00 you send us, we will give you in return that which is quite fully worth

\$20

—namely \$10.00 worth of Journals, that is one each for a year to each one of your ten subscribers, and a watch to you, worth at least \$10.00, making \$20.00 in all. Now what is this watch like? We will tell you. We will describe it to you as it is described to us by the firm from whom we obtain it. The firm in question is that of the well-known, and old established watch-making and jewellery establishment, Messrs. Kent Bros., of 168 Yonge Street, Toronto. Their business is one of the best in Canada; and their guarantee affixed to any description of watch is a full surety that the watch is just what they represent it to be. Now the watch which we will give as a reward to you for sending us ten subscribers is described by them as being in every way a good serviceable watch, with movement (jewelled) quite as good as will be found in any fifteen or twenty dollar watch. It is a stem winder. The case is not pure silver; but of a substance partly of silver, which looks as well, keeps its color as well, and will wear as well as real silver. The case is a strong hunting-case, and the watch is in every way adapted to heavy out-door work. Each watch before being sent out, will be taken down by Messrs. Kent Bros., examined, put in good running order and guaranteed by them for one year. This watch is sold retail by Messrs. Kent Bros

FOR \$10

but we offer it to you as a reward for sending us ten new subscribers. Every watch will be sent direct to you from Messrs. Kent Bros' establishment, by express, so that we shall not handle it at all, but it will

reach you direct from them, accompanied by their **Written Guarantee**. Now how can you earn \$10.00 more easily? or how can you obtain a good, honest, serviceable watch for yourself at less trouble. But if you say: "Well, I like the idea of a watch well enough, and would like to have one, but when I get a watch I want one with a **Real Silver Case**," we have arranged for that too. That is, we have made arrangements with Messrs. Kent Bros., by which we can offer you a good **Silver Watch** with either an open case, or a hunting case, and with either a stem-winding movement or a key-winding movement. But for the silver watch we must ask you to obtain for us **twelve** new subscribers at \$1.00 each, as this watch, though sold by Messrs. Kent Bros. at the same price as the other, costs us more. Now whether you are successful in obtaining twelve orders or only ten, that is whether you send us \$12.00

OR \$10

you will get in return, not only a copy of *The Live Stock and Farm Journal* for each dollar that you send us, but also a handsome, reliable watch, from a first-class, reliable firm, that is the Messrs. Kent Bros., guaranteed by them

to be just what we represent it to be. A further description is as follows:— (1.) The first watch is not pure silver, but of a composition only partly silver, which however, is the same all through, and will always look and keep color quite as well as silver, the other is a solid silver case. (2.) The first watch has a large strong case and is most admirably adapted for all sorts of heavy work; the second watch being of pure silver is smaller and of lighter make, but still is a good sized strong watch. (3.) To this it may be added that both watches are handsome, and well finished, both have jewelled movements, both are stem-winding (though the second watch may be had as a key-winder), both are hunting-case (though the second watch may be had in an open case), and both will have Messrs. Kent Bros' guarantee. Now we have something more, something even better

FOR

our young friends to think over, and see if they cannot turn it to their own advantage. It is this: We will send *The Live Stock and Farm Journal* to new subscribers on trial for six months for 25 cents, on the condition that each person understands that should he take *The Journal* beyond the six months, he must do

so at the regular price of \$1.00 a year. These six months' orders we call **Trial Orders** and in allotting the above rewards we will count **Three Trial Orders** the same as **One Full Order**. We shall have pleasure in sending blank order forms which you can use for obtaining trial orders. You may send in the names and the money as soon as you secure them, but take care that every name is properly entered in the blank forms with which we will supply you. Remember

NOTHING

of importance can be gained in this world without some expenditure of time and labor. If you wish to get one of these handsome watches you may do so, but you cannot

do so unless you go to work in earnest about it. Once having made up your mind to win the reward, stick to the thing until it is accomplished. You have a good cause to work for—the betterment of the farming interests of Canada. You have a good helper to back you up in your work—the *Canadian Live Stock and Farm Journal* which undoubtedly gives such practical information to the Canadian farmer, every month, as he can obtain no where else. And you have good rewards to work for—one or other of these beautiful watches. Therefore, go in to win, boys, go in to win, and you will win.

through the North-West a few days ago, and on the cars he happened to meet Senator Cochrane, head of the well-known Cochrane Rancho Company. The two gentlemen naturally discussed, among other things, North-West prospects, when Mr. Cochrane made the following remarkable statement: Six years ago the Cochrane Company drove into Alberta six thousand head of cattle, locating them on what is now the town site of Calgary. Many of the animals were footsore from constant travelling, and before they could be safely housed for the winter a tremendous snowstorm came on and 5,500 head died, representing a loss to the Company of \$100,000. The rancho was restocked, and by mismanagement during the following year a further loss of \$150,000 was sustained. Since then prosperity has been with the Company. During the last three years their previous losses have been entirely made up, and in addition the Company has paid ten per cent. on its investment, and put \$100,000 to rest.

The World's Exposition.—As to whether this important event shall be held at Chicago or New York, speculation is rife, but certain it is that if looked at calmly and free from self-interest, the first-mentioned city will be conceded to be in many ways preferable, as it is able to furnish the best facilities and be more likely to do full honor to such an auspicious event. Looking at the question from the standpoint of the farmer and the stock-breeder, there is not a vestige of doubt but that Chicago with her past and present achievements in the direction of live stock shows, would be able to surpass her weaker rival in every respect. From the view of those who look at the question unbiased by any considerations but those on which the success of such an exposition would rest, Chicago with her great railroad facilities, vast accommodations, central site, and many other facilities, most decidedly appears to be the best suited for the holding of this vast exposition. The fact that she has made such an unqualified success of her fat stock shows as attested to by the crowds of foreigners that annually attend these displays, should bear weight in a matter of this kind. The fat stock show has grown to monster dimensions, and this should surely be sufficient guarantee of the suitability of Chicago as the site of this exposition now talked about. In matters of this nature urban jealousies should be buried and all unite in choosing that city as the favoured one which would do most honor to such an important and far-reaching event, and if this was done, unbiased judgment must pronounce in favor of Chicago.

Banner Oats.—We are able to furnish our correspondent, Mr. E. J. Hutchison, of Aylmer, Ont., who inquired in our issue of last month as to how Vick's Banner Oat, that is handled by Mr. John Miller of Markham, had succeeded in different localities, with the following extracts from letters written by some of those that have tried them. Mr. Keane, who has a farm at Beaverton, informs us personally that from seven acres he has received by measure 90 bushels per acre, while other varieties on his farm only yielded 40 bushels. Mr. Edwin Gaunt, of St. Helen, Ont. who obtained 20 bushels, which were sown on nine acres, reports a yield of 50 bushels per acre from the machine, while white ordinary oats in that district only yielded 18 to 23 bushels per acre. He writes: "The oats here are very badly affected with rust; the Banner oats not nearly so much. They stood up well. The frost on the 28th May froze about an acre and a half of them, consequently that part of the field did not yield much. We consider them the best oats we ever grew, having tried all the new kinds that have come out for a number of years past." T. G. Bowley, of Napperton, Ont., writes that he threshed 300 bushels from three acres, though they were accidentally sown too thick, viz. 3½ bushels to the acre. Quoting his own words, he says: "I intend to sow all Banner oats next year, and thus supply my neighbors. I had the common white oats sown on land just as good as where the Banner oats were sown, and the latter beat them three to one." Mr. Allan A. McDougal, of the Homestead Farm, Hornby, sowed a bushel on half an acre and this produced 47 bushels of cleaned oats.

Mulching the Wheat Field with Straw.—I had the pleasure in August, 1888, of visiting the farm of that well-known writer and most intelligent wheat-grower and potato-raiser, Mr. T. B. Terry, of Summit County, Ohio, and there observed some of the effects of straw mulching. Mr. Terry's land is a cold clay, not naturally very fertile, but made good wheat land by the rotation of crops, in which wheat and clover play second parts, potatoes being the main crop. On this farm wheat straw was drawn out just before winter closed in and scattered thinly over the land, about half-an-inch deep, I should think, from the appearance of the field when we visited it. The effect of the straw was to prevent the snow from blowing off. It also tends to prevent thawing in the winter and early spring which is the bane of the winter wheat crop. Mr. Terry holds that one of the best uses for winter wheat is to make the clover crop which follows entirely possible. A careful inspection of the field where straw mulch has been used over a portion showed that clover had

a much better catch and was stronger where the straw mulch was placed than where none had been used. The dense green clover showed to the very inch where the mulch had been used. Mr. Terry assured us that the wheat showed up in the same way before harvest in favor of the mulched portion of the field. The practice is entirely reasonable and should be profitable, if a fair amount of straw is at hand. There is no reason for scattering it very thick, and if not too abundant it will not interfere with the harvester at cutting time, or the mower later on, when the clover crop, which should always follow winter wheat, is mature.—W. A. HENRY, of Wisconsin, in *Breeders Gazette*.

Our Premiums.—The things of this world that combine in themselves features of beauty and utility are rare indeed, but among those that possess these qualities to an eminent degree the watch may be said to stand among the foremost. For the person of mature years there are few articles of more utility than a strong, serviceable watch, and for the budding youth there is nothing that will so infuse into him a feeling of manliness than a watch that is pleasing to the eye, and a good time-keeper as well. Recognizing the universal leaning of the popular mind to good reliable watches, we cast about us to find a well-established firm that we would feel safe in trusting in such an important matter. We choose that of Kent Bros., well-known throughout Canada as a house of old and firm standing in Toronto, to supply us with a *first-class* watch so that we could feel in offering it as premium there was not the slightest danger of our past record for uprightness in dealing with our patrons being in the least tarnished. We are happy to say that we have eventually succeeded, in securing two styles of watches that are reliable and serviceable in every respect, and these we are enabled to offer on liberal terms for subscribers. For twelve subscribers at one dollar each, we offer a splendid silver watch, a good time-keeper, and not without some pretensions to beauty. For ten subscribers a very strong watch is offered, such as one around a farm needs for every day use. The casing is strong and the works also. Both these watches are of good make, excellent finish, and the outcome of good workmanship in every respect. With two such premiums as these we hope to secure the co-operation in this work of every farmer's boy in the land. We feel sure that once one of these watches get into a neighborhood it will set the community to work. Write us and we will supply you with all particulars and materials necessary for canvassing.

The Ayrshires as Milk Producers.—At the milking competition held in connection with the Ayrshire Agricultural Association Exhibition in 1860, commonly known as the Duke of Athole's milking competition, in which all of the competing animals were of the Ayrshire breed the following is the average of ten successive milkings, twelve hours between each milking, viz. 36 lbs., 5½ oz.; 24 lbs., 7 oz.; 22 lbs., 10 oz.; and 22 lbs., 2 oz. At a more recent competition held under the auspices of the same Society in the year 1886, prizes were offered for the Ayrshire cow that would give the greatest quantity of milk in twenty-four hours. This test was not altogether satisfactory; several of the cows did not take very kindly to the wooden erection put up for them, and a dog show was held within 20 yards from where the cattle were stalled, which prevented some of them from feeding. The weight of the four at the top was 57½ lbs., 56½ lbs., 55½ lbs., and 51½ lbs. At the Oxfordshire Agricultural Society's open show at Henley-on-Thames on the 19th and 20th May, 1886, for the greatest quantity of milk at two successive milkings, and not more than twelve hours apart, the first prize was awarded to Mr. Geo. Ferne's Ayrshire cow Lady Elphinstone, with a yield of nearly seven gallons or 68 lbs. in competition with all other breeds and cross breeds. At the Bath and West of England show at Bristol in June, 1886, this same cow also beat all comers for quantity and quality combined. Within recent years the demand for really good Ayrshire cattle, even for export, has reached a very high figure, and realized prices which a few years ago were never dreamed of. A really good bull or cow of a prize strain will now sometimes bring £100 and upward. I say that in modern times in the eagerness to secure fancy bodies and prize vessels, there has been a tendency to neglect or ignore milking properties. I also look upon the small teats as a delusion, and this point has operated more than any other to prevent the universal adoption of the Ayrshire as the dairy cow. In show yards of late the very small teats have been discarded, and not a day too soon.—N. E. *Agriculturist*.

