

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

Covers damaged/
Couverture endommagée

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

Cover title missing/
Le titre de couverture manque

Coloured maps/
Cartes géographiques en couleur

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

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

Bound with other material/
Relié avec d'autres documents

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

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.

Additional comments:/
Commentaires supplémentaires:

Coloured pages/
Pages de couleur

Pages damaged/
Pages endommagées

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

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

Pages detached/
Pages détachées

Showthrough/
Transparence

Quality of print varies/
Qualité inégale de l'impression

Continuous pagination/
Pagination continue

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

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

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

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 14th, 1899.

It depends on the Process

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

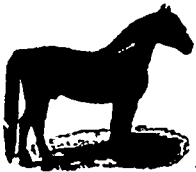
The "Vacuum Process" for making salt is the most modern and scientific.

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

Windsor Salt...

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

Horse Owners! Use GOMBAULT'S



Caustic Balsam

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., TORONTO.

Trade Mark Reg'd

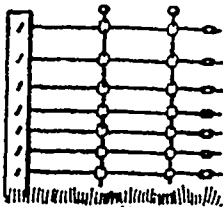


LUMP JAW NOW CURABLE.

Surely, quickly and for good. FLEMING BROS., Chemists, St. George, Ont., have a remedy that quickly cures the most obstinate cases. Supplied by mail under a positive guarantee. Price, \$2.00. Valuable information and full particulars FREE.

Fence Machine Free

With 100 Rods. Gold Stem-Wind Watch Free.

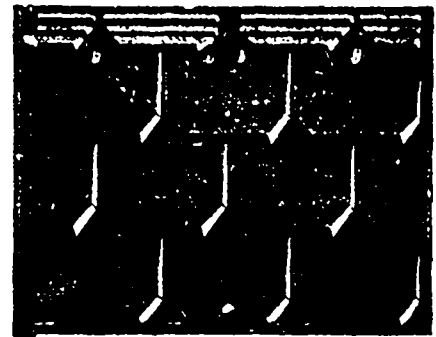


To introduce Diamond Grip Fence in new localities. Don't have to wind wires around each other (like old woven fences), as cross wires are gripped and protected from weather; can never slip or break; 5 times as strong and lasts 10 times as long, as any woven wire fence made; can use coiled spring, plain,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

CANADA FENCE CO., London, Ont.

No trouble to lay Eastlake Shingles

They are accurately squared, and fit together perfectly at the sides by our patent telescopic side-lock.



In choosing them you gain the very best fire, lightning and leak-proof protection—save time in the laying—and are sure of durable, economical satisfaction.

No imitations can equal them. See that you get EASTLAKES. Write us—we'll tell you more about them.

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

Rapids Farm, Lachine Rapids, Quebec



W. W. OGILVIE,
Proprietor.

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.

Address ROBERT HUNTER, Manager
LACHINE RAPIDS, QUEBEC.

OXFORD DOWNS

For Sale

Good Shearling Ram and some fine Rams and Ewe Lambs; also some good young Yorkshire Sows and Boars. Some good young Heifers in Calf for sale.
John Cousins & Sons,
Harrison, Ont.



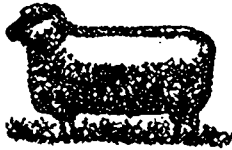
Another Importation.

All present surplus Shropshires sold, Customers pleased, and I am happy. Very choice rams and ewes producing, But not enough for coming trade. Will therefore import next July. Importing orders taken for any breed.
John Campbell, Fairview Farm, Woodville, Ont., Can.

OXFORD DOWNS

For Sale.—A fine lot of ram and ewe lambs, bred from imported sire and dams. Prices to suit times.

SMITH EVANS
Gourock, Ont.
Breeder and Importer



Gotswolds Twenty good ram lambs, shearing and two-shear, at farmers' prices. Some excellent shearing ewes, bred to our best studs.

Ber-shire Sows ready to breed. Boars fit for service. Twenty Plymouth Rock Cockerels, choice.

O. T. GARBUTT, Bar 18, Claremont, Ont.

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.

A. TELFER & SONS, Paris, Ont., Breeders and Importers of reg. Southdown Sheep. For sale.

JAS. P. PHIN, The Grange, Hespeler, Ont., breeding and importing Shropshire Sheep a specialty.

JNO. A. MCGILLIVRAY, Q.C., Jerseyville Farm, Uxbridge, Ont., Breeder and Importer of Dorset Horned Sheep, Jersey Cattle, and Tamworth Pigs.

HOME of the CHESTER WHITES



Boars, fit for service; Sows, ready to breed; Young Stock from home-bred and imported stock, at prices to suit the times. Pairs furnished not akin. Eggs from the following: B. Langbans, P. Cochins, Barred and White P. Rocks, S. G. Dorkins, G. L. Wyandottes, Br. Leshorns, Cornish Indian, Black, Red and Pitt Games, \$1.00 per 13; Pekin, Rotten and Aylesbury Ducks, \$1.00 per 9.

G. BENNETT & PARDO, Charing Cross, Ont.

COLDSRING TAMWORTHS



Boars fit for service; Sows in pig and bred to order. Sept., Oct., and Dec. pigs of both sexes of the right bacon type, pairs and trios

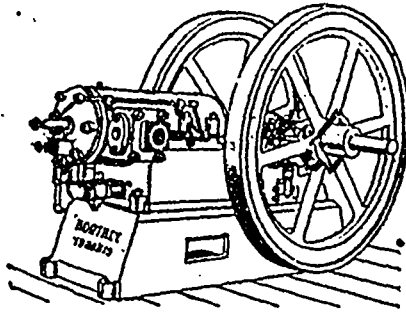
no. akin. Am booking orders for spring pigs at the lowest prices.

NORMAN M. BLAIN

Coldspring Farm, St. George.

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. R. 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.

Large English Berkshires.

Young boars for service. Young sows in farrow. Young pigs from two months up. From first-class show stock. Prices right. Write for particulars. Mention FARMING.

O. B. DECKER, Chesterfield, Ont.

ENGLISH BERKSHIRES

My herd won 306 prizes, 11 diplomas, and 3 medals since 1888. Choice stock of all ages for sale.

GEORGE GREEN, FAIRVIEW, ONT.
Stratford Station and Telegraph Office.

JOS. CAIRNS, Camlachie, Ont.

IMPORTER AND BREEDER OF

Chester White Hogs

Stock on hand for sale at all times of all ages, and at right prices.

Additional Stock Ads. on page 428.

GEO. THOMSON ..BRIGHT..

HAVING sold his farm, will sell by auction, without reserve, on MARCH 24th, 1898, Clyde Horses, Jersey Cattle, Berkshire Pigs, Poultry, Farm Implements, Etc.

Terms—\$10 and under, cash; over that amount, 7 months' credit on approved security, or 6 per cent. per annum off for cash on credit amounts. Lunch at noon.

GEO. THOMSON,
3 Miles West from Bright.

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.

FARMING

VOL. XVI.

MARCH 14th, 1899.

No. 28

A Very Valuable Paper

WELLESLEY, ONT., MARCH 4TH, 1899.

To The Editor of FARMING

Find enclosed \$1 to continue my subscription for 1899. I find FARMING a very valuable paper and I would not like to be without it, as it is of great value to me in farming and stock-raising.

Yours truly,

GEORGE HOFFMAN.

Agricultural News and Comments

A new creamery is being built at New Westminster, B.C. The creamery will be under the management of Mr. J. Kincaid, who for the past two years has had charge of the Dominion Government Creamery, Wetaskiwin, Northern Alberta.

During January, 1899, Great Britain exported 71 cattle, as against 141 in January, 1898; 1,031 sheep, as against 1,269 in January, 1898; 6 pigs, as against 7 in January, 1898, and other animals 5,790, as compared with 5,322 in 1898.

The British Columbia fruit exchanges are now making preparations to dispose of the coming fruit crop. The Manitoba and Northwest market will be the one that will be catered to more particularly. By co-operating in fruit-selling in this way it is claimed that much better returns can be obtained than selling individually.

At the last County Court of Perth the grand jury made the following recommendation: "We would recommend that the rules governing the rights of persons travelling or driving on the public roads should be posted up for the information of the public. It would be a great benefit to the winter roads if sleighs were made to track as wide as wagons. We have examined the statistics you gave us about statute labor, and approve of your suggestion that the labor should be abolished and the value of that labor expended on the roads, under the direction of a practical engineer."

Negotiations are in progress for the erection of a \$500,000 abattoir and cold storage warehouse at Halifax. The establishment would have a capacity for handling annually at least 30,000 head of cattle, 30,000 head of sheep, and 20,000 head of swine. Of this quantity they would purchase in Nova Scotia, if the stock could be had, 10,000 head of each, the balance to come from the West. The product of the concern would be sold in England, the company retaining 2½ cents per lb. for the expense of management and handling, the balance to be returned to the producers. The promoters are asking the local Government to guarantee the bonds of the company for half a million of dollars.

At the North Dakota Station some interesting experiments have been carried on re the vitality of the typhoid bacillus in milk and butter. The butter used in these investigations was derived from an ordinary creamery, and contained one ounce of salt per pound. Ten days appears to be the longest period of time over which typhoid bacilli introduced direct into butter could be detected. When, however, the cream was infected with typhoid germs before

churning, the latter was discovered in butter even after three months old. Typhoid bacilli do not, apparently, make any marked growth in butter if the buttermilk is thoroughly worked out of it. In sterilized milk typhoid bacteria can exist for upwards of four months. Where milk is inoculated with typhoid bacillus it will take almost complete possession of the liquid, becoming almost a pure culture.

New Ontario

A very interesting meeting took place at the Pavilion, Toronto, last week. The object of the gathering was to interest the people of Toronto and of this part of the province in Algoma or what is known as New Ontario. Many people in the older parts of Ontario are, perhaps, ignorant of the great heritage we have north of Lakes Superior and Huron and extending to James' Bay. This great stretch of country is not only abundantly supplied with minerals, fish, timber, pulp, and certain varieties of coal, but contains millions of acres of good farming lands. It is estimated that there are fully 50,000,000 acres of good agricultural lands in that section yet to be settled on. The extent of this vast area will be more fully realized when it is pointed out that in the settled parts of Ontario there is only about one half of this number of acres given up to agricultural pursuits.

With this great land to go up and possess there is no good reason why the young men on the farms in the older parts of the province should go to the United States or to eke out a precarious living in our towns and cities when they wish to make a home for themselves. Every settler going to Algoma gets a free grant of 160 acres of good land, upon which, if he is industrious and frugal, he can, in a few years, make himself practically independent. At the meeting referred to some valuable information was given as to the productiveness of this new country. From statements made by settlers it was pointed out that oats frequently yield 110 bushels; peas, 80 bushels; wheat, 45 bushels; potatoes, 800 bushels; turnips, 1500 bushels; and timothy hay, 5½ tons per acre. These figures give some idea of the possibilities of this new district. At present the market there, owing to the adjacent mines and railroading, for all kinds of farm products, is very good, and persons without much capital, but with push and energy, can, in a few years, make a profitable livelihood.

Chestnut Color in Horses

This question is receiving some attention from the English horse breeders. With the exception of the Cleveland Bay, the Yorkshire coach horse and the Suffolk, breeders in that country have never devoted themselves seriously to regulate the color of their horses. The theory that color is largely determined by the amount of pigment in the blood during certain stages of germ growth is said to find favor with many breeders, but there does not appear to have been any serious attempt by believers in this theory to make any practical use of it. This pigment theory may account for the growth of the chestnut color in that the absence of coloring matter in the pigment may produce this shade.

In regard to the increase in chestnuts the *London Live Stock Journal* has this to say:

"Unquestionably the most extraordinary circumstance in connection with the color question is the rapid advance of the chestnut. The prepotency of this color is extraordinary, and it seems as though it will be an exceptional occurrence to meet with a horse of any other hue in the course of fifty years or so. Yet it is remarkable that chestnut is not generally the most popular color, neither is it regarded as being the most serviceable by those who are compelled to get all they can out of their horses. For this reason one rarely sees a chestnut in the employ of the London General Omnibus Company, a most extraordinary fact, considering the prevalence of the color. The general belief that a chestnut sire and a chestnut dam will never throw anything but chestnut stock, although other colors will produce a chestnut foal, rather tends to discredit the theory that the color of the unborn animal is regulated by circumstances which arise after its conception; but, beyond the undeniable fact that chestnuts are multiplying upon all sides, little that is positive can be written. It may be noted that thirty chestnuts have won the Derby in 119 years, and only twenty four the St. Leger, and yet the chestnut thoroughbred is as much in evidence as any other color."



Sheep on a Hundred-Acre Farm

During the past couple of years a number of articles have appeared in FARMING on the subject of sheep-raising. These have aroused fresh interest in this important branch of farming, not only among farmers who keep sheep, but among those who do not. Of date February 18th, Mr. Robert Hodgson, Mitchell, Ont., writes us as follows:

"I have never kept sheep, but am thinking of doing so, and would ask, through FARMING, how many you would recommend to be kept on a farm of one hundred acres. My farm is in a high state of cultivation, and well under-drained with tile. During the last few years I have read a number of articles in FARMING in which the writers claim that sheep do well on weeds. My father always taught me that growing foul weeds of any kind took nourishment away from the crops. His faith was so strong in this direction that he did not allow weeds to grow on any part of the farm, including the bush. Since his death, four years ago, I have farmed in the same way as we did when working together. I state these facts so that you will know the condition of the farm, and also that you will not be advising me to feed them on weeds, either in part or whole."

As Mr. Hodgson's question is an important one we decided to get the views of a few of our most successful sheep-raisers in regard to it and other phases of sheep-farming, and have pleasure in being able to give our readers the benefits of the experience of the following well-known sheep farmers:

Mr. Richard Gibson, Delaware, Ont.:

"Replying to your favor of 21st containing a series of questions—I would say that whatever I may write in answer to them must be accepted as applying generally, having no foundation upon which to base literal answers.

(1) The number of sheep that could be kept on a hundred-acre farm in a high state of cultivation and well under-drained with tile. If the farm were to be cropped to its full capacity for carrying a flock and a succession of crops provided that would be at their best, each as required, a flock of 700 sheep could be kept.

(2) But it is not likely that a farm would be entirely cropped to produce sheep food. There would be on an ordinary 100 acres, say, 40 acres in grain, then there would be cattle and horses, so that perhaps there might be only 25 acres for sheep. A farm as described ought to pasture 7 sheep per acre for 6 months, say 100 head. There will then be 12½ acres to produce ensilage, cabbage, roots, etc., for winter feed. Six acres of ensilage, 4 acres of clover hay and 2½ of roots will supply ample food for wintering the flock of 100.

I recall to memory a 500 acre farm in England that carried about 1000 sheep, 50 head of cattle, 20 horses and some 200 acres grain crop for sale.

It may be taken for granted on good grazing land that seven sheep are equal to one cow. Again it may also be taken that on poor lands sheep will luxuriate and revel where cattle would starve, as for instance, on rough rocky lands or where weeds and briars hold sway. A bit of brush, a tender weed, the heart of a burdock or blue devil, would be a choice morsel to the one, but to the other as wormwood and gall.

(3) The most profitable way is to simply keep the number that the farm will provide suitable food for. A hungry sheep at night is an unprofitable sheep, hence the capabilities of the farm are about in ratio to the ability of the owner to cultivate such crops as may be not only required the year round, but especially to provide feed during the usual periods of scarcity.

(4) "Cost of keeping a sheep well for a year": Pasture per month, 20 to 25 cents; winter feeding, three pounds clover hay per day for each 100 lbs. live weight may be taken as an outside estimate. Four lambs, weighing 100 lbs. each, would require one ton, worth at present in London market \$5, so that on that basis it ought not to cost over \$2 per head to winter on hay alone, but that is not altogether advisable, so we may use ensilage as part ration; one acre ought to provide sufficient to satisfy fifteen sheep per winter; cabbage, one acre, will feed ninety sheep thirty days. In England we used to allow one acre of swedes to 20 to 25 sheep per winter. Prof. Craig, at Madison, Wis., in his experiments in feeding lambs, found they consumed grain to the value of eight to eleven cents per head per week. I don't think ordinary sheep of commerce cost the average farmer more than \$2 per head per year."

