

Technical and Bibliographic Notes / Notes techniques et bibliographiques

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

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

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

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

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

Cover title missing/
Le titre de couverture manque

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

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

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

Showthrough/
Transparence

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

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

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

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

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

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

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments:/
Commentaires supplémentaires:

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

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

FARMING

March 21st, 1899.

It depends on the Process

Used in the manufacture of salt whether the production is of the highest grade or not.

The "Vacuum Process" for making salt is the most modern and scientific.

It makes a fine and purer salt, most readily dissolved, and perfectly even in crystal.

Windsor Salt...

MANUFACTURED BY
THE WINDSOR SALT CO., LIMITED,
WINDSOR, ONT

HORSEMEN! THE ONLY GENUINE IS



A safe, speedy and positive cure. The Safest, most BLISTER ever used. Takes the place of all treatments for mild or severe action. Removes blunches, blisters from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Write for circulars. Price \$1.50 per bottle, express prepaid.

THE LAWRENCE-WILLIAMS CO.,
21 Front St. W., Toronto, Ont.

Quick Cure For Lump Jaw

Not one case in a hundred that cannot be cured by one to three applications of

Fleming's LUMP JAW CURE



Trade Mark Reg'd.

Lump Jaw has heretofore baffled treatment. It has infected herds and pastures, and caused loss of hundreds of thousands of dollars. This new remedy cures quickly, thoroughly, and permanently. Leaves jaw smooth and sound. Easy to apply; costs but a trifle compared with results.

GUARANTEE.—Every package sold under positive guarantee; money back if it should ever fail to cure. Sent everywhere by mail, Price, \$2.00.

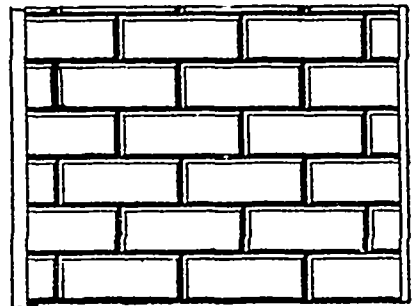
FREE A valuable illustrated treatise on cure of Lump Jaw sent free to readers of this paper.

Address: FLEMING BROS.
Chemists, ST. GEORGE, ONTARIO

ANY BUILDING covered with our

SHEET STEEL
PRESSED BRICK

Will present a splendid appearance and be economically protected from all kinds of weather.

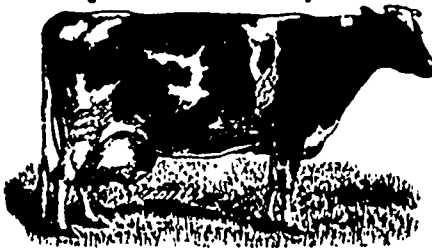


The sheets are very quickly and easily applied, ARE ABSOLUTELY LIGHTNING-PROOF, as well as fire-proof, and make a durable covering that is highly valued either for new buildings or improving old ones.

Write for full particulars if you are doing any building this spring. You are sure of satisfying results at slight expense.

METALLIC ROOFING CO., Limited,
1192 KING STREET WEST, TORONTO.

Rapids Farm, Lachine Rapids, Quebec



Choice Imported Ayrshires
FOR SALE

SIX BULL CALVES,

Eight to ten months old, from Imported Cows from the Best Herds in Scotland. Any breeder requiring a bull for the coming season would do well to see them. We will sell them right.

W. W. OGILVIE,
Proprietor.

Address ROBERT HUNTER, Manager,
LACHINE RAPIDS, QUEBEC.

HOLSTEINS.

Brookbank Holstein Herd

CHAMPIONS FOR MILK and BUTTER

A number of desirable young bulls on hand from one to eight months old from our show herd and great milking stock. Also females of all ages Write for just what you want.

Registered Poland China Pigs, one month old, for sale.

A. & G. RICE, Currie's Crossing, Oxford County, Ont.

MAPLE HILL

Holstein-Friesians BULL CALVES FROM

QUEEN DeKOL 2nd. Winner of Prince of Wales' prize, over heifers of a 1-breed in public test.
LADY AKKRUM 2nd. 87½ lbs. milk in 1 day and 2½ lbs. butter in a week.
KAATJE DE BOER. 63 lbs. milk and 3 lbs. butter per day at 14 years old.
MERCENA. 57 lbs. milk per day at 14 years old.
DAISY TEARE. Dam of Daisy Teake's Queen, whose 4-yr.-old public test has never been equalled.
G. W. CLEMONS, St. George, Ont

ROSE HALL STOCK FARM. HOLSTEIN-FRIESIAN

FOR SALE—Two choice young bulls, sired by Lord Everet and, a great grandson of Barrington; one of the best bulls ever imported. Dams are Cecilia Mink Mercedes, 1st and 2nd, both of good milking strains. Also heifers and heifer calves. Prices reasonable. T. W. CHARLTON, St. George, Ont.

HOLSTEINS, TAMWORTHS and ... BARRED ROCKS...

SOME grand January Pigs to offer, sired by White Crystal (Royal Prize Winner). Also, a few Boars, ready for spring service. Two Sows, 10 months old; one Imported Boar, 7 months old. Herd numbers 100—most select in America. All ages for sale. Am looking orders for Barred Rock Settings.

A. O. HALLMAN, New Dundee, Waterloo Co., Ont.

E. PANNABECKER Fairview Farm, Hespeler Ont., Breeder of reg Holsteins. Stock for sale

ALBERT MACINTYRE, Renfrew, Ont., Breeder of 100 registered and High Grade Holstein Cattle. Stock for sale.

J. C. RICHARDSON, South March, Ont., Breeder of Holsteins, Dorset Horned Sheep, Tamworth Swine.

17 ACORN PIGS

LARGE ENGLISH BERKSHIRES
They suit the Farmer and please the Packer.

Our Stock is (Of best Breeding. No. 1 in Quality. Reasonable in Price.

Send your orders for young pairs not akin, to Maplehurst Farm, J. J. FERGUSON, Smith's Falls, Ont. Box 373.

HENRY ARKELL, Arkell, Ont. Importer and Breeder of OXFORD-DOWN SHEEP

Ewes in lamb to Royal Warrick and Imp. Hero 5th for sale. PRICES REASONABLE.

Rural Stock Farm.

A.J.C.G. JERSEYS

St. Lambert Blood.

Young Bulls ready for service, and stock all ages, second to none in Canada, for sale.



Large Improved Yorkshires

Write for Bacon Pigs, all ages. Boars ready for service, etc.

PRICES ARE RIGHT. Delivered anywhere. **SILLS, SHAVER & SON, WINCHESTER SPRINGS, ONT.**

W. R. BOWMAN

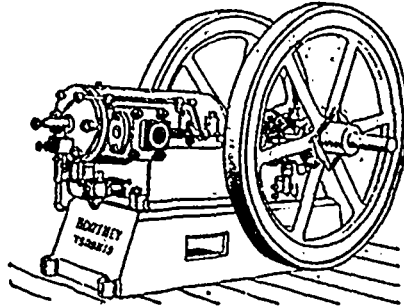
Offers for sale.

Twelve Shorthorn Cows and Heifers Yorkshire and Berkshire boars and sows ready for breeding at \$10.00 each. A 10 month Jersey Bull for \$35.00.

Mount Forest, P. O., Ont.

Northey Gasoline Engine

AN IDEAL FORM OF POWER FOR THE FARM



Simple, Strong, Economical. No handling of fuel. No smoke stack to throw sparks. No danger of explosion. Can be readily moved about from one place to another, and will do with the greatest ease all that the windmill or steam engine could do, at a far less cost.

Our booklet tells all about it. Write for it.

Northey Manfg. Co., Limited, Toronto

1008 King St. Subway



DON'T make a mistake BUT ask your Dealer for ROBERTSON'S the Best PAINTS in the Market

THE JAMES ROBERTSON CO., Limited

The Paint Makers..... TORONTO

Dentonia Park Farm

EAST TORONTO (Coleman P. O.)

W. E. H. Massey, Proprietor

Address **DENTONIA PARK FARM, Coleman, Ont., Canada**

Dentonia Jersey Herd

Winners of the Herd Prize at both the Toronto and London Fairs last fall, also some thirty other prizes. The herd comprises fourteen head of imported cattle, many of them winners of valuable prizes on the Island; also some thirty animals carefully selected from the best Canadian herds. Heifer and Bull Calves, also good Cows, always on sale.

Dentonia Trout Ponds

"Eyed" Trout Eggs, also yearling and two-year-old Brook Trout for sale. Market trout supplied in season.

ABERDEEN ANGUS.

J. BUCHANAN, Napier, Ont., Breeder, reg. Aberdeen-Angus Cattle. Stock by Lord Forest for sale.

REGISTERED

Aberdeen Angus Cattle

FOR SALE, young ul 13 months old. 3 heifers rising 1 year old, 1 heifer 2 years old, in calf. All registered or eligible for registration in American Herd Book and of first class quality and breeding. Prices and terms reasonable. Apply to

J. W. BURT, Jr.

Coringsby, Ont.

4 miles from Erin Station, C. P. R.

GALLOWAYS.

A. M. & R. SHAW, Brantford, Ont., Breeders of Galloway Cattle. Choice young animals for sale.

DAVID McCRAE, Janesfield, Guelph, Canada, Importer and Breeder of Galloway Cattle, Clydesdale Horses, and Cotswold Sheep. Choice animals for sale.

DEVONS.

W. J. RUDD, Eden Mills, Ont., Breeder of Devon Cattle, Cotswold and Suffolk Sheep, Berkshire Pigs, Plymouth Rock Fowls. Young stock for sale.

A. ELLIOTT, Pond Mills, Ont.

Emden Geese, Pekin Ducks, Bronze, White Holland and Narraganset Turkeys. Collie Dogs and Oxford Sheep. All of the best strains.

Golden Link Herd of Berkshires

I have the 1st-prize boar under 12 months at Toronto for sale, and 1st at Western Fair; also 2nd prize boar under 6 mos. at Toronto. Have 4 first class boars fit for service, 5 and 6 mos. old. Have 2 of the sows for sale that tried for 1st of the three pigs bred from one sow, and the 2nd and 3rd prize sows under 6 mos. These winning sows are bred from Perfection, the unbeaten yearling. Have a few good sows bred for sale. Have 25 head of young pigs from 10 to 8 weeks. Am booking orders for March and April pigs.

T. A. COX, Brantford, Ont.

IMPROVED LARGE YORKSHIRES

Choice Boars fit for service from pedigreed, prize winning stock—the very best in Canada—all eligible for registration. Will be sold at a sacrifice if taken at once. Write at once for prices. Also choice lot of spring pigs from the celebrated boars Mollington Jones-S015 and Victor Hugo-S205, and first-class prize-winning dams. Pairs not akin or single at lowest prices.

L. ROGERS, Cookville, Ont.

FARMING

VOL. XVI

MARCH 21st, 1899.

No. 29

Agricultural News and Comments

At the last meeting of the Agricultural Student Union of Ohio, Professor C. A. Zavitz, of the Ontario Agricultural College, gave a very interesting address on the work of the Ontario Experimental Union.

There is a good market for butter in South Africa, which is supplied chiefly by Australia from October to May, and by Denmark from May to July. Considerable American butter is also shipped there, and the greatest demand for it is from July to October.

In an improved horse collar the facing is formed of a metal plate of similar shape to those now in use, the back consisting of an inflatable tube, which is blown up to the desired hardness, adjusting itself to the shape of the animal's back and easing the strain of pulling.

This seems to be an age of trusts, or at least our cousins across the line are having their fill of them. The latest rumor is a beef trust by the big packers. Every beef raiser will know what this means should the packers succeed in their scheme. It is to be hoped that it is only a rumor.

A rein guide and guard has been invented to prevent the reins from falling over the dashboard or from becoming entangled in the horse's tail when driving. It is so arranged that it can be fastened beneath the back strap and to rest on the animal's haunches, thus supporting the reins.

A Michigan man has invented a feed cooker which can be placed in a barrel to cook the contents and prepare them for feeding to stock, a stove being formed of a metal tube, with a smoke pipe at the top, and draft pipes running down on one side, in which air is forced to burn the combustibles.

A new Dairy School has been started at Woodstock, N.B. Mr. J. F. Tilley, one of the dairy superintendents of the Province is in charge. Woodstock is in the centre of the best farming district of New Brunswick and should be well patronized. Mr. Tilley in ordering FARMING for the school speaks of it as a most valuable farm and dairy journal.

What is said to be the largest hog ever raised was recently slaughtered in New York. The animal was a Jersey red boar two and one-half years old, weighing alive 1,609 lbs., and dressing 1,336 lbs. It measured nine feet from tip of nose to the end of its tail, two and one-half feet across the loin, two and one-half feet across the hams and six feet in girth.

A self propelling traction sleigh has been invented by a resident of Washington State. The propelling power consists mainly of two barrels mounted parallel to each other, each having ice-cutting flanges projecting therefrom, and on these rests the weight of the sleigh. As these barrels are rotated by hand power or otherwise the sleigh worms its way along over the ice and snow.

Some idea of how much the British people eat may be gathered from the amount of butter and oleomargarine imported last year. Of butter the imports were 320,909,300 lbs., and of oleomargarine 89,987,500 lbs. The butter imported cost the people of Great Britain \$99,800,855 and the oleomargarine \$11,918,870. Denmark furnished nearly fifty per cent. of the butter and Canada only about three per cent.

An English food specialist has devised a plan for blending peanut meal with grain products to produce a mixture having the desirable qualities of pure wheat flour, with the added rich protein contents of the pea meal. Winter wheat flour has about 10.4 per cent. protein, but the food of man should contain about 20 per cent. by weight of protein. Peanut meal has about 43 per cent. of protein, which is a muscle producer, and if a satisfactory combination can be made with wheat flour the two would contain sufficient nourishment to meet the requirements of man's physical existence.

Inter-Provincial Trade

Last week a deputation consisting of representative breeders and members of the Cattle, Sheep and Swine Breeders' Association waited upon the Provincial Government and asked for a grant of \$1,000 to extend inter-provincial trade in purebred live stock. In many respects it was one of the largest and most representative deputations that has waited upon the Government during the present session, and we trust that the powers that be will see their way clear to accede to the request of our stockmen and breeders.

It is hardly necessary for us to state that we are entirely in sympathy with the stockmen in their request and believe that the Government could not expend \$1,000 that would do more good, not only to the important live stock interests of Ontario, but to every agriculturist in the province. There is no class of our citizens doing more for the building up of the agricultural interests of this country to day than the importer and breeder of purebred live stock, whether of cattle, sheep, or swine. Every purebred animal he brings into the country, or produces, adds so much more wealth to the country in the improved quality of its live stock. True, the breeder is not doing all this work for nothing and expects to make a profit on every animal he sells, which is nothing but fair—though we question very much whether any large breeder or importer in Canada has ever made himself rich in the business. His services, nevertheless, are just as valuable, and any grant from the public chest that would help him to extend his trade would be returned tenfold in the improved condition of the live stock of the country.

The special branch of farming that has made Great Britain famous among agriculturists all over the world is that of purebred live stock. She is to-day the breeding ground from which new blood is secured to replenish the herds in about every country under the sun, and there is a possibility of Ontario in this special line becoming for this continent what Great Britain is for the whole world. But to give Ontario this proud position a market must be found for the stock produced or in other words we must let people in the other provinces and in the United States know that we have the best of purebred stock for sale. Considerable progress has been made along this line during the past two years by the publishing of a list of purebred stock for sale and sending it to prospective buyers, not only in Ontario, but in other parts of the Dominion and in the United States. To extend this work, however, and to place it on a basis that will thoroughly establish and insure this trade for all time to come the various associations interested need more money. It will not do to put off this matter till next year, as a large portion of the trade may be

lost by that time. There never was a period in the history of this continent when there was a greater demand for purebred live stock of all kinds than at present, and the time to strike is now.

There may be a feeling in the minds of some that only our larger breeders and importers are benefited by this movement. But this is not so. The real benefit comes to the smaller breeders and those who have a few good animals for sale. The publication of these lists has been a great help to the smaller breeders in enabling them to get better prices for their stock, and to reach buyers in all parts of the country. As one of the members of the deputation pointed out, the work of the larger bodies has been very much hampered during former years because the smaller breeders who bought stock from them were not able to get sale for their produce. These lists, in enabling the latter to dispose of their young animals, have greatly benefited the larger breeder and importer, and thus given an impetus to the live stock trade of the country that it never had in the past.

But all this work has a reflex action; it benefits the one who buys as well as the one who sells. Not only is the Ontario breeder, who is enabled by the publication of the lists of stock for sale to dispose of his surplus animals greatly benefited, but the purchaser in the other provinces of the Dominion is equally benefited. And, as the importation of purebred stock into Ontario from Great Britain and elsewhere is of immense value to this province, so the exportation of good stock outside of Ontario adds greatly to the wealth of the other provinces of the Dominion in which this stock is sold.

In this way the work that is being carried on by these live stock associations has more than a provincial character and not only should they be aided in the most liberal way by the local Government but also by the Dominion Government. The Federal Government has during the past eight or nine years spent large amounts in developing dairying in the outlying provinces with splendid results. But why should it not do something to encourage the raising of better stock in these provinces? And there is no better way of fostering the raising of good live stock in these newer districts than by granting such assistance to the live stock associations as will enable them to greatly extend the good work they now are doing.

Another important work which these associations have accomplished is that of obtaining reduced rates on the railways for the transportation of purebred live stock. Though very valuable concessions have already been obtained from the railways, there is more to be done in this respect and which can be done much more effectually if the associations have more funds. Then, there is the great question of transportation as it applies to the carriage of our products to the consumer in Great Britain and elsewhere. There is no more important problem before the people of Canada to day than this. In the transportation of cattle alone the Ontario shipper has to pay \$6 per head more to get his animals to the consumer than the cattle shipper of the Western States. This is something that these associations, which are looking after the interests of the live stock farmer, might very well take up. Until these great disadvantages in regard to freight rates are removed or remedied this country will never be able to successfully compete with other lands in supplying food products to the British consumer.

Sheep Worrying and the Dog Tax

A subscriber in Norfolk County sends us a number of suggestions for amendment to the Act imposing a tax on dogs and for the protection of sheep. He informs us that this question has been very fully discussed by the farmers in his district, who agree that the present law does not meet the needs of the case, and as a result a great many farmers all over the province have gone out of sheep-raising. These suggestions, which are based upon a resolution passed by the Bloomsburg Farmers' Union, are, we under-

stand, in the hands of the Minister of Agriculture and the local member for North Norfolk, and will probably come up for discussion at the present session of the Legislature. They are as follows:

1. That one or more inspectors be appointed in each municipality, who shall act as valuers on sheep destroyed by dogs. They shall also be authorized to destroy all dogs found without tags and dogs known to have worried sheep.
2. That the Act be amended so that an annual tax of five dollars be levied on bitches.
3. That each municipality shall pay full value for sheep damaged or destroyed by dogs.
4. The owner of any dog known to have worried sheep shall be free from liability, the dog in every case to be destroyed.
5. It shall be the duty of the assessor to collect the dog tax and furnish each dog owner with a tag, for which he shall pay an annual fee of _____ cents.
6. All cities, towns and incorporated villages shall bear a share of the loss caused by dogs worrying sheep in proportion to the number of dogs kept in each.

