

Technical and Bibliographic Notes / Notes techniques et bibliographiques

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

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

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

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

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

Cover title missing/
Le titre de couverture manque

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

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

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

Showthrough/
Transparence

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

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

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

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

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

Title 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

Additional comments:/
Commentaires supplémentaires:

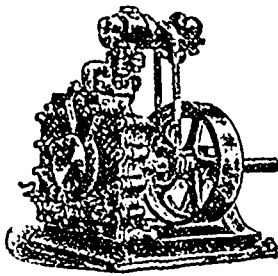
This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

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

FARMING.

The... Dake Engine

Also for Yachts,



Launches, Dynamos, Etc.

Is easily operated and its
First Cost Low.

We supply complete Steam Plants for farm and factory, including Engine and Boiler, Portable, Semi Portable or Stationary.

Ask for Prices and Circular

THE JENCKES MACHINE CO.,
30A LANSDOWNE STREET,
Sherbrooke, Que.

BUTTER BOXES



FIRSTBROOK BROS., Toronto, Ontario.
For Sale by Wholesale Dealers.

Large English Berkshires

A choice selection of young pigs, ten weeks old. Pairs and trios supplied not akin. Also young sows in pig.

Write H. J. DAVIS, Box 210, Woodstock, Ont.



SHORTHORN BULLS

FOR SALE.

Two Bates Bulls of Princess-Duchess family. First-class animals in every respect. Apply to **WILLIAM COWAN, V.S.,** Galt, Ontario.

Horse Owners! Use

GOMBAULT'S

Caustic Balsam



A Safe Speedy and Painless Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. **SUPERSEDES ALL CAUTERY OR FIRING.** Impossible to produce scar or denture. 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.,** L. F. N.



C. C. JAMES, M.A.

...LEADING TOPICS FOR THE WEEK...

Agricultural News and Comments. Illustration Stations for Farmers. Cheap Money for the Farmer. Our British Letter. The Wool Situation. Pheasant-Culture Mixed Farming. The Kind of Dairying That Pays. The Financial Position of the Farmer's Wife. Care of Young Trees. Horse-Breeding. Manitoba Elevator Question. Market Review and Forecast.

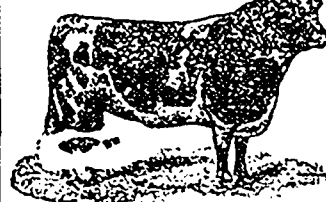
Isaleigh Grange Stock Farm

Ayrshire and Guernsey Cattle.
Improved Yorkshire Swine.

Shropshire Sheep. Our Ayrshire herd is headed by the noted bull, Matchless 7560, sire, Glencairn III., imp. 6455, dam, Nellie Osborne, imp. 5352

Our Special Offer

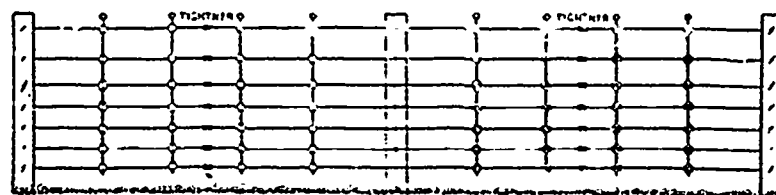
consists of six choice young Ayrshire bulls and a few heifers; two extra Guernsey bull calves, and a choice lot of sheep and pigs. All at very low figures for immediate sale.



T. D. McCallum, Manager,
Danville, Que.

J. N. GREENSHIELDS, Proprietor

FENCE MACHINE GIVEN AWAY



To introduce the best Fence made into new localities we will give a Fence Machine and License FREE to any person buying material for 200 rods of Fence

Get particulars from

CANADA FENCE CO., - LONDON, CAN.