Henry Arkell, Arkell, Ont.:

"In answer to your question of 'how many sheep could be profitably kept on a 100-acre farm.' In my opinion from 60 to 70 sheep could be kept without interfering with the general rotation of crops, and it would be very helpful to the enrichment of many a Canadian farm.

"A sheep could be kept well on a mixed ration of a little grain, roots, hay, and pea straw for the winter months for from 50 to 60 cents per month. During the summer months they could be pastured for, say, 20 cents per month.

"Keeping sheep in hurdles on the ground in summer is certainly the most profitable way of feeding sheep and thoroughly manuring the ground. Give them a fresh piece every day. But one drawback to that system in Canada is the excessive heat in the middle of the day, when it is of great benefit for the sheep to have some shade. The least trouble is to let them have a run of pasture, but not to keep them on it too long at a time. Sheep never want to be kept long on any single run. A change is what they like and thrive on. They must also have access to fresh water all the time. A pasture field of red and Alaska clover and alfalfa is the best. The latter has proved with me to be just the thing. It stands the drouth well, and sheep are very fond of it, but it must be kept fed down, and not allowed to become rank.

"A great many of our Ontario farmers seriously stand in their own light in not keeping sheep. If one kind does not do well with them another will, and, as I said before, nothing enriches land like a band of sheep, and land enriched helps the farmer."

John Jackson, Abingdon, Ont.:

"In answer to your enquiry as to how many sheep can be kept on a good farm of 100 acres without interfering much with other farm operations, much would depend on the kind or breed of sheep kept. Some kinds require double the food that others do. It may be thought by some that a sheep is a sheep, but size and make up have a good deal to do with the amount of food required. We keep nothing but pure Southdowns. On a farm of 110 acres, clay land, we keep five horses and about fifteen head

of cattle. We have three acres of orchard, have usually about fifty acres in grain, and keep on an average from 60 to 100 sheep. We have over 70 at the present time. About the only thing done extra on account of the sheep is to sow half an acre of vetches or some mixture for green feed in fitting up show sheep. We only grow about two acres of roots (mangolds). We sow some rape seed among our oats, this makes a lot of cheap feed for sheep. I can safely say that sheep make several times over more clear profit than all the other farm operations put together. Sheep, however, have their ups and downs; but have not failed once in thirty years to pay a fair dividend on the capital invested, sometimes one hundred per cent. A flock of good sheep of the right sort well managed will get the farmer out of debt, keep him out of debt, lay him up something for old age, and leave the farm fertile, clean and productive for those who come after."

Smith Evans, Gourock, Ont.:

"You letter of the 21st inst. to hand in reference to sheep raising. A young farmer in Western Ontario asks how many sheep could be kept on one hundred acres. I think he might profitably keep about twenty-five ewes. A great many common breeders in our section run their sheep on the road side till after the crops are off in the fall. I would recommend sowing some rape after the fall wheat is off or sow some in June for the lambs after they are weaned. In regard to the cost of keeping a sheep a year I would say about two dollars for the keep of a common sheep."

John Campbell, Fairview Farm, Woodville, Ont.:

"Replying to the enquiry of recent date sent you, regarding the number of sheep that can be profitably kept on a good 100-acre farm, much depends on how the farm is otherwise stocked. Where sheep-raising would be made the principal business, and other kinds of stock kept only in sufficient numbers for family needs and to work the farm, a breeding flock of fifty or sixty ewes may be kept on the average 100-acre farm in our best districts. A neighbor who pins his faith strongly on Shropshires, keeps a breeding flock of about thirty ewes and winters over three-fourths of his lambs, which usually average one-and-a-half lambs per ewe and over. He also keeps two or three milch cows, a team from which he raises foals, and also keeps pigs; all on a fifty-acre farm. During five years I never knew of his being obliged to purchase any feed.

Probably your subscriber's wish is to ascertain what number of sheep can be kept successfully on a 100-acre farm of good soil, where other lines of stock-raising are given the first place. In that case I would say that a breeding flock of fifteen ewes would be quite enough, and can be kept with much satisfaction, and most likely a larger clean gain can be secured than in keeping a larger number. It is a fact not easily accounted for that a small flock stands a far better chance of giving its owner a larger percentage of increase at maturity, as well as greater individual weight of the progeny, than a flock where numbers more than actual gain is studied more in its management. I will give some figures showing what may be accomplished along the line which your enquirer is considering, basing my statement on the doings of acquaintances during the present and recent years. The majority of farmers sell their lambs in September or October, when the price will not average \$3.00. Instead of selling at such a low price the aim should be to get the most possible profit out of the business, by finishing them so as to insure the securing of the largest profit, which certainly is after the fall months are past and gone. One consideration should be, what kind of a lamb brings the highest price in the best market, and next comes the thought, in what season is that available. Having settled these questions satisfactorily, the effort should be to furnish all the necessary conditions required to top the market. One very essential operation is the castrating of ram lambs, and next, all should be tailed. Having done all that is in keeping with good management my expectations of results would be that 15 ewes would

give 22 lambs, which in March would average 130 pounds and sell at 5 cents live weight, making \$6.50 per lamb, or \$143 for the lot. Where the great advantage lies in sheep-husbandry is that so little costly grain is required to get them ready for the market. Lambs, when given a run on rape in the fall and in winter fed unthreshed peas once, clover hay once, and cut turnips twice daily, will grow and fatten with less cost and labor than any other kind of stock, and leave the feeder a large margin of profit ninety-nine times out of a hundred."

Manures and Manuring

The Relations Between Soils, Crops and Manures

By T. C. Wallace, before the Ontario Farmers' Institutes

The great interest which attaches to this subject of manures and manuring makes it important that it should be approached with care and as much exactness as possible, and even much more in detail than has been the practice in dealing with what are usually looked upon as scientific subjects. Manuring is not a branch of agriculture, but the very foundation of profitable farming. It underlies all branches of our work, and may truly be called the main-spring of crop-production and stock-raising. It has its branches and they are: The working of the soil to release some of its locked-up fertilizing elements, drainage and ærating, restoring some of the alimentary substances we remove by cropping and grazing, the proper care and handling of manures, with the best method of application, the use of commercial aids, supplying humus and nitrogen by the aid of the legumes, clover, peas, vetches and beans, and the action of water.

I shall not undertake to lay down plans of procedure, for I know full well that it is quite impossible to do so intelligently. I shall aim, then, only to indicate as shortly as possible such of the basic principles underlying the work as our space will permit. And I will ask that the subject receive the earnest thought of every Canadian farmer, so that, if possible, by taking warning from the mistakes of the older nations, and even our forefathers in our own country, we may place our fair Dominion at the head of the list among the agricultural countries of the world, by maintaining, and even increasing, her soil productiveness.

ORIGINAL SOILS

Were but rock ground up, disintegrated by the action of the elements, air, fire, frost and water; also more or less by microbic action. This ground up rock, carried by the floods and lesser flows, formed banks or deposits which the waters, receding, left as a resting-place for animal life to follow. The coarser parts sinking earlier in the streams, and the finer parts being carried further on, accounted for the various grades of soil. The kind of rock from which they came governed the class of soil, as, for instance, the feldspathic rock-forming clay. These original soils were clearly mineral only and would certainly be wanting in one of the important elements necessary to the growth of such types of plants as we mostly grow for our use. I refer to nitrogen, which seems to be entirely an element of the atmosphere, which is nearly 80 per cent. nitrogen, and can only be taken up by plants after becoming fixed in some form in the earth. This is worth noting, for it suggests a reason in nature for such a "nitrogen fixing" class of plants as the clovers and their brothers, the peas, vetches and beans, which can flourish on the mineral elements alone in the soil and get their nitrogen from comparatively low forms of microbic life.

Before pursuing this line of thought further it becomes necessary to impress upon our minds the elements entering into plant and animal life, or at least the principal ones as understood. Plants and animals utilize some thirteen of the

ELEMENTS OF THE AIR AND SOIL,

but only four of them, comprising about 3 per cent of the make-up, are usually considered. The reason for this is that the rest of the atmospheric elements can be easily acquired, and that the rest of the mineral or soil elements are in abundance in the soils. By and by, when we know more of the science of plant life, we may discover that the availability of these abundant mineral elements may require consideration, as the necessities of an expanding population in the world demands more food.

For the present, however, we will try and work within the bounds of what we know. Of these four elements then: nitrogen gives us what we term growthiness or size; potash induces fleshy parts; and phosphate makes bone and force, and after acting upon the other substances during growth, finally carries the plant or animal to ripening, and prepares for the continuation of species. The lime and the phosphoric acid are included in the term phosphate.

(To be continued.)

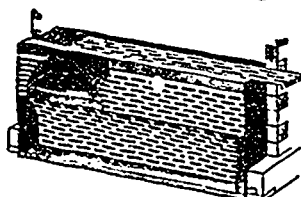
The Use of the Drone and Queen Trap, Also, "Taylor's" Swarm Catcher

Written for "Farming" by R. F. Holtermann, Brantford, Ont.

One of the difficulties the average farmer has in the keeping of bees is to look after the swarms during the swarming season, and prevent the loss of swarms, also, the inconvenience of hiving them at all times of the day. The methods in use in modern bee-keeping have enabled us to largely overcome the difficulties in connection with swarming. Some bee-keepers place their bees in the vicinity of the kitchen window, hoping, or expecting the women of the house to do the work of the house and also keep their minds and eyes on the bees, and detect swarms as they issue from the hives. I have never been an advocate of doing two things at one time, or being engaged in one line of work and having one's mind on another, and the difficulties connected with such a method of bee-keeping are great. The swarming season generally begins during the last days of May, and continues through June and a portion of July. In the buckwheat districts we often have swarms during August. Any farmer who has kept bees and been called home to hive them when he may be engaged in distant fields doing work with horses knows how annoying this is.

The Alley drone and queen trap here illustrated is placed at the entrance of the hive, completely closing it before there is any danger of swarming.

The way in which this trap works is as follows: The queen is a little larger than the worker bees, and in the trap is placed a piece of perforated metal of such a size that the worker bees can pass through it, but not the queen. This perforated metal is also used between the body of the hive and the supers; the worker bees passing through it can enter the super and deposit honey in the combs without allowing the queen entrance. No frame is

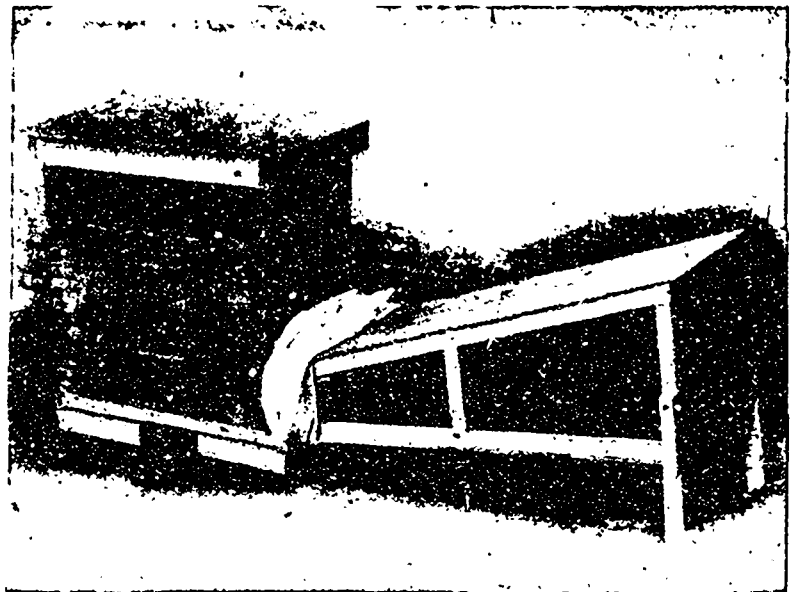


ALLEY DRONE AND QUEEN TRAP.

complete without a queen; in fact, the frame consists of the old queen and the old bees, they leaving the old hive to the young queen and the younger bees. As the swarm issues the worker bees pass through the perforated metal, as they have been doing ever since the trap has been put at the entrance; the queen attempts to follow the swarm, on the same principle as in the fly trap, she passes through the comb into the upper

compartment of the trap, and is there caged. The swarm now on the wing notice the absence of the queen, and, failing to find her, return to the hive and cluster in part in the upper part of the queen trap, the remaining bee re-entering the hive. The bee-keeper, looking at the trap at noon, or evening, finds the queen there, and knows that the swarm has issued. He now takes the new hive, shakes about three-quarters of the bees in the old hive into the new, and, after that, the queen out of the trap. The new hive should be placed in the old stand, and the old hive some distance away, in this way, the bees are hived without watching or climbing trees, and the farmer has avoided possible loss, and, if he takes an interest in his business, a great deal of anxiety, for, if the bee-keeper loses his first swarm, he practically loses the season's profit.

The "Taylor" swarm catcher wants no adjusting; it has a cage which is placed at the entrance of the hive the moment the swarm begins to issue. It could be used to good advantage by the bee-keeper in the apiary, or a child or timid person could cage the swarm in this way when they would not be in a position to climb trees to shake down swarms. By using this swarm catcher the danger from absconding bees is also lessened. In using the catcher care must be exercised to close all means of communication with the outside; the catcher must not be emptied of bees until after the first excitement and desire to fly. It is well to leave them there for at least one-half-hour, until they cluster; a cloth at the mouth of the swarm catcher could be used to close the latter; then, when the farmer or bee-keeper returns to the apiary, even if it is



TAYLOR'S SWARM CATCHER.

twelve hours later, he could hive the bees. I know one case in particular, where the bee-keeper is a market gardener. He has a daughter about twelve years of age, and one dozen of these swarm catchers in the apiary; she places the swarm catchers in position as soon as the swarms begin to issue, and leaves them in the catcher until her father's return in the evening. By means of appliances such as the above the labor connected with bee-keeping could be reduced and better profits secured.

Fine Bone and Good Flesh

A writer in a recent issue of the *London Live Stock Journal* points out that the crude old notion that mere size was of the first importance has given place to advanced ideas of the relations between the structure and the flesh which an animal carries, experience and observation having shown the inverse ratio of the tendency to make meat and the tendency to make bone. The rule that as bone became refined fattening became more rapid, and could be done on less food, is now fully recognized, and breeders are

working along that line. It will not do, however, to associate coarse bone with large frames. On this point the writer has this to say: "Great, coarse bone, therefore, went out of fashion, and finer and more consolidated bone came into favor instead, and has continued, whilst the demand for size has fluctuated according to circumstances and local conditions. Confusion of the ideas of great bone and great size should be avoided, for it is quite possible to have the frame large and the bone fine, and on the other hand coarse bone in a small frame. The quality of the bone inclining to either the sponge-like or the more compact extreme is irrespective of the size of the frame; although bone of a certain quality supposed, the length and thickness (or average diameter) of each piece forming the skeleton, shoulder fairly proportioned to the size of the entire skeleton." As looked at from a butcher's standpoint an animal has two classes of points—one of structure and the other of flesh points. An animal when lean may be defective in points of structure, but when fat may have its faults on these points concealed by excellent flesh points.



The Best Way to Manage an Agricultural Show

A Paper Read by J. Thos. Murphy, Simcoe, Ont., Before the Canadian Fairs Association

In having this subject allotted to me, I feel my inability to deal with it in a manner satisfactory to this association. However, in doing so I can only trust that the members will bear with me, and give me credit for stating that which I conscientiously believe is for the best in this matter.

The society having elected its board, the officers and directors must determine to work together in the most harmonious manner, always being anxious to act in a conciliatory spirit, avoiding all semblances of bickering and strife, thus showing conclusively that their sole idea is to lay aside all thought of self advancement or aggrandizement, and anxiously maintaining every effort to advance the interest of the society according to its rules and regulations, as well as the granting of that which is right and just to exhibitors. As much of the stability and standing of a society depends upon the selection of a president, and too great care cannot be taken in securing a person of good executive ability.

The chief, and I might say the greatest, aid to proper management is the secretary, as upon him to a very great extent devolves the success of the fair. He should at all times have his work thoroughly in hand, sparing neither pains nor time in having each day's business duly completed and his books entered up, so that if applied to at any moment by either any member of his board or an exhibitor he may be in a position to say all is ready and complete. He must also be courteous and obliging in all his transactions with the members or the public, and any information required, no matter of what nature, must be willingly and pleasantly given. He must know all the rules and regulations thoroughly, carry them out to the letter, not overbearingly but in a respectful manner, not permitting any one to sway him from the right. In so doing he will receive in the end the sanction and approval of all; even those who might have been inclined to overstep the bounds, having to acknowledge that in carrying out the rules and regulations he was actuated by the desire to further the interests of the society, thus clearly indicating that in conducting the affairs of a show the same conscientious observance of that which is right may be accomplished therein, as well as in that of any other legitimate business transaction.