It is hardly necessary for us to state that we are quite in sympathy with any scheme which has for its object the development of the sheep industry in Canada. There is no doubt but that the worrying of sheep by dogs has induced a great many farmers to give up keeping sheep, and has also prevented many more from engaging in that profitable line of farming. If the present law relating to the tax on dogs is inadequate, by all means something should be done at once to remedy matters. The suggestions made herein seem to be along the right line. If carried into effect they certainly would inflict no hardship on anyone. A dog that is not worth a reasonable tax and the trouble of a tag should be destroyed, as it is of no value to anyone. The part referring to towns and villages bearing a share of the losses incurred from sheep-worrying is in many ways commendable. Very often it is the village or town dog that is guilty of the destruction of sheep in many districts. However this may be, the changes proposed are worthy of the fullest discussion and we would be pleased to hear from our readers as regards their practicability and effectiveness.

A Great Agricultural Meeting at Souris, P. E. I.

(Specially Reported for Farming by J. A. MacDonald.)

One of the greatest, if not the very greatest, agricultural meetings it has ever been the privilege of the writer to attend was held at Souris, P. E. Island, on March 2nd. It was the largest meeting of farmers ever held (probably) in Canada. There were about three thousand persons present. The large opera house of the town was filled to the door, while hundreds at the door were unable to gain entrance. The meeting was held under the auspices of the local government. Profs. Robertson, Macoun and Dillon, with the members of the Cabinet and about fifty specialists of the province—such men as Robertson, of Inkerman, Moore, of Cropaud, etc., etc., and many advanced farmers of Kings county came by special train. On the platform were about a hundred of the leading farmers of the county, and the leading clergymen of every denomination, besides prominent business-men and politicians.

The meeting was called to order by Dr. McIntyre, ex-M.P. of the county. The first speaker was Prof. Macoun, Horticulturist of the Central Experimental Farm, Ottawa, who did very well under the circumstances, and gave much practical information on matters horticultural, and at the close of his talk was put through a close fire of questioning. John Robertson, the P.E.I. apple king, of Inkerman, placed a number of apples on the platform, showing the capabilities of the island for apple-growing. Mr. R. strongly urged the audience to take up the growing of apples to a larger extent, assuring them what he had done could be done by others.

Prof. Robertson, Agricultural and Dairy Commissioner, on coming forward was greeted with great applause and

was listened to in an address of one and one-half hours with marked attention. Prof. Robertson is certainly a great speaker, and is nothing if not practical. It is a question if there is an equal of Prof. Robertson as a platform speaker on matters agricultural in the wide world, certainly not in Canada or the United States. Those of us who have heard the leading speakers of Canada and the States will bear this statement out.

Previous to the meeting the writer heard some friends remarking to this effect: "If Prof. Robertson would give us \$200 each at the close of his lecture we might be able to profit by what he'll tell us." At the close of the meeting it was curious to note these same parties acknowledging their mistake, and affirming that no man wanted a single dollar more than the average farmer possesses to carry out in every detail the teaching of Prof. Robertson in his lecture of one and one-half hours. This shows how intensely practical the Professor is, and what great results are possible to be obtained from the teaching of such a man.

Prof. Robertson first spoke of the soil, what it was and how agriculture might be taught in the public schools as it is at present taught in 1,600 schools in the Empire State. He very plainly showed the fundamental principles of plant growth, the value of the clover plant, selection of seed, aided by glasses containing samples of selected and non-selected seeds.

One portion of his lecture was then given to swine raising, and another to chicken fattening. He promised that the chicken-fattening station would be in operation in the province, with cold storage, by August next. He also said that a number of illustration stations would be located in the province next June—three at least, located by the roadsides, where all could see at a glance the experiments being carried on and the results thereof.

There is no doubt these illustration stations can be made to work great object lessons to the farmers far away and ahead of single experiment stations. In France alone there are 4,000 of these stations scattered throughout the country.

Mr. Dillon was the next speaker. He took the cow for his theme, saying that in order to fatten pigs or chickens you must have milk. He startled the audience by telling them of the large amount of British gold brought to our shores last year for cheese and butter. He counselled all dairymen to sow plenty of peas, oats and vetches this spring for cow feed, and be thus prepared for a possible drouth. Mr. Dillon always obtains an attentive audience, and retains the full confidence of the farmers and dairymen of Prince Edward Island.

Premier Farquharson delivered the closing address in a running speech, and promised better things for the farmers of the province. By co-operating with Hon. Sydney Fisher, Premier Farquharson has several helps under consideration for the benefit of the farmer. A vital problem the popular Premier is to grapple is that of keeping the sons and daughters on the farms.

A vote of thanks was tendered to the professor in a nice speech by John McLean, ex-M.P., and seconded by Hon. Thomas Kirkham, of Souris West. The meeting broke up at eleven o'clock, the speakers leaving immediately by special train for Charlottetown, where a meeting of the Dairymen's Associations of the Province took place the following day. Special low rates and a number of special trains were arranged for this meeting. The meeting took place on March 3rd, and was the largest dairy meeting ever held in the province.

One of the Best in America

Singhampton, Ont., March 9th, 1899.

To the Editor of FARMING:

Please send me your paper, FARMING, for the present year, for which find enclosed \$1. I would say that it is one of the best farm papers published in America.

Yours truly,
ROBERT EMERSON.

Further Efforts to Improve the Seed Grain of Canada

During the past ten years continuous effort has been made by Professor Saunders, Director of the Experimental Farms, to improve the quality and increase the productiveness of the seed grain used by the farmers of this country. During that time about 120,000 packages of three pounds each have been sent out to over 100,000 farmers, who have greatly benefited thereby. This work is being continued this year, and these samples are in great demand.

This season, under instructions of the Minister of Agriculture, a new feature has been added to this work. A select number of farmers have been chosen from each county or constituency in Canada, selected mainly from among those who have shown by the returns they have made regarding samples received in the past a special interest in this subject. Nearly 5,000 of these farmers have been invited to join in this special test which will be made in each instance on plots of one tenth acres each. The quantities of grain to be supplied, which is being mailed free from the Experimental Farm, are as follows: Oats, 8 lbs.; spring wheat, 10 lbs.; barley, 10 lbs.

Fourteen varieties which have been thoroughly tested at all the experimental farms, and have proven to be among the best sorts grown, have been chosen for these trial plots. Six of these are oats, viz.: Abundance, Banner, Improved Ligowo, American Beauty, Bavarian and Golden Giant; four spring wheats, Preston, Stanley, Percy and Advance; two two-rowed barleys: Beaver, and Sidney; and two six-rowed barleys: Royal and Trooper.

Every farmer entering on this test has had his own choice of variety, but can only receive one sample. At the close of the season the results obtained in each county will be published so that this test will, to some extent, be a competitive one, and will show the value and usefulness of these several sorts of grain in the various provinces of the Dominion.

The following particulars are given by Dr. Saunders in reference to the introduction of the varieties chosen for this special test and the record they have made as to crops during the past four years:

The ABUNDANCE oat was imported from France by the Experimental Farm in 1891, and has been grown each year since with very satisfactory results. It is a white oat with a branching head and a fairly stiff straw, a vigorous grower, and very productive. In the uniform test plots at the Central Experimental Farm it has given an average yield during the past four years of 66 bushels 37 pounds per acre. The Abundance oat has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average crop of 65 bushels 9 pounds per acre. The largest crop yet given by this variety at any of the experimental farms was had at Indian Head, N.W.T., in 1895, when it produced 108 bushels 28 pounds per acre.

The BANNER oat was first grown at the experimental farms in 1890, and has been sown each year since and has given heavy crops. From the outset it has shown great vigor and has been very productive. It is a white oat with a branching head and a stiff straw. In the uniform test plots at the Central Experimental Farm it has given an average yield during the past four years of 70 bushels 21 pounds per acre. The Banner oat has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average crop of 71 bushels 17 pounds per acre, which is the largest yield given by any variety. The heaviest crop yet obtained from this oat at any of the experimental farms was at Brandon, Man., in 1898, when it gave 106 bushels 6 pounds per acre. In 1895 at Indian Head, N.W.T., an 18 acre field of this oat gave an average of 106 bushels per acre.

The IMPROVED LIGOWO oat was imported from France by the Experimental Farm in 1891, and has been grown each year since with very good results. It is a white oat, large and plump, with a branching head and stiff straw, a

vigorous grower and very productive. In the uniform test plots at the Central Experimental Farm it has given an average yield during the past four years of 65 bushels 30 pounds per acre. The Improved Ligowo oat has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average crop of 64 bushels 6 pounds per acre. The largest crop yet given by this variety was had at Indian Head, N.W.T., in 1896, when it produced 92 bushels 32 pounds per acre.

The AMERICAN BEAUTY oat was first grown on the Experimental Farms in 1891, and has been tested each year since with very satisfactory results. This is a pale yellow oat with a branching head and fairly stiff straw, a vigorous grower and very productive. In the uniform test plots at the Central Experimental Farm it has given an average yield during the past four years of 62 bushels 32 pounds per acre. The American Beauty oat has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average crop of 71 bushels 16 pounds per acre, which is only 1 pound per acre less than the Banner, which stands at the head of the list for productiveness. During the past season (1891) a five acre field of American Beauty gave at the Central Farm an average crop of 82 bushels 11 pounds per acre. The largest crop yet given by this variety was had at Brandon, Man., in 1898, when it produced 113 bushels 18 pounds per acre.

The BAVARIAN oat was first grown on the experimental farms in 1895, and has been tested each year since with good results. It is a white oat with a branching head and a stiff straw, which has shown much vigor and been very productive. In the uniform test plots at the Central Experimental Farm this oat has given an average yield during the past four years of 62 bushels 13 pounds per acre. The Bavarian oat has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average crop of 66 bushels, 33 pounds per acre. The largest crop yet obtained from this variety at any of the experimental farms was at Brandon, Man., in 1898, when it gave 109 bushels 14 pounds per acre.

The GOLDEN GIANT oat was first grown on the experimental farms in 1893, and has been tested each year since with satisfactory results. It is a yellow oat with a sided head and a fairly stiff straw, which has proved vigorous in growth and very productive. In the uniform test plots at the Central Experimental Farm this oat has given an average yield during the past four years of 65 bushels 7 pounds per acre. The Golden Giant oat has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average crop of 64 bushels 19 pounds per acre. The largest crop yet obtained from this oat at any of the experimental farms was at Indian Head, N.W.T., in 1895, when it produced 104 bushels 4 pounds per acre.

The PRESTON wheat is a cross-bred sort produced at the Central Experimental Farm, Ottawa, in 1888, by fertilizing the Ladoga wheat with the Red Fife. It is a bearded variety which has shown great vigor and productiveness. It has a stiff straw and ripens on an average about four days earlier than Red Fife. At the Central Experimental Farm it has been tested alongside of a large number of other sorts, under similar conditions for four years, and has given an average yield for this period of 26 bushels 4 pounds, which is 2 bushels, 4 pounds per acre more than that obtained from any other sort at Ottawa. The Preston wheat has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, at all these farms an average of 32 bushels 17 pounds per acre, being 1 bushel 17 pounds more than that obtained from any other variety tested. The largest crop yet given by the Preston at any of the Experimental Farms was at Brandon, Man., in 1895, when it gave 48 bushels 20 pounds per acre.

The PERCY wheat is a cross-bred sort, produced at the Central Experimental Farm, Ottawa, in 1888, by fertilizing

the Ladoga wheat with the White Fife. It is a beardless variety with a stiff straw, which has shown much vigor and productiveness, and ripens on an average about four days earlier than the Red Fife. In the uniform test plots at the Central Experimental Farm it has given an average yield during the past four years of 21 bushels 7 pounds per acre. The Percy wheat has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average of 30 bushels 24 pounds per acre. The largest crop yet obtained from this variety at any of the experimental farms was at Indian Head, N.W.T., in 1898, when it gave 45 bushels 20 pounds per acre.

The STANLEY wheat is a cross-bred sort, a sport which occurred in the variety known as Preston, a cross between Ladoga and Red Fife. This is a beardless sort with a stiff straw, which has shown much vigor and productiveness, and ripens about four days earlier than Red Fife. In the uniform test plots at the Central Experimental Farm it has given an average yield during the past four years of 22 bushels 41 pounds per acre. The Stanley wheat has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial at all these farms, an average of 29 bushels 3 pounds per acre. The largest crop yet obtained from this variety at any of the experimental farms was at Nappan, N.S., in 1896, when it gave 49 bushels per acre; the second largest crop was at Brandon, Man., in 1895, when it gave 43 bushels 30 pounds per acre.

The ADVANCE wheat is a cross-bred sort, which was produced at the Central Experimental Farm in 1888, by fertilizing the Ladoga wheat with the White Fife. It is a bearded variety with a stiff straw, which has shown much vigor and productiveness, and ripens on an average about three days earlier than the Red Fife. In the uniform test plots at the Central Experimental Farm it has given an average yield during the past four years of 21 bushels 20 pounds per acre. The Advance wheat has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average crop of 29 bushels 8 pounds per acre. The largest crop yet obtained from this wheat at any of the experimental farms was at Brandon, Man., in 1895, when it gave 46 bushels 20 pounds per acre.

The variety of two rowed barley known as BEAVER is a hybrid produced by crossing the Swedish two-rowed barley with the Baxter, a six rowed sort. This cross was effected at the Central Experimental Farm in 1889, and it has been tested each year since with satisfactory results. It has a stiff straw, is a vigorous grower and productive. In the uniform test plots at the Central Experimental Farm it has given an average yield during the past four years of 42 bushels 9 pounds per acre, which is the highest yield obtained from any of the varieties tried at Ottawa. The Beaver barley has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average crop of 41 bushels 12 pounds per acre. The largest crop yet given by this variety was had at Indian Head, N.W.T., in 1896, when it produced 66 bushels 32 pounds per acre.

The variety of two-rowed barley known as SIDNEY is a hybrid of the same parentage as Beaver. This cross was effected at the Central Experimental Farm in 1889, and this barley has been tested each year since with satisfactory results. It has a stiff straw, is a vigorous grower and productive. In the uniform test plots at the Central Experimental Farm it has given an average yield during the past four years of 39 bushels 38 pounds per acre. The Sidney barley has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average crop of 39 bushels per acre. The largest crop yet obtained from this variety at any of the experimental farms was at Indian Head, N.W.T., in 1896, when it produced 61 bushels 42 pounds per acre.

The ROYAL six-rowed barley is a hybrid which was produced at the Central Experimental Farm in 1889 by cross-

ing the Swedish two-rowed barley with the Baxter, a six-rowed sort. It has been tested each year since with satisfactory results. This barley has a stiff straw, is vigorous in growth and productive. In the uniform test plots at the Central Experimental Farm it has given an average yield during the past four years of 53 bushels 26 pounds per acre. The Royal barley has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average crop of 45 bushels 4 pounds per acre. The largest crop yet given by this variety at any of the experimental farms was at Brandon, Man., in 1895, when it produced 65 bushels 30 pounds per acre.

The TROOPER six-rowed barley is a hybrid of the same parentage as Royal. It has been tested each year since with satisfactory results. This barley has a stiff straw, is vigorous in growth and productive. In the uniform test plots at the Central Experimental Farm it has given an average yield during the past four years of 48 bushels 17 pounds per acre. The Trooper barley has been similarly tested at all the experimental farms throughout the Dominion, and has given, as the result of four years' trial, an average crop of 46 bushels 29 pounds per acre. The largest crop yet given by this variety at any of the experimental farms was at Indian Head, N.W.T., in 1896, when it produced 67 bushels 14 pounds per acre.

Ornamental Shrubs

Written for "Farming" by E. Morden, Niagara Falls South, Ontario.

Ornamental shrubs and trees would be much more largely planted if examples in sight had been planted and managed with more judgment and taste. To distribute shrubs singly through a lawn is a mistake. Commonly the effect is bad, the labor of cultivating a space about each shrub is so great that it is rarely continued. A large bed or group of shrubs can be better and more easily cared for; while a single shrub is often interesting for a brief period a group of shrubs is interesting for months together.

If a considerable variety is planted there will be continuous bloom during the season of growth. While the foliage lasts plants with a golden or purple foliage give a continuous effect. The Forsythias give a very early abundant yellow bloom before the leaves appear. As these are often in bloom at the spring planting season they sell at sight. Their foliage is bright and good. Several of the spireas are early, and one has golden foliage. Spirea ban Houttie has good foliage and produces a snow bank of bloom. Spirea thunbergii is valuable on account of its peculiar light green narrow foliage. It is useful in bouquets for months together. Meigela rosea is a fine bloomer and useful in foliage. Meigela variegata has a nice golden-bordered foliage. The denterias in June make a fine show and ought to be more largely grown. Tartarian honeysuckle makes nice hedges. It comes into leaf very early in the spring, and is then much admired. In late summer, in time of drought, the foliage sometimes drops. Flowering quince and flowering almond are both fine in early spring, but singly are rather common place later on. Neither is reliable in northern Ontario. Syringas, single and double, with cream colored very fragrant blossoms, are valuable. Their resemblance to orange blossoms gives us the name mock-orange. Rhodotyus kearoides is a nice shrub with white flowers and light green foliage. Golden elder is visible at long distances. Prunes pissardi, or purple leafed plum, is a small tree, suitable for a centre or background in a group. Its foliage has a persistent dark liver color and is very distinct. Golden poplar is a small tree and valuable in a group.

Autumn flowering shrubs are peculiarly valuable. Of these the tree hydrangea, which holds its immense heads of bloom from August until the end of the season, is not as well known as it should be. It always blooms. In dry ground the heads are not so large. Hydrangea paniculata grandiflora is none too large a name for it. The Rose of

Sharon, althea, or tree hollyhock, bloom for months in autumn. The large flowers are red purple, blue purple, or white with red centre. Tree hollyhock is a good name and a correct one. A variegated leaf variety has leaves with distinct white colorings. These shrubs flourish here, but are not reliable in some parts of Ontario.

Manures and Manuring

By T. C. Wallace, Before the Ontario Farmers' Institute

(Continued from last issue.)

OUR SOILS.

To return again to our soils. As we got them from the prairie and forest primeval they contained a rich supply of humus, caused by the decomposition of ages of plant life which had grown up and dying down left plant bodies for food for following plants. This humus was rich in the atmospheric element of nitrogen, got from the air through the species of "nitrogen collectors" already referred to, and by the action of micro organisms of nitrification. It was rich also in mineral matter, which had taken new form in the plants which had formed it (though inorganic elements), and these soils are what we term organized or in a condition which grains, roots, grasses and fruits can feed from them readily. We term them rich. On these soils our farming generally began by

GRAIN GROWING

as an easy and remunerative method of working. As we found these lands in a state of rich humus supply, we may take as a first condition of manuring that a good supply of humus is necessary.

As we grew our grain crops let us inquire what was the general result on the fertility of our soils and how did it leave them for future agriculture. It may as well be stated here that the soils of our farms are mines of agricultural wealth, but it is mostly locked up so tight in the hard unyielding ground rock that our plants cannot feed from it. Only that portion of it which is available to our plants can be called fertility, the rest has yet to be rendered so.

The straw contains most of the potash removed from the soil by the crop. It was usually returned to the soil, apart from the fact that our soils are usually well stored with potash. Even often to a greater extent than lime, no serious loss of potash occurred by such grain growing.