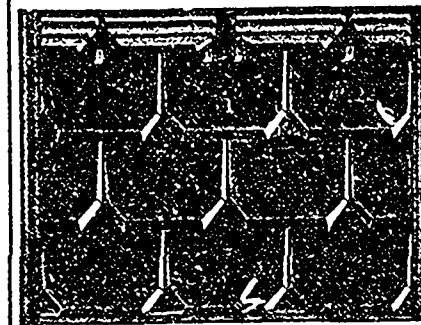
DON'T TAKE CHANCES

ABOUT YOUR ROOF.

USE OUR RELIABLE

...Eastlake Shingles.

They are a proved success and last indefinitely.



Fire, Rust and Leak Proof, with our Patent Cleat and Water Gutter. They are easily and quickly laid and always give the best and most economical satisfaction.

Write Us. We want you to know all about them.

METALLIC ROOFING CO.

1102 King St. W., Toronto.

ORDER EARLY

The Lancaster Feed Cutters

have won a place ahead of the hand wagon, and as the demand is increasing so rapidly you should order early to avoid being disappointed.

LANCASTER MACHINE WORKS,

LANCASTER, ONT.

Box 113.

FLEMING'S LUMP JAW CURE

Is sold under a positive guarantee to cure, or money is refunded



Trade Mark Reg'd.

DEAR SIR, In regard to our experience with your Lump Jaw Cure, we used it on seven lumps last season. It worked all right. Some of the lumps had broken and run several times before using it. Yours truly,
FLEMING & SHORT.

PRICE, \$2.00, sent by mail
Illustrated Treatise on "Lump Jaw" sent free
Address

FLEMINGBROS., Chemists, ST. GEORGE, ONT.

HILLVIEW STOCK FARM

WE are now offering for sale a very fine SHORT HORN BULL CALF 7 months old, bred by Arthur Johnston, Greenwood, Ont. Also one 17 months old AYRSHIRE BULL. Both first-class animals. For prices and particulars address

R. E. WHITE, Perth, Ont.

GLENHURST HERD OF AYRSHIRES.

Noted prize winners. Choice quality and heavy milking families. Extra fine young animals of both sexes for sale. Also Leicester Sheep and Berkshire Swine.

DAVID BENNING,
WILLIAMSTOWN, ONT.

**...GOLDFINDER, Imp...
-HEADS OUR AYRSHIRE HERD-**

We have for sale: five choice young bulls fit for service, two by the noted stock bull "Matchless," also some good females of all ages. We have a few choice Clydesdales on hand. Correspondence solicited and Visitors Welcome.

R. NESS & SONS, Howick, Que.

MAPLE CLIFF STOCK AND DAIRY FARM

**Ayrshire Cattle,
Berkshire and Tamworth Pigs.**
FOR SALE—Two young bulls fit for service, and five bull calves (calved in February).
R. REID & CO.,
Hintonburg, Ont.
One mile from Ottawa.)

HICKORY HILL STOCK FARM



2 Fine Ayrshire Bull Calves, one out of dam with record of 56 lbs. of milk per day. Also one Jersey Bull Calf 7 months old, a fine one. Write or come and see.

NAAMAN DYMENT,
Clappison's Corners, Ont

OSHAWA POULTRY YARDS

S. L. Wyandottes, Red Caps, and Rose Comb Black Minorcas. All high class stock.
EGGS, \$1.00 per Fifteen.
W. H. KIRBY, - Oshawa, Ont.

FOR SALE

One fine young Ayrshire bull fit for service, sired by Jack Morton.
EGGS for hatching from choice matings in Barred Rocks, Black Spanish, Black Minorcas & Black Red Games at \$1.00 per 13.
JAS. McCORMACK & SONS,
Rockton, Ont.