Another very important position in connection with the management and success of the show is that of a general superintendent, having supervision of the grounds and buildings, hiring of caretakers and all needed help, the letting of rights for grocery booths and privileges, if same are allowed. It requires that he should be a man of sound judgment and also well versed in the rules and regulations

of the society, and fully alive to the carrying out of same. Having neat, well kept and tidy grounds, buildings in good order and cleanly, keeping and preserving of order and attending to the wants of all concerned, he thus adds very much to the comfort and enjoyment of the exhibitors and the public, and also to a large extent to the success of the fair.

Great care should be exercised in the selection of judges and only those should be appointed having a thorough knowledge of the class in which they are to judge (in other words, experts), persons of undoubted integrity and above reproach, in whom the exhibitors and public have implicit confidence. To secure such judges is not difficult. But it must be borne in mind by any society that in doing so it must provide their travelling expenses, entertain them as guests of the society and look after their comfort and convenience in every way. Without the extending of these courtesies to those selected, the day has gone by when any society can hope to secure the services of such expert judges, as it is not reasonable to suppose that they should not only lose their valuable time, but also be expected to pay their own expenses for the privilege of filling the position. The prize list should be as complete as possible in each department so that all exhibitors may feel that every interest is served.

In all matters connected with the fair it should be a resolution of the society that no member of the board nor the superintendent in charge of the separate classes, should under any circumstances or in any way interfere in or bias the decision of the judge. They should stand aloof and have no conversation with the judge, unless applied to regarding any information required, thus showing to exhibitors and the public that, on the part of the association, everything is being done to allay any suspicion of interference or wrong-doing.

Another very important factor in the work is that no favoritism be observed. This is one of the worst features of many shows, and I would strongly impress on every society the evil of the same. Exhibitors and the public are very quick to observe anything of this nature, and the discontent occasioned thereby seriously affects the standing of the show. The secretary being the chief officer in giving decisions should by all in his power abstain from every appearance of wrong and should uphold the rules and regulations in every respect, favoring neither officers, directors, or any other persons, but granting equal justice to all alike. If this is done by the various shows a very great cause of complaint and one interfering with the proper success of many will be done away with.

A matter given much attention at the present time is that of attractions and entertainments. It is supposed by the great majority of shows that to draw the crowds such must be resorted to, and our agricultural shows are thus becoming less agricultural educators and more of a circus combination.

The Norfolk Union Fair, held at Simcoe, Ont., of which I have the honor of being secretary-treasurer, some years ago ceased entirely to allow any kind of circus or mountebank performances, exhibitions or shows, or the selling of goods, wares or merchandise on the grounds, and I can assure this association that ever since we adopted this course our fair has grown in the esteem of the public, success has crowned our efforts, and on no account would our society again permit anything of that nature on the grounds or within the statutory allowance, viz: 300 yards. Horse-racing, or more politely termed at present "trials of speed," are now greatly favored, although the Government is endeavoring to prevent the giving of the people's money to such purposes in connection with agricultural fairs, yet it seems an impossibility to suppress it just now. I feel sanguine, however, that if the managers of the fairs would determine upon the discontinuance of the same that they would get rid of a class of people who have not been any help to the agricultural or better class of people, and the shows would be conducted with much less friction and much more satisfaction to all concerned. Another great detriment to the success of many shows is the admittance to the

grounds of fakirs. Having nothing to give they take money out of the pockets of the unwary. To such a length has this been allowed in many shows that the public have become utterly disgusted with the same, and in consequence have withdrawn their patronage. The allowing of this class of people to our fairs is very demoralizing not only to our children but to those of more advanced years.

I find that in the United States, where horse-racing, circuses, side-shows and such means have been so extensively resorted to for many years, they are daily becoming convinced that, instead of these means being conducive to the success of a show, they are proving detrimental, and in many states they have passed laws prohibiting such at agricultural fairs. May the good work go on.

Having to the best of my ability given you my views in regard to this matter, and trusting that at least some of the suggestions offered may be acted upon by many of our agricultural shows, I will conclude by summarizing as follows:

(1) A board of officers and directors with the one idea of harmonious action in advancing the interest of the fair.

(2) A secretary alive to the interests of the society, courteous, obliging, and his work always in hand and ever at his post.

(3) A general superintendent who has all his work ready, grounds and buildings tidy and neat, all caretakers and watchers at their posts, and the work of the society going on as steady as clock-work.

(4) Expert judges.

(5) A prize list complete in every detail and up to present needs.

(6) No member of the board or superintendent of classes in any way to communicate with the judges, unless applied to by the judges for information.

(7) No favorites but all treated alike, and in accordance with the rules and regulations.

(8) If attractions and entertainments permitted, the utmost care to be exercised as to morality, etc. Under no circumstances or consideration fakirs to be allowed access to grounds.

A Scotch System of Ventilating a Cow Stable

At a recent meeting of the Glasgow and West of Scotland Agricultural Society, Mr. Alex. Blair gave the following method of ventilating a cow stable.

"In the outside wall, opposite every pair of cows, and just on the level of the floor, is placed a large grating, admitting a full half square foot of air, exclusive of the ribs of the grating, the air passes through this, over the hot pipes, and up through the inlet into the byre, which, as I stated before, is placed on the top of the heating chamber, and in front of each pair of cows. The gratings on these inlets are made on the hit and miss system, so that the flow of air may be regulated in the stormy weather. The flow of air provided for each cow, when the wind has a velocity of three miles per hour—and it is seldom we have it of less velocity than this—is 3,600 cubic feet per hour, a quantity which should be sufficient to satisfy the most rabid advocate of fresh air ventilation. The roof ventilation is carried out on an entirely new principle, and it may be worth while to describe it to you rather minutely. The system of this ventilation is such that it is impossible to close it, and yet there can be no draught, which is such a bugbear in the farmer's life with regard to weeds in milk cows. In outside appearance the ventilator is an ordinary louvre ventilator, running the whole length of the ridge of the byre, except a few feet at both ends. The sides of the ventilator are solid boards for a height of 12 inches, and the louvre boards are above this, the whole being covered with a corrugated iron circled roof. A division runs along the inside the whole length of the ventilator, and every 4 feet is divisioned off crossways. In this longitudinal division holes are cut about 12 inches square, and in front of them the sarking of the main roof is

cut away. In these square holes frames are placed on which are hung silk valves. All air passing to the outside must pass through these valves, and nothing whatever can enter. In addition to these valves there is provided a hinged flap behind each pair, which is controlled by a rope, and can be opened in calm weather. This means that practically the whole ridge is opened up at will for roof ventilation. This ventilator has been put up on several byres which had only the common louvre ventilator, with excellent results; in one case the milk supply was very materially increased, to the benefit of the farmer, although I am of opinion that the landlord ought to have shared it with him. The heating apparatus consists of a slow-combustion Canadian boiler, situated at one end of the byre in a pit, from which the four rows of pipes going along each side of the byre are fed. The pipes are 4 inches in diameter, giving fully a square foot of heating surface for every foot of pipe, and, as there are 560 feet of piping, there is fully that number of square feet of heating surface available.

The cost works out about 40s. per cow. The open winter we have had up to the last week or two did not give us a chance to test the apparatus, but it has been in use frequently of late, and I am enabled to give you a few particulars of the temperature of the byre. Over the last two months I find that the average outside readings have been a little over 40 deg., ranging from 22 deg. as the lowest to 54 deg. as the highest. The inside readings show that the cold air, after passing over the pipes, enters the byre at about 55 deg., while the cows themselves raise the normal temperature of the byre to 60 deg. on an average, the lowest reading of this latter shows 52 deg., and the highest 64 deg. This lowest figure occurs twice, and was due to very stormy weather, but, outside of this, the ventilation appears to work with remarkable regularity, keeping always near the 60 degrees."

CORRESPONDENCE

Milk Tests

To the Editor of FARMING:

SIR,—Allow me to briefly notice W.E.B.'s article under the above head. W.E.B. shows his inconsistency when he says, a small cow that consumes a lot of feed is sure to prove a profitable one. How can a small cow consume a lot of food if his contention is right and consumption is according to weight? Unfortunately for his theory Daisy Texal 2nd is a profitable producer. Calamity Jane in actual trial standing alongside produced butter one cent per lb. cheaper, she produced more butter and the extra size did not count at all.

I might quote Prof. Haecker, who says in effect. "We have been making a great mistake in making rations by weight rather than by production." But there is no need to go so far a field. W.E.B. wants to make a cast-iron rule that a cow should be fed according to weight, and if that were not so any test based on rules suggested by him are of no account at all.

We suppose Mr. Butler practises what he preaches and what is the result of his method? We find in the recent test on the second day that his cows gave. Tamarina, 14 lbs., Lady Luke, 12 lbs., Daisy Rose (heifer), 9 lbs. A grand total of 35 lbs. of milk in 24 hours from the three or for the two days a total of 4.34 lbs. fat (Daisy Texal alone produced 4.295 lbs. fat). We presume this great work is the result of feeding scientifically according to weight. Granting that they were not fresh but were in milk two or three years instead of months, it is a poor showing. Is it the score card or feeding by weight that has brought those cows "to the present state of perfection?" The only change so far proposed is not to give a first prize to any cow that can't make butter in the test at the rate of 10 lbs. a week, which is low enough. In conclusion, let me say to my dairy friends everywhere, "Don't be scared by this food 'bogie.'" Keep a good cow, give her plenty and suitable feed and care and you will not only get a good return, but this method will develop your cow and besides, I believe, there is a pre-natal influence upon the calf, which,

by keeping the cow in the best of working condition, will be shown in the future years. Breed up and feed well is the combination that insures success.

Yours truly,
Curries, Ont., March 5th, 1899. GEO. RICE.

Lucerne or Alfalfa

To the Editor of FARMING:

In your paper of February 14th you have a valuable letter to FARMING from Mr. Davis, of Tweed, of which every word is truth. If all farmers would read that letter, and act upon it, it would be worth thousands to this Canada of ours.

Mr. Davis desires me to state through FARMING if it is hard to plough. Any man who knows how to plough with a sharp point and a fair team can plough it first rate. If any one does not believe this he can see eight acres ploughed on one of my farms. I have not seen any better work done last fall.

Lucerne clover seems to be demanding more attention at present, and it well deserves it, as every farmer who has used it can well testify.

Some of your readers ask in your number for February 28th if Lucerne will grow good in fall wheat. It did not catch good with me, but I think if sown when the land is dry and rolled it would be all right.

As to seed per acre, it depends whether you want it fine or coarse. I like to have some orchard grass seed with it, as it does well that way with me. I would say from twelve to twenty pounds per acre, with three pounds of orchard grass with it. It must not be fed the first fall if you want it good.

ALBIN RAWLINGS.

Forest, Ont., March 8th, 1899.

Should the Farmer Alone Pay for Good Roads?

To the Editor of FARMING:

Why is state aid for good roads the only just solution of this problem? Because it is the only practicable plan by which the great wealth of the cities can be brought to bear its just share of the expense. The country products go into the town and the city wares come out over the same common roads. The big towns are the farmer's best market, while the cities, great market is the vast farming community. Why should not the resident of the city help to pay for good roads to his country market as well as the farmer to his city market? In strict justice the city or commonwealth should pay not less than one-half the cost of improving all the leading market highways in every county. The very existence of the town depends on the trade it receives from the surrounding country. If good roads lessen the cost of this trade exchange and permits steady traffic, uninterrupted by mud blockade seasons, the larger the volume of trade and the larger the margin of profit to both townsman and farmer, and the larger the purchases they will thus be enabled to make. The hauling cost over bad roads is estimated to be 25 cts. per ton per mile, and only 5 cts. per ton per mile over good roads. It is but fair that all who use and are benefited by good roads should help pay the cost. The travelling representative of the city tradesman uses the common highways to visit every town, village and cross road store in the country in order to sell his wares, and the main highways are also used by the general public of the province. Therefore any plan that is designed to saddle all the cost of good roads on the farmer is evidently a most glaring injustice.

The city road reformer who wants to ride his bicycle through the country appears to think (as per a recent statement in *The Globe*) that the farmer needs more "education rather than legislation" and that "the Province is not ripe" for the latter. This unrighteous plan of educating the farmer to pay all the cost for good roads for the city man's equal benefit has been going on during the past

century, and the coming century will also pass by before the farmer will be ripe enough to fully accept so one-sided a proposition.

The farmer has long been ripe for a just legislative enactment for state aid for good roads similar to the renowned New Jersey State aid law, and it is rather the city road reformer with such unsound ideas who needs to be educated by the farmer in the first principles of simple justice. True, the farmers here and there in our province, yet only in shreds and patches, have for years back been building some creditable roads, but too many of these are botch stone roads, and unworthy the name of macadam.

The cost of building really first class stone roads such as are required (a botched stone road is a nuisance) is out of all proportion to the available property to be taxed in the sparsely settled country districts, and many farmers still in debt would lose their farms if required to pay such an extra road tax. The burden is too great to be undertaken by the farmers alone. One acre of property in some cities is probably worth from 10,000 to 100,000 acres in the country.

If it is a truism that all wealth comes originally from the soil then all Ontario may be said to have contributed to the building up of the large concentration of wealth represented by the city of Toronto, or, in other words, the business interests of Toronto extend over the whole province in various forms as represented by the newspaper, merchant, manufacturer, banker, loan company, insurance, lumber, mining and other interests. In like manner, but in a less degree, this is the case with every city, town and village in the province. All these city institutions are constantly sweeping in wealth from the country; the loan company by its semi-annual interest on hundreds of millions on farm mortgages, and the insurance lodges in every village sending in their monthly assessments, all tending to impoverish the country and to enrich the town. Can there be any plan that would better advance the well-being of the whole community, both townsman and farmer, than the returning of some of this wealth to the country whence it came, by way of state aid for good roads? I trow not.

The county road system has had a degree of success, and notably where large towns within the counties aided in paying the cost. This is a partial application of the principle of state or city aid. But this system is a great injustice to adjoining or outlying townships or counties that have no large towns, and which have also so largely contributed to the cities' wealth, yet have no power to tax the wealth of towns to aid them in return to improve their highways. Where the population is not dense enough, township and county councilmen stand appalled at the cost of good roads, and are unwilling to incur heavy debts, unless that debt can be lightened to the farmer by assistance from some good sized towns. Are not the farmers placed in an unfair position after helping to bonus the railroads with millions upon millions of dollars, and which has boomed the cities, so long as state aid is withheld from country highways? Good highways will "boom" the whole country as no other measure can.

The writer early advocated provincial aid for good roads, before knowing of the New Jersey State aid law, whereby the state pays one-third of the cost for improving the leading highways, and the county the other two-thirds, excepting ten per cent., which is paid by the property fronting on such highways. Since then this state aid principle has been adopted by the great commonwealths of Massachusetts, Connecticut, New York, Pennsylvania, and other leading states, with their millions of population, and being approved by such a mighty host that the writer feels that it has been fully vindicated on this continent and is bound to conquer all opposition in Ontario as soon as those who favor the good roads movement will sufficiently unite in pressing for its adoption.

The road reformers of these great states did not waste much time in futile education, but went straight for just legislation, and road improvement object lessons made swiftly popular the good roads movement. To the \$100,000 annually voted for colonization roads, and by which

some \$3,000,000 have been expended in Northern Ontario within the past thirty years, we should add a similar amount, or even more, to be drawn upon by the counties in rotation as they comply with the conditions laid down for provincial aid. Not till then will the good roads movement receive a general impetus.

J. F. BEAM,
Vice-President Ontario Good Roads Association.
Black Creek P.O., Ont., March 6, 1899.

Live Stock at the Ottawa Fair

To the Editor of FARMING:

Since the principal fairs to be held this year have now selected their dates, no doubt the breeders throughout the western, as well as the eastern sections of the country, will be thinking out a circuit, I would respectfully suggest the following:

After showing at Toronto, split up, which they usually do between London and Quebec, clearing from the latter cities on Friday, 15th September, arriving in Ottawa Monday, September 18th, being the second week of the latter exhibition and the latest date for receiving live stock upon their grounds. None of the stock shown at any of the western fairs can very well show at Sherbrooke on account of the early dates which they select; but the breeders showing at Sherbrooke could also form a circuit taking in Quebec and Ottawa, all stock returning from the Ottawa show free, in accordance with the various railway arrangements heretofore existing, and which will likely be repeated this year as usual.