Products of a Small Garden.—We have just to hand the account a village neighbor has kept with his garden the past three years. It contains nearly 35 rods or 1000 square ft., 1-5 the area being thickly set with fruit trees which are of bearing age. The land was purchased in May, when in seed, rough and rough and in poor condition for a garden the first year. The cash expended for seed, manure and labor during the summer amounted to about \$33.00. The crops grown the first year would have cost the owner not less than \$50.00. The

past two years the average product has been, three barrels Roxbury red apple, twelve bushels peas, eight bushels string and shell beans, one bushel green peas, one bushel beets, five bushels tomatoes, one-half bushels onions, twenty-five bushels potatoes, three-dozen summer squashes, ten dozen cucumbers, twenty-three dozen ears sweet corn, forty pounds winter squash, thirty-five boxes strawberries, eight quarts currants, besides a considerable quantity of blackberries and raspberries; lettuce was also grown in abundance and there is a young asparagus bed large enough to supply a moderate sized family. Most of the labor of planting and cultivation is hired at higher prices than farmers pay for labor in the country, which makes the products cost more than they should cost farmers. But, then, if he had purchased his vegetables and fruits in the market he would not only have been charged the cost of raising but also a large profit by the retailer. His family have spent some time in gathering the products but it has been attended with the satisfaction of knowing that they are fresh and wholesome, and when the strawberries come to the table they are free from suspicion as to cleanliness. Very few farmers have garden vegetables and fruits as fine in appearance or in as great variety as they may be found in the large city markets, yet few people can obtain those things in as fine and choice condition as the farmer or country resident might have them if he was so disposed. We all ought to give more attention to the kitchen and fruit garden. There is money, health and a good deal of satisfaction in a really good garden.—N. E. *Farmer*.

Publishers' Column.

Special Inducements.—Our subscribers are taking advantage of our special inducements and are sending in orders for new subscriptions every day. Reader, why do you not take advantage of these offers?

For two new subscribers. First offer. Remember that for sending us two new subscribers (that is, names not already on our list) and \$2.00, we will send you any one of the great weekly secular papers published in Canada, from now till the end of 1890.

For two new subscribers. Second offer. Remember, too, that for sending us two new subscribers and \$2.00, we will advance your own subscription to THE LIVE STOCK JOURNAL for one year.

Our plan of trial subscriptions.—By our plan of trial subscriptions you are enabled to get people to subscribe for THE LIVE STOCK JOURNAL very easily. For we will send THE JOURNAL to any new subscriber, on trial, for six months, for 25 cents, on condition that if such subscribers take THE JOURNAL beyond the six months they will do so at the regular rate of \$1.00 per year.

How trial subscriptions count.—Trial subscriptions when secured in conformity with the above conditions count this way. Three "trials" will be accepted in lieu of one "regular." So that any one sending us either six "trials," or three "trials" and one "regular" or two "regulars," may have either any secular weekly paper published in Canada for one year, or his own subscription to THE JOURNAL extended for one year.

Blank Order Forms.—We have blank order forms, both "regular" and "trial," nicely put in little books, quite convenient for carrying in one's pocket, and containing all necessary information for securing subscriptions, which we will be glad to send to any one, post free, on receipt of application for the same.

Don't Lose Time.—Your own subscription will soon be running out. You cannot do without THE JOURNAL, and you will therefore soon have to be sending us a dollar. Why not save this dollar by sending us two new subscribers as above described, or else six trial subscribers?

Why not get a great weekly? Why not do more and secure for yourself, besides THE JOURNAL free for a year, a copy of *The Globe*, or *The Mail*, or *The Empire*, or any other secular weekly for a year? This you can do by combining the offers described above and sending in four new subscribers and \$4.00.

Do you want to act as our agent?—If you want to act as our agent and secure cash commissions for new subscribers write to us for terms and we will tell you how to go to work at once.

But, above all, get your boys to work.—But, above all, get your boys to take advantage of the offers described in the accompanying loose sheet. These offers, we believe, are the most liberal ever devised by the publisher of any monthly paper published in Canada. We believe that they combine every quality that Reward Premiums should have, viz. *suitability, intrinsic value, and popularity*. We assure our readers that we stake a great deal on these "Offers to Boys," and nothing but our superior facilities for procuring these valuable gifts, and our great confidence in the worth of THE LIVE STOCK JOURNAL, could warrant our making the offers so liberal as we have done.

If you want to see your sons at useful work, for which they will be well and appropriately rewarded, get them at once to set about securing one of these excellent watches.

If you are in doubt.—If you are in doubt as to the watches, write to Messrs. Kent Bros., 168 Yonge Street, and they will tell you just what these watches are.

Call at our office.—Or else call at our office and we shall be very glad to show you samples of the watches, and supply you with blank forms, sample copies of THE JOURNAL, and any other information which you may desire.

How to send your money.—Send it by Registered Letter. This is a perfectly safe and satisfactory way. If the amount is large send by Post Office Money Order. Never send money in an unregistered letter. There is no means of tracing it if it be lost, and losses are sure to occur now and again.

Keep your eye on this column.—Keep your eye on this column. In it every month you will find something to interest you, and also to profit you, as we hope. Now, send in your orders as fast as you can.

The picture of the Ontario Agricultural College.—We have received from the late managers of the JOURNAL a number of fine lithograph pictures of the Ontario Agricultural College. It is a beautifully colored plate, 14x27 inches, giving a good view of the College and the surrounding buildings and grounds, and quite suitable for framing. To every present subscriber sending us money, either for arrears or for renewals, we will send a copy of this picture until the stock is exhausted.

How to address your letters.—Address all correspondence to THE J. E. BRYANT PUBLISHING COMPANY (Limited), 58 Bay Street, Toronto. Put all matter intended for the editor, all items of news, stock notes, and matter intended for publication, on separate sheets. Please bear this in mind; it saves a good deal of trouble.

Stock Notes.

Horses.

Messrs. J. & W. B. Watt, of Salem, Ont., make a slight change in their advertisement in this issue.

Mr. Jas. McCombie, of Galt, Ont., makes an alteration in his advertisement this month, as he has sold one of the Clydesdale mares advertised. He now offers another, Georgie Vol. XII., a two-year-old of good breeding. See his changes.

A thoroughbred horse of good breeding is held for sale by G. Bunbury, of Suffolk Lodge, Oakville, Ont. Jack Frost is his name, sired by Jack Malone, and out of Kitty Purgear. He is warranted a sure foal-getter. Owner having no use for him will sell on easy terms. Do not fail to notice the advertisement, and write to the proprietor.

Messrs. Ormsby & Chapman, Springfield-on-the-Cred, Ont., offer in this issue a number of their young prize-winning imported Shire colts for sale cheap. These two and three-year-old stallions were very successful at the leading shows, winning many prizes at Toronto as well as at Buffalo. Do not neglect to see their advertisement.

Mr. John Dunkin, of Brucefield, Ont., writes:—"I have arrived home safe from the Old Country with my stock. I bought a young Clydesdale stallion, Glenelg, of Kippendavie, from Col. Stirling. He was sired by Knight Errant. I also imported at the same time a very choice lot of Shropshire sheep from Mr. Buttar's celebrated flock of Shrops."

Mr. W. H. Hutchinson, of Napanee, Ont., writes:—"I am sorry to inform you that since sending my advertisement to your paper I have had the misfortune to lose the Shire stallion Black Jack from inflammation of the bowels. He was a very promising colt and likely to have left some good stock, being very well-bred, and having tremendous bone and muscle."

A HIGH PRICE FOR A LORD ERSKINE FOAL.

Mr. John Marr, Cairnbrogie, has bought from Mrs. Davidson, Mains of Cairnbrogie, for Mr. Peter Crawford, Eastfield House, Dumfries, at the price of £120 net, a Clydesdale colt foal, sire Lord Erskine 1744, dam Grace of Cairnbrogie 7145, by Grand Turk 1148. This is a very promising youngster, with plenty of size and extra good feet and pasterns.

A GOOD PURCHASE.

Mr. S. C. Johnston, Manilla, Ont., last week made his second trip to Scotland this season, and purchased the choicely-bred yearling colt Scotland's Pearl, got by Lord Erskine, from Mr. W. S. Park Hatton, Bishopston, and the finely-colored, strong-boned colt Newshot from Mr. A. Lang, Garneyland, Paisley. Mr. Johnston does not import as many Clydesdales as some of his brethren in Canada, but what he does import will, in respect both of quality and breeding, compare favorably with the ports of any others in the trade. —*Farming World.*

A SIRE OF PRIZE-WINNERS.

Mr. Jos. Vance, of New Hamburg, Ont., writes us:—"My horses are all doing well, and the foals from my Clyde stallion, Wigton Lad (5441) (5521), have taken the following prizes: First at Woodstock, Galt, Berlin, New Hamburg, and Drumbo; and

the yearlings got by him have also taken prizes wherever shown, and the two-year-old Yorkshire Coach horse, *Aldeyman Kirby*, (a cut of which appeared in September number of JOURNAL), and which I have since sold to Sayers & Halleck, of Albion, New York, won the first-prize at the New York State Fair, held at Albany, in a very large class."

A SUCCESSFUL EXHIBITOR.

W. H. Hutchinson, of Napanee, Ont., writes: I have been pre-ty successful at the two local fairs at which I exhibited, winning at the Midland Central, held at Kingston, 1st three-year-old carriage stallion, and diploma for best carriage stallion any age with the Cleveland Bay Ingmanthorpe Lad (852), 1st two-year-old gelding or mare with the Yorkshire Coach mare Victoria (125), 1st heavy draught stallion, three years old, with the Shire Melton IV. (7703), and 2nd three-year-old General Purpose Stallion with the Yorkshire Coach horse Prince o. Orange (1250). At the Bay of Quinte Fair, held at Belleville, I won the same prizes in the respective classes.

A FAMOUS PERCHERON.

Mr. E. A. Bricknor, of Rednorville, Ont., is now one of the foremost breeders of Percheron horses in the Dominion. Although he hazarded a good deal in his foundation stock he began right, that is, he secured animals of the very best types at the outset. The famous prize-winning stallion Producteur 4280 (68) he bought at the cost of almost a farm, but this horse, even more famous as a stock-getter than as a prize-winner, has already more than repaid the outlay. Producteur won first-prize as the best Percheron three years and over, and first as best French Draught stallion with five of his get. Mr. Bricknor has been successful in raising the colts which come to hand with a very small percentage of loss.