**AYRSHIRES
... For Sale**

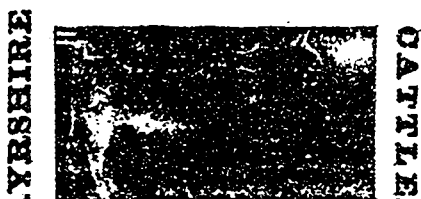
The celebrated stock bull "DOMINION CHIEF," which is considered one of the best stock bulls in Canada; also two choice young bulls, fit for service, sired by "Dominion Chief," as well as several choice young imported cows and heifers, and two Shorthorn heifers, sired by "Gibson Duke." These bulls will be sold cheap if taken at once. Write me for particulars.
JOHN H. DOUGLAS,
WARKWORTH, ONTARIO.

H. & J. McKEE, Brookside Farm, Norwich, Ont.
Breeder's Ayrshire Cattle, Silver Grey Dorkings.

W. M. & J. C. SMITH, Fairfield Plains, Ont.,
Breeder's World's Fair prize-winning Ayrshires, Merino Sheep, Poland-China Pigs, Poultry. Stock for sale.

J. VUILL & SONS, Meadowside Farm, Carleton Place, Ont.,
Breeder's of Ayrshire Cattle, Shropshire Sheep, Berkshire Swine and Barred Plymouth Rocks.

Elm Shade Farm



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 grand herd prize at Montreal in '87, against strong competition. Young stock of both sexes for sale bred from imported and prize-winning stock. **W. M. WYLLIE,** Howick, Que., or 218 Elmer St., Montreal.

- CHOICE AYRSHIRES -

FOR SALE one two year-old Bull and two Yearlings. Also three Bull Calves sired by Douglas of Loudoun 1384, bred by D. Merton & Sons, of Hamilton. Price to suit. Write for particulars **R. W. TAYLOR,** Wellman's Corners, Ont. Hoard's Station, G.T.R.



FAIRVIEW SHROPSHIRE.

Imported and Canadian RAMS and EWES

Choice lots to select from for breeding purposes, also first-class fitted sheep of both sexes for showing.

JOHN CAMPBELL,
WOODVILLE, Ont.

Eggs for Hatching.

R. C. White Leghorn eggs purchased from me last year produced first-prize winners at Toronto, Guelph, Owen Sound, Peterboro, and Brantford. At the last named a cockerel purchased from me won special as best bird any breed in the show. I have won more "firsts" at "Ontario" show on this variety than all other exhibitors combined. Eggs \$2.00 per 13. Plymouth Rocks and Dark Brahmas same price.
W. J. BELL, Angus, Ont.

HATCH Chickens BY STEAM with the MODEL **EXCELSIOR Incubator**. Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced. Best-class Hatcher made. **Geo. H. Stahl,** 114 & 122 N. 6th St., Quincy, Ill.

GLENHURST POULTRY YARD. EGGS FOR SALE.

White Wyandotte, White Plymouth Rock, Cornish Indian Game, Black Minorcas, Houdan, Black Langshan, White Langshan, Barred Plymouth Rock, Silver Laced Wyandottes, \$1.50 for fifteen, or \$2.50 for thirty. Packed in patent boxes. Will replace at half price any not fertile. Also poultry supplies. Will exchange any of the above for first class Tamworth pigs or light Brahma Pullets, any strain. Dorset and Shropshire sheep, Tamworth pigs, Shetland ponies, Jersey cattle all ages. Registered. Prices right. **STRATFORD BROS.** Brantford, Ont.

S.C.W. LEGHORNS Utility strain, Extra large birds. Prolific layers of large eggs. 200 hens in 1897 averaged 16 1/2 doz. each. Also B. F. Rocks (E. B. Thompson's strain). Incubator **R. C. ALLEN,** Cobourg, Ont.

B. Minorcas, Barred P. Rocks, L. Brahmas, Recherche Stock.

Birds imported from best yards in England and United States. Eggs \$1.00 per dozen. A few good birds for sale.
W. L. BROWN,
176 Wharncliffe Road, London West, Ont.

CAMPBELL'S BANNER.. ROOT CUTTER HAND AND POWER. Turns all roots and vegetables into Fino Stock Food. Incorporates to Gullies and sheep handlers and of great value to great farmers and poultrymen. One time: no chopping. Self-Feed. No Hacking. Grate takes out all dirt; saves the knives; fully warranted. See 7th page catalogue. **THE M. CAMPBELL FARMING & MILL CO.,** of Chatham (Limited).