E. McMAHON,
Secretary Central Canada Exhibition Association.
Ottawa, Ont., March 9, 1899.

Nova Scotia Farmers' and Dairymen's Convention.

To the Editor of FARMING:

The fourth annual convention of this association was the largest and most successful ever held in the province. The sessions were held in the famous old historic town of Annapolis Royal, which boasts of being the second oldest town site to be found in North America. The president, J. Rufus Starr, in his annual address, spoke strongly on the urgent necessity existing for agricultural education in this province which is only awakening to its possibilities. He further strongly advised more hearty co-operation among the farmers, especially along the line of cheese and butter-factory work. There are few, if any, districts in the world with better natural advantages for dairying, and its profitable adjunct pork-production, than this splendid Annapolis valley.

Prof. Shutt gave a most interesting address upon the results of his experiments in handling farm-yard manure. These have been embodied in a bulletin issued from the C.E.F., a copy of which can be had for the asking. Mr. Shutt advised the feeding of the coarse grain on the farm, retaining by this means 75-85 per cent. of the fertility. It is greater wisdom to conserve the fertility by careful handling of the farm-yard manure than by investing large sums in commercial fertilizers. In order to make a more permanent impression upon his hearers Mr. Shutt very kindly distributed printed sheets, giving a summary of his work along this line. It is a good precedent.

In a pithy address, full of good things, Hon. Sidney Fisher, dealing with agriculture in general, scored a splendid success. He reproached the farmers of Nova Scotia with allowing their brethren in Ontario to still supply Maritime markets with the best in beef, mutton, and pork. There is no disability of soil or climate as an excuse of this, it is because the farmers down here are not alive to their great advantages and possibilities.

Dealing with the question of dairying, Editor Hubbard, of the *Co-operative Farmer*, emphasized the importance of

a pure water supply and food free from objectionable taints and odors in the production of No. 1 cheese or butter. He protested against the feeding of large quantities of turnips to dairy cows. Turnips are a part of the staple ration with eastern dairymen. Mr. Hubbard told his audience that, while the local consumer might not object to turnip butter, it would be impossible to export it to the English market, which finally must be our common goal.

Mr. R. Robertson, formerly a successful breeder of Ayrshires in Quebec, now superintendent of the Nappan Farm, gave many valuable pointers on dairying in general. Being a warm admirer of the "special purpose" dairy cow, he advised the farmer to waste no time with stock unsuited for the business. He encouraged the dairymen by stating that, although he had had a long and varied experience in dairying, he could produce a pound of butter in Nova Scotia as cheaply as he could anywhere else. Mr. Robertson advocates "all the year round" dairying; he has facts and figures proving its advantage. At the farm he experimented with four fall cows and four spring-calved ones of nearly equal merit. In the year the former made \$10.75 more profit than the latter, and also marketed nearly fifty per cent. more of the feeding-stuffs grown on the farm.

The location of a new school of agriculture and horticulture was a very live question at the convention. All were agreed that it was essential that the school should be established. There is a strong friendly rivalry between East and West to secure it, but the good people of King's County think they have the strongest claim owing to their favorable conditions of soil and climate. A strong resolution was passed urging the Government to take action in the matter at an early date.

In this province there is at least one model creamery, that operated by the Acadia Dairy Co. at Wolfville. Mr. F. M. Logan, who has managed the business for five years, gave an interesting account of his methods. The company manage a retail business in Halifax, keeping a man and team constantly employed in delivering their goods direct to the consumer. A large quantity of the butter made is put up in three and five-pound earthenware crocks, which are durable, cheap, and easily kept clean. At the Halifax Exhibition, 1898, Mr. T. J. Dillon awarded an exhibit of Mr. Logan's butter 99½ points. How is that, Ontario creamery men? It costs 2½ cents per lb. to deliver this butter, which sells for 23 to 25 cents. Last year the company manufactured nearly \$16,000 worth of cheese and butter. Patrons of this creamery have netted as high as 18 cents per lb. of butter fat. Ontario sends thousands of dollars' worth of butter to Halifax every year. Mr. Logan can see no good reason why this should not be made in the province, but those who can grow apples netting \$3 per barrel will naturally be slow to go into dairying.

Mr. J. E. Hopkins, who was formerly a successful farmer and cheesemaker near Ingersoll, but who for six years has been Dairy Superintendent in Nova Scotia, urged the farmers to work more on co-operative lines in the dairy business. He claimed that Nova Scotia is to-day making as good butter as is to be found anywhere, but not in large enough quantities. Mr. Hopkins has done a great work, both in the Dairy School and among the factories, in improving the quality of the dairy products of this province.

Your correspondent came over from New Brunswick specially to discuss "Breeding and Feeding of the Bacon Pig." This question is a very live one just at present, as a strong company have commenced work on the erection of a pork-packing house at Middleton. There are very few bacon type pigs to be found in this country. Mr. McGill left last week for Ontario, to purchase a carload of breeding stock to be distributed among the farmers. At present there is no establishment of this kind operating in this province.

This valley of Annapolis is a most delightful spot, quite justifying the claims of the natives that it is truly "earth's paradise."

Kentville, N.S., Feb. 28th, 1899. J. J. FERGUSON.

QUESTIONS AND ANSWERS.

POULTRY ; SORES ON CATTLE.

Mr. Herbert O. Stevens, Shetland, Ont., asks :

(1) " Would some one give his experience in raising geese or ducks by setting under hens, having to buy the eggs ?

(2) Which do you think are the most profitable to raise of the four kinds, geese, ducks, turkeys and chickens now that there is such a demand for them in the British markets ?

(3) Has someone a home-made device for crushing and preparing bones (green or otherwise) for fowl, other than by burning ?

(4) We have some young cattle, from one year to coming three years old, that have sores broken out on them, around their eyes and elsewhere. The sores are blotchy and cause an eruption of the skin. They look scabby at first and if picked or rubbed will look raw and nasty. The cattle are all stabled at nights and get wheat, oat and some pea straw. They are all in very good flesh, but one or two steers. What is the trouble ? I might say that two young cattle not stabled at all are not affected.

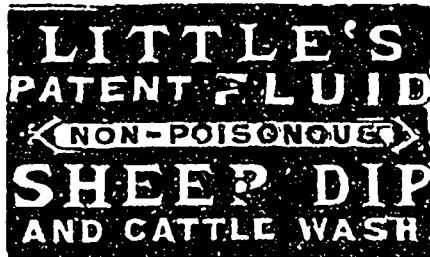
The questions on poultry are answered by A. G. Gilbert, Supt. Poultry Department, Central Experimental Farm, Ottawa.

(1) Goose eggs are frequently put under hens and hatched with success. The common practice is to allow the goose to hatch out her young. Much depends upon circumstances. If eggs are bought it might be more convenient to use hens. Our ducks last year were hatched out by hens.

(2) Much depends upon conditions. There is money in chickens, ducks, geese and turkeys, whether raised separately or in combination. Separate ground, of course, being allotted to each kind. Some localities are better adapted to geese raising than others. The district surrounding Smith's Falls is a noted turkey-raising country. Geese require grazing land. Turkeys are foragers. Old ducks, used as breeders, will be better with access to water. Chickens can be raised almost anywhere.

(3) No home-made device is as good as a bone crusher and no bones are better than green bones. The latter should be cut not ground. Bones should not be burned.

(4) The disease affecting the cattle is probably ringworm. It is caused by a vegetable parasite and there are two or three forms of the disease. We would advise washing and cleansing the scabs thoroughly and rubbing with a tincture of iodine every other day for a few days. The affected parts should be washed clean and softened with soap and water before each application of the iodine. The disease is contagious and the reason why the two cattle kept outside have not taken it is because they have not been housed in the same building with the diseased animals.



The Original Non-Poisonous Fluid Dip.

Still the Favorite Dip, as proved by the testimony of our Minister of Agriculture and other large Breeders.

FOR SHEEP

Kills Ticks, Maggots ; Cures Scabs, Heals Old Sores, Wounds, etc., and greatly increases and improves growth of Wool.

CATTLE, HORSES, PIGS, Etc.

Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals Saddle Galls, Sore Shoulders, Ulcers etc. Keeps Animals Free from Infection

No Danger, Safe, Cheap, and Effective.

BEWARE OF IMITATIONS.

Sold in large tins at 75 Cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to Breeders, Ranchmen, and others requiring large quantities.

Sold by all Druggists. Send for Pamphlet.

ROBERT WIGHTMAN, Druggist, Owen Sound, Sole Agent for the Dominion.



in making Butter or Cheese can be obtained only by using the best ingredients.

That is why

so many good butter and cheese makers always insist on having

RICE'S PURE SALT

Every Package Guaranteed.

Sole Makers :

The North American Chemical Co., Limited

Godérich, Ont.

A SMART PUBLICATION

that pleases its readers will please its advertisers. The Co-Operative Farmer has the name of being a successful paper that pleased its readers from the start. Fostered by the leading farmers' organization in New Brunswick, it was quickly adopted and endorsed by the other Farm, Dairy and Stock Associations of the Maritime Provinces, and is to-day the Home Farm Paper of Eastern Canada.

Free Sample Copy and advertising rates on application to

CO-OPERATIVE FARMER, SAssex, N.B.

P LANT 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.

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, thorough work, a strong staff and good results.

You may enter at any time. Write for prospectus. W. H. SHAW, Principal. Yonge and Gerrard Sts., Toronto.

STRATFORD

NON-BETTER IN THE DOMINION!



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 Bialo Teachers; moderate rates; board cheap. Students admitted at any time. Write for beautiful Catalogue.

W. J. ELLIOTT, Principal.

HAMILTON



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.

BRITISH COLUMBIA FRUIT GROWERS.

A meeting of the British Columbia Fruit Growers' Association was held recently to discuss the facilities for disposing of the fruit crop of that province to the greatest advantage. A special committee that had been previously appointed made the following recommendations: "1. That the Fruit Growers' Association act only in an advisory manner as to the marketing of British Columbia fruit in the Northwest. 2. That the Association send a man to the Northwest whose special business it would be to keep the fruit growers of this province posted as to the market conditions, prices, and the best methods of transportation during the shipping season, and such information to be sent by wire or mail as necessity demands, for publication

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

LABOR SAVING UP-TO-DATE BROADCAST SEED SOWER

For Sowing Wheat, Oats, Rye, Barley, Flax, Grass Seed, Clover Seed, etc. In fact any kind of Seed, Broadcast. No careful economical farmer will continue to sow his seed by hand (the old style) when he can get one of these machines at our reduced prices. They will save their cost almost daily in the saving of seed. They say nothing about the saving of time and more even distribution, which will have a great effect on the crop. They will sow from 4 to 6 acres per hour at a common walking gait.

Valuable labor-saving, seed-saving, crop-increasing machines. The seed is not thrown upward, but distributed right and left evenly, and will save at least one-third the seed used in hand-sowing. They are operated by a crank, which revolves the distributor and works the vibrator rapidly. It is the only seed sower having a satisfactory vibrator which prevents clogging. They are quickly adjusted to sow any quantity desired. The grain sack holds one bushel, made strong, well finished, and weighs about four pounds. It will last many years. At a round will sow wheat 50 feet, buckwheat and barley 48 feet, flax seed 36 feet, grass and clover seed from 27 to 36 feet. These are the best machines ever invented for the purpose, and should be in the hands of every farmer. Satisfaction guaranteed. Send for one to



This Crank Seeder is preferred by most people. It is the same as the other, except the gear. We guarantee them to give entire satisfaction.

Price, \$1.75 each.

Robt. Evans & Co.

Seed Merchants & Growers
HAMILTON - - 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, as 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.

RELIABLE SEEDS

To introduce our reliable Seeds to "Farming" readers, we make the following liberal offer:

THESE ARE NOT PACKETS

put up with half the quantity of seeds in them to our retail counter at 5 cents each. Take your choice,

sell at a reduced price, but are full sized packets, same as we sell over our own retail counter at 5 cents each. Take your choice, either collection, remit us the amount, and we will guarantee safe arrival.

\$1.60. No. 1-VEGETABLE AND FLOWER COLLECTION--for \$1.00.

- 1 Pkt. Best Early Turnip.
- 1 " Cabbage, Charleston Wakefield, early.
- 1 " Cabbage, Lupton or Imp. Vandergaw, late.
- 1 " Carrot, Long Red Coreless.
- 1 " Cauliflower, Extra Early Paris.
- 1 " Cucumber, Pearce's Imp. Long Green.
- 1 " Cucumber, Pickling.
- 1 " Celery, Giant Golden Heart.
- 1 " Lettuce, Imp. Hanson.
- 1 " Musk Melon, Burpee's Melrose.
- 1 " Water Melon, The Fordhook.
- 1 " Vine Pea.
- 1 " Onion, Large Red Wethersfield.

- 1 Pkt. Parsnip, Imp. Hollow Crowned.
- 1 " Onion, Yellow Globe Danvers.
- 1 " Pepper, Long Red Cayenne.
- 1 " Pumpkin, Japanese Pie.
- 1 " Parsley, Taber's Exquisite.
- 1 " Radish, Scarlet Turnip.
- 1 " Radish, Long Brightest Scarlet.
- 1 " Salsify or Vegetable Oyster.
- 1 " Spinach, Giant Thick Leaved.
- 1 " Squash, Essex Hybrid.
- 1 " Squash, English Vegetable Marrow.
- 1 " Tomato, Pearce's Princess.
- 1 " Turnip, Golden Stone.

- 1 Pkt. each Summer Savoury, Sage, Thyme.
- 1/2 Pint Corn, White Cory Sweet.
- 1/2 Pint Beans, Golden-eyed Wax.
- 1/2 Pint Peas, Premium Gem.

FLOWER SEEDS

- 1 Pkt. Balsam, Best Double Mixed.
- 1 " Aster, all varieties.
- 1 " Mignonette, Large Flowering Stock, Dwarf German 1 1/2-week, mixed.
- 1 " Phlox, Grandiflora Mixed.
- 1 " Nest-Egg Gourds.

Above collection contains 29 pkts. Vegetable Seeds, 6 pkts. Flower Seeds, 1/2 pt. Sweet Corn, 1/2 pt. Wax Beans, 1/2 pt. Garden Peas, sent to any address, post paid.

No. 2-VEGETABLE AND SEED COLLECTION--50c.

- 1 Pkt. Beet, Early Turnip.
- 1 " Cabbage, Charleston Wakefield.
- 1 " Carrot, Long Red Coreless.
- 1 " Cucumber, Pearce's Long Green.
- 1 " Celery, Golden Heart.
- 1 " Lettuce, Improved Hanson.

- 1 Pkt. Musk Melon, Burpee's Melrose.
- 1 " Water Melon The Fordhook.
- 1 " Onion, Yellow Globe Danvers.
- 1 " Parsnip, Imp. Hollow Crowned.
- 1 " Parsley, Taber's Exquisite.
- 1 " Radish, Scarlet Turnip.

- 1 Pkt. Salsify or Vegetable Oyster.
- 1 " Squash, English Vegetable Marrow.
- 1 " Tomato, Pearce's Princess.
- 1 " Turnip, Golden Stone.
- 16 Pkts. sent to any address, post paid, 50c.

No. 3-VEGETABLE SEED COLLECTION--25c.

- 1 Pkt. Beet Eclipse Turnip.
- 1 " Carrot, Scarlet Model.
- 1 " Cucumber, Pearce's Long Green.

- 1 Pkt. Cabbage, Charleston Wakefield.
- 1 " Lettuce, Improved Hanson.
- 1 " Onion, Yellow Globe Danvers.

- 1 Pkt. Parsnip, Hollow Crowned.
- 1 " Radish, Scarlet Olive-shaped.
- 8 Pkts. for 25c, post paid.

COUPON

The purchaser of either of the above collections can by cutting out this coupon and sending with order secure a packet of either "Giant Idaho Coffee Pea" or our "Grandest Mixture of Poppies"—mark an X opposite or over the name you want, and mail this with order.