A NEW IMPORTER.

Mr. T. W. Evans, of Yelverton, Ont., well-known as an extensive importer of high-class Clydesdales, and a successful exhibitor in Canada, places with us in this issue an advertisement to which we desire to call attention. Mr. Evans imports only animals of the best of breeding, including the gets of such horses as the famous Topgallant, the meritorious Jordanshaw, and the well-known getter of prime stock Old Times, and many others of similar kin. Neither expense nor risk has been spared to secure the best stallions and fillies that the breeders of Scotland could supply, and hence the reason of so many prize-winners in their native land finding a home in the stud at Yelverton. In importing only the best Mr. Evans has full faith in the intelligence of the breeders of Canada, and we have no hesitation whatever in recommending to the latter his stud, for we feel sure that intending purchasers will find that he has a collection of stallions and fillies to pick from that would be hard indeed to beat. Be sure and see this advertisement.

EXCELLENT RECORDS.

Writing to the Peterboro' Review "A Spectator" drawing attention to the excellence of the stud of Mr. Samuel Staples, of Ida, Ont., says:—"In looking over prize lists of the many fairs held in this vicinity for the fall of 1889, we think there are few horses in Ontario that can show records among the prize winners equal to those of Cheviot and Lord Sudley. We find Lord Sudley's colts among the winners at Port Hope, Lindsay, Peterborough, Bethany, Centreville, Onawake, and Millbrook, taking 1st and 2nd as yearlings, and 1st and 2nd as foals of 1889 at Peterborough, and 1st and 2nd as colts of 1889 at Bethany, with a strong class of competitors. Cheviot's record is even brighter, though not quite so far-reaching. We find his colts prominent among the winners at Keene, where they were 1st as yearling colt, and 1st as mare and foal, and at Peterborough 1st as two-year-olds, and at Bethany 1st and 2nd as two-year-olds, and 1st and 2nd as colts of 1889, and at East Durham County Fair at Millbrook, he was represented by seventeen of his colts, among them gaining sixteen prizes, including the prize for the five best two-year-olds from any draught horse. And just here, let me say that I think it would puzzle any draught horse in Canada to show five better colts of any age than were exhibited here. With these facts before us, and, I have no doubt, many others equally as creditable, of which I have not heard, I am fully convinced that Mr. Staples is the owner of two of the best stock horses for their respective classes that stand in Ontario."

THE IMPORTATIONS OF MESSRS. MCKAY, CASAR AND CHANDLER.

Mr. Stewart McKay, Saintfield, Ont., sailed last week from Glasgow with four well-bred Clydesdales, one of which was purchased from Mr. Lang, Garneyland, Paisley, and another from Mr. Taylor, Park Mains, Paisley, and two, a horse and a mare, from Mr. Park Hatton, Bishopston. The first was a five-year-old horse of a rich dark brown color, and free from white markings, got by Pure Gowd 1799, out of the well-known prize mare Paisley Nancy 201, the dam of the noted prize horse Ivanhoe 356, winner of the Glasgow premium two years in succession, and first at the Highland and Agricultural Society's Show in 1878. The colt, bought from Mr. Taylor was got by the successful breeding horse Lord Clyde 482, whose stock having taken first-prize at the Highland and Agricultural Society's Show, and at Kilmarnock last spring a filly got by him was well forward in a strong class of yearlings. One of the purchases from Mr. Park was a very fine three-year-old mare, bred by Mr. D. Henderson, Netherton, Langbank, got by a son of the celebrated Sanquhar, and a prize-winner at Paisley and Bishopston. The other was a colt got by Doncaster, the sire of the well-known stallion General Neil 1143, and out of a choicely-bred mare. This is Mr. McKay's first visit, and the animals he has purchased should ensure his return. Mr. J. Casar, Langside, Ont., purchased two well-bred yearling colts from Mr. Robert McKay, Corsewill, Barrhead, which he shipped from Glasgow yesterday. One of these was got by the superior breeding horse Ghaillie Callum 3629, out of a mare by Young Lord Lyon 994; while the other is by Robertson, out of a very fine mare by St. Lawrence, gr. dam by Dunmore Prince Charlie. Both are useful, promising horses. Mr. R. Hutchinson, Craikland, Dundonald, sold a heavy boned, well ribbed two-year-old colt by Old Times 579, out of a Lorne mare, to Mr. Chandler, Ayr, Ont., which was shipped along with Mr. Chandler's other horses a few days ago. —*Farming World.*

Cattle.

Messrs. Smith Bros., of Churchillville, make a change in their regular advertisement this month. Our readers should observe all such.

A herdsman, who claims to be a first-class hand with wide experience with cattle and sheep, desires a situation as herdsman or as farm manager. See his advertisement elsewhere.

G. Bunbury, of Suffolk Lodge, Oakville, Ont., offers for sale, reasonable in terms and liberal in time, a pure-bred Holstein bull eighteen months old. Here is a grand chance for somebody. See advertisement.

The entire herd of Ayrshire cattle owned by Messrs. W. H. & C. H. McNish, of Lyn, Ont., is offered for sale in this issue. Those interested will do well to see this notice and write the proprietors. They also hold for sale a number of choice South-down sheep.

Two Jersey bulls and two Jersey heifers all registered in A.J.C.C., are held for sale by Mr. John Fennell, of Berlin, Ont. They are said to be highly bred, and animals of excellent quality. If you want anything in this line do not overlook this advertisement as the animals will be sold on fair terms.

By a slight oversight the address of Mr. Thos. McKay, of Woodbine Farm, Richwood, was given as Rockwood in our Provincial report. Mr. McKay was successful in his showing and secured second on Victor Hugo Ingram, in the aged Short-horn bull class at London, and third at Toronto.

Messrs. A. & G. Rice, of Curries Crossing, Ont., were very successful in exhibiting their Holstein Friesian cattle this year, having concluded their circuit at Otterville Fair, where they won twelve prizes on ten head, securing sweepstakes and special for the best milch cow of any breed on Daisy Texel in competition with nine others.

A handsome Jersey cow registered in a J.C.C.R., due to calve Nov. 1st, and a pure-bred Jersey bull calf of excellent breeding, by a Lambert bull, out of a Rioter cow, is advertised for sale by John Snell's Sons, of Edmonton, Ont., in this issue. Be sure and notice it. This firm have at all times Berkshire boars and Cotswold ram lambs for sale.

Mr. S. Shunk, jr., of Maple Grove Farm, Edgely, Ont., is giving up farming, and hence offers for sale his entire herd of pure-bred Holsteins. Any one desiring to procure animals of this breed at reasonable prices will do well to look up his advertisement which appears elsewhere, as he claims to have a choice lot from which to make a selection.

If you want a four months old pure-bred registered Jersey bull calf, one thirteen months old that has been a winner of many prizes, or a three-year-old grandson of the great Stoke Pogis 3rd, look up the advertisement of T. E. Brameld, Lakehurst Jersey Farm, Oakville, Ont., that appears in this issue. Want of room forces Mr. Brameld to make the sacrifice.

An entire herd of pure-bred Shorthorns all entered or eligible for entry in the D.S.H.B. is to be sold by auction on Nov. 20th, thus offering a grand chance for the securing of excellent young stock for breeding purposes. Mr. John J. Bravan, of Byng, Ont., is the proprietor. As there will be no reserve some good stock will fall under the hammer. Notice his advertisement.

In a letter from Mr. J. S. Smith, of Maple Lodge Farm, the well-known breeder of Shorthorn cattle and Leicester sheep, enclosing payment for his advertisement in the LIVE STOCK JOURNAL says:—"We think very highly of the JOURNAL as an advertising medium. Our stock are all doing nicely, and we are in a position to supply intending purchasers with good specimens of anything in our line, both male and female."

Mr. T. E. Brameld, the proprietor of Lakehurst Jersey Farm, Oakville, Ont., made an excellent exhibit at a number of our leading exhibitions. In this number he places with us a card advertising his Jerseys of the noted St. Lambert and other meritorious strains. They are all registered, and good dairy working animals. Mr. Brameld also breeds Berkshire pigs, and is prepared to meet all demands in that respect. No one will do himself justice that neglects to observe Mr. Brameld's card.

Mr. Thos. McCrae, Guelph, Ont., has sold to Mr. D. Parish, St. Thomas, Ont., the Galloway bull calf, Bruce 5948. Bruce, by the dam's side, is from the oldest family among the Galloways, the Blackies of Balig, tracing back to Blackie the 1st, 1828. He is sired by Stanley II., O.E.F. (4473), and he by Stanley III., of Drumlang (1793), bred by the Duke of Buccleuch, Scotland. Bruce was a winner in his class both at London and Toronto this year. We wish Mr. Parish every success in his venture with the hardy black skiers.

Edward Jeffs, of Bond Head, Ont., writes: On the 20th of last month I sold to Mr. Thos. Andrews, of Cambridge, Neb., U.S., nine Shorthorn heifers and a yearling bull, six Southdown lambs, and four Berkshire pigs. Some of them were extra good ones and may yet be heard from, though they have gone so far West. This sale interfered slightly with my showing at our local show, yet I cleared the board with calves through Simcoe, Cardwell, and York, and did very well with Leicester and Southdown sheep, making a few sales, and taking in prices about \$300.00 at five local fairs.

T. Ballantyne & Son, of Stratford, Ont., writes: We have sold during the past month the nine-month old Shorthorn bull calf Neidpath Prince to Green Bros. "The Glen," Inverkip, Ont. He is a red, sired by the Lenthenty bull, Prince Royal (56346), and out of Missie of Neidpath, by Methack Hero imp. 5723, gr. dam Missie 793 imp., by Prince Royal (45413). He is a very

SALE OF PRIZE WINNERS.

H. George & Sons, Crampton, P.O., Ont., report the sale of their famous Suffolk sow Beauty a few days before the Provincial fair to R. Dorsey, Burnhamthorpe, P. O., Ont., price \$60.00.

GRAND SUCCESS AT THE EXHIBITION.

Mr. R. Delbridge, of Winchelsea, Ont., writes us: My stock of Berkshires has done well the past season. I have had good success at the fall shows the last two seasons, having taken over seventy first and second prizes.

THE BERKSHIRES IN STRONG DEMAND.

Mr. C. T. Garbutt, a breeder of Berkshires, of Claremont, Ont., writes us as follows: Since writing you last we have been very busy attending the fall fairs where our winnings have been exceedingly large.

Poultry

W. B. Cockburn, of Aberfoyle, Ont., well known as a successful poultry breeder, places with us again his card. He has been very successful at all the shows, and has an excellent collection to supply the wants of intending purchasers desiring Pekin ducks, Plymouth Rocks, Light Brahmas, or Black and Brown Leghorns.

Table of Contents.