If the straw was returned without burning, humus was also maintained to some extent. The most of the nitrogen goes to the grain, though the straw also carries some back to the land. It has been an accepted theory that wheat is a great user of nitrogen because it seems to be benefited by the application of soluble nitrates, but this, I think, is founded on empirics. The real fact would seem to be that the wheat grows during the early part of the season when nitrates are not very active in the soil and has yielded up its life by midsummer, after which nitrates are more active. The phosphoric acid of this crop then goes off almost entirely in the wheat seed, and the straw retains almost none of it, because it goes to effect perfect ripening of the grain and fit it for reproduction of the species. The loss, then, in grain growing is principally of the nitrogen and phosphate. So serious does this become in time that the grain gets poorer and softer, the crop less, the stand weaker, and the plants succumb to various fungoid diseases and the ravages of insects which are always in evidence to attack weakened constitutions. As it is in the animal kingdom, so it is in the domain of plant life. Gradually the seriousness of this state of affairs dawns upon us and we begin to realize the necessity of returning some of the lost fertility. We hit upon the plan of stock keeping for beef, mutton, pork and the dairy. The crops shall then be fed upon the farm and only the finished product sold off. The manure of the animals with the straw litter shall be returned to the land and we then think we have done our whole duty and fall into the error of calling that complete manuring.

(To be continued.)

The Condition of Live Stock on the Western Ranges

From a bulletin issued by the National Live Stock Association on March 3rd we take the following: "For the past month the headquarters of the National Live Stock Association has been engaged in gathering reports of the condition of live stock on the western ranges. These reports include almost the entire West, and cover loss from winter weather and storms, together with general conditions for the spring. Owing to the incomplete condition of this work it was not intended to make public results until later, but as there have been many conflicting reports published, and these headquarters are besieged with inquiry for facts, it is thought best to publish information thus far received. It is well to state, however, that while reports up to this time are much more favorable than generally expected, the danger period is not over. While most of the cattle have wintered well, the winter has been of unusual severity, and while losses are light thus far, the cattle are as a rule very weak and in poor condition to withstand severe storms of the spring. One of the worst features in the outlook is the scarcity of forage reported from many districts. Very early grass is an absolute necessity to keep many of the cattle alive.

"The 'cattle of commerce,' or, more intelligently speaking, cattle in the feed lots, do not enter into this question in any manner, as the agricultural districts have sufficient feed to carry these animals through the winter with only nominal losses.

"With the exception of Montana, reports have been received from leading stockmen, and are considered accurate as far as they go. . . . The heaviest losses have been with so-called 'through cattle,' that is, cattle being moved north from the south. Where the cattle went into the winter in bad condition, the mortality has been heavy, reaching in some sections as high as 20 per cent. Taking the range section as a whole, to the present time, the losses will average 4 per cent. With the most favorable conditions that can be expected an additional loss of 2 per cent. may be looked for before spring, and should the weather continue bad through March a heavy loss will certainly result.

"The department of agriculture reports that there were in the neighborhood of 13,000,000 head of cattle in the range country on January 1st, 1899. Assuming that this is correct, 6 per cent. of this number would indicate the destruction of 780,000 head of cattle during the present winter.

"One feature of the reports received is the scarcity of steers above the age of two years which seems to prevail generally over the West. Some sections, notably Texas, reports a scarcity of all classes of cattle, but outside of old steers the shortage is not pronounced, and many sections report plenty of young stock.

"Final conditions on the opening of spring depend entirely upon the weather for the next six weeks. It is too early to give anything more than a bare estimate of conditions as they now exist.

Treatment of Winter-injured Trees

In a recent bulletin the Kansas Experiment Station gives the following for the treatment of winter-injured trees: "Where trees are merely injured, the real damage done to the orchards will depend greatly upon the treatment given them from this time. Trees that are killed should be removed at once from the orchard. If they can be used for fire-wood, well and good; if not, they should be piled and burned to destroy any insects or disease that may infest them. Trees that are partly top-killed are weakened and deadened throughout, and should be heavily cut back, the extent depending upon the degree of injury. In many cases it will be necessary to cut back to the main branches or even to the trunk, but where the injury is less severe the cutting may be confined to the smaller branches of the tree.

Though the branches of an injured tree may not be killed, it is advantageous to cut them back, because the wood that is browned and deadened can never perform its life functions again. It becomes as heart-wood and must be enclosed by a layer of new wood. The quicker we can get this deposit of new wood the better and the more of it the better. By cutting off the branches of the tree, it is reduced in surface and the new wood is more rapidly deposited on the parts that remain. The energy that is spent in blossoming is also saved to the tree by the severe pruning. It is necessary to prevent the vitality of the tree from dissipating itself in any way, and to husband and apply it so as to restore the tree quickly to its normal process of growth.

"Trees treated in this way will rapidly regain their vigor unless the injury is very serious. They will also quickly resume their normal habit of growth and shape. Cutting back the last year's growth in the winter is especially beneficial to the peach, whether it has been injured by cold or not, as its branches tend to grow long and slender, and in bearing fruit near the extremities they break and split and are ruined. Where blackberries and raspberries have been killed back to the ground, the canes should be cut out and burned.

"A difference in opinion exists as to the best time for cutting back injured trees: some growers prefer to have the work done before the leaves open, others choose a later time; but the safe way is to do it early. As soon as the degree of injury is known, therefore, we may wisely begin the pruning. If left till a later time, other work may crowd it out entirely, with the result that the orchard is lost. A saw and tree pruners are the tools to be used. It will be beneficial to carry along a keg of white lead and apply a coat of the lead to the wounds made. This will keep out the air, prevent the wood from checking, and retard evaporation from it. All pruned-off wood should be removed from the orchard and burned.

"The process here described will not save all the trees that have been injured, but, if done with care, it will save many, and those that die after the treatment is given will probably die in spite of rather than because of it.

Alfalfa for Fattening Hogs

Last fall the Kansas Experiment Station made an experiment to test the feeding value of alfalfa hay when fed to hogs. The hogs fed in this experiment were bought of farmers and averaged 125 lbs. each. They were placed in lots of ten each, in large pens. The alfalfa hay used was of the best quality, carefully cured. Black hulled white Kaffir corn was the grain fed, the hogs being fed all that they would eat without waste. The hay was fed dry in large forkfuls in a large trough. The pigs were given more than they would eat. One lot of hogs were fed Kaffir cornmeal dry and alfalfa hay; one lot whole Kaffir corn dry; one lot Kaffir cornmeal dry, and one lot Kaffir cornmeal wet. The experiment began on November 24th, and lasted nine weeks. At that time the alfalfa-fed hogs were ready to be marketed, while those fed grain alone would have required four or five weeks' more feeding to get them in good marketable condition.

The gains in nine weeks from the different methods of feeding were as follows:

	Gains per hog in pounds.
Kaffir corn meal dry and alfalfa hay.....	90.9
Kaffir corn whole.....	59.4
Kaffir corn meal fed dry.....	51.4
Kaffir corn meal fed wet.....	63.3

The gain from feeding alfalfa hay with Kaffir corn meal fed dry, over the meal alone fed dry, is more than seventy-three per cent. The gains per bushel of feed were as follows:

	Pounds.
Kaffir corn meal dry and 7.83 pounds alfalfa hay....	10.88
Kaffir corn whole.....	8.56
Kaffir corn meal fed dry.....	7.48
Kaffir corn meal fed wet.....	8.09

The hogs in nine weeks were fed 656 pounds of alfalfa

hay. For each 7.83 lbs. of alfalfa hay fed with the Kaffir corn meal, the hogs gained 3.4 lb. over those having dry Kaffir corn meal alone, a gain of 868 lbs of pork per ton of alfalfa hay. In a former experiment it was shown that the gain per acre when hogs were pastured through the summer on alfalfa with a light feeding of corn was 776 pounds of pork.

These results obtained at the Kansas Station are certainly good. Alfalfa is receiving more attention in this country, and we would like to hear from any who have had any experience in feeding it to hogs. Pork raising is one of our most important industries, and any plan that will tend to lessen the cost of production will be welcomed by our farmers. Nothing is said in the experiments mentioned above as to what effect the feeding of alfalfa had upon the quality of the pork.

CORRESPONDENCE

Some Practical Poultry Questions

To the Editor of FARMING:

I should like to hear through this valuable paper in next issue, from some expert poultry breeder, his strictly unbiased opinion as to the following questions:

Is it possible to make hens lay as many eggs in winter as in summer?

Isn't heat as essential to egg production as proper food and exercise?

Would 60 or 70 degrees in a poultry house be too warm, other requisites being provided?

What breed or strain of fowl is actually the most profitable as a broiler, and as an adult?

Markham, Ont., March 11, 1899.

J. R.

NOTE—Will some of our poultry breeders kindly give J.R. the information he desires? The questions are thoroughly practical and furnish a good opportunity for imparting knowledge of value to the poultry industry of Canada.—EDITOR.

A Talk on Manure

To the Editor of FARMING:

I have read with much pleasure, and I hope profit, "Bulletin No. 31 on Barn-yard Manure," by Professor Shutt, of the Central Experimental Farm. Every farmer should secure a copy and mark, learn, and inwardly digest the truths therein contained. The practical information, so clearly and plainly stated, if intelligently followed, would be the means of adding a large amount of wealth to the farmers of this Dominion.

Driving through the country in the winter season, it is surprising to see the careless and reckless manner in which otherwise good farmers handle the manure; the horse manure thrown out in one pile to ferment and fire fang, and thus become useless as a fertilizer. When manure heats to such an extent as to become white, it is worthless, as all the good or the gases have gone off into the air to be brought down by the rain, probably to enrich some other man's farm. It reminds me of rendering out tallow in a pot with a hole or a crack in it. The grease drops into the fire and is burned up, while there is nothing left in the pot but dry, useless cracknels. The cow manure is thrown out in another pile to freeze solid and get mixed with snow and water from the barn roof. Others haul the manure out to the fields and put it in round high heaps like a stack. The rain will run off these heaps like water off a duck's back, and the manure will heat and burn up. If, however, the horse and cow manure were put into a heap near the barn every day, in the absence of a manure shed, and the heap built up square at the sides, and flat on top, the horse manure would heat up the cold cow manure and the flat heap would catch what snow and rain would fall, which would regulate the heat, and result in making a perfect fertilizer. If it were found that the pile was heating too much, saturate it well with water, or shovel snow on if convenient, and thus check the fermentation; the results would amply repay the trouble.

By this plan the manure could be hauled out to the fields where it is intended to be applied, and handled in the same way. We are in favor of a light dressing of manure and applied more frequently, rather than a heavy dressing at longer intervals. The manure should be kept as near the surface as possible. The better plan is to mix it with the top soil by very light ploughing or cultivating. I would not advise spreading manure on the surface after the ground is frozen but it is all right anytime up to then. There should always be a good supply of absorbents in the stable and there is nothing better than dry earth. This absorbent costs nothing, is as good as gypsum and can be gathered during the dry time in summer from the road side, or along the line fences, and stored conveniently for use. Then by having water tight gutters, which are easily constructed, the most valuable part of the manure will be saved and the stable kept as sweet as a nut.

Pownall, P.E.I., Feb. 27th, 1899.

A. A. MOORE.

Sheep on a 100-Acre Farm

To the Editor of FARMING:

In reply to your inquiry concerning sheep I would say that on the average 100-acre farm from ten to twenty sheep is the number that is kept in our neighborhood. I have always contended, however, that whatever a man has the most taste for that is what he should follow. If a man has more taste for taking care of and feeding sheep, he should be able to do better with them, and he could keep more than the man who had not this inclination. Another man would perhaps do better in caring for cows if his taste lay that way. I would advise your correspondent to go slow, and creep up; buy a few good ones, and as he gained in experience he could keep more. If he wishes to make his a sheep farm he might keep as many as a hundred, but I would go slow myself.

As to the most profitable way of keeping sheep on the average farm, I hardly know how to answer. I know some farmers who turn their sheep on the road in the summer, and do not feed them very good through the winter. They just feed them on pea straw, which is a cheap way, but I do not say that it is the best way. I think it is better to give sheep the best care possible, and keep them growing from the start. There are other farmers who think the most profit is in having the lambs come very early, and selling them for spring lambs at five and six dollars each. There is a good deal in this plan, as the lambs are then out of the way early, but then there is a lot more work about this way than there would be to have the lambs come later, say about the first of April, when they soon get to grass, are not of much further trouble till fall, when they are fed for the butcher. If they have been well fed, and are a good kind, these lambs will realize from four and a half to five cents per pound, live weight, which gives a good profit. We have had lambs weigh at nine and ten months 200 lbs. We have only a small lot at present, as we keep them only for breeding purposes, but are hoping to increase our flock soon. A few very choice ones will bring better returns than a large lot of poor ones.

As to the cost of keeping a sheep for a year. We have always had an abundance of feed, so I hardly know the actual cost. About five pounds of turnips per day is a good average feed for a good-sized sheep. This would be about twelve bushels for the winter, which, at six cents per bushel, would be seventy-two cents, and a pound of oats a day would be about four bushels, which, at twenty-five cents per bushel, would make one dollar. These, with the roughage, would winter sheep very well until they began to lamb, when they would want some clover hay and a little bran. Then to this should be added pasture, which should not be more than twenty-five cents per month if it had to be hired. I think the way we keep our sheep that it would cost more than this, say from \$5 to \$7 per year. Hoping this will be satisfactory,

WILLIAM WILLIS.

Pine Ridge Farm, Newmarket, Ont., March 3rd, 1899.

QUESTIONS AND ANSWERS.

THUMPS IN PIGS.

A subscriber wishes to know the symptoms and also the cause of the disease known as thumps.

The disease known as thumps is very common among pigs, especially young ones. It is, however, not a disease in itself but an evidence of disease, and is an accompaniment of many diseases. Its symptoms are a jerking or twitching action of the heart or diaphragm. As thumps are merely an evidence of other diseases, to cure it it would be necessary to get at the disease itself. The remedy given by a western farmer in FARMING for Feb. 28th may have been successful in that it cured the disease which produced the thumps in his pigs.

FEEDING OATS IN SHEAF.

A subscriber at Pownal, P.E.I., asks: "Is it more profitable to feed oats in the sheaf to the cows or to thresh and grind them? Some say that if fed in the sheaf the cows will dry off."

Answered by Professor G. E. Day, Agriculturist, Ontario Agricultural College, Guelph, Ont.

There is no reliable information regarding the merits of feeding oats in the sheaf as compared with threshing and grinding. Many good dairymen follow the practice to a greater or less extent. Sheaf oats afford variety and are much relished by the cows. There is certainly no danger of drying off the cows, but of course the sheaf oats should not constitute the entire ration. A good sheaf of oats will furnish in the neighborhood of two pounds of straw for every pound of grain. Of course there is great variation in this respect, but the proportion stated will serve as a general guide.

SPRAYING FOR PROFIT.

We have received, "just from the press," a copy of "Spraying for Profit," by H. E. Weed, M.S., manager Mont Vista Fruit Farm, and formerly entomologist of the Mississippi Experiment Station. The aim of the author is to place before the farmer and fruit-grower a small, practical handbook for ready reference, describing the application of the more common insecticides and fungicides so largely used for suppressing injurious insects and fungus diseases. This object has been very creditably accomplished, and the book is one which should be worth many times its

CANADIAN PACIFIC RY.

Settlers' One-Way Excursions

To Manitoba and Canadian Northwest will leave Toronto every TUESDAY during March and April.

Passengers travelling WITHOUT LIVE STOCK should take train leaving Toronto at 3:15 p.m.

Passengers travelling WITH LIVE STOCK should take train leaving Toronto at 9:00 p.m. Colonist Sleepers will be attached to each train.

For full particulars and copy of "Settlers' Guide" apply to any Can. Pac. agent, or to

C. E. McPHERSON

Assistant General Passenger Agent,
1 King St. East, Toronto

cost to every farmer. The price, in paper covers, is 20c., and it will be sent by FARMING, postpaid, to any address for that sum. Any subscriber sending in his renewal subscription for one year may obtain a copy of the book by enclosing 10c. additional.

THE FEDERAL LIFE ASSURANCE CO.

In another column we publish the 17th annual report of the Federal Life Assurance Co. The statement furnished by the directors shows a marked increase in business during the past year. New business for the year represents the enormous sum of \$2,248,850, and covers nearly 1,500 applications for new policies. The increase in income, the additions made to assets, and the satisfactory condition of investments are indications of the

sound financial standing of the company and the wise and prudent management of its affairs by the directorate. Shareholders and policy-holders alike will be gratified with the report and a large increase in business may be looked for during the coming year.

REMARKABLE RESULTS FROM ONE APPLICATION.

Germantown, Pa., May 8th, 1897.

The Lawrence Williams Co., Cleveland, O.
Replying to your favor of March 29th, after awaiting results of the application of "Gombault's Caustic Balsam," to a bad strain on my trotting horse, Samuel T. (back tendons on hind leg), I am pleased to report the lameness entirely gone and the limb as good as before. I am well repaid for my patience and

LAND For Everybody

Free Grants of Government Lands

Cheap Railway Lands for Sale on Easy Terms

GOOD SOIL PURE WATER AMPLE FUEL

MOST desirable lands suitable for mixed farming can be obtained in the Old District along the line of the Calgary and Edmonton Railway, about fifty miles North of Calgary. Most desirable lands can be obtained in Southern Alberta in close proximity to the Calgary and Edmonton Railway and the Crow's Nest Pass Railway, suitable for mixed farming and ranching on both a large and small scale. North Saskatchewan also affords a splendid opening for intending settlers in the Prince Albert, Duck Lake and Rosthern Districts, on the line of the Qu'Appelle, Long Lake and Saskatchewan Railway.

For full information concerning these districts, maps, pamphlets, etc. Apply to

OSLER, HAMMOND & NANTON,

[d-9]

Lund Office, 381 Main St., WINNIPEG.

..SEED GRAIN..

Danish Island Oats	Common Six-Rowed Barley
Imperial American Oats	Mandscheuri Barley
Poland White Oats	Oderbruger Barley
Early Russian Oats	Rio Grande Wheat
Siberian Oats	White Fife Wheat
Rosedale Oats	Speculation Wheat
Banner Oats	Goose Wheat
Early Dawson Oats	Canadian Beauty Peas
Second Early Peas	Russian Blue Peas
California Creeper Peas	Lakefield White Peas
Prince Albert Peas	Golden Vine Peas, etc.

Our stock is grown from selected seed by men that make a business of growing seed grain. We have the Finest Varieties of Seed Grain in the Province. Write for Samples and Prices. All information cheerfully furnished

d 3-28

JAMES HEWER, Seedsman, GUELPH.



56-PIECES FREE

Full-Size, for Families.

There is no fake about this. send your address at once. Every person answering this advertisement can get a Handsomely Decorated Set, absolutely free—we mean it. There is no trick, no juggling with words, nothing but what is honest. Our offer is in black & white, no misrepresentation of any sort, everybody can receive & take advantage of it, & we positively will not go back on it no matter what it costs us. We wish to put our paper on top, & will do anything to get it in the lead quickly. It is one of the best & most interesting Fashion, News & Story Papers in existence. You can prove all we say, the absolute TRUTH, if you will send us 10c. silver or 10c. stamps to cover expense of postage, mailing, addressing & packing, & we will send you the paper for three months free. Every one can have their choice of breakfast, dinner or fruit set free. All sets carefully boxed & packed at our expense.

