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V. 12 # 3

# Canadian Live Stock Journal

Vol. XII. No. 3.

TORONTO, MARCH, 1895.

[WHOLE No. 136.

## Ingleside Herefords!

ANXIETY 4th and THE GROVE 3rd STRAINS  
 Choice young bulls of the above strains for sale.  
 Registered, and prices to suit the times.

**HORSES...**  
 Clydesdales and Hackneys.

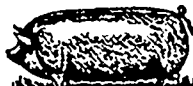
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 Improved Large Yorkshires and Red Tamworths.

All Stock Registered.  
 Prices to suit the times. Correspondence solicited.  
 Visitors Welcome.

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**H. D. SMITH,**  
 G.T.R. Station Ingleside Farm,  
 2 1/2 miles. 18: COMPTON, QUE.

## Oak Lodge Herd

Improved Yorkshire Swine.



Two hundred pedigree hogs of different ages, and of the correct type from the feeders standpoint. For Sale.  
 This herd has again secured FIRST PRIZES at Toronto Exhibition, and individuals sold from this herd have been prize winners at the principal Canadian shows. All stock guaranteed to be as described. Personal inspection solicited.

J. E. BRETHOUR, Burford, Ont.

## DOMINION PRIZE HERD PUREBRED

## AYRSHIRE CATTLE

RECORD FOR 1893

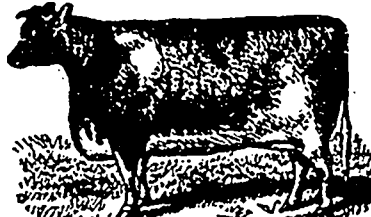
54 Prizes 54

37 FIRST II SECOND

WITH Gold, Silver and Bronze Medals  
 MONTREAL, TORONTO, LONDON AND OTTAWA

This herd has always taken the lead. they are of large size, and of good milking strains.  
**JAMES DRUMMOND & SON,**  
 Petite Cote, Montreal, P. Q.

**ARTHUR JOHNSTON,**  
 Greenwood, Ont.



Offers at moderate prices an extra good lot of 13 young Shorthorn bulls, mostly by Imp. Indian Chief, besides two imported two-year-old bulls, in finest show form. Also a choice lot of young cows and heifers.  
 A capital lot of young Berkshire sows for sale. 1895 Catalogues now ready. Send for one. Orders by letter filled promptly and with care.  
 Write for prices and particulars. "No business, no harm," is our motto.

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

537

## FOR SALE.

We now offer for sale (for the first time) our celebrated show bull AR115, P.H.E.R. 998 H.F.H.B. sire Prince of Artiz 229 (by Artiz 127), dam Netherland Peeress 2nd, by Prince Imperial. This bull has been exhibited at twenty-one exhibitions, and at these has taken twenty first prizes and one second. This is probably the best showing record of any bull on the continent. The prizes won are as follows: 1st, New England, '89; 1st, Albany, N.Y., '89; 1st, Providence, R.I., '89; 1st, New England, '90; 1st, Barre, Mass., '90; 1st, Brattleboro, Vt., '90; 1st, New England, '91; 1st, Providence, '91; 1st, Vermont, '92; 1st, New Hampshire, '92; 1st, Stanstead, '93; 1st, Montreal, '93; 1st, Toronto, '93; 1st, London, '93; 1st, Ottawa, '93; 1st, Stanstead, '94; 1st, Sherbrooke, '94; 2nd, Toronto, '94; 1st, London, '94. This bull is all right in every particular, and it is only sold to prevent inbreeding. He will be sold very reasonably.

Address **McDUFFEE & BUTTERS,**  
 Visitors Welcome Correspondence Solicited  
 189 **STANSTEAD, QUEBEC.**

## THORNCLIFFE STOCK FARM

I have on hand the best young Clydesdale Horses and Mares on this continent. Bred from the well-known sires, Prince of Wales, Darnley, Macgregor, Energy, Lord Montrose, The Ruler, Carruthan Stamp, Knight Errant, and other celebrities.



**SHROPSHIRE.**  
 Orders can now be booked for Shearling Rams, Ram Lambs and Ewes, sired by the celebrated prize-winning English ram, Bar None. Also rams and ewes of this year's importation.



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

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

**ROBT. DAVIES, PROP.**  
 237 P.O., TORONTO.

## 1864 HILLHURST FARM 1894

Oldest Stud of Hackneys in America

Having purchased Mr. T. W. Hector's entire Cottage Grove flock of the popular Dorset Horns, including Columbian prize winners, I am offering choice registered rams and ewes at low prices; also Shropshire shearlings of both sexes.



Shorthorn and Aberdeen-Angus Cattle  
 Dorset Horn and Shropshire Sheep

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

## H. CARGILL & SON, Cargill, Ont.

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## Shorthorn Cattle and Trotting Bred Horses

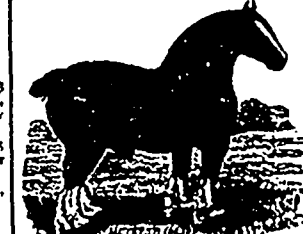


The herd was founded on the best animals attainable, both as to pedigree and individual merit, and no expense was spared to procure the choicest specimens of the breed, comprising the well-known Rose of Strathallan, Vry Queen, Duchess of Kent, and Isabella families. Imported Golden Drop bull Albert Victor - 5715 - (55230), and Imported Saladin, by Vice Chancellor (5668), now at the head of herd. A few choice young bulls and heifers for sale. For particulars, address

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The Most Celebrated Stud of **GLYDESDALES AND HACKNEYS** in Canada... is owned by

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

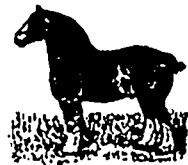
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—IMPORTED—

## Clydesdale and Hackney Stallions

FOR SALE.

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



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

**ROBERT BEITH & CO.,**  
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Bowmanville is on the main line of the G.T.R., 40 miles east of Toronto, and 29 1/2 west of Montreal.  
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## SHORTHORNS



For Sale, the imported Nonpareil bull, General Booth (54252), a good animal, active and quiet, red in color. Also a ten-month-old Matchless bull, and a few good heifers, at times prices.

Apply to **W. J. BIGGINS,**

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Holstein-Friesians and Tamworth Pigs.



We have great choice in young bulls ready for spring sale. Including the new sire, Prince of Artiz, winning bulls and Friesian dams. Will give bargains from now till spring in anything we have. Stock and pigs right. Ready to book orders for Tamworths of both sexes, of best quality and breeding. Prices to suit the times.

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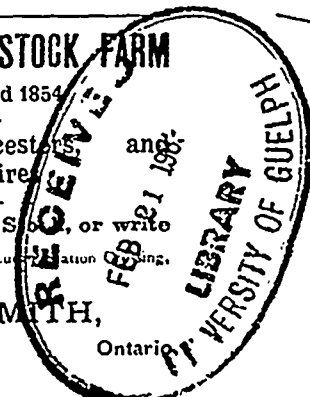
Established 1854

Shorthorn, Leicester and Berkshire

Come and see our Stock, or write  
 Stables, one mile west of Lupton Station, G.T.R.

**JAS. S. SMITH,**

Maple Lodge, Ontario  
 2060



SEE THAT OFF HORSE?



Only three weeks ago we began mixing a little of Dick's Blood Purifier in his feed and now look at him. I tell you there is no Condition Powder equal to Dick's. Am using it on the high one now.

Dick's Blood Purifier, 50c.  
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Dick's Ointment, 25c.

DICK & CO.,  
P.O. BOX 482, MONTREAL.

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THE Managers of Dr. Barnardo's Homes desire to obtain good situations with farmers throughout the country for bright, healthy little boys from ten to twelve years of age, who will be arriving from the London Homes in several parties during the present season. There are at present nearly 5,000 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

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Or write to manufacturer for catalogue and prices. We also manufacture Churns, Wringers, Mangles, and other household specialties, and want good agents in every county.

DOWSWELL BROS.  
Hamilton, - Ontario.

ONTARIO VETERINARY COLLEGE,  
Temperance St., Toronto, Can.

Patrons: Governor-General of Canada and Lieutenant-Governor of Ontario. The most successful Veterinary Institution in America. All experienced teachers. Classes begin on Wednesday, Oct. 17th. Fees, \$65 per session. Apply to the Principal,

PROF. SMITH, V.S., EDINBURGH,  
TORONTO, CANADA.

CHAMPION EVAPORATOR

For MAPLE SYRUP. Has a capacity for one bushel, doubling boiling capacity; small interchangeable syrup pans (connected by siphons), easily handled for cleaning and a perfect automatic regulator. The Champion is as great an improvement over the Cook Pan as the latter was over the old iron kettle hanging on a fence rail.

THE G. H. GRIMM MFG. CO.,  
HUDSON, Ohio, & MONTREAL, Quebec.

Have you read "Dairying for Profit," by Mrs. E.M. Jones, Judge of Butter at World's Fair, Chicago? If not, you miss a treat, which would save you hundreds of dollars. Only 50c. by mail. ROBT. BROWN, Agent, Box 324, Brockville, Ont., Can.



JERSEY COW MASSENA, PROPERTY OF MRS. E. M. JONES, Brockville, Ont., Can. 8,000 lbs. Milk, which made 654 lbs. Splendid Butter, all within her sixteenth year. My herd has won thirty medals—gold, silver, and bronze; over 400 cash prizes, besides diplomas, etc. Solid Silver Cup, value \$340, given at the Kellogg sale in New York for highest price on animals sold there; also Silver Tea Set at London, Ont., for three best Dairy Cows of any kind. Grandsons and granddaughters of this great cow for sale; also from Canada's Sir George, whose dam made 26 1/2 lbs. butter a week, and gave 57 lbs. milk a day; also from my Signal Bull, whose dam made 50 lbs 6 oz. butter a week on second calf. Chicago tests have proved the Jersey to be the farmer's best paying cow. MRS. E. M. JONES, Brockville, Ont., Can.

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If you want excellent returns write for particulars of our

GEM STEEL WINDMILLS  
GEM STEEL TOWERS  
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SAW TABLES, Etc., Etc.

We manufacture a full line of both pumping and Geared Windmills and the greatest variety of Pumps of any firm in Canada. Our Haymaker car and Patent Steel track is leading them all, and our prices are made to suit the times.

Ontario Wind Engine & Pump Co.  
387 Spadina Ave. - Toronto, Ont.



WILSON SCALES.  
Highest Award at WORLD'S FAIR.  
31 prizes in Canada.  
Special prices this month.  
C. Wilson & Son,  
131 ESPLANADE ST. EAST,  
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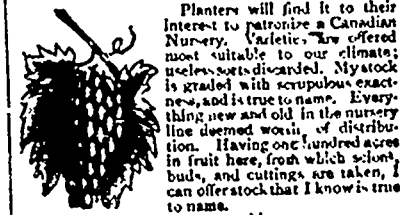
SHOEMAKER'S POULTRY ALMANAC

FOR 1895. It is positively the best work of the kind ever published. Others advertise the best (but they have not got it). If you want something that will do as you and it advertised here or even better, you will get it by sending your order to me. Write ALL your orders to me. C. G. Shoemaker, 131 Esplanade St. East, Toronto, Ont. It contains 100 pages, best paper, in color, photo engravings of the largest poultry fairs in the North and West. Also other fine engravings. Twelve illustrations of 42 of the leading varieties of New England fowls, with full description and prices of them, and eggs. Gives recipes for the best corn and Condition Powder, sure remedies for all known diseases of poultry, best plans with illustrations to build the best and most convenient Poultry House. Next to any other for its size, practical. Address C. G. SHOEMAKER, Box 61, Freeport, Ill., U. S. A.

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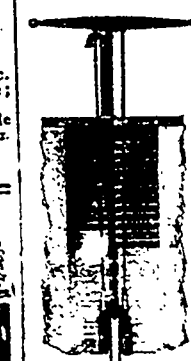
With the Improved Excelsior Incubator. Thousands in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other Hatcher. Lowest priced first-class Hatcher made. GEO. H. FAHLE, Quincy, Ill.

400 ACRES. FRUIT AND ORNAMENTAL TREES. 400 ACRES. GRAPE VINES AND BERRY PLANTS.



Planters will find it to their interest to patronize a Canadian Nursery. Varieties are offered most suitable to our climate; useless sorts discarded. My stock is graded with scrupulous exactness, and is true to name. Everything new and old in the nursery line deemed worthy of distribution. Having over a hundred acres in fruit here, from which select buds and cuttings are taken, I can offer stock that I know to be true to name. Agents wanted in every township.

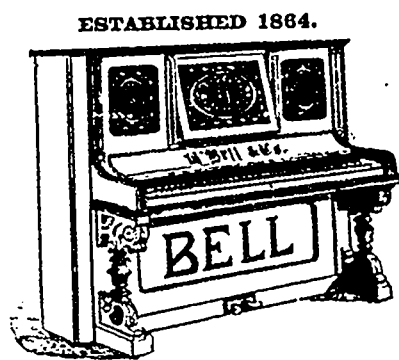
HELDERLEIGH FRUIT FARMS and NURSERY,  
400 ACRES IN EXTENT.  
E. D. SMITH, Prop., - WINONA, ONT.



Anderson's Double-Acting Force Pump.  
Pumping apparatus submerged, and constantly primed and lubricated, and cannot freeze; two rods connected to two cylinders do the work and balance each other so that there is no weight of rods to lift. Result, work reduced to minimum.  
Send for Circulars.  
J. W. Anderson,  
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THE BELL ORGAN & PIANO CO. (LTD.)  
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The "Business Guide," by J. E. Handford, of Osgoode Hall, is a complete Handbook of Legal and Business Forms. It tells all about notes, Receipts, Mortgages, Cheques, Drafts, Orders, Deeds, Wills, Leases, Contracts, Landlord and Tenant, Ditches and Watercourses, etc. It gives the Law on Pledging, Opening Letters, Line Fences, etc. It contains the Interest, Lumber, Grain and Wage Tables, also a Ready Reckoner and a Complete Exposition of the Great Swindling Scheme. In short, it is a Storehouse of Knowledge, and no farmer should be without it. Fourth Edition ready. Over 25,000 copies sold. Over 175,000 people have read it, and praised it. In 60 vols., 1200, 320 pages. Beautifully bound in cloth. Price, \$1.00 postpaid. Money promptly refunded if not satisfactory. Mention this journal, and address, J. L. NICHOLS & Co., Westley Building, 217-219 Agents Wanted, Toronto.

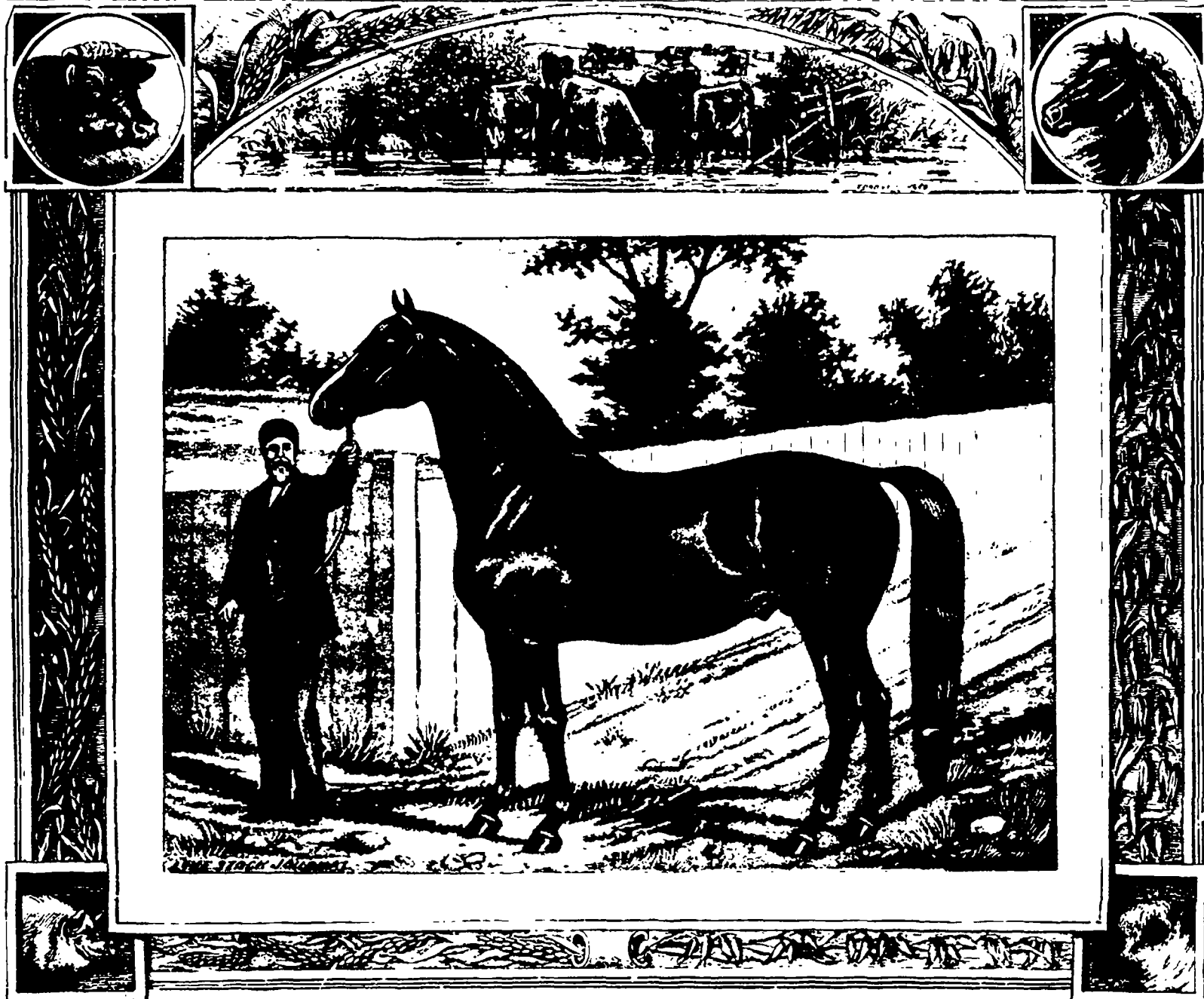
# THE Canadian Live Stock and Farm Journal.

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

Vol. XII. No. 3.]

TORONTO, MARCH, 1895.

[WHOLE No. 136



The Imported Thoroughbred Horse, Gascon.

The property of Mr. John Haig, Hoard's Station, Ont.

### Our Illustration.

The value of the Thoroughbred cross upon any of the light-legged breeds of harness and saddle horses has been proved time and again, while for crossing upon cold-blooded farm mares wonderfully good results have been obtained by the use of the Thoroughbred stallion.

The vast advantage gained by the introduction and service of Thoroughbred stallions in many of the best breeding sections of Canada has induced speculators to bring in inferior specimens, trusting to the reputation that the breed

has already obtained to insure their popularity. Fortunately, Canada has been favored by the importation of some of the best specimens obtainable of grand big Thoroughbreds of sufficient size and substance to insure utility in their offspring. Such a one we have the pleasure of presenting to our readers on our front page for this issue, on which is portrayed the imported horse Gascon, owned by Mr. John Haig, of the firm of Haig Bros., Hoard's Station, Ont. Gascon is a beautiful specimen of the Thoroughbred. A bright chestnut, standing 16 hands and  $\frac{1}{2}$  inch, and weighing 1,325 lbs.,

he is a horse of immense substance; he has  $8\frac{1}{2}$  inches of bone below the knee, clean, sinewy legs, and heavily muscled thighs and forearms, while his handsome form adds the finish to the picture.

Gascon was sired by Avontes, also a horse of grand size and substance. Avontes was by Trumpeter, a son of Orlando. Gascon's dam, Arrogance, was by Cellarius, a son of Fan dango; her dam, Mrs. Humby, was by Napier.

Some of the stoutest racing blood of England, therefore, courses through his veins, while his grand conformation should insure

his success as a hunter sire. He has already sired some beautiful colts since coming to Canada, which are now commanding top figures. Among these are a goodly proportion of capital saddle horses, while others are equally sought after for harness purposes.

Gascon has been twice shown at the Toronto Industrial, in 1889 as a three year old, and in 1890 as a four year old, winning second at both meetings, while at local shows he has never taken a second place. Horsemen will have the opportunity of seeing him at the Provincial Spring Stallion Show at Toronto.

## THE CANADIAN Live Stock and Farm Journal

PUBLISHED ON THE  
FIRST OF EACH MONTH BY

THE BRYANT PRESS,  
20 BAY STREET, - TORONTO, CANADA.

G. W. GREEN, . . . . . MANAGING EDITOR.  
F. R. SHORE, . . . . . STOCK EDITOR.

Representative for Great Britain and Ireland:  
W. W. CHAPMAN,  
Fitzalan House, Arundel St., Strand,  
London, Eng.

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Great Britain and other foreign countries, \$1.25 per annum in advance.  
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## The Household Companion

A monthly illustrated magazine, devoted to the ladies and young people of the household.  
Furnished to subscribers to THE CANADIAN LIVE STOCK AND FARM JOURNAL as a free supplement.  
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### Death of Mr. F. W. Stone.

On January 29th there passed away, in Guelph, at a good old age, one whose name is widely known, both on this continent and in the old country.

Born in 1814, at Barton-on-the-Heath, Warwickshire, England, Mr. F. W. Stone came to this country by way of New York in 1831, in company with the late Messrs. John and Thomas Arkell. He purchased a farm in Puslinch township, to which he made additions as time went on. In 1873 he sold to the Ontario Government the land on which the Ontario Agricultural College now stands, but continued farming the remainder till the day of his death, although himself living in town.

The deceased was well known as one of the first importers of purebred stock into Canada. In 1851, Shorthorns were brought over, followed, later, by Cotswolds, and in 1860 he commenced the importation of Herefords, of which breed he was, for many years, the sole breeder and importer in this country. Many descendants of his stock will be found in both Canada and the United States. Suffolk horses, Southdown sheep, and Berkshire and Yorkshire pigs were also imported by him. Mr. Stone had the respect of all who knew him, and he will be greatly missed in the community in which he resided. He leaves two sons and four daughters to mourn his loss.

### The Cold Snap.

It is some years since we have had such a severe and prolonged spell of cold weather as we had during the first few days of last month. For nearly the whole of one week the thermometer remained below zero all through the day, and the weather culminated on the Friday in a terrific blizzard, which drifted the snow, interrupted street car traffic, and blocked the railways all over the country. The blizzard was the cause of several severe railroad accidents, including one near Weston and another near Milliken, both of which were, unfortunately, attended with the loss of life, together with a great destruction of railroad property.

It is evident from the evidence brought out at the inquest that the regulations in force on the Grand Trunk as to the running of trains, especially during stormy weather, are insufficient to properly protect the lives of the passengers, and it is to be hoped that more stringent rules may be adopted in the near future. There have been so many disasters by sea and land during the first two months of this year that anything that can be done to avert the loss of human life should be carried out promptly and without grudging.

### Live Stockbreeders' Meetings.

The various purebred live stock associations have now all held their annual meetings, and it is possible to see from the reports how they have fared during the last year, which has been so full of depression. That they have felt the hard times goes without saying, but the reports are quite encouraging notwithstanding. They show that every economy possible has been practised, consistent with maintaining efficacy, and that the officers selected have done all in their power to further the interests of the breeds which they represented. To show how much such efforts are appreciated, we instance the case of Mr. R. Gibson, Delaware, who for four years has officiated as president of the Dominion Shorthorn Breeders' Association. At the meeting held last month he announced his intention of retiring in favor of some one else, although he would have been elected unanimously had he consented to stand again. In consideration of his services he has now been made a life member, and a presentation is to be made to him with a suitable address.

During his four years' term Mr. Gibson has been unflinching in his efforts to promote the Shorthorn cause wherever he found an opportunity, and to his energy and enthusiasm is due much of the success that has attended the cause. He has been succeeded by Mr. A. Johnston, Greenwood, who, as one of the executive and finance committees, has done much useful work. He will, no doubt, prove a worthy successor to Mr. Gibson.

### Railroad Regulations Regarding Live Stock

A question that was brought up at the meetings of breeders held in Toronto last month is one that is of importance to live-stock breeders. We refer to the regulation in force whereby the railroads compel breeders, who may be shipping single animals a distance of over 100 miles, to send a man in charge, making him pay half first-class fare to the destination of the animal, and full single fare on the return journey. Strong resolutions denouncing this course of action were passed by the various associations, and delegates were appointed to

interview the railroad committees to see if they would not withdraw the obnoxious rule.

We are sure that the railroads are not consulting their own interests by allowing this rule to stand. They often lose the freight on animals, especially on young animals, when a buyer comes from over 100 miles, because the seller finds that the cost of paying the fare of the man in charge to and fro eats up all the profit on the animal, and he often sells it a little cheaper to some one near by, as he is in pocket by so doing. In shipping older animals, of course, the bigger price obtained for these enable the seller to pay the charges, but still removes a big margin off the profits. Were there any necessity for sending a man in charge, we should not object; but as animals scarcely ever go wrong when shipped alone we fail to see the necessity for sending the man.

Another question brought up at the convention was the practice of railroads refusing to allow two men to travel with each car of cattle destined for exhibitions. It is simply impossible for one man to attend to such valuable stock when alone, especially when cows have to be milked; and, therefore, it is to be hoped that the remonstrances addressed to the railroad managers will have the effect of getting this rule reversed.

### The Provincial Spring Stallion Show.

At the annual meeting of the Clydesdale Association, held in Toronto last month, it was arranged to hold the show in connection with the Toronto Hunt Club on April 18th, 19th, and 20th. This is considerably later than usual, and will suit owners of stallions better than an earlier date, inasmuch as their horses will be able to start on their routes at once, if necessary. When the show was held earlier in the season, horses had to be fed up for it and then kept in idleness for a few weeks after show time, until the travelling season began, a state of affairs to which many owners strongly objected. This will now be avoided.

It is expected that the holding of the show in partnership with the Hunt Club will largely swell the gate receipts. The exhibition of "bang-tails," tandems, and fancy turnouts will in no way interfere with the showing of the stallions, as these will be in the ring at different hours. The use of the new drill shed has been obtained for the three days' show. This will be an enormous improvement on the old drill shed, where previous shows have taken place. We hope all breeders will unite to make this show a great success. Very liberal prizes are offered.

### American Clydesdale Association.

At the annual meeting of the above association, several changes were made in the board of management. The new board have since adopted a set of rules, which will shortly be placed in the hands of all interested, which will simplify and cheapen the registration of Clydesdales, so as to make it clearly to the advantage of all to keep their purebred horses recorded. Custom house certificates will be furnished to all Canadian breeders, which will entitle the horses described in them to free entry. Mr. Alexander Galbraith, Janesville, Wisconsin, who is now secretary, is well known to Clydesdale breeders, and every attention and assistance will be rendered by him to those who have business with the association.

### How to Obtain the Best Seed Oats Cheaply.

At this time of year we have always advertised, as a premium to those sending us in the names of new subscribers, one or more of the best and newest varieties of seed oats that have been tested in Canada. This year we have chosen the Lincoln and the Improved American as being two of the most satisfactory, and we have great pleasure in announcing that to any present subscriber who sends us in one new subscriber's name and \$1 we will send either half a bushel of the former or one bushel of the latter as a premium; while for each additional subscriber's name sent in accompanied by \$1, half a bushel of Lincoln or one bushel of the Improved American will be sent. The oats will be sent direct from the grower, Mr. John Miller, Markham, and no charge for bags will be made, but the receiver will have to pay the cost of carriage.

The Improved American oats, which were the first to be introduced, have been well tested in Canada, and have given great satisfaction, the yield being uncommonly large. The Lincoln oat was only introduced last year, and in spite of the unfavorable season did remarkably well. It is a white oat, very early, and has hitherto shown itself entirely rust-proof, standing up better than any other sort. Its thin hull, heavy meat, and soft nib make it a grand feeding oat, and for the same reason it is a first-class oat for grinding or making into oatmeal. One grower reports 38 stools to one root, and 250 kernels on a stalk.

In these hard times the above is the best method of getting a change of seed, and that of the best. Send in names early, so that you may be sure of seeing the oats.

### Spring Litters.

The price of pork is not as high as feeders would like to see it, but, still, a fair profit can be made from feeding and selling pigs at the current prices paid for pork and live hogs. There is also no immediate prospect of a further fall in prices, while many are looking for prices to advance somewhat in the near future. Those who take this view base their opinions on the reports to hand of the number of hogs to be found in the principal hog centres of this continent. While the numbers show an increase over the previous year, nevertheless there are not enough in sight for all requirements.

In view of all this, breeders would do well to look after their spring litters, and save as many of the young porkers as they can. Hundreds of young pigs are lost every year for want of a little care. Sometimes it is because there is no one present when the sow is farrowing, and, in consequence, some of the young pigs wander off from the mother's heat and get chilled. A great number are killed by the sows lying on them and crushing them. Much of this kind of mortality can be prevented by running a plank round the sides of the pen, about nine inches from the ground, under which the youngsters can retire when the sow lies down. Long straw also is responsible for engaging the weak pigs and holding them so that they get lain upon. For this reason many breeders prefer cut straw for bedding for sows at farrowing time.

Occasionally we hear of sows eating their young as soon as these are born. This may arise from two causes. Either the sow is a bloodthirsty one that does it from pure "cussedness," or, what is commoner, the



animal's appetite has become depraved, owing to constipation, and the pain and inconvenience cause her to attack her young. In the former case, it seems that nothing can be done, except either to feed off the sow, or, as some breeders do, to put whiskey in her food, when the owner perceives that she is about to farrow. This will keep her quiet until the pains of travail are over, when she will generally accept her young without any more trouble. In the second case, the remedy is to keep the sow's bowels open, by aperients if necessary, for a few days before she farrows.

While farrowing time and a couple of days after may be said to be the most dangerous period for the young pigs, there is still danger to be apprehended for them later on. The food given to the sow, as soon as she recovers her appetite, may be heating and unsuitable, and cause inflammation of her udder, which, in turn, will affect the young pigs; or these, when able to eat, may be fed too heating a ration. Thumps and other troubles will affect them, and the breeder who expected to raise a fine litter of pigs will find them dying off one by one. This is discouraging to the breeder; but, inasmuch as nearly all this mortality can be prevented by careful attention and intelligent methods, he should not despond, but resolve to try to obviate it in the future. He will find that he will be well repaid for all his trouble.

### Early Lambs.

There will be a good many early lambs dropped before winter—which seems to love to "linger in the lap of spring"—finally departs. The cold days, oftentimes accompanied by sleet and rain, that occur before spring finally makes up its mind to appear as very trying to the newborn lamb, unless a comfortable retreat has been provided for it and its mother until finer weather appears. These cold rains are, as most breeders know, very trying even to fully developed sheep, much more to young tender lambs. Unless, then, a breeder makes up his mind to give his lambs careful attention in the early spring, it would be far better for him to arrange to have his ewes drop their lambs later in the season, when the weather has become settled, as a lamb dropped when the mothers can get on the pasture will do better than one dropped earlier, which has had a check in its development and growth through exposure to stormy weather. Only those who give their flock careful attention should breed for early lambs.

### Improving Grade Swine.

This question is important in any country where much attention is given to the swine industry. The tendency of all breeding, where a constant vigilance is not exercised, is downward rather than upward. And even where close attention has been given to the work, and a distinct improvement has been effected in certain directions, it has been counteracted oftentimes by loss in other directions.

The tendency in swine-breeding was for a long time in the direction of a reduced size, and an over-refinement of the system. These results have been the outcome of a sincere search after easy-keeping qualities, and they were the penalty of carrying this search to an extreme. Easy-keeping qualities are desirable, but they are not everything. Size is

wanted; meat of a certain quality is wanted; a sufficiency of ruggedness is needed; strength of bone is wanted; and the property of prolificacy is very helpful. In fact, a combination of qualities is needed, and it should be the aim of the grower of swine to keep those in a happy equilibrium.

In handling grade swine, there are two ways of restoring lack of vigor, loss of size, and impaired breeding qualities. In carrying out one of these, we would select materials from similar blood. By the other we would infuse alien blood. Both methods have their advantages and disadvantages. Among the advantages of the former is the more perfect conservation of type, and of the latter the quickness with which improvement may be made. Among the disadvantages of the former are the length of time required in effecting the improvement, and the greater difficulty in finding suitable material for making it; and among the disadvantages of the latter are greater liability to a change of type, and a greater tendency to revert to undesirable forms.