Stock Department:

- Our Illustration. 280
The Best Always Commands a Good Price As it Ought to be. 290
The Value of Improved Sires 290
An Ayrshire Stock Farm. 290
The General Purpose Stallion 291
Fattening Sheep 291
The Live Stock Industry 292
The Signs of the Times. 292
Canadian Exhibitors in the United States. 293
With the Stockmen 293
The Shire Horse and His Origin. 295
Canadian Live Stock at Buffalo Fair 295
What Sires shall we Use to Improve our Harness Horses? 296
Our Manitoba Budget. 296
Clydesdales. 297
The Most Northern Pure-bred Herd in the World. 297
Norfolk Red Polls. 298
New Glasgow Exhibition. 298
The Standard Brod Trotter 298

Veterinary:

- Choking in Cattle 299

The Farm:

- Wheat Growing in Ontario. 299
Variations in Grain Yields. 299

- Seed Inspection. 300
Corn Notes. 300
The Wild Out. 300
Chemical Analysis of Soils. 301
How to make a Good Binder Cover. 301
The Banner Out. 301

The Dairy:

- Remarkably Rich Milk 301
A Chute instead of a Door for a Silo 302
Stable Floors. 302
Foods for Milk Cows. 302
Clover for Hogs. 303
Keeping Records 303
Dairy Husbandry 303
Quality of Holstein Milk 304

Poultry:

- Clover for Fowls 304
Eggs all the Year Round 304

The Apiary:

- November and October Notes 305

Horticulture:

- Rules for Nanting Vegetables 306
Wintering Apple Trees Procured in the Fall. 306
Storing Apples 306
Forestry 306

Young Stockman's Department:

- Books for the Boys 307
Our Prize Essay 307
Rise to Your Opportunities 307
Prize Essays from Our Boys 307
Watches for the Farm Boys 307

Jottings

- Publishers' Column 309
Stock Notes 310
Advertisements 312

Advertisements.

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 make one inch) for three months, 75c. per line each insertion; for six months, 1.25c. per line each insertion; for one year, 1.00c. per line each insertion.

WANTED

A SITUATION for a Handsman, or to manage a farm. First class man with cattle and sheep. Five years experience. References on Address.

T. M, Box 24,

HARRISTON, Ont.

To those importing stock from Scotland. For a Foreign and they supplies address.

JAMES CLARK,

Hay, Grain and Straw Merchant (Wholesale Contractor), 401 Parliamentary Road, Glasgow, Scotland. One Hundred and fifty Bunches of Queen Street Stations. For a Foreign and they supplies address.

JERSEY COW

Handsome, solid form, registered in A.J.C.C.R.—due to calve 1st Nov.

REGISTERED JERSEY BULL CALF

5 months—handsome—by St. Lambert Bull and from a Rioter Cow—cheap.

Berkshire Boars and Cotswold Ram Lambs.

Prices Reasonable.

JOHN SNELL'S SONS, Edmonton, Ont.

A. J. C. JERSEY BULLS

FOR SALE.

One calf 4 months old, one, 13 months old, prize winner at Toronto Industrial and Central Fair, Hamilton, and Rambler Pogs 18456 A.J.C.C. 3 years, grandson of Stoke Pogis 3rd.

T. E. BRAMELD,

LAKHURST JERSEY FARM, Oakville, Ont.

JERSEYS. LAKEHURST HERD OAKVILLE, ONT.

St. Lambert and other noted strains—all registered in the American Jersey Cattle Club Register. Also Berkshire pigs. Stock for sale. Inspection invited. Address

T. E. BRAMELD,

Lakhurst Jersey Farm, Oakville, Ont. Oakville station on G.T.R. Midway between Toronto and Hamilton.

TWO JERSEY BULLS AND

TWO JERSEY HEIFERS.

Still up to date. They are highly bred and registered in the A.J.C.C. They will be sold cheap, regard being had to their quality.

JOHN FENNELL,

Borln, Ont.

JERSEYS FOR SALE.

Several Jersey Heifers; choicest strains. Prices low. Sep. 9. 1912. Write G. M. BEEMAN, NAPANEE, ONT.

CHESTER WINNES

originated in Chester County, Pa. If you send to me I can give you stock that will please you and benefit your stock make hogs weighing 300 lbs. St. Lambert. Walter 4553 is a noted hog valued at \$600.00. Write me. I guarantee my stock and satisfaction. novme C. H. MORRISON, Londonderry, Pa., U.S.A.

WILL BE SOLD

Very cheap, coasting quality, a superior lot of BERKSHIRE BOARS AND SOWS. Fit for service. Registered pedigree. Apply

J. E. BRETHER,

Burford, Ont.



AGAIN TO THE FRONT.

Pekin Ducks, Plymouth Rocks, Light Brahmas, Black and Brown Leghorns. The above have won highest honors at the leading shows this fall.

Stock for Sale

W. B. COCKBURN, Aberfoyle, Ont.

AWAY AHEAD AGAIN.

PRIZE-WINNING BIRDS FOR SALE.

Light and Dark Brahmas, Plymouth Rocks, Langshans, W. F. Black Spanish, Non-Parasitic, Colored Dorkins, Bronze Turkeys, Light and Pekin Ducks, Toulouse Geese. Upwards of 125 prizes at the recent Poultry Shows.

EGGS FOR HATCHING IN SEASON

From the highest-scoring birds in the Dominion. Send three cents for circulars. Birds and prices right.

Wm. Hodason, Box 12, Brooklin, Ont.



W. G. G. PETER,

Importer and Breeder of Light Brahmas, Silver-Laced Wyandottes, Bred Plymouth Rocks, Rose-Comb Brown Leghorns, Rose-Comb White Leghorns, Single-Comb White Leghorns, Langshans, B. B. Red and Silver Duckwing Game Bantams.

Eggs, \$3.00 per Setting; 2 Settings for \$5.00.

Stock for sale at all times. Send for Circular.

ST. GEORGE POULTRY YARDS, ANGUS, ONT.

To sell lambs or sheep, or any other species of live stock at the highest obtainable prices should be the aim of every farmer. You cannot secure the highest prices unless you breed the finest qualities. You cannot breed the finest qualities unless you know how. To know how you must keep abreast with the times. To keep abreast with the times you must read THE CANADIAN LIVE STOCK AND FARM JOURNAL.

PURE BRED
HOLSTEIN FRIESIAN
BULL.

Eighteen months old, from imported parents. Price very reasonable. Time given for payment. Apply to

G. BUNBURY,
Suffolk Lodge,
OAKVILLE, Ont.

nov.

HOLSTEINS FOR SALE.

As the proprietor is giving up farming, he has for sale a number of pure bred Holsteins

COWS, HEIFERS, AND BULLS

Any one desiring to buy before the sale, to be held this winter, may do so on reasonable terms. The cattle are a fine lot and are doing well. A lot of registered Clydesdale mares will also be offered, but may be secured at any time. The date of the sale will be given in due season.

S. SHUNK JR.,
Maple Grove Farm,
Edgely, Ont.

novm.

SHORTHORNS FOR SALE.

We now offer for sale our Stock Bull Rosy Prince the 6th, (3 years old); also a young bull and a few heifers sired by him, and registered in S.H.B. registry. Will sell on easy terms. Come and see us or write for prices and pedigree to

ecd.

GRAHAM BROS.,
Ailsa Craig, Ont.

Shorthorn Bulls.

1 Bull, aged 3 years; 1 Bull, aged 19 months; 1 Bull, aged 12 months; 1 Bull, aged 12 months. All of Dom. S. H. B. registry, except the bull aged 19 months, which is eligible to N. S. H. B.

A. C. BELL,
TROUT BROOK FARM, New Glasgow, N.S.

Auction Sale of Shorthorns

The entire herd of the undersigned, consisting of a choice collection of prime young bulls, cows, heifers and calves, will be entered or eligible for entry in the D.S. H.B., will be sold by auction, on

NOVEMBER 20th, 1889

There will be no reserve. Dunnville, on the G.T.R., is the nearest station, where parties, sending post card will be met.

novm.

JOHN J. BRAVEN, Proprietor,
Byng, Ont.

MAKE YOUR POULTRY PAY.

AND SUBSCRIBE FOR THE
"POULTRY MONTHLY,"
The Best Poultry Paper Published.
Send One Dollar and get it from now to end of 1890.

ocmc.

CHAS. BONNICK,
Toronto, Ont

DORSET HORNED SHEEP.

YORK & TAZEWELL, Importers and breeders. Ewes, ewe lambs and rams for sale. Write for particulars and pamphlet which will be forwarded post paid. Address

ecd.

POET CREDIT, Ont.

FOR SALE.

Thoroughbred Stallion

"JACK FROST,"

By Jack Malone, out of Kitty Purgear. This horse is registered and is a sure foal getter and his stock are very promising. Price very low and terms very easy, as the owner has no use for him. Apply to

G. BUNBURY,
Suffolk Lodge,
OAKVILLE, Ont.

nov.

IMPORTED STALLIONS.

CHEAP.

WE have a number of Imported Shire Colts 2 and 3 years old, including First and Second prize winners at Buffalo and Toronto this year, which we will sell

VERY CHEAP

As we are short of stable room. We will sell a year olds from \$500.00 up, all registered. Also 4 fillies—all prize winners. We mean business as we must sell before the New Year to make room.

ORMSBY & CHAPMAN,
Springfield-on-the-Credit, Ont.

novm.

FOR SALE.

PURE BRED

IMPORTED CLYDESDALE STALLION,

BEN LEE OF CULLEN (5537), Vol. X., foaled 26th June, 1886; Color, bay; white stripe on face; hind feet white above pasterns. Sire, Leopold (3766), Vol. VII.; Dam, Bet (1638), Vol. V.; Sire of Dam, Young Lofty (991), Vol. I. Also

ONE IMPORTED CLYDESDALE MARE,

GEORDIE Vol. XII., foaled June 1887; Color, dark brown, two white legs and white face; Sire, Sir Archibald Buchanan, (540), Vol. XI.; Dam, Jess of Smithston (7953), Vol. XI.; Sire of dam, Campsie (119), Vol. I.

Horses can be seen at stable, EAST STREET, GALT. Full particulars by post. Address,

JAS. MCCOMBIE, Galt, P.O., Ont.

novis

FOR SALE

At a great bargain our entire herd of Ayrshire Cattle

Also some

CHOICE SOUTHDOWN SHEEP.

Apply to
novm.

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

AUCTION SALE

OF PURE BRED

DORSET HORNED SHEEP

IN WOODSTOCK

On 20th. Nov. At One O'clock.

I will offer, on above date, without reserve, the entire flock of Dorset Horned Sheep, late of the Onklands Jersey Stock Farm, consisting of 7 Bucks, 31 Ewes (13 of these Shearling), 14 Spring lambs, and 30 October lambs.

TERMS—\$20 and under cash; over that amount 3 months credit will be given, by furnishing approved security. A discount of 7 per cent. will be allowed parties paying cash.

This sale will give purchasers an opportunity of selecting from the Best Flock of Dorset Horned Sheep in America.

S. B. FULLER, Proprietor,
WOODSTOCK, Ont.

Imported and Canadian-bred Shropshire Sheep
For sale registered pedigree. Agent for Dana's Sheep and Cattle Farms. **W. O. DUNKIN,** Brucefield, Ont. mme.

SOME CHOICE SHROPSHIRE RAM LAMBS,

SUFFOLK AND BERKSHIRE FIGS
For sale from imported stock. Address F. J. Ramsey, Dunnville, Ont. Pigs at 6 weeks old \$5.00 each. myme

WELLS, RICHARDSON & Co's

IMPROVED
Butter
Color.

EXCELS IN { STRENGTH
PURITY
BRIGHTNESS

Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color.

Three sizes, 25c, 50c, \$1.00. For sale everywhere
WELLS, RICHARDSON & Co., Montreal, Que.