JOHN S. PEARCE & CO., LONDON ONT.

Seedsmen to the Canadian People

NOTE—This will only appear this week.

and dissemination throughout the province. 3. That the Association should secure the services of an expert in packing and shipping, to give in formation re packing, condition of fruit for shipment, and the loading of cars, etc., at points to be determined. 4. That the Association should itself undertake the inspection or shipping of a carload of fruit to Winnipeg, at the commencement of the season, keeping an accurate account of the condition of the fruit and temperature of the car, icing, etc., both at the time of shipment and during transit, and all other particulars of moment concerning it, and that the fruit, on arrival at Winnipeg, be displayed to the best advantage and well advertised, with a view to demonstrating the superior quality of British Columbia fruit. 5. That the committee be increased to seven, and include the Minister of Agriculture."

MANITOBA LIVE STOCK AND DAIRY MEETINGS.

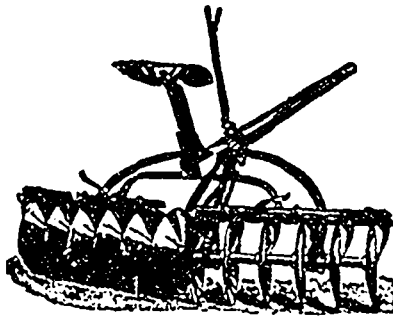
These were held at Winnipeg during the second week of February, and were full of interest and profit to the farmers of that country. Wheat growing has been, and will be, the mainstay of the Manitoba farmer for many years to come; but, as the Hon. Mr. Greenway pointed out in his address to the breeders, it will be necessary, even on the fertile prairies of the West, to keep more stock on their farms if they wish to keep their lands in a condition to grow wheat successfully.

A strong resolution was passed, urging upon the Dominion and Local Governments, the municipal councils, and the public generally, and stock adopting, at the earliest possible date, systematic measures for the suppression and eradication of tuberculosis among cattle.

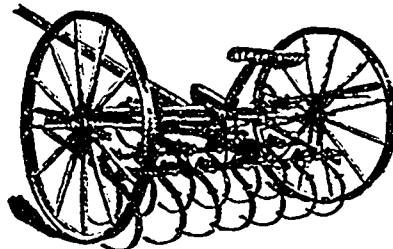
A resolution was also carried, urging upon the Dominion Government the need of passing a measure prohibiting the use of the square box or Australian butter package, for any but creamery butter, two or more persons contributing the milk of not less than two herds of cows to be considered as constituting a creamery.

At the Horticultural Society's meeting a resolution was adopted urging the society to use its influence to secure an amendment to the Dominion San Jose bill so as to allow, under proper conditions of inspection, nursery stock to come into Manitoba and the Northwest Territories from the States of Minnesota, Wisconsin and Dakota. The western fruit-growers claim that under the law as it now stands they have to get their nursery stock from Ontario, where it is reported the scale exists, while they are unable to get it from the adjoining States where the San Jose scale is not known to exist.

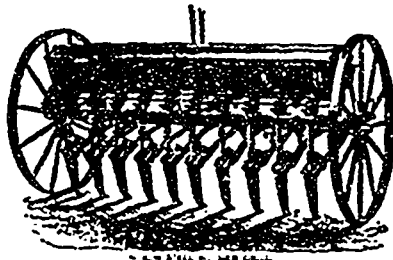
Prof. Craig, of Iowa, gave several addresses on live-stock husbandry, who together with local speakers help to make the series of meetings very profitable.



NOXON NEW BUFFALO PATENT ALL STEEL DISC HARROW



NOXON No. 12 SECTIONAL SPRING TOOTH CULTIVATOR



NOXON STEEL DISC HARROW

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 tines-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, Mowers 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.

THE BRANDON FAIR.

We have received notice from Mr. F. J. Clark, manager, that Western Manitoba's big Fair will take place at Brandon on July 18th, 19th, 20th, and 21st. \$7,000 will be given in prizes, and the prize list will be ready for distribution on May 1st. This fair has been a very successful one heretofore, and the directors this year intend to eclipse all previous successes. The accommodation for exhibitors is good, and the grounds are well laid out with evergreens and shrubs.

THE NUMBER OF SEEDS IN A POUND OF CLOVER.

A student of the Michigan Agricultural College gives the following table to show the number of seeds in a pound of the clover and timothy. In each case the number in a gram was correct:

| | Seeds Per Gram. | | | Seeds Per Pound. |
|----------------|-----------------|----------|----------|------------------|
| | High-est. | Low-est. | Average. | |
| Alfalfa | 585 | 454 | 523 | 237,000 |
| Alsike clover | 1,788 | 1,536 | 1,664 | 755,000 |
| Crimson clover | 363 | 267 | 323 | 147,000 |
| Mammoth clover | 720 | 616 | 674 | 305,000 |
| Red clover | 668 | 406 | 612 | 291,000 |
| White clover | 1,992 | 1,584 | 1,832 | 834,000 |
| Timothy | 3,416 | 2,572 | 3,736 | 1,731,000 |

One pound of red clover, containing 291,000 seeds, would contain 249,815 living seeds, or six per square foot on one acre of land, and one pound of timothy containing 1,731,000 seeds would contain 1,159,971 living seeds, or twenty-six per square foot on one acre of land. With these tables in mind a farmer can tell how many

Woodstock Steel Windmills

FOR POWER AND PUMPING



Get a **DANDY** WITH GRAPHITE BEARINGS They Run without Oil.

Steel Towers, Pumps, Tanks, Saw Tables and Watering Troughs, etc.

WOODSTOCK WINDMOTOR CO., Limited
Woodstock, Ont.

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.T.R. Station. Good boating and fishing. \$2,500.00. Apply to

E. ROLLESTON TATE
Lakefield, Ont

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.

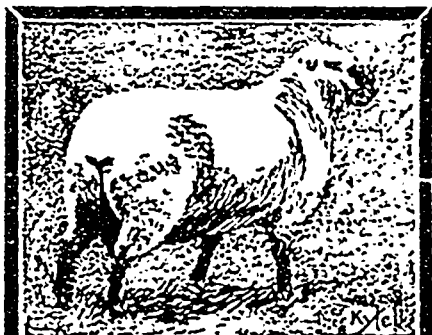
NURSERY STOCK IN VERITY!



Our new catalogue is our agent, giving description, PRICES, and how to plant fruit, ornamentals, shrubs, ROSES, Clematis, evergreens and small-fruit. All well assorted, clean and hands-me at the Central Nursery. Shall we send you our—nineteenth 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.



Persicatic Sheep and Animal Wash

For the complete and effectual removal of all insects or vermin peculiar to sheep and cattle. Powerful, without being harsh; immediate in effect, without any irritating effects; it leaves the animal refreshed and in good spirits after use; does more than destroy the pests, it completely removes all traces of their attacks, healing sores on hoofs, curing open sores and leaving the skin whole and sound. Mr. G. A. Brodie, a prominent stock-raiser of Bethesda, Ont., used it with great success in castrating lambs, the wash healing the wounds rapidly and keeping the maggots away. He considers it the most effectual wash in the market, and heartily recommends it to farmers generally.

If your dealer hasn't it, write us for it, and tell us of anything special in the ailments of your flocks or herds and we'll advise you how best to use it.

The Pickhardt Renfrew Co.
(LIMITED)
STOUFFVILLE, ONT.



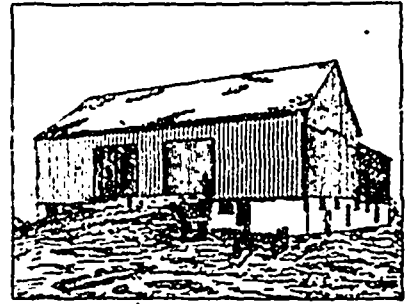
Established 1841.

53 Years in Use.

WORK DONE WITH

Thorold Cement

SPEAKS FOR ITSELF



Barn of ALLAN McMANE, Elma Township. Basement Walls, 8 1/2 x 10 x 9 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 24 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 Siles, 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.

WANTED

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

SMITH & REED

(Successors to A. M. Smith)

Dominion Nurseries, - 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, Ontario

seeds he is sowing to a square foot, provided they are evenly sown.

ABERDEEN-ANGUS PREMIUMS.

The American Aberdeen-Angus Breeders' Association desires to apply \$100 as special prizes at some Canadian show during 1899 as grand sweepstakes award either upon breeding or fat cattle, and is seeking information as to the best show to patronize. There are several shows in Canada that could fill the bill, and there should be no difficulty about the place. These special premiums are applicable only when Aberdeen-Angus cattle win the awards. Thomas McFarlane, Harvey, Ill., is the secretary of the association.

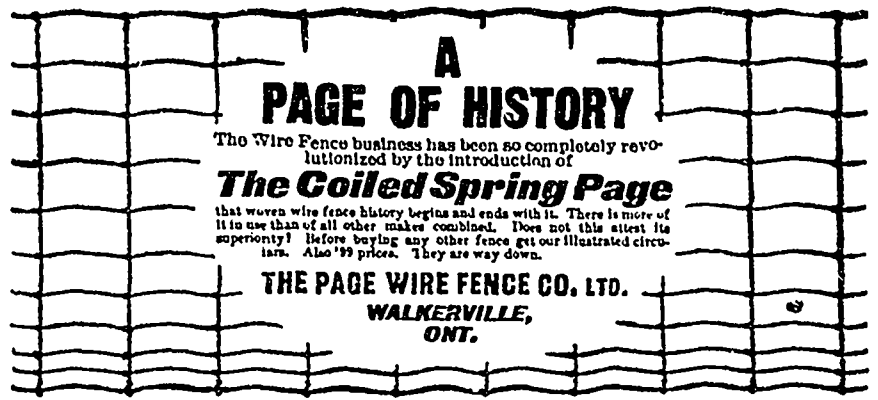
Stock Notes

MR. GEORGE THOMSON, of Bright, Ont., is advertising a dispersion sale of his stock on Friday, March 24th. This sale should be largely attended by those desirous of obtaining first-class stock. The catalogue of sale includes a number of Clydesdale and driving horses, amongst them a purebred Clyde mare, registered; a draught mare eligible for registration; a prize-winning bay filly, rising 3 years old, and two aged horses, good workers or drivers. The cattle comprise 9 Jersey cows, 2 Shorthorn two-year-old grade heifers, 4 heifer yearlings, 3 last s ring heifers (some purebred), one A. J. C. C. aged cow with bull calf at foot, a yearling heifer from the same cow, one A. J. C. C. bull two years old, and two heifer calves. In Berkshires there are a number of purebred individuals from the best prize-winning stock, including the well-known aged boars, Highclere's Crown and Mariner; the imp. yearling, Stumpy Prince; the aged sow, Charmer, bred by Mr. Thos. Teasdale, of Concord, supposed to be in pig; a yearling sow, also bred by Mr. Teasdale and due to pig before the sale; a yearling sow, dam Charmer, by Highclere Crown, supposed to be in pig; Royal Lady, due to farrow in April, and a number of others of equally good breeding. There are also a number of sheep, geese, bronz. turkeys, Rouen ducks, and about 100 hens of different breeds. Mr. Thomson, having sold his farm, will at the same time dispose of all his farm implements, of which he has a very complete outfit, and, as there will be no reserve, some decided bargains may be looked for.

Publishers' Desk.

Danish Island Oats.—Mr. John Kenward, a prominent farmer of Oxford county, Ont., says: "I sowed 20 bushels Danish Island oats by weight on 12 acres on April 20th, 1898, and cut them July 25th and 26th, and threshed 400 bushels, or 75 bushels per acre, or 75 bushels for every 56½ lbs. of seed. The land was not very rich, as it had been cropped for over fifty years, and there was no fertilizer of any kind used on the land." There is no grain that will show better results and give more satisfactory returns than a change and new varieties of seed oats. We are offering the Danish oats as premiums for new subscribers, and our friends, therefore, have an excellent opportunity of testing its merits. See our premium list.

The Des Moines Incubator.—Attention is called to the "Rocroy Farm" advertisement on the last page of cover. The incubator offered is cheap and is said to be effective. The Des Moines Incubator Co. claim to operate the largest incubator in the world, and they make machines suitable for all classes of buyers from the cheapest to the most expensive. Send 3-cent stamp for a handsome illustrated catalogue of different varieties of poultry and incubators to "Rocroy Farm," 24 St. Sulpice street, Montreal, Que.



**A
PAGE OF HISTORY**

The Wire Fence business has been so completely revolutionized by the introduction of
The Coiled Spring Page
that woven wire fence history begins and ends with it. There is more of it in use than of all other makes combined. Does not this attest its superiority? Before buying any other fence get our illustrated circulars. Also '99 prices. They are way down.

THE PAGE WIRE FENCE CO. LTD.
**WALKERVILLE,
ONT.**



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 Results were Extraordinary.—Wapella, N.W.T., Feb. 13th, 1897. The Lawrence-Williams Co., Cleveland O.—I keep your "Gombault's Caustic Balsam" in stock. I have sold it for the last three years. I have been in the drug business in Ontario and this country, but it is not known to the majority. I sold a bottle which I saw used under my own supervision, which gave most universal satisfaction. The results were extraordinary. I sell it here at \$1.50 per bottle. I am quite a horseman, and would be pleased to use any pictures of the noted racers of the day, to our mutual benefit. J. A. MACDONALD.

High-Grade Farm Machinery. A representative of FARMING visited the town of Brockville a few days ago and dropped in to see Mr. J. N. Pablow, the manager of the Mann Manufacturing Co., Limited, the manufacturers of the famous "Giant" agricultural machines. Here, as elsewhere, everything

The Sramotor 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 causes combined?

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

Over 100 GOLD MEDALS AND THE HIGHEST AWARDS have been granted the Sramotor 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.

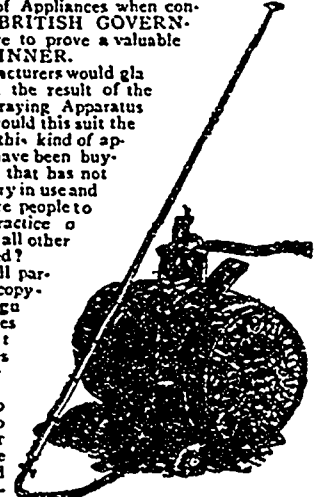
Certificate of Judges' Award:

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 Sramotor, made by the Sramotor Co. of London, Ont., was awarded First Place.

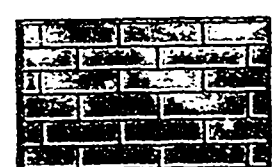
H. L. HURT, H. PATTIN, Judges.

Agents Wanted.

SPRAMOTOR CO.
357 Richmond St., London, Ont.



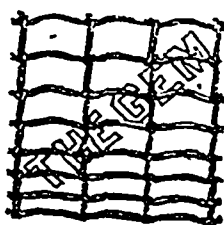
The JONES LOCKED WIRE FENCE



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



Still at the front! Not only the cheapest, but fastest and best. Price \$5 00.

Highest grade Coiled and other WIRE for sale. Write for particulars. Agents Wanted.

McGregor, Banwell & Co., Windsor, Ont.

BACON PIGS
IN
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 573.

FIFTH ANNUAL

Canadian Horse Show,

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

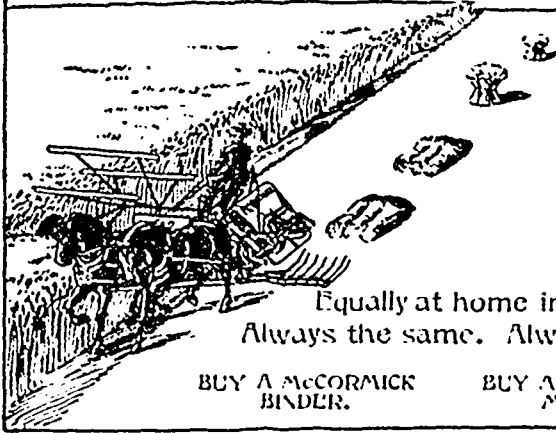
The Armouries, Toronto, Canada

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.

Astonishing The Nations!

That has always been the way with the McCormick. Always New! Always in Front! Always Leading! The most Modern of all Machines!



Equally at home in Oriental wheat fields and American prairie lands. Always the same. Always efficient.

BUY A McCORMICK BINDER.