When improvement is to be effected within the breed, that is to say through the continued choice of sires used in grading, let it be the aim to secure the improvement desired by a careful selection of sires. The sire should be strong where the females are weak. If they are small, he should be large. If they are lacking in stamina, he should possess it in a marked degree. If they are deficient in prolificacy, he should be chosen from a family possessed of this quality. If, on the other hand, the sow is long in body and leg, and not much possessed of smoothness, then use a short-bodied, compact, and smooth boar. In this way, the desired qualities are more and more obtained.

But we must not forget that stamina and vigor are largely the outcome of care and food of a certain kind. If we want to increase stamina or prolificacy we must not feed too much for fat, and we must give large liberty of exercise to both sire and dam. In this way these qualities will be largely increased, and, after a time, if the same line of breeding has been persevered in, they will have accumulated to such a degree that they will be possessed to the extent desired.

When improvement is sought through the introduction of alien blood, the work should be cautiously done at first, more especially when no experience has hitherto been gleaned with reference to the results of such a cross. If the breeding of the females has been of a mixed character, then we can calculate with no little certainty as to what the results will be. The progeny will bear a close resemblance to the sire. But, with high grade females, the resemblance will not be so strong. As soon as it has been ascertained that good results follow, then the cross may be made as freely as desired.

It is thus apparent that much watchfulness is necessary on the part of those who rear swine, even though the ultimate end sought is the meat product. It is well to have pigs that will grow freely, that will make a good use of the food fed, that will be adapted to the market, that will be ready for market at a convenient age, that possess a fair degree of stamina, and that breed freely and nourish their young handsomely. It may be said that this standard is a high one. It is, but it is not too high. It is by no means unattainable. Every swine-grower should aim at nothing less than what has been outlined, and, if he does so aim, and manages his work intelligently, he will certainly succeed.

### Take Good Care of the Lambs.

Farmers, take good care of the lambs. A lamb lost means that three or four dollars are lost, and, if a purebred, ten to twenty dollars; while, if a lamb is saved, these amounts are saved. The lamb crop is all-important in sheep husbandry. If that is lost, the profit from sheep husbandry is lost; hence it is all-important that the closest attention be given to the lambs.

It is not pleasant visiting them in the night, but sometimes it may be necessary, and that it may be done, when it is necessary, with the least expenditure of labor, an alarm clock should be kept to waken the sleeper. He can then sleep soundly, knowing that the faithful clock will stand sentinel while he is sleeping. It may be well to bear in mind that there is no necessity for waking up a number of the family by the sounding of the alarm. It can be made to do its work in another way. It may be put under the pillow. It will then most assuredly waken the sleeper without waking any one else, unless it be a companion who may share his bed.

It is well to see to it that the stove is well supplied with coal, before seeking rest, or, where wood is used, that a big chunk has been put into it which will keep the fire in. The boots should be left where they will keep warm, the lantern near at hand and ready to light, and the coat just where the hand can be laid upon it, even in the dark.

There is always danger, at the lambing season, that something may go wrong which the prudence of the owner may make right, or may go far to make right, and in this way to avoid loss. A young lamb may be too weak to take nourishment. If a little is drawn from the dam and given to it with a spoon, it may be saved. Where twins are produced, one may wander away while the dam gives attention to the other, and may perish, or she may disown it. At such a time, a record of the dates of service will be of great advantage, as it will then be known whether it will be necessary to visit the flock at night. Some may say that care is not necessary. Let those who think so take their way. We want our farmers to save their lambs.

Lambs are sometimes lost when they are several days old, and the reason why is not known. The farmer will sometimes go into the shed and find a lamb dead without any apparent reason. Now, this generally happens when the sheds are kept close, and when too many animals are kept in them. It is more likely to happen in the time of prolonged storms than at any other time. At such seasons the bedding gets damp, unless frequently supplied, and this also is probably associated in some sense with the loss of the lambs. Because of this, great care should be taken at such times. Ventilation should be admitted, if possible, during a portion of the time, and extra care should be taken to supply bedding often and plentifully. The vitiated air and the loss of exercise is probably responsible for the death of the lambs. The vitiated air hurts them both directly and indirectly, for it injures the milk of the dam.

It is important, therefore, to let the lambs have lots of fresh air. They should be allowed to get in the sun as frequently as possible. They should have access to yards with lots of bedding in them. To encourage them to take exercise some persons go the length of making spring-boards for them which they can jump from as they play. With lots of fresh air and sunshine, and plenty of nourishment, the lambs should do very well.

They are not likely to give trouble after they are two or three days old.

There may be some trouble, however, when they are first allowed to go to the field with the dams. If the weather is raw, and the ground is damp, they may take injury from lying on the same for any length of time. Ailments frequently arise from this source, which may end fatally. Some discretion, then, must be exercised with reference to turning out the dams at that season of the year.

In the time of cold rains, too, look out for the lambs. Dry cold does not easily affect a lamb adversely, but a cold rain will soon kill even a strong lamb if exposed to it. Even though exposure to cold rain should not cause death, it may cause serious injury through the shock given to the system.

In handling lambs, therefore, be sure to give them lots of liberty. Be sure to avoid all pampering, in the sense of keeping them confined and restricted in such a way as to render them delicate. By all means, keep them rugged, and more especially those which are to be kept for breeders. With those which are to be marketed ruggedness is not so important, but it will probably be found that even when the lambs are to be sold they will not give the best returns when reared as hothouse plants.

### The Pure Breeds of Cattle.

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

POLLED DURHAMS—THEIR ORIGIN AND HISTORY.

In one respect the story of the origin and history of nearly all the pedigreed breeds of cattle now in America is very similar. I refer to the obscurity which shrouds the origin of nearly every one of them, and to the meagre and oftentimes unsatisfactory character of the information bearing upon their early history. This is not true, however, of the origin and history of the breed now under consideration. The first volume of the American Polled Durham Herdbook is before the writer, and it is putting it mildly to say that it is a credit to the society under whose auspices it was prepared, and also to the men who prepared it. It traces, step by step, the progress of the work from the very beginning, and in all its stages. It commences at the fountain head of the various rivulets of effort, which gradually broaden into streams, and which at length come together to form what I believe is destined to be some day a broad and brimming river, which will overflow its banks, and in so doing will tend to enrich all the states and provinces on this continent through which it flows. The reasons for this belief will be given in the next paper, which will treat of the characteristics of Polled Durhams.

This new breed of cattle, or, as it may more properly be called, sub-breed, is entirely American in its origin. It is the product of the last half of the nineteenth century. It is the outcome of a spontaneous and independent desire to establish a breed of cattle which would have all the good qualities of Short-horns, without horns. This desire seems to have established itself in the minds of individuals living in various centres at one and the same time, as several of these Polled Durham moulders had been working for years without having known of the very similar work that was being carried on in other centres by other workmen. The pioneers in this work were Dr. W. W. Crane, Tippecanoe City, Ohio; Salem R. Clawson and Peter Shafor, Hamilton, Ohio; J. F. and A. L.

Burleigh, Maron, Illinois; and W. S. Miller, Elmore, Ohio. Z. T. Dunham, of Dunlop, Iowa, had also been working for many years essentially on the same lines, but he was not one of the charter members of the association. Other breeders soon became enamored of the work, notably J. H. Miller, of Mexico, Indiana, whose accession to the ranks has been a tower of strength to the American Polled Durham Breeders' Association. He is now its secretary and treasurer, and also editor of the herdbook. But the valuable historical matter contained in the same is from the pen of Dr. W. W. Crane.

These pioneer breeders worked essentially on the same lines, with some variations in their methods. They sought to establish herds essentially possessed of Shorthorn characteristics, but without horns, and, if possible, with stamina and milking properties in advance of the average Shorthorn.

To reach this end, they selected the native muley cows as the foundation on the side of the dams, and almost invariably bred these and their progeny to pure recorded Shorthorn bulls for several generations. In some instances as many as five or six crosses were made in this way before males were chosen from the progeny to fix permanently the properties thus acquired. To show the persistence with which Shorthorn blood was thus used, it may be mentioned that when, in 1891, Mr. J. H. Miller purchased Dr. Crane's entire herd, every animal in it had over ninety-three parts of pure Shorthorn blood. In some instances polled bulls were used in the second or third generation, and then recourse was again had for a time to Shorthorn blood. The persistent rejection of all males during the earlier generations on the part of nearly all the breeders, whether with or without horns, and the prompt rejection of all females with even the semblance of horns, have made the work tedious and toilsome, but the fruits of effort are now being richly enjoyed by those faithful workmen in the success which has crowned their efforts.

The American Polled Durham Breeders' Association was organized in Chicago in 1889. Only eight persons were concerned in the initiatory steps that led to permanent organization. The membership at the present time numbers forty-seven, and Polled Durhams are now kept in at least five states of the Union. They are most numerous bred in Ohio, Illinois, and Indiana.

The following are among the essential requirements to entitle Polled Durhams to registration: (1) They must be at least one year old. (2) They must be hornless. (3) They must have the color and markings characteristic of the Shorthorn. (4) They must have not less than 75 per cent. of Shorthorn blood, and where there is a remainder of blood, not Shorthorn, it must be in part or all of the old native muley strain. With the lapse of years, the standard for entry is raised, so that in this new amalgamation Shorthorn elements will soon make up nearly all the constituents of the alloy.

But while this interesting work was thus going on in the formation of a new breed, other elements came into the hands of the workmen. It so happened that, in 1881, Oakwood Gwynne 4th, bred by Col. W. S. King, of Minneapolis, dropped twin heifer calves, when in the possession of Mr. H. W. McNair, of Minneapolis. They were named respectively Nellie Gwynne and Mollie Gwynne, and were sired by 7th Duke of Hillhurst 34221. Both were hornless. In 1883, Oakwood Gwynne 4th dropped a hornless bull calf, re-

corded as King of King 87412 in the American Shorthorn Herdbook. The heifers also are recorded in the same. These, together with some others, were secured several years ago by Mr. W. S. Miller, of Elmore, Ohio, and formed the nucleus of what is now a splendid herd of hornless Shorthorns, paradoxical as the term may sound. These are all recorded in the Shorthorn and in the Polled Durham Herdbooks. Dr. W. W. Crane has also set to work to establish another branch of hornless Shorthorns upon a Kentucky foundation.

The first volume of the American Polled Durham Herdbook contains 504 entries, of which 185 are bulls. So rapidly has the pure hornless Shorthorn branch increased that at the present time fully one fifth of all the animals on record are of this class.

#### Canadian Shire Horse Association.

The Shire horse-breeders of Canada held their seventh annual convention at the office of Mr. H. Wade, Toronto, on February 5th, with the president, Mr. John Gardhouse, in the chair. The report of the secretary-treasurer showed that the finances were in a satisfactory state. The election of officers resulted as follows: President, John Gardhouse; vice-president for Ontario, H. N. Crossley; for Quebec, J. V. Papineau, Barnston, Que.; Manitoba, Henry Munn, Brandon; Prince Edward Island, George Tweedy, Charlottetown; Northwest Territories, Dr. C. J. Bush, Grenfell. Directors: James H. Smith, Highfield; George Garbutt, Thustletown; John Duncan, River View; Valentine Ficht, Oriol; William Mullen, Hillsburgh; Robert J. C. Wardlow, Downsview; and Robert Mackness, Tullamore. Auditor, G. W. Green, Toronto. Delegate to Central Farmers' Institute, George Garbutt; Industrial Exhibition, H. N. Crossley; Western Fair, Valentine Ficht; Spring Stallion Show, J. Gardhouse.

#### Holstein Breeders' Meeting.

The annual meeting of the Holstein-Friesian Breeders' Association of Canada took place at the Albion Hotel, Toronto, on February 5th, and was attended by a goodly number of members. Among those present we noticed Messrs. A. C. Hallman, New Dundee; H. Bollert, Cassel; R. S. Stevenson, Ancaster; A. Rice, Curries; W. G. Clemons and A. Clemons, St. George; W. G. Ellis, Deer Park; A. Hoover & Son, Emery; J. H. Patten, St. George; S. Shunk, Sherwood; A. McCaugherty, Streetsville; W. McClure, Norval; Wm. Armstrong, Locust Hill; J. A. Line, Sherwood; and C. H. Curtis, Newmarket.

In the absence of the president, the chair was taken by Mr. Bollert.

The treasurer's report stated that twelve new members had joined during the past year; that the receipts were \$883.95 and the expenditure \$584.20, leaving a balance on hand of \$399.75. The number of bulls registered to date was 795 and 1,259 cows, while transfers of 270 bulls and 337 females had been made.

The election of officers resulted as follows: President, T. W. Charlton; 1st vice-president, H. Bollert; 2nd vice-president, R. S. Stevenson; 3rd vice-president, A. C. Hallman; 4th vice-president, R. Marshall; secretary-treasurer, W. G. Clemons; auditors, W. Suhring and J. H. Patten; directors in place of the two retiring, W. Shunk and A. Rice.

Considerable discussion took place on the question of printing the second volume of the herdbook, and it was finally decided that it should be printed during the present year. The president and Messrs. Bollert and Stevenson were appointed as a committee to superintend the work. Toronto was selected as the place of meeting for next year.

Messrs. Bollert, Stevenson, Hallman, and Shunk were selected as inspectors of imported cattle, after which the following list of delegates to the principal shows was drawn up: Toronto, Messrs. Ellis and Shunk; London, Messrs. Crump and Johnson; Ottawa, Messrs. Fletcher and Lakes; Montreal, Messrs. Butters and Gilroy; Winnipeg, Messrs. Young and Glennie; Brandon, Messrs. Marwood and McNaught.

Judges were also chosen for the fairs: Toronto, Messrs. Van Ree-or, Cobleskill, N.Y.; J. D. Hineckley, South Brookfield, N.Y.; H. D. Warner, Powling, N.Y. Other exhibitions, Messrs. Stevenson, Hallman, McCaugherty, Shunk, Clemons, Crump, Charlton, and Bollert.

The following new members were approved of by the meeting: R. S. Park, Whitewood, N.W.T.; W. J. Young, Emerson; John Buckland, Cottam; Sydney Macklin, White-lav, R. Willis, jun., Glenmeyer; P. Allin, Little Britain; L. P. McDuffee and W. H. Butters, Stanstead, Que.; J. H. Loucks, Smith's Falls; Jos. Stratford, Brantford; Gregor McIntyre, Renfrew; James Glennie, Portage la Prairie; C. H. Curtis, Newmarket; A. Hoover, jun., Emery.

It was decided to offer the same amount of money at Toronto as last year for the special milk and butter prize, provided that the same conditions were observed. As regards the prizes offered for fat cattle, Holsteins or Holstein grades, it was unanimously decided that no special prizes be offered for these, but that the association would duplicate any prizes won by Holstein or Holstein grade cattle in the class open to all breeds.

A vote of thanks was passed to the Industrial Exhibition Board and the American Holstein-Friesian Association for voting money for the milk test last year.

It was moved by Mr. Hallman, seconded by Mr. Ellis, "That the association co-operate with other breeders' associations with a view of securing the cancelling of the present railroad regulation, which compels breeders shipping single animals over 100 miles to send a man along with them, charging him half first class fare, and full single fare return. Also to try to get the railroad companies to permit two men to travel free with each carload of exhibition stock, and that the secretary be instructed to forward a copy of this resolution to the Grand Trunk Railway and the Canadian Pacific Railway managers."

A motion was also brought in by Mr. Ellis and passed, approving of all the arrangements for cattle at the Industrial Exhibition with the exception of that for the supply of straw for bedding, which was lamentably insufficient, a change in the method of supplying which was much desired.

#### Dominion Ayrshire Breeders' Association.

At the eighth annual meeting of the above association, the following, among others, were present: Messrs. William Stewart, jr., Menie, president; W. W. Ballantyne, Stratford; James McCormack, Rockton; R. G. Steacy, Lyn; Joseph Yuill, Carleton Place; W. M.

Smith, Fairfield Plains; John Crosby, Campbellford; F. W. Taylor, Wellman's Corners; Thomas and F. C. Guy, Oshawa; H. E. Eyre, Harlem; J. Crawford, Brown's Corners; George Fulton, Fulton's Mills; H. Wade, secretary.

The secretary's report stated that the second volume of the herdbook had been issued, containing the pedigrees of all animals recorded to 1894. During the past year the registration had been 321. The receipts had been \$163.89, and expenditure \$156.55.

The president read a very interesting paper on the "Points of an Ayrshire Cow." In the discussion that followed about the value of a good escutcheon, several of those present thought that it was a valuable point when found in connection with other good points.

Mr. Joseph Yuill read an account of a test that had been conducted at the New Hampshire Experimental Station over a period of twelve months with Ayrshires, Jerseys, Holsteins, and Shorthorns, wherein the Ayrshires had made butter at a considerably less cost of feed than the other three breeds.

In the discussion that took place on the subject of framing a new standard for Ayrshires, Mr. Stewart advocated the one that was described in the December number of THE JOURNAL. It was decided to frame a new standard, and for that purpose a committee was appointed, composed of Messrs. Stewart, Guy, Yuill, McCormack, Kains, Wade, and Ballantyne; and it was also resolved that they correspond with the Quebec association, to see if they would co-operate with them in this matter.

Mr. Yuill brought in a resolution, which was passed, that this association co-operate with other associations to endeavor to secure the abrogation of the regulation in force on the railroads, which requires that, when single animals are shipped a distance over 100 miles, a man must go in charge, as also the one that precludes two men travelling with each car of stock intended for exhibition. A motion was also carried that the delegates to the Industrial Exhibition try to obtain more and better prizes for Ayrshires at that show.

A resolution of condolence was passed to the widow and family of the late Mr. David Nicol, of Cataract, Mr. McCormack speaking in high terms of the deceased and of his services to the association.

The election of officers was then proceeded with, and resulted as follows: President, Mr. W. W. Ballantyne, Stratford; vice president for Ontario—Mr. H. E. Eyre, Harlem; Quebec—Mr. W. C. Edwards, North Nation Mills; Manitoba—Mr. George Steele, Glenboro; Northwest Territories—Mr. C. H. Manners, Moosomin; British Columbia—Mr. W. Wells, Chilliwack; Nova Scotia, Mr. C. H. Archibald, Truro; P. E. Island, Mr. C. C. Gardner, Charlottetown; directors, Messrs. Joseph Yuill, James McCormack, William Stewart, jr., R. G. Steacy, John Crosby, Thomas Guy, W. M. Smith; auditors, G. W. Green and W. Thompson; delegates to the Industrial Fair, Messrs. W. W. Ballantyne and William Stewart; to the London Fair, Messrs. Kains and Ballantyne; to Ottawa Fair, Messrs. Joseph Yuill and J. C. Smith.

The following judges were recommended for the shows: J. Yuill, Carleton Place; John McKee, Norwich; W. L. Carlyle, Chesterfield; J. G. Clarke, Ottawa; J. H. Findlay, Beachburg; J. C. Smith, Hintonburg; J. P. Campbell, Vernon; W. Hyslop, Smith's Falls; P. S. McLaren, McGarry; Alex.

Drummond, Petite Côte; D. Drummond, Petite Côte; M. Ballantyne, St. Marys; H. G. Clark, Brampton; A. Kains, Byron; J. McCormack, Rockton; H. E. Eyre, Harlem; W. Stewart, jr., Menie; J. Crosby, Campbellford; Wm. Hunter, Lancaster, W. M. Smith, Fairfield Plains; R. G. Steacy, Lyn; T. White, Branchton; A. Hume, Burnbrae.

A resolution that it be an instruction to judges not to take dehorning into consideration as a blemish in judging Ayrshire stock at the fairs was lost by one vote.

Mr. Yuill favored clippers for dehorning, while Mr. Stewart preferred the saw, as the clippers sometimes crushed the bone of the horn and left the horn sore. A vote of thanks to the retiring president concluded the business.

#### Clydesdale Breeders' Meeting.

At the annual meeting of the Canadian

Clydesdale Breeders' Association, held at the Albion hotel, Toronto, on Wednesday, February 6th, the following members were present:— Messrs. R. Davies, president; R. Graham, Claremont; R. Beith, M. P., Bowmanville; D. & O. Sorby, Guelph; J. Davidson, Ashburn; D. McCrae, Guelph; R. Shaw Wood, London; G. W. Clemons and W. A. Clemons, St. George; W. Smith, M. P., Columbus; R. Miller, Brougham; J. D. Howden, Whitby; J. Vipond, Brooklin; A. E. Major, Whitevale; Peter Christie, Manchester; A. Doherty, Ellesmere; J. Alsop, Glasgow; James Allan, Marsh Hill; J. Duff, Rockwood; Peter Stewart, Parkhill; James Burns, Rockwood; John Clayton, Peepabun; V. Ficht, Oriel; James Burns, Greenbank; Joseph Watson, Greenbank; Heron Bros., Ashburn; H. Wade, secretary-treasurer.

The treasurer's report showed that registrations during 1894 had fallen off, there being only 147 recorded, as against 293 the previous year. Volume 8 of the record will be printed and sent out. At the last annual meeting the standard that was changed for 1894 was again changed to read as formerly, that "A Canadian-bred Clydesdale for exhibition purposes shall not have an imported mare in its pedigree."

The secretary read the correspondence that the Minister of Agriculture at Ottawa has had with the Treasury authorities at Washington with reference to the recognition of our registers by the custom-house officials, in which he has not been successful. Mr. Miller thought that the only way to succeed in this matter was to offer reciprocity. The American

Clydesdale Association deny that they brought any influence to bear on their government to exclude our studbook.

The president brought up the proposition of the Toronto Hunt Club before the meeting in regard to the spring show. The club offer to pay two-thirds of the expenses if they are allowed two-thirds of the receipts, the Clydesdale Association to pay the other third and to receive one-third of the receipts. This was agreed to, and April 18th, 19th, and 20th were selected as the dates for the show.

Mr. Miller drew attention to the fact that the American Clydesdale Association intend offering \$500 in prizes for geldings and mares at the next Chicago Fat Stock Show, the geldings to be purebred or grades and the mares grade. The association desired Canadian breeders to co-operate with them and make the show a success by sending over their best horses. He thought that high-class

#### Polled Durham Cow, Lorena No. 73.

The accompanying illustration represents a cow of a breed of which not much is known in Canada, but a history of which, by Prof. Shaw, appears in another column. She is a typical specimen of a Polled Durham cow, and was bred by Dr. W. W. Crane, Tippecanoe City, Ohio. She is now five years old, and was sired by Aaron, who has the honor of being No. 1 in the Polled Durham herdbook. The picture was taken from a photograph, and is a correct representation of her as she appeared last June.

Lorena, the subject of our illustration, has five crosses of Shorthorn blood in her veins. She has been exhibited every year, and has bred regularly, having produced three calves during the last three years. She is a deep, solid red, and is one of the deep-fleshed, short-legged kind, with great scale, the build that is now so much sought after.



The Polled Durham Cow, Lorena No. 73.

Bred by Dr. W. W. Crane, Tippecanoe, Ohio.

geldings would soon be selling for good figures.

The following officers were elected: President, Robert Davies, Toronto, for a third term; vice-president for Ontario, Robert Beith, M. P., Bowmanville; vice-president for Quebec, Robt. Ness, Howick; vice-president for Nova Scotia, Col. Wm. Blair, Nappan; New Brunswick, A. S. Murray, Fredericton; Prince Edward Island, Hon. James Clow, Murray Harbor; Manitoba, John E. Smith, Brandon; Alberta, J. A. Turner, Calgary; Northwest Territories, J. M. McFarlane, Baljennie; directors, D. Sorby, Guelph; John Davidson, Ashburn; Geo. Cockburn, Baltimore; Thos. McMillan, Constance; Robt. Graham, Claremont; and J. Vipond, Brooklin; auditor, David McCrae, Guelph; delegate to Farmers' Institute, D. McCrae; to Industrial Exhibition, Wm. Smith, M. P., Columbus, and John Davidson; Western Fair, E. W. Charlton.

This cut appeared, without name, in the first volume of the American Polled Durham Herdbook, over the title of "A Typical Polled Durham Cow."

#### Dominion Shorthorn Breeders' Convention.

The ninth annual meeting of the Dominion Shorthorn Breeders' Association convened in Shaftesbury Hall, Toronto, on Friday morning, February 8th, at 11 a.m. Owing to the stormy weather and the consequent cancelling of trains, there were not as many present as usual. Mr. R. Gibson, Delaware, president, occupied the chair, and among those present were Messrs. A. Johnston, Greenwood; J. Russell, Richmond Hill; J. I. Hobson, Mosboro; C. M. Simmons, Ivan; F. J. Patten, St. George; D. D. Wilson, Seaforth; J. Hunter, Alma; T. F. Robson, Ilderton; F. Birdsall, Birdsall; Val. Fitch, Oriel; Ed.

Jeffs, Bond Head; W. W. Ballantyne, Stratford; W. J. Biggins, Clinton; H. Wright, Guelph; J. Hobson, jr., Mosborough; W. Linton, Aurora; W. G. Pettit, Burlington; H. Smith, Hay; R. Miller, Brougham; J. W. Gardhouse, Highfield; A. J. C. Shaw, Thamesville; Geo. Johnston, Ashburn; A. W. Smith, Maple Lodge, and others.

After accepting the minutes of the last meeting and the report of the Executive Committee, which showed the affairs of the association to be in a satisfactory condition, a vote of thanks was passed to Mr. Wade, the secretary, for his valuable history of Shorthorns in Canada, which has been included in the successive volumes of the herdbook, and which has been brought up to date in the last volume issued.

Mr. Hobson then moved a vote of condolence to the wife and family of the late Mr. F. W. Stone, Guelph, in which he expressed

the sense of the association of the services rendered by the deceased to the live-stock interests of this country.

The president gave an excellent address. He said that the Shorthorn interests of this country were in a peculiar position at the present time, owing to depreciation of value. No breed, however, is better suited for a general purpose breed. The association had held its ground very well, compared with what others had done. Shorthorns, owing to their good qualities, would ever be to the front. Times of depression serve to bring out the true value of a breed. Inbreeding is valuable, but must be practised with caution. Breeders should not

pin their faith to any one family, but should breed for the animal, and not for pedigree. The dairy business was very prosperous, and, judging from what Shorthorns did in that line in England, there was a great field for them in that branch of farming in this country. He returned the association his heartiest thanks for having elected him to the presidency for four successive years.

The secretary read the correspondence that had passed between the Minister of Agriculture at Ottawa and the Treasury Department at Washington on the subject of the latter recognizing our record books on the frontier when purebred stock are being sent into the United States, which showed that they refused to do anything in the matter. After some discussion a committee, consisting of Messrs. Gibson, Johnston, and Wade, was appointed to confer with other associations, to see if anything further could be done in the matter.



A motion was passed that \$10 be paid to the Dominion Cattle Breeders' Association to assist them in their work.

The only paper read was one by Mr. R. Miller, Brougham, which was very well received. He discussed the question so often asked at the present time, "Are Shorthorns as good as they used to be?" which he answered most decidedly in the affirmative. He went further, and brought forward good proofs that they are a good deal better than they ever were. A vote of thanks was passed to him for his excellent paper.

The following are the officers for 1895: President, A. Johnston, Greenwood; vice-presidents, James Russell, Richmond Hill; Hon. D. Ferguson, M.P.P., Charlottetown, P.E.I.; J. H. Ladner, Ladner's Landing, B.C.; James Cochrane, Hillhurst, Que.; Josiah Wood, M.P., Sackville, N.B.; Malcolm McInnes, Calgary, Assa.; Prof. George Lawson, Halifax, N.S. Executive Committee: Edward Jeffs, Bond Head; T. Robson, Herton; H. Smith, Hay; R. Miller, Brougham; John I. Hobson, Mosboro; W. J. Biggins, Clinton; J. L. Cowan, Galt; James Tolton, Walkerton; William Linton, Aurora; F. I. Patten, St. George; D. D. Wilson, Seaforth; H. Wright, Guelph; John Isaac, Markham; W. G. Pettit, Freeman; C. M. Simmons, Ivan; delegates to Industrial Exhibition, Hon. John Dryden, Brooklin; John I. Hobson, Mosboro; delegate to Central Farmers' Institute, J. M. Gardhouse, Highfield; delegates to Western Fair, R. Gibson, Delaware; C. M. Simmons, Ivan.

It was unanimously resolved to present a suitable testimonial to Mr. Gibson, on his retirement from the presidency, as a small token of his great services to the association, and he was also made a life member.

#### Prizes for Clydesdale Grades.

At the annual meeting of the Canadian Clydesdale Horse Association, Mr. Robert Miller, Brougham, vice-president of the American Clydesdale Association, announced to those assembled that the latter society would, at the next Chicago horse show, offer valuable premiums for grade Clydesdales.

We have since received from Mr. Miller a circular issued by the association, which calls on all breeders of Clydesdale stock to prepare for the event, and do their best to make the show a success.

The following are the premiums offered:

##### TEAMS IN HARNESS.

First Premium.....	\$200 00
Second ".....	150 00
Third ".....	100 00
Fourth ".....	75 00
Fifth ".....	50 00

##### SINGLE MARES OR GELDINGS SHOWN TO HALYER.

First Premium.....	\$100 00
Second ".....	75 00
Third ".....	50 00
Fourth ".....	30 00
Fifth ".....	20 00

Teams should in no instance weigh less than 3,200 lbs., must have good feet, be sound in every particular, closely matched in size and conformation, and be well groomed and properly harnessed. An entrance fee will be charged. The circular adds that such teams can be sold in Chicago for \$450 to \$600 a team. Here is a chance for some of our Clydesdale breeders.

#### Canadian Hackney Horse Association.

At a special meeting of the directors of the Hackney Horse Association, held in Toronto on February 21st, there were present: Mr. R. Davies, president; Mr. R. Beith, first vice-president; Mr. James Cochrane, second vice-president; and Messrs. John Kent, Toronto; Robert Graham, Clarendon; H. N. Crossley, Rosseau; Geo. H. Hastings, Deer Park; John Holderness, George Pepper, and Robert Bond, Toronto. Mr. H. N. Crossley, Rosseau, was appointed a delegate to confer with the Agriculture and Arts Association in regard to arrangements for the spring horse show. A resolution was passed granting \$30 out of the treasury for a sweepstakes at the spring horse show for the best Hackney stallion of any age; also \$30 for the best high-stepping gelding or mare, sired by a registered Hackney stallion. To this the Agriculture and Arts Association have added a second prize of \$15.

#### Toronto Industrial Exhibition.

At the annual meeting of the Industrial Exhibition Association on February 12th, there was a large attendance of members. The following were present in the interests of live stock and farming: Messrs. Jas. Russell, Richmond Hill; R. Davies, Toronto; Thos. Teasdale, Concord; Dr. A. Smith, Toronto; H. N. Crossley, Rosseau; H. Wade, Toronto; W. G. Ellis, Toronto; Capt. Rolph, Markham; John Gardhouse, Highfield; W. H. Pugsley, Richmond Hill; Thos. A. Duff, Toronto; J. W. Wheaton, London.

The financial report showed a balance of profit from the last exhibition of \$5,078. This amount, however, as well as \$4,379 from the year before, was required to meet interest on the amount borrowed to erect the new horse and cattle sheds.

The question of erecting new sheep and swine pens was brought up by Mr. Wade, and the new board will approach the City Council at once on the subject, as, by the agreement between the city and the association, the former is bound to maintain all the buildings in proper condition. The speakers were all agreed on the immediate necessity for new pens. Ald. Hallam announced that he would give \$75 in prizes for wool at the next exhibition, the terms of competition to be arranged by Mr. D. McCrae, Guelph. He hoped the board would supplement it with a similar amount. The president also announced that Mr. Geo. Keith, Toronto, had agreed to offer a prize of \$50 for the best Shorthorn cow and two of her progeny.

Mr. J. W. Wheaton, London, on behalf of the Western Dairymen's Association, spoke in terms of approval of the accommodation given by the association to the cheese exhibit last year. He thought, however, that a Canadian judge should be appointed this year in place of an American one, as the standards for cheese in that country were not the same as here.

The exhibition will be held, this year, from September 2nd to 14th.

#### Description of Ayrshire Points.

Read by Mr. W. STEWART, JR., Menie, at the Ayrshire Breeders' meeting.

In judging cattle of any description reference must always be had to the characteristics of their breed. Thus, while all cattle are judged by certain undeviating standards as

respects feeding and growth, beef cattle must be judged from a beef making standard, and dairy cattle from their milk producing powers. It is more than probable that, weight for weight, the Ayrshire cow, being of medium size, will produce more milk than any other breed. In selection, no surer test can be had than a careful study of her points.