DO YOU KNOW

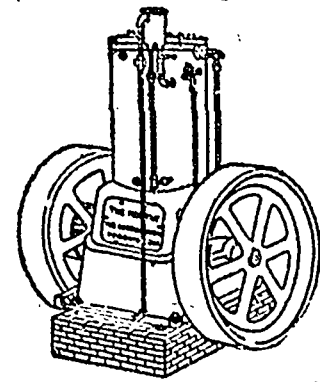
What your cows are doing? Every factory should have **DILLON'S** Milk Pass Book.

Secretaries of cheese and butter factories will find that Dillon's Improved Milk Book Combined Dillon's Milk Sheets Dillon's Pass Books

ARE THE BEST AND CHEAPEST

For sale by all Dealers in Dairy Supplies, or **Thos. J. Dillon** Charlottetown, P.E.I.

Northey Gasoline Engine



Does all kinds of work on the farm where power can be used. It makes its own power, is always ready for use, and costs only a trifle to run. Takes up but little room, is clean, portable, and needs little or no attention when in use.

Our booklet tells all about it. Write for it.

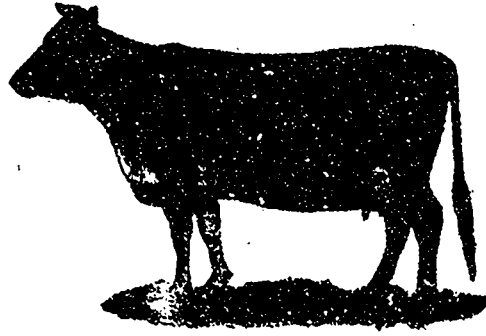
Northey Manfg. Co., Limited, Toronto
1008 King St. Subway

Dentonia Park Farm

W. E. H. MASSEY, Proprietor.
HIGH-CLASS REGISTERED JERSEYS.

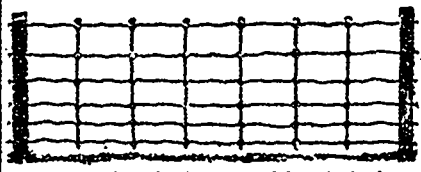
The following offered for sale to make room for additional imported stock soon to arrive.

ST. LAMBERT OF HIGHFIELD, No. 48994, a handsome bull, in fine condition; solid fawn color, black points; born March 3rd, '95; sire Earl of St. Lambert No. 81935; dam Noble of St. Lambert No. 63204. A Few Good Cows, also some splendid Heifer and Bull Calves. Prefer positive buyers should visit the farm. Full information given on request. Apply—



WILLIAM PATTON, SUPERINTENDENT, COLEMAN P.O., ONTARIO.
FARM LOCATED NEAR EAST TORONTO.

THE RANKIN FENCE

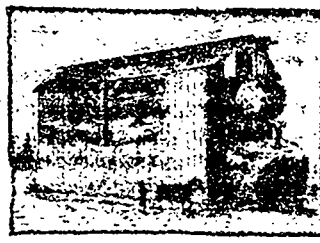


Is a coiled spring wire fence containing all the latest improvements, is easily and rapidly erected without any expensive tools or previous experience. All particulars in our Catalogue. Write for one. Agents Wanted.

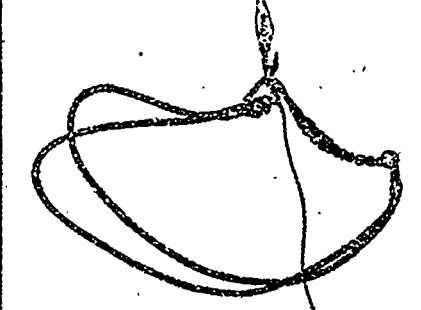
THE RANKIN FENCE CO.
275 St. Martin St., MONTREAL

BUCHANAN'S (Malleable Improved) PITCHING MACHINE

For unloading hay and all kinds of loose grain.