BUY A McCORMICK MOWER.

BUY A McCORMICK FODDER SHREDDER.
BUY A McCORMICK CORN HARVESTER.

BUY A McCORMICK REAPER.
BUY A McCORMICK RAKE.

pointed to the fact that an era of prosperity had set in. The Mann Co. make a specialty of spring-tooth machinery. They were the originators and patentees of the fit and only spring-tooth helper, attached to each of the Giant cultivators, which has been often imitated but never equalled by any other device. The company have been in business in Brockville for 20 years and have established a reputation for high-grade tillage and seeding machinery extending to all parts of the world. Our representative was shown invoices for two cars of machinery which were being shipped to Great Britain while he was there, and orders for at least twenty more carloads were being filled. In all countries where high grade machinery is required there is a demand for the "Giant" machines, and at the present time local and foreign trade has stimulated demand to such an extent as to fully tax the resources of the firm. All hands are kept constantly on the move in order to keep pace with the season's trade. Their advertisement appears in another column but we suggest that our friends should procure a copy of the firm's illustrated catalogue, which will be sent to any address free on application.

SEED PREMIUMS.

Choice New Varieties of Field and Garden Seeds Absolutely Free to the Readers of "Farming."

We have made arrangements with Messrs. John S. Pearce & Co., of London, Ont., which enable us to offer the choicest new varieties of this season's seeds as premiums for new subscriptions. We are assured that these seeds are selected from the best stocks which it is possible to procure. Some of the varieties are not only choice but rare, and those who desire to obtain them should act promptly, as the supply of these is limited and will very soon become exhausted. Every reader of FARMING can easily obtain the requisite number of subscriptions if he will try. It will not only pay as an immediate and present means of obtaining something really valuable but enable those securing the seeds to make large profits from the product of them in the future. Strike while the iron is hot.

"The Pearce" Potato, grown from seeds imported from Texas, claimed to be the best cooking and the longest keeping variety grown in that state. It is oblong in shape, has a fine blush and white, mottled skin, with strong eyes even with the surface. Large and very smooth. Flesh very white, cooking up dry and mealy. Of such strong growth the bug does not work on them as it does on some of the more delicate growing varieties. Price, 50c. per lb; \$2 per peck; \$6 per bush. One lb. free with one new

Auction Sale OF THE VALLEY HOME 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, Minas, Jilts, Cecilia, Bessies, and Duchesses of Gloster Sired by the best imported Cruick-shank 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.

FREE FOR ONE DAY'S WORK

WE GIVE this fine WATCH, with a chain and charm, for selling 2 dozen gold-topped, enamelled Lever Collar Buttons at 10c. each, or a lady's watch and guard for selling 3 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. Un-sold 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.

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.

yearly subscription; one peck free with 3 new yearly subscriptions at \$1 each.

Pearce's Improved Half Long White Carrot. Best in shape, best in quality, best in yield, and best keeper. Wherever shown has carried off first honors. The only true half-long carrot in cultivation. Comparative value by experimenters of Ontario Agricultural and Experimental Union, 100 per cent. Took the lead in point of yield in co-operative experiments in 1896 and in 1897, and gave an average of 3 to 4 tons per acre more than the large white Belgian variety, and has beaten everything in sight for six years. Average yield for six years at the Ontario Agricultural College Farm, 29.28 tons per acre. Price, 40c. per lb., or 2 lbs. for 50c. Two pounds free with one new yearly subscription at \$1.

New Zealand Oats. Introduced for the first time this year. Yielded 100 bushels to the acre the past season. Grain beautiful white color, long and slim, with thin hull, and a first-class weighing variety. Very stiff, strong straw, and never known to lodge. Stools out well, and thus requires less seed to the acre. Entirely free from rust on all kinds of soil. Price, 25c. per lb.; 3 lbs., 50c.; peck, \$1; 1/2 bush., \$1.50; bush., \$2.50. Three pounds free with one new yearly subscription; one peck free with two new yearly subscriptions; half bushel free with three new yearly subscriptions at \$1 each.

Danish Island Oats Very productive; yielded 900 bushels for every 56 1/2 lbs. of seed sown; strong, stiff straw; plump, thin-hulled, bright grain; does not lodge, nor grain fall out. As many as forty stocks are produced from a single grain. Price 15c. per lb.; 4 lbs., 50c. Four pounds free with one new yearly subscription at \$1.

White Hull-less Barley. It is hull-less, beardless, early; yields over 60 lbs. to the measured bushel; yields well on poor land and enormously on good land; makes better pork than corn; makes excellent flour; the straw makes good hay. Of inestimable value to every one who feeds stock. Price, 25c. per lb.; peck, 75c.; bush., \$2.50; 2 bush., \$4.50. Three pounds free with one new yearly subscription; one peck free with two new yearly subscriptions; half bushel free with three new yearly subscriptions at \$1 each.

Mandscheuri Barley. Price, 75c. per bushel. One bushel free with two new yearly subscriptions at \$1 each.

Prussian Blue Peas. Price, \$1.25 per bushel. One bushel free with two new yearly subscriptions, with 15c. for bag.

Canadian Beauty Peas. An entirely new white field pea; grain large; bright, clear color; of the white Marrowfat type. In point of productiveness it leads all field peas. Price, per bushel, \$1.25. One bushel free with two new yearly subscriptions at \$1 each, with 15c. for bag.

Hungarian Brome Grass. The great forage grass of Russia. The greatest boon ever discovered. It is not only the grass for dry sections, but can be raised on almost any kind of soil in any climate. Animals eat it greedily, green or dry. Price per lb., 20c. Three pounds free for one new yearly subscription at \$1.

The descriptions given above are extracted from the annual seed catalogue of Messrs. John S. Pearce & Co., a copy of which may be obtained on application to them by anyone desiring further information.

The prices and terms stated above are for seeds f.o.b. at London, freight or express at purchaser's expense. Small parcels which can be sent by mail are prepaid.

Evans' Electric Bug Exterminator. The Workman's Friend and the Insect's Enemy. One of these machines with tin reservoir—indispensable to every farmer, fruit-grower, and gardener—will be sent free, postage or express paid, for two new yearly subscriptions at \$1 each.

Sample copies of FARMING will be sent free to anyone who will undertake to form a club. Address

FARMING

44-48 Richmond 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 DULMAGE, 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 LEGHORNS—Buff Rocks. Winners Petrolea, Owen Sound, Ont. Brantford—hot competition. Eggs \$1.50 and \$2.00 per 15. Fine cockerels cheap. Write sure. THOMAS H. MILLS, Box 277, Sarnia, Ont. [1f]

STRATFORD BROS.
BRANTFORD, ONT.

Tamworth Boars, Dorset Rams, Shetland Ponies, Light Brahmas, Houdans, Cornish, Indian Games, Black Langshans, White Langshans, White Plymouth Rocks, Buff Plymouth Rocks, Barred Plymouth Rocks. *Prizea Right*

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 never intended to hatch chickens—made merely to sell. **The Von Cullin Incubators** are sold on trial subject to your approval. Simplest machine made. 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.

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-41 Box M., KOSSUTH, ONT.

FOR MONEY FOR AGENTS



THE STAR RIVETER

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

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



SHOEMAKER'S POULTRY BOOK on **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 for built 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, Cardington, O.



HATCH CHICKENS BY STEAM—with the a simple, perfect, self-regulating **EXCELSIOR INCUBATOR**. Thousands in successful operation. Lowest priced first-class hatchers made. **GEO. H. STALL,** 114 to 122 S. 6th St., Quincy, Ill.



FREIGHT PAID

to any address. That's the way we send out our **CYPHERS INCUBATOR.**

It combines the good qualities of all machines and has the faults of none. Our Catalogue and Guide to Poultry Culture tells all about the laws of incubation, and how to raise fresh and market poultry—all about the money end of the business. Contains plans for construction and cost of modern poultry houses and many other things worth knowing. Sent for 10c. **THE CYPHERS INCUBATOR CO.** Box 69, Wayland, N. Y.

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.

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 containing valuable information, prices, etc.

Isaac Usher & Son, Queenston, Ont.

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 - 20050 - 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.



Sheep, Cattle, Calf and Hog Labels.

Send for circular and prices.

R. W. JAMES, Farm Implement Forwarding Agency, Toronto, Ont.

TAMWORTH AND CHESTER WHITE

BOARS

Fit for Service

SOWS ready to breed, and a choice lot of FALL PIGS now ready to ship, at rock-bottom prices, from the sweep-stake herd at Toronto, Montreal, London and Ottawa Exhibitions, 1897. We pay express charges to your station, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Drop a card before buying elsewhere.



H. GEORGE & SON
Crampton, Ont.



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

Two Prize-Winning Sows FOR SALE.

Seven months old. Both in farrow to our stock boar, "Royal First," winner of first prize at the Royal Show in 1898 in a large class. Also young stock of both sexes.

A. ELLIOTT & SON,
GALT, ONT

Binder Twine

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

CHOICE BERKSHIRES FOR FEBRUARY

2 good young BOARS, 10 months old, weighing about 220 lbs. each, at \$12. Must go to make room for 220 pigs. 4 choice SOWS, about same age, due to farrow in April and May. Bred to a grand young boar from Imported Sire and Dam. Price \$18. Also fine lot of Boars and Sows 4 months old.

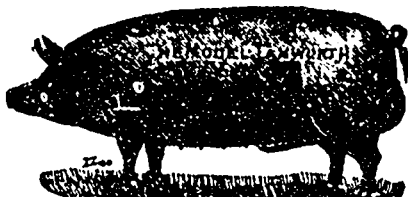
E. E. MARTIN,
Paris Station, G.T.R. Canning P.O., Ont.

Oxford Herd of Poland Chinas

Choice stock of either sex and all sizes, from 2 months up. Bred from the best strains known to the breeder. Write for prices.

W. & H. JONES
Mt. Elgin, Ont

The Home of the Winners



TAMWORTH SWINE. For Sale Boars fit for service. Sows in pig; also bred to order. Large quantity of young pigs. Address, JOHN BELL, Clydesdale Farm, Amber P.O. Agincourt Station, G.T.R. and C.P.R.

IMPROVED LARGE YORKSHIRES

A few good Boars fit for service. Must be sold at once to make room for sows about to farrow. A cinch if taken at once. Orders booked for March pigs from such sires as Mollington Jones-3015- and Victor Hugo-3205. Pairs not akin, or single

L. ROGERS,
Cooksville, Station C P R., Tel. and P.O.
Port Credit, G.T.R.

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.

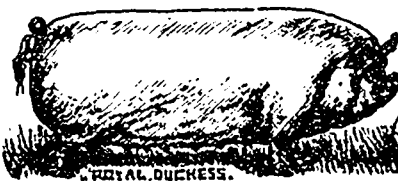
HIGHEST TYPE OF BACON HOGS...

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.

J. E. BRETHOUR, Burford, Ont.



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 if 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 1898, together with a choice lot of other sows, young boars fit for service, and pigs eight weeks old, single or in pairs not akin. 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

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

Hursley Stock Farm.

A.J.C.C. 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.

BRAMPTON JERSEY HERD.

Full stock of J.C.C. cows, heifers, heifer calves and bulls. A for what you want. A number of young Berkshires.

B. H. BULL & SON, - Brampton, Ont.

J. H. SMITH & SON, Willow Grove Farm, Highfield, Ont., Breeder St. Lambert and St. Helen's Cattle. Prize herd at the Industrial.

W. M. ROLPH, Glen Rouge Farm, Markham, Ont., Breeder of Jersey Cattle. Herd nearly all pure St. Lambert. Young stock always for sale.

W. M. WILLIS, Pine Ridge Farm, Newmarket, Ont., breeder of St. Lambert Jersey Cattle, Cotswold Sheep.

Berkshires



In my herd there is such blood as BARON LEE, DORSET CHIEFTAIN and WINDSOR SUPREME and other noted strains. Choice stock for sale at reasonable prices. Write for particulars.

GEORGE N. HARRIS
LYNDEN, ONT.

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.

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 CATTLE, SHEEP, AND SWINE BREEDERS' ASSOCIATIONS.

Annual Membership Fees:—Cattle Breeders' \$2; Sheep Breeders', \$1; Swine Breeders', \$2.

BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association to which he belongs, during the year in which he is a member. In the case of the Swine Breeders' Association this includes a copy of the Swine Record.

A member of the Swine Breeders' Association is allowed to register pigs at 50c. per head; non-members are charged \$1.00 per head.

A member of the Sheep Breeders' Association is allowed to register sheep at 50c. per head, while non-members are charged \$1.00.

The name and address of each member, and the stock he has for sale, are published once a month. Over 9,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

A member of an Association will only be allowed to advertise stock corresponding to the Association to which he belongs; that is, to advertise cattle he must be a member of the Dominion Cattle Breeders' Association, to advertise sheep he must be a member of the Dominion Sheep Breeders' Association, and to advertise swine he must be a member of the Dominion Swine Breeders' Association.

The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 9th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

F. W. HODSON, Secretary.
Parliament Buildings Toronto, Ont.

SECRETARY'S REPORT.

The rates here given only apply from the point where stock is loaded on the association car in Ontario to the point where the stock is unloaded in Manitoba and the Northwest. The cost of any local shipping before reaching the car or after leaving it is extra. We have formerly been unable to give an accurate rate for transporting stock from Ontario to points in the West, the charges on the various shipments being made up after the car was loaded. This was not very satisfactory to

intending buyers, as they very often wished to know before purchasing the cost of having the stock delivered, but as the system was in the experimental state we could not do otherwise. After two years' experience the following schedule has been made out. It is possible, after these rates have been tried for a short time, we may be able to make a slight reduction.

The distance between Winnipeg and Calgary is divided into five sections. The rates to all points within any one section will be the same:

SCHEDULE OF RATES FOR STOCK FOR MANITOBA AND THE NORTHWEST VIA ASSOCIATION CAR.

CATTLE.

Bulls.

| AGE. | SEC. 1. | SEC. 2. | SEC. 3. | SEC. 4. | SEC. 5. |
|--------------------------------|---------|---------|---------|---------|---------|
| Under 6 months..... | \$ 8 00 | \$ 8 50 | \$ 9 00 | \$ 9 50 | \$10 00 |
| Over 6 " and up to 12 mos..... | 10 00 | 10 75 | 11 50 | 12 25 | 13 00 |
| " 12 " " 18 "..... | 11 00 | 12 00 | 13 00 | 14 00 | 15 00 |
| " 18 " " 24 "..... | 12 00 | 13 25 | 14 50 | 15 75 | 17 00 |
| " 24 "..... | 15 00 | 16 25 | 17 50 | 18 75 | 20 00 |

Cows and Heifers.

| AGE. | SEC. 1. | SEC. 2. | SEC. 3. | SEC. 4. | SEC. 5. |
|--------------------------------|---------|---------|---------|---------|---------|
| Under 6 mos..... | \$ 8 00 | \$ 8 50 | \$ 9 00 | \$ 9 50 | \$10 00 |
| Over 6 " and up to 12 mos..... | 10 00 | 10 75 | 11 50 | 12 25 | 13 00 |
| " 12 " " 24 "..... | 11 00 | 12 00 | 13 00 | 14 00 | 15 00 |
| " 24 "..... | 12 00 | 13 00 | 14 00 | 15 00 | 16 00 |

HORSES.

Stallions—10 per cent. more than bulls.

Mares—10 per cent. more than cows and heifers.

PIGS.

Must be Crated in all Cases.

| WEIGHT (including crate). | SEC. 1. | SEC. 2. | SEC. 3. | SEC. 4. | SEC. 5. |
|-------------------------------------|---------|---------|---------|---------|---------|
| Under 50 lbs..... | \$ 3 00 | \$ 3 50 | \$ 4 00 | \$ 4 50 | \$ 5 00 |
| Over 50 lbs. and up to 100 lbs..... | 6 00 | 6 75 | 7 50 | 8 25 | 9 00 |
| " 100 lbs. and up to 150 lbs..... | 7 00 | 8 00 | 9 00 | 10 00 | 11 00 |
| " 150 lbs. and up to 200 lbs..... | 8 00 | 9 00 | 10 00 | 11 00 | 12 00 |
| " 200 lbs..... | 12 00 | 13 25 | 14 50 | 15 75 | 17 00 |

SHEEP.