##### USEFULNESS.

The usefulness of the dairy cow is in her udder, and towards the udder, its shape and its yield, all the capabilities of the cow should be directed. We must first look upon it as a reservoir for the milk. As such, it must be large and capacious, with broad foundation, extending well behind and forward, with distinct detachments, broad and square; viewed from behind the sole, broad and level, the lobes even-sized, the teats evenly distributed, the whole udder firmly attached with skin, loose and elastic. Such a form gives great space for the secreted milk, and for the lodgment of the glands, while allowing for the changes from an empty to a full vessel. The glands should be free from lumps of fat and muscle, and be well set up in the body when the cow is dry, and loosely covered with a soft and elastic skin without trace of flabbiness. Such a covering allows for expansion when the animal is in milk, while the glands are kept in proximity to the blood vessels that supply them. The necessities of the lacteal glands are larger supplies of blood from which milk can be secreted, and this harmonizes with the demands of the udder as a storehouse; for broad attachments mean a broad belly or abundance of space for the digestive organs, from which all nutriment must originate. The blood is furnished to the glands of the udder by large and numerous arteries. As secretion depends on the freedom of supply of blood to the part and a copious flow, we find branches coming from different arterial trunks and freely communicating with each other, although their arteries are internal and out of sight. Yet, fortunately, the veins which carry the blood from the udder pass along the surface, and, by their size and other characteristics, indicate the quantity of blood, not only which they carry away, but which must have passed through the glands from the arteries. These return veins pass both backward and forward; those passing forward are known as the milk veins, and the size of these superficial veins on either side of the belly, and the size of the orifices into which they disappear, are excellent points to determine the milking possibilities of the cow. Still better is it to find, in addition, veins in the perineum, which also return from the udder, prominent and circuitous.

##### ESCUTCHEON.

The escutcheon is now generally conceded to be a good indication of milk in a cow; this mark is sufficiently well known not to require description in detail. I think a broad escutcheon is fully as good a sign as a long one, and that quantity or quality mean more than shape. I would not, nevertheless, discard the shape entirely. One error must, however, be avoided. It may be well to compare the size of the escutcheon of cows of one breed, but never to compare the size of the escutcheon of cows of different breeds. I think this point means more in relation to its size in the Ayrshire than in the Holstein, and am certain that, while it may be safe to follow it in the Ayrshire in the majority of instances, it would be equally unsafe to adopt it in selecting a Shorthorn, for the obvious reason that that breed has been bred for generations for other purposes than those of the dairy. The udder and its dependen-

cies, the milk veins and the escutcheon, may be considered the foundation of the Ayrshire cow. These points are important, and also the shape of the body and the form of the animal. The milk vessel is placed in the public region of the cow, and is protected on either side by the hind limbs. The breadth of its attachments secures breadth of body, and the weight requires also a depth of quarter and of flanks; the breadth below requires breadth of hip above, and the length of loin here appears related to the length of the pelvis. So much for the physical portion. The physical function of milk producing demands a great and continuous flow of blood, so to speak. This flow depends on the supply of food and the facilities of digestion. To gain this a large body is required in order to hold the suitable digestive organs. To gain further room for these, we desire to see arched ribs, depth, yet no heaviness of flank, and breadth of hips, which we see was also required for the broad udder. To sustain this body, a strong, firm back is needed to gain the most of our blood after it has absorbed the chyle from the digestive organs. Reasons show that it should find its way freely and speedily through the system on its labors of supply and removal, cleanse itself in the lungs and again pass on to its duties. All this points to a healthy heart, not cramped, and lungs of sufficient capacity, for the yield of milk drains much nutriment from the system, and the constitution must needs have the vigor given by a healthy and active heart and lungs; in this way the chest is correlated with the udder. The reproductive functions require hock bones of good size, and a broad pelvis is desirable, as underlying within are the generative organs, and any defects here are to be shunned. Thus the necessities of the body of a good milking cow require the wedge shape, and this not only from the flanks, but also when viewed from above.

#### Are Shorthorns as Good as They Used to be?

Read by Mr. ROBERT MILLER, Brougham, at the Dominion Shorthorn Breeders' meeting.

The above question is so often asked that, perhaps, no paper that I might read here to-day would be more interesting to a majority of the Shorthorn breeders in Canada than one attempting to answer it.

Men new in the breeders' ranks and young men are not the ones who ask this question, but many who have had long years of experience ask it, and proceed to answer in the negative and defend their belief. While this may work no harm, as I believe it is always better to speak out on matters of interest to the majority, yet I think it would be a source of satisfaction to all who have the interests of the breed at heart if they were convinced that Shorthorns are not only as good but better than they used to be, and we may learn a good lesson by looking back in comparing and figuring how to avoid mistakes and repeat successes in the future.

When conversation turns to Shorthorn subjects, and flows in a retrospective channel, Queen of Athelstane, Rosedale, Violet's Forth, and Butterfly's Duchess are sure to be mentioned, together with an equal number of bulls that were prominent in the same days, and we hear the statement that no such cows and bulls are seen now. We are all free to admit the excellence of those animals, but is that the test that is to be applied? If so, we should merely have to compare the showyard animals of the distant past with those of the

present, and I am sure this test would not prove any cause for dissatisfaction with the results attained. The great cows mentioned above stood out pre-eminent above their competitors. Those that won before their day were not so good; those that won immediately after were not such shining lights. We can only, then, in justice to the present time, compare the best with the best of that time. Havering, Nonpareil, Isabella, and Rose of Strathallan and may fairly be called stars of the present decade, and, while it is unnecessary to say that they were better, they were certainly in every way as good. In their showyard career they were surrounded by large classes that were worthy competitors, and they showed their superiority by being able to breed on, each having produced winners to perpetuate their names.

We do not hear the other classes discussed by those who had such a delightful impression made on their memories by the queens of the past, not because they would willingly do an injustice, but because no other classes of those days charmed them as the matrons did, and it is from this lack of memory that the present suffers in comparison.

Can any breeder remember seeing such classes as our yearlings and calves have made in the past five years in Toronto? Even if a person were prejudiced, no must be the answer. But the claim might be made that the classes were small then because the breeders were few, so I will venture to say that the first-prize winners of twenty years ago could not compare with the winners of the present.

The bull classes of the present decade have also furnished animals superior to those shown years ago, and this can be accounted for partly by the best being imported or purchased by those who exhibited to nearly as great an extent as years ago—which practice is not followed to as great an extent in females as formerly—and partly from the improvement made by our own breeders. There are not as many professional showmen now as in years past, men who searched the Shorthorn world for the best regardless of cost, and many of the foremost breeders take no part in the showyard contests; thus many of the choicest never appear in public, and those retained and shown by their breeders necessarily appear in a limited area.

While the showyard records cannot be ignored for the purposes of comparison, yet they do not supply the only means of judging between the present and the past.

A few good animals do not make a herd, and it is in the general excellence of the whole herd that the value lies. Where all the animals are good, scientific breeding and good judgment are bearing fruit, and this is where the Shorthorns of the present day completely overshadow those of the past, in their uniformity of smoothness, growth, constitution, and general character. Breeding Shorthorns, like the breeding of other classes of domestic animals, has been reduced to a science, founded on the principle that like begets like. If the form that is to be begotten is honestly inherited, two animals whose ancestors were not like each other, and not like the offspring when mated together, could not be relied on to produce of their own kind, and, while the product might be an extraordinary good animal, it would just as likely be extraordinarily bad. Such mating would not be according to approved or scientific methods, but would be haphazard or chance breeding, and this is the kind of breeding to which can be attributed many of the phenomena of the olden times. They were produced by accident, and

they towered so high over their brothers and sisters and mates in the herds that we were impressed to such a degree that their companions were overlooked or forgotten.

When two animals were mated, one being of a very good type, but, perhaps, small, the other being of great size and not so smooth, the progeny might embody the finish of the former and the extreme size of the latter, an accident in breeding, but still a great show animal.

A male and female might be mated that were of the same size and form, but their ancestors were of all imaginable shapes and sizes. The calf might take its form from a grandam on the one side and its size and gaiety or style from a grandsire on the other, and be a wonder, but, after all, only an accident. Such an animal cannot breed on; thus we can account for many of the best individuals being absolute failures in the herd.

A male or female of abnormal size, such as are often found in great winners, could not possibly be descended from a long line of ancestors such as themselves, so that they could not be expected to produce their own kind. They are accidents in breeding, and their work will be haphazard and full of chance.

Breeding on the advanced methods of the present day has produced the uniform classes of our great exhibitions, and it has produced our uniform herds, not in a short time, but after many years of perseverance, with our ideal clearly before us. The animals composing those classes and our herds having been bred, in a majority of cases, from such as themselves can be relied on to reproduce; and while we may not always produce a show animal, we can confidently depend on never producing a really bad one. While it is unnecessary to deny that many of the old-time animals were grand, it would be impossible to deny that a great proportion of the purebred cattle were no credit to the name, and if the latter were bred without intention the former must, to a great extent, have been accidental as well.

Let us, then, take encouragement from the fact that the general excellence of our present-day herds is far beyond that of those that were in existence during what is termed the palmy days of the cattle trade, and that, if we have made such improvement in the past, it is within our power to go on improving. Let each and every one lend their assistance to that end, for, like the attempts to reach the north pole, the nearer we come to our idea the greater are the difficulties to be overcome; but unlike them in this, that every step forward is a material benefit to mankind.

#### The Present Position of Horse Breeding in Great Britain.

In an address before the Edinburgh University Agricultural Discussion Society, Mr. Macneilage, secretary of the Clydesdale Horse Society, gave an address on the present position of horse-breeding in Great Britain, with special reference to Clydesdales. The address is too long for us to reprint in full, but we give portions of it, which we think will interest our readers, as it will show the class of horses in demand over there. After referring to the importation of van and harness horses from Canada and the United States, which, from inquiries made, he finds give very fair satisfaction, although he condemns the heavy draught horses imported from here as being too light and lacking stamina,

he thus writes on the homebred draught horse.

"It will be observed that we are discussing commercial horses—those which fill the position in the horse world occupied by cross-bred or butchers' cattle in the bovine race, or wethers amongst sheep. Breeders whose aim is the spring bull sales, or the autumn ram sales, select very different animals as the dams of their stock from gentlemen who are only aiming at supplying the store market with good, useful animals which will take on flesh and mature rapidly for the butcher. The universal and only sure method of improving any class of commercial stock is by improving the character of the breeding stock of the country. It seems necessary at the outset to make this important distinction, as many are disposed to overlook it. Commercial stock may be bred either within breed lines or by crossing; which method gives the more meritorious animal is matter of debate; the speedier results, as a rule, are got by crossing. Examples of this are to be found in crossbred cattle, whether these be blue-grays from the Shorthorn to the Galloway, blue Polled from the Aberdeen-Angus and the Shorthorn, or animals like Queen of Spades from the Hereford and Aberdeen-Angus amongst cattle, and half bred sheep or cross-bred wethers amongst the thousands of our sheep tribes. The most conclusive demonstration of the value of a pure breed is to be found in the success of its crosses. There would be no Irish hunting horses were there no English Thoroughbred sires. There could be no half-bred sheep without the Border Leicester tup and the Cheviot ewe, or cross-bred wethers without the Border Leicester tup and the Blackface ewe; and the breed which produces the sire or dam is always more valuable than its cross. The way to abolish commercial sheep would be to obliterate the breed distinctions of the race from which they spring; and the way to abolish blue-gray cattle would be to breed indiscriminately from them and abolish the distinctions between Shorthorns and Galloways, just as the way to wipe out the Buchan Hamies and the Angus Doddies was to proceed on the lines which were being followed in the northeast of Scotland when William M'Combie rose up and stood in the breach to save the breed, the distinctive character of which was a necessary element in the creation of the best crossbred cattle in the world. To apply all this—if, as we believe, the shortest way to produce the best commercial heavy draught horse in the world is to cross the Shire mare with a well-bred Clydesdale horse—it is indispensable that the distinctive characteristics of both breeds be preserved, and therefore that both breeds be kept distinct. It is stated, on undoubted authority, that the blood of a red Galloway cow flows in the veins of one of the best tribes of Shorthorn; it is alleged that there is a strain of extraneous improved blood in the veins of some of the best Aberdeen-Angus cattle; it is certain that there is Clydesdale blood in the veins of some of the best and most successful Shires, and not less certain is it that there is a strain of Shire blood in many of the best Clydesdales. But in spite of all this, the man is obviously crazed who says that there is no distinction between a Galloway and a Shorthorn, or that the Aberdeen-Angus is not a pure and distinct breed; and not less mentally blind or prejudiced is the man who asserts, on the grounds stated, that Shires and Clydesdales are without breed distinctions. We have the same evidence that they are distinct as we

have that the Thoroughbred and the Hackney are distinct; we have the evidence of our eyes, and it is just because they are so that, when crossed, the produce—when good—is very good, and takes the character of the more impressive and stronger blood—the Clydesdale—as witness the stock bred by the late Mr. Drew by the Clydesdale sire out of Shire mares. These were truer to the Clydesdale type than to the Shire type, or they could not have won so uniformly in Scottish showyards, and been so uniformly taboored in English showyards. To take two concrete examples. Prince of Avondale was very unlike his Shire dam. If he had been like her, he never would have gained a prize in Scotland. When an Englishman got the opportunity of judging him, as at the Royal Norwich in 1886, he would have put him down low, and this in the season when many Scottish judges thought he should have been first at the H. and A. S. show, Dumfries. Premier Prince, after he was three years old, was no favorite in Scotland. He stood second for the Glasgow prize in a weak class, in 1885, but that was his last appearance in the north. For several years thereafter he was winning prizes in the south. He took after the characteristics of his dam's race, although not of herself. Enough has been said on this branch of the subject; it was needful to guard our position in view of some obvious attempts to misrepresent it, and to confuse things which essentially differ.

"Heavy draught horses for street work are scarce. This seems paradoxical, but unfortunately it is true. The horse market is glutted, and prices are demoralized, but yet the horses which the contractors wish to buy are scarce, and have been scarce for the past ten years. 'Within the past few years,' says Messrs. Wardie & Co., 'it has been more difficult to obtain the heavy lorry horse in the Scottish markets, and for a heavy horse, sound, with good legs and feet, a large price can always be got. There can, we think, be little doubt that the purebred Clydesdale is not the most suitable horse for street work; a horse with the good qualities of the Clydesdale, supplemented by the weight of the English horse, is what we contractors, as a rule, prefer. Our Scottish farmers need to buy big, roomy, English mares for breeding purposes, and, in our opinion, if they continued this larger supply of suitable horses, heavy enough for town work, could have been reared by our home farmers. Such a type of horses has been so difficult to get of late years that we have been compelled to buy a lighter stamp of horses to go in pairs, and go to English markets for heavy horses. The Clydesdale studbook has been set down as the cause of Scottish farmers no longer buying big English mares, of which no recorded pedigree could be had. We think there is some truth in this.' These words fairly represent the ideas entertained by contractors on the character of our homebred horses as they are. Writing of commercial horses, we are not concerned to defend the policy of the Clydesdale Horse Society in this connection. Undoubtedly the studbook was the means of stopping the indiscriminate importation of Shire mares from the south, and passing the off, or at least their produce, as Clydesdale. If it had not been for the studbook, it would never have been acknowledged that they were not Clydesdales, and therefore the interest of the Clydesdale Society and its studbook has been altogether in favor of international honesty and the maintenance of the truth between man and man.

(To be continued.)

## Notes From Great Britain.

(By Our Own Correspondent.)

During the last month or so a very great deal has been heard of the vast and increasing depression in agriculture at home. The state into which the agricultural interest has drifted is, indeed, most deplorable, and one which requires speedy and efficacious remedies. What is to be done none seem to know. Prices of all kinds of farm produce are very low indeed; in fact, some have reached a level never reached before. All manner of remedies are suggested, bi-metallism, protection (only here this word is used covered up in any or every possible disguise), fair trade, etc., etc.; but to the sober, steady-minded Englishman there is really, after all, but one thing to do, *i. e.*, to stick to work, work at home as the colonial brother does, keep the best stock, produce the best, and then, as our brothers elsewhere get a living, so shall we here at home. As I said at the commencement of this article, a very large amount of attention has been recently called to the depression in agriculture, the chief reason being that the Central Chamber of Agriculture sent out circulars to all its affiliated societies and asked each to report its affairs in its own district, etc.

I have seen some of these reports, and hope in future to give a digest of them, but for the present I would bring to your readers' notice a quotation from the Lewes (Sussex) Farmers' Club Report. It is as follows: The returns of a farm, called here a cow and sheep farm, of about 800 acres, a large lot of it being down:

	Prices made in 1883	1893	Loss as compared with '83
Corn sold	\$9,750 00	\$3,945 00	\$5,735 00
Flock (including wool)	3,490 00	2,650 00	830 00
Total	13,270 00	6,605 00	6,665 00

This example shows clearly a very heavy loss of practically 50 per cent., and it is to be noted that it is almost entirely caused by the fall in price of corn, *i. e.*, wheat and oats. The question of cattle is not included, because the receipts are just about the same.

Another quotation for a similar farm for twenty years' time, after taking all receipts into consideration, shows a debit of \$9,205.00 in 1893, as compared with 1873. Can it be wondered at, then, that our farmers are complaining? These two farms are both said to be well farmed; if so, then must not the case of bad farmers be infinitely worse?

We are having here a spell of arctic weather now such as we have not experienced for years.

Fancy here in England 8 to 10 degrees below zero! It is without exception a most trying time for all our stockbreeders. Lambing reports up to date are very good. Dorset Horns have done well; they came down before the weather turned cold. Hampshire Downes have also done well. Southdowns and Shropshires are now in full swing, and as far as we have heard they are doing well, as are also Suffolks and Oxford Downes; but there is always the question as to what the position will be after the frost goes. One can certainly only fear grave results; for turnips, left out here, as they are, in the fields, will, in all probability, rot, and, as all other feed must be very backward, it will lead to great shortness of keep. Another evil to be feared is that when vegetation returns it will be rapid, and then, unless the stockmaster is very careful, lambs and ewes will die off by dozens from scour, etc., caused by rotten roots and forced growth of tops, etc.

Plenty of dry food will be needed, and great care will have to be exercised to prevent this.

Lord Belper disposed of a large portion of his celebrated stud of Shire horses on January 23rd, 1894. A very good demand existed, and a grand average made for forty-eight head of \$565.

For brood mares \$1,000 was the highest price, and for three-year old fillies \$1,600.

The bi-annual sale of a draft from the stud of H. R. H. the Prince of Wales at Sandringham brought together a very large and influential company. His Royal Highness has been a very large buyer of all the best and most fashionable strains of blood during the past, and, as is well known, whatever is undertaken on His Royal Highness' behalf has to be done well. The sale was a very successful one in every way. Fifty head, in all, were offered, and the average was \$596, as against \$567 for forty-one at the last sale in 1892.

The highest prices for brood mares was \$2,100, for four-year-old mares \$755, for three-year-old fillies \$425, for yearling fillies \$225, and for yearling colts \$775.

The demand for both Clydesdale and Shire stallions of first-class quality is very great, and very high prices have been asked and obtained. \$12,500 is recorded as having been realized by one Shire stallion.

The cattle trade has been fairly brisk, and we are informed that several large herds of note are likely to come to the hammer during the year. The demand for all kinds of purebred stock is good, and our breeders are constantly being reminded by the continued succession of orders of the fact that every year continues to prove the fact that English farmers must in the future, more than in the past, keep, breed, and produce nothing but the best, for it is here that the world comes now, and will come in the future, for the replenishment of purebred sires and dams of all kinds.

## Special Stock Reviews.

## Messrs. Haig Bros.' Jerseys.

Quite convenient to Hoard's station, on the Belleville and Peterboro Branch of the Grand Trunk Railway, are situated the extensive farms of Messrs. Haig Bros. In addition to the beautiful Thoroughbred stallion, an illustration of which we have the pleasure of presenting to our readers in this issue, this firm have formed the nucleus of what promises to be a successful herd of Jerseys. To head the herd, they have selected the handsome yearling bull, Dr. Logie, sired by Judge of St. Lambert, dam Myrtle of Logie. Frolic of Oakdale, rising three years, is a beautiful Jersey cow that has abundance of promise for the future, and so also has Jersey Girl, by Halowell. Both of these have produced more than ordinary merit, of which we hope to have more to say during some future visit. At all events, Messrs. Haig Bros. have started out on the lines which insure success; all that is required is a little time.

In the stable we found a number of exceedingly useful farm horses, amongst which were a handsome pair of mottled dappled grays, that have never yet failed to carry off the red ticket, they having been at every show of any importance in that part of the country.

## Mr. Ketcheson's Jerseys.

Among the breeders who have become convinced of the excellencies of Jerseys is Mr. D. H. Ketcheson, Menie, Ont. While his herd is not large at the present time, still he has been careful to select only animals of good breeding and performance.

The bull at the head of the herd is Thaley's St. Lambert 23715, whose sire was Rene of St. Lambert 20345, and his dam Thaley (imp.) 14599. He was purchased from that well-known breeder, Mr. W. A. Reburn, St. Anne de Bellevue, Que. Two cows were purchased at the sale of Mr. A. Jeffrey, Toronto. They are Lutra St. Helier 35140 and Woodflower 35534. There are also some younger females, including three nice heifer calves.

A flock of Shropshire sheep is also kept. Mr. Ketcheson started the foundation of this in 1887, and now has a flock of twenty-five or more. They trace to

ewes imported by the late Mr. H. H. Spencer, while the ram in use was purchased as a yearling from Messrs. John Miller & Sons, Brougham.

Nor are we neglected on this farm, and one sow which we saw in the pens was suckling a fine litter at the time of our visit. She was bred by Mr. J. Bonnycastle, Campbellford, Ont.

## Neldpath Farm Stock

Leaving Toronto on the early train, we reached Stratford at noon, and found Mr. W. Ballantyne awaiting us. We should soon have covered the milk or soot distance between the city and the Neldpath Farm had it not been for the numerous pitch holes to be found in the road, which were deeper and more frequent than we had ever before seen. We arrived at the farm, however, in due time, and, after partaking of dinner, called forth to see the cattle.

As is well known, both Shorthorns and Ayrshires are kept on the farm, but, as advertised in another column, the whole herd of Shorthorns is to be sold without reserve on Wednesday, March 13th. We first looked over the Ayrshires. Of the importation last made the best cow is Daisy of Auchinbain. She has been milking for a long time, but, even as it is, her udder shows what she can do, while her narrow shoulder, wedge shape, and full milk veins are further proofs of her ability at the pail. In addition to this she has, in common with the rest of the herd, plenty of depth of body. Flecky of Auchinbain has, apparently, the best udder of the lot, as it runs further back and forward. She is the mother of the bull calf purchased by Messrs. Kains Bros., Byron. Her mate, Denty 7th of Auchinbain, was put ahead of her at Stratford last fall, but we preferred Flecky. Kirsty of Auchinbain is not much inferior to those mentioned, and has a fine show of udder. Among the younger stock, we noticed a beautiful heifer calf from Daisy of Auchinbain, four yearling heifers in calf, which were a very even lot, and a bull calf from Flecky of Auchinbain.

Of the stock bull, Beauty Style of Auchinbain, we cannot speak too highly. He is by Style For Ever, and comes from a dam that gives 72 lbs. of milk a day. He is a lengthy bull of good quality, and smooth throat, and has a splendid shoulder, neck, and head.

The Shorthorns to be disposed of will be found a very serviceable lot. They are in a nice, healthy breeding condition, but not excessively fat, and being of the best blood, cannot fail to sell to good advantage. The first we saw were two heifers just under the year, Missie of Neldpath 15th and 14th, both good ones, but the former especially so. She is very level, has a good skin, straight flank, and neat head; while her quarters are also exceptionally nice. Indian Princess, a yearling by the well known bull, Indian Prince, out of Princess Royal 21st (imp.), is a mossy-coated thing with a fine front, good top and bottom lines, while her hind-quarters are of the best. Her mother, Princess Royal 21st, is not big, but is good, and has proved herself a great breeder and a milker, looking fresh in spite of her age. A grand old cow of great depth is Missie of Neldpath 12571, and of a fine old family.

Looking at Marchioness 6th, one would consider her of too beefy a type to be a milker, and yet she is giving at the present time over 40 lbs. a day. She was one of the Shorthorns that were entered for the World's Fair Dairy test. The Marchioness family are known for their milking qualities, and the representatives of it in the herd should be eagerly sought for by dairy men. A daughter of the above cow, Marchioness 8th, is also a grand milker, nor are some of the Missies far behind. Missie of Neldpath 14th is one of the best milkers in the herd, and a great breeder as well. The Missies are also good show cattle. Missie of Neldpath 6th was only shown one season, and won 1st at London and 2d at Toronto. The stock bull is Scotsman 18587, one of the last of the get of Hampton Hero. He is now two years old, and, though only in moderate condition, weighs 1,700 lbs. He has a model head, horn, and neck, 20 ribs well, is well ribbed out, good in the tail, and level in the flank. There are three young bulls fit for service to be sold. Probably the best is Heir of Neldpath 20572, a very deep, thick lull; 5th Marquis of Neldpath 20775 has a stylish head and horn, and is of the stamp of a dairy Shorthorn. He is out of Marchioness 8th. A number of useful heifers, some of them by Indian Prince, were to be seen. One of the best is Marchioness 11th. The calves are all by Scotsman, and are of a good solid color. These will be sold with their dams.

## Mr. Wilson's Shorthorns.

Returning to Brampton, we spent the night with Mr. William Wilson, who also intends selling out of Shorthorns. Wednesday, March 13th, has been selected for the date of the sale. Mr. Wilson has a number of well-bred cattle, some of his own breeding, others purchased from Mr. Hugh Thomson, St. Marys, and other breeders. Of the young bulls for sale most of them are by Hampton Hero. One of the best is Home Range, a roan, out of Edmont, one of

Mr. Wilson's best cows, and a good milker to boot. Her sire is of the Duchess of Gloster family, and she has a particularly good red heifer calf in one of the pens that should be purchased by some breeder that intends exhibiting this fall. This calf has a splendid back, lengthy, full quarters, and a great front. Home Range has good width behind and level lines, and is a capital handler. Next to him comes Salem Hero, out of Salem Duchess 3rd, a red that promises well, but who is excelled by a full brother a year younger.

The stock bull is Bold Briton, a yearling roan purchased from Mr. John Isaac, Markham. His sire is Golden Prince, and he is out of a Mina cow. He has a good top line, nice loin and rib, handles well, and is wide across his buttocks. A Wimple cow, purchased from Mr. Joseph Redmond, Peterboro, is one of the kind so much sought for, being tidy, low set, and compact, but we preferred for usefulness Rose of Kentucky 11th, a fine cow carrying a lot of flesh. She was purchased at Mr. Ackroyd's sale, and has a good heifer calf at foot. A two-year old roan heifer, Rosie Saxon, also from her, and sired by Royal Saxon, gives promise of making a fine cow. Among the younger heifers we noticed one by Mr. A. Johnston's stock bull, Indian Chief.

Mr. Wilson has been breeding both Berkshire and Yorkshires, but has determined to keep only the former. He will, therefore, offer at his sale a lengthy, even Yorkshires sow that was purchased from the Ontario Agricultural College. She was sired by Premium of Oak Lodge -605-, and her dam was Dunfield Maid (imp.) -164-. The Berkshires are of Mr. Snell's breeding, as is the flock of Cotswolds kept.

## Spring Valley Farm Jerseys.

A short distance from Mr. Wilson's farm is that of Mr. John Puffer, who has a select herd of Jerseys, both purebreds and high grades. Mr. Puffer was, unfortunately, not at home at the time of our visit, but from his son we got all particulars. The stock bull is Yankee Pogie, by 100 Per Cent., out of Yankee's Dream (imp.). He was purchased from Mr. Robert McCullough, Brampton, and is of Mr. Valancey Fuller's breeding. Although showing signs of age he still remains a good stock-getter, and his stock are much sought after. The two best purebred cows in the herd are Hugo's Delight, by King of Peel, out of St. George's Heroine, which has tested 55 per cent. of butter fat, and Spring Valley's Pride, a daughter of Black Diamond's Queen. The latter is now dry, but gave by test when a two-year-old 185 lbs. of butter in a week. She has fine milk veins and is of a rich color, while the former has the true dairy shape and a good skin, with a fine udder when in milk. Orange Dinah, by Orange Carlo, dam, Rubano Star, was another purchase from Mr. McCullough. Her udder is of the thin kind, not overburdened with flesh. She has a daughter in the herd, Dinah's Surprise, by 5th John Bull. There was also a nice smooth yearling heifer, by Yankee Pogie, out of Hugo's Delight, solid fawn in color.

The Jersey grade cows kept are a business lot. The best one is Queen, rightly so named, for she has made 121 lbs. of butter on ordinary feed, and her milk tests 65 per cent. of butter fat. A two-year-old is also a good milker. Nearly all the grades are young cows. There were two very promising grade heifer calves in a pen, one of them from Queen, by Yankee Pogie, and a choice bull calf by the same sire from Orange Dinah.

Mr. Puffer has lately entered into the breeding of Tamworth pigs. His first purchases were a very good eight months old boar from Mr. John Bell, Amber, and a young sow from Mr. H. Wilkinson, the latter being from stock purchased at the Ontario Agricultural College sale. Among the swine we saw a very superior lot of pigs by a Tamworth boar out of a sow that was half Yorkshire and half Suffolk. The progeny resembled the Yorkshire most, and were, without exception, white.

## The Home of Cornelia Tensen.

Close by Churchville station on the Orangeville branch of the C.P.R. is the farm of Messrs. Smith Bros., Churchville, owners of the famous Holstein cow, Cornelia Tensen, which has a record of 14,184 lbs. of milk in ten months, and of 19 lbs. of butter in one week. During a recent visit we found the old cow still looking thrifty and vigorous, although nearly in her eleventh year. It must be a matter of satisfaction to her owners that they have two such good descendants of hers in Flossie Tensen and Lillie Tensen, which bear considerable resemblance to the mother, especially the latter, and they also perform well at the pail. The aim of Messrs. Smith has been not only to breed cows that give a good allowance of milk of a high quality, but also to have them with plenty of depth and not too long in the leg. That they have succeeded well in this is evident when one looks carefully over the herd.

The first cow that we looked over was Hijke 2nd, whose butter record stands at 18 lbs. in a week. She

is a good show cow, and won third at Toronto and second at Montreal in 1893, the only times she was ever shown. The oldest cow in the herd is the great Siepkje, who comes next to Cornelia Tenen as regards her milk record. Next in order of production is Peel Queen, a fine cow, with a nice udder, and whose milk veins run forward further than those of any other cow that we have seen. Daisy Teake is a square-built cow, whose milk tests higher than almost any of the others in the herd. She is also a fine milker, as is Hedda 2nd. A young cow that has every appearance of doing well, and whose bag runs well forward, is Princess of Lansdown, by Siepkje 3rd's Mink Mercedes Baron, out of Lady Marringa 2nd. Siepkje 4th, who stood first as a two-year-old in Toronto, has a good milk and butter record, having given 7,597 lbs. in 185 days. The cow that has tested highest of any on the place is Lady Marringa 2nd, who made 21 lbs. 10.025 of butter in a week.

The loose boxes contained a number of choice youngsters of both sexes by the present stock bull, Tirannia 2nd's Prince Casine. They all take after the sire, who seems to have the special faculty of reproducing his great depth of body and high quality in his offspring. He is an extraordinarily deep as well as a lengthy bull, and has given great satisfaction to his owners. The young bulls on hand of an age for service number 6, their age varying from ten months up. They are a very useful lot, and should sell readily. In all, some sixty-three head of Holsteins are kept.

In the horse stable we had the pleasure of looking over one of the choicest little cobs that we have seen for some time. This was a three-year-old filly by Mr. J. Y. Ormsby's cob, Little Wonder, out of an imported Scotch pony. It stands 13½ hands high, and is a beautiful little thing, reminding one much of the build of Mr. Pepper's famous Charlie Burgess. It shows a good gait and high action. There was also a three-year-old trotter out of a three-quarter blood mare, by a son of General Staunton, and a seven-eighths blood mare of fine stony bone which was in foal to Mr. Keith's Jubilee Chief.

Yorkshire pigs also form part of the farm stock. There are seven brood sows kept. The best of these is Jasmine, purchased from Mr. E. Jarvis, Clarkson's, the others having been bought from Mr. Wenger, Ayrton. The stock boar, King George, by Stamina, out of Jasmine, is a short-legged, lengthy animal, and leaves good stock, as could be seen by the pair of fine sows from him in the next pen.