Apme.

FARMS FOR SALE.

1. About two hundred acres in the township of Fenelon, in good order, having good farm buildings upon it, and well fenced and well drained. Timber on it sufficient for firewood for all time to come, also a new falling beam running through it. 2. About 50 acres in same township, cleared and in good cultivation. Well supplied with water. A good chance for a man wanting a small farm. 3. About 100 acres in the township of Muskoka. Excellent land, 800 acres cleared and under cultivation; 800 under best timber. Capital Stock Farm. Will be sold in lots if necessary.

APPLY TO H. R.,
Live Stock Journal Office, Toronto.

ECONOMICAL WOMEN
should have one or both of these aids to cheap comfort
THE DOWSWELL WASHER
—THE—
STANDARD WRINGER
save the Clothes, the Health, Time, Money
Sold by Hardware Dealers, or direct from
Standard Mfg Co. 34 James n. Hamilton.

Advise your boys to write their experiences for our Boys' Department
Set your boys at work to compete in our prize competitions; second, obtain new and trial subscriptions.
Ask your boys to read our Publishers' Column and thus obtain the Stock Journal for your family free of cost.

USE ONLY
JOHNSON'S
PURE COLORS
TRADE MARK
PAINTS

BOW PARK HERD

OF



PURE-BRED SHORTHORNS

Have at all times a number of both sexes for sale. Catalogue of young bulls, recently issued. Address, JOHN HOPE, Manager, Bow Park, Brantford, Ont.

Myme.

THE BRIARS FARM SUTTON WEST, ONT.

Choice of 60 head of

SHORTHORNS

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

D. ALEXANDER,

Bridgen, Lambton Co., Ont.



JAME.

Shorthorn herd now consists of 120 Lady Violet sires on 120 other daughters, and two imp. Beauty 15th, almost one bull, and of one char-ack and fine quality. Can supply a splendid young herd, including an imported bull. Trains twice daily. Station one mile

CLAREVILLE STOCK FARM

Lying between Canada Southern Railway, and Grand Trunk Air Line. Cayuga Stations.

I breed and have FOR SALE

A-1 SHORTHORNS

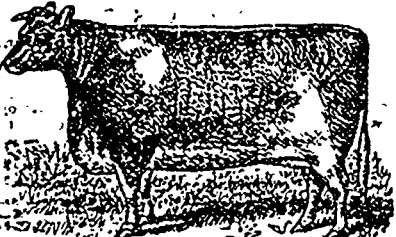
Baron Constance 10th, heads the herd.

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, ONT.

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 excellent 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 Sta'n, C.P.R., or Pickering Sta'n, G.T.R.

Write or wire me, when and at which station to meet you. Send for Catalogue. No business, no harm JAME.

If you want sample copies of THE LIVE STOCK JOURNAL to show to your friends to induce them to subscribe, write to us.

MAPLE LODGE STOCK FARM.

We breed and have FOR SALE Shorthorn Cattle, Leicester Sheep

AND Berkshire Pigs,

Herd established in 1857 and flock in 1854.

Our stables are one mile west of Lucas Crossing, on Grand Trunk (main line) and London, Huron and Bruce Railways.

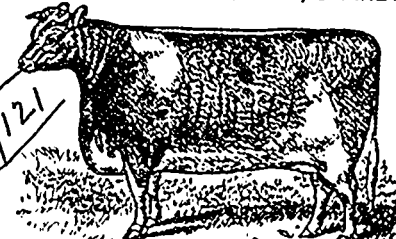
Several females and young Bulls, sired by Duke of Colonus, purchased now at very moderate prices. Also a few choice ram lambs, sired by the First Prize ram at London and Toronto Exhibitions 1883.

We are always pleased to show our stock. JAS. S. SMITH, Maple Lodge P. O., Ont.



JOSEPH REDMOND

PETERBOROUGH P.O., ONT., CANADA.

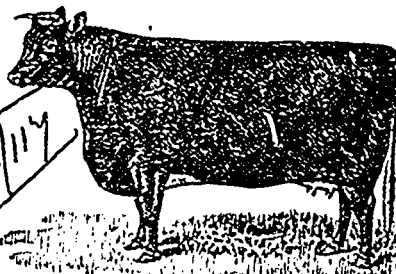


I have still on hand and for sale an excellent lot of imported bulls, heifers, and young cows, besides an excellent lot of home-bred heifers and bulls all by imported sires and mostly from imported dams. I can supply intending exhibitors with first-class show animals of either sex and of various ages, from calves upward. Of my last imported, ten were from Bruce and Cruickshank breeding, all show animals.

Peterborough is on the C. P. R. and G. T. R. Six trains daily. Write or wire me when to meet you. Will be pleased to show the stock, whether you purchase or not.

JOSEPH REDMOND.

FRANK R. SHORE & BROTHERS, R. R. Station, London, White Oak P.O.



SHORTHORNS AND SHROPSHIRE

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

BELVOIR HERD

Pure-Bred Shorthorns.



The Bates portion of herd is headed by imported 8th Duke of Leicester, 49270, and consists of the following families:

- Waterloo
- Princess
- Darlington
- Garlands
- Constances
- Charmers
- Filigrues
- Seraphinas
- Etc.

There are some imported Booth Cattle, and Scotch strains are also included. Purchasers can depend upon treatment and liberal prices.

ROMONA STATION, 3 MILES

Richard Gibson - Delaware P.O.

J. & W. BOWATT,
BREEDERS OF SHORTHORNS
OF CLYDESDALES AND
OXFORD DOWN SHEEP and
BERKSHIRE PIGS.
A number of Choice Young Bulls for sale
apmc. SALKM, Ont.

J. Y. REID, HILLSIDE FARM,
2 1/2 miles south from Paris, on the G. T. R.



We have on hand and for sale a superior lot of show cows, heifers and young bulls. This season's calves being mostly from the imported Scotch Bull,

EARL OF ROSEBERRY.

Intending purchasers will be met at Paris station. Apply apmc. JAMES GEDDIE, MANAGER, PARIS, ONT.

JAMES HUNTER, ALMA, ONT.,

BREEDER AND IMPORTER OF
SHORTHORN CATTLE,
CLYDESDALE HORSES,
and Shropshire Down Sheep.
Stock of both sexes for sale. mrmc

CRUICKSHANK SHORTHORNS,
Clydesdales and
Shropshire Sheep

IMPORTED AND BRED BY

JOHN DRYDEN,
BROOKLIN, ONT.

Show and Store Ewes, choice Rams, and Lambs for sale at moderate prices. Inspection invited. JAME. Catalogues on application.

LORRIDGE FARM.
SOUTHDOWN SHEEP.
Flock first established 1857. Commenced exhibiting 1867. Since then have taken over 100 prizes, including a large number of medals and diplomas.
Imported Rams used only.
Stock for Sale.
ROBERT MAISH, PROPRIETOR.
Richmond Hill, Ont

English Pedigree Live Stock

To Importers and Breeders Hereford and Shorthorn Cattle, Shropshire, Dorset-Horn and Other Sheep.

E. G. PRENDE, Live Stock Agent and Exporter, Shrewsbury, England, has choice Selections of these breeds, of full registered pedigrees, always on sale at moderate prices. He has the privilege, by special appointment, of selecting from Noted Flocks and Herds, the best types of English Live Stock, and will be glad to assist importers in their selections. The purchase and shipment of any pedigree stock executed on commission, on personal responsibility. Special facilities for freight and transit. Correspondence invited. Highest English and foreign references. Extensive trade with N. and S. America, the Colonies, S. Africa, etc.
ALL IMPORTERS SHOULD COMMUNICATE.

Improved cattle and sheep give larger returns for your year's work. MORAL—Improve your breeds.

SPRING BROOK STOCK FARM.
A. C. HALLMAN & CO.,
New Dundee, Waterloo Co., Ont.



IMPORTERS AND BREEDERS OF
**PURE-BRED, REGISTERED
HOLSTEIN-FRIESIAN CATTLE.**

The choicest and most uniform herd in Canada. Upwards of 40 head to select from. Only choice stock of highest milk and butter production selected from. Individual merit and pedigree a special object. Direct descendants of Aaggie, Artis, Netherland, Johanna, and Billy Bolyn.
Stock of all Ages and both Sexes for sale from above Families. Prices reasonable considering quality. Send for Catalogue.

Oakdale Stock Farm

THE CHAMPION HERD OF HOLSTEINS

Winners in 1887, 1888 and 1889 of more

**MONEY PRIZES,
MORE GOLD and SILVER MEDALS**

and more **DIPLOMAS** than was ever won in Canada

BY ANY HERD

At Same Number of Exhibitions.

At Toronto Industrial, this year, F. C. Stevens, of Atica, New York, Owner of the finest Herd of Holsteins in the world and one of the best judges in America acted as Judge and the

OAKDALE HERD

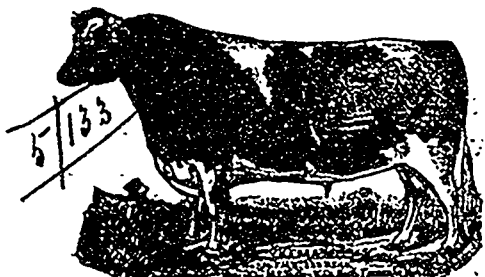
took all important prizes. **FIRST** for aged bull, **SWEET-STAGES** for best bull of any age, **FIRST, SECOND** and **THIRD** for cows four years and over and **First** for Herd of One Bull and four females, and also **First** for Yearling Bull with the unbeaten "Banker." Smith Bros, of Churchillville, were competitors at the Industrial, and competed in all these classes.

Stock for Sale.

JOHN LEYS, Toronto.

CREDIT VALLEY STOCK FARM.

SMITH BROS.,
CHURCHVILLE (Peel Co.), ONTARIO.



THE GREAT BUTTER AND MILK HERD
OF PURE-BRED REGISTERED
HOLSTEIN-FRIESIAN CATTLE.

Most first prizes of any herd in Canada at Provincial and Industrial Exhibitions, 1888 and 1889.

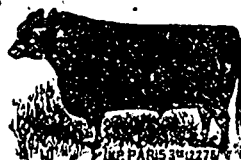
Best strains, as Mercedes, Netherland, Clothilde, Artis, Wayne, Aaggie, Mink, Siepkje, Tensen and Ykema, for sale. Particular attention paid to individual excellence and good breeding combined. Prices low for quality of stock and within range of all Farmers. Send for catalogue.

N.B.—Beware of animals registered in a Branch of the North Holland Herd Book. Jamc.

Secure two of your neighbors as subscribers to THE LIVE STOCK JOURNAL and so obtain for yourself a good weekly paper for sixteen months.

Always mention THE CANADIAN LIVE STOCK AND FARM JOURNAL when corresponding with advertisers.

HILLHURST HERDS.



HEREFORD

Aberdeen-Angus and Jersey

Heifers, Cows, and Young Bulls for Sale

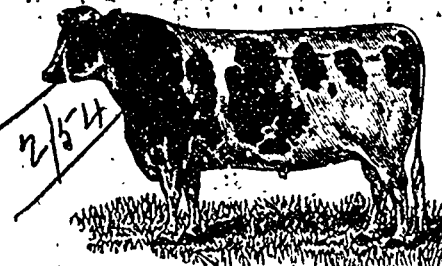
At reasonable prices. Send for new Catalogue.