3 Sheep or Under Must be Crated.

| WEIGHT (including crate). | SEC. 1. | SEC. 2. | SEC. 3. | SEC. 4. | SEC. 5. |
|---------------------------|---------|---------|---------|---------|---------|
| Under 100 lbs..... | \$ 7 00 | \$ 8 00 | \$ 9 00 | \$10 00 | \$11 00 |
| Over 100 lbs..... | 8 00 | 9 00 | 10 00 | 11 00 | 12 00 |

When over 3 sheep from one shipper to one consignee, will be placed in car without being crated.

| WEIGHT. | SEC. 1. | SEC. 2. | SEC. 3. | SEC. 4. | SEC. 5. |
|--------------------|---------|---------|---------|---------|---------|
| Under 100 lbs..... | \$4 00 | \$4 25 | \$4 50 | \$4 75 | \$5 00 |
| Over 100 lbs..... | 5 00 | 5 25 | 5 50 | 5 75 | 6 00 |

In addition to the above, stop-over charges (\$3 for the first stop and \$2 for each subsequent stop) will be charged against the shipment for which the stop is required. When more than lot of stock is loaded or unloaded at any one point the stop-over charge will be equitably divided.

The above charges include transportation, care and feed while in the association car.

Due care will be exercised and the best attention given stock, but the shipments are entirely at the owner's risk.

ALPHABETICAL LIST OF STATIONS BETWEEN WINNIPEG AND CALGARY, GIVING THE NUMBER OF THE SECTION IN WHICH EACH STATION IS SITUATED.

| Station. | Section. |
|------------------------|----------|
| Aikins..... | 3 |
| Air Line Junction..... | 1 |
| Alexander..... | 1 |
| Antelope..... | 4 |
| Austin..... | 1 |
| Bagot..... | 1 |
| Balgonie..... | 3 |
| Bantry..... | 5 |
| Bassano..... | 5 |
| Belle Plain..... | 3 |
| Bergen..... | 1 |
| Boharm..... | 3 |
| Bowell..... | 4 |
| Brandon..... | 1 |
| Broadview..... | 2 |
| Burnside..... | 1 |
| Burrows..... | 2 |
| Calgary..... | 5 |
| Calgary Junction..... | 5 |
| Carberry..... | 1 |
| Carmichael..... | 4 |
| Caron..... | 3 |
| Cassils..... | 5 |
| Chaplin..... | 3 |
| Chater..... | 1 |
| Cheadle..... | 5 |
| Cluny..... | 5 |
| Colley..... | 4 |
| Crane Lake..... | 4 |
| Crowfoot..... | 5 |
| Douglas..... | 1 |
| Dunmore..... | 4 |
| Dunmore Junction..... | 4 |
| Elkhorn..... | 2 |
| Ernfold..... | 3 |
| Fleming..... | 2 |
| Forrest..... | 4 |
| Gleichen..... | 5 |
| Goose Lake..... | 4 |
| Grand Coulee..... | 3 |
| Grenfell..... | 2 |
| Griswold..... | 1 |
| Gull Lake..... | 4 |
| Hargrave..... | 2 |
| Herbert..... | 3 |
| High Bluff..... | 1 |
| Indian Head..... | 2 |
| Irvine..... | 4 |
| Kennay..... | 1 |
| Kincorth..... | 4 |
| Kininvie..... | 5 |
| Langdon..... | 5 |
| Langevin..... | 5 |
| Lathom..... | 5 |
| Leven..... | 4 |
| McGregor..... | 1 |
| McLean..... | 2 |
| Maple Creek..... | 4 |
| Marquette..... | 1 |
| Meadows..... | 1 |
| Medicine Hat..... | 4 |

| | |
|-------------------------|---|
| Melbourne | 1 |
| Moose Jaw..... | 3 |
| Moosomin..... | 2 |
| Morse..... | 3 |
| Mortlach..... | 3 |
| Namaka..... | 5 |
| Oak Lake..... | 1 |
| Oakshela..... | 2 |
| Parkbeg..... | 3 |
| Pasque..... | 3 |
| Pense..... | 3 |
| Persoval..... | 2 |
| Pilot Butte..... | 3 |
| Poplar Point..... | 1 |
| Portage la Prairie..... | 1 |
| Qu'Appelle..... | 2 |
| Reaburn..... | 1 |
| Red Jacket..... | 2 |
| Regina..... | 3 |
| Rosser..... | 1 |
| Routledge..... | 2 |
| Rush Lake..... | 3 |
| Scoretan..... | 3 |
| Sewell..... | 1 |
| Shepard..... | 5 |
| Sidewood..... | 4 |
| Sidney..... | 1 |
| Sintaluta..... | 2 |
| Southesk..... | 5 |
| Stair..... | 4 |
| Strathmore..... | 5 |
| Suffield..... | 5 |
| Summerberry..... | 2 |
| Swift Current..... | 4 |
| Tilley..... | 5 |
| Tomplins..... | 4 |
| Virden..... | 2 |
| Waldbeck..... | 3 |
| Walsh..... | 4 |
| Wapella..... | 2 |
| Whitewood..... | 2 |
| Winnipeg..... | 1 |
| Wolseley..... | 2 |

INSTITUTE MEETINGS.

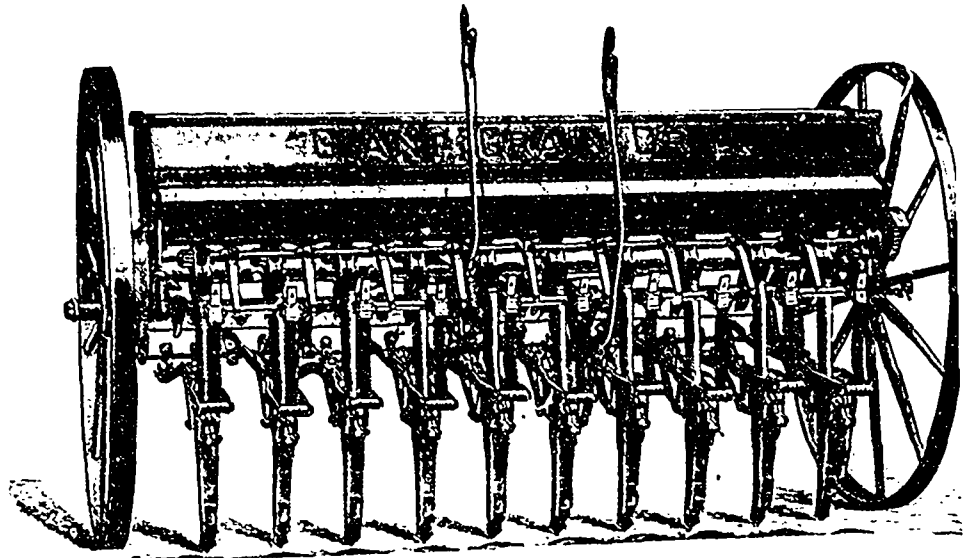
The following is the average attendance at meetings, reports of which have been received since the last list published:

| | |
|----------------------------|-----|
| Essex, North..... | 110 |
| Kent, East..... | 150 |
| Middlesex, East..... | 100 |
| Monck..... | 78 |
| Oxford, South..... | 339 |
| Port Carling and Bala..... | 25 |
| Wellington, East..... | 198 |
| Wellington, South..... | 35 |
| Wellington, West..... | 120 |
| York, East..... | 73 |
| York, North..... | 46 |

The following are the lists of members which have been received since the last list published:

| | |
|----------------------------|-----|
| Algoma, Centre..... | 36 |
| Bruce, Centre..... | 11 |
| Bruce, South..... | 3 |
| Bruce, West..... | 3 |
| Elgin, East..... | 23 |
| Glengarry..... | 7 |
| Grey, South..... | 6 |
| Hastings, East..... | 1 |
| Haldimand..... | 4 |
| Huron, East..... | 15 |
| Kent, East..... | 11 |
| Ontario, North..... | 8 |
| Oxford, South..... | 57 |
| Peterboro', East..... | 1 |
| Lanark, North..... | 2 |
| Manitoulin, East..... | 33 |
| Middlesex, East..... | 94 |
| Middlesex, North..... | 5 |
| Monck..... | 97 |
| Port Carling and Bala..... | 29 |
| Simcoe, East..... | 186 |
| Stormont..... | 10 |
| Waterloo, South..... | 18 |
| Welland..... | 2 |
| Wellington, Centre..... | 10 |
| Wellington, East..... | 141 |
| Wellington, South..... | 7 |
| Wentworth, North..... | 3 |
| York, East..... | 18 |
| York, North..... | 42 |

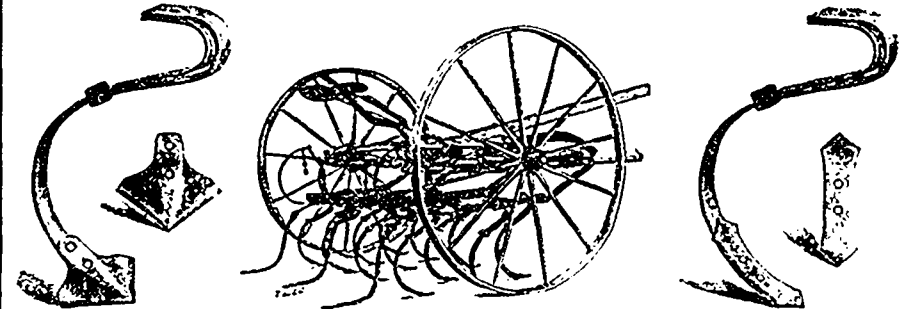
The Mann Mf'g Co., Limited BROCKVILLE ONT.



Giant Combined Pressure Drill

Latest Improved. Only Drill made on which the hoes can never trail or wobble. Every drill of grain must be uniform distance between drills and all parallel when sown with a Giant Drill, and yield increased.

Famous **GIANT**



BROAD SPEAR POINTS FOR WEEDING.

KING OF ALL CULTIVATORS

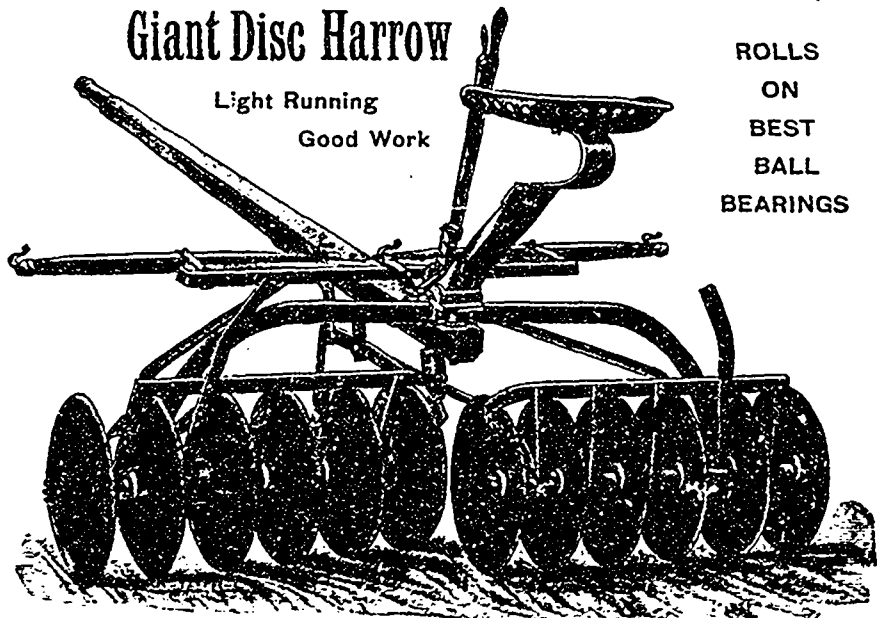
TEETH HAVE REVERSIBLE POINTS, DOUBLE BOLTED.

Has triumphed over all competitors throughout the world. Solid steel throughout. Best oil-tempered Teeth. Best Tooth Helper. Elastic Pressure with Link Lock down. Lightest Draft. The Giant will cultivate land when all others fail.

Giant Disc Harrow

Light Running
Good Work

ROLLS ON
BEST
BALL
BEARINGS



Look up our Seed Premiums on pages 528-527.

Steel Beam, Steel Scrapers, Solid Pole. The Giant leaves no ridges. Triumphant in the field.

FARMING

AN ILLUSTRATED WEEKLY JOURNAL DEVOTED TO
FARMING AND THE FARMER'S INTERESTS.

Published every Tuesday by

THE BRYANT PRESS,

44-46 RICHMOND STREET WEST, TORONTO, CANADA.

Subscriptions in Canada and the United States, \$1.00 per year, in advance; six months, 50 cents, three months 25 cents. In all countries in the Postal Union, \$1.50 a year in advance.

The date opposite the name on the Address Label indicates the time to which a subscription is paid, and the changing of the date is sufficient acknowledgment of the payment of a subscription. When this change is not made promptly notify us. In ordering change of address, be sure to give the old address as well as the new.

FARMING will be sent to all subscribers until notice by post card or letter to discontinue is received and all arrears are paid up. Retaining a paper is not a notice to discontinue. All arrears must be paid up before a name can be taken from our list. All remittances should be made by P.O. money order, express money order, or registered letter. Sending money in an unregistered letter is unsafe, and will be at the sender's risk.

Advertising rates furnished on application. All communications should be addressed to "FARMING, 44-46 Richmond Street West, Toronto, Canada."

Representative for Great Britain and Ireland, W. W. CHAPMAN, Fitzalan House, Arundel St., Strand, LONDON, ENG.

MARKET REVIEW AND FORECAST.

Office of FARMING,

44 and 46 Richmond street west,
Toronto, Mar. 13th, 1899.

Payments throughout the country are much better than they were at this time last year, which is a pretty good indication of how the business in the country is progressing. There are signs of a hardening tendency in the money market.

Wheat.

The wheat markets, though showing a duller tendency than a week ago, continue to interest both the producer and the consumer, and also the middleman, who stands between those two ready to take whatever share of the profits he can lay hold of. In fact, it is the speculator or the middleman who watches the market more closely than anyone else. Just now all attention is centred on the crop prospects. Though the week just past has not been the most favorable for wheat, there is little change in the general opinion of the situation of the coming crop. The visible supply of wheat on this side of the Atlantic early in the week was 29,477,000 bushels, a decrease of 3,797,000 as compared with the same time last year, and the world's visible supply in sight was 65,237,000 bushels, as against 72,132,000 bushels a year ago. There is believed to be heavy reserves in the farmers' hands, and this is having a kind of bearish tendency upon the market. A break has taken place in ocean freight rates, which may stimulate export, but aside from this there is very little that is encouraging for the producer in last week's market reports.

The *Trade Bulletin's* special London cable of March 9th reads thus: "The market has fluctuated during the week, but closes quiet and easier, but with light stocks holders are not forcing business. Trading in cargoes was better at beginning of week, but later the demand fell off and the market closed weaker." Later cable reports show a continuance of the weaker feeling. There appears to be very little doing in the markets on this side, and farmers are still loth to part with last year's crop. The market here is dull and inactive at 67 to 68½c. for red and white west. Goose is quoted at 66 to 68c.; No. 1 Manitoba hard, 81 to 82c., Toronto, and No. 1 northern at 78½c. On the local farmers' market red and white is quoted at 70 to 71c., spring fite at 71c., and goose at 67 to 68c.

Oats and Barley

The London, England, market for oats has recovered from the dullness early in the week, and is firmer and higher and stocks are light. At Montreal the market is somewhat unsettled and holders seem unable to get the top prices paid a week ago. The market has a steady feeling, however, at the decline and quotations are 33½ to 34c. for car lots in store. The market here is weaker at 29 to 30c. west. Oats on the local market bring 35c. per bushel.

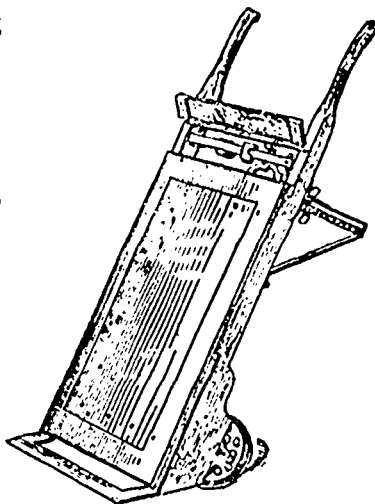
Every Merchant
and Farmer

Should own a

Parsell Truck SCALE
combining a first-class ware-
house truck with a fine 800
Canadian Standard Scale.