#### The Valley Home Farm Shorthorns.

Messrs. Smith kindly drove us on to Meadowvale, where, about a mile from the station and village, is situated Valley Home Farm, the residence of Messrs. S. J. Pearson & Son, who are not unknown to Shorthorn breeders and exhibitors, as they have more than once made their mark in the show ring. They now have a very fine herd of some twenty-seven head, which we found in the best of condition.

The herd had been considerably increased since our last visit by the purchase of some of the Cecilias from the estate of the late Mr. Robert Cockburn, Campbellford, and of some Nonpareils from Mr. Carruthers, Fenella.

The first cow turned out for our inspection was one of these latter, a red, Nonpareil 40th—24245—; a good style of a cow, with milking proclivities, and yet carrying a lot of flesh. She is a good milker, and gives very rich milk. Next came the imported cow, Mina Lass, bred by the late Mr. S. Campbell, Kinellar, and now in her eighth year. She was the mother of the well-known Mina Lad—14877—, sold at Mr. Pearson's sale in 1893. She is as even-fleshed as ever; has a grand back, front, and quarters, girths well, is well filled at the tail head, and handles splendidly. She was one of the three reserved by Mr. Pearson at the time of his sale, together with her daughter, Mina Lass, now two years old, and Jilt. The former is the plum of the herd. She is a short-legged, deep, and very compact heifer, with a great front, good arched ribs, great girth, good in the twist and quarters, and, as might be expected, a very easy feeder. Jilt, though a good milker, carries a lot of flesh, and is a fine, smooth cow. Of the Cecilias in the herd, we preferred Cecilia 6th, a roan, by Baron Lenton (imp.). She is a big-framed cow, and has a good back and quarters.

The Nonpareils, though, perhaps, a little on the small side, are very neat, blocky cows, especially Nonpareil 41st and 42nd. Both are reds. Of a somewhat different strain of breeding is Sooby Lass, a fourteen months old heifer by Mina Lad, out of Sooby's Bridal Wreath, a cow bred by Mr. Linton. We were greatly pleased with a quintette of heifers, four of them being Nonpareils and one a Sooby. The latter was by Mina Lad, and the four by Village Boy, a son of the renowned Hopodar, once owned by Mr. James I. Davidson, Balsam.

The stock bull, British Statesman, which was imported by Mr. Isaac from the representative of the

late Mr. S. Campbell, Kinellar, is a worthy sire to head the herd. He is deep, stands well on his feet, is very thick through the twist, is well fleshed on the back, and shows good masculine character. His sire was Royal James (54079), and dam Red Bless, by Gladstone (4328). Waterloo Lad, by Mina Lad, out of a Waterloo Warder cow, is an even, smooth bull, straight in his lines, of good constitution, wide on top and lack of the shoulder, has a neat head, and, indeed, resembles his sire much. Two red bull calves, one of them from Mina Lass, by Tofthills, promise well. The last calf lately dropped by Mina Lass is also a bull, and should do well. There is also a fourteen months-old red bull by Mina Lad, out of Jilt, that should be bought by a dairyman, as he is of the right stock.

Three very superior grade cows are kept. They are all full sisters by the Booth bull, Sir Edmund. One has given 17 lbs. of butter in seven days, another 13 lbs. in the same time on ordinary rations, while the third has not been tested, but would probably outdo them both.

A few good Berkshires are kept. The boar is Berkshire Bill, of Messrs. Snell's blood, and has the required length and depth. One of the sows was purchased from Mr. Teasdale, Concord, while the other is by Messrs. Snell's boar, London Champion. They are compact pigs of good quality. Two good litters of pigs by different boars were to be seen in the pens, and from these buyers could select pairs not akin.

## Veterinary.

### Foot-Rot in Sheep.

Read by A. A. Mooney before the Ontario Veterinary Medical Society, Toronto.

This is a disease that has created considerable difference of opinion among flockmasters as to the nature, varieties, and methods of controlling it.

Foot-rot is a disease in sheep which has been described by veterinary writers of nearly every age, and is one which will be found in one variety or other wherever sheep are bred; but there has always been the greatest diversity of opinion as to its being of a contagious or sporadic nature, and the supporters of one theory will make their assertions with such vigor that one is inclined to side with the writer who comes nearest to one's own views. Having given some attention to the diversity of opinion which exists concerning the nature of the disorder before us, I have concluded, from experience, as well as from other channels that have been open to me for obtaining the information I was searching for, that there are two forms of the malady: the one *contagious* in a high degree; the other *sporadic*, and depending on surrounding circumstances, to be described further on.

While the curative remedies used in the different forms of foot-rot do not vary materially, yet it is important that we should have a correct understanding of the causes and symptoms of the two maladies, for by the careless handling of a flock affected with the contagious form of the disease we are liable to spread the virus not only among our own animals, but also among those of our neighbors.

#### SPORADIC OR NON-CONTAGIOUS FOOT-ROT.

This is a disease that is often brought under our notice, and originates from a variety of causes, which produce symptoms varying with the cause. The malady usually begins with inflammation of the space between the claws, which extends, and, if not arrested, the whole foot soon becomes involved, and the hoof may drop off, leaving a loathsome sore, with a most intolerable odor, to aggravate the animal for some time. It may be caused by a splinter or other foreign body getting into the part, and the filth to which the sheep is exposed finds its way into the wound caused by the foreign body, where it, in the popular parlance, acts as a poison that produces festering and all its consequences. Again, we find that in sheep that are taken from high lands, more or less gravelly or rocky, and placed in boggy pastures, the horn of the foot grows very quickly, owing, no doubt, to the comparative want of attrition in the low land pastures, and the space between the claws becomes an excellent receptacle for the storage of decomposed grass and filth of nearly every description, which, through the warmth of the foot and other conditions, will ferment, and the products of this process will begin their siege upon surrounding organized tissues, slowly, perhaps, but surely, burrowing into the quick.

When a flock of sheep have been subjected to precisely the same conditions, as may be the case in some localities, where it becomes a matter of necessity at certain seasons, when the grass becomes too ripe, dry, or scant, in the upland regions, to move the flock to soft, moist, low-land pastures in all probability abounding in luxuriant vegetable productions, this rapid growth of horn begins, and the evil consequences already alluded to follow in quick succession.

The front feet often succumb to the exposure first, and the entire flock may be found, in the course of a short time, grazing upon its knees. An examination of the foot, which will be hot, tender, and sore, at once reveals the cause. The flockmaster, losing sight of the fact that all his animals have been subjected to exactly the same exciting cause, is liable to think that a contagious epizootic disease has broken out among his sheep.

Again, we find this disease attacking one hind foot, or, it may be, both. It does so through some peculiarity of selection, which cannot well be accounted for. When one foot is diseased, you are likely to find the horn of it longer than it should be.

*Treatment.* If this is resorted to in the early stage, it is not usually a difficult matter to overcome the complaint in a few days. The first thing to be done is to remove all superfluous horn, then cleanse the wound thoroughly with warm water, after which curative remedies may be applied. If ulcers, which may be recognized by their unhealthy, ragged, angry appearance, have already formed, caustics should be applied. Of the host of caustics found in the list of medicinal agents, few have gained as much favor as butter of antimony, its fluidity making it easy to apply, while its energetic action makes it an effectual remedy. To apply it, take a sponge about the size of a small bird's egg, saturate this with the fluid, and apply to the affected part, taking care not to allow the medicine to extend into the healthy tissues, and thus avoid unnecessary pain for the animal. Twenty-four hours after the caustic has been applied, if the wound is still foul, with a fetid discharge from it, the caustic may again be repeated, but it is seldom that a third application is necessary, for some days, at all events. Further treatment consists in keeping the foot as clean as possible, and the daily application of some antiseptic fluid—sulphate of copper, one part, rainwater, twelve parts, makes a good one. The ordinary white lotion has proved most effectual in the writer's hands. In some instances beneficial results will accrue from the application of the copper solution one day, and the ordinary white lotion, composed of one dram sulphate of zinc, two drams acetate of lead to a quart of water, the next.

The animal should be fed well and its general comfort attended to. The causes of this complaint should not be lost sight of, for by observing or avoiding them much suffering and other annoyance may be prevented; and it is also wise to separate the affected from the non-affected, thus avoiding risk and danger.

#### CONTAGIOUS FOOT-ROT

is very different from the foregoing, being even more disastrous, if not more difficult to overcome. This variety is, no doubt, caused by a specific poison, which often makes rapid inroads upon the constitution of the afflicted creature, causing it to die of a debilitated condition called marasmus.

The onset, course, and determination of this disease are surrounded by many interesting features, which it, no doubt, would be well for those engaged in the sheep-raising industry to study; for, although it may occasionally be difficult even for the expert to distinguish between the two forms of the disease, yet when we watch the progress, inquire into the cause, and pay close attention to its general behavior, we can generally form somewhat intelligent opinions as to the variety.

*Symptoms.* In typical cases of this form of the complaint, the early symptoms are characterized by lameness in one or more feet, the cornet usually swells, the space between the claws will be red and tender, soon to be followed by the appearance of several minute vesicles, containing a watery fluid. Presently a sticky, foul-smelling, lardaceous substance oozes from the affected parts; proud flesh forms, or ulcers may make their appearance. In the course of a week, more or less, the hoof begins to separate from the quick, and, if the process is not arrested, it will separate entirely in about a month. The disease extends often rapidly from one foot to the others, until all are involved, and, as the creature is left without a leg to stand on, it lies down; and through the rubbing occasioned by its movements, the skin soon has "ledsores" on various parts of it, which become foul, attracting blow-flies, which take advantage of these warm spots to deposit and hatch their eggs, and in a few days a crop of maggots are present to add fuel to the fire. With this fresh source of irritation we can easily imagine that the unhappy creature becomes discouraged, loses its appetite, and things go from bad to worse, until it eventually dies from marasmus.

In distinguishing this disease from the non-contagious variety, we notice that after one foot is affected it soon makes its appearance in others; then, too, the gradual spread of the malady in the flock should arouse our suspicions, and by careful observation it can usually be traced to exposure. Finally, it does not yield to the removal of the exciting cause of the non-contagious kind.

The contagium of this disease is contained largely in the matter exuded from the sores of the feet, and is spread in a great variety of ways, notably through litter, pasture fields, roads, freight cars, freight boats, washing pens, currents of water, etc.; indeed, whatever the feet of affected sheep come in contact with is liable to spread the disease. Attendants, after working among an affected flock, cannot be too careful in handling healthy ones or individual animals.

The virus of this complaint remains active for a long time, though the limit of its vitality has not been ascertained. Sheep appear to be the only domestic animals affected by this disease.

It gains access to the system through the skin at the foot. The period of incubation is estimated as extending over a period varying from three to six days.

The mortality of foot-rot depends so much upon the care of the animals that it is diffi-



cult to strike an average of deaths of practical value, though with reasonable care the percentage is almost nominal. Some few animals seem to possess that peculiar condition termed "immunity," and will not contract the disease, although freely exposed to it. One attack does not render an animal proof against a future invasion; indeed, the same animal may be attacked several times.

To prevent the contamination of a flock or pasture with the poison of foot-rot, newly-purchased sheep should undergo quarantine restrictions of, say, two weeks; and should it appear in a flock through some unforeseen circumstance no sheep should be admitted from the affected district until the malady has been cured thoroughly.

If it should appear in several animals in a flock before its presence is suspected or detected, much may be done even at this late stage to relieve the distress of all concerned by observing proper and judicious suppressive measures. The flock should be examined carefully, and the healthy separated even from the suspicious ones, and, in the opinion of the writer, it would be a wise precaution to put them into a trough containing a solution of carbolic acid, one part, and water, two hundred parts, about three inches deep. A few minutes in this mixture will suffice. The flock should be looked after carefully, and any that become suspicious taken out.

Those that are already affected should be put by themselves and treated. The convalescent ones should be taken out every three or four days to make a fourth lot.

The formula would then be: Healthy, suspicious, convalescent, diseased.

The curative measures of this form of foot-rot do not differ materially from the simple or non-contagious variety. Cleanliness, above all things, must be carefully observed, after which the part may be dressed with the same remedies as recommended for the sporadic form; and ulcers, if there be any, touched with some caustic solution, say, butter of antimony, and the general comfort of the animal attended to.

### Questions and Answers.

**Pigs Dying.**—Subscriber, Athlone. I have a litter of pigs about three weeks old that are dying. There is, apparently, nothing wrong with them. They seem all right for one meal, and by the next meal one or two will be dead. They have black tooth. Would that kill them? Kindly give me a remedy through *THE JOURNAL*.

**A.**—By our Veterinarian: If you had informed us what you were feeling the sow and young pigs, we might have been able to give the cause of their dying. It is possible that it may be due to tapeworms. Get a veterinary surgeon to examine the intestines, or do so yourself. Split these open carefully with a pair of scissors and see if there are tapeworms present. Black tooth is not a disease, but is merely a symptom that the stomach is out of order and that indigestion is present.

**Cow Losing Quarter.**—W.W.E., Chatham, Ont. I have a young cow that calved recently, one of the forequarters of whose udder seems to be shrinking up. There does not appear to be any obstruction or swelling, and very little milk comes from that quarter, but it milks easily. At the time of her last calving I had some difficulty with her udder, which was feverish, but it came around all right. She is a good milker, and her milk is of good quality. Her appetite is good, her bowels regular, and she is apparently healthy in every other way. I have been feeding her on bran and crushed oats with cornstalks, and she has daily exercise. I have been rubbing the quarter with some oil and hot drops (capsicum). Please inform me what I can do for it.

**A.**—We do not think that anything more can be done to bring that quarter back to its normal state, and fear that when the cow again calves the quarter may go entirely dry. Such is our experience with a similar case.

Send us in a new subscriber's name and \$1 and get a bushel of the Improved American Oats for Spring seeding.

## The Farm.

### That Woodshed.

Farmers, have you got your supply of fire and kindling wood for the coming season stored in your woodsheds? If you have not, see that it is done this month, before the approach of spring calls your attention away to other things. Winter is the time to do this, so do not neglect it and put it off to what you may consider a more convenient season. To have your woodshed piled up with a supply of firewood split all ready for the stove means to save your wives and daughters hours of labor, and also prevents friction in the household. If you can get a quantity of kindling wood ready to hand as well, so much the better. The provident man keeps his store of wood ready a year in advance, so that his family have plenty of dry wood to go on with through the spring and summer, thus giving the stock of green wood time to dry before the next winter. All cannot do this, and, in places where one coal stove is kept, perhaps this is not so necessary; but, in any case, a good stock of wood in the woodshed is a thing that every farmer should see is provided at the proper season.

### Preparing for the Spring Work.

The beginning of another month brings us within hailing distance, so to speak, of spring, but, before spring comes, there remains a good deal to be done to get everything into shape for attacking the spring work at as early a date as possible. A little time spent now means the saving of much valuable time then.

In the first place, there is often harness to be mended. It may be only a strap that is missing or a buckle that is broken, but all the same, if the mending is left till spring work begins, it means the loss then of an hour, and probably a good deal more, according as the work is done at home or taken to the village for repairs. Then there are implements to be overhauled, and examined to see if they require repairing or new parts put in, to enable them to do their work to the best advantage. Even if they do not require repairing they will be all the better for a cleaning up, especially if this was neglected last fall when they were stored away.

Another thing that should be done at this season is the cleaning up of grain that is required for sowing in the spring. We all know how important a matter it is to have our seed grain as clean and free from weeds and impurities as possible. If the cleaning up is left to the last moment, we are very apt to hurry over it, and not take sufficient time to clean it as thoroughly as we might have done. If, however, it is done during this month, we can spend more time over it, and run the grain through the fanning mill a second time, if we found that the first cleaning was not thorough enough. Moreover, we assure ourselves that we have a sufficient number of good, sound grain bags on hand, if we bag up the seed as we clean it.

In cases where new seed is bought, it is always well to order it early. If the ordering is left till spring opens, the seedsmen have so many orders on hand that they often have to keep customers waiting, and delay in sowing is the consequence.

We have mentioned a few things that are imperative, if we would be forerunners with our spring work, and we are all agreed on the advantages to be derived from such a happy state of affairs. There are many other things

that we could mention, such as drawing out manure, or getting fencing material handy on the ground, where new fencing has to be erected; but we have said sufficient to show every thoughtful farmer how necessary it is to plan ahead, and so be in a situation to start on the spring work at the earliest possible moment.

### Object of Good Roads' Association.

A great deal of misconception appears to exist in Ontario concerning the objects of the Good Roads' Association of Ontario, which held its second annual meeting in Toronto last month. A great many people, in fact, probably the majority of those who are not connected with it in any way, or who have not heard any of the delegates from it speaking about its aims, imagine that its object is the doing away with the statute labor system, and the imposition of a road tax instead. Such, however, is not the case. At the meeting referred to, President Pattullo expressly stated that the object of the association was to collect and diffuse information on road matters in order to secure better roads, to educate pathmasters and those who work on the roads up to a higher sense of their duties in this matter, and to arouse interest in the matter among the public.

That public opinion at the present time does not favor the change from the present system to a direct road tax was evident from the speeches made at the meeting. Most of the speakers referred to improvements that could be made in the statute labor system, rather than to any violent change from the present method.

It is true that a number of those present would prefer to see the statute labor commuted into a direct road tax, but those who were thus minded were largely in the minority.

### A Hotbed for the Farm.

The season has again come when hotbeds can be utilized with much advantage. They are common in villages where the artisan has a little piece of ground, but they are seldom found on farms, where they can be cheaply made, and where they can be utilized to the very best advantage. The construction of a hotbed suitable for the farm need not be costly, nor of necessity should it be very large. A good size would be six feet long and three feet wide. The frame may consist of two-inch plank fastened together in the form of an oblong box, one side of which is six inches higher than the other. The high side may be two feet to two feet six inches high. This box should be sunk about one foot into the ground. It may be kept above the ground where manure is plentiful. The manure may be banked up about one foot around the outside of the box. This may be the most convenient way on the farm where manure is plentiful.

Old window sash will answer for a covering. The size of the box or frame may be adjusted to the size of the sash. These sashes with the glass in them cover the box, the ends of the sash just coming to the sides of the box. To keep them in place, an inch board six inches broad may be tacked on to the two sides of the frame, so that its upper edge comes up even with the upper surface of the sash. This box should face the south, that is to say, the slanting surface of the glass should be toward the south. When the box is put into position, horse manure may be put into it to the depth of one foot. It should be taken from a warm part of the heap, and

should be tramped to make it heat. Earth may then be put upon the manure to the depth of four or five inches. After two or three days the seeds may be sown. Of course good fine earth should be chosen. The seeds may then be sown. There is no great necessity for having them sown very early, if only they are far enough advanced for transplanting when the weather gets warm enough so as not to freeze the plants. They will then be sufficiently advanced to answer all practical uses. Such seeds as lettuce, radishes, cabbages, tomatoes, celery, melons, and cucumbers may be sown, but not of necessity at the same time. Radishes may be ready for the table within a few weeks from the time of planting.

The sashes may remain on all the time until the plants are ready to appear. After that time they should be raised up on one side for a time every day, lest too much heat for the well-being of the plants should concentrate within the hotbed. It may be necessary to cover the glass with boards when the nights are cold, in order to exclude frost. Manure may be used instead of boards. The glass covers should be removed during the warm portion of the day to harden the plants for transplanting, as the season for this approaches. The plants should be watered as often as necessary. The use of cold water should be avoided. The water may be applied with a sprinkler, and a fine spray is considered preferable to a coarse one.

Some of the more tender kinds of plants may be sown in little pots sunk into the earth. When they are ready for transplanting the pots may be lifted, and the plants removed from them, with but little check to the continuity of their growth.

In this way an abundance of vegetables may be started much earlier than they could be in the open air. They will come into use quite early in the season, and, when other varieties are sown later in the garden, the season of abundance in the supply of vegetables is prolonged. Young lads of the farm, set to work at once and make a hotbed.

### Growing Spring Wheat.

Discussion with reference to growing spring wheat is not by any means superabundant in the agricultural papers of Ontario. It does not seem wise that it should be so, for in large areas of the province winter wheat cannot be successfully grown. The spring wheat crop is relatively one of much importance. True, the price is low, but, notwithstanding, we should still grow a goodly percentage of spring wheat in those parts of the country which are well adapted to its growth. We want the straw to furnish litter for our live stock. Straw from spring wheat is more bulky than the straw of other spring grains, as oats and barley. We want such litter for live stock to help to absorb the liquids of the manure, as well as to provide warmth and to bring comfort to the various forms of live stock which we keep. We want wheat to make bread for supplying our homes. It may be affirmed that we can buy bread more cheaply than we can grow it. We are chary to accept any such doctrine where spring wheat can be grown in good form. We want bran from the manufactured product for our cows and beef cattle, and we want shorts for our pigs.

We should, therefore, weigh the question carefully before we decide to give up growing spring wheat. And when we do grow it, the aim should be to grow it in the very best



form; in fact, in such a way that we can hope for good returns. Good yields from small areas, or from moderate areas, should be the farmer's watchword. Hence, in growing spring wheat, which cannot be said to be as hardy as some other plants, we should try to have the ground in the very best form.

Spring wheat should be sown early. It is imperative that it be sown early. With no other kind of grain is early sowing so important as with spring wheat. Where it cannot be sown reasonably early, it should not be sown at all. And this remark is equally true when applied to all parts of the Dominion from sea to sea. It is well, therefore, to have the ground plowed in the fall.

But other advantages result from early fall plowing. First, in Ontario and eastward, it tends to secure a more perfect pulverization of the soil; that is to say, it tends to secure a more perfect tith. On prairie soils it tends to secure more of soil density, and that is just what is wanted in the soils of Manitoba and the Northwest. If these soils were plowed in the spring, they would, as a rule, suffer from evaporation. In the second place, it secures the liberation of inert fertility in all soils, and more especially in those of clay texture. This is brought about by the combined action of rain, melted snow, frost, and sunshine on the upturned soil; hence when the crop is sown it can get plant food without difficulty. And, in the third place, it secures greater warmth to the soil near the surface in the early spring, which tends to promote an early and vigorous growth. This greater warmth is secured through the influence of the sun, which reaches the upturned soil on the surface as soon as the snows are gone, and through the influence of the rainfall. The water in early spring is warmer than the frozen earth, and the heat in the water is absorbed in the greatest degree by that part of the soil which is nearest the surface.

Early and vigorous growth is thus secured, if the soil is rich enough in plant food. Such growth is exceedingly important with all kinds of crops, but more so with spring wheat than with other cereals, as it will not yield well when sown late, and a set-back at the start, or a failure to make a good start, puts the crop on a par with that late sown.

Spring wheat is not as rugged as some other cereals. It has not the same power to gather plant food from the soil as oats or rye. To do well, it must find plenty of food in the soil, and that easy of access. If these conditions are lacking, the crop will not be a good one, even though other favorable conditions are present. In the rotation, therefore, it may come after clover. The clover roots will furnish the wheat with nitrogen and other elements of plant food, and they will also tend to keep the land moist. It is a good practice to sow spring wheat after a root crop or after a corn crop; in fact, after any cultivated crop. The ground is then clear, if these crops have been properly cared for; hence the wheat is not choked by weeds, as it would be under some conditions. In addition to the cleanliness of the land, the soil is generally in a very excellent condition as to tith. Usually, it would need to be plowed before sowing the wheat. In Manitoba it would be decidedly better not to plow, but simply to drill in the seed in the early spring. Plowing there would make the soil too porous. In Ontario it would generally be better not to plow after a hoed crop, but simply to cultivate thoroughly in the early spring to make sure of a fine pulverization. When roots have been grown on clay soils, and these have become impacted and soaked

by the early spring rains, it may then be necessary to plow before sowing; but in such instances it would be well to consider whether it would not be better to sow some harder crop, which would be better able to grapple with adverse conditions.

In some parts it will be well to harrow the wheat with a light harrow soon after it has commenced to grow. But this work must be done carefully, or injury will follow. The harrow must be of a certain make. We cannot enlarge on this feature of the work here, but simply call attention to it. On prairie soils, especially, valuable results may be obtained from judicious harrowing. The harrowing not only encourages the growing of the grain, but it helps to destroy weeds in great numbers.

#### Farmers, Give Your Boys a Chance.

Farmers, give your boys a chance, and when they go out into the arena of life they will bring honor to your gray hairs. Give them a chance, for it is your duty so to do. Give them a chance equal to that which is given to the boy who goes to study for the professions, and they will give a good account of themselves as farmers and as citizens. You owe this to them in virtue of kinship; you owe it to them as parents; and you owe it to them as citizens of the commonwealth.

By giving them a chance we do not mean laying up for them broad acres to be handed over to them as a heritage when you, as parents, cannot enjoy it any longer. The possession of acres is one thing, and the capacity to enjoy them is another. A man may be the owner of a wide domain handed down to him by his parents, and yet his intellect may remain so unexpanded that he cannot take that enjoyment from his work which he otherwise could. Nor has he the capacity for enjoying many of the true pleasures incident to his calling, if he only understood its secrets better.

By giving them a chance we do not mean giving them an education of a character that is likely to lead them away from the farm. Such is the education that they receive in a college in the ordinary sense in which the term college is used. And when we speak thus, we do not wish to be understood as speaking slightingly of those colleges. They are doing an excellent work. We have none too many of them. But in the very nature of things it cannot be otherwise. They have almost nothing to say about agriculture. When a young man attends one of these for two or three years, farm labor ordinarily becomes distasteful to him; hence, in a large majority of instances, he decides to follow some line of work other than farming.

By giving them a chance we do not mean encouraging them to roam away to some untried land in search of fame and fortune. These desires come more or less to all young men, and some parents are indiscreet enough to encourage such romantic and visionary notions. Others go to the opposite extreme, and, by dint of parental authority, positively forbid them to leave home so long as they are minors. There is a better way. It would be to convince them, first, that "distance lends enchantment to the view," and to show them, in the second place, that when they leave the farm they leave a calling that gives them wider scope for the exercise of intellect than any material calling that engages the attention of men.

How shall they be convinced of this? that is, how shall such views of the importance of

their calling be imparted to them? By giving them an education which has a direct bearing upon the pursuit of agriculture. The opportunities for so doing are few, but they are not entirely wanting. We have an agricultural college in our country where such an education can be obtained. But we have only one. Let us educate our boys at some such institution, and, when we have done so, our contention is that we have given them a chance.

But it may be that we cannot send them to an agricultural college. Circumstances may forbid. But though we cannot, there are many things that we can do. We can cover our tables winter evenings with agricultural periodicals and books, bright, interesting, instructive, and reliable, and we can read these with them and encourage them to read them for themselves. Nor will it do to say that we cannot do this, for we can. It will only take half the produce of a cow per year to purchase the annual supply of fresh and wholesome intellectual food. The progeny of one sow will do it, though sold at weaning time or shortly after. It would be better to go without luxuries on the table many a time than to go without this supply of mental food.

Farmers, give your boys a chance. There is only one period in life when they may get an education that will fit them for their life work, and this time soon runs away. It is positively cruel to starve the minds of the boys while this time is hurrying on, for soon it will be away, and when once gone, like the waters that have passed, it never comes again.

If the chance is offered and persistently refused, the responsibility is lifted from the shoulders of the parent. It is then laid upon the boys themselves. If they deliberately choose to starve the inner man, the effects are no less sad than if the parents were responsible, but the conscience of the parent is then relieved. He has given his boys a chance, and they have made the huge mistake of neglecting to profit by the opportunity.

#### Succession of Pastures.

On a well-ordered farm the aim will be to have a succession of pastures that will carry the stock of the grower through the entire season, so far as this may be practicable. This means that the aim will be to have a variety in pastures. Where blue grass grows in great perfection, there will usually be found no necessity for the introduction of any kind of grass that grows earlier in the season. If a rank growth is desired quite early, it may be obtained from orchard grass, where the same will grow in good form. And in localities where orchard grass may not grow, and where even blue grass grows shyly, then it may be well to grow rye for early pasture, for it is a fact that rye will grow fairly well on light sandy soils where blue grass grows but feebly. The roots of the rye can penetrate further in search of plant food. These three plants, therefore, are best adapted for early grazing in many parts of Ontario. But a new candidate for public favor is cropping up in the west. We refer to Austrian Brome grass, which grows vigorously early in the season, and which, therefore, will probably be found a good pasture grass for the west.

After these grasses common red clover may be ready, and if it has a goodly sprinkling of lucerne the pasture will be all the more vigorous. Next in order will be timothy and mammoth clover, or timothy and alsike clover, as the case may be, for these are ready for being pastured about the same time, although

the two clovers are not well adapted to the same kinds of land, as our farmers very well know. After these are eaten, the red clover and the orchard grass should come again, unless the season should be very dry, and after these are cropped down the blue grass will be up again. In this way a succession of grasses may be secured, but its closeness and unbroken continuity will depend very largely on the character of the season.

Of course, in actual practice these grasses cannot all be grown in separate pastures, except on very large farms. But we mention them to show the natural order in which they come, and in which they will be ready for pasturing. When, therefore, the effort is made to utilize them in furnishing pastures in succession, even to a limited extent, a careful regard should be had to the time at which they furnish pasture plentifully, when selecting them for sowing.

But there is succession of a different character. We refer to that succession which will always enable us to have available pastures on our farms; that is to say, which will enable us to have pastures every season on some part of the farm. And this, of course, will be the aim of every careful farmer who is engaged in mixed husbandry. Succession of this character is simply the outcome of a regular rotation. It may be secured with one or two kinds of grass, as, for instance, common red clover and timothy. Where a regular rotation is observed in cropping, this succession of available pastures may be obtained with unfailing regularity, unless dry weather should cause failure of the grasses to catch.

It is a common practice in Ontario to cut grasses for hay the first crop, and, it may be, the second crop, and then to pasture the third year. It is, at least, an open question if the practice should not be reversed, unless the clover in the hay is the element more particularly sought for. The quality of hay from the first year's product is usually coarser than from the second or third, and the first year's growth will furnish much more pasture than the growth of the second or third year.

When a dry season comes, it is often difficult, with any succession of grasses that may be grown, to carry the stock right through the season without growing some soiling foods to cut and feed to the stock during very dry weather. But by giving some attention to growing grasses in combination, or in a succession, the season for using soiling crops will be materially shortened.

The question of growing grasses is one of great significance, and should receive every attention. The grass crop is by far the most valuable crop grown upon the farm. Anything that will throw light upon the best modes of growing it should be eagerly seized upon and put in practice, as far as possible. The greatest calamity that could come upon any agricultural country would be the destruction of the grass crop, and the greatest neglect, in consequence, is a neglect in practicing the best known modes of growing it.

#### Sowing Spring Grain.

One would suppose at first thought that the process of sowing spring grain was so simple that it would be superfluous to write anything upon it. Such, however, is far from being the case. Almost every variation in land requires different management; hence it is indeed important that the more essential requisites bearing upon the sowing of spring grains shall be well understood.

*Time of sowing.* With reference to the best time of sowing, it may be said that cereals should be sown quite early in the season—as soon, in fact, as the ground can be worked without injury. Sandy lands with a porous subsoil will be the soonest ready to work. Those of a stiff clay in texture should not be touched until they have dried, so that the earth will not adhere to any extent to the implements of tillage. To work them while they are still wet would mean the loss of the crop, more especially if the season should turn dry, as the ground would become so hard that it would more closely resemble bricks than earth. Where the water level comes near the surface, as, for instance, in low lands, nothing is gained by rushing in the seed, for with water near the surface the seed will not do well, as the ground will be cold. It would be much better to tarry until the ground had warmed and the water level lowered, and then to sow some kind of seed congenial to such soils.

*Preparation of the land.* The land should be plowed for cereals in nearly all parts of Canada, whether in the central provinces or in those of the west or the east. It is not so in some of the states to the southward. In these the winters are short, and the rains in the fall and spring are so heavy that they serve to impact the land when it is plowed in the fall. But with our colder winters the rains have usually not sufficient time to run the soil together again after it has been plowed, and the action of the frost upon it is helpful in securing a finer pulverization. The aim, therefore, in all parts of Canada should be to plow as much as possible of the land in the autumn. In the spring the amount of cultivation required will depend almost entirely on conditions. If the soil is naturally mellow, and all the conditions are exactly right, the ground may want very little preparation before going on to it with the seed drill. On the other hand, if it be stiff clay and in a compact and stubborn condition, it should first be pulverized before the grain is sown, however much of labor it may require. Because of the danger that clay soils will in certain seasons become thus impacted, we should try to keep in them as much vegetable matter as possible. The more of this in the soil, the less is the tendency to impaction.