POPULAR FASHIONS, NEW YORK CITY, DEPT. 402 C. P. O. BOX 2617.

Why ? Because

In these times of keen competition is there such a great demand for this All Steel Flexible Harrow.



Parties wishing a first-class Harrow will do well to write us direct, or apply to the local agent.

Our Motto, "Not how Cheap, but how Good."

TOLTON BROS., GUELPH, Ont.

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 made 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. We can guarantee more than double the strength and wear in this Harrow than there is in any other make.

trouble in securing such remarkable results from one application of your Caustic Balsam. This horse trotted on a half-mile track on Friday of last week in 2:20. Thanks for your interest in this case. CHAS. CHIPMAN.

Publishers' Desk.

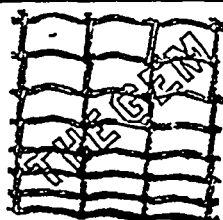
Seed Grain.—Our readers' attention is called to James Hewer's advertisement in this issue. James Hewer, seedsman, Guelph, makes a specialty of seed grain, and living in Guelph, the home of the Agricultural College, he has every advantage to study which is the most profitable grain for the farmer to grow.

Reliable Seeds.—The special offer made by Messrs. John S. Pearce & Co., of London, Ont., in last week's FARMING should be read by every one. It contains three offers of reliable field, garden and flower seeds, which it will be difficult to duplicate. If any reader of this has not received a copy of FARMING containing this advertisement we shall be pleased to supply him with one.

The Vessot Sub-Soil Lance.—Mr. James H. Peters, of Moosomin, Assa., writes to FARMING, "I have purchased a Vessot sub soil lance through an advertisement I saw in FARMING, and all who have seen it work think it fine. We could tell to the row where it was used." This testimony was given voluntarily and was comprised in the letter asking questions with regard to poultry raising answered in FARMING of the 28th February. It confirms what we had previously heard as to Vessot's sub-soil lance.

Egg Crates.—Many farmers do not sufficiently appreciate the value of proper facilities for marketing eggs. By the use of a good crate a large percentage of breakages may be saved, and a good business-like looking package is often the means of procuring a cent or two in excess of the usual prices. The "Humpty-Dumpty" crates made by the Dowsell Manufacturing Co., of Hamilton, Ont., are the best thing we have ever seen of the kind, and should be used by every farmer in the country.

An Eventful Day.—March 4th was a day of great events for a large number of farmers residing in the neighborhood of Mitchell, Ont., when the whole town turned out to celebrate the delivery of a large consignment of the machines which "have made America famous" to the purchasers of the Deering Harvester Co.'s implements in that locality. Three carloads of machines were delivered, and there were over one hundred farmers in line during the parade, in spite of the fact that the roads were in a very bad condition, some of the farmers coming with sleighs and some with wagons. It was the first event of the kind that has ever taken place in the town, and the farmers were very enthusiastic. A large crowd of townspeople and farmers who were no purchasers, but came in to inspect the machines and participate in the celebration, were also present. A brass band was engaged for the occasion, and rendered a number of selections during the afternoon. After loading the machines, 175 farmers were entertained at dinner. Afterwards a procession was formed, which paraded the streets headed by the band, and the proceedings closed with speeches by leading local celebrities and Mr. H. H. Hanna, of London, the general agent of the Deering Harvester Co. Altogether, it was one of the most successful deliveries the company have had in Ontario. The Mitchell Recorder reports that the duty collected on this consignment alone amounted to nearly \$1,000, and that it included specimens of nearly all of the various classes of implements manufactured



FENCE MACHINE
Still at the front!
Not only the cheapest, but fastest and best.
Price \$3.00.
Highest grade
Coiled and other
WIRE
for sale. Write for
particulars. Agents Wanted.
McGregor, Banwell
& Co., Windsor, Ont.

J-3-14

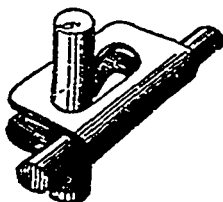


we have been studying paint—its best composition and its best application. We have only one aim. That is to make the best paint possible. The markets of the world are open to us. If all white lead or all zinc made the best paint it would be wise for us to make it so. But experience shows that a combination of these two substances makes far better paint than either one alone. Therefore, as we are neither white lead dealers, nor zinc dealers, we use enough of each to produce the best result, and with pure oil and the best drier, we make the paint that have made us.

**THE
SHERWIN-WILLIAMS
PAINTS**

They are made in the best way and put up so they can be applied in the best manner and will give the best results. Send for our little book (it's free) and get acquainted.

THE SHERWIN-WILLIAMS CO., PAINT AND COLOR MAKERS
Canadian Dept.,
21 St. Antoine Street, Montreal



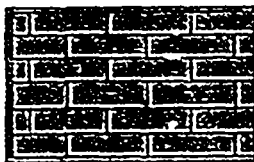
**Farmers Want It
and will have it
We Make It
and want you to sell it**

—Write for our Illustrated
—Fence Catalogue describing it...

THE FROST WIRE FENCE CO.

WELLAND, ONT.

The JONES LOCKED WIRE FENCE

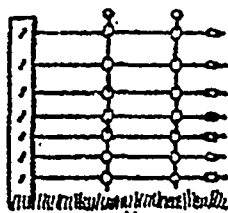


is the best fence in the market. Also makers of Metallic Roofing and Siding. Write for catalogue and circular

The Locked Wire Fence Co., Limited,
London, Ont.

Fence Machine Free

With 100 Rods. Gold Stem-Wind Watch Free.



To introduce Diamond Grip Fence in new localities. Don't have to wind wires around each other (like old woven fences), as cross wires are gripped and protected from weather; can never slip or break; 5 times as strong and lasts 10 times as long, as any woven wire fence made; can use coiled spring, plain, twisted or barb wire. Cheapest Fence in end that was ever invented. Agents wanted; write quick to



CANADA FENCE CO., London, Ont.

The Spramotor First

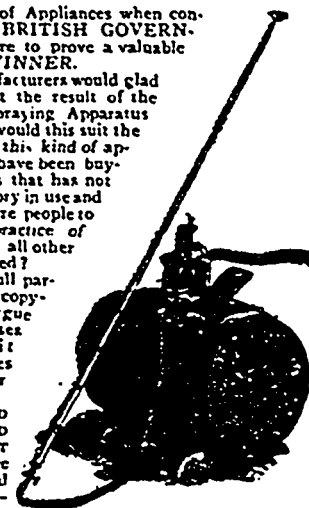
A TRIAL of Appliances when conducted by a BRITISH GOVERNMENT, is sure to prove a valuable asset to the WINNER.

Rival manufacturers would gladly have us let the result of the Contest of Spraying Apparatus die, but how would this suit the purchasers of this kind of apparatus, who have been buying apparatus that has not been satisfactory in use and has caused more people to delay the practice of spraying than all other cause combined?

Send for full particulars in our copy-righted catalogue on the diseases affecting fruit trees, vegetables etc., and their remedies.

Over 100 GOLD MEDALS AND THE HIGHEST AWARDS have been granted the Spramotor in 3 years.

Sixty-eight outfits are in use by the Ontario and Dominion Governments for experimental work. Adopted by six American and European Governments.



Certificate of Judges' Award:

THIS IS TO CERTIFY that at the Contest of Spraying Apparatus held at Grimsby, under the auspices of the Board of Control of the fruit experimental stations of Ontario, in which there were eleven contestants, the Spramotor, made by the Spramotor Co. of London, Ont., was awarded First Place.

H. L. HURT, H. PETTIT, Judges.

Agents Wanted.

SPRAMOTOR CO.

357 Richmond St., London, Ont.

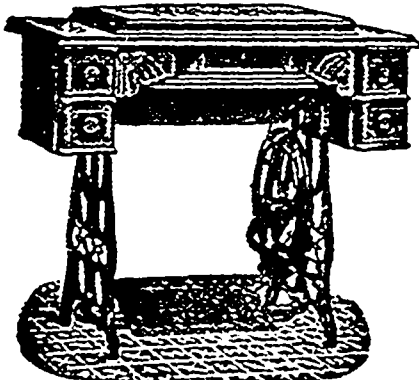
by the company. The Recorder also states that this is the third year the local agent at Mitchell has handled the Deering machines, and that he has never been applied to for a repair of any kind, and never yet received a complaint from a purchaser.

A Great Commercial Enterprise.— Among the many best and greatest things that North America possesses, certain manufacturing establishments always stand out conspicuously. This is notably true of The Sherwin-Williams Company, the home plant of which at Cleveland, Ohio, holds a unique position in the manufacturing world. The Sherwin-Williams Company owes its distinction not only to the fact that it is the largest producer of paint in the world, but as well to the system and method of manufacture, the splendid conduct of its factory, and the institutions established for the benefit of employees. Besides the main plant at Cleveland, The Sherwin-Williams Company have factories at Chicago and Montreal, and their own warehouses and branch offices at New York, Boston, and Toronto, with several auxiliary interests at other trade centres. The Cleveland plant consists of fifteen large buildings conveniently arranged for shipping both by rail and water. The company's printing and advertising establishment is in a separate building adjacent to the main plant. Here all the printing and preparation of advertising and sample cards are carried on. The Sherwin-Williams Company operates its own box factory and co-coverage establishment, and makes all its own cans. For the convenience of employees a dining room and kitchen is provided, where lunches are served to all employees of the company. Special wash-rooms and bath-rooms are also provided, while perhaps the most unusual feature in the establishment is a laundry in which all the company's towels, aprons, table linen, etc., are laundered. The Sherwin-Williams Mutual Benefit Association has been in successful operation for a number of years, paying benefits to the employees who become members in case of sickness, accident, and death. A monthly magazine called "The Chameleon" is printed for circulation among the staff of workers in the manufacturing, sales and account departments of the company. Besides these there are many other distinctive features of the factory system that make The Sherwin-Williams' institution the most model paint plant in existence. Everything that promotes cleanliness, health, and neatness is done in the most thorough manner, and the result is a highly sympathetic working between employees and employers.

"SEAMSTRESS" AND "EXPERT"

High-Grade Sewing Machines at Factory Prices

Equal to any Machine made in every respect, regardless of name or price



Latest improvements, high arm, long self threading shuttle, automatic bobbin-winder, steel attachments. ALL STYLES. OAK OR WALNUT FINISH. Why spend from \$40 to \$60 on a machine when you can buy as good a machine as ever was made for half the money? Write for catalogue and prices.

THE BAILEY DONALDSON CO.
1 ST. PETER STREET
Department "F."MONTREAL

FREE
FOR ONE DAY'S WORK

WE GIVE this fine WATCH, with chain and charm, for selling 2 dozen gold-tipped, enamelled Lever Collar Buttons at 10c each, or a lady's watch and guard for selling 5 doz. *No Money Required.* You run no risk. Write and we send the buttons, post-paid, with our big Premium List. Sell the buttons, return money, and we send watch, free of all charge. Unsold buttons returnable. Liberal commission if preferred. Be the first in your field. Send your name and address to-day. In writing, mention this paper.

LEVER BUTTON CO., TORONTO, ONT.

LEADING COLLEGES OF CANADA

TORONTO

THE Best Job

Invariably goes to the one with best brain—one who has education, special training. Why not qualify for one of the best places going? You have the chance. The

CENTRAL BUSINESS COLLEGE, TORONTO opens the door to success for many young Men and Women each year. It offers splendid equipment through work, a strong staff and good results. You may enter at any time. Write for prospectus. **W. H. SHAW, Principal**
Verge and Gerrard Sts., Toronto.

STRATFORD

"NONE BETTER IN THE DOMINION"

Central Business College

STRATFORD, ONT.

A Commercial School of the Highest Grade. Twice as large as many of the commercial schools in the larger cities; enjoys a large patronage; Staff of Nine Male Teachers; moderate rates; board cheap. Students admitted at any time. Write for beautiful Catalogue.

W. J. ELLIOTT, Principal.

HAMILTON

CANADA BUSINESS COLLEGE

HAMILTON

For nearly 40 years this College has been a leader in Commercial and Shorthand training in this country, and it is the leader to-day. Write for prospectus to **R. E. GALLAHER, Principal.**

GEO. THOMSON ...BRIGHT..

HAVING sold his farm, will sell by auction, with out reserve, on **MARCH 21st, 1899,**

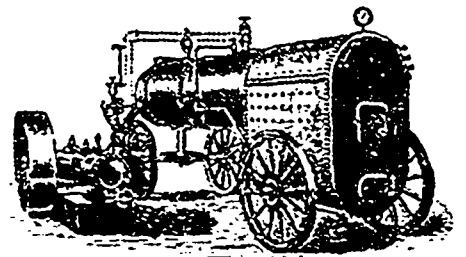
Clyde Horses, Jersey Cattle, Berkshire Pigs, Poultry, Farm Implements, Etc

Terms—\$10 and under, cash; over that amount, 3 months' credit on approved security, or 6 per cent. per annum if for cash on credit amount. Lunch at noon. (332)

GEO. THOMSON,
3 Miles West from Bright.

CANADIAN OFFICE & SCHOOL FURNITURE CO. LIMITED
PRESTON ONT.

FINE BANK OFFICE COURT HOUSE & COLLEGE FURNITURE
SEND FOR CATALOGUE



E. Leonard & Sons

ENGINE AND BOILER MANUFACTURERS

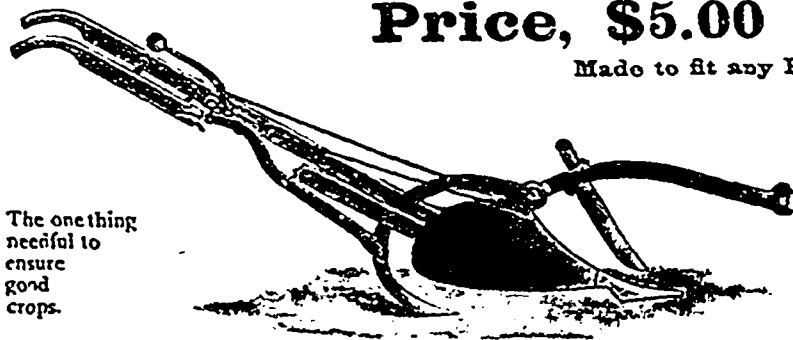
LONDON, CANADA,

Build Engines for every purpose, from 3 h.-p. and upwards, with either stationary or portable Boilers to suit.

If you require power for Dairy, Cheese Factory Grist or Saw Mill, etc.,

write us, stating what power is required, and for what purpose, and ask us for Catalogue 35 B.

The Vessot Sub-Soiler Price, \$5.00



Made to fit any Plough

NOW IS THE TIME TO BUY

The one thing needful to ensure good crops.

Read in another column what one man has to say about it without being asked

Circulars on application

S. Vessot & Co.,
Joliette, Que.

The company always extends a cordial invitation to visiting paint dealers who desire to inspect their factories.

Stock Notes

ATTENTION is called to the advertisement of Hackney horses for sale on page 550. Any one desirous of obtaining a good animal of this class will do well to write to Box 502, Woodstock, Ont.

MR. JOHN BELL, of Amber, Ont., writes, "I am pretty well sold out of Tamworths, having sold Mr. G. B. McGill, of Middleton, N.S., a car load for the purpose of breeding a suitable supply for a large packing concern just started in Annapolis County, Nova Scotia." This is the stock referred to in Mr. J. J. Ferguson's report of the Nova Scotia farmers and dairymen's convention in last week's FARMING. The car load of Tamworths purchased from Mr. Bell will be distributed among the farmers of the Annapolis valley. This sale furnishes another evidence of the value of advertising.

MR. L. ROGERS, of Cooksville, Ont., is rapidly gaining a reputation as a breeder of purebred Yorkshires. During the past few weeks he has made a number of sales and his stock has been inspected by some of the leading breeders in the province. One of the best known breeders of purebred Yorkshires, who has recently visited all the principal herds, says Mr. Rogers' is equal to any of them. At present he has a number of very choice young boars, ranging from six to eight months old, from pedigreed stock, which he would like to dispose of to make room for spring litters. They are from the best prize-winning stock on both sides, the sire being a prize winner at Toronto and the dam having won first for best sow of any breed against strong competition at one of the last fall fairs. They are a good lot all through, weighing from 200 lbs. to 225 lbs. each. He also has a number of young pigs which will be ready to ship about the end of April. They come from noted prize-winning stock, and should make a good showing for the fall fairs.

MR. J. C. LYONS, of Lucknow, Ont., whose advertisement appears in this issue, is particularly well equipped for business this season. Mr. Lyons is one of the most successful breeders of purebred poultry in Western Ontario, and we shall not be surprised to see him topping the list at no distant date. His pens for the coming egg season are the best he has ever mated up. He writes: "Every pen is headed by a noted prize-winner, and every female is either a prize-winner or bred from prize-winners. My show record for the season of 1898-9 comprises a list of 300 prizes—195 of them being firsts. I won 1st and 2nd in some classes wherever I showed; hence so many 2nds. I have purchased a number of winners since the shows to infuse new blood into my stock. I have not spared either money or time to bring my stock up to such high quality, and I honestly believe that my pens

USE

**Ulrich's
Ensilage
Corn**

MAMMOTH WHITE
GIANT PROLIFIC
YELLOW DENT
IMPROVED LEAMING

E. R. Ulrich & Sons
SPRINGFIELD, ILL.

Ask your dealer for samples and testimonials.

J. E. Richardson's Selected Seeds

Special Choice List of Vegetable, Field and Flower Seeds
These are not cheap seeds, but the best that money can buy

CATALOGUE FREE

WRITE FOR IT

VEGETABLE SEEDS

Tomato—Richardson's Cre k ide Glory, 15c. pkt.
Sweet Corn—Vendal's Bar v Giant, 5c. pkt.
Potatoes—Carman, N. 3, \$1.25 per bus.
" Great Divide, \$1.25 per bus.

FIELD SEEDS

Sugar Beet—Danish Improved, 50c. lb., 5 lbs. \$2.25
Corn (Field)—Mammoth eight-rowed yellow, \$1.25 per bus.
Barley—Success Beardless, \$1.00 per bus., 5 bus. and over, 90c. per bus.
Oats—The New Black Meslay (all-old).
Clover and Timothy. Write for prices.

FLOWER SEEDS

Pansies—Richardson's Giant Mixture, 10c. pkt.
Sweet Peas—Richardson's Princeton Mixture, 5c.
Verbena—Mammoth Strain, 10c. pkt.
Morning Glory—Japanese Imperial, 10c. pkt.
Carnation—Extra Choice Double, 25c. pkt.
Phlox Drummondii—Mixed large flowering, 5c.
" Splenden's Crimson, pure white eye, 10c. pkt.

LAWN GRASS SEED

Richardson's Special Mixture, 18c. per lb.

Address all communications to

J. E. RICHARDSON Seed Merchant and Grower **PRINCETON, ONT.**

Ewing's Selected Seeds

Are thoroughly reliable, and better cannot be found. We MAIL FREE our ILLUSTRATED SEED CATALOGUE FOR 1899 TO ALL WHO WILL SEND US THEIR ADDRESS

PLEASE SEND FOR ONE

Our Assortment comprises all the best varieties of Garden, Field and Flower Seeds, a well as Clovers, Timothy and other Grasses, Corn and Seed Grain. Spray Pumps, etc. Thomas-Phosphate Powder and other artificial manures. Flowering Plants and Bulbs.