Unloads on either side of barn floor without changing car. No climbing necessary. Malleable Iron Cars. Steel Foras. Knot Passing Pulleys. Will work on stacks as well as in barns. Satisfaction guaranteed.

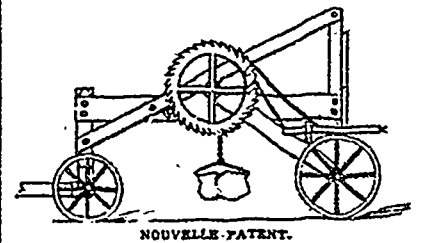


The Common-Sense Sheaf-Lifter

Works in connection with Pitching Machine, and is the most complete apparatus ever offered to the public for pitching sheaves. Sheaves hat in the mow just as they come from the load.

RESPONSIBLE AGENTS WANTED
Circulars, Prices and Terms on application to **M. T. BUCHANAN,** Ingersoll.

Lemire Stone and Stump Lifter



Capacity of Lifting 18,000 lbs WITH NO EQUAL.

Lifting and carrying stones at will, so you can make with them fences from four to five feet high. You will clear your land for the mowers and reapers. To lift a stone you make the lever work, and the hooks will hold it when lifting. You can lift, remove, and put into tence a stone in ten minutes. Agricultural societies should buy it. Farmers, if they like, may join in club to buy it. Price moderate. For all particulars address to—

A. LEBLANC, Prop.
WOTTON, QUE
Or at the Plessisville Foundry, Somerset, Que.

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.

FARMING

VOL. XV.

MAY 24th, 1898.

No. 38.

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 a notice by post card or letter to discontinue is received and all arrears are paid up. Returning 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.

TOPICS FOR THE WEEK

They Cannot do Without It.

On every hand we receive very flattering words regarding FARMING, as a weekly farm paper. It is our purpose to make it second to none on this continent, and judging from what our friends say we are gradually attaining to our ideal. What we want in addition to the good words of our friends is their experiences, in operating their farms, for publication. Nothing is so helpful in carrying on farm work as to know how others have succeeded in carrying on the same line of work. As farmers meet together in their institute and other meetings, and are benefited by discussing each other's methods, so they can be even more benefited by discussing each other's methods through the medium of a weekly agricultural paper. A paper like FARMING, which circulates in every part of the Dominion, brings the farmer in British Columbia and Manitoba in touch with the Ontario farmer and the farmer of the Eastern Provinces. What is needed to make complete this unity of interest is for the farmers in these various portions of the Dominion to let us know how they carry on their farming operations. If it is only a few words—let us know how you feed your cattle, horses, sheep, swine and poultry, your method of caring for milk or managing the dairy, in what way you cultivate your corn and roots, the kinds of corn and grain you sow, or any other line of farm work in which you are interested. A farmer may think his way of doing things not very valuable, but if it has been a successful way he should let others know it. It is only by co-operation in this way and by our farmers helping each other that we can hope to make agriculture in this country what it ought to be.

The following extracts from letters received recently show how FARMING is appreciated on both sides of the line.

"We want your paper and would not like to do without it. The weekly market page is worth the price of the paper to any farmer who wants to keep posted in his business."

WILLIAM STEWART & SONS,

May 11, 1898,

Menie, Ont.

"Enclosed please find \$1 to renew my subscription to your very valuable paper. It has as much, if not more, good, solid information in it as any paper I take."

JOHN E. LENO,

May 11, 1898.

Wayne, Mich.

Agricultural News and Comments.

The dried fruit product of the Pacific coast is assuming large proportions. In the year 1897 the product of dried fruits in California and Oregon, exclusive of apples and raisins, was 150,000,000 pounds, of which 100,000,000 pounds were prunes, 25,000,000 pounds apricots, and 25,000,000 pounds peaches and other fruits. 125,000,000 pounds of this will be consumed in the United States and the balance in foreign countries.