*Sowing the seed.* Seed should, where practicable, be put in with a drill. A saving of seed is thereby effected. The grain is covered more deeply. The covering is also more even. And, owing to the more uniform depth of the covering, the grain stands drought better when drilled than when sown broadcast. But the depth must be gauged by the kind of grain and the character of the soil. Grain should not, as a rule, be buried as deeply in the spring as in the fall, as the roots, in the spring, do not have to resist frost as they do when sown in the fall. But peas form an exception. They should be sown deeply, as they are easily uncovered by rain. On light, spongy soils seed should be buried more deeply than on clays. This would mean that on the prairie of the Northwest wheat should be buried as deeply than in Ontario. It would be easy to bury barley too deeply. The aim, with spring-sown grain, is to have it come up quickly, and to grow right along.

*Rolling.* Here, again, conditions are paramount. On the spongy prairie soils, to roll would mean a preparation that would assist them in blowing away. On clay soils, rolling after the grain is sown is usually helpful. But, on very early-sown grain, the rolling should be deferred a little, lest beating

rains should impact the soil before the grain gets up high enough to protect it. On sandy and leachy soils, rolling both before and after sowing would be advantageous, with a view the more completely to impact them.

### Central Farmers' Institute.

About one hundred and fifty delegates were present on the opening day of the eighth annual meeting of the Central Farmers' Institute of Ontario, which was held in Toronto on January 5th and the two succeeding days, but the number was considerably increased on the second day, and the room was crowded with an attentive audience of the most intelligent farmers in the country. A number of excellent papers were read, but fault might be found with some of them on account of extreme length.

The president, Mr. James McEwing, in his address, dwelt on the benefits that accrue to farmers when they unite and organize. President Mills, of the Ontario Agricultural College, deserved great credit for the assistance he had given farmers' institutes. The great cause of agricultural depression was the low price of farm produce and the excessive cost of production. In view of the embargo on Canadian cattle in Great Britain, he favored the development of a dead meat trade with that country. The marketing of cheese could also be improved. He favored the branding of cheese, to prevent fraud. Referring to the bounties given on dairy products by Australia, he urged that something be done for Canadian dairymen in the same way.

The total expenditure for last year was \$573.31, and there was a balance on hand of \$693.08.

Mr. K. W. McKay, St. Thomas, read a paper on "Municipal Reform," which came in for a good deal of discussion.

During the evening session Mr. J. T. Gould, who had recently returned from the old country, gave an address on the cattle trade with Great Britain and other European countries. He said that the embargo on our cattle was placed on them in order to protect English breeders, and that contagious pleuropneumonia did not exist among our cattle. He thought that we could not compete, in the dressed meat trade, with the wealthy corporations in Chicago.

Mr. John I. Hobson, Mosboro, in his paper on "What means can be best adopted to bring the farmers in closer touch with the Ontario Agricultural College and Experimental Farm?" urged the benefit of occasional visits to the college, and a more extended use of farmers' institutes in extending the knowledge obtained.

The first business on Wednesday was the election of officers. This resulted as follows: President, T. G. Rzyrnor, Rose Hall; vice-president, D. McCrae, Guelph; secretary-treasurer, A. H. Pettit, Grimsby; auditors, T. Good, Brantford; G. A. Aylesworth, Newburg; executive committee, J. C. Dance, Hon. Chas. Drury, L. L. Sovereign, Simpson Rennie, J. McEwing, R. J. Jelly, Andrew Kennedy.

Then followed Prof. Zavitz's paper on "Clovers and Legumes, especially Crimson Clover." He treated of clover in agriculture, from a scientific standpoint. There are 7,000 species of legumes, and they are very valuable, deriving, as they do, nitrogen from the air through the tubercles on their roots. Of the 72 substances in soils, only 10 were essential to the growth of plants, and 7 of these are always available. The only three that the

farmer has to concern himself about are potash, phosphoric acid, and nitrogen. The latter is the most important and costly, and, therefore, when it is supplied by the legumes themselves, it is a great consideration. Crimson clover has been grown successfully in the Eastern States, and has been tested at Guelph for three years. When sown in the spring it is fairly successful, but it has not produced more than one ton to the acre, and it dies at the end of the year. In warmer climates it passes through the winter well. Last fall some was sown on winter wheat at the college, to test its capabilities in that direction.

In the discussion that followed Mr. McCrae advised sowing some of the soil infected with the clover tubercle when the clover seed was sown in order to secure the tubercles on the new catch of clover. Prof. Robertson stated that each plant of the legumes had its own particular microbe, and that the microbe of one plant would not be effective on another species of legume. Moisture was another requisite to secure proper growth.

Mr. McCrae read an interesting paper on clovers of different kinds. He considered alsike clover a very valuable crop.

"The Fifth Form in Public Schools" was the subject of an exceptionally able address by the Rev. Dr. Jackson, of Galt. By argument and statistics, he showed the advantages which would accrue by making the fifth form compulsory in our public schools. The chief contention was that it would elevate the standard of education with the masses.

The important and familiar subject of "Agriculture in Public Schools" was next taken up by Mr. Dearnsey, public school inspector for Middlesex. He spoke first of the history of agricultural teaching in our schools, which, he stated, had its commencement in 1871. Sufficient failure had resulted to show that the teaching of agriculture to primary pupils simply by the study of text-books in the schoolroom was impracticable, and he strongly advocated the establishment of a practical system of teaching by means of which all teaching could be illustrated in field or in school garden. More teaching from nature, rather than from books, he considered was required.

The next subject was an address on "Dairy Farming in Ontario," by Canada's Dairy Commissioner, Prof. Robertson. The first need of the dairy farmer to-day is to think clearly about his own business. The second need is a fund of exact and applicable information. This can only be obtained by experiment; hence the necessity of experimental stations.

A third requisite to success at this time is energetic effort and application to business throughout the year.

Prof. Robertson gave a most comprehensive talk, laying much stress upon the reduction of the cost of production and the improvement of the quality of the products, and strongly advocated more co-operation as the cheapest method of production. In regard to winter dairying, the commissioner said that it should be engaged in for the purpose of making the capital invested in farm property pay interest for twelve months in the year rather than for six. An exhaustive explanation of the correct nutritive ratio and the advantages resulting from feeding a well-balanced ration added much to the value of the address. This explanation was made very vivid by means of a series of illustrative charts. The daily ration given as suitable for a dairy cow was as follows: 50 lbs. of ensilage, 25 lbs. of roots (mangels or carrots), 5 lbs. of mixed meal, bran, and oil cake, and 5 lbs. of hay. This costs 12 cents a day per cow.

In view of the glut of summer-made butter in the hands of exporters, he had recommended to the government that provision be made for the immediate shipment of fresh-made creamery butter. To enable creamery managers to make payments to their patrons, it has been suggested that an advance of twenty cents per pound be paid by the government on all creamery butter of fine quality made between the 1st of January, 1895, and the 1st of April, 1895, put up in clean, neat packages when delivered at Montreal (or other points to be designated), to be shipped to Great Britain, the butter to be delivered at the place or places designated by the government in regular weekly shipments after the 1st of February, 1895, and the advance to be made only on butter of finest quality and in fine condition for shipment. He was hopeful that the government will make provision for giving effect to this plan of helping the winter butter business.

He advised a system of cold storage both in this country and in Great Britain as well as on the steamships, and advocated keeping butter at a temperature of 30° until put on to the market. Creamery butter, if put into a suitable cold-storage room before it is three days old and kept at a temperature not above 30° Fahr., will not be injured in quality as much in three months under these conditions as it would be in a week in the ordinary temperature of an English warehouse in June, July, or August.

Mr. John McMillan, M.P., Constance, read an able paper on "Meat Production," in which he gave his own long experience in breeding, feeding, and shipping live stock. He thought Ontario had nothing to fear from the Australian live-stock trade. If we kept good cattle in comfortable, well-ventilated stables, and gave them good care, we should not despair. He also gave advice on raising sheep and pigs for market.

Prof. Fletcher's talk on grasses was much appreciated. While timothy was a favorite grass, it was not as valuable as was supposed. In the first place, it gives no aftermath, and when cut too soon it often dies, and its bulbs are frequently destroyed by mice and insects, while its shallow growth takes much goodness out of the top soil. Orchard grass is valuable and yields a big crop, but does best on dry lands. The meadow fescues are also serviceable, but the rye grasses are a failure in Canada. The mixtures of grasses sometimes sown are not perfect. He recommended the following: Six pounds of timothy, four pounds of meadow fescue, two pounds of orchard grass, and one pound of Canadian June grass, with four pounds each of mammoth, white Dutch, and Alsike clover, as being the best for this country. He mentioned the following native grasses as valuable: Blue joint and canary reed grass, both heavy croppers. The Austrian Bromus is the best of the grasses imported from the old country. It gives a heavy crop (somewhat coarse), but is much relished by stock. It does well in low grounds and stands flooding. Quack grass, that pest of farmers in some parts, is easily killed by shallow plowing. For dry lands he recommended sheep fescue, and a native grass that is better than that, the flat-stemmed meadowgrass. The new fodder plant sacaline needs testing in this country before it is planted to any extent.

The remedy for potato rot was six pounds of bluestone and four pounds of quicklime mixed in water. Potato scab was caused by bacteria, and also by wire worms. Tubercle-affected should be soaked in bluestone an water before sowing.

At the close of the session Mr. O. A. Howland, M.P.P., Toronto, and Mr. John Brown addressed the meeting on the subject of the deepening of our canal system to tidal waters. Mr. A. W. Campbell, St. Thomas, read a paper on "Good Roads," showing the disadvantages of the present system. He thought that the cities should bear some of the expense of improving the country roads.

### Good Roads' Convention.

The second annual convention of the Ontario Good Roads' Association was held in Association Hall, Toronto, on February 7th and 8th, when a goodly number of farmers and others interested in the improvement of our country roads were present.

President A. Pattullo occupied the chair. In his address he said that the progress made by the association was greater than he had expected. Their aim was to collect and distribute information on road matters. They had sent speakers to all the farmers' institute meetings in Ontario, and they had been everywhere well received. 20,000 copies of pamphlets on road building had been distributed, and they hoped to get the subject placed on the list of subjects taught at Guelph College.

The Lieut.-Governor of Ontario, on being called upon, spoke on the value of good roads as a means of getting farm products to market in as short a time and as cheaply as possible. He thought the expenditure of money by the counties on roads would often be more beneficial than bonusing railroads.

Hon. John Dryden said that the association was acting as an educator of the people on the subject of good roads. As regards the present system of statute labor, he would not condemn it, as some of the speakers did. In some sections the work was faithfully performed, the farmers working as hard as on their own farms. Good drainage of the roads was much needed, and more care as to the quality of the work done on them. He advocated wide tires, and would like to see a bill passed abolishing narrow tires. A better control and supervision of statute labor is what is required at present.

Mr. A. W. Campbell, St. Thomas, dealt with every phase of the road question, and made some excellent suggestions. Professor Robertson spoke of the necessity of good roads where dairying is carried on. Other speakers followed in the same line.

Mr. W. M. Davis, Woodstock, read a paper on "Roads Suitable for Oxford County." He said that it had been well said that there are three essentials to good roads. They are: "Drainage, better drainage, and the best drainage possible."

In this paper he gave good advice on the building of earth and also macadam roads. These latter could be built for about \$1786 per mile. Next in importance after building was maintenance. Other aids to good roads were broad tires and road machines.

Mr. Henderson, Beverley, would group a number of road divisions together and put an overseer over them with full control.

Mr. Shepherd suggested that a township should be set apart and a trial be carried on, to see what improvements could be made in statute labor.

Mr. Judd's paper was on "Municipal Laws of Highways." Statute labor was a remnant of the old feudal laws, and should be abolished. In the course of his paper, he gave some features of the law that are not generally known.

Mr. A. H. Pettit said that ratepayers everywhere were looking to the association to formulate a plan for better roads, and he hoped that such would be done soon.

Mr. A. F. Wood, ex-M.P.P., for Hastings, read a good, but rather lengthy, paper on "What has been done in Hastings County." In it he claimed that Hastings has the longest and best roads in Canada to-day.

The attendance on the second day was large, in spite of the boisterous cold weather. Votes of thanks were passed to Hon. John Dryden for having 20,000 copies of reports of the association printed last year, and requesting him to have an increased number printed this year; also to Mr. F. W. Holson, superintendent of Farmers' Institutes, for including the subject of roadmaking among those discussed by speakers at the institute meetings; also to President Mills, of the Ontario Agricultural College, for arranging a series of lectures on the subject before the students at Guelph; and to the Canadian press for their aid in the good work of road improvement.

A Legislative Committee was appointed to ascertain the directions in which the statute labor system can be improved, with the following suggestions from this meeting: (1) That the number of pathmasters be decreased by the increase of the beats over which they have jurisdiction. (2) That provisions be made for the selection of pathmasters through merit, and for special knowledge of roadmaking and repairing. (3) That pathmasters should have power to call out statute labor at any season of the year when needed, and that they be paid some remuneration for the time, in excess of the statute labor for which they themselves are liable, during which they are actually engaged, under authority of the municipal council, at work on the roads, or in superintending work that is going on. (4) That a member of each municipal council, or some competent person, be named as township overseer, who shall have the supervision of all work done by the pathmasters, and who shall report annually the work done by each. (5) That the remuneration of such overseer, if any, be fixed by the municipality.

The above committee was also empowered to investigate the subject of legislation for the encouragement of broad tires, and also the question of road drainage. Circulars are to be sent to all municipal councils and other bodies to ascertain the opinion of the public on various questions of road reform.

The following officers and executive were elected for the ensuing year: President, A. Pattullo, Woodstock; first vice-president, J. F. Beam, Black Creek; second vice-president, A. W. Campbell, St. Thomas; secretary-treasurer, K. W. McKay, St. Thomas. Executive Committee—A. Mahon, Aberfoyle; J. Sheppard, Queenston; Alan Macdougall, C.E., Toronto; J. C. Judd, Morton; M. Kenney (Mayor), Owen Sound; W. F. Campbell, Brantford; J. H. Wooley, Simcoe; Robt. Jelly, Jellyby; and E. Kidd, North Gower.

### Questions and Answers.

**Leveling Land.**—Subscriber, Nanaimo, B.C.: Please inform me through the columns of your valuable paper if you know of any implement that will level land. The land has been well cleared and levelled after the stumps were taken out, and cultivated a year or two, but it is still very uneven, and I should like to level it well next spring after plowing. If you could give me a description how to make a cheap effective implement for two horses that will draw the little hills into the hollows and make an even surface, I should be obliged.

**Ans.**—By Prof. Shaw: One of the best forms of leveller that can be used for such land is the following: Take, say, five or six planks about a foot wide, and, say, eight feet long. Lay them side by side, and then

place under them crosswise three scantlings of some kind of hard wood. The size should be about 4 x 3 or 4 x 6 inches. Place one under each end and one under the middle, and spike the planks to them, or in the absence of long spikes pin the planks to them. The planks, if pine, should not be more than two inches thick, or one span of horses will not be able to draw the leveller. Strong inch boards of some hard wood may be used instead of the planks, and if they should not be heavy enough some weight, as stones, for instance, could be added.

### Orchard and Garden.

#### Gooseberries for Profit.

I think it is a fact that will not be questioned by any of your readers at all acquainted with our local fruit markets that the supply of gooseberries is by no means equal to the demand, says a writer in the *Ohio Farmer*; and that for those who can command a suitable soil and location a sure and liberal profit can be realized, at a very moderate outlay of money, time, and labor, by their cultivation.

The soil best suited to gooseberry growing has been found to be thoroughly drained, rich, and deeply-worked clay loam. These qualities of soil are imperative, as the plant is very impatient either of excessive dryness or heat. This is the only cause why success with it is at all uncertain. Therefore, with a moderate amount of protection from dryness and heat, the success of gooseberry culture may be looked upon as assured.

To secure these conditions, location must be skillfully used. The plants should be two years old, strong and well rooted, and, if carefully planted, their after-growth will be rapid. The ground should be well prepared, and marked off in lines four feet apart each way. Thus planting at the intersection of each line makes 2,725 plants to the acre, and will give satisfaction to the workers and pickers, and form a fine plantation after the first year's growth. The ground must be kept stirred by means of a one-horse cultivator, between the rows both ways, and not a weed allowed to be seen. Thus treated, the young bushes make extraordinary growth of wood, and the set of fruit buds will be astonishing, repaying all the care bestowed upon them. Of course, in gooseberry growing, as in every other kind of fruit culture, if one would wish to reap the highest results, increasing vigilance and constant application must be certainly and freely given.

The annual pruning consists of shortening the summer's growth to a moderate extent, and thinning out the crowding shoots. This operation is best done (though very often neglected) in the early summer, as the growth of wood and fruit buds, on that which is left, will be so much better and more encouraging to the grower. After the wood has borne fruit for three or four years, and becomes somewhat old and feeble, cut it entirely out, and encourage young growth in its place. This renewing is very important in all pruning for fruitfulness. I have known a gooseberry plantation to remain profitable for twenty years and over by proper attention to pruning and cultivation, but at the same time I am no advocate for this kind of thing; as I believe the best results come from young and vigorous plants, as in other fruits, and would advise changing the plantation after ten years' service, as young plants are produced so cheaply, that there is no economy in running a plantation after its prime is passed.

The ordinary enemies of the gooseberry are insects, mildews, and blights. The most common insects are the caterpillar of the gooseberry sawfly (*Nematus zeurificus*), and

what is commonly known as the gooseberry worm (*Yemphelia gossularia*). The first of these insects is hatched early in May, and so numerous do they become that they will completely defoliate an entire plantation, unless given an application dose of white hellebore, which will effectually stop their ravages and save the crop. This insect is not nearly so abundant or destructive as formerly. The gooseberry worm mentioned was also a threatening scourge, but its numbers are less and it may disappear from our gooseberry bushes altogether. After hatching, the worm eats its way to the inside of the berry and devours its contents, then immediately joins itself to another berry, enters and devours it also, and so continues. No remedy is known for this insect aside from hand-picking.

Occasionally plantations are attacked with a form of mildew, destroying the fruit, and rendering the bushes unprofitable and worthless. In my opinion, the cause of these diseases is atmospheric, and the remedy, to forbear planting varieties that are subject to such parasitic growths. Happily, several varieties have been introduced within the past few years that are seldom, if ever, attacked by this mildew.

In conclusion, I may state that our standard varieties of gooseberries are limited to three or four, as a variety must be at once hardy to stand our climate, free from mildew, a good grower, and an abundant bearer, with fruit of first-class quality; these points are fully developed in Industry, Smith's Improved, Downing, and Houghton's Seedling.

### The Dairy.

#### Government Aid to Export Creamery Butter.

As is well known, there is a considerable quantity of creamery butter now being held in cold storage in Canada by shippers, who are waiting for prices to improve in Great Britain before it is exported. This butter was purchased too high, and cannot be sold at a profit at present prices. Prof. Robertson, the dairy commissioner, who has been paying great attention to the state of affairs, advises creamery men to dispose of this butter as soon as possible. He holds that, if any surplus of Canadian creamery butter be held in Canada as late as the end of March, although by reason of the cold weather it may not be injured in quality, it will reach the British market at a time when fresh-made dairy butter from the English and French dairies will be plentiful. The result would probably be disastrous losses to the shippers, the manufacturers, and the farmers.

At the meeting of the Central Farmers' Institute, held in Toronto last month, Prof. Robertson stated that the Dominion Government had a plan under consideration, whereby some assistance could be rendered to the creameries, in order to prevent this state of affairs. The details of this plan have now been arranged, and the commissioner has been authorized to pay advances at the rate of twenty cents per pound on creamery butter of the finest quality made between the 1st of January, 1895, and the 30th of March, 1895, when put up in neat, clean packages, and delivered to the order of the dairy commissioner at Montreal. The following directions to makers and shippers of butter have been issued by the department:

(1) Butter which is intended for export, according to this announcement, should be shipped immediately to the dairy commissioner at Montreal.

(2) The quantity of butter made in different weeks should be marked with a distinguishing letter or figure.

(3) After the first shipment the butter should be shipped from the creameries to Montreal once every week until the end of March.

(4) The net weight of butter in every package should be distinctly marked on it.

(5) A statement of the name of the creamery, the name of the treasurer, the number of package, the net weight of butter, the date when made, the distinguishing marks, the shipping mark, the route by which and the date when shipped, should be forwarded by mail to the dairy commissioner, Ottawa. Proper forms will be furnished on application.

(6) The use is recommended of the square butter boxes holding 56 lbs. net each. They are made of spruce wood  $\frac{3}{4}$  or 1 inch thick, and 12 inches deep, 11 inches wide, 12 $\frac{1}{2}$  inches long, inside measurements. They should be lined inside with parchment paper. If not obtainable in the locality, they will be furnished at cost price on application to the dairy commissioner, Ottawa.

It must be distinctly understood that this assistance to the butter trade is offered by the government for the present month only, as they expect that shippers will be able to handle the trade when once the good qualities of Canadian butter are made known.

#### Some of the Advantages of the Cream Separator.

The world is moving. Not very long since, the time-honored plan of raising cream by means of the shallow-setting system was universal. Then followed an advance upon this in the introduction of the system of setting in deep cans. And close in the wake of the deep setting system comes the system of separating cream by the centrifugal separator. These newer systems have met with the reception accorded to all innovations, however good in themselves. They have been met by that iceberg, indifference, which stands in the way of all progress, and which has stood in its way since the world began. And they have met with more active opposition in the way of denunciation, and even ridicule. And yet they have worked their way slowly, but surely, until now they are embodied in the practice of many of the foremost dairymen in the land. Of the two systems, the centrifugal mode is probably destined to succeed the other, at least in very many instances. The following are among the advantages of the centrifugal system:

(1) It enables those who use it to obtain the cream in the most perfect form. If they use it promptly and judiciously, they can get the cream sweet, pure, and free from all taint. But, as implied, it must be used judiciously. The stable must be kept as free as possible from odors that taint. The milk to be separated must be put in a room where the air is pure as the morning, and the separation should take place as soon as possible after the milk is obtained. The greater likelihood of obtaining pure cream by this method, as compared with the other methods, will be at once apparent to the reflective mind.

(2) It is labor-saving. When the work of separating is completed, the work is practically done, so far as securing the cream is concerned. There is no lugging of the milk to and fro, no skimming of the same, no carrying of the skim-milk from the cellar or other apartment to the place of feeding. The skim-milk near the place where it is to be fed.

It may be answered that the work of separating is something. It is, undoubtedly; but, even when done by hand, it is less than when the milk is set by either of the aforementioned processes. But this labor may be lessened. It ought to be lessened. Where much milk is separated it should be lessened. It may be lessened by using some kind of power, as, for instance, a dog, a bull, a horse, or, where the facilities will admit of it, water may be used as the motive power.

(3) It enables the dairyman to get all the butter fat from the milk. This cannot be done by any process of setting. Good, practical dairymen have stated on public platforms that an average of about 20 per cent. more of butter fat can be obtained than when the milk is set in pans. If one-fifth more butter fat can be got by the use of the separator, it would mean that from a cow that would produce two hundred pounds per year of butter fat by the setting process, two hundred and fifty pounds would be produced by the separating process. Every dairyman knows how much butter fat is worth, and, therefore, he can readily compute how much more his cow would be worth to him per year in the one case than in the other. By adding one-fifth to his annual butter product in case he has no separator, he may know very nearly what it would have been had he used a separator. It has been claimed that even at the present prices of the separators, it would pay to invest in one where ten cows are kept in the dairy.

(4) The last advantage arising from the use of the separator that we will mention here is the superior quality of the skim-milk that it brings to us. As the separation takes place at once, the milk may be used not only while it is fresh, but also while it is warm. Every one who has fed skim-milk to live stock must know the great superiority of sweet skim-milk as compared with what is sour, and of warm skim-milk as compared with what is cold.

But there is one difficulty in the way. The separators are dear, and, as there is a patent on them, there does not seem to be any way of overcoming the difficulty. It does seem too bad that humanity should be so grasping in its nature. A man who invents a useful article should be rewarded, but there surely ought to be a limit to the reward. When a man has enjoyed a monopoly for a time, and that monopoly has made him a millionaire, he surely ought to be satisfied. If these separators could be obtained for two-thirds of the cost many more of them would be used than are now used, and the makers would still have a profit.

#### The Composition of Dairy Products.

Read by PROF. F. SHUTT, Ottawa, before the Eastern Dairymen's Association.

In order that we, as dairymen, may have a better understanding of our business, in order that we may be able to apply our skill with intelligence and true economy, it is necessary, nowadays, to know something of the composition of the materials with which we have to do, and, further, to be well advised as to the rôle that the component parts play in the manufactured products.

For these reasons, I purpose directing my remarks briefly, this morning, to a consideration, from an economical standpoint, of the composition of cow's milk and its various dairy products and by-products.

The constituents found in milk are water, albuminoids, fat, sugar, and ash. For convenience of reference the percentages (averages) of these in milk, cheese, whey, butter,

buttermilk, and skim-milk have been arranged in the following tabular form:

(Table 1.)

Constituent	PERCENTAGE COMPOSITION OF DAIRY PRODUCTS.			
	Milk	Cheese	Whey	Butter
Water	87.5	10.0	91.8	1.0
Albuminoids	3.2	25.0	0.9	0.5
Fat	4.3	34.5	0.4	32.4
Sugar (milk)	4.8	7.0	5.0	5.5
Ash	0.7	0.7	0.6	0.1
				Buttermilk
				90.3
				3.7
				1.2
				5.5
				0.7

The differences that occur in the case of cheese and butter between the total amounts of the constituents and those correspond to the percentages of common salt added in the process of manufacture.

**Milk.** We may consider the composition of milk somewhat in detail, and then pass on to more rapidly trace the history and function of its chief constituents in the dairy and cheese factory.

**Water.** To the water in milk no commercial value can be assigned. From its association with the fat, milk sugar, casein, or curd, and mineral matter, however, it has acquired, in milk, an important physiological value. It is the water normally present in the milk that makes this "food and drink" such an agreeable article of diet. By virtue of its water, milk is an emulsion, in which the fat is in suspension and the other solids in solution. The water in milk not only serves to prevent these nutritious substances in a palatable form, but acts as the chief factor in contributing towards their easy digestion and assimilation.

But I would emphasize more particularly its rôle from an hygienic standpoint. Water is the universal medium or vehicle for conveying food and discharging the physiological functions of digestion, secretion, and excretion in the animal economy. The water of milk is derived from that of the blood, and this, in turn, from that drunk by the animal. How important, how necessary, then, is it, not only for the health of the cow, but also for the wholesomeness of the milk and its dairy products, that the water supplied to cows should be pure and free from pollution!

The question of pure water is one of greater moment to dairymen than to any other class of farmers, since the germs of diseases that may lurk in a contaminated supply may be handed on, through the agency of the cow, to many an innocent victim.

Organic filth of all kinds must be carefully excluded from entrance into the well. No well should be sunk in a barnyard or stable, as, sooner or later, it must, in such a place, act as a cesspool.

Pure water, in a large measure, means the good health of man and beast on the farm; it means thrift in the animals and wholesomeness in their products.

**Albuminoids.** These may be considered under two classes—casein or curd, and albumen. The first is separated from its solution

in milk by the action of rennet and acid; the latter constitutes the non-coagulable portion of the albuminoids (or nitrogen-containing substances), and, consequently, remains in solution when milk is curdled. It is extremely probable that the albumen of milk is complex in its character, and really consists of several closely allied compounds. This seems the more evident since a separation can be further effected by certain chemical and physical means. The usual amount of casein is about 2.5 per cent.; that of albumen about 0.7 per cent.

The feeding value of curd is high. In composition it is akin to the lean (muscle) of meat, the white of egg, and the gluten of wheat. All animals require, daily, a certain amount of such nitrogenous organic materials to repair the waste of their tissues and to enable them to do work, to make flesh and milk. Plants also require nitrogen to store up in their tissues, the compounds so formed afterwards serving as nutriment for animals. The nitrogen-holding substances, moreover, are costly. Their rational and scientific use, both as plant and animal food, requires, therefore, careful consideration.

**Fat.** The butter fat constitutes the element of the greatest commercial value in milk. It is the most important of all the solid constituents.

Chemically, it is the result of the combination of glycerine with certain fatty (organic) acids—principally butyric, stearic, palmitic, and oleic acids. It is butyric acid (present in butter to the extent of some 6 per cent.), an acid characterized by being soluble in water and volatile, that is the special distinguishing feature of butter fat. Oleomargarine and other productions of foreign oils and fats—now upon the markets of other countries as butter substitutes—may be recognized by the chemist, owing to the absence of very low percentage of volatile fatty acids found in them. They contain little or no butyric acid.

The fat of milk exists as small globules, held in suspension; hence, as already stated, milk is an emulsion. The size of the globules differs in the milk of the various breeds. Being lighter than the serum (the solution of the other milk solids), the fat rises to the surface on allowing the milk to stand. For the same reason the fat may be taken immediately, and almost absolutely, from milk by the aid of centrifugal force in the separator. This apparatus is by far the most economical and thorough of all devices for removing fat.

It is not my purpose to-day to speak to you at length upon the Babcock method, either as a reliable process for estimating the fat in milk or as a means or basis for the valuation of milk. I have done that on previous occasions, fully explaining the whole matter to the members of this association. All I wish to do now is to draw your attention to the following table.

The data it contains are from the very highest authorities, and are well worth the careful consideration of all interested in cheese-making.

The results of the large number of experiments conducted by Dr. Van Slyke, and here epitomized by Dr. Babcock, establish the fact that the percentage of fat in milk is a true indication of the value of normal milk for cheese-making purposes. We have no hesitation in saying that when quantity and quality of cheese are taken into consideration, the payment for milk in cheese factories on the basis of the percentage of fat is the very best and most equitable plan that has been proposed.



Table prepared by Dr. S. M. Babcock, embodying the results of experiments by Dr. Van Slyke, of the Experimental Station of Geneva, N. Y., and showing the relation of fat to casein, and yield of cheese in normal milks containing different amounts of fat:

Green cheese for lb. of fat in milk.	1 lb. of cheese from 100 lbs. of milk.	Per cent. of fat in milk lost in whey.	Fat lost from 100 lbs. of milk.	Lbs. of casein per lb. of fat.	Average per cent. of casein.	Average per cent. of fat.	Per cent. of fat in milk.
2.73	7.14	9.45	1.32	0.68	2.33	3.38	From 3.0 to 3.5
2.70	7.4	7.5	1.1	0.66	2.46	3.72	" 3.5 " 4.0
2.73	11.4	7.7	1.4	0.65	2.70	4.15	" 4.0 " 4.5
2.71	12.5	5.7	1.45	0.64	3.05	4.73	" 4.5 " 5.0
2.66	13.2	6.92	1.1	0.61	3.12	5.11	" 5.0 " 5.25

**Milk sugar.** This is not as soluble, nor as sweet as cane sugar, though similar in its composition. It undergoes fermentation, forming, first, lactic acid (which curdles milk), and, finally, alcohol. The decomposition of milk sugar into lactic acid is brought about by a micro-organism or bacterium, always to be found in milk that has not been sterilized.

The alcoholic fermentation of milk sugar allows the manufacture of koumiss and many other alcoholic beverages from milk.

Milk sugar has a distinct and important feeding value. It belongs to the class of compounds known as carbohydrates, whose function it is, in the animal economy, to furnish bodily heat and energy.

**Ash or mineral matter.** This consists of phosphates, chlorides, and sulphates of lime, potash, magnesia, soda, and iron. The total ash amounts to about 7 per cent. of the milk, and is estimated by burning off the fat, curd, and milk sugar left on evaporating the milk.

When we consider milk as an article of food, we must recognize the very important rôle of this soluble mineral matter. It supplies in the best proportions and in the most assimilable condition those earthy salts necessary to the development of bone and other tissues of the body.

**Cheese.** Cheese differ much in composition, owing to the various methods in vogue for their preparation. The analysis here given probably represents the average Canadian full cream cheese.

Cheese is both a rich and a strong food, and has an exceedingly high nutritive value.

In the manufacture of cheese the curd is precipitated from milk by rennet. This casein or curd carries with it by far the greater part of the fat, in addition to a small quantity of milk sugar and ash. The various steps in the making and ripening of the cheese, and the changes that accompany them, I cannot now speak of; such an important matter as cheesemaking deserves more attention than it is able to give in this address.