WILLIAM EWING & CO.,

142 McGill Street, MONTREAL:

FREEMAN'S

Double Strength

FERTILIZERS

GREAT REDUCTION

IN PRICE



Catalogue Free

The W. A. FREEMAN CO., Limited
Hamilton, Ont.

DEAL DIRECT

IF YOU CAN USE ANY:

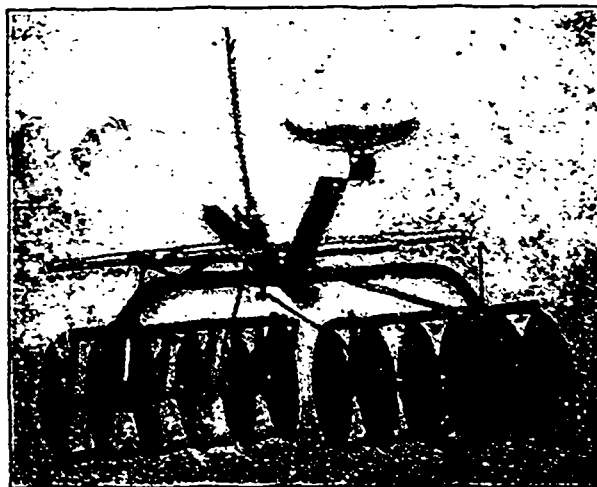
Grape Vines, Currant Bushes, Ornamental Shrubs, Shade Trees, Norway Spruces or other Evergreens, or any Fruit Trees or Plants, write to

E. MORDEN, NIAGARA FALLS, SOUTH,

for his Price List. Stock reliable and cheap and can be shipped to any point in Ontario in good order and season if order arrives early enough.

The Cossitt Bros. Co., LIMITED

A Record of Over 50 Years as
Manufacturers of Farm Implements.



To see means to buy

COSSITT'S

All-Steel
Ball-Bearing
Disc Harrow

with Patent Lock
Scraper and Clod
Cleaner.

Without a doubt the best
Harrow in the market.

Send for catalogue describing our Ball-Bearing Mowers; Tiger and Ithaca Horse Rakes; Reapers; Harrows; Scufflers; Corn Shellers; Root Pulpers, Etc.

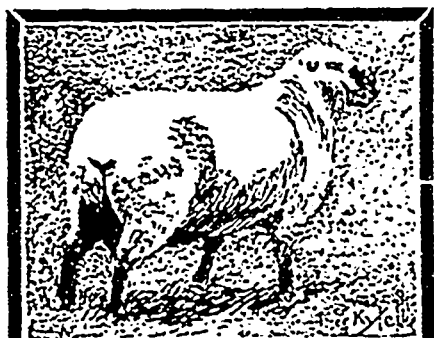
Our Machines will speak for themselves when put in operation.

Head Office and Works:

BROCKVILLE, ONT.

will produce a large percentage of high class birds this year of the utility breeds as well as those for show purposes."

MR. A. C. HALLMAN, of New Dundee, Ont., writes: "My herd of Holsteins and Tazeworths were never so complete as now. My Holsteins were never better. They are a rich-bred lot and in fine shape. Sales have been good. I sold that grand cow, Lady Alma, to Mr. Kettie, of Norwich. She is a true model of a dairy cow and will do well in his hands. I sold three rich-bred cows to Mr. H. Park, Norwich. They are Princess Medina 2nd, a very rich cow; Belldena 2nd and Lady Griffin, the two latter are very fine individuals and will do well for Mr. Park. Another valuable cow went to Mr. De Montmorency, of the same place. This is Grace P., a beautiful cow, Pieterje blood and a grand producer. A fine yearling bull went to Mr. Anson Grot, Preston. Another yearling bull, a Toronto prize-winner, went to Sebringville. My bull calves are a fine lot. In quality and style I never had anything better. They will make grand animals. My Tamworths are now nearly reaching the hundred, and I believe I am safe in saying that, in point of breeding and individual excellence, have no equal in America. I am using five very choice imported English prize-winners at the head of my herd. These boars bred to such choice prize-winning sows as I have cannot fail to produce the very best of young stock, and any one who sees the boars and dams will be convinced that their product cannot fail to be of the right sort. I have several litters from my young boar, Whilasic Crystal, an English Royal prize-winner. They are very choice, good quality and grand bone. My champion imported sow, Lady Whilasic 2nd, is doing immense. She is a wonderfully smooth sow. For a fine top and depth of side I never saw her equal. She was bred to my choice young imported boar, British King, a boar of great length and depth of side and very smooth. She is due to farrow in the middle of March. I have some orders booked for her coming litter. Such is the demand for her pigs by those who have seen her. My Barred Rocks are also a fine lot of birds. Have just added a very fine first prize cockerel, which will put me in shape to send out settings of eggs second to none in this country."



Persian Sheep and Animal Wash

A powerful non-irritant and healing preparation that is proving a boon to farmers all over Canada for sheep and cattle ailments, such as:

- TICKS
- MAGGOTS
- GANGRENE
- SHEAR CUTS
- RED LICE ON SHEEP
- WOUNDS
- RINGWORM
- BRUISES, ETC., ETC.
- AND SCAB.

Full directions on every can. Cures the worst cases. The most effective and economical dip on the market. If your dealer can't supply you, write us direct for it, and if there's anything out of the ordinary in the ailments of your stocks and herds we'll be pleased to give free any additional advice in the matter.

The Pickhardt Renfrew Co.

(LIMITED)

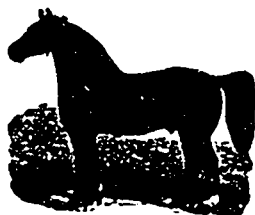
STOUFFVILLE, ONT.



Trade Mark

**Griffiths' Veterinary
...Menthol Liniment**

A Veterinary Medicine Chest in Itself and the most Useful Home Remedy for Horses and Cattle.



IT CURES

Strains, Curb, Chapped Hocks, Wind Galls, Splints, Strained Tendons, Rheumatism, Over Reaches, Coughs, Colds, Sore Throat, Founder, Lameness, or any Soreness, Swelling, or Inflammation.

Griffiths' Menthol Liniment is endorsed by the highest live-stock authorities as the greatest of external applications.

It never blisters or removes the hair, should be in every home.

Sold by Druggists everywhere—
25 and 75 Cents

The GRIFFITHS and MACPHERSON CO.
SOLE PROPRIETORS
TORONTO and VANCOUVER, B.C.

**NURSERY STOCK
IN VERITY!**



Our new catalogue is our agent, giving descriptions, PRICES, and how to plant fruit, ornamentals, shrubs, ROSES, Clematis, evergreens and small fruits. All well assorted, clean and handsome at the Central Nursery. Shall we send you one—ninetenth year. Also choice Seed Potatoes.

One Campbell's Early Grape Vine, two years, by mail, 75c.

A. G. HULL & SON,

(Mention this paper.) St. Catharines, Ont.

**Winona
Nursery Co.**

OFFERS FOR
SPRING of 1899

A full line of stock, both fruit and ornamental, at very moderate prices. No agent's commission to pay.

Send for price list and catalogue. Dealers will find it to their interest to correspond at once with

J. W. SMITH, Manager,
Winona Ont

**HELDERLEIGH
FRUIT FARMS and NURSERIES**

—400 ACRES—



Sixteen years' experience. Everything wanted that is useful and valuable in the Nursery Stock line—either FRUIT or ORNAMENTALS.

SEND FOR CATALOGUE, which is furnished FREE to applicants.

Do not make the mistake of buying cheap stock—it is dear as a gift.

GOOD RELIABLE SALESMEN WANTED in a number of fine townships, to start work at once. Complete Outfit FREE.

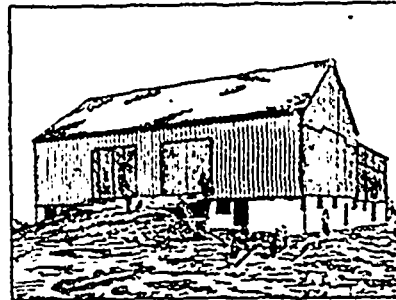
Address, **H. D. SMITH**
WINONA, ONT.

Established 1841. 63 Years in Use.

WORK DONE WITH

Thorold Cement

SPEAKS FOR ITSELF



Barn of ALLAN McMANE, Elma Township. Basement Walls, Sixty-nine feet high. Built with Thorold Hydraulic Cement.

ELMA TOWNSHIP, Nov. 15th, 1898. It gives me much pleasure to testify to the excellence of your Thorold Hydraulic Cement for building purposes.

If I had stone on the ground I would not use it, as I much prefer a concrete wall built of your Thorold Cement and gravel.

During the past summer I erected a barn 84 feet by 100 feet, with basement walls 9 feet high. Your Thorold Hydraulic Cement was used in the erection of the said walls. I also put in floors with it for my horses and cattle. It has given splendid satisfaction, and I have no hesitation in recommending it to those who require to use Cement.

My walls and floors are here for inspection, lots 21 and 25, Elma Township. I strongly recommend your Thorold Cement to all farmers who intend building barn walls or putting in stable floors.

Yours respectfully,
ALLAN McMANE,
Atwood P.O., Perth Co., Ont.

Our Thorold Cement is the best and cheapest for Silos, Barn Walls, Floors for Horses and Cattle, Pig Pens, etc. Write us for free pamphlet and full particulars.

AGENTS WANTED in unrepresented districts

ESTATE OF JOHN BATTLE

Mention this paper. **THOROLD, ONT.**

Important Change in Nursery Firm

Owing to the increased demand for Nursery Stock the undersigned has decided to enlarge his business, and for this purpose has taken in an energetic partner, and the Dominion Nurseries will hereafter be run by Smith & Reed. We propose, as in the past, to offer trees direct to planters at reasonable rates, guaranteeing them to come in good condition and to be just what they are represented. Thanking the farmers for their past liberal patronage we respectfully solicit a continuance of the same. Send for Catalogue—Free.

SMITH & REED

(Successors to A. M. Smith)

Dominion Nurseries, - St. Catharines, Ont

When replying to advertisements please mention FARMING

PUREBRED POULTRY FREE.

Boys can make more money raising purebred poultry than in any other way. We are told that one young Canadian has been in receipt of an income of from \$300 to \$500 a year for the past three years from his poultry pens without any interference with his ordinary avocations or his attendance at school. He began at 13 years of age and has now an established business which will yield him a certain income independently of any other business he may take up.

We offer the boys who are willing to devote a few hours of their time each week to securing subscriptions for FARMING an opportunity to make a start in the poultry business. There should be no difficulty in securing the necessary subscriptions to obtain the prizes desired. Write at once and secure an outfit. Then when it is received select the varieties of poultry which take your fancy and go to work with a determination to get them. If you do this you cannot fail. Your friends and acquaintances will help you when they know of your determination.

These premiums are from the pens of Mr. T. A. Cox, of Brantford, Ont., who won 495 prizes last year at the leading Canadian poultry shows.

PAIRS FROM PRIZE-WINNING STRAINS.

For five new yearly subscriptions at \$1 each we will send, carriage paid to any railway station in Ontario, a choice of one pair from either of the following varieties:

- One Pair of Brown Leghorns—regular price... \$5 00
- One Pair of B. Langshans 5 00
- " Barred Plymouth Rocks..... 6 00
- One Pair of S. L. Wyandottes..... 5 00
- One Pair of Blk. Minorcas.. 5 00
- " S. G. Dorkings. 5 00

EGGS FOR HATCHING.

For two new yearly subscriptions at \$1 each we will send free, carriage or express paid, one setting of thirteen eggs from either of the following varieties of purebred prize-winning stock; regular price, \$2 per setting: S. G. Dorkings, B. Langshans, S. L. Wyandottes, or Black Minorcas.

To show the profits to be made under proper conditions from purebred poultry it is reported in the *Reliable Poultry Journal* for March, 1899, that Mr. J. W. Shaw, of Brockton, Mass., sold during the first week in February, in one shipment, nine birds—five males and four females—for \$400, and that Mr. A. C. Hawkins, of Lancaster, Mass., had reported the sale of eleven Wyandottes for \$400, five going to one man for \$200 and six to another for the same amount. The possibilities are great if you start with the right kind of stock.

A Watch Free.—To any boy who will send us three yearly subscriptions at \$1 each we will give one solid nickel, open face, stem wind, up-to-date watch. Carriage and all expenses paid.

Hohner's Up to date Cased Mouth Organ.—A fine organ for concerts, with nickel shaped covers, twenty holes, brass plates, twenty reeds. Each organ in a velvet satin lined case, with clasp. Price, 40c. Sent to any boy free for one new yearly subscription at \$1.

Sample copies and outfits free.

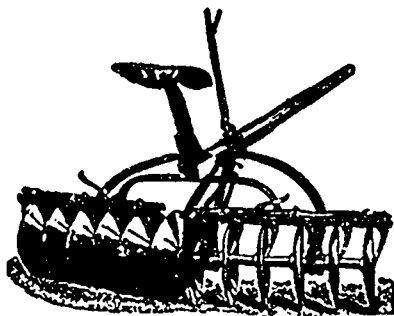
Address—
FARMING,
44-46 Richmond St. west,
Toronto, Ont.

BOWHILL STOCK FARM.
.... Teeswater, Ont.

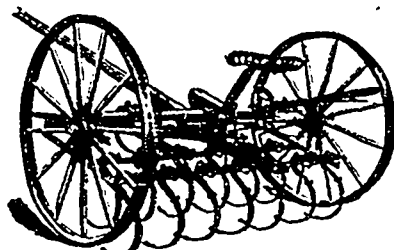
FOR SALE

1 SHORTHORN BULL, 14 months old, color red, in fine form and good quality. Dam English Lady Sib, by Victor G.; Sire Albert Victor (Imp.)

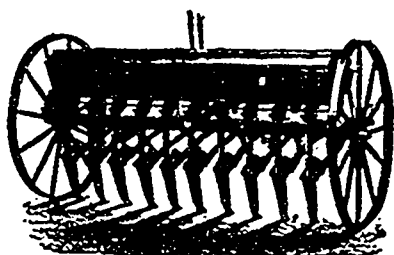
G. B. ARMSTRONG,
Box 3, TEESWATER, ONT.



NOXON NEW BUFFALO PATENT ALL-STEEL DISC HARROW.



NOXON NO. 12 SECTIONAL SPRING TOOTH CULTIVATOR.



NOXON STEEL PLOW.

The Buffalo All-Steel Disc Harrow.

This is the only Disc Harrow made or sold in Canada, having independent, adjustable spring pressure upon the inner ends of the gang disc, allowing any amount of pressure to be thrown upon the inner ends of the gangs, by the foot of the operator. By this means a perfectly flexible action is secured and the ground can be worked to a uniform depth. Examine this Machine carefully and compare with others.

The No. 12 Cultivator

IS A MARVEL OF SUCCESS. The only Cultivator made that both lines of teeth will cut an even depth in the ground. Examine it and you will see why. The only Cultivator with a movable tooth set so that the angle of the teeth can be regulated to suit any condition of soil. Pressure can be regulated to act differently on every section requiring it. The teeth are carried between the wheels instead of trailing behind, as in other machines, thus securing lighter draft. This machine is furnished with grain and grass seed box when required. It has reversible diamond steel points for the teeth, also extra wide this le-cutting points can be furnished. Examine it and you will buy no other.

THE BEST DRILL MADE.

The Hoosier Needs No Introduction.

Over 40,000 Drills and Seeders of our manufacture in use in Canada. The only Drill made with lever for instant and perfect regulation of depth of hoe in all kinds of soil, while team is in motion. Sows absolutely correct to scale; saves seed, as every kernel is deposited at a proper depth to grow. Purchase only the best and you will be satisfied.

We also manufacture Binders, Reapers, Mower Rakes, Cultivators and Pulpers, as good as the best. Send for illustrated catalogue.

NOXON BROS. MFG. CO., (Limited)

Ingersoll, Ont., Canada

“THE FAVORITE”



Patented, Roller Bearings, Steel Stand,
Combined Foot and Lever Drive,
The Easiest Driven, The Best Finished,
: : : The Most Durable.
BEFORE BUYING SEE IT.

DAVID MAXWELL & SONS
ST. MARYS, ONTARIO, CANADA.

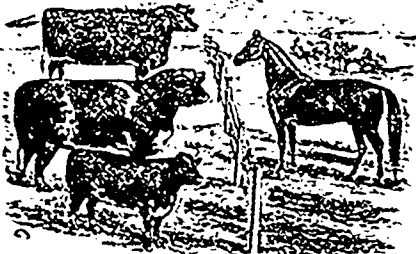
Alva Farm GUERNSEYS



Awarded first prize at Montreal for BREEDERS YOUNG HERD. Young animals of MERIT for sale Pedigrees and particulars to parties wishing to purchase. Address, SYDNEY FISHER, Knowlton, Que.

W. D. FLATT

HAMILTON P.O. and TELEGRAPH OFFICE



... OFFERS FOR SALE ...

TEN Choice Shorthorn Bulls, from six to twelve months; twenty five Cows and Heifers served by imported bull, Golden Fame =20036=; also Large Yorkshires of choicest breeding and quality from Imported and Canadian-bred stock of True Bacon Type. Catalogue sent on application. Visitors met at G.T.R. or C.P.R. if notified.

FIFTH ANNUAL

Canadian Horse Show,

Under the joint auspices of the Country and Hunt Club of Toronto and the Canadian Horse Breeder Association, to be held in

The Armouries, Toronto, Canada

On Thursday, Friday and Saturday,

April 13, 14 & 15

1899

ENTRIES CLOSE on Wednesday, March 29th, 1899, and should be, as well as applications for Prize Lists, addressed to H. WADE, Parliament Buildings, Toronto.

WANTED

Competent man to work among cattle and do general farm work. Apply to JAMES DOUGLAS, Caledonia, Ont.

Patchall

WILL REPAIR

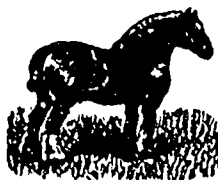
Rubber Goods Cloth Goods
Rubber Coats Binder Canvas
Rubber Boots Grain Bags
Rubber Overshoes Mail Bags
Half Sole Rubbers Your Pants

PATCHALL will not do impossible things. It will not make a worn out garment new, nor mend one run over by a railway train, but it will mend all as stated above, and nothing less. Eight patches, 2 inches square, for a cent. If you cannot obtain it from your hardware dealer, send 25 cents and we will mail a can to your address, prepaid. Manufactured by

DOMESTIC SPECIALTY CO.
Hamilton, Ont., Canada.

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, Carruchan Stamp, Knight Errant, and other celebrities.



SHROPSHIRE. Orders can now be booked for Shearling Rams, Ram Lambs and Ewes, sire 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.

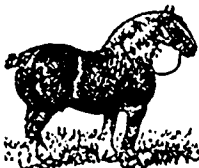


599

ROB. DAVIES, PROP. TORONTO, CANADA

A New Importation of
Clydesdale Stallions

Arrived Oct. 31, 1898



The largest importation of the breed made in five years, and 80 per cent. of them Scottish Prize-Winners. A few choice

HACKNEYS for sale. Address

ALEX. GALBRAITH

JANESVILLE, WISCONSIN

IMPORTED SHIRE STALLION
FOR SALE

Eight years old. About 17 hands; weight, about 2000 lbs. Good condition. Color, bay, with white stripe and two white hind feet. Sure stock-getter. Perfectly sound in every respect. Right in every way. For particulars address

JOHN SEMPLER
Box 73, Tottenham

FOR SALE

THREE HACKNEY STALLIONS (two imported)
ONE HACKNEY MARE (imported)

The above are offered to an IMMEDIATE purchaser at exceedingly low prices.