M. H. COCHRANE, Hillhurst, Que., Can.



J. E. PAGE & SONS, Amherst, Nova Scotia.

On line Intercolonial Railway.



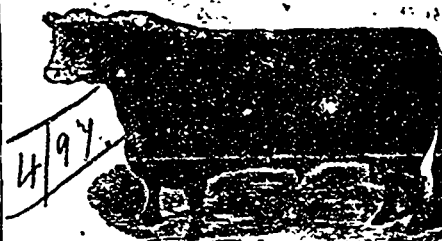
IMPORTERS AND BREEDERS OF
HOLSTEIN-FRIESIAN CATTLE,

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. 1 oz. unsalted butter; sire, Netherland Prince. Prices low for quality of stock. femc.

HAY & PATON.

KINNOUL PARK STOCK FARM,
NEW LOWELL, ONT.



BREEDERS AND IMPORTERS OF CHOICE

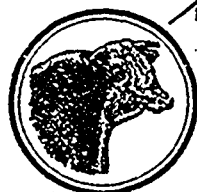
ABERDEEN-ANGUS POLLS.

We have reserved from the sale of our champion herd of Polls, some 17 excellent females, with that splendidly-bred Ruth bull, Runnymede and, at their head, and have started afresh to breed the comely doddle with individual merit (as before) the guiding star of our efforts. We are at present sold out, with the exception of two or three yearling bulls.

We have also a flock of over a hundred head of fine Shropshire sheep, the ram lambs and shearlings of which we have now for sale at reasonable prices. Send postal card for list and terms. Jamc.

THE PARK HERD OF HEREFORDS.

This herd embraces over
250 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.

Shire Horses

We have sixteen of the best Imported Stallions and Mares on hand, all registered in the Eng. Stud Book. We want to clear them out, and sell at very low figures. They are the right kind, low set and blocky.

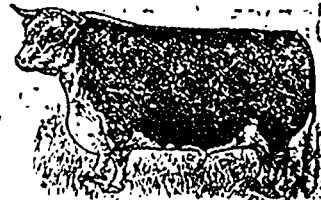
SHROPSHIRE, BRED FROM PURE IMPORTED STOCK.

Address—ORMSBY & CHAPMAN, THE ORANGE FARM, "Springfield-on-the-Credit" Station and Telegrams: STREETSVILLE. Jamc

THE

TUSHINGHAM

HEREFORDS



THIS herd is remarkable for the number and uniformity of the good calves that it produces. It has taken all the medals given in the Province of Quebec, at leading exhibitions the last three years. Breeders who are anxious to get bulls or females with plenty of hair and of good quality and good milk producers, should see this herd before purchasing elsewhere.

J. WALTER H. VERNON,

TUSHINGHAM HOUSE, Waterville, P. Q.
Waterville is on the main line of G. T. R., 110 miles east of Montreal.

JAS. DRUMMOND,

PETITE COTE, MONTREAL.

Imports and breeder of

PURE-BRED

AYRSHIRE

CATTLE



Of Large Size, and from Choice

Milking Strains.

The herd numbers sixty-five head, and for three years, in succession has won Provincial or Dominion Prize as best milkers. The imported bull, ROY ROY (3971), at head of herd.

Young Stock on hand at all times for sale. femc.



This lead is known from Halifax to British Columbia as the best finest and purest in Canada.

Scientific farming is a profession, and THE CANADIAN LIVE STOCK AND FARM JOURNAL is the Canadian Farmer's professional journal. He should read it.

To improve your breeds keep yourself posted on all the best modern methods of breeding. In other words, read THE LIVE STOCK AND FARM JOURNAL.

Improved Yorkshire Pigs

We have the Pioneer Herd of Pedigreed Yorkshire Pigs in America. All bred from the Best-English Strains. Every pedigree guaranteed. Prices low. We are now booking orders for fall pigs. Also

W. H. HUTCHINSON,
N. B. BEECHER, ONT.

IMPORTER OF
SHIRE, CLEVELAND BAY and
YORKSHIRE COACH
HORSES.



These are old Stallions of all breeds,
for sale at lowest prices.
Stable five minutes walk from C. 1
Station

All Stallions Registered in the English Stud Book
same

James Gardhouse & Sons,
Malton, Ontario, Canada.

Breeders and Importers of
CLYDESDALE and SHIRE
HORSES.



feme.

Shorthorn Cattle and Berk-
shire Pigs Young Stock for
sale Terms reasonable

James Gardhouse & Sons,
Malton Station,
Highfield P. O., Ontario.

D. & O. SORBY,

Guelph, Ont.,

Breeders and Importers of
Clydesdales,

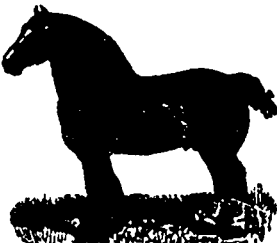
35 PURE-BREDS on
hand and for sale,
including gets of the fol-
lowing sires: Lord Lyon
(485), What-Care I (912),
Belted Knight (2395),
Goldenberry (2828), Corse-
wall (1420), Prince Charlie
jame.



629) Sir Michael (1530), Scots-Wha-Hae (4006), Macpherson
(1825) 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).

IMPORTED CLYDESDALES FOR SALE

FROM one to four years
old stallions and fil-
lies from the best studs in
Scotland. Including gets
from Macgregor, Harold,
Knight of Galloway, Swe-
ered, Crown Jewel,
McMaster, What-Care I,
Clyde, Scots, Laird
Craford, etc., etc.
The stock is selected
by myself with great care.
Parties wishing to pur-
chase would do well to
inspect personally before
deciding.

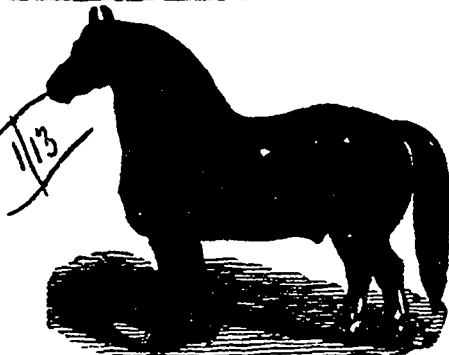


Also a few SHETLAND PONIES
(Correspondence Solicited, Howick Station, C. P. R., on
the farm. (G. T. R. one mile from Howick also.)
Address.

ROBERT NESS,

Woodside Farm,
Howick P. O., Pro. of Que.

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.
decme. MORRIS, STONE & WELLINGTON, Welland.

THE GLEN STOCK FARM

Innerkip, Oxford Co., Ont.,



Scotch Shorthorns,
Shire Horses,
Improved Large White Yorkshire Pigs.



A few young heifers and bulls for sale at reasonable prices. Our first importation of Improved Large White Yorkshire
pigs arrived home last month, from the herd of F. Walker Jones, England, whose herd won over \$10,000 in prizes in three
years. Orders now booked for young pigs. 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 Canadian Pacific and Grand Trunk R. R.

GREEN BROS., THE GLEN, INNERKIP. novme

IMPORTED CLYDESDALES
FOR SALE.

At prices to suit the times I offer a superior selection of
STALLIONS AND FILLIES

From one to three
years old which
have won several
prizes at the big-
gest shows in
Scotland and
Canada, out of
the gets of such
sires as



Topgallant,
Jordanshaw,
St. Malcolm,
Sir Hilde-
brand, Old
Times, Baron
O'Shreeve, &
Lord Hope-
town.

Correspondence solicited. Visitors always welcome. Near-
est station PONTYPOOL, C. P. R. where visitors will be met
by wing me to Pontypool.

T. W. EVANS,
Yelverton, Ont.

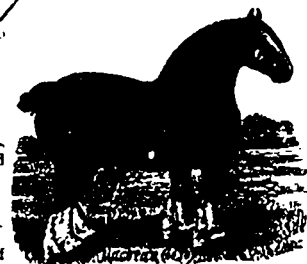
novs.

GRAHA BROS., Claremont, Ont.

RESIDENCE ONE MILE FROM CLAREMONT STATION

IMPORTERS OF
REGISTERED
CLYDESDALES
—AND—
HACKNEYS.

Stallions and Mares
constantly on hand
and
FOR SALE
in reasonable terms.



The importations of
1888 comprise a large
number of one, two, three and four-year-old registered stallions
and mares, the gets of such sires as Macgregor (1487), Darnley
(224), Harold (6226), Crown Jewel (2708), Lord Marmion (2020),
St. Lawrence (3220), and others of like merit. Also a few choice
Shetland Ponies. (Correspondence solicited. New catalogues
just out. Visitors are always heartily welcome
same

CLYDESDALES,
SHORTHORNS AND
SHROPSHIRE

John Miller,
Brougham, - Ontario,



has on hand for sale a large
selection of prize-winning animals of
the above breeds. The Clydes-
dales 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 Bocking Station, G. T. R., where visitors will be met
by telegraphing us at Brougham. Correspondence solicited.
feme.

BROOKSIDE FARM,

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



Standard-Bred Trotters,
AMERICAN
CATTLE-CLUB JERSEYS.

GEORGE G. STEWART,

IMPORTER,

Howick, Chathamway Co., Province of Quebec,

Offers on reasonable terms CHOICE Pedigreed
Clydesdale Stallions and Fillies.



Amongst them are "Lord Rollo,"
sire Macaron, first prize last year
and this year at Huntingdon, P. Q.,
and this year at Montreal, "Lord
Ophant," first prize this year at
Huntingdon and St. Marine, P.
Q., "Lord Cross," "Lord Dup-
lin," etc., all of various ages.
Prize winners in Scotland, freshly
imported, all from favorite and
fashionable sires and registered in
the British Clydesdale Stud Book.

Correspondence solicited and visitors welcome.

IMPORTED
CLYDESDALES

HACKNEY * STALLIONS
FOR SALE.



Highest Prize-winners in the Leading Shows
of the World,

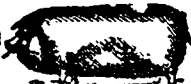
And the gets of famous sires, such as Lord Erskine, Darnley,
Old Times, MacCammon, Garnet Cross, Prince Edward, Prince
Henry, Sir Windham, Good Hope, Fireaway, and Macgregor.
Prices reasonable. Catalogues furnished on applica: on.

ROBERT BEITH & CO., Bowmanville, Ont.
27 Bowmanville is on the main line of the G. T. R., 40 miles
east of Toronto, and 294 west of Montreal. decme

H. GEORGE & SONS,

CRAMPTON

IMPORTERS
AND
BREEDERS



OF CHOICE IMPROVED CHESTER WHITE SWINE,
Also Suffolk and Berkshire swine. Sixty fine fall pigs now
fit to ship from prize winning stock. All breeding stock recorded
Half rate by express.



E. D. GEORGE,
TUNNAMI, - - ONT.,
IMPORTER AND BREEDER OF
IMPROVED CHESTER WHITE SWINE
BREEDING AND INDIVIDUAL MERIT
UNSURPASSED feme.



DANIEL DeCOURCY,
BORNHOLM, ONT.,
IMPORTER AND BREEDER
OF
OHIO IMPROVED
CHESTER
WHITE SWINE.
Stock for sale. Regis-
tered pedigree. jame.

A. FRANK & SONS.

The Grange P.O., Ont.