**Whey.** Whey is the by-product in the manufacture of cheese. It contains the soluble albumen, the mineral matter, the milk sugar of the milk, together with about half of one per cent. of butter fat. Its chief con-

stituent is the milk sugar, and it is upon this that its principal value as a food for hogs depends.

**Butter.** Butter should not contain more than 17 to 18 per cent. of matter other than butter fat. This latter constituent is usually found to average from 80 to 85 per cent. in good samples. The better made the butter, the less will be the amount of curd present. Water, incorporated during the process of manufacture, and small quantities of ash and milk sugar, constitute (in addition to the salt used), with the curd already mentioned, the substances other than butter fat present in butter. Of the nature of butter fat we have already spoken.

**Buttermilk.** Buttermilk contains practically all the constituents of milk, with the exception of the butter fat. If the churning has been properly conducted, the amount of fat in buttermilk should not exceed .2 per cent. It, however, should be mentioned that more or less of the milk sugar has been converted into lactic acid.

The feeding value of buttermilk is much greater than that of whey, owing, chiefly, to the presence of the casein.

**Skim-milk.** Skim milk varies in quality according to the method employed in removing the butter fat. By the use of the separator, not more than .2 per cent. of fat is left in the skim milk. With other processes of skimming the percentage is much greater.

The chief difference between buttermilk and skim-milk from the separator is that the latter is sweet, containing no lactic acid.

Skim-milk is a valuable food, supplying to farm stock the heat and muscle-forming compounds necessary for their maintenance and growth. Its use must, however, be supplemented by some food containing oil or fat, such as linseed or cornmeal.

**Poultry.**

**Popularize Poultry Keeping.**

By JOHN J. LANTON, Oshawa.

Poultry, in the way in which they are often kept on a farm, afford neither pleasure nor profit. Why is this? Because so little attention is given to them, either in breeding or care. As a rule, farm fowls are not as good as they should be. Now, there is no place where finer fowls can be raised than on the farm. Instead of this, however, we find a great many poor ones. No fresh blood is introduced for years; very often they are allowed to roost in the trees, or any place that they can find, having no houses of their own. It is not much to be wondered at that so many say that their fowls do not pay. How can such breeding and care be expected to pay? We should not expect to realize very large profits from our other stock if they were handled in that manner. That there is a profit, as they are now kept, shows that there is good ground to walk on, with a chance for as large profits as can be got from any other department of farm work.

"Which variety shall we keep?" is a question often asked. That depends on what you keep fowls for—whether for eggs only, for meat, or the two combined. If for eggs, the Leghorns and Minorcas are the best. The eggs of the Leghorn are smaller than those of the Minorca, but the birds likewise are smaller and require less to keep them on, so that the weight of eggs produced for food consumed will be equal to, and, I think, surpass, that of the Minorcas. As it is always necessary to kill off the older birds to make way for a certain number of pullets yearly, flesh value must be also taken into account. The Leghorn matures very quickly, and, young or old, are very much superior to the Minorcas for the table.

If a table fowl alone be wanted, the Plymouth Rocks, Dorkings, and Brahmas will be found suitable; the selection of any one variety being based on the question whether fitness for the table at an early age, plumpness from a month old, or large size is wanted. For a general purpose farm fowl the Wyandotte is superior to all others. I have tried many varieties, but have found none to compare with it. In this opinion I am corroborated by the leading authorities in the United States. These fowls are hardy and clean-legged, have no feathers to cling with snow; and their combs and wattles are of medium size; they are of a vigorous, lively nature, good

layers, and excellent for the table, from two months old to full maturity. They are some of the plumpest birds, at all ages, that are to be found.

There are sitters and non-sitters among fowls. This latter quality is not natural, but has been established by careful breeding for man's convenience; so bear in mind if you crossbreed them—even two non-sitting varieties—that you will get sitters. So, while a bird in its purity may be either a sitter or non-sitter, a crossbred bird will always have the incubative quality developed.

In the erection of poultry houses a few general rules may be observed. These are warmth, plenty of light, and ventilation. Without these your house, no matter how costly, will not be suited to the wants of its feathered inhabitants. Make no double walls with a space between them, as it forms a harbor for vermin. The best inside wall is well-matched boards, which leave no seams for vermin to lodge in. Make all nests, perches, etc., movable, which greatly facilitates cleaning the house out. Use plenty of lime-wash on the walls, coal oil on the perches, and in the corners and joints of the nest boxes. To become interested in and familiar with poultry, you should subscribe for one of the many excellent poultry journals; go to a poultry show; get a sitting of eggs or a pair of birds of some pure breed from a reliable dealer; care for them as you would for your well-bred sheep, cattle, or horses; and if in six months you have not got what fanciers call the "hen fever," you certainly have no love for the beautiful.

**Questions and Answers.**

**Bone Cutter.** Subscriber, Nicola, B.C.: Please inform me whether there is a firm in Canada that manufactures bone mills for crushing raw bones for poultry. I often see them advertised in American papers. I am running a small butcher's shop, and I wish to make good use of the bones, knowing the value of them. I have 150 chickens, and thus far I have always boiled the rough meat, head, fat, etc., with vegetables, and then mixed with shorts. This answers splendidly, but I always had to burn the bones to make use of them. I would rather use them raw if I could get a small hand mill.

[We do not know of any firm manufacturing such mills in Canada. If there are any, they should let the fact be known through our columns.—Ed.]

**The Apiary.**

**Beekeeping and its Place on the Farm.**

By R. F. HOLTSMANN, Brantford.

It would be a matter of surprise to learn that a lawyer, living in the heart of a great city, was keeping a herd of cattle at his home for dairying purposes. Every one would naturally say that dairy farming under such circumstances was decidedly out of place, and that the lawyer had better get rid of the cows or move them out to the country. Beekeeping is an occupation which has also its proper place. And while it may be legitimately carried on by very many on the outskirts of large cities, and in towns and villages where the owners make the bees help them in maintaining a substance or in laying by a small sum for a rainy day, yet there is no doubt that beekeeping is properly a branch of the farm or garden. To ask if it is a legitimate branch of the farm is almost to ask if a farmer has a right to gather his own crops. Aside from this, the farmer and the gardener derive another benefit from beekeeping. Honey is secreted in the flower, and the bee is imbued with the instinct to gather it, not merely that honey may be stored and man take it from the comb, but that the bee and other insects may, in their visits from flower to flower, distribute pollen. Thus the flowers become fertilized, and the insects assist in the great scheme of the reproduction of plant life.

Now, we know that in the spring of the year, when peach, cherry, plum, apple, and other fruit trees blossom, there are comparatively few insects on the wing, and these, on the one hand, assist nature in her work of reproduction by the distribution of pollen, and, on the other, they, as it were, ask for compensation by making a portion of that very fruit too often the cradle for their offspring.

The queen, the mother of the honey bee, unlike the many other insects, is attended early in the season—in fact, all winter—by thousands, yes, tens of thousands of workers, which, in their lazy flight from flower to

flower, confer great blessings on the fruit grower, and that when insect life in general is hardly awake. And, unlike so many other insects, the visits do no injury, but they confer a twofold advantage: They store the product which attracts them, and in such quantities that men make a business of providing for marketing it and caring for the insect which stores it. The part the honey bee plays in the reproduction of plant life should alone be sufficient to cause the horticulturist and the farmer to see that their fields are kept within range of the bee.

If any one making beekeeping his main or entire business is within two miles of them, they can rest satisfied to leave the fields to such a one. The specialist will probably be a man whose bees may be depended on to remain there from year to year. One with whom it is a comparatively side issue is more liable to quit the business. For this reason it does not pay to crowd the territory, and run the chance of having it overstocked to such an extent that the specialist has to leave. In speaking of overstocking, it is well to define what is meant. The beekeeper calls a locality overstocked when a colony of bees begins to gather less honey on account of other colonies visiting flowers in the same locality. Authorities differ considerably as to the ease with which a locality may be overstocked. Opinions run all the way from seventy to two hundred colonies for every two square miles. It certainly depends upon the locality and upon the season. If a locality is good and the season likewise good, it would probably take more than the number mentioned to diminish the average yield per colony in the neighborhood. If the locality and season are poor, much less might overstock it.

In studying the location of an apiary, we consider the land lying within two or three miles of the apiary. I say two or three miles, although bees have been known to gather honey ten and twelve miles from the hive, yet it is generally admitted that when they have to fly more than three miles from home they work at a disadvantage.

If there is no one keeping bees extensively in your neighborhood, it would be well to consider the advisability of going into the business on your farm. The extent to which honey-gathering may be made to pay depends upon the individual, the location, and your market. Most localities in Ontario, which are good farming districts, are fairly good localities for the beekeeper, but not necessarily the best. Probably the best are where the physical features of the country are undulating, even to the extent of being hilly and swampy, and where the land is partly cleared and partly wooded.

If the soil is all grades from sand to clay, and produces spring blossoms, white and alsike clover, thistle, basswood, buckwheat, boneset, golden rod, and aster, it is a good locality. All the above prolong the honey season, and help the bees to secure a larger honey crop. Some soils secrete honey under certain atmospheric conditions more liberally than others. It takes time and very strict attention to look after bees.

It is true that the swarming season does not last long, but it is during the farmer's very busy season. The work during the remainder of the year for a few colonies is not much, yet it is spread over the year, and all that is required to be done should not be neglected for a single day. When there is much to look after on the farm, unless some one is particularly interested in the bees, they are apt to be forgotten, and loss or "bad luck" results.

If you have a son or a daughter (for some ladies are most successful beekeepers) old enough to watch for a swarm of bees, and you are willing to take the child from school about the first of June to watch for them until about the close of July, you may manage that part. These children may, as they develop, grow up into the bee business, the apiary gradually increase, and they have a means, without any great cash outlay, of securing an independent livelihood. Under such circumstances, they do not require to go out into the world and away from home to secure a living, as so many have to do.

An apiary under such conditions leaves, to my mind, nothing to be desired. Any one having the requisites to success in other businesses, that is to say, a right character and suitable disposition, may succeed in beekeeping under the conditions just explained.

(To be continued.)



**Jottings.**

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

**Mr. Cockburn's Sale.** We desire to once more call our readers' attention to Mr. Cockburn's sale of imported Oxford Down sheep, which takes place on Wednesday, March 6th, at 12 p.m. For particulars see advertisement in this issue.

**Montreal Provincial Exhibition.** This provincial exhibition will be held in Montreal from Thursday, 12th, to Friday, 21st September inclusive. Live stock will come in on Monday, 16th. Premium lists will shortly be issued. For all information please address S. C. Stevenson, Manager and Secretary, 76 St. Gabriel street, Montreal.

**Journal of the R.A.S.E.** Part 4 of Volume 5 of the above journal contains as usual many articles of interest. "Rotation of Crops" is treated by Sir John Lawes and Sir J. Henry Gilbert. "Agricultural Depression at Home and Abroad," by Mr. William E. Lear, and "Vaccination against Anthrax," by Prof. McFadyen, are two readable articles.

**Balsam Lodge Farm.**—This farm, the property of the late Mr. John Fothergill, Burlington, is to be sold on April 4th, and, as it is a most desirable farm, we would draw our readers' attention to it. It lies most conveniently to the village of Burlington, has been kept as a stock farm for 25 years, and is in the highest state of cultivation and productivity. It has won three medals in county and provincial contests. The farm consists of parts of lots 17 and 18 in the 3rd concession of the township of Nelson, Halton county, and contains 205 acres or more. The sale will take place on the premises. Apply to C. Fothergill or W. G. Pettit, Freeman, or Martin & Martin, 47 James St. South, Hamilton.

**Horse Owners Should Try  
COMBAULT'S  
Caustic  
Balsam**

**The GREAT FRENCH VETERINARY REMEDY  
A Safe, Speedy and  
POSITIVE CURE.**



Prepared exclusively by J. E. Combauld, ex-Veterinary Surgeon to the French Government Stud.  
**SUPERSEDES ALL CAUTERY OR FIRING**  
Impossible to produce any scar or blemish. The safest and most reliable ever used. Takes the place of all liniments for mild or severe action. Removes all Humors or Blemishes from Horses or Cattle.  
As a **HUMAN REMEDY** for Rheumatism, Sprains, sore Throat, Etc., it is invaluable.  
**WE GUARANTEE** that one tablespoonful of **CAUSTIC BALSAM** will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.  
Every bottle of **Caustic Balsam** sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address  
**THE LAWRENCE-WILLIAMS CO., Cleveland, O.**

**THE GREAT MILK AND BUTTER HERD  
OF  
HOLSTEIN FRIESIAN CATTLE.**



75 head, young stock of excellent quality, prices 10 suit times. Send for catalogue.  
**SMITH BROS.**  
Credit Valley Stock Farm, Churchville, Ont.

A subscription to THE JOURNAL is the best \$1 investment any farmer or stock-raiser can make.

**EXECUTOR'S SALE  
—OF—  
Real and Personal Estate**

The executor of the late John Fothergill  
**Will sell by Public Auction at Balsam Lodge, in the Township of Nelson, in the County of Halton, on Thursday, the fourth day of April, 1895, at eleven o'clock in the forenoon.**

Balsam Lodge, and certain chattels belonging to the estate of the late John Fothergill, and also certain chattels, the property of the executor.

Balsam Lodge consists of parts of Lots 17 and 18 in the 3rd Concession, south of Dundas St. in the Township of Nelson, and contains 205 acres and upwards.

The farm is beautifully situated within a few minutes' walk of Burlington station, on the main line of the C. & N. The soil varies from sandy loam to clay loam, the subsoil is nearly all clay, and 100 acres east upwards are underdrained. It is all cleared except about 20 acres, and there are about 100 acres of orchard.

The buildings consist of a large two-story brick house, a frame one and a half story cottage, a large bank barn, and other suitable outbuildings.

Possession will be given on the 15th of April, 1895, if the sale be then completed, but the purchaser may plow and sow a portion of the land immediately after the sale.

The chattels consist of farm implements and stock.

**TERMS OF PAYMENT**

Real Estate.—10% of the purchase money to be paid at the time of sale, and a further sum sufficient with the 10% to make up one-third of the purchase money to be paid within 30 days thereafter, and the purchaser shall, within said 30 days, either pay the balance in cash or secure the same by mortgage on the property, payable in three or five years (with the privilege of paying off \$100 in any year), with interest at 6% half yearly on the 1st days of June and December.

Chattels.—Purchasers of \$10 and under cash, over that amount 8 months' credit on approved joint notes or a discount of 6% for cash.

For further particulars and conditions of sale apply to  
**MARTIN & MARTIN,**  
47 James St. South, Hamilton.  
or to **CHRISTOPHER FOTHERGILL,** Executor,  
25th February, 1895 or **W. G. PETTIT,** both Freeman P.O. Ont.



**NOW  
Choice Selected Qualities  
SEED OATS**

**SIBERIAN OATS,** white, first-class for feeding or for meal, heavy yield. Price, 75 cents per bushel; 10 bushels or more, 70 cents per bushel.

**CHALLENGE OATS,** white open-headed oat, excellent plump grain, and good straw. Price, 80 cents per bushel; 10 bushels or more, 75 cents per bushel.

**PEERLESS OATS,** a new variety, grown largely last season, and have given good satisfaction, heavy yield, and splendid plump oats—no better for feed or meal. Price, 90 cents per bushel; 10 bushels or more, 80 cents per bushel.

Our Catalogue goes free with every order from this advertisement, or to those mentioning THE STOCK JOURNAL.

**A WONDERFUL NEW CLOVER.** We will mail a package of Crimson or Scarlet clover seed, which every stock-raiser should try, and our Catalogue of Seeds, on receipt of 10 cents in stamps.

**Why Not**

Go into dairying? You can make money at it if you understand the business. In order to get an understanding of it, you should read Mrs. E. M. Jones' book,

**"DAIRYING FOR PROFIT."**

Price 50 Cents postpaid

Or given for one new subscriber to  
**THE CANADIAN LIVE STOCK  
AND  
FARM JOURNAL.**

**THE BRYANT PRESS**

TORONTO, CAN.

**Barred  
Plymouth Rocks.**

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

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

**The PINE GROVE HERD of  
DUROC-JERSEY SWINE**

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

**CHARLES ANSTICE, Springford, Ont.**  
B. & L. Railway.

**CLOSING OUT SALE**

Of the property of  
**The Late Frederick Wm. Stone, Guelph, Ont.**  
By Public Auction, on Thursday, March 21st, 1895, at 1 p.m., sharp.

Purebred Hereford and Shorthorn Cattle, Cotswold and Southdown Sheep, and Berkshire Pigs.

At the Moreton Lodge Farm, next the Ontario Agricultural College, one mile from Guelph.

This is one of the oldest established and largest breeding establishments in America.

At the same time there will be offered the Moreton Lodge farms, most of which have been used for breeding pure stock from 45 to 64 years by the late owner, consuming on them all crops raised and large quantities of fodder purchased, and consequently they are in a very high state of fertility. The location for a breeding establishment cannot be surpassed. The Ontario Agricultural College adjoins the Home farm, and the proposed Guelph Electric Street Railway runs past the farm and within a few yards of the buildings.

Catalogues on application to **HARRY MURTON,** Executor F. W. Stone Estate, Guelph.

**The Knight Patrons Farmers' Friends.**

(Continued.)

World's Championships are Scarce Commodities—The Only Gold Medals and Diplomas Won on Plows and Plowshares at Columbian World's Exposition—The Only Awards Won Through Court of Appeals. Under Protest, at Washington, D.C., and the Only True Awards Won for Canada on Agricultural implements, are Now Held by this Company—Knowledge of Power Holds the Fort—Wise Men Get the Best—Honorable Judges and Acute Expert Critics say, "It's All in the Johnstons Plow (Defence)"—Business Managers and Agents (Wholesale and Retail) Wanted.

(Publishers throughout the country copying this information shall be rewarded later. Send sample copy containing same.)

See official wording of World's Fair awards. In reply to much late enquiry from all parts, please see and note the meaning of wording of World's Fair awards on plowshare alone, viz., World's Columbian Exposition, Chicago, Canadian Government Department of Agriculture; exhibitors, Johnston Patent Plowshare Co., address, Toronto, Ont.; group 16, class 48; exhibit Plows and Plowshares.

**AWARD.**

East of operation in cutting soil, due to an improvement in form which produces easy escape of weeds and grass under the ground level. A practical kind of plowshare for all kinds of plowing, under scoring, and guarding against any kind of obstruction in any kind of soil.

(Signed) **JOHN BOYD THACKER,**  
Chairman Executive Committee on Awards, and other officials.

Note, in particular, the many late patent claims on our plow (Defence), all of which are adaptable to any style of plow, and the names of which explain their use. The Plow-Guard, guarding against obstruction between the point of coulter and the point of the share, yet providing for the required space at its proper level. The limited height underscore scores the bottom portion of the furrow, which, heretofore, was torn away, thus making lighter the draft. The self-clearing coulter, in combination with the underscore, is removed from the old-fashioned attachment on the beam and made adjustable to any required position by means of a low-down attachment on the land side,

and operated by a single bolt working in a 1/4-inch slot. This coultter is made self-clearing by means of a lop, or lean-over, towards the unbroken land, and coming back into line at the point with the underscore. This lop-over of coultter from the line of land side affords a low-down hitch, and draft direct from breast of the plow, making much lighter the draft and easier the management in the hardest ground. The extreme slant of the underscore and coultter reduces the old style of pressure cut, in the upright coultter, to a draw cut, again making much lighter the draft. The minute adjustable clevis is reduced from the old style cumbersome clevis to three pieces, and operated by slacking one bolt and swinging the guide-plate to any desirable width or depth of furrow. This is only adoptable because of one style of draft-rod. The draft-rod is only adoptable by means of our lean-away coultter, from line of land side. The tubular beam is a matter of choice. We claim it is lighter, with equal strength. The handles are made adjustable by means of ratchet wedges and loops, or eyes, into which the handles are placed and raised or lowered to any height required in a moment, by the use of turn buckles on the brace rods, and made rigidly tight without the use of a single bolt. Those handles can be removed for storage as quickly as you can remove the bridle from your horse, thus encouraging preservation of the plow by storing when not in use; for transport, in a knock-down plow (portable handles), it is accepted at half freight. To the commercial travellers introducing our plow and appointing agents, these claims are invaluable, as this working plow can be invisibly stored in a Gladstone carriage, ready for practical test whenever required by the agent being appointed, or others demanding practical test. The horizontal width of furrow gauge wheel travels on the inner smooth land side of the furrow, yet not touching the bottom of the same, which allows the plow to dip and plow the hollows as well as the heights. The many advantages of this plow are better seen and felt than is possible to tell by way of any description. Suffice it to say, we shall only offer the best plow in every particular, at about ordinary prices for the best common plow. Offers to such men as we require. Orders reserved for us shall have our most careful attention. For facts in this matter, the fountain head (our office), where the goods are to be seen, is the proper place to investigate.

Respectfully yours,  
THE JOHNSTON P.P.S. CO.,  
73 George St., Toronto.

## WE SELL ROCK SALT

For 50 cents per 100 lbs. by your taking 400 lbs. or over (cash with the order). We have shipped a ton at that price to the Hon. John Dryden, Minister of Agriculture, to his farm at Brooklin, Ont. It salts stock for half the money that loose salt does. Can we ship you an order?

TORONTO SALT WORKS,  
128 Adelaide Street East, - Toronto

**Jottings—Continued.**  
Hear, and "Vaccination against Anthrax," by Prof. McFadyean, are two readable articles.

**Steele, Briggs, and Marcon Seed Co.'s Catalogue.**—Not inferior to other years' is the verdict about the fine seed catalogue issued by the above-mentioned firm. It contains the names of all the latest varieties, and all the best of the old standard kinds of seeds, grains, roots, etc. A catalogue will be sent to all who write for one. Address, Steele, Briggs, Marcon Co., Toronto.

**Simmers' Seed Catalogue.**—The seed catalogue of Mr. J. A. Simmers, now to hand, contains everything new and good up to date. This reliable firm is now in its fortieth year, and has been largely patronized by our readers in the past. We expect many more will do so this year. Any wishing to get a fine seed catalogue should write to J. A. Simmers, 147 King street east, Toronto.

**A Well-Deserved Testimonial.**—A large and enthusiastic gathering of Patrons met at Grant's Schoolhouse, Mariposa, on Thursday evening, January 24th, the object being the presentation of a handsome set of plate and a very flattering address to Mr. John Campbell, Woodville, who was the standard-bearer of the Patron cause in West Victoria at the last election. Mr. Campbell was visibly affected, and replied in feeling terms.

**Kentucky Stock Farm.**—This journal, which is exclusively devoted to the interests of the trotting horse, is published at Lexington, Ky., the hub of the horse universe. It contains summaries of all the prominent meetings held throughout the year, and newsy notes concerning the doings of the trotter throughout the Bluegrass region and elsewhere. Printed weekly. Subscription price, \$2 per year; in clubs of five or more, \$1.50. Sample copies free.

**Fruit and Ornamental Trees.**—The annual catalogue of fruit and ornamental trees issued by Mr. E. D. Smith, Winona, Ont., contains the names of the best kinds of fruits, ornamental trees, plants and shrubs suitable for planting in the various parts of the Dominion. Some valuable advice is also given on planting the same, and on getting rid of some of the pests that worry the fruit grower. Those intending to set out trees in the spring should write to Mr. Smith for prices.

**Our Northern Districts.**—Very timely are the three handbooks on Algoma, the Rainy River district, and the Temiskaming settlement just issued by the Department of Crown Lands for Ontario under instructions from the Hon. A. S. Hardy. There is a great deal of good land in those districts, and it is well for those ignorant of the fact to know the resources and capabilities of those parts as regards agriculture, timber, and minerals. Illustrations of farms already cleared in those districts are to be found in the principal handbook of the three.

**The Canadian Almanac.**—The Canadian Almanac for 1895 is a great improvement on those previously issued—good even as those were. The amount of useful information for the business man and the private individual that is contained in its columns makes it a valuable work of reference. To the breeder it will be found very useful when he is shipping stock, as the list of post offices in Canada contains a column giving the nearest railroad station to each post office. The price is 20 cents in paper and 30 cents in cloth covers.

**Rock Salt.**—One of the most important points in feeding stock is the salting, and nothing is so neglected. The use of rock salt will greatly improve that point, as by its use the stock have it always before them; they take what they need, and will not take too much. The Hon. John Dryden, Minister of Agriculture, says: "If farmers knew the value of rock salt, they would never use anything else to salt stock with." The method of using is to put lumps of ten or fifteen pounds in each manger in winter, and, in summer, to place large lumps in the pasture. We hope to see rock salt come into more general use than it has been heretofore.

**North American Review.**—The president of the Farmers' National Congress, Hon. H. P. Clayton, contributes a paper entitled "Politics and the Farmer" to the February number of the *North American Review*, in which he explains, among other things, why farmers' political organizations have hitherto proved a failure. Among the short articles which appear are "Images in Dead Eyes," by Dr. Ellerslie Wallace; "Newspaper Row and National Legislation," by Albert Halstead, Washington correspondent of the *Cincinnati Commercial Gazette*; "The Cat in Law," by Gertrude B. Rolfe; and "How to Repel Train Robbers," by Lieut. J. T. Knight, U.S.A.

**Freeman's Fertilizers.**—The approach of spring causes the prudent farmer to prepare for spring work. Many have not sufficient manure to cover all the land they want enriched. For immediate profitability nothing comes up to high-grade fertilizers when they are purchased from a responsible firm. Such a firm is that of the W. A. Freeman Co. (Ltd.), Hamilton, Ont., who supply many of our readers with their excellent fertilizers. The results of the application of these to worn-out and run-down lands is surprising. Mr. Isaac Holland, Culloden, a Guemsey breeder, reports a yield of over 1,000 bushels of mangels per acre where the fertilizer was used, while for fruit crops the results are surprisingly good. The poultry foods supplied by this firm are also both cheap and good. Send for catalogue and prices.

**Dominion Shorthorn Herdbook.**—Volume 10 of the above record has been received at this office. In it are included all the animals registered up to the end of 1893. The arrangement of the bulls and cows is the same as in the last three volumes. The chronological history of imported Shorthorns written by the secretary, Mr. Wade, has been brought up to the present time, and thus completes what is a valuable work of reference. A new and important feature is a list of transfers of Shorthorns during the past year. A list of premiums awarded to Canadians at the World's

## FIRST ANNUAL Canadian Horse Show NEW ARMORY, TORONTO

To be held in the  
ON  
APRIL 18, 19, and 20, 1895.  
Under the auspices of  
The Agriculture and Arts Association of Ontario and the Country and Hunt Club of Toronto.

Large prizes will be given for all the recognized breeds of stallions, and for all kinds of Driving, Saddle, and Jumping Horses.  
Reduced rates on railways are applied for. Prize lists and information can be procured from the joint secretaries.

H WADE, Agriculture and Arts Ass'n, Toronto.  
STEWART HOUSTON, Country and Hunt Club, Toronto.

**FOR SALE**  
**Coach Stallion Londonderry**  
16 1/2 hands high; weight, 1450 lbs., 7 years old.  
Times' price and liberal terms. Address:

**ROBERT ATKINSON,**  
Thistletown, Ont.

**FOR SALE.**  
Two imported Shire stallions, Garfield and Duke of Blagdon. Garfield won second place at both Spring and Fall shows at Toronto in 1894. Duke of Blagdon was sweepstakes horse at Montreal and the winner of five first prizes in 1894. He is now two years old.

**J. M. GARDHOUSE,**  
HIGHFIELD, Ont.

**FOR SALE**  
Seven young red Shorthorn Bulls at very low prices. Also the Bull "PRINCE ROYAL," used three years in the herd.

**J. & W. RUSSELL,**  
Richmond Hill, Ont.

**SHORTHORNS FOR SALE**  
Eight Shorthorn Bulls, including Canada, second prize yearling at Toronto; the best show bull in Canada of his age, and a sure getter. Also a lot of young cows and heifers.

**J. & W. B. WATT,**  
Salem P.O., Elora Station.

**FOR SALE**  
**Imported Shire Stallions**

Blagdon Marquis, foaled 1889. Bay, 16 1/2 hands. Diseworth Blue, foaled 1886. Bay, 16 1/2. Fyde King, foaled 1888. Brown, 16 3/4. These horses were exported in 1893 by Clement Keevil, Blagdon Stud Farm, England, and are entered in both English and Canadian studbooks, and will be sold at low prices, and on liberal terms. Address:

**GEORGE GARBUTT,**  
Thistletown, Ont.

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

**JOHN DAVIDSON,**  
ASHBURN, Ont.

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

**H. J. DAVIS,**  
WOODSTOCK, ONT.

## LINCOLN OATS

The Lincoln oats were introduced into Canada last year by The Steele-Briggs-Marcon Seed Co., and have proved so successful on Canadian soil that we feel justified in offering them to our subscribers as something out of the ordinary. Last season was the first time this grand oat was offered to the Canadian public, and though the season was not a favorable one for oats, one and all agree as to its sterling qualities. This is a white oat very early, and so far has proved to be entirely rust proof, standing up better than any other sort. Its thin hull, heavy meat, and soft nib make it a grand feeding oat, as also for grinding for oatmeal. Mr. R. N. Lewis says that it excelled Clysedale, Black Tartarian, Welcome, and Giant Side oats. Mr. D. A. Tincorn reports 38 stools to the gram and 250 kernels to the stalk. These are the facts concerning them:

1. That the Lincoln Oat has produced one third more than any other variety grown in the same locality.
2. It is white and very early.
3. It has thus far proven itself entirely rust proof.
4. It stands up better than any other sort.
5. It is best for feeding on account of its thin hull, heavy meat, and soft nib.
6. It is best for oatmeal or grinding for the same reasons.

The originator has for several years been working up a stock in order to get a sufficient quantity to offer at a price that would place them within the reach of all.

Our offer is as follows:  
To any present subscribers who send us one new subscriber to THE CANADIAN LIVE STOCK JOURNAL at \$1, we will send a half bushel of the Lincoln oats, and also one-half bushel for each additional new subscriber. The oats will be forwarded to you by Mr. John Miller, of Markham. No charge for bags will be made in any case, but in every case the cost of carriage must be paid by the receiver.

## The Improved American Oats

We have again made arrangements with Mr. John Miller, of Markham, to offer the Improved American oats as a premium to our subscribers.

These oats have now been well tested by our leading seed grain specialists and experiment stations, and nearly all who have given them a trial have pronounced them as having few equals.

In many instances they have shown remarkable yields, over one hundred bushels to the acre having been reported. As these oats were introduced before the Lincoln, they have become better known, and we have been able to procure them on more reasonable terms. To any present subscriber who sends us one new subscriber to THE LIVE STOCK JOURNAL at one dollar we will send one bushel of the Improved American oats, and also one bushel for each additional new subscriber. They will be forwarded to you by Mr. Miller. No charge will be made for bags, but the cost of carriage must be paid by the receiver. Send at once for sample copies, order forms, etc., to begin canvassing.

The  
Canadian Live Stock and  
Farm Journal,  
TORONTO.

SHORTHORNS.

FOR SALE.

Seven Shorthorn Bulls and twelve Heifers, forty to six months Southdown and Leicester Rams and Ewes and a lot of Berkshire Pigs.

E. JEFFS & SONS, BOND HEAD, Ont.

SCOTCH SNORTHORNS AND BERKSHIRE PIGS FOR SALE



Choice young cattle of both sexes of the most select breeding. Also young Berkshire pigs from sows selected from the herd of Mr. J. C. Snell, Edmononton, Ont.

AMPLE SHADE STOCK FARM HAS FOR SALE

Shorthorn Bulls, 4 to 16 months old, of the best breeding, large size, thick and well fleshed, grand quality, at reasonable prices. Address:

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

FOR SALE. PURE SCOTCH SHORTHORNS.

Young bulls and heifers, some from imported sires and dams. Also a lot of fine young Berkshires, pairs mated that are not skin. Prices to suit the times.

S. J. PEARSON & SON, Meadowvale, Ont.

SHORTHORN CATTLE AND LEICESTER SHEEP

All stock registered. Write for particulars, or come and see stock.

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

"THE BRIARS"

SUTTON WEST, ONT.

84 Head of Registered Shorthorns.



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

F. C. SIBBALD.

NEIDPATH STOCK FARM

Thos. Ballantyne & Son, Stratford, Ontario.