000

Address— d4-11
BOX 502, WOODSTOCK, ONT.

W.M. SMITH, Columbus, Ont., Breeder of Clydesdale Horses, Shorthorn Cattle, and Cotswold Sheep. Stock always for sale.

CHEAP CATTLE FEED

OAT DUST on hand, a good substitute for Bran or Shorts. Delivered at any station of the Grand Trunk or Canadian Pacific Railways. For Prices write to

JAMES WILSON

Monkland Mills, Fergus, Ont.

Hermanville Tamworths

PIGS

Ready to wean.

1 Pig, \$10.00
2 Pigs, \$18.00
3 Pigs, \$25.00

Cross-breds
Half-price

Orders booked and filled as received.

Yorkshires
Duroc-Jerseys
Cross-breds

Every sow in the herd has either been a winner, produced a winner by a winner, or out of a winner. No other herd with such a record. Litters come in April, May and June. Orders now received. Address (P.O. on Farm), HERMANVILLE FARM, P.E.I., Can.

Wm. Butler & Son

Dereham Centre, Ont.

Importers and exporters of Pure-bred Live Stock. Breeders of Guernsey cattle, Chester White and Duroc Jersey Swine. Stock delivered free in carload lots to any part of Canada. Write for circulars, calendars, etc. if



Summer Hill Herd of Yorkshire Hogs—Large Lengthy English Type—Among them being the undefeated prize-winning boar "LOOK ME OVER"—2602—acknowledged to be as good as any it not the best of his kind on the continent of America to-day. Also "ROYAL DUCHESS," a first-prize sow at the Royal Show, Birmingham, England, in 1893, together with a choice lot of other sows, young boars fit for service, and pigs eight weeks old, single or in pairs not skin. Also choice young sows bred to "Look Me Over." We ship to order, prepay express charges, guarantee stock as described.

D. C. FLATT, Millgrove, Ont.

Telephone and Post Office

.. HIGHEST TYPE OF BACON HOGS. .

Oak Lodge Herd of Large Yorkshires

The Largest Herd of Pure-Bred Yorkshires in America.

This herd has won the best prizes offered for the breed during the last ten years. Only one breed kept, but the choicest of its kind. Three imported stock boars and several sows that have all been winners at the largest shows in England, also winners at prominent Canadian and United States shows. Pigs of all ages for sale. if

J. E. BRETHOUR, Burford, Ont.



The Ontario Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep, and Swine Breeders' Associations, and of the Farmers' Institute System of the Province of Ontario.

THE DOMINION SWINE BREEDERS' ASSOCIATION.

Berkshires.	
Bonnycastle, F. & Sons.....Campbellford	20 head, 4 weeks to 8 months.
Cole, T. J.....Howmanville.....	Boar, 2 years.
Colwill Bros.....Newcastle.....	2 boars and 5 sows, 6 months; 2 boars, 4 sows, 2 months.
Decker, C. R.....Ch-sterfield.....	25 head, all ages; young sows.
Ewing, J. B.....Dartford.....	50 head, all ages.
Green, G.....Fairview.....	Stock for sale.
Evans, J. C.....Grimsthorpe.....	6 boars and 14 sows, 3 weeks to 6 months.
Smith, H. D.....Compton, Que.....	Spring pigs.
Vance, R.....Ida.....	Stock, all ages.
Vuill, J. & Son.....Carleton Place.....	Sows, all ages.
Poland Chins.	
Jones, W. & H.....Mt. Elgin.....	Stock for sale.
Yorkshires.	
Brethour, J. E.....Burford.....	35 boars, 6 months; 100 pigs, 2 months.
Cole, T. J.....Howmanville.....	Stock, both sexes.
Colwill Bros.....Newcastle.....	3 sows; boar, 4 months.
Godard, C. E.....Cobourg.....	Boar.
Hurley, J. & Son.....Belleville.....	Young stock.
Robertson, H. P.....Beachburg.....	Pigs, both sexes, 8 weeks; 5 sows, months aged sow; boar, 11 month.
Ross, A. W.....Douglas.....	13 sows, 6 and 7 months; pigs, both sexes, 7 weeks.
Spicer, J.....Yeovil.....	20 boars and sows, 1 to 3 months.
Tamworths.	
Brethour, J. E.....Burford.....	Imp. boar, 12 months; 3 imp. boars, 6 months.
Colwill Bros.....Newcastle.....	4 boars, 1 sow, 3 weeks; boar, 6 montas.
Nichol, J. C.....Hubrey.....	4 boars and 3 sows, 6 months; 20 young pigs.
Simonton, J. H.....Chatham.....	21 boars, 6 weeks to 11 months, 30 sows, 6 weeks to 6 months.
Smith, H. D.....Compton, Que.....	Spring pigs.
Duroc-Jerseys.	
Fraser, I. O. & Son.....Fellows.....	Stock, both sexes, all ages.
Chester Whites	
Bird-all, F. & Son.....Birdsall.....	Pigs, 8 weeks.
Godard, C. E.....Cobourg.....	3 boars; 2 sows; young pigs, both sexes.
Gummer, G. A.....Colborne.....	Young pigs, both sexes; sow; boar.

THE DOMINION SHEEP BREEDERS' ASSOCIATION.

Shropshires.	
Miller, R.....Stouffville.....	100 ewes and rams.
Vuill, J. & Sons.....Carleton Place.....	Ewes and ewe lambs, all ages.
Southdowns.	
Jeffs, E. & Son.....Bond Head.....	1 two-shear rams, 3 shearling rams, shearling ewes.
Leicesters.	
Jeffs, E. & Sons.....Bond Head.....	Stock, all ages.
Cotswolds.	
Bonnycastle, F. & Son.....Campbellford.....	yearling rams.

THE DOMINION CATTLE BREEDERS' ASSOCIATION.

Shorthorns.	
Barclay, L.....Port Hope.....	Cow; bull, 3 years; 2 bulls, 13 months.
Bonnycastle, F. & Son.....Campbellford.....	6 bull calves, 2 to 4 months; heifers and heifer calves.
Bright, J.....Myrtle.....	3 young bulls.
Douglas, J.....Caledonia.....	4 bulls, 10 to 16 months; young cows and heifers.
Jeffs, E. & Son.....Bond Head.....	2 young bulls; heifers and young cows.
Miller, R.....Stouffville.....	Cow, 4 years; bull calf, 4 months; bull, 10 months; bull, 8 months; heifer, 1 year.
Milne, D.....Ethel.....	bulls, 10 to 18 months; cows and heifers.
Skilletter, T. A.....Grenfell, Assa.....	Bull, 19 months; 7 bulls, 7 to 10 months.
Sibbald, F. C.....Sutton West.....	40 cows; 15 heifers; 20 calves; 10 young bulls.
Smith, H.....Hay.....	6 young bulls; 12 cows and heifers.
Herefords.	
Smith, H. D.....Compton, Que.....	Bull 6' ves.
Ayrshires	
Guy, F. T.....Howmanville.....	2 bulls, 9 months; heifers, all ages; young calves, both sexes.
Vuill, J. & Sons.....Carleton Place.....	8 bull calves, under 6 months; 20 heifer calves, under months; cows and heifers, all ages.
Polled Angus.	
Varcoe, J.....Carlow.....	Bull, 10 months; females, all ages.

NOTICE TO SECRETARIES.

Clause 57, page 15 of the pamphlet known as Rules and Regulations Governing Farmers' Institutes reads as follows:

"On or before the 10th day of January of each year the secretary shall send a revised list of members for the current membership year to the Superintendent, and on or before the 10th day of each succeeding month he shall forward the name and address of each additional person who has

since the previous return become a member of the Institute."

Some of the secretaries have not strictly complied with this clause, allowing a long period to elapse between sending in the lists. Names which are received earliest get the reports; names that are received late may perhaps miss getting some of them as an edition is liable to run out.

The following is the average attendance at meetings, reports of which

have been received since the last list published:

Norfolk, North	75
Simcoe, W. st.....	110
Victoria, East.....	92

The following is a list of members received since the last list published:

Addington	1
Grey, Centre	1
Grey, North	20
Dufferin	28
Durham, West.....	1
Halton.....	19
Haldimand.....	12
Kent, West.....	9
Lambton, East.....	172
Lambton, West.....	17
Lincoln.....	10
Parry Sound, East....	7
Peel.....	15
Perth, South.....	61
Peterboro', West	8
Norfolk, North	123
Northumberland, East.....	129
Manitoulin, East.....	6
Muskoka, Centre	10
Muskoka, South.....	10
Simcoe, West.....	32
Victoria, East.....	3
Wellington, West	106

PLAN TO RAISE THE STANDARD OF CANADIAN-BRED STOCK.

The committee appointed to wait on the Ontario Government and ask for a grant of \$1,000, to be used for the purpose of extending interprovincial trade, met in the Palmer House, Toronto, on Wednesday, March 15th, 1899. The committee was composed of the following gentlemen:

D. G. Hanmer, Burford, President Dominion Sheep Breeders' Association.

A. W. Smith, Maple Lodge, Vice-President Dominion Sheep Breeders' Association.

Geo. Green, Fairview, President Dominion Swine Breeders' Association.

Wm. Jones, Mt. Elgin, Vice-President Dominion Swine Breeders' Association.

Arthur Johnston, Greenwood, late President Dominion Shorthorn Breeders' Association; Director Dominion Cattle Breeders' Association.

Richard Gibson, Delaware, Director Dominion Cattle and Sheep Breeders' Associations; late President Dominion Shorthorn Breeders' Association.

Dr. James Mills, Guelph, President Ontario Agricultural College.

John I. Hobson, Guelph, President Dominion Cattle Breeders' Association; President Provincial Winter Fair Association; Vice-President Dominion Shorthorn Breeders' Association.

Peter Christie, Manchester, President Canadian Association.

J. D. Howden, Whitby, President South Ontario Agricultural Association.

Wm. Smith, Columbus, ex-President Canadian Clydesdale Association.

R. Miller, Stouffville, Vice-President Dominion Shorthorn Breeders' Association; late President Dominion Sheep Breeders' Association; Director American Shorthorn Breeders' Association.

W. E. Butler, Detchem Centre, Director Dominion Swine Breeders' Association.

Jos. E. Brethour, Burford, late President Dominion Swine Breeders' Association; Di-

rector Dominion Swine Breeders' Association; Director Provincial Winter Fair.

Major John A. McGillivray, Toronto, Director Dominion Sheep Breeders' Association; Director American Sheep Breeders' Association.

J. W. Wheaton, Toronto, editor "FARMING."

The following resolution was moved by D. G. Hanmer, seconded by Peter Christie, and carried: That this committee, composed of representative stockmen, are unanimously in favor of the plan outlined at the directors' meetings of the Live Stock Associations to extend interprovincial trade in purebred stock, and consider it most important that, in the interests of the country generally, Government assistance should be given in order to energetically pursue the policy laid down.

The committee waited on the cabinet at 2.15 p.m., Thursday, March 15th, 1899.

The points brought to the notice of the Government were: The general plan as outlined; the growth and present work of the associations; history of the lists of stock for sale and how published; that breeders and importers of purebred live stock have not made money out of their business in proportion to the benefit the country at large has received from their work; the desirability of extending the lists of stock for sale.

GENERAL OUTLINE.

It is proposed that the Government set aside \$1,000 to be used by the Live Stock Associations in extending interprovincial trade in purebred live stock. This will be done by publishing monthly a list of stock each member of the Live Stock Associations has for sale, and placing the list in the hands of all farmers and breeders throughout Canada. During the past year considerable work has been done in this direction by the associations with the funds now at their disposal, but with an additional sum much more work can be done which will be of great value to this province.

One of the great detriments to the rank and file of the farmers going into the business of raising purebred stock is that they cannot procure purchasers for their stock at remunerative prices—they cannot get more for them than they can for grades. The reason for this is the smaller breeder has not enough stock to advertise extensively, and, therefore, it is not known that he has thoroughbred stock for sale. The scheme proposed will provide the means by which the smaller breeder can get rid of his stock, neighboring farmers will see that the purebred stock is sold, and will be willing to raise more themselves. This will eventually raise the standard of all stock raised in the country.

It is a fact at the present time in the Montreal market American cattle are worth from one cent to one and a half cents more than Canadian cattle. The associations propose to publish the Breeders' Directory, one in the east and one in the west, also to continue the one already published in Ontario. The directory will be published in papers having the largest circulation in the district in which they are published. Any member of an association will have the privilege of advertising monthly all over Canada the stock he has for sale.

GROWTH AND PRESENT WORK OF THE ASSOCIATIONS.

In 1894 the Cattle Breeders' Association was organized. There was, however, practically no membership. During the year 1895 the association was re-organized, and during the remainder of that year and in 1896 a membership of 84 was obtained. In 1898 the membership had increased to 99.

The Sheep Breeders' Association was organized in 1890. The membership at that time was 53 and the receipts \$303. In 1896 the membership was 61 and the receipts \$1,619.13. In 1898 the membership had increased to 94.

The Swine Breeders' Association was organized in 1891. The membership at that time was 40. In 1896 the membership was 240, and in 1898 369. During the year 1898 the lists of stock for sale were published in Ontario. During the years from 1890 to 1896 special efforts were each year made t

ROOFS FOR THE HOUSES



32 Years Ago

We started the manufacture of sheet metal building materials, and this long experience enables us to offer intending builders all that is desirable in Steel Roofing, Steel Siding, Steel Ceilings, etc.

We Prefer

That you purchase through the trade, still if your dealer cannot give the information you desire, or offers a substitute "just as good," write us.

"The Pedlar Patent Shingles" are the best, and the best cost no more than the poorest.

Pedlar Metal Roofing Co.
OSHAWA, CANADA.

PLANT LIFE, to be vigorous and healthy, must have

Potash

Phosphoric Acid and Nitrogen. These essential elements are to plants, what bread, meat and water are to man.

Crops flourish on soils well supplied with **Potash**.

Our pamphlets tell how to buy and apply fertilizers, and are free to all.

GERMAN KALI WORKS,
93 Nassau St., New York.

BIG MONEY FOR AGENTS



THE STAR RIVETER

For MENDING HARNESS, BELTING, etc. Indispensable to Farmers, Livemen and Threshermen. **STAR RIVETER** complete, with 50 tubular rivets \$1.00. Best selling article ever introduced. Agents write for special prices and territory.

ENTERPRISE MAN'G CO., - TORONTO, ONT.

Auction Sale OF THE VALLEY HOME FARM OF Shorthorn Cattle

On Wednesday, March 22nd, 1899, at our Farm one mile from Meadowvale Station, C. P. R.

Our entire herd of Shorthorns, consisting of 30 head, comprising such well-known Scotch families as Nonpareils, Minns, Jilts, Cecillias, Bossles, and Duchesses of Gloster. Sired by the best imported Cruickshank and Campbell bulls. Among the lot are some very fine show animals, bred from imported stock, as well as cows that are very heavy milkers. The young things are a choice lot, sired by such imported bulls as British Statesman, Comet, Golden Crown and Grand Sweep. In all ten bulls will be offered, also the imported bull, British Statesman, a first class show bull, bred from one of the best milking strains in Scotland. See Catalogue, which will be sent on application. All will be sold without reserve, as Mr. Pearson is giving up farming.

JOHN SMITH, M.P.P.,
Auctioneer, Brampton.

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

BINDER TWINE

FARMERS'

PURE MANILA, 650 FT. TO LB.
SPECIAL MANILLA,
TIGER, STANDARD.

Farmers! Don't be taken in. There is none "just as good." These twines will not bunch at the knotter, and a Binder will run all day without stoppage, thus saving time, annoyance and a "lot o' cussin'."

We pack our twine in bags of the size of ordinary grain bags, and we are not ashamed to put our name upon it. Don't take any other.

CONSUMERS' CORDAGE CO.,
LIMITED,
MONTREAL.

induce breeders to join the association. During 1898 absolutely nothing was done to increase the membership, and members took advantage of advertising their stock in the lists published by the associations.

HISTORY OF THE LISTS OF STOCK FOR SALE.

In the secretary's annual report of March, 1897, the following was a clause: "It has been the practice of each association to publish in the annual report each year the name and address of each member, and specify the breed he reared. This has grown to be the largest Breeders' Directory in Canada. During the last three years I have been very frequently asked for these lists by parties desiring to buy purebred stock, and have mailed hundreds of copies, sending them to various parts of Canada and the United States. I believe that if these lists of breeders could be revised and distributed monthly, it would be of great value." It was decided at the annual meeting to place the matter in the hands of the Executive. At a meeting of the Executive in June of the same year the matter was brought up, and was strongly opposed by some on the grounds that the funds belonging to the associations should not be used for this purpose. It was decided after a fair discussion that the associations were organized for the benefit of the live stock trade, and that the officers were fully entitled to formulate and carry into effect any plan considered by the association to be for the benefit of the country at large, but in order that there would be no ground whatever for taking objection, it was decided that the amount spent should not exceed the membership fees of the various associations. As there was still considerable opposition it was decided to again place the matter before the Executive Committee of the Live Stock Associations. This was done in the association tent at Toronto Industrial Exhibition in the fall of 1897, when the decision of the former meeting was sustained, and the secretary was instructed to make the best terms possible regarding the publication. This was done, and the first list of stock for sale was published in FARMING on October 12th, 1897. Since that time the list has appeared monthly.

In addition, notices of meetings, notices regarding the Fat Stock Show, and reports of meetings were published, and it was chiefly through the notices regarding the association cars of stock for the West that the cars were made possible. It is by means of this list of stock that the secretary is able to locate stock when requested to do so by intending purchasers, and it is the persons who are there advertised who have the first opportunity to sell, and who will sell if their stock is suited to the requirements of the purchaser. During the past year the secretary has received more enquiries than ever before as to where certain breeds of stock can be found, and his only guide is the list of stock for sale.

Towards the end of last year stock throughout the Province was very scarce, and the inter provincial trade was very large. Should not the Gazette, which is being received by breeders throughout Canada, be entitled to a fair share of the credit? It is impossible to make any accurate statement as to the work done by the Gazette in making sales, but the opinion of the large number of prominent live stockmen who have sent unsolicited testimonials is evidence as to the work being done through this medium. I will quote only one:

"Your advertisement of stock for sale in the Gazette is a very happy one, and must be useful to buyers.

(Signed) SYDNEY FISHER,
Minister of Agriculture."

THE WORK DONE BY BREEDERS AND IMPORTERS OF GREAT VALUE TO THE COUNTRY.

The importers and breeders of live stock in Canada have added millions of dollars to the revenue of this country, and the results of their labors will continue to bear fruit for years to come, while they themselves have failed to grow wealthy, and in some cases even to make a good living. That being the case, all parties interested in our progress

THE FEDERAL LIFE ASSURANCE COMPANY.

SEVENTEENTH ANNUAL STATEMENT.

DIRECTORS' REPORT.