Cheltenham Station, C. P. R. and
G. T. R. Railways.
The Centennial Sweepstakes herd of
Suffolk Pigs, greatly im-
proved. All registered.

THOROUGH-BRED 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. feme.



BREEDERS' DIRECTORY

Cards under this head inserted for one year at the rate of \$1.50 per line when not exceeding five lines. No card accepted under two lines for less than six months.

Parties desiring to purchase Live-Stock will find in this Directory the names of the most reliable breeders in Canada.

HORSES

DAVID ANN... Pickering, Ont., importer of pure Clydesdale horses. Stock for sale at all times.

A. & J. BELLE, Athelstane P. O., Ont., importers and breeders of recorded Clydesdale horses, Shire cattle, Cotswold sheep and Berkshire pigs. Stock for sale. 77

R. ELM... Waukegan, Ont., Lanark Co., breeder of pure-bred Clydesdale horses, Shorthorn cattle, Shropshire sheep and Berkshire swine. Young stock for sale. Prices right.

THOS. BLANCHARD... Waukegan, Ont., breeder of Shire horses, Shorthorn cattle and other stock. 73

R. C. BRANDON & CO., Clyde's Station, Ont., registered brood mares. Stock for sale. Pearlida Farm, Cummerington, Ont. 76

E. W. & G. GILMANSON, Dunrobin, Ont., importers and breeders of registered Clydesdale and Coach horses. 72

W. M. CRAWFORD, Upper Springs, near Malvern, Ont., breeder of registered Clyde horses, black and greyed Ayrshire cattle and Cotswold sheep. 73

GEO. E. DYER & SON, Highland Farm, Sutton, Que., breeders of registered Clydesdale horses and Berkshire pigs. Stock always on hand for sale. 68

THOS. GOOD, Richmond P. O., Ont., importer and breeder of registered Clydesdale horses, Shorthorn cattle, Cotswold and Southdown sheep. Stock for sale. 76

JOHN L. HOWARD, Shrewsbury, Ont., breeder of registered Clydesdale horses and Shorthorn cattle. 78

W. H. HUTCHINSON, Napawan, Ont., importer of registered Shire, Cleveland Bay and Yorkshire Coach horses. Stock for sale.

JAS. LEAK & BROS., Taunton P. O., Ottawa Station, U. S., breeders of registered horses, Shorthorn cattle, Shropshire sheep and Berkshire pigs. Seed grain a specialty.

JAMES MOBBIE, farmer and breeder of Scotch and Driving horses, Shetland, Exmoor and other ponies. Stock broken-to saddle. Prices reasonable. Chasterville, P. O., Dundas Co., Ont. 78

J. D. ON... London, Ont., importer and breeder of Clydesdale, Canadian Orange, Carriage and Road Stallions. Stock always on hand for sale.

J. W. ROBINSON, St. Marys, Ont., importer and breeder of pedigree registered Clydesdale horses, Shorthorn and Shropshire Down sheep. Stock for sale. 79

THOMAS R. SMITH, New Hamburg, Ont., importer and breeder of Cleveland Bay horses. Young stock for sale. 77

WILLIAM SMITH, Columbus, Ont., importer and breeder of Clydesdale horses and High Coach stock.

MESSRS. SNIDER & EDMONSON, Brantford, Ont., importers of registered horses, Suffolk Punch, Cleveland Bay and Coach horses. Also breeders of Cleveland Bay, Clyde and Suffolk Punch Stallions on hand for sale. 74

H. H. SPENCER, Brooklin, Ont., importer and breeder of Clydesdale, Scotch Shorthorn, black and greyed Shropshires, and Berkshires. 77

THOMAS TAYLOR, Norwich P. O., Ont., breeder and importer of registered Clydesdale and Cleveland Bay horses. Stock for sale.

J. WALTER M. VERNON, Waterford, Ont., breeder of Pure-bred Clydesdale Horses and Herdwick Sheep.

SHORTHORNS

A. SAM... (successor to John S. Armstrong) breeder and importer of Shorthorn cattle and Oxford Down sheep. Specialties: F. O. (near Guelph) Ont.

THOS. BALPANTYNE & SON, "Walton Farm," Stratford, Ont., importers and breeders of Shorthorn cattle and Shropshire sheep. Herd headed by the imported Cruickshank bull Prince Royal. 76

J. E. BRETHOUR, "Oak Lodge," Hurford, Ont., breeder of Shorthorn and Shropshire Pigs. Imported Scotch bull The Provost at head of herd.

A. BROCKIE, Fenelon, Ont., breeder of Scotch Shorthorns and Oxford Down sheep. Stock for sale. 74

J. W. BROWN, Thorold (Walden Co.) Ont., breeder of pure-bred Shorthorn cattle. The bull Bridman 12th head of the herd. Stock for sale. 69

ALEX. BURNS, Maple Ridge, near Rockwood, Ont., breeder of Shorthorn cattle. Stock for sale. 68

J. B. CARPENTER, Simcoe P. O., Ont., breeder of registered Shorthorn cattle and Shropshire sheep. 78

HUGH CRAWFORD, Napawan, Ont., breeder of pure-bred Shorthorn cattle, Cotswold and Southdown sheep, and Berkshire swine. Stock of all kinds for sale. 73

JOHN CURRIE, Telegraph and P. O., Hurford, Ont., breeder of Shorthorn cattle, Berkshire pigs and Leicester sheep. Stock always for sale. Four miles from Rockwood, G.T.R. 77

H. J. DAVIS, Maplewood Stock Farm, b. a. 200, Woodstock, Ont., registered with G.T.R. and C.P.R. Breeders of Shorthorn cattle, large English Berkshires, registered pedigree. Stock for sale and shipped to order. Satisfaction guaranteed. 72

JAMES I. DAVIDSON, Innes P. O., Ont., importer and breeder of Clydesdale horses and Shorthorn cattle from the herd of A. Cruickshank, Esq., Strathclyde, Scotland. Stock for sale.

W. DAWSON & SON, Littlewood Farm, Victoria P. O., Co. North York, Ont., breeders of Shorthorn cattle and Southdown sheep. Several young animals for sale. 77

W. M. DICKSON, Hill View Farm, Malvern, Ont., breeder of Shorthorn cattle, Oxford Down sheep and Berkshire pigs. Young stock for sale. 69

W. M. DONALDSON, Huntingford, South Zorra P. O., Ont., breeder of Shorthorns and Shropshire Down sheep. 76

W. M. DOUGLAS, Caledonia, Ont., breeder of Shorthorn cattle. Young stock for sale at all times. 67

W. C. EDWARDS & CO., Rockland, Ont., breeders of Shorthorn cattle. All entered in Dominion Herd Book. Stock for sale at all times. 75

G. GRAHAM BROS., Belvedere Stock Farm, The Craig, Ont., breeders of Shorthorn cattle. Young stock always and heifers always for sale. All entered in Dominion Herd Book. 74

ALBERT HAZAR, Bellevue Farm, Plantagenet, Ont., breeder of Shorthorn and Cruickshank bull "Soldier Boy" at head of herd, Shropshires and Berkshires. Stock for sale. Prices to suit the times. 72

JOHN HARRISON, Owen Sound, Ont., breeder of Shorthorn and Shropshire Down sheep. This year won 6 prizes at the Toronto Industrial and Provincial. 76

W. S. HAWKINS, Glasworth P. O., Ont., breeder of Shorthorn cattle and pure-bred Shropshire sheep.

SIMEON LEMON, Poplar Lake, Keokuk, Ont., breeder of pure-bred Shorthorn cattle, Oxford and Shropshire sheep, Berkshire and Suffolk pigs. Stock for sale. 78

THOS. MAJAY, Woodbine Farm, Richmond P. O., Ont., breeder of Shorthorn cattle. Victor Hugo Ingram at head of herd. Young stock for sale. 74

W. MAJOR & SON, Whitewater, Ont., breeders and importers of Shorthorn cattle, Clydesdale horses, Shropshire sheep. Stock for sale. 76

DAVID MILNE, "The Old Mill," Eglar, Ont., breeder of Scotch Shorthorn young bulls and heifers for sale. Imp. Red Knot at head of herd. 70

MARCUS G. MERRITT, Smithville, Ont., breeder of pure pedigree registered of splendid milking qualities. 73

ALEXANDER MORRIS, "The Farm," Ont., breeder of Shorthorn cattle. The pure Cruickshank bull at head of herd. Stock for sale. 72

J. P. PHIN, "The Farm," Ont., breeder and importer of Shorthorn and Shropshire Down sheep. Sheep recorded in American Record. Stock for sale.

W. M. PORTER, Cedar Grove Farm, Lloydtown P. O., breeder of Shorthorn and Southdown sheep. Young stock for sale.

SPRING HILL FARM, Walkerton, Ont., Richard Rivers & Son, proprietors, breeders and dealers in Shorthorn and High Grade of Leicester and Southdown sheep and Berkshire swine. Seed grain a specialty.

J. B. RIDD, Kothay, Ont., breeder of Shorthorn cattle, Leicester sheep and Berkshires. The highly bred Booth bull, Waterloo Solway, at head of herd. Stock for sale.

W. M. SHAW, "The Spring Farm," Sunderland P. O., Ont., breeder of Shorthorn cattle. Stock for sale.

C. S. SMITH, box 18, Tilsonburg, breeder of Durham cattle, registered Berkshire pigs and Berkshire sheep.

HENRY SMITH, "The Farm," Abtham, Ont., breeder of pure Shorthorn cattle. Stock for sale. 73

W. M. TEMPLER, breeder of pure-bred Shorthorn cattle and Berkshire pigs, Wood Lane Farm, Hurford P. O., Ont. Telegraph Office and R. R. Station, Hurford, G.T.R. Young stock for sale. 73

GEO. THOMSON, "The Farm," Ont., breeder of pure-bred Shorthorns and Leicester sheep. Stock for sale. 74

GEO. THOMSON, Alton, Ont., breeder and importer of Shorthorns, also swine. C. & R. Jones at head of herd.

JAS. TULLOCH, "The Farm," Ont., breeder of Shorthorn cattle and Oxford Down sheep. Stock for sale.

THOS. TURNER & SON, Eden Grove P. O., Co. Brv., breeders of Shorthorn cattle, Clydesdale horses and Leicester sheep. All kinds of stock for sale. Carroll station, G.T.R. 78

JOSEPH WATSON, Greenbank, Ont., breeder of Shorthorn and high bred cattle. Imported bull Vice-President at head of herd. Young stock for sale.

WILLIAM WHITELEW, Guelph, Ont., breeder of Shorthorn cattle, and importer and breeder of Berkshire sheep. Stock for sale. 77

ALEXANDER WOOD, St. Marys, Ont., breeder of Shorthorn cattle and other stock. Stock for sale. 78

HEREFORDS

F. A. FLEMING, "The Farm," Ont., breeder and importer of pure Hereford cattle. One of the best families always for sale. Write for further information.

R. J. MACKAY, "The Farm," Ont., breeder and importer of pure Hereford cattle. Imported stock Oswawa, Ont. for sale. 71

F. W. STONE, "The Farm," Ont., importer and breeder of Shorthorn and Hereford cattle, Cotswold and Southdown sheep, Berkshire and Yorkshire pigs, and Suffolk horses. 71

DEVONS

SAMUEL HARPER, "The Farm," Ont., breeder of Devon cattle, Leicester sheep and Cotswold horses. Young stock for sale.