Purebred Ayrshire Cattle

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

YOUNG BULLS FOR SALE

SIMMONS & QUIRIE, IVAN, ONTARIO.

Breeders of Shorthorns and Berkshire Pigs

The herd is headed by the Matchless bull, Royal Saxon 10517-1, by Excelior (imp.) 2693 (51233), with Hampton M. 18240, sired by Hampton Hero 124, as reserve. Among the females are representatives of the Strathallans, Minas, Goldenrope, Mysie, Eliras. They are lates, with Scotch crosses. The herd of Berkshires includes many prize-winners, and are an exceedingly choice lot. Farm 7 miles from Hinton Station, G.T.R. Stock of all kinds for sale. Apply to

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



SHORTHORNS AND BERKSHIRES STOCK FOR SALE.

JOHN RACKY, Jr., Lennoxville, Que.

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

ELMHURST STOCK AND DAIRY FARM, Clarence, Ont.

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

HENRY SMITH, Manager.



PINE GROVE STOCK FARM, Rockland, Ont.

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

JOS. W. BARNETT, Manager.

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

Ayrshires, imported and homebred; herd headed by Imported Emperor of Drumore 5431 C.A.H.R. and 1868 S.A.H.B. Jerseys, all of the celebrated St. Lambert family; herd headed by Hoggar Fogg of St. Amos 25704, A.J.C.C. Berkshire Pigs. Young stock of all the above breeds for sale. Post Office, Telegraph Office, and Railway Station, North Naiton Mills, P.Q., on the C.P.R.

GEORGE CARSON, Manager.

Jottings.—Continued.

Fair and an illustration of prize winners at that show owned by Messrs. J. & W. Russell, Richmond Hill, increase the value of this number. The book is well printed and edited, and reflects great credit on the editor, Mr. Henry Wade.

Grasses, Clovers, Field Roots, Forage, and Fodder Crops. This is the title of an extremely useful and timely little work written expressly by Prof. Thos. Shaw, of the Minnesota Experiment Station, for the Northrup, oration, G.S. Twin Company of Minneapolis. It treats in an able manner of all the subjects mentioned, and will be found very useful not only by the beginner, but also by the experienced farmer who has followed farming for some time. The work tells the farmer what crops are best for his land, how to prepare his ground for the crop, how to sow the seed, how to take care of it and harvest it, and also how to feed it. The Northrup Bros., Goodwin Company will give the book free to those who purchase vegetable seeds to the amount of \$1, or field or grass seeds to the amount of \$2, or it will be mailed to any address on receipt of \$1.

Tolton's All Steel Flexible Harrows. It is important in these years of advancement to procure the best and most efficient implements in agriculture that it is possible to obtain, and at the same time something that has the largest possible amount of wear and the least chance of getting out of repair. These requisites have been wanting for many years in the harrow line, but we are happy to state that these very important points of merit have all been fully met in the All Steel Flexible Harrow manufactured by Tolton Bros., of Guelph, whose advertisement appears in another column of THE JOURNAL. As an evidence of this, since the introduction of this excellent harrow, the demand for it has been gradually increasing, and so popular has it become in sections where it has been introduced that the progressive agriculturist will buy no other, a fact which has been very gratifying and satisfactory to the manufacturer and purchaser alike, thus fully demonstrating the oft-experienced fact that a first-class good thing is a benefit to all concerned, and verifying the statement that the best is always the cheapest. From the reputation obtained by this genuine harrow, we can safely predict a large trade for them.

A Word to Breeders and Farmers. Read what is said by some of our leading stockmen regarding the value of Little's Sheep and Cattle Wash. From John Snell's Sons, Willow Lodge Stock Farm, Edmononton, Ont.: "Having used Little's Sheep and Cattle Wash for several years, we willingly give our testimony to its efficacy as a destroyer of ticks and lice on sheep, cattle, and pigs. It is the most satisfactory preparation for the purpose we have ever tried, and we have tried a good many. It is easily prepared for use, is clean, safe, and sure. It leaves the wool in fine condition, and the sheep thrive and improve rapidly after its use." From J. V. Ormsby, V.S., Manager Isaleigh Stock Farm, Danville, Que.: "I have been using Little's Sheep and Cattle Wash for some five years, and can truthfully say that it is by far the best preparation I have ever used for destroying lice on horses, cattle, and hogs, or any animals. Its special advantages in my eyes are that, while it is not only sure but sudden death to all kinds of external parasites, it is also clean and easy to use, and so cheap, when we consider how long a tin will last, that no farmer, not to speak of stockbreeder, should be without it." From A. Telfer & Sons, Paris, Ont.: "Having used Little's Sheep Dip and Cattle Wash on both sheep and cattle, we take great pleasure in recommending it to others, as it is the best and safest we have ever used. We also find it a most excellent wash for wounds and sores on horses, cattle, and sheep." See advertisement and get pamphlet sure—it will pay you.

American Shropshire Registry Association.—At the meeting of the executive committee of the American Shropshire Registry Association held in Detroit, January 29th, the committee agreed to offer \$50 to each of the following named fairs, during 1895, for special prizes on Shropshire sheep: London, Western Fair; Indiana State Fair, New York State Fair, Michigan State Fair; Toronto, Industrial Fair; Richmond, Virginia State Fair; Washington, Pa., State Fair, St. Louis State Fair, South Dakota State Fair, Nebraska State Fair, Manitoba Fair at Winnipeg, Wisconsin State Fair, Minnesota State Fair, North Carolina State Fair, Texas State Fair, Iowa State Fair, Wyoming State Fair, Ohio State Fair, Colorado State Fair. Also the same special premium at the Fat Stock Show in Chicago, and Guelph, Ontario, amounting to about \$20 to each of the last named. It was decided that this association recommend to the various fair boards of the above-named fairs the names of men hereinafter named to act as expert judges of Shropshire sheep at any of such named fairs, upon the following conditions: Such fair association to pay one-half and this association to pay one-half of the travelling and hotel expenses of such expert judge, provided this association shall not have to pay more than \$25 as any single fair, where any of the men selected shall act as single expert judge on Shropshire sheep. As expert judges the following are named: Richard Gibson, Delaware, Ontario; John L. Thompson, Gas City, Indiana; Mortimer Levering, Lafayette, Indiana; Wm. H. Beattie, Wilton Grove, Ontario; F. D. Ward, Batavia, N.Y.; Arthur Broughton, Albany, Wis.; W. J. Garlock, Owe Wyo.

IMPORTANT AUCTION SALE

SIXTY IMPORTED OXFORD DOWN SHEEP

WEDNESDAY, MARCH 6th, 1895, at 12 o'clock sharp.

HAVING disposed of my acres of land, and having a large stock of Suffolk sheep, I have decided to sell, without reserve, my entire flock of choice imported Oxford sheep, including all my last Fall winners, Down Aster Royal, the acknowledged champion ram, also Lord Gloucester, and seven show ewes of different ages, that won every first at all the leading shows, both in England and this country; also forty-two shearing ewes, imported from the best English flocks, Brassys, Adams, and Breadwells, all in lamb to above rams, and nine ram lambs, all in fine condition and very choice quality. Come and get what you want at your own prices, as they all will be sold without reserve. Particulars on application.

TERMS.—Twelve months' credit on approved bank notes, or six per cent. per annum off for cash. CORWHIN STATION, C.P.R. or GUELPH, G.T.R. Terms will meet trains on day of sale. Lunch provided. INGRAM & HEFFERMAN, Auctioneers. W. B. COCKBURN, Prop. Aberfoyle P.O., Ont.

Isaleigh Grange Farm

has two very fine Giltensay bull calves for that will be fit for service in spring, sired by the celebrated bull, Adventurer, winner of first prize in Britain previous to importation.

IN SHROPSHIRE SHEEP

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

IN IMPROVED LARGE YORKSHIRES

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

Apply to T. D. MCCALLUM, Manager. Isaleigh Grange Farm. DANVILLE, QUE.

AUCTION SALE.

As I am retiring from farming, I will offer for sale by auction, without reserve, at

LOGAN'S FARM, - MONTREAL, QUE. on WEDNESDAY, MARCH 27th, 1895

All my Stock, Farm Implements, Household Furniture, Dairy Utensils, etc. The stock includes Clydesdale stallions, mares, and work horses. Some very fine young Ayrshire bulls, fit for service. Berkshire pigs and poultry, all registered. THOS. IRVING, Sr., Prop., Logan's Farm, Montreal. FRASER BROS., Auctioneers.

DISPERSION SALE

SHORTHORN CATTLE

without reserve, at Haddon Hill Farm, Brampton, Ontario.

ON WEDNESDAY, MARCH 27th, 1895.

I will sell by auction on the above date 19 head of good Shorthorn cattle, consisting of 12 cows, heifers and heifer calves, and 7 bulls, some of them very choice. There will be no reserve, as I am going out of the business.

Sale will commence at 11 a.m. Lunch at noon. Terms: 7 months' credit on approved bank notes, or 6 per cent. per annum off for cash. Trains arrive at Brampton, on the I. R. East, at 9:15 a.m., and from the West, at 10:05 a.m., and 11:30 a.m.; on the C.P.R., at 10:15 a.m. from the North, and 9:25 a.m. from the South. Conveyances will meet all trains. Farm, one mile from station. Send for catalogue.

WM. WILSON, Brampton, Ontario.

AVONDALE STOCK FARM. - SHORTHORNS -

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

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

JOHN H. DOUGLAS, Warkworth, Ont.

H. I. ELLIOTT, BREEDER OF Scotch Shorthorns and Southdown Sheep

Imported King James at the head of herd. Riverview Farm, Danville, Que.

YOU can get your Journal for one year free by sending us two new subscribers. Any regular subscriber sending us two new yearly subscribers will receive his own subscription for one year free.



Seed Oats For Sale.

A quantity of Texas rust-proof oats never before offered in this country. They are ten days earlier than other oats, and ripen before attacked by rust.

C. J. BRODIE, Bothesda, Ont.

TO STOCKMEN AND BREEDERS

LITTLE'S PATENT FLUID SHEEP DIP AND CATTLE WASH. (NON-POISONOUS)

For the destruction of Ticks, Lice, Mange, and all insects upon Sheep, Horses, Cattle, Pigs, Dogs, etc.

The following letters from the Hon. John Dryden, Minister of Agriculture, and other prominent stockmen, should be read and carefully noted by all persons interested in Live Stock:

"MAPLE SHADE" HERDS AND FLOCKS.

BROOKLIN, ONT., Sept. 4th, 1894. DEAR SIR,—I cannot afford to be without your "Little Sheep Dip and Cattle Wash."

JOHN DRYDEN.

17 Gold, Silver, and other Prize Medals have been awarded to "Little's Patent Fluid Dip" in all parts of the world.

Sold in Large Tins at \$1.00. Special terms to breeders, ranchmen, and others, requiring large quantities.

Ask your nearest druggist to obtain it for you; or write for it, with pamphlets, etc., to

ROBERT WIGHTMAN, Druggist, Owen Sound.

Sole Agent for the Dominion.

DEAR SIR,—

Enclosed you will find \$1, for renewal of my subscription to your valuable paper, THE STOCK JOURNAL. I would not like to be without it

R. T. MATTHEWS, Churchhill, Ont.

BRITISH ADVERTISEMENTS.

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

W. W. CHAPMAN,

PEDIGREE LIVE STOCK AGENT AND EXPORTER.

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

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

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

Registered address for cables—"Sheepote, London."

SUSSEX CATTLE.

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

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

Jottings -Continued.

S. H. Todd, Wakarusa, O.; Geo. Aller, Allerton, Ill.; Prof. W. J. Quirk, Columbia, Mo.; S. S. DeArmann, Franklin, Pa.; C. H. Hallinger, Lexington, Neb.

Canada's Horse Market. In nearly every city, town or village in America, and in all the largest cities in England and Scotland, Canada's Repository of Horses is known to be the horse market of Canada, and never in the history of this popular establishment has it been in a more flourishing and prosperous condition than under the proprietorship of Messrs. Silver & Smith, successors to Mr. W. D. Grand.

Stock Notes.

NOTICE.—New advertisements, notice of which is desired in the Jottings or Stock Notes columns must reach us by the 20th of the preceding month.

Cattle.

Mr. THOMAS IRVING, of Logan's Farm, Montreal, will sell by public auction on Wednesday, March 27th, all his stock, including Clydesdale stallions and mares, choice young Ayrshire bulls and Berkshire pigs.

LORD HASTINGS, Melton Constable, Norfolk, England, advertises his Red Polled bull, Broadbent, for sale. This grand bull was first and champion at the Royal, and is a rare stock-getter.

Mr. Wm. Wilson, Brampton, Ont., announces the date of his dispersion sale in this issue. He has selected Wednesday, March 27th, and will on that date sell, positively without reserve, the whole of his herd of well bred Shorthorn cattle, as he is going into other business.

The representatives of the late Mr. F. W. Stone will sell by auction, at the Moreton Lodge Farm, adjoining the Ontario Agricultural College, Guelph, on Thursday, March 27th, 1895, all the extensive herds of Hereford and Shorthorn cattle, Cotswold and Southdown sheep, horses, etc., also the farms, aggregating some 600 acres adjoining and near the college, in five different parcels.

Messrs. THOS. BALLANTYNE & SON, Stratford, Ont., as announced in our last issue, will sell by auction on Wednesday, March 13th, all their Shorthorn cattle, particulars of some of which will be found in our "Special Stock Reviews" column. These cattle will be sold to the highest bidder, and there will be no by-bidding or reserve on any of them, as Messrs. Ballantyne intend breeding Ayrshires only.

Mr. JOE W. BARNETT, manager for Messrs. W. C. Edwards & Co., Rockland, Ont., writes: Our stock are all doing well, especially the young things. We have lately decided to offer the two-year-old imported red bull, Knight of Lancaster, for sale.

BRITISH ADVERTISEMENTS.

Lord Hastings' Grand Champion Red Polled Bull, Broadbent 1771, is for sale. He is by Baroloph 472, out of 37000 Bunch, by Passion 714.

Broadbent won champion and 1st prize at the Royal Agricultural Society's Show, at Warwick, 1872, and Reserve for Champion, and 1st prize at Ches. et., 1874, and numerous other prizes. He was a rare stock getter, and is only sold in consequence of having been used quite enough in the herd.

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

APPLY TO

Estate Office, Melton Constable, Norfolk, England

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

HOBGEN BROS.

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

Appointed Auctioneers to the Southdown Sheep Breeders' Association.

Edwin Buss, Elphicks, Horsmonden, Kent, Eng.

Breeder of Pedigree Large White Yorkshire and Berkshire Pigs. Highest awards at Royal Shows, Boars, Gilts, and impig Sows of either breed always for sale.

SIR THOS. BARRETT LENNARD, Woodingdean, Rottingdean, Brighton, England.

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

Improved Large Yorkshires.

Again has the Holywell Manor herd distanced all other herds in the show yards in the various parts of the globe.

This unprecedented success having continued for so many years, and his pigs having been exported to some thirty-five foreign countries and colonies, Mr. Spencer has decided not to exhibit so extensively in future.

SANDERS SPENCER,

Holywell Manor, St. Ives, Hunts, England.

LORDS A. & C. CECIL, Orchardmains, Tonbridge, Kent, England,

Breeders of Clydesdales, and successful exhibitors of the same at all the chief shows of Great Britain. Numerous prizes have been won in the closest competition. Only the best and most fashionable strains are kept.

REGISTERED SOUTHDOWNS,

Flock No. 6, Southdown Flock Book.

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

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

JAMES LAWRENCE HALL, Pitts' Farm, Shrivensham, Bucks., England

BREEDER OF Registered Berkshire Pigs, from stock unsurpassed for true characteristics, size, and quality. One of the oldest established herds in England.

Enquiries Solicited - - Prices Moderate

BRITISH ADVERTISEMENTS.

JOHN A. HEMPSON

HWARTON HALL, IPSWICH, ENGLAND.

A very old established flock of Southdown sheep bred with the greatest care from the best strains of pure blood for more than forty years.

MUTTON SHEEP.

FORBIDDEN TO BE SHIPPED from registered flocks, for exhibition or exportation. Full particulars may be obtained upon application to the Secretary of the Suffolk Sheep Society. Address

ERNEST PRENTICE,

Auctioneer and Commission Agent, Stowmarket, England.

GEORGE JONAS

DUSFORD, CAMBS, Eng.

Flock of 600 pure Southdown ewes—individual pedigrees of ewes and rams recorded for several generations, contain much of the Webb blood and strains from some of the purest flocks.

SIR THOS. BARRETT LENNARD, Woodingdean, Rottingdean, Brighton, England.

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

W. TOOP, Aidingbourne, Chichester, Eng.

Flock No. 9, Southdown Flock Book of England. Registered Southdowns, full pedigrees kept. Every sheep individually ear-numbered. Numerous prizes have been won at all the principal shows of England including champions at Smithfield, Norwich, and Cambridge Wells (three in 1889-90-91); at World's Fair, Chicago, 1893, first and fourth prizes for ewe lambs, the only animals sent.

H. PENFOLD, SELSEY, CHICHESTER, ENG.

REGISTERED SOUTHDOWNS, No. 4.

Established over a century. One of the best and purest of Southdown Flocks in England. Many prizes have been won for the last 30 years. Rams and Ewes always for sale; full pedigrees kept.

Pagham Harbour Co., Selsey, Chichester, Eng.

Registered Southdown Flock, No. 3.

Above flock consists of over 1000 Ewes of best strains in England, and of very hardy constitution. Individual pedigrees of Rams and Ewes recorded to 10 generations—every sheep's ear having tattoo number. Duplicate of private pedigree record kept at Southdown Association's office, Fitzalan House, Arundel Street, Strand, W.C., London, England. Prizes won at Royal and other shows, including first prize for wool at Windsor Jubilee Royal, only time exhibited. Rams and Ewes always for sale. Address

NEWTON CLAYTON, Selsey, Chichester, Eng.

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

Registered Southdown Flocks, 10 and 11.

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

KIDNER EDWIN,

LICENSED VALUER AND SALESMAN.

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

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

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

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

Biscathorpe House, Lincoln, England



HOLSTEINS.

HOLSTEIN-FRIESIAN CATTLE.

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

FOR PRICES ON

HOLSTEINS

WRITE TO

F. A. FOLGER

RIDEAU STOCK FARM

BOX 577 KINGSTON, ONT. 2231

HOLSTEIN-FRIESIANS H. BOLLERT, Cassel, Ont.

I now offer for sale several very choice bulls fit for service; they are of rare breeding, with great milk and butter records to back them. Also females of all ages and at breeding at prices that are right. Remember the best are the cheapest. Come and see them, or write for prices and full particulars. 26

Woodbine Stock Farm HOLSTEIN-FRIESIANS

Dona Beets 3rd Pieterje Netherland heads my herd; his sire was the great prize-winner, Milla's Pieterje Netherland, whose dam, Pieterje 3rd, held the world's four-year-old record of 24,126 lbs. of milk in one year, and her butter record, 27 lbs. 10 oz. in a week. Second dam, Pieterje 2nd, gave 30,318 lbs. of milk in one year, and 123 lbs. 7 oz. in one day. Young stock for sale, also a choice lot of grade cows. Prices right.

A. KENNEDY, - - - - - Ayr, Ont.



Fairview Farm

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

BROCKHOLM HOLSTEINS



Netherland Romulus, a grandson of Netherland Prince and Albino 2nd, at the head of herd. Original stock cows all imported from Holland. Also Improved Large Yorkshire Pigs of the best strains. Young Stock for Sale.

R. S. STEVENSON, ANCASTER P.O., ONT. 127

HOLSTEIN-FRIESIAN CATTLE FOR SALE.

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

Wm. SUHRING, SEBRINGVILLE, Ont.

Good Luck advertisement with a decorative border and list of advertising tips.

Stock Notes.—Continued.

Messrs. Wm. Stewart & Son, Willow Grove Farm, Lucasville, Ont., write: Please make the enclosed change of advertisement. Although this has been one of the severest winters for some time, the hardy Aberdeen-Angus do not mind it, but rather seem to defy the cold. We have recently sold one bull and two fine heifers to Mr. Herbert Stairs, King's county, Nova Scotia, for good prices. Owing to distance, we had to ship by express. We are receiving enquiries nearly every mail, and have hopes of better sales this spring than ever before.

Mr. J. C. SMITH, Edmonton, Ont., in ordering a change in his advertisement, writes: The demand for Jersey is constantly increasing. Enquiries come from all the provinces, from Prince Edward Island to British Columbia. In these times of low prices and keen competition the people realize that to create a profit necessitates the utilization of all the machinery to its utmost capacity at the least cost. The same principle applies to dairying cows, when their owners carry on their dairy work with an eye to profit, and the Jersey has proved herself, in all essentials, the greatest dairy cow the world has ever produced. The greatest quantity of the best quality is the watchword of the progressive breeder and feeder, and for this the Jersey cow fills the bill.

Mr. W. J. HIGGINS, Elmhurst Farm, Clinton, Ont., writes: Our Shorthorns are getting along very nicely. The young calves up to date are a red bull calf from Matchless Girl, a red bull calf from Alina Booth, a red heifer calf from Bella Broughton, a dam red bull calf from Matchless of Elmhurst 14th. I think they are an extra good lot of youngsters. They are all sired by imported General Booth (54353), bred by S. Campbell, Kinellar, Aberdeen, Scotland, whose dam was Nonpareil 30th, and sire Banner Bearer (49034). He is advertised for sale in the March number of THE JOURNAL. The ten month old Red Matchless calf advertised is also sired by imported General Booth. The heifers we have on hand for sale are a good lot. Mr. William Lockhart, of Seaford, recently purchased the twelve month old calf, Master Nonpareil, dam, imported Red Rose, and sired by imported General Booth, an extra good one, red in color.

Messrs. James McCORMACK & SON, Rockton, Ont., write: Our stock are wintering exceedingly well, and we have made the following sales: To Mr. R. E. White, Perth, Ont., the young bull, Grand Duke; to Mr. Fletcher Foster, Clarkburg, Ont., the bull, Guy Fawkes, winner of second prize at Toronto last fall and 1st at all the local shows; his full brother, Gallant Lad, and the heifer Cherry, go to Mr. John Graham, Grand Valley, Ont.; to Mr. William Wolfenden, New Westminster, B.C., the heifer, Phyllis of Rockton 2nd, and the heifer calf, Polly 4th; to the Sussex Agricultural Society, Sussex, N.B., the bull, Emperor of Rockton; to Messrs. James Monkman & Sons, Castlederg, Ont., the young bull, Grandeur, winner of third prize in Toronto. This is a twin, and we have reserved his mate to use in our herd. We have three bulls left fit for service, all sired by Sir Laughlin, and one of them is a grandson of Primrose 6th, the first-prize cow in Toronto.

Mr. T. D. McCALLUM, manager of the Isaleigh Grange Farm, Danville, Que., writes: Our stock are coming through the winter nicely. We have sold all our Guernsey bulls, with the exception of our grand stock bull, Ontario's Prize 1899 (which we offer for sale, as we have placed Adventurer (imp.) 2623 at the head of the herd), and two choice bull calves, out of Eliza C. and 3724, and May Queen 6th 3618, which are 45-lb. cows, testing 6 per cent. The calves are sired by Adventurer (imp.) 126 E.G.H.R. and 2663 A.G.H.R., and should make prize-winners wherever they go. Our Shropshires were never in better shape than at present, and we have a few lambs already, and expect a fine lot next month. Our sales were exceptionally good this last fall, and we shall be in good shape to give our customers what they want this coming season. We are pleased to see such a demand for Yorkshires. We have shipped, in January, to all parts of Ontario and Quebec, and several across the lines. We have already booked several orders for spring pigs, and orders continue to come in every day. Our stock won over \$1,200 in prize money last fall, and we hope to beat this the coming season.

Mr. ARTHUR JOHNSTON, Greenwood, Ont., in sending in change of advertisement, writes: Cattle in these parts are still looking unusually well, notwithstanding the extreme cold of the first ten days of this month (February). Feed is fairly plentiful, and farmers manage their stock very much more intelligently than they did even a very few years ago. Indeed, I know of no branch of farming in which the general farmer has advanced so rapidly as in the care and management of stock. Our own herd of Shorthorns were never in finer form at this season of the year. We have still on hand thirteen uncommonly good young bulls, mostly sired by the imported bulls, Indian Chief, Royal George, and Clan Campbell. We are also offering, as will be seen by our advertisement in this issue, a very superior lot of young cows and heifers of various ages. Our imported two-year-old show bull, Royal Don, is in the very finest form, and the other imported two-year-old bull, Grand Sweep, is little, if any, behind him. We shall be ready to sell both of them by the middle of March or sooner. We have never owned a handsomer bull than Royal Don, winner of first prize and sweepstakes at best bull of any age at the Manitoba Provincial Exhibition at Winnipeg in July, 1894. Catalogues for 1895 are now ready. Send for one. "No business, no harm," is our motto.

Messrs. SIMMONS & QUIRK, Ivan, Ont., write: Our Shorthorns and Berkshires are wintering very well. The quartette of heifers shown at the Toronto Industrial are going on very satisfactorily. Royal Saxon's calves are all that could be desired, reds and roans, by the by. My herd is now in the swim, as I have two white bull calves, one by Royal Saxon and

For Horses and Cattle Use Dick's Blood Purifier

HOLSTEINS.

HOLSTEINS FOR SALE

BY ELLIS BROS. GEM HOLSTEIN HERD BEDFORD PARK, NORTH TORONTO, ONT. CORRESPONDENCE SOLICITED.

Brookbank Holsteins Won Milk Test at Toronto, both 1st and 2nd prizes. Silver medal for best female, any age. Prizes in every female section, from cow to calf inclusive.

At the Great Fairs, first and diploma, best bull, any age; also first prize and diploma, best herd, a Ottawa.

All our Prize Winners in the two year old, one-year-old and calf sections were bred at Brookbank. All ages for sale. Special lots in choice bred bulls and heifers from prize winners stock.

Also Poland China pigs, sired by a World's Fair prize winner.

Write for particulars. Visitors welcome

A. & G. RICE,

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

DEVONS.

W. J. RUDD

Eden Mills, Ont.

Breeder of

Devon cattle, Cotswold

sheep, Berkshire pigs

Langshan fowls, and

White turkeys.

Special bargains at

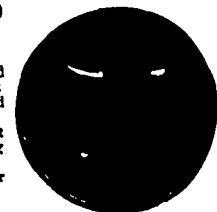
present on a few young

bulls and heifers.

Call at the farm, or

write for particulars.

245



POLLED ANGUS.

THE HOME OF THE DODDIES.

Hardy

Healthy



Hornless

Handsome

We have still some very fine bull calves, and one bull just two years old, dam Mysie of Verulam, sire Runnymede 2nd, that grandly bred treble Ruth bull, which we will sell at a bargain to make room; also females, all ages. Farm 3 1/2 miles from Sarina Tunnel Station. Give us a call.

WM. STEWART & SON.

WILLOW GROVE FARM,

Lucasville P.O., Lambton Co., Ont.

AYRSHIRES.

AYRSHIRE BULLS FOR SALE.

One yearling Bull, one two-year-old Bull, Heifer and Bull Calves. All from choice milking stock. Prices reasonable. Address, WM. KIDD, Petite Cote, Que. 68

HIGH-TESTING AYRSHIRES

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

ROBERTSON & NESS, Howick, Que. 197

AYRSHIRE CATTLE

DAVID BENNING, Glenhurst, Williamstown, Summerstown Station G.T.R., BREEDER OF

Ayrshire Cattle, Leicester Sheep, and Berkshire Pigs. The bull, Tom Brown, and heifer White Floss, winners of sweepstakes at World's Fair, were bred from this herd. Young stock always for sale.

ALEX. HUME,

Burabrac P.O., Ont.,

Importer and Breeder of Ayrshire cattle and Yorkshire pigs, besides bulls, cows, heifers and calves of the choicest breeding, either for milk or showing. We have on hand and coming on, grade calves whose dams, g. and g.g. dams, are deep and persistent milkers. Purebred bulls have been used on herd for past twenty years.

Pigs of the best type and pair not akin always on hand. Prices low. Telephone Hoard's Station, G.T.R.

AYRSHIRES.

MENIE STOCK YARD.



Breeder of Ayrshire Cattle and Berkshire Pigs. First class pedigreed stock always on hand and for sale. First-class milking stock a specialty. Hoard's Station, G.T.R. 184 WM. STEWART, Jr., Monts. Ont.

CHOICE AYRSHIRES.

Stock bull is Imported SILVER KING who took 1st prize—2-year-old class—in 1893 at Montreal, Hochelaga, London, Ottawa, Toronto, as also silver medal there as best bull of any age. Dam of Silver King is Nelly Osborne (imported), who took 1st as milk cow and champion medal at World's Fair, and his sire is Traveller, the champion Ayrshire bull of Scotland. I Offer For Sale young stock of both sexes sired by this famous young bull, and whose dams are not only good individuals and prize winners, but heavy milkers as well, with exceptionally high tests for quality. Please Address D. McLACHLAN, 186 Petite Cote, P.Q.

JAMES COTTINGHAM,

Riverside Farm, Breeder of Ayrshire Cattle.

Herd traces direct to stock imported by Andrew Allan, Montreal, and headed by the prize-winning bull, Sir James (5051); sire, Rob Roy (3971). Stock of both sexes for sale at all times, including some choice young bulls and heifers. Correspondence solicited. Visitors welcome. Railroad station and post office, Ormstown, Que. Farm one mile from station. 84

WOODROFFE FARM.

We have now for sale a choice lot of young Yorkshire pigs. Write and get particulars, or come and see stock.

J. G. CLARK,

70 Ottawa, Ont.

F. W. TAYLOR, WELLMAN'S CORNERS. - ONTARIO.



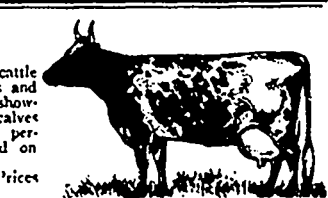
A number of purebred Ayrshire calves of both sexes, and also a few high grades, due to calve in March, April, and May.

AYRSHIRES FOR SALE.

Young stock of both sexes, sired by Silver King 5209, and Chiefstain of Barcheskie 5362, for sale at reasonable prices. Write for prices or call and see my stock. D. DRUMMOND, Jr., Near Montreal. 187 Petite Cote, P.Q.

A. McCALLUM & SON

Spruce Hill Dairy Farm. DANVILLE, Que. IMPORTERS AND BREEDERS OF purebred Ayrshire cattle. Our stock is specially bred from cattle of the deepest milking strains, with high percentage of butter fat. Young stock always for sale at reasonable prices. Correspondence solicited. 195





**JERSEYS.**

**JERSEY COWS.**

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

**J. C. SNELL,**  
Edmonton, Ont.

R.R. Station, Brampton, G.T.R. and C.P.R.

**Jerseys For Sale.**

The bull Exciter, by Thaley of St. Lambert's and Woodflower, calved 16th December, 1892; also a bull calf by the above, dam Matrina of St. Lambert's; both prize winners.

Also a few registered Berkshire pigs.  
**WM. CLARK, Myersburgh, Ont.**  
234

**A.J.C.C. Jerseys For Sale.**

Heifers in calf, heifer calves and bulls, young and old, all registered stock, being of the best strains of breeding, viz., Tormentor, Pedro, Stoke Pogis 3rd, Ida's Stoke Pogis, etc. None better.  
Write for what you want to

**H. FRALEIGH,**  
St. Marys, Ont.

223

**SHEEP.**

**FOR SALE**

**SHROPSHIRE RAMS,**

AND

**YOUNG SHORTHORN BULLS**  
(Registered)

Also a few females. Apply to

**C. H. IRVING,**

112 Box 288, Newmarket, Ont.

**MONTROSE STOCK FARM**

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



218 **HORACE CHISHOLM, Paris, Ont.**

**1881 SHROPSHIRE 1881**



Our flock, one of the oldest in Canada, was established in 1881. Importations made from time to time, selected in person from best English flocks. Present stock of lambs are a choice lot. Also yearlings of both sexes for sale.

**J. COOPER & SON,**  
157 Kippen, Ont.

**AMPLE SHADE STOCK FARM**

Extra good Shorthorn Bulls and Heifers for sale; also Leicesters of both sexes, Mammoth Bronze turkeys, very fine birds. Write, stating your wants.