The seventeenth annual meeting of the Shareholders of The Federal Life Assurance Company of Canada was held at the Head Office, in Hamilton, on Tuesday, the 7th inst. In the absence of the President, Mr. Beatty, Mr. William Kerns, First Vice-President, occupied the chair, and Mr. David Dexter acted as Secretary. The following report and financial statement was submitted by the Directors:

The Directors have pleasure in submitting for the information and approval of the Shareholders, the following report of the business of the Company, together with a statement of Receipts and Disbursements for the year which closed on 31st December, 1898, and of the Assets and Liabilities on that date.

New business consisted of fourteen hundred and fifty-nine applications for insurance, aggregating \$2,248,850, of which thirteen hundred and eighty-one applications for \$2,114,232 were accepted, applications for \$134,000 having been rejected or held for further information.

Annuity premiums to the amount of \$12,731.50 were also received.

In the past year, as in the preceding year, fully ninety per cent. of the new business written by this Company was on its investment plans. This, and the fact that the advent of three additional and well equipped competitors in the field within the past two years has not diminished the share of new business which this Company has been able to secure, indicates the continued growth of feeling in favour of investment insurance rather than towards other forms of investment on which interest earnings are depreciating steadily.

The income of the Company shows a gratifying increase over previous years, and the addition of \$143,835.14 to the assets is especially noticeable, the total assets having risen to \$866,283.41, exclusive of guarantee capital.

The security of the policy-holders, including guarantee capital, amounted to \$1,475,283.41, and the liabilities for reserves and all outstanding claims, \$757,399.20—showing a surplus of \$717,884.21. Exclusive of uncalled guarantee capital, the surplus to policy-holders was \$108,884.21.

Assurances for \$114,575 on fifty-seven lives became claims through death, of which amount the Company was re-insured for \$7,000. Including cash dividends and dividends applied to the reduction of premiums (\$30,878.32) with matured endowments for \$4,600, the total payments to policy-holders amounted to \$143,702.25.

In accordance with instructions received from the shareholders at the last annual meeting your Directors applied for and obtained from the Parliament of Canada a special act of incorporation changing the name of the Company to the Federal Life Assurance Company of Canada, and granting enlarged powers for business and investment in and out of Canada.

The investments of the Company have been carefully looked after and have yielded for years past the best results reported by any Company doing business in this country. Expenses have been kept within reasonable limits while due effort is being made for new business. The chief officers and agents of the Company are entitled to much credit for their able representation of the Company's interest. The office staff have also proved faithful in the Company's service.

The accompanying certificate from the Auditors vouches for the correctness of the statements submitted herewith. All accounts, securities and vouchers having been examined by them.

FINANCIAL STATEMENT.

INCOME.

Premiums, interest and rents.....\$ 410,831 73

DISBURSEMENTS.

Paid policy-holders for death claims, endowments, dividends, etc..... 143,702 25
General expenses, re-insurance & dividends on capital..... 127,648 09

ASSETS.

Debentures, mortgages, policy loans, real estate, cash and other securities..... \$'66,283 41
Guarantee capital..... 609,000 00
Total resources for security of policy-holders..... 1,475,283 41

LIABILITIES.

Reserve fund..... 757,399 20
Surplus to policy-holders..... 717,884 21
Insurance written and taken during the year..... 2,021,585 00
Amount insured..... 11,125,566 43

JAMES H. BEATTY, President, DAVID DEXTER, Managing Director.

AUDITORS' REPORT.

To the President and Directors of the Federal Life Assurance Company:

Gentlemen,—We have made a careful audit of the books of your Company for the year ending 31st December, 1898, and have certified their correctness.

The securities have been inspected and compared with the ledger accounts and found to agree therewith.

The financial position of your Company, as on 31st December, is indicated by the accompanying statement.

Respectfully submitted,

H. S. STEPHENS,
SHERMAN E. TOWNSEND,
Auditors.

Hamilton, March 1st, 1899.

In moving the adoption of the Directors' Report, Mr. Kerns referred to the steady and substantial growth of the Company's business; the large increase from year to year in its income, assets and surplus. He stated that while the expenditure had been decreased 6.56 per cent. in the last year, the assets of the Company had increased 19.90 per cent., the net surplus 37.92 per cent. and the reserve funds 21.41 per cent., the capital and assets having now reached \$1,475,283.41.

He quoted from the December number of the *Economist* to show that the Company had so carefully managed the investment of funds as to earn a better rate of interest in each of the past eight years than the average rate earned by all of the Canadian life insurance companies. The rate earned by the Federal in 1897—the last year in which the average can be obtained from the report of the Superintendent of Insurance—was 5.64 per cent., and the average rate earned by all the Canadian companies 4.48 per cent.

After the adoption of the Directors' report an interesting report of the mortality experience of the Company and of the history of medical examinations for life insurance was read by the Medical Director, Dr. Wolverton.

Congratulatory remarks regarding the substantial progress of the Company and regarding the management were made by several of the share-holders.

A vote of thanks to the officers, agents and office staff was responded to by Mr. David Dexter, the Managing Director.

The retiring Directors of the Company were re-elected, with the addition of T. H. Macpherson, Esq., M.P.

The Auditors were reappointed.

and national growth should do all in their power to assist the men who are doing so much for the country. It may be argued that breeders of purebred live stock are in the business for the money they make out of it. If we were to say this is not true the country would laugh at us, but we maintain it is not true. A successful breeder is born, not made. A man cannot buy a few head of purebred stock and produce good animals that will be a benefit to his country unless he has had a life-long training and an inborn love for the work. The great reason why the rank and file of our cattle have become worse during the last few years is because the great breeders of live stock have not found their calling remunerative. Some means should be adopted to overcome the difficulty. It is a most valuable industry to the country and should be made profitable to the men engaged in it, for among them are many of the brightest and best men in Canada.

The associations have done much in reducing the railroad rates, but a great deal can be done in extending the inter provincial trade by taking up the lists of stock for sale and publishing them broadcast throughout the land. By this means Canada will be more widely and better known as a producer of purebred live stock; breeders, by making extensive sales, will be encouraged to import from England and improve the stock here. Thus will not only the most extensive breeders profit by the scheme, but the man who owns one or two animals will be benefited in a marked degree. The help asked is certainly due and should be cheerfully given.

BOOKS AND BULLETINS RECEIVED.

Eleventh annual report of the State Board of Agriculture, Kansas, containing a full report of the work for 1867-98.

American Shorthorn Herdbook, Vol. XLII., containing pedigrees of animals calved before February 1st, 1898. J. H. Pickrell, secretary, Springfield, Ill.

Holstein-Friesian Herdbook, Vol. III., published by the Holstein-Friesian Association of Canada. G. W. Clemens, St. George, Ont., secretary and editor. It contains a record of all Holstein-Friesian cattle in Canada.

Report of the Secretary of Agriculture at Washington for 1898, including reports of the heads of the various departments of the service.

Annual report of the Pennsylvania Department of Agriculture for 1897, part I.

Annual report of the Agricultural Experiment Station, Wisconsin, for 1898.

The Journal of the Royal Agricultural Society of England, third series, volume the ninth, part IV., for the quarter ending December 31st, 1898.

Special Bulletin on Fruit Pulp, issued by the Ontario Department of Agriculture. It contains valuable information on this subject. Copies may be had on application to the Department of Agriculture, Toronto.

FOR SALE

A choice property in the Village of Lakefield, consisting of a brick house, lawn, gardens, orchard and fields. Suitable for a

Poultry Farm, Market Garden or Gentleman's Residence

Ten minutes' walk from Post Office and G. I. R. Station. Good boating and fishing. \$2,500.00. Apply to

E. ROLLESTON TATE
d3-21) Lakefield, Ont.

Binder Twine

Agents Wanted. Ontario Binder Twine Co., 124 Front St. West. Toronto, Ont.

BELLEVILLE POULTRY YARDS. Eggs, \$1 per setting of 13, from Barred or White Plymouth Rocks, Single or Rose Comb White Leghorns, Rose Comb Brown Leghorns, Black Minorcas. MALCOLM DULMAGH, Belleville, Ont. [1f

RED CAPS—Prize Winners at Toronto Industrial and Hamilton Poultry Shows. A few cockerels left yet. Eggs, \$1.25 for 15. ERLAND LEE, Stony Creek, Ont. [1f

BUFF LEGHORN—Buff Rocks. Winners Petrolia, Owen Sound, Galt, Brantford—hot competition. Eggs \$1.50 and \$2.00 per 15. Fine cockerel cheap. Write sure. THOMAS H. MILLS, Box 277, Sarnia, Ont. [1f

W. R. VANDERVOORT, Sidney Crossing, Ont. Eggs for hatching from pure-bred Barred Plymouth Rocks, Buff Cochins, Black Minorcas and S. W. White Leghorns, at \$1 per 13, also Pekin Duck eggs at \$1 per 11 [d1-25

JAS. McCORMACK & SONS, Rockton, Ont. A large number of Barred Rocks and Black Spanish Fowls, Fine Toulouse Geese and Cayuga Ducks for Sale. [d-3-21

WILLIAM STEWART, JR. & SON, Menie, Ont. Thirty varieties of Land and Water Fowl. Eggs for hatching and birds from prize-winning stock for Sale. [d-3-21

G. BENNETT & PARDO, Charing Cross, Ont. Eggs from the following: B. Langshans, P. Cochins, Barred and White P. Rocks, S. G. Dorkings, S. L. Wyandottes, Br. Leghorns, Cornish, Black, Red and Pit Games, \$1 per 13, Pekin, Rouen and Aylesbury Ducks \$1 per 9. [d-3-21

SUNNYSIDE POULTRY YARDS

I have for sale the following varieties of the richest strains of blood that can be produced, winning 495 Prizes at the following shows: Toronto Industrial, Provincial, Quebec, Galt, Drumbo, Paris, Brantford and Brantford. Winter Shows.—Ontario, Galt, Brantford and Hamilton.

Choice S. G. and W. Wyandottes, Light Brahmas, Black Langshans, Black Javas, Black Minorcas, Cornish Indian Games, B. B. R. Games, S. G. Dorkings, Brown S. C. Leghorns, Barred, W. and Buff Plymouth Rocks, W. C. Robbs, Andalusians, Houans, B. B. R. Game and Pyle Bantams, M. B. Turkeys.

T. A. COX, - Brantford, Ont.

LUCKNOW POULTRY YARDS

Our matings for '99 are the best we ever made in Buff and White Cochins, L. Brahmas, Buff Leghorns, Red Caps, S. L. Wyandottes, Black Minorcas, Langshans, Spanish and Javas. EGGS, \$1.50 per 13. Try our Barred Rock (imported strain), White and Brown Leghorns. Eggs, \$1 per 13. Pekin and Rouen Ducks. Eggs, \$1 per 11. We guarantee a good hatch and safe arrival of eggs. [d-1-25 Won 300 prizes the past season

J. C. LYONS, Lucknow, Ont.

SHOEMAKER'S POULTRY BOOK and Almanac for 1899. 100 pages, 100 illustrations of Poultry, Incubators, Brooders, Poultry Houses, etc. Tells how to raise chickens successfully, their care, diseases and remedies. Diagrams with full descriptions to build poultry houses. All about INCUBATORS, BROODERS and Fancy Poultry, with Lowest Prices. Price only 15c. C. C. Shoemaker, Freeport, Ill., U. S. A.



Incubators and Brooders. Self-regulating. Special low price for first in any locality. Agents wanted everywhere. Eggs for hatching, by the hundred cheap. B. P. Rocks a specialty. Catalogue free. Address Geo. S. Singer, Carlington, O.



HATCH CHICKENS BY STEAM—with the simple, perfect, self-regulating **EXCELSIOR INCUBATOR**. Thousands in successful operation. Lowest priced in-class hatchery made. GEO. H. STAHL, 114 to 120 S. 6th St., Quincy, Ill.

SOLD ON TRIAL!



Buy no incubator and pay for it before giving it a trial. Many people have lost faith in incubators because they bought one that was not intended to hatch chickens—made merely to sell.

The Von Cullin Incubators are sold on trial subject to your approval. A child can operate it. The biggest catalogue and "poultry pointers" book published, sent for 5c. Plans for Brooders, Poultry Houses, etc., sent on receipt of 25c. Von Cullin Incubator Co. 80 Adams St. Delaware City, Del.

EGGS FOR HATCHING FROM

Barred Plymouth Rocks, Silver Wyandottes and S. C. W. Leghorns at \$1.00 per 13. Also Pekin and Rouen duck eggs at \$1.10 per 11. Four settings of any one or all varieties for \$3.00. Orders booked now. Satisfaction guaranteed. All hens are selected with a view to large egg production as well as quality.

W. R. GRAHAM, Belleville, Ont.

THE IMPROVED

Safety Incubator

Is guaranteed to give satisfaction to all or money refunded. Absolutely self-regulating. Supplies its own moisture. Will out-hatch all others. No customs duty to pay on it.

Cheapest Because the BEST.

Write for free circular to

J. E. MEYER,

d-44 Box M., KOSSUTH, ONT

To the Farmers of this Canada of Ours....

WE heartily thank you for the liberal and increased patronage which has made the past year a record-breaker in our business. Remember, we do not class our

Queenston Cement

with the Water-Limes and Hydraulic Cements now on the market, but guarantee it equal to the Imported or Domestic Portlands for all farm structures, such as Basement Walls for Stables, House or Cellar Walls, Cisterns, Hog Pens, Poultry Houses, and for all kinds of Stabling.

Kindly investigate our System of Ventilation. This system is fully covered by letters patent, but to our patrons we make no charge.

Write for our New Pamphlet for 1899, containing valuable information, prices, etc.

Isaac Usher & Son, Queenston, Ont.

MARKET REVIEW AND FORECAST.

Office of FARMING,

44 and 46 Front Street West,
Toronto, Mar. 20th, 1899.

General trade continues active. The speculative element which since the beginning of the year has been operating pretty freely, especially in the stock market, has withdrawn somewhat, and business is being conducted on a more legitimate basis. One of the exciting features of the week in general trade is the excitement in the tea market. Cash paymen's show large increases over those of last year at this time.

Wheat.

Weaker and weaker seems to grow the wheat market, and if the declines of the past two weeks continue much longer at Chicago and elsewhere prices will soon be below the cost of production. The *Trade Bulletin's* special London cable of March 16 gives some idea of how European markets are at the present time. It reads thus:

'The market continues dull at all ports, and with liberal imports, especially from the United States, prices have an easier tendency, and still lower prices are expected. A small cargo of No. 1 Manitoba hard has just sold at 29½ c.i.f. April shipment.'

During the week Chicago market sunk to nearly the bottom price of the season. The coming crop situation continues favorable. Though in the more northern parts of this continent the danger is by no means over yet, and a great deal will depend upon the nature of the weather from this out. The U. S. Department of Agriculture's estimated report of wheat in farmers' hands in the United States on March 1st has weakened values some, though not as much as was to be expected under the circumstances. The estimated amount in farmers' hands in the United States on that date is given as 29.3 per cent. of last year's crop, or 198,000,000 bushels. There is probably a larger percentage of last year's crop in the hands of Canadian farmers than this. These facts, together with the fact that there is only about four months till the new harvest is on, are causing the present depression.

The prices in Canada have not dropped as low as one would expect from the conditions elsewhere. There is very little wheat offering on the market, and there appears to be very little demand for export. Red and white is quoted at 67c. north and west, with sales reported at 64c. for export. Goose is quoted at 67c. north and west; No. 1 Manitoba hard at 80c., Toronto, and No. 1 Northern at 76½c. On the local market red and white fetch from 70 to 70½c., spring sife 71c., and goose 66c. per bushel.

Oats and Barley

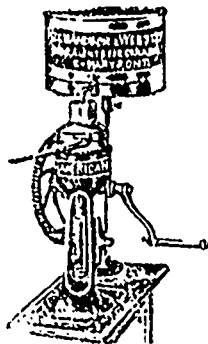
The English oat markets have ruled quiet, and stocks are liberal. In the United States there is estimated to be 38.7 per cent. of last season's crop in farmers' hands, as compared with 38.9 per cent. at this time last year. Though receipts have been large at Montreal, prices have not dropped any, and are quoted at 33 to 33½c. in store. Oats are quoted here at 30 to 30½c. for white east, and 29 to 30c. west. On the local market they bring from 35 to 36c. per bushel.

The Montreal barley market is quiet at 54 to 56c. for No. 1 malting. It is quoted here at 46 to 47c. west.

Peas and Corn.

The London, England, market for peas is reported firm with a good enquiry. The Montreal market is steady at 72 to 73c. The market here keeps firm at 65 to 66c. north and west. They are worth from 60 to 62c. on the local market here.

The estimated amount of corn in farmers' hands in the United States on March 1st was 41.6 per cent. of last season's crop as compared with 41.1 per cent. a year ago. No. 2 American is quoted at Montreal at 43 to 44c. in car lots. American is quoted here at 41 to 42c. on track.



To be Simple is to be Great—Emerson.

That is why the

American
Cream Separator

Is considered such a great machine.

No simpler machine can exist and the result of the work is wonderful. Gasoline Engines for all purposes. Write us for full particulars and Catalogues.

Richardson & Webster,

ST. MARYS, ONTARIO

Bran and Shorts

Bran continues scarce and high at Montreal, where it is worth \$15.50 in car lots. Shorts are quoted at \$16.50 to \$17, and are also scarce. City mills here sell bran at \$14.50 and shorts at \$16.50 f.o.b. Toronto in car lots.

Clover and Timothy Seeds.

The Montreal market is steady with more business doing. Ontario timothy is quoted there at \$1.60 to \$1.75, and American at \$1.25 to \$1.50; red clover at \$3.75 to \$4.50; Alsike, \$3.50 to \$4.50; mammoth clover, \$4.25 to \$4.75, and flax seed \$1.20 to \$1.25 per bushel. On the local market here red clover sells for \$3.30 to \$3.70; white, \$5 to \$8; Alsike, \$3 to \$4.20, and timothy, \$1.20 to \$1.35 per bushel.

Eggs and Poultry.

The English egg market is weak and lower with a good demand at the decline. On this side the egg market has taken a decided slump, and prices for new laid at Montreal in large lots are about 12c., while at Ontario points 10 and 11c. is the most that is being paid for shipment. The market here is about steady at from 12½ to 13c. for strictly new laid in large lots. On the local market new laid fetch from 13 to 14c. per dozen.

The demand for dressed poultry is falling off at Montreal, where it is difficult to get 10c. per lb. for turkeys, and other fowls in proportion. Prices here are about the same as last week.

Potatoes.

Considerable quantities are being shipped from Quebec and the East to Toronto and other points. This has caused a firmer tone at Montreal, where potatoes are quoted at 55 to 58c. per bag. The market here is firm at 68 to 70c. per bag for cars on track and 75 to 80c. out of store and on the local market.

Fruit.

Apples continue firm at Montreal, where they bring from \$3 to \$4.50 per barrel. There is reported to be a good market for Canadian dried apples in Germany. Apples bring from \$2.50 to \$3.55 per barrel on the local market here.

Hay and Straw.

Very little hay is going forward just now on export account, owing to the blockade at the seaboard. The Montreal market is quiet, where baled hay is quoted at \$5.50 to \$5.75 for choice No. 2, \$4.50 to \$4.75 for ordinary No. 2, and \$3.50 to \$4.25 for clover. Hay is selling at country points in Quebec at \$3.30 to \$4 per ton f.o.b. Prices here are \$7 to \$7.50 for cars on track, and \$4.50 to \$5 for baled straw. On the local market timothy brings \$8 to \$9.50; clover, \$6 to \$7; sheaf straw, \$6 to \$7; and loose straw, \$4 to \$5 per ton.