It has "caught on"
splendidly, and is go-
ing like "hot cakes."

WILL
SAVE ITS
COST
IN
NO
TIME.



For descriptive circular
and full information,
address

THE ST. MARYS
"TRUCK SCALE"
CO.

St. Marys, Ont.

Mating barley is quoted at 55c. at Mon-
triel. The market here is easier at 46 to 47c.
west.

Peas and Corn.

The London, Eng., market for peas is quiet,
but prices are firm. Prices at Montreal
are 71 cent. lower and quotations are
72 to 73c. Peas are in good demand here at
66 to 67c. west. On the local market the quo-
tations are 60 to 62c.

American No. 2 mixed in car lots is quoted
at 43 to 44c. at Montreal. Canadian yellow
is quoted here at 36 west, but it is hard to
get. American is quoted here at 41 to 42c.
per bushel on track.

Bran and Shorts.

Bran seems to be a little scarce at Montreal
but still there is enough for the demand.

Bran is worth from \$15 to \$15.25 and shorts
\$15.75 to \$16 in car lots. City mills here
are selling bran at \$14.50 and shorts at \$16.50
in car lots, f.o.b., Toronto.

Clover and Timothy Seeds.

The Montreal market is steady with an im-
proved enquiry. Ontario timothy is quoted
at \$1.60 to \$1.75; American timothy at \$1.25
to \$1.50; red clover at \$3.75 to \$4.50; alsike,
\$3.50 to \$4.50 and mammoth clover at \$4.25
to \$4.75. On the local market here red
clover is quoted at \$3.30 to \$3.70; white
clover, \$5 to \$8; alsike, \$3 to \$4.20 and
timothy \$1.20 to \$1.35 per bushel.

Eggs and Poultry.

Prices for new laid eggs have taken a de-
cided drop and supplies are increasing fast.
The ruling prices at Montreal are 16 to 17c.
and 18 to 19c. in small quantities, which is a
drop of 4 to 5c. during the week. There are
larger offerings here and prices range from 12
to 13c. for new laid. On the local markets new
laid eggs bring from 15c. per dozen.

The Montreal market is slow for dressed
poultry, and prices are lower than last week.

Receipts are small here with turkeys bring-
ing from 9 to 12c.; geese 6 to 7c. per lb., and
chickens 40 to 70c. and ducks, 50 to 80c. per
pair.

Potatoes.

A fair amount of business is being done at
Montreal, where quotations are 53 to 54c. per
bag in car lots. The market here is quiet at
65 to 68c. per bag for cars on track and 80c.
out of store. On the local market potatoes
bring from 75 to 80c. per bag.

Fruit.

There is very little change in the apple
market and the only thing exciting about it is the
usual reports of large losses incurred by ship
pers. Prices at Montreal range from \$3 to
\$4.50 per barrel and on the local market here
from \$2.50 to \$3.75.

Hay and Straw.

Quite a lot of hay continues to be exported.
Prices for baled hay at Montreal are: Choice
No. 2, \$5.75; No. 2, \$4.50 and clover \$3.50
per ton. At country points in Quebec prices
vary from \$3.50 to \$4 for clover mixed. The
market here is quiet at last week's quotations.

Cheese.

The long expected change has come in the
cheese market and the Englishman is now fully

alive to the fact that there will be scarcely enough
old stock on hand to last out till the new
goods are on the market. The total exports
from Montreal and New York from May 1st,
1898, to date show the large decrease of
546,073 boxes, as compared with the same
period a year ago, a decrease that will very
likely be much greater before the season is over.
Since the close of navigation the English
buyers have been doing a hand-to-mouth
business, and have only in the last week come
to realize that cheese were scarce, with the
result that prices have gone up from ¼ to
½c. and likely to go higher. There is now
every prospect for a good wind-up for Cana-
dian cheese unless the factories begin making
earlier than usual, which would be very un-
wise. The less fodder cheese made the butter
whether the price be high or low. Both the
London and Liverpool markets are firmer
and higher, with the finest Canadian quoted
at former at 51s. to 52s., and at the latter
place at 52s. to 53s. per cwt. 10¼ to 10¾c.
are the quotations at Montreal for the finest
colored and white respectively.

Butter.

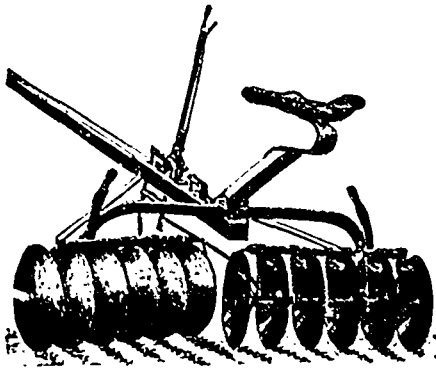
The London, England, butter market is
steady at last week's decline, and there is a
good demand. Finest Canadian creamery is
quoted at 96s. to 98s. The market on this
side is still pretty well confined to local re-
quirements, though a few lots of fine fresh
creamery continue to go forward every week.
The Montreal market is firm at 20¼ to 20½c.
for choice creamery, 19½ to 20c. for good to
fine, and 18½ to 19c. for fair. Western
dairy is quoted at 13½ to 15c., and fresh
Eastern Townships at 18 to 20c., as to
quality. The supply of roll butter seems to
be light. The total exports of butter from
New York and Montreal from May 1st, 1898,
to date show an increase of 41,376 packages,
as compared with the same period a year ago.

Creamery butter here is quoted at 21 to
22c. for prints and 20 to 21c. for packages.
The receipts of dairy butter are fair, and
there is a good demand at 14 to 16c. for
large rolls and 12 to 15c. for tubs. On the
local farmers' market the quotations are 18 to
20c. for pound prints and 15 to 17c. for large
rolls.

Cattle.

In a bulletin recently issued by the National
Live Stock Association it is pointed out that,
while most of the cattle on the Western
Ranges have wintered well, the winter has
been unusually severe and it is early yet to
estimate accurately. There is reported to be
a scarcity of steers above the age of two
years all over the west. A better feeling has
prevailed at Western markets and the supply
of good cattle has been light. The receipts
on this market have also been somewhat
light, but the quality was fairly good. Trade
was brisk on Friday with prices firm.

Export Cattle. Choice heavy exporters
are worth from \$4.85 to \$5 and light ones
from \$4.60 to \$4.75 per cwt. A few choice
picked lots sold on Friday at 15 to 25c. above
these figures, but such sales are the exception.
Choice heavy bulls bring from \$3.75 to
\$4.12½ and light ones from \$3.40 to \$3.60
per cwt.

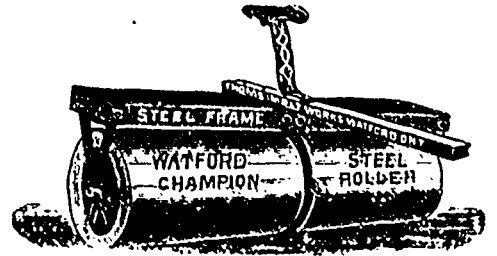


In last week's issue of FARMING we offered a Disk Harrow FREE. Look up our offer. It was made in good faith.

OUR
Steel Land Rollers

8 ft. and 9 ft. lengths, are proving the most popular Rollers on the market.

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



Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters but not so heavy, sell for \$4.35 to \$4.50 per cwt. Good butchers' cattle are worth from \$4.20 to \$4.30 and medium from \$3.75 to \$4.

Stockers and Feeders.—Buffalo stockers sold on Friday at \$3 for inferior steers; \$3.25 to \$3.60 for common, and \$3.75 per cwt. for choice steers of good breeding and quality. Stock heifers, weighing about 600 lb. each, are worth \$2.75 to \$3 per cwt. Heavy feeders are scarce and fetch from \$4 to \$4.25 per cwt.

Calves.—These bring from \$2 to \$8 each for the bulk, with choice heavy veals selling for \$5 per cwt.

Milch Cows and Springers.—The bulk of these offered of late are of poor quality, and are worth from \$25 to \$48 as to quality.

Sheep and Lambs.

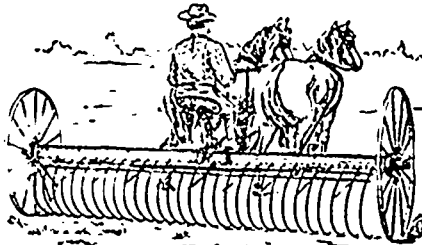
There is very little that is new to report in connection with sheep and lambs. The American markets have ruled fairly steady, with a good demand at Buffalo on Friday. Prices here are the same as last week, and are \$3 to \$3.50 for ewes and \$2.50 to \$2.75 for bucks. There are too many lambs of inferior quality coming forward. Prices range from \$4.50 to \$4.75 per cwt. Good heavy lambs weighing over 100 lbs. each are wanted.

Hogs.

Prices for choice bacon hogs are a shade higher than a week ago. Choice selected lots, weighing from 160 lbs. to 200 lbs. each off cars, bring \$4.37 1/2 per cwt.; light hogs, \$4; and thick, fat hogs of all kinds \$3.75 per cwt. The average price paid for uncured car lots on Friday was about \$4.15 to \$4.20 per cwt. There is a fair demand at Montreal from packers, where bacon hogs are worth about \$4.50 and mixed lots \$4.25 per cwt. The Trade Bulletin's London cable of March 9th in regard to Canadian bacon reads thus: The market is firm; receipts have been lighter, and holders are not anxious for business. Canadian pea-fed lean sides, 36s. to 40s.; fat and stout sides, 32s. to 34s.

The Machines that Made America Famous

Deering All-Steel Rakes



8 1/2 ft. 10 1/2 ft. and 12 ft. wide.

More Deering Hay Rakes are made than the combined output of our two largest competitors. They are the most popular, because they are the most economical, most easily operated, and most durable.

Deering Rakes save all the hay.

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

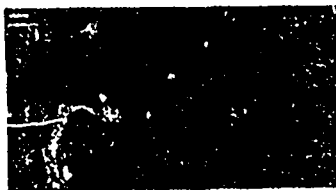
Write for circulars.
Agents wanted

J. F. GILL & CO.

NIAGARA FALLS, ONT.

Elm Shade Farm

AYRSHIRE



CATTLE.

The head of the herd is Lord Sterling, a prize winner. The imported Cows, Blue Bell, White Glen, and Kate Wallace, belong to this herd. Won the 2nd herd prize at Montreal in 1897, against strong competition. Young stock of both sexes for sale bred from imported and prize winning stock W.M. WYLIE, Howick, Que., or 228 Bleury St., Montreal.

FREEMAN'S

Double Strength

FERTILIZERS

GREAT REDUCTION



IN PRICE

Catalogue Free

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

Patent Roller and Ball-Bearing Galvanized Steel

Wind Mills Towers and Flag Staffs

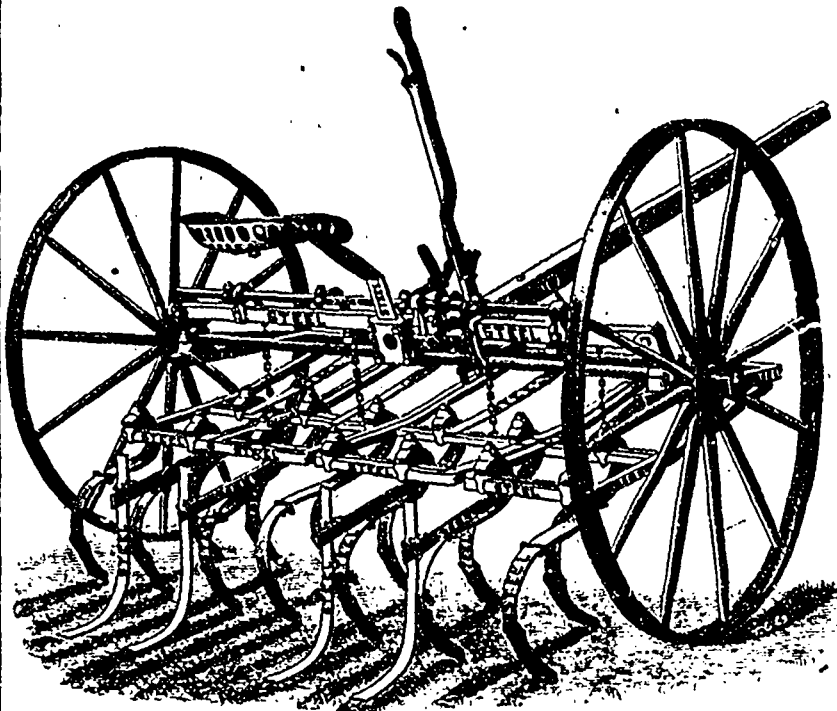
"Maple Leaf" Grain Grinders. Iron and Spray Pumps.

Send for New Illustrated Catalogue.

W. A. SHAPLEY & CO. LIMITED
BRANTFORD CAN.

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.,
TORONTO LIMITED

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.,
HAMILTON, ONT. LIMITED

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.

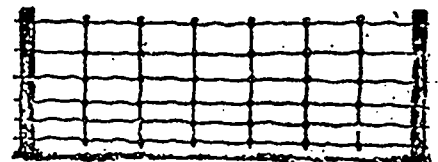
It is a **FACT**, not an **EXPERIMENT**.
It is the greatest aid Agriculture has ever known.

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.

If You Need a New Binder You Want the Latest and Best

There is only **One Best**, it is the **Frost & Wood No. 2**, made in two sizes, 5 ft. and 6 ft. cut.

It pays to make
the best machine,

WE DO

It pays to sell the
best machines,

Our Agents Do

It pays to buy the
best machines,

**Leading Farmers Buy
the F. & W. No. 2**



OUR AIM

is to please the
CANADIAN FARMER

and that

We Do

thousands will tes-
tify.

We sell in no other
country

**"Canada Is
Our Home."**

MANUFACTURED BY

THE FROST & WOOD COMPANY, Limited

Head Office and Works
SMITH'S FALLS, ONTARIO

BRANCH OFFICES:

Local Agencies Everywhere

Send for 1920 Illustrated Catalogue

77 Jarvis St., TORONTO, ONT

Market Square, WINNIPEG, MAN

When writing mention FARMING.

Why ? Because

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



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

Our Motto, "**Not low Cheap, but low Good.**"

TOLTON BROS., GUELPH, Ont.

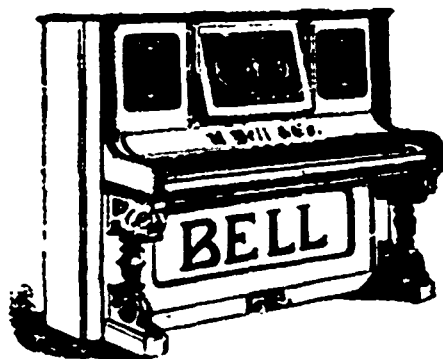
The flexibility of the Harrow enables it to
adapt itself as readily to rough and uneven
ground as to smooth, and the oscillating
motion produced by its flexibility pulverizes the
ground, and leaves it in a loose and more
porous condition than any other Harrow, and
it is made of the very best material money can
buy for the purpose. The bars are made of

HARD SPRING STEEL.

very stiff and strong, the hinges and teeth be-
ing of solid steel, all of which are of a higher
grade than is possible to use in any other make
of Harrow. We can guarantee more
than double the strength and wear in
this Harrow than there is in any other
make.

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: GUELPH, Ont.

THE BELL ORGAN & PIANO CO., LIMITED

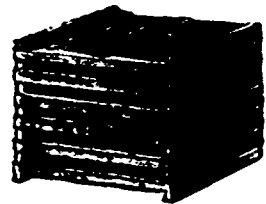
Des Moines Incubator

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 Poul-
try and Poultry Supplies. Poultry's Guide, New
Edition, 15-cs per mail. P.O. Address,
24 St. Sulpice St., Montreal.

Humpty-Dumpty Egg Crates



Save their cost to
the Farmer many
times every year.

**BREAKAGE and DISPUTED
COUNTS AVOIDED
CHEAP—CONVENIENT
LIGHT—STRONG**

When not in use folds compactly together
Handiest thing—with fillers removed—for
carrying Fruit or Vegetables.

**THE DOWSWELL
MAN'G CO LIMITED**

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

...Hamilton