**E. GAUNT & SONS,**  
St. Helens, Ont.

120

**T. W. HECTOR**

The Cottage,  
Springfield-on-the-Credit, Ont.  
Breeder and Importer of  
**DORSET HORN SHEEP**

And dealer in  
Saddle and Carriage HORSES.

Stations: Springfield, C.P.R., and Port Credit, G.T.R.  
129

**LEICESTERS.**

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

**E. ARCHER & SONS,**  
Warwick, Ont.

212

**SHEEP.**

**SYLVAN AND BRANT STOCK FARMS.**

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

Flock is registered. Personal inspection solicited.

**Turner & Jull,**  
125 Burford, Ont.



**BUENA VISTA FARM. - HARRISTON, ONT.**

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

**JOHN COUSINS & SONS.**

71



**SMITH EVANS, GOUROCK, ONT.**



BREEDER AND IMPORTER of Registered Oxford Down Sheep

Importation for 1893 arrived August 4th, selected from some of the best flocks in England. Stock for sale at reasonable prices.

16

**LORRIDGE FARM.**

Southdown sheep. Flock established 1857. Commenced exhibiting 1867. Since then have taken over 1,000 prizes, including a large number of medals and diplomas. Imported Rams used only. Stock for sale.



**ROBT. MARRH, Proprietor, Richmond Hill, Ontario.** 149

**SPRINGBANK STOCK FARM**

SHORTHORN CATTLE, OXFORD SHEEP, BERKSHIRE PIGS, AND BRONZE TURKEYS.

14 Shearling Oxford Rams, imported and homebred, for sale; also a number of shearling ewes.



50 Ram and ewe lambs ready for the fall trade, mostly sired by Young Nobby (imported) No. 7203, First prize shearling ram at the Bath and West of England Show in 1892.

125 **JAS. TOLTON, Walkerton, Ont.**

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

**J. F. GIBSON, Denfield, Ont.**  
**W. WALKER, Ilterton, Ont.**  
On London, Huron & Bruce Railroad. 148

**FAIRVIEW'S SHROPSHIRE.**

With this season's business finishing up so very satisfactory, I wish to thank my many customers for their kind words of appreciation of sheep sent out.

I do not care to reduce my flock any more at present, but orders for this year's surplus will be placed with pleasure. Several orders are already booked.

If you want something good to head your flock, and improve its quality, your immediate order will secure the pick. A few choice ram lambs out of World's Fair winners, and by Newton Lord, the champion, on hand. Come or Write.

**JOHN CAMPBELL,**  
Fairview Farm,  
WOODVILLE, ONT. 218 CANADA.

**Whiteside Bros.,**  
The Glen, Innerkip,  
Oxford Co., Ont.

Shropshires - Yearlings and lambs. Berkshires - Breeding stock, both sexes. Ayrshires - Three excellent bull calves for sale.

In writing mention this journal.



2395

**Stock Notes.—Continued.**

one by Hampton M. Although one of them will be a year old in April, I have not as yet had an offer for him. He is well bred, and I believe if he was run or red he would have sold for \$175. I only asked \$45 for him, but now that whites are coming in fashion I have raised the price to \$60. He is a thick, mellow calf, sired by Royal Saxon, dam by Sir Christopher, granddam by 1st Crown Prince of Strathallan, and his dam, imported Rose of Strathallan. This is the oldest bull I have of the calf crop of 1892 and 1894. I feel certain that the status of the herd will not deteriorate, as the other white bull calf two months old is by Hampton M., dam, Mita, by Mita Chief; granddam, Mita Imported. As he is young, I keep him as a reserve number for the show this fall. I have not had bull calves enough to supply the trade, and put a price on Hampton M. the other day, as I have a young Golden Drop red bull calf coming in sired by Royal Saxon, dam, Golden Drop, by old Hampton Hero, granddam, Golden Drop (imp.). The herd will bear inspection, as it embraces four Scotch families of females.

Mr. ALAN HUGH, Hurstville, Ont., writes in placing this new advertisement with you, I do so in the full expectation that it will pay expenses. For any dairyman starting a dairy herd, or wanting to improve his herd, I feel that I can freely recommend our purebred calves, or the grades. I can also say that these grades have a pedigree behind them in the milk pail, in their dams, grandams, and great grandams. Having been breeding so long for the dairy, we offer to the public all the results of our years of selecting and expense in breeding, at low prices; in fact, cheaper than any one can breed them. We have calves with five crosses of Ayrshire bulls. Your representative saw our stock at a disadvantage, but he can say if I am at all exaggerating when I say that it is hard to beat our dairy herd. We have captured diplomas, medals, or first prizes every year for a number of years for our herd of dairy cows, one medal being given by the Agriculture and Arts Association for the best herd of dairy cows, any breed. The get of some of the purebred bulls used in the herd have twice taken sweepstakes for best female, any age, once at London and another time at Toronto. The bull now in use is Sir Colin, bred by Messrs. D. Morton & Sons, and has eight first prizes to his credit, the only times he has been on exhibition. He competed successfully, last fall, as first prize yearling bull at Toronto in 1894. We never had a finer lot of pigs to choose from. One of our sows won eight first prizes. Our young sows are choice, as well as the boars, and are of the short nose, short-leg, deep-sided sort, with the best of tempers.

**Swine.**

Mr. Wm. Row, Avon, Ont., makes some changes in his advertisement.

Mr. J. LAWRENCE HALL, Shrivvenham, Bucks, England, advertises choice Berkshire pigs for sale.

Mr. E. HUGHES, Elphicks, Hornsmondon, Kent, England, informs us that he has had several enquiries for pigs through his advertisement in THE JOURNAL, and that he is able to supply any quantity of excellent pigs at moderate prices.

Mr. R. B. McMULLIN, Goldsmith, Ont., says: My Poland Chinas are doing nicely. I have made a number of sales since I wrote you last, and every purchaser is well pleased with his purchase. I still have a nice lot of August and October pigs for sale at hard times prices. I wish THE JOURNAL every success.

**Sheep.**

Messrs. J. R. & R. R. KIRKHAM, Biscathorpe House, Lincoln, England, have a flock of 2,000 Lincoln sheep from which buyers can make a good selection.

Mr. W. W. CHAPMAN, live stock agent, Fitzalan House, Arundel street, London, England, writes that intending buyers of sheep would do well to place their orders with him early. He has about 1,000 to 1,500 shearling Southdown ewes and 200 rams for sale, as well as a large selection of sheep of other breeds, all purebred and registered. He supplies no others.

Mr. JAMES SMITH, Paris, Ont., writes: My sale of farm stock was a very satisfactory one, the sheep especially making good prices, considering the depressed state of the sheep business. The highest price for ewes was \$43 for a good pair of four shears. Sixteen shearling ewes made an average of \$16.65. Four three-shear ewes averaged \$17.50, and sixteen four-shear ewes \$16.25. An imported four-shear ram brought \$25, and ewe lamb from \$5 to \$12 each. A three-year-old Durham bull sold for \$76, and broad Yorkshire sows for \$14 to \$20 apiece.

Mr. J. CAMPBELL, Fairview Farm, Woodville, Ont., reports the sale of one of his winning pen of five ewes at the Gt. St. show to Mr. Wm. H. Norton, Springwater, N.Y. who is one of the most critical judges of a Shropshire. His opinion of the purchase was the following: "You have sent me a true type of a Shropshire ewe. She is the best sheep that ever came to the Valley Home Farm. I can find no fault with her. Nose, face, ears, head, neck, shoulder, brisket, back, hips, flank, legs, dark points, skin, girth, all extra good. I am well pleased with her." This is one of many shipments sent to Mr. Norton, but to date we are, in a way, strangers to each other, having not met as yet. Another American, Mr. W. C. Christley, from Pennsylvania, says, regarding the filling of three orders since September: "Friend Campbell, I have not kind enough words to send you for the sheep you have sent me, as they are far above my expectations, and therefore wish to express to you my hearty thanks. I shall want some more of your flock. Remember me, and send the best you have to spare." Breeders of high-class Shropshires may rest assured of the near future trade, as every indication points to its being a sound, healthy one, and on a paying basis.

**Spavins, Ringbones, etc.**  
**Cured by Dick's Blister.**

**SHEEP.**

**SHROPSHIRE FOR SALE**

A choice lot of shearing rams, ewe and ram lambs. A few rams two and three years old.

Also young Yorkshire pigs, all ages

**T. H. MEDCRAFT,**  
Sparta, Ont.

Eight miles from St. Thomas, Ont.

**A Choice Lot to Pick From.**

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

**Allen McPherson,**  
218 Forest, Ont.



**SWINE.**

**POLAND CHINAS**

Choice young stock ready for shipment at hard times prices. Send for free catalogue of breeding stock.

Also a quantity of honey for sale cheap.

**CAPT. A. W. YOUNG,**  
TUPPERVILLE, ONT.

105

**YOUNG REGISTERED BERKSHIRES**

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

**H. G. CLARK,**  
Brampton, Ont.

111

**Large English Berkshires for Sale**

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

Address **R. J. DIXON,**  
Glenora, Ontario.

**E. D. GEORGE**  
PUTNAM, ONT.

Importer and Breeder of  
**OHIO IMPROVED**  
**CHESTER WHITE SWINE**

The largest and oldest established registered herd in Canada. I make this breed a specialty and furnish good pig at a fair price. Write for prices. 74

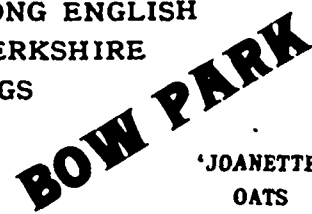


**ELMDALE TAMWORTHS**

Boars fit for service. Also two and three months pigs, all from prize-winning stock. Pairs furnished not akin.

**JOHN C. NICHOLL,**  
Huhrey, Ont.

**FINEST STRAINS**  
**LONG ENGLISH**  
**BERKSHIRE**  
**PIGS**



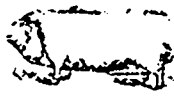
**BOW PARK**

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

SWINE.

THOMAS DOLLIN & SON  
Chatham, Ont.

Importers and breeders of Ohio Improved Chester White Swine, Fild Strain. Can supply pairs or trios not akin, of all ages. Prices right.



Ontario Central Herd of Improved Chester Whites.

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

262 WM. BUTLER & SON, Dereham Centro.

DUROC JERSEY SWINE.

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



164 TAPE BROS., Ridgetown, Ont.

The Pine View Herd

Orders are now solicited for spring pigs, from young, January, February, and March. A few sows in pig to be mated later. A few Silver Laced Wyandotte cockerels and pullets, well marked and bred. All stock guaranteed as described, or no sale. For particulars write

167 JAMES H. SHAW, Simcoe, Ont.

Norfolk Herd of Registered Poland Chinas

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

Prices low, considering quality of stock  
178 R. WILLIS, JR., Box 36, GLENMEYER, Ont.

The Spruce Grove Herd of Tamworths and Yorkshires.

We offer young sows ready to breed, and fit for service, of either sex, of best breeds and individuals at right prices, stock heavy. Call and inspect, or write for prices.

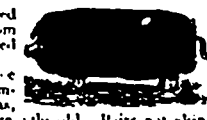


J. F. MASTRIE, New Dundee, P.O.; Baden, G.T.R.; Drumbo, C.P.R. 275

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

Our herds are selected from the best strains from England and the United States.

We have some choice young stock of the Tamworth and Poland Chinas, from five weeks to four months old. Pairs not akin. Prices moderate. Correspondence solicited. Orders booked for spring pigs, Chester White bred.



211 HEIRON & DAFOR, Avon, Ont.

LARGE ENGLISH BERKSHIRES.



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

127 ISRAEL CRESSMAN, NEW DUNDEE, Ont.

TAMWORTH SOWS.

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

POLAND CHINA BOARS.

Fit for service. Prices moderate. Come and see me, or write.

FRANK ROW, Avon, Ont.

SWINE.

J. G. MAIR, Dealer and Importer of Improved Large Yorkshire Pigs.

For the spring trade I will breed from nothing but imported stock of good quality. Write early and get prices for March and April litters, which will be found very reasonable. Pairs supplied not akin. Railroad station and P.O., 102

HOWICK, QUE.

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

J. H. SIEFFERT, 95 North Bruce, Ontario.

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

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



252 Correspondence solicited and visitors welcome.

Young Registered Berkshires.

NITHSIDE FARM.

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



E. E. MARTIN, Canning, P.O. 157 Paris Station, G.T.R., Ont.

YORKSHIRE PIGS

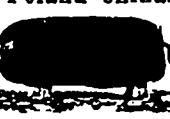
of the best type and breeding. Pairs not akin now ready.



Also ROAD AND CARRIAGE HORSES, bred at Kingston Road Stock Farm. J. M. HURLEY & SON, Belleville, Ont. Box 442. 278

The Home of the Poland Chinas

We have the best herd of Poland China Swine in Canada. Our herd won all the sweepstakes, diplomas and herd prizes, and 21 out of 27 first prizes at the three largest fairs in Canada in 1894. Our herd is headed by Darkness Quality, the winner of first prize in his class over 41 entries at the World's Fair in Chicago in 1893. Young stock for sale at all times. Prices reasonable and stock guaranteed to be as represented.



Address, W. & H. JONES, 160 Mount Elgin, Oxford County, Ont.

ESSEX COUNTY HERD OF POLAND CHINAS.

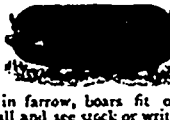
I have still a few boars left fit for service, and a few sows ready to mate, which I will sell cheap, in order to make room for 100 pigs, of which I have a nice lot, and expect more soon.



I give a registered pedigree and guarantee every pig to be as represented. H. B. McMullen, Goldsmith P.O., Ont. 143

Large English Berkshires

Large English Berkshires, choice young boars from imported dam; boars and sows two weeks old, by imported boar. Choice sows in farrow, boars fit for service. Pairs not akin. Call and see stock or write for prices.



C. R. DECKER, 91 Bright Station, G.T.R. CHESTERFIELD, Ont.

KEEP YOUR EYE ON THIS SPACE



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

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

C. T. GARBUTT, Clarendon, Ont. 247

SWINE.

ASHTON GRANGE FARM.

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

WM. TAIT, St. Laurent, P.O. Near Montreal. 178

MEDAL HERD OF 1894. Chester White Swine and Dorset Horned Sheep of all ages, for sale at prices to suit the times. R. H. HARDING, Thorndale, Ont. Middlesex County. 222

My Herd

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

Superb Young Sows

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

OLIVER DRURY, FARGO, ONT.

JOSEPH FEATHERSTON, Pine Grove Farm, STREETSVILLE Post Office and Telegraph (late Springfield-on-the-Credit, Ont.), importer and breeder of Improved Large White Yorkshire and Essex swine. This herd obtained twenty first, nine second, five third, and four fourth prizes at the World's Fair, Chicago, 1893. I have now on hand a choice lot of Yorkshire sows, from the first prize boar, and out of some of the sweepstake sows; also a limited number of first-class young boars fit for service this fall, and fifty breeding sows, which I am breeding to Hasket (pat), Halton King (pat), and the boar Holywell 1st, bred by Sanders Spencer, England, just imported in July last, selected for me by J. G. Snel, Edmonton, as the best boar in all England. 53

FRANCIS RUSNELL, Mount Forest, Ont. Breeder of Improved Large Yorkshire pigs. Young boars and sows of good breeding for sale. Prices to suit the times. 201

BERKSHIRES FOR SALE

My Berkshires have secured a large number of the most important prizes at Toronto, Montreal, and London exhibitions in 1893; also several prizes at the Fat Stock Show in Guelph, including sweepstakes for best purebred sow of any age or breed.

A choice lot of all ages for sale. Please mention THE LIVE STOCK JOURNAL. GEO. GREEN, Fairview P.O. Stratford Station and Telegraph Office. 261

MAPLE LEAF FARM

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



JOHN PIKE & SON, Locust Hill P.O., C.P.R., Markham, G.T. 202

BERKSHIRES

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

W. McALLISTER, Varna, BRUCEFIELD STATION, Huron Co. 121

Red Tamworths, Yorkshires, and Ayrshire Cattle.

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

Caldwell Bros. Briery Bank Farm, Orchard, Ont. 217

SWINE.

POPULAR HILL HERD OF REGISTERED Poland China and Tamworth Swine

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



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

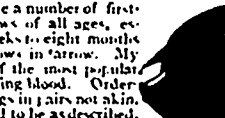
Registered DUROC-JERSEY SWINE

HOLSTEIN CATTLE. POULTRY (Ten Varieties).

Send for circular to THE CLIMAX PET STOCK CO., Springfield, Ont.

The HURON HERD OF REGISTERED POLAND CHINAS.

I now offer for sale a number of first-class boars and sows of all ages, especially from six weeks to eight months old; also young sows in farrow. My herd is composed of the most popular strains of prize-winning blood. Order booked for spring pigs in pairs not akin. All stock guaranteed to be as described. Prices to suit the times. Write for particulars and prices. WENLEY W. FISHER, Renfrew, Ont.; Goderich Station. 211



RED TAMWORTH PIGS.

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



LEVI MASTER, 274 Hayville, P.O. New Hamburg, G.T.R.

Tamworth and Improved Chester White Swine.

Our herd of Tamworths are selected from the choicest herds of England, being true in color and of the most suitable type. Over a head of choice fall pigs of all ages for sale, several of them being sired by the red ribbon boar at Toronto.

Also 8 choice Tamworth boars ready for fall service, and to choice young sows bred to an imported boar. Pairs furnished not akin; reduced rates by express; pedigrees furnished. Send for prices before buying elsewhere.

H. GEORGE & SONS, 111 Middlesex Co. Crampton P.O., Ont.

HORSES.

ROBERT NESS

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

WOODSIDE FARM, HOWICK P.O., Que. 172

POULTRY.

FOR SALE.

Partridge Cochins. Barred and White Rocks. Black Leghorns.

Stock will be sold reasonably, and guaranteed to be A1. My record at the leading exhibitions of Canada is ample proof of the fine quality of the birds I keep. Don't write unless you mean business.

Prizes won at the great Ontario and Por. State shows: Partridge Cochins 1st and 2nd on cock, 1st and 2nd on hens, 1st on cockerel, 1st and 2nd on pullets. Barred Rocks won 1st, 2nd, and 3rd at the Industrial, Toronto, Bowmanville, and New Hamburg. Won first on Black Leghorn Cock, 2nd on cockerel.

LEON G. PEQUEGNAT, New Hamburg, Ont.

POULTRY.

CANADA'S BEST

Are imported, bred, and sold by JNO. J. LENTON, Park Farm, Oshawa, Ont.

I have fowls for sale in White, Silver, and Golden Wyandottes, Barred and White Plymouth Rocks, Eggs in season, \$1 per 9 or 15 for \$1.50. Bronze Turkeys for sale, extra fine and large. Eggs, 25c. each, or 15 for \$1. My fowls, as well as being fine specimens for the show room, are very large and healthy. I am Canadian Agent for WEBSTER & HANNUM BONE CUTTERS, and for the PRAIRIE STATE and the MONITOR INCUBATORS AND BROODERS, the best made.



FOR SALE

Eggs for hatching from thoroughbred Light Brahmas, Black Langshans, Black Hamburgs, White Wyandottes, white Plymouth Rocks, and Pekin Ducks. Write for prices Eggs guaranteed fertile. C. J. WRIGHT, Dixville, P. Q.

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

Some grand young birds of the foregoing varieties. Pairs and trios furnished not akin. All of the best prize winning strains.

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

WHITE LEGHORNS EXCLUSIVELY.

I have made a specialty of this breed for fifteen years. A choice lot of cockerels for sale. My breeding pens for '95 will be headed by two grand imported cocks of the "Royal" strain, direct from the pens of Dr. John W. King. Eggs \$1.50 per thirteen. Correspondence a pleasure.

GEORGE E. LEE, Highgate, Ont.

BRONZE TURKEYS, bred from prize-winners, 22 lb. to 27 lb. Toms, 13 lb. to 17 lb. hens, 1894 hatch, for sale. A. E. ELLIOTT, Pond Mills, Ont.

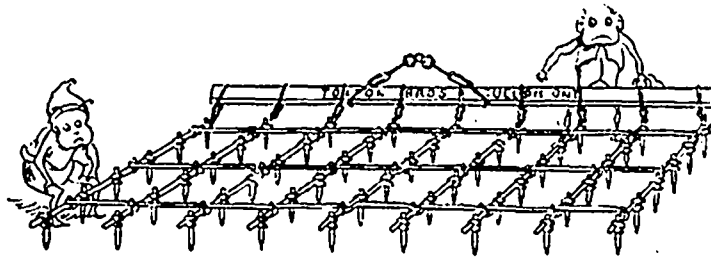
POULTRY.

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

Why Because

In these hard times is there such a great demand for this All-Steel Flexible Harrow?

The flexibility of the Harrow enables it to adapt itself as readily to rough and uneven ground as to smooth, and the oscillating motion produced by its flexibility pulverizes the ground, and leaves it in a loose and more porous condition than any other Harrow, and it is made of the very best material money can buy for the purpose. The Bars are made of HARD SPRING STEEL, very stiff and strong, the Hinges and Teeth being of SOLID STEEL, all of which are of a higher grade than is possible to use in any other make of Harrows, being too hard to permit of the Bars being punched, also, the Clips are malleable and Staples are more than highly refined, with special forged nuts, making the Harrow first class in every respect, therefore we can guarantee more than double the strength and wear in this Harrow than there is in any other make.



Parties wishing a first-class Harrow will do well to write us direct, or apply to the local agent.

TOLTON BROS., - Guelph, Ont.

Trafalgar, January 1st, 1894. Messrs. Tolton Bros., Guelph, Ont. It is with pleasure I send you the amount of your note, sixteen dollars, for the Harrows. I am very well pleased with them; they exceeded my expectations in a wonderful way, being thorough pulverizers. I have been farming over thirty years, and they are the best Harrows I have ever followed or seen run on land. They are exactly the kind adapted for our soil, and were greatly admired by my neighbors, who made enquiries as to the maker. I will do what I can for you in my neighborhood. I am, yours truly, JAS. STEINER.

Dairying

Is to-day, possibly, the most profitable pursuit connected with farming, and the most valuable information to be found on the subject is contained in Mrs. E. M. Jones' book, "Dairying for Profit," sent free for one new subscriber to the Canadian Live Stock and Farm Journal

HOLLOWAY'S PILLS AND OINTMENT.

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

THE OINTMENT Is the only reliable remedy for Itch Legs, SORES, ULCERS, and OLD WOUNDS.

FOR BRONCHITIS, SORE THROATS, COUGHS, COLDS, GOUT, RHEUMATISM, Glandular Swellings, and all Skin Diseases, it has no equal.

Manufactured only at 27, NEW OXFORD STREET, LONDON, E.C. And sold by all Medicine Vendors throughout the World.

40,000 CHATHAM MILLS NOW IN USE!



- 2,000 MILLS SOLD IN 1886
2,300 MILLS SOLD IN 1887
2,500 MILLS SOLD IN 1888
2,800 MILLS SOLD IN 1889
4,000 MILLS SOLD IN 1890
4,800 MILLS SOLD IN 1891
5,000 MILLS SOLD IN 1892
6,000 MILLS SOLD IN 1893

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

It stands at the Head. Over 14,200 Bagging Attachments now in use.

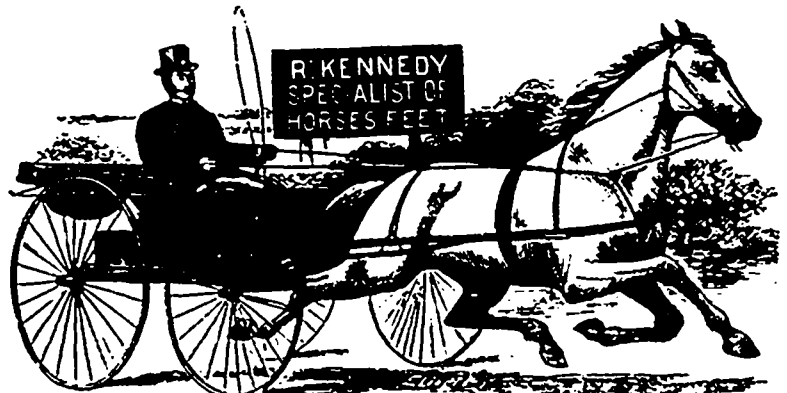
Bagging Attachment is run with a chain belt that cannot slip. The elevator cups are also attached to endless chain belt that cannot slip nor clog.

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

Mr. MANSON CAMPBELL: East Whitley, Ontario Co., April 12th, 1892. Your mill which I bought from your agent, Mr. J. H. Tremear, works very satisfactorily. I take great pleasure in recommending it to my fellow farmers. Turns easily, cleans fast. Your bagger is something that every man should have; could not do without it; saves labor, and that means money.

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

Orders solicited. MANSON CAMPBELL - CHATHAM, ONT.



TO ALL OWNERS OF LAME HORSES

A Cure Guaranteed or No Charge.

NOTICE. My cure is permanent. I guarantee every horse I operate on for two years. Do not be deceived by people telling you your horses cannot be cured. I can refer you to horses all over the city. I have cured Contracted Feet, Quarter Cracks, Corns, Thrush, and all Lameness of the Feet.

15 Years' Experience. SALVE Hundreds of Testimonials. The Most Wonderful and Quickest Healing Mixture in the World. Can be used with perfect safety on the most valuable animals. If once used will never be without it. Guaranteed to cure scratches, sore shoulders, cuts, bruises, proud flesh and old sores of the worst kind in less than seven days.

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

R. KENNEDY, Specialist of Horses' Feet.

INFIRMARY AND FORGE: 223 Church Street, Toronto; also INFIRMARY AND RESIDENCE 138 65 Bloor Street East N.B.—No charge for examining horses.

RENNIE'S SEEDS. Illustrated 'Guide' for 1895. Do you grow Flowers, Vegetables, Field Roots or Grain? If so, see \$190.00 IN CASH PRIZES. MAILED FREE. SEND FOR IT TO-DAY. WM. RENNIE, - TORONTO, CAN.

Never Saw a Good Wire Fence.

AN Ontario County farmer writes that any wire fence that he has seen will sag if anything comes against it, or snow drifts on it, and when once stretched will always remain loose. He has never seen the Page, and asks where the nearest store has it.

Perhaps your experience is the same, and you have about given up the search for a good wire fence. If so, or you haven't before thought of using a wire fence, we wish you would send for particulars of the Page. You can send on a post card, and we will forward our descriptive circular and illustrated monthly paper. It will pay you to investigate, even if you never buy.

We have not space here to fully explain the merits of the PAGE, but its special feature is the coil. In making the fence, each foot of the special steel wire used is coiled once around an inch nail, thus each wire of the fence becomes an elongated spring. This spring allows the fence to give when under a strain and come back to place again as soon as the strain is removed. It makes no difference whether the strain is a sudden shock, as of a horse running into it, or a steady pull, such as being under a cowbank for a month; in either case the fence will surely come back to place and never remain loose. Our monthly paper will tell you more about it.

The PAGE WIRE FENCE COMPANY OF ONTARIO, LTD., WALKERVILLE, ONTARIO.

## Our Stock of Sleighs Is Nearly Exhausted.

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



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

**Bain Bros. Manufacturing Co., Ltd.,**

(HEAD OFFICE) **BRANTFORD, ONT.**

THE PEOPLE'S

## Wholesale Supply Co.

35 COLBORNE STREET, TORONTO,

Is one of the most reliable houses in Canada to send your orders to for all kinds of Farmers' Supplies.

**For \$14** we will send you a set of Single Harness; regular price \$18 to \$20.

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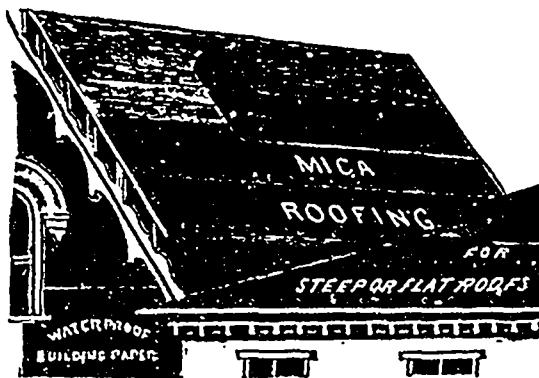
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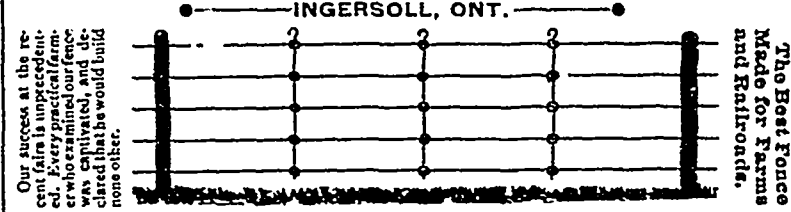
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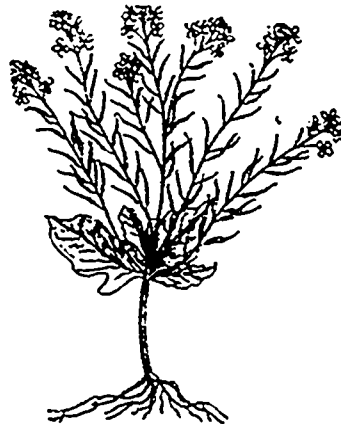


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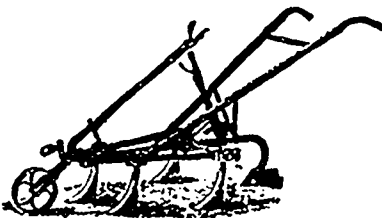
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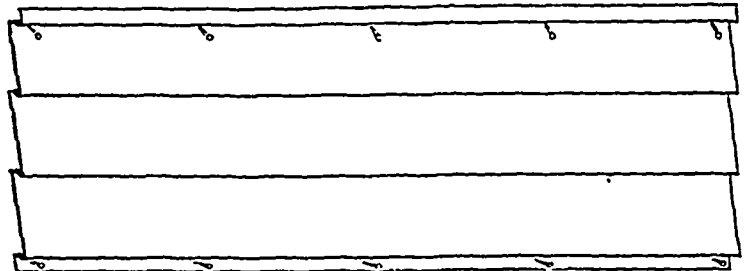
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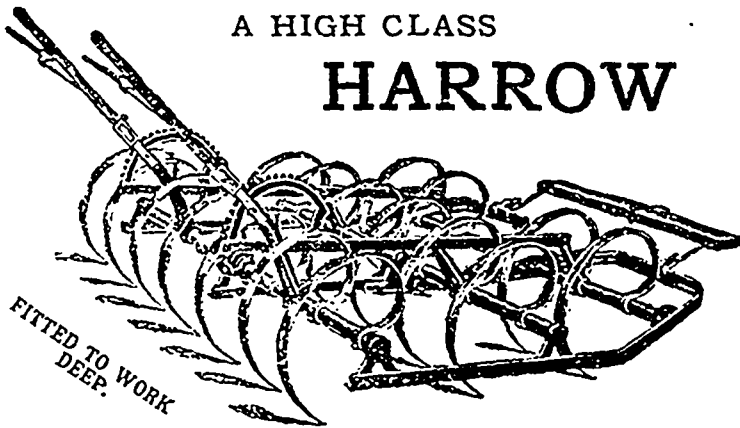


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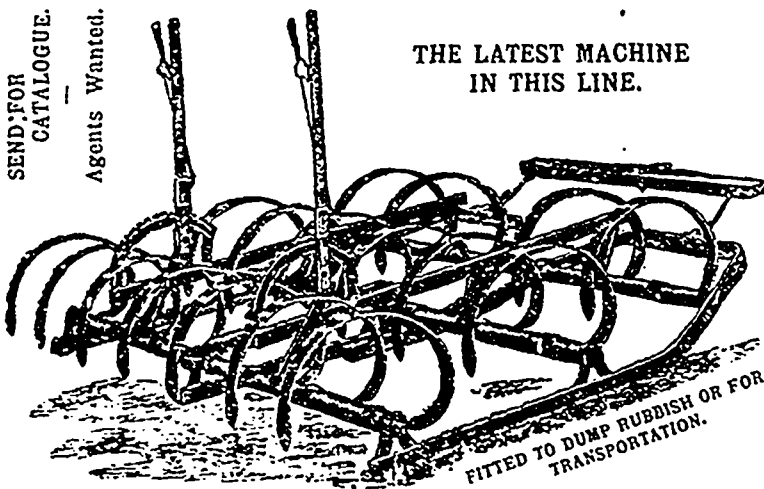
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