Cheese.

The cheese situation just now is a particularly strong one. There is a decidedly strong

market in England and prices seem to be steadily moving upward. Most of the low-priced goods have been cleared off, and the demand is now for the better quality of cheese. Both at London and Liverpool cheese was selling at 52s. to 53s. during the week, and in some cases 54s. was asked. The market on this side continues to gain strength, and ruling prices are now 10¼c. to 10½c., with finest Westerns worth 10¾c. The bulk of the holdings at Montreal are disposed of. It is reported that some fodder cheese is being made in the Ingersoll district. The present high prices and the likelihood of a good opening may induce many factories to make fodder cheese. It would be as well for the trade, however, if no foddery were made at all. The shipments from Montreal from May 1st, 1898, to date show a shortage of 255,250 boxes, as compared with the last export season, and the combined shortage of Canada and the United States amounts to 554,326 boxes, the largest deficit in the history of the trade.

Butter.

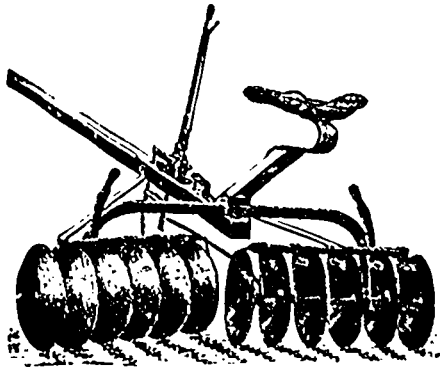
While the English cheese market is strong the butter market there has ruled dull. The *Trade Bulletin's* special London cable of March 16th reads thus: "The market has ruled dull all week but with comparatively light stocks, holders are not forcing things. Finest Canadian creamery 96 to 98s. with an occasional parcel bringing 100s." The Montreal market keeps firm for fresh made choice creamery at 20½ to 21c.; good to fine, 19½ to 20c. and fair 18½ to 19c. The bulk of it is being sold for local trade, though a few lots of creamery are going forward. Western dairy is quoted at from 13½ to 16c. and is in good demand. The total increase in shipments from Montreal and New York from May 1st, 1898, to date is 43,005 packages as compared with the same period a year ago.

The market here is steady with creamery bringing 20 to 22c. for prints and 19 to 20c. for tubs. There is a good demand for all choice offerings of dairy butter which brings 14 to 16c. for large rolls. On the local market pound rolls bring from 18 to 20c. and large rolls from 15 to 17c. per lb.

Cattle.

The British market for cattle has not been altogether satisfactory of late for shippers, many of them losing money. The butchers' boycott seems to have something to do with it. The American markets have been fairly steady, though large receipts have weakened prices in some places. Really prime cattle for export seem to be scarce all over this continent. There have been very large receipts on this market. On Friday we had the largest market for sometime past. The quality of the fat cattle offered was better than for several weeks back, but still it would pay farmers to keep them longer. On account of the heavy run prices, especially for exporters, took a drop of 10c. to 20c. per cwt. Generally speaking trade was fair.

Export Cattle.—Choice loads of heavy exporters sold for \$4.75 to \$4.90, and light exporters at \$4.60 to \$4.75 per cwt. A few choice lots brought \$5 per cwt., but these were few in number.



A Disk Harrow Given Free to any FARMER who intends buying this spring, if he will first, by actual field work, find any other Cultivator, Disk Harrow, or Pulverizer that will do AS MUCH WORK with AS LITTLE HORSE POWER as

THE "BISSELL" DISK HARROW

Address **T. E. BISSELL, Fergus, Ont.**

Butchers' Cattle.—Choice picked lots of butchers' cattle, equal in quality to the best exporters' but not so heavy, sold at \$4.35 to \$4.50 per cwt. Good butchers' cattle bring from \$4.20 to \$4.30, and medium from \$3.70 to \$3.95 per cwt.

Stockers and Feeders—Buffalo stockers were in good demand on Friday, selling all the way from \$3.40 to \$3.75, with choice picked lots at 10 to 15c. per cwt. Stock heifers weighing 600 lb., each bring from \$2.75 to \$3 per cwt. and light stock bulls from \$3 to \$3.25 per cwt. Heavy feeders are scarce and bring from \$4 to \$4.25 per cwt.

Calves.—These bring from \$2 to \$10 each for the bulk, while choice veals bring \$5 per cwt.

Milk Cows and Springers. The demand for these is good and they bring from \$25 to \$45 each, with some choice ones fetching as high as \$50

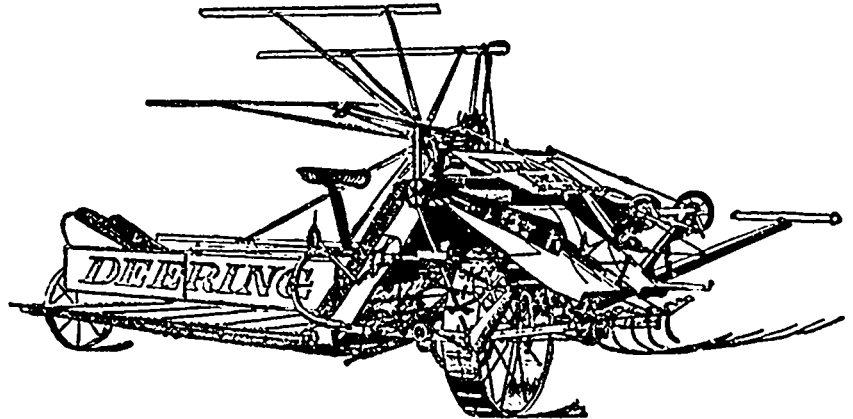
Sheep and Lambs

The Chicago and Buffalo markets, though supplies continue large, have been active with a good demand. On Friday the Buffalo market was 10 to 15c. per cwt. higher. About 300 sheep and lambs were offered here on Friday. Ewes sold for \$3 to \$3.50, and bucks \$2.50 to \$2.55 per cwt. The deliveries of yearling lambs were light with prices firmer at \$4.50 to \$4.75, and good heavy ewes and wethers fetching \$5 per cwt.

Hogs.

About 1500 were offered on Friday. Choice selections weighing from 160 to 200 lbs. each; unfed and unwatered sell for \$4.50; light hogs for \$4.12½, and thick fats from \$3.75 to \$3.87½ per cwt. There is a good demand at Montreal from the packers, who are paying as high as \$4.75 for nice light bacon hogs, and quotations there are \$4.50 to \$4.75 as to quality. The *Trade Bulletin's* cable of March 16th reads: "The market for Canadian bacon is quiet but steady, considering the liberal receipts from Canada."

The Machines that Made America Famous



The LIGHT DRAFT, Noiseless running IDEAL Binder is a model of mechanical beauty, strength and durability. It will cut, elevate and bind any kind of grain with less horse power and less expense than any binder ever built.

Several pages in the Deering Catalogue for 1899 are given up to a detailed description of the Deering Ideal Binder. Every important part is carefully described and illustrated. Please send us your name and address.

DEERING HARVESTER CO.

Main Office and Factory:

CHICAGO, U.S.A.

Permanent Branch House:

LONDON, ONT

Make Your Own Butter

The Very Latest for Farmers' Wives

**NO MACHINERY
NO WORK
NO ICE**

Separates the Cream in from 2 to 3 hours

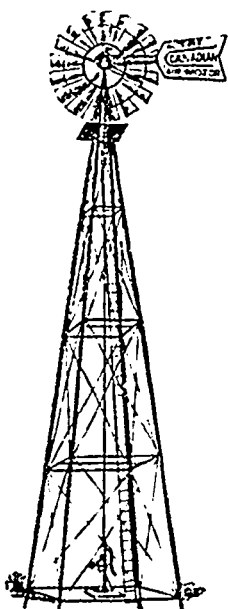
A Separator for

10 COWS FOR \$10.00

Write for circulars
Agents wanted

J. F. GILL & CO.

NIAGARA FALLS, ONT.



Windmills

No machine on a FARM Yields better results than a

Canadian Steel Air-Motor

Will Grind, Chop, Pulp, Run Grindstones, Fill Silos, etc.

And give your House and Barns A Full Supply of Water

PUMPS, TANKS, GRINDERS

Have you seen our WATER BASINS?

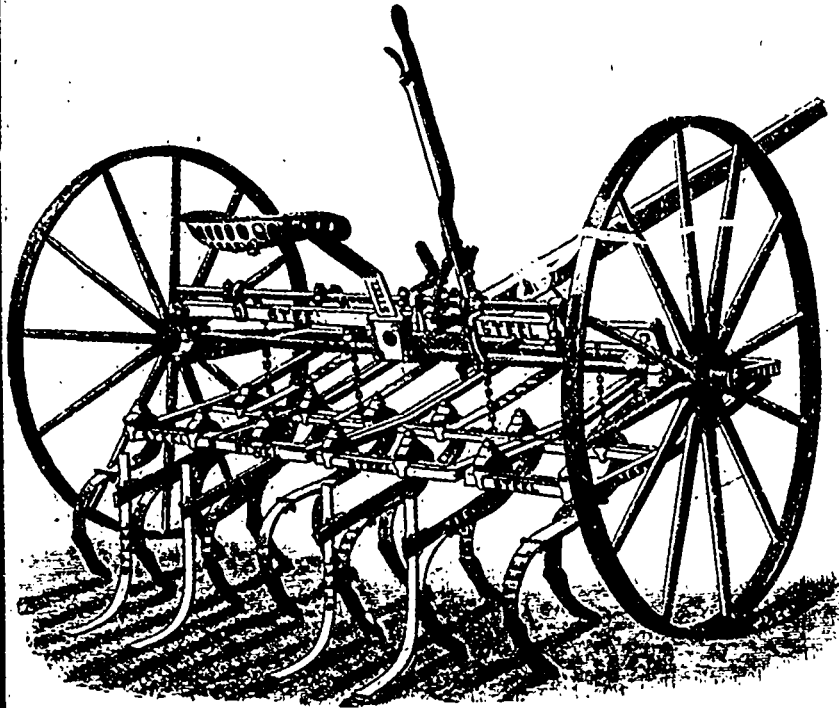
Ont. Wind Engine & Pump Co. Limited
ATLANTIC AVE., TORONTO
(Largest Manufacturers under British Flag)

POPULAR GOODS POPULAR PRICES

Matheis' New Universal Seeders and Cultivators
They save practically all hand labor, that's expensive you know. They open the drill, drop the seed, cover the seed and roll and firm the earth all at one operation. In cultivating they cultivate deep or shallow, cultivate between the row or straddle the row and cultivate on each side of it. Destroy all grass and weeds and leave a mulch of fine earth on top, which effectually preserves the natural soil moisture. They are fast and effective, strong and durable. Our Horse Hoe with X beam frame and spring steel standards is unequalled. Our book describing and illustrating a score or more of different styles sent free to anyone.
Ames Plow Co., Boston and New York.

The MASSEY-HARRIS CULTIVATOR

Does its work thoroughly in all kinds of soil.
THE TEETH ARE VERY STRONG



AND ARE SUPPORTED BY A PATENTED HELPER

MASSEY-HARRIS CO., LIMITED
TORONTO

Hamilton Engine AND Thresher Works

Compound and Simple Traction and Plain Engines
Threshing Machines,
Clover Hullers,
Horse Powers,
Saw Mills, with all the latest improvements

—ALSO—

ROAD-MAKING MACHINERY
Stone Crushers, Road Rollers, and Graders

For descriptive catalogues, prices, and terms, apply to

SAWYER-MASSEY CO., LIMITED
HAMILTON, ONT.

Lump Jaw

If once gains a foothold in your herd will in all probability carry off from ten to twelve per cent.

MITCHELL'S ANTI-LUMP JAW

has proved by its effective work that a bottle of it should be in every cattle raiser's hands.

WE ABSOLUTELY GUARANTEE TO CURE ALL CASES.

If it fails we return your money. Endorsed by Canada's leading cattle exporters, Gordon, Ironside & Fares, Montreal and Winnipeg.

Price \$2.00,

Postpaid to any address.

FREE—Treatise on Lump Jaw and booklet of Testimonials sent on request.

W. J. Mitchell & Co.,

CHEMISTS,

Prince Albert, N.W.T.
Winnipeg, Man.

Thousands....

of practical farmers and the best scientists have PROVED the undoubted value of

ALBERTS'

Thomas-Phosphate Powder

for all kinds of crop on all kinds of land.

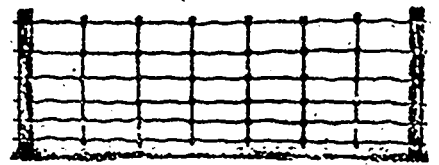
It is a **FACT**, not an **EXPERIMENT**.
It is the greatest aid Agriculture has ever known.

WALLACE & FRASER

Masonic Temple,
ST. JOHN, N.B.

58 Canada Life Building,
TORONTO.

THE RANKIN FENCE



is a coiled Spring wire Fence containing all the latest improvements, is easily and rapidly erected without any expensive tools or previous experience. All particulars in Our Catalogue.—Write for one.

AGENTS WANTED.
THE RANKIN FENCE CO.
275 ST. MARTIN ST., MONTREAL.



FREE We give this fine WATCH with chain and charm, for selling two doz. Whitelight Wicks at ten cents each. *No Money Required.* Write, and we will send the Wicks, postpaid, and our big Premium List. When you have sold the Wicks, return the money, and we will at once send your watch free of all charge. Hundreds have earned fine watches working for us, why not you? In writing, mention this paper.

WHITELIGHT WICK CO.,
TORONTO, CAN.

THERE IS ONLY ONE BEST HERE IT IS!

7 SIZES
6, 7 and 8 Foot
CUT
16, 18 and 20 inch
DISCS.

FROST & WOOD

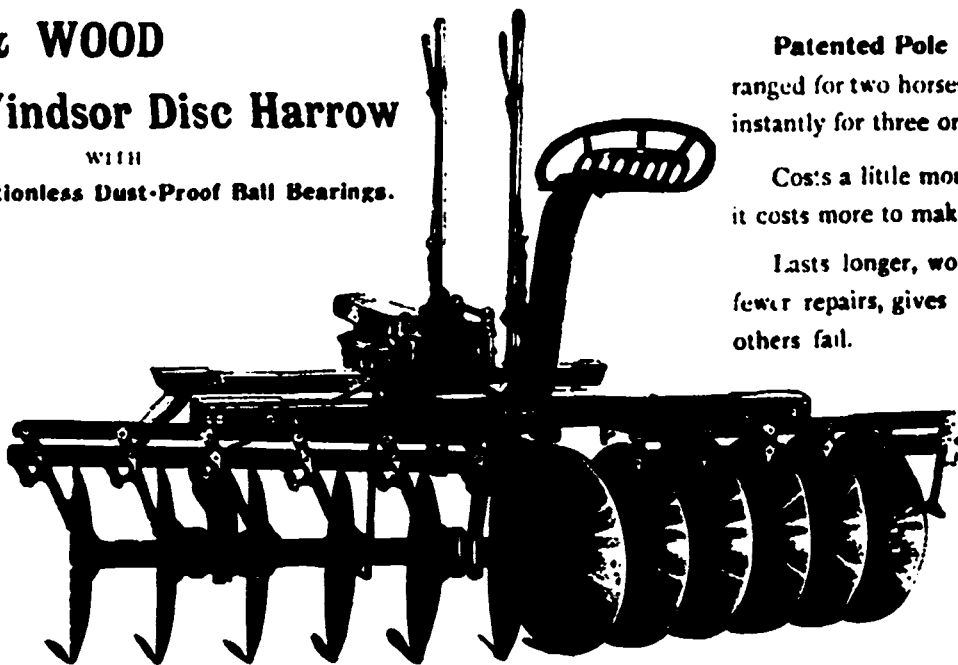
Windsor Disc Harrow

WITH

Improved Frictionless Dust-Proof Ball Bearings.

**BRANCH
OFFICES:**

Toronto, Ont.
London, Ont.
Winnipeg, Man.
Montreal, Que.
Quebec, Que.
St. John, N.B.
Truro, N.S.



Every Windsor Disc Rolls Along on 66 Hardened Balls.

Patented Pole Attachment, arranged for two horses; can be adjusted instantly for three or four horses.

Costs a little more to buy, BECAUSE it costs more to make.

Lasts longer, works better, needs fewer repairs, gives satisfaction where others fail.

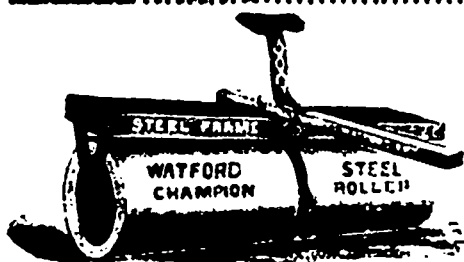
Light draft,
No weight on
horses' necks,
and sold under
our GUARAN-
TEE.

Manufactured by **THE FROST & WOOD COMPANY, Limited**

Head Office and Works, **SMITH'S FALLS, ONTARIO.**

Local Agencies throughout the Dominion. Send for 1800 Illustrated Catalogue to nearest Branch Office. When writing, mention "FARMING."

Farmers



CHAMPION STEEL ROLLER

Weight about 1,200 lbs. Steel frame, removable top or low bit has present weight on horse tracks.

There are many different styles of Rollers, weight from 600 to 1,200 lbs. The adjoining cut shows our up-to-date . . .

...CHAMPION... ROLLER

with special pattern of end surface constructed as to prevent dirt from falling inside of drums.

All we ask is comparison. Your judgment will do the rest.

Thom's Implement Works
WATFORD, ONTARIO

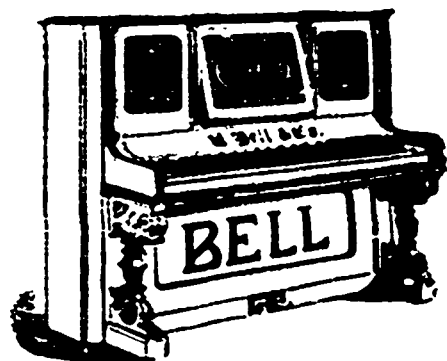
The Unparalleled Reputation of

**The BELL PIANOS
and ORGANS . . .**

Is accepted without dispute
by all other makers

ORGANS from \$40 upwards
PIANOS from \$250 upwards

Only the best materials used. All others are rejected
On Reasonable Terms from all Agents
Manufacturers: **QUELPH, Ont.**



THE BELL ORGAN & PIANO CO., LIMITED

Des Moines Incubator

THE BEST AND
THE CHEAPEST

SURE TO GIVE
SATISFACTION.

Rock Roy Farm Sole Agent for the Dominion.
Send 2-cent stamps for Illustrated Catalogue of Poultry and Poultry Supplies. Poultry's Guide, New Edition 15 cts per mail. P.O. Address.

24 St. Sulpice St., Montreal.

Humpty-Dumpty Egg Crates



See what loss might have been prevented if the new Egg Crates were used by all farmers.

They are exceedingly cheap and very strong and durable.

Be Sure You See Them.

**THE DOWSWELL
MAN'G CO LIMITED**

If your dealer has not got them send to us for Circulars.

...Hamilton