W. J. RUDD, Eden Mills P. O., near Guelph, breeder of choice Devon cattle, Cotswold sheep, Berkshire pigs, and Plymouth Rock fowls. 77

POLLED CATTLE

ANDREW GLEESON, "The Farm," Huntwood, Que., importer and breeder of Aberdeen-Angus Cattle, Oxford Down sheep and Yorkshire pigs. Stock at all times for sale. 77

W. M. KOUGH, Owen Sound, Ont., Canada, breeder of Galloway cattle. Choice imported and home-bred animals of both sexes for sale. Catalogue on request. 75

THOMAS MERRILL, "The Farm," Guelph, Canada, importer and breeder of Polled Angus cattle, Clydesdale horses and Cotswold sheep. Choice animals for sale.

AYRSHIRES

W. C. EDWARDS & CO., North Nation Mills, P. O., breeders of pure-bred Ayrshire cattle and Berkshire pigs. Young stock for sale. 77

A. GERRARD, Hamilton, Ont., breeder of pure Ayrshires. Bull calves sold young and cheap. 78

T. GUY, "The Farm," Guelph, Ont., breeder of Ayrshire cattle, Southdown and Leicester sheep. 76

THOMAS IRVING, Montreal, importer and breeder of Ayrshire cattle, Berkshire pigs and Clydesdale horses. 76

J. McCORMICK, "The Farm," Ont., breeder of Ayrshire cattle, Toulouse geese and Colored and Silver-Gray Dorkings.

NICHOLSON BROS., Plattville, Ont., breeders and importers of Ayrshire Cattle, Leicester sheep, and other stock. Opepe.

W. M. & J. C. SMITH, "The Farm," Ont., breeder of Ayrshire cattle, Leicester sheep and Poland China pigs. Also pure-bred sheep for sale.

JOSEPH YULL, "The Farm," Ont., breeder of Ayrshire Cattle, Shropshire Down and Berkshire sheep. 78

JERSEYS

ALBERT P. BELL, "The Farm," Rock Island, Stanstead Co., Que., has for sale pure Jersey C. H. R. Jerseys, all ages. Moderate prices. Write for full particulars.

ROBT. REFSOR, Jersey Farm, near Groves, Merikham, Ont., breeder of Jersey cattle. A pure Jersey cow is Atoll 17219, a pure St. Helier bull. Young stock for sale. 73

MESSRS. G. SMITH & SON, Grimsby, Ont., breeders and importers of pure-bred Jersey and Welch ponies of choicest quality and breeding. Stock always for sale at reasonable prices. Correspondence solicited. 78

HOLSTEINS

MAPLE GROVE STOCK FARM, Cassel P. O., Oxford Co., Ont., breeders and importers of pure-bred Holstein-Friesian cattle. Stock for sale. R. R. Station, Tavistock, G. T. R. 73

E. PANNABECKER, Fairview Farm, near Guelph, Ont., breeder of Holstein-Friesian cattle. Stock for sale. 76

A. R. G. RICE, "The Farm," Crossing P. O., Oxford Co., Ont., importer and breeder of Holstein-Friesian Cattle, descendants of the famous "Alles, Pieterse and Jewel, Netherlands, Promoter, Angers, and Texas for sale. Spa.

J. N. SANGSTER, "The Farm," Ont., breeder and importer of Holstein cattle. Stock for sale.

S. SHUNK, "The Farm," Gageley, Ontario, breeder of pure-bred Holstein-Friesian Cattle. Stock for sale. Thornhill Station, G. T. R. 78

BREEDERS' DIRECTORY

(Cards not more than five lines, \$1.00 per line per annum)

SWINE

S. CONWORTH, Whitevale, Ont. Breeder and shipper of pure Berkshire pigs. Young stock for sale. Registered pedigree. White & black.

ISAAC M. CROSS, Band Head, Ont. Breeder and dealer in Berkshire hogs and Southdown stock for sale at the lowest living prices.

W. M. BAYNE & SON, Kinross, Marsham, importers and breeders of improved large Yorkshire swine and Guernsey cattle.

RICHARD DELBRIDGE, Winchester, Ont. Breeder of pure Berkshire pigs. Young stock for sale. Registered pedigree. Prices right.

R. BOKSAY & SON, Summersville, Ont. Breeders of pure Berkshire pigs. Young stock for sale. Registered pedigree. Stock at all times on hand for sale.

JOSEPH FEATHERSTON, Port Hope, Ont. Credit. Ont. Importer and breeder of Essex, Suffolk and Yorkshire pigs. All correspondence will receive prompt attention.

C. T. GAMBLE, Breeder of pure Berkshires in imp. sows. Young stock for sale. Registered pedigree.

GEO. GREEN, Breeder of pure Berkshires. Young stock for sale. Registered pedigree.

R. & J. GLENN, Breeder of pure Berkshires. Young stock for sale. Registered pedigree.

E. M. JARVIS, Ontario, Ont. Breeder of pure Berkshires. Young stock for sale. Registered pedigree.

J. & T. MACKENZIE, Breeder of pure Berkshires. Young stock for sale. Registered pedigree.

E. L. MARTIN, Breeder of pure Berkshires. Young stock for sale. Registered pedigree.

W. W. SMITH, Breeder of pure Berkshires. Young stock for sale. Registered pedigree.

JOHN SELLERS, Breeder of pure Berkshires. Young stock for sale. Registered pedigree.

J. G. SELLERS, Breeder of pure Berkshires. Young stock for sale. Registered pedigree.

R. H. TYLER, Breeder of pure Berkshires. Young stock for sale. Registered pedigree.

C. E. WHITNEY, Breeder of pure Berkshires. Young stock for sale. Registered pedigree.

SHEEP

HENRY ARKELL, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

PETER ARKELL, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

ROCK BAILEY, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

W. M. H. BLAIR, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

JOHN CAMPBELL, JR., Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

W. B. CHURCHMAN, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

G. & R. DODD, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

ANDREW EASTON, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

SMITH & SON, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

D. G. HANCOCK, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

D. HARVEY, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

JOHN JACKSON & SONS, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

KAINS BROS., Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

LAIDLAW & JACKSON, Breeder of pure Shropshire sheep. Young stock for sale. Registered pedigree.

W. M. OLIVER, Breeder and importer of pure Leicester sheep. Established forty years.

J. & J. SMITH, Breeder of pure Shropshire stock for sale.

W. M. SMITH, Breeder of pure Leicester sheep. Established.

A. TELLER & SONS, Breeder of pure Leicester sheep.

JOHN YOUNG, Breeder of pure Leicester and Southdown stock for sale.

POULTRY

B. MCKENRICK, Wyandotte, Plymouth, and Cuckoo. Eggs, 50¢ per setting. Guaranteed quality.

R. L. KRAVITZ, Breeder of pure Leghorns, Game, and Pekin ducks.

SHAR WYANDOTT, Breeder of pure Leghorns, Game, and Pekin ducks.

MILKING TUBES

PHILIP J. SHAR, Breeder of pure Leghorns, Game, and Pekin ducks.

LIVE-STOCK AUCTIONEERS

GEORGE ANDREW, Auctioneer of live stock.

E. A. M. GIBSON, Auctioneer of live stock.

Halliday Standard Windmills.

For supplying constantly pure and fresh water for the following purposes, viz:

- Pumping Water
- Hotels, Colleges
- Pumping for Railway Stations
- Fire Protection
- Irrigation
- Factories
- Boatworks
- Sewage Mills
- Drinking Fountains
- Washing
- Grinding Mill's



Agents and Dealers of **FIELD GRINDERS, HAYING MACHINES, IRON and WOOD PUMPS**, and a full line of Railway and Farming Machinery. Also, a full line of Agricultural Water Supply Materials.

ONTARIO PUMP CO., TORONTO, ONT. CANADA.

Agents Wanted to Sell Nursery Stock for the **LANSHIRE NURSERY**, Largest in Canada. Terms, Cash. For particulars address, **STONE & WELLINGTON**, Toronto, Ont.

SALESMEN WANTED!

To canvass for the sale of **NURSERY STOCK**. Steady employment guaranteed. **SALARY AND EXPENSES PAID.** Apply at once, stating age. (Refer to this paper.)

CHASE BROTHERS CO., COLBORNE, ONT.

If you wish to be on the list of a stock dealer, advertise in the **Live Stock Journal**.

ONTARIO VETERINARY COLLEGE

Patrons: Governor General of Canada and Lieutenant Governor of Ontario. The most successful Veterinary Institution in America. All the best teachers. Classes begin in October. Fees, \$50 per session. Apply to the Principal, **PROF. SMITH, V.R., EDIN., TORONTO, CANADA.**

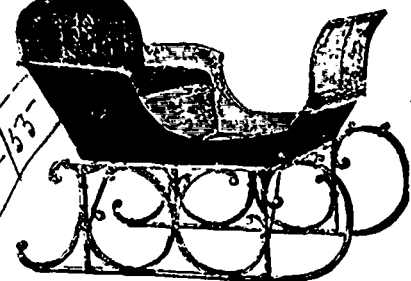
FATTENING. "The fattening is the one secret of financial success."

Foods that have been approved. **MANITOBA LINSEED CAKE.** UNRIVALLED FOR COWS, CALVES, HORSES, AND SHEEP. "Crushed," "Nuttet," Meal, Cotton Seed Meal, 1 lb. Nut Meal, Locust Beans, Call Meal (milk substitute). Large Lump Rock Salt - the most economical and only safe way to feed horses and cattle. Don't forget these when you add to ordinary food produced on the farm. You improve your live stock and enrich your land by feeding them **FERTILIZERS, ETC.** **Boyd, 27 FRONT STREET WEST, Toronto, Ontario.**

BOYS FOR FARM HELP!

The Managers of **DR. BARNARD'S HOMES** desire to obtain good situated farm laborers throughout the country for the boys they are sending out from time to time from their London Homes. There are at present nearly 1000 children in these Homes, receiving an industrial training and education, to fit them for positions of usefulness in life, and those who are sent to Canada will be selected with the utmost care, with a view to their moral and physical suitability for Canadian farm life. Farmers requiring such help are invited to apply to **MR. ALFRED B. OWEN, Agent Dr. Barnard's Homes, 204 Farley Avenue, Toronto, Ont.**

PORTLAND CUTTER



On **Armstrong's Tempered Steel Running Gear**. LIGHT, STYLISH, AND ROOMY. **THREE** had winter tests have doubly verified our claims regarding these gears, in all respects. Unbreakable under almost any circumstances. Easy draft in good or poor conditions. Will stand by actual test over 300 per cent. greater strain than raw steel, or iron and wood combination, and draw one-half easier; and **Runners** wear six times longer. Every Carriage Maker should handle them. Send for descriptive circulars, and reduced prices to the trade. **J. B. ARMSTRONG MFG. CO., Toronto, Canada.**

NEBRASKA SOIL!

THE RICHEST IN THE WORLD.

IMPROVED FARMS

FOR SALE. **BELLOWS & BELLOWS, WEEPING WATER, Neb.**

GERMAN CARP

Last year at \$3.00 per 100, or \$20.00 per 1000. **NICOLA SONS, Catarqui, Ont.**

FREE ... **W. FABUSH, Thomas, Ontario.**