Sunflower seeds form an excellent food for poultry. They can be easily grown in this Northern climate, and it is rather surprising that more poultry raisers do not grow them. An Eastern poultry raiser states that the feeding of sunflower seed to poultry will almost double their laying quality. The Mammoth Russian sunflower is recommended for this purpose. It is a much larger seed than the common sunflower and contains more egg food.

An old sheep keeper says that good fat sheep never lose their wool. Wool is lost through lice, ticks or scab, due to a mite, and none of these insects can endure fat. A poor sheep is always their feeding ground. If wool is the principal object of breeding, then a ram should be selected with plenty of wool bearing surface and yielding a washed fleece of at least fifteen pounds. His wool should be of strong fibre and coarse crimp. A ram should not have a ewe's fleece.

Cherry trees are said to have been planted in England one hundred years before the time of Christ. In 1540 an orchard of thirty-two trees produced 1,000 quarts of cherries, which were sold strung along sticks and peddled from house to house. It is said that the Court of James I. amused themselves having matches as to who could eat the most cherries. As many as 20 lbs. have been eaten by one of the Court ladies at one of these matches. Grapes also were planted and tended with great care, the clergy being the most clever in managing vineyards.

A French physician has found the casein of milk to be a good brain food. He experimented specially with buttermilk and found that the casein in it differs from all other albuminoids. One of its properties is, when burnt pure, to make no ashes. In a number of experiments he found that absolutely pure casein contains 7.53 parts out of the organic phosphorus. He also demonstrated the presence of casein of sulphur, and, therefore, concludes that casein is made up of carbon, hydrogen, nitrogen, oxygen, phosphorus and sulphur. According to this statement skim milk and butter milk are brain foods of a very high order, for both are rich in casein.

Some months ago, in a lecture before the Glasgow Dairymen's Association, Dr. Bell made the following significant statement in regard to the purity of Danish butter. "I have it on the best authority that shiploads of what is called teal seed is constantly being imported into Denmark from India. This seed when pressed produces a beautiful, tasteless, and inodorous fat, which, I am informed, is largely employed in the adulteration of butter. This, I think, should be inquired into, as the laws against adulteration in this country are being enforced sometimes, I think, a little too severely, while foreign articles of diet are allowed to enter the country without any examination whatever."

The annual military requirements for beef and mutton at the various Indian ports are as follows: Calcutta, 150 tons; Madras, 170 tons; Rangoon, 400 tons; Bombay, 365 tons; Karachi, 320 tons; Aden, 280 tons; total, 1,685 tons. The civilian demand is unknown, but it is considerable, and is growing. The Australians are making an effort to get this trade. A large refrigerating company is now making arrangements to have Australian frozen meat sent to Calcutta and Bombay. It is hoped if the trade develops that a line of steamers will be put on between the two countries for this purpose.

It costs the people of Australia £17 in ocean freights for every £100 worth of beef and mutton sent from that country to England. It costs them £14 in ocean freights on every £100 worth of cheese and £7 on every £100 worth of butter sent to the British markets. From these figures it will be seen that the Australians are likely to devote more attention to the production of butter for export because of the lower cost of transportation. The colony of Victoria sends about one-fifteenth of Great Britain's total imports of butter. From recent tests made it costs on an average about 5s. 5d. to produce a pound of butter in Australia.

The butter-king of the world is said to be Obadiah Sands, of Chicago, Ill. Mr. Sands owns eighty creameries and controls the output of as many more. These creameries are scattered over the State of Illinois, and their annual product amounts to 14,000,000 pounds of butter, valued at \$2,500,000.00. The milk of 20,000 cows is used in the manufacture of this butter. In the season of the year when the milk is most plentiful 20,000,000 pounds of milk are daily churned into butter. The milk is gathered by 4,000 teams from 6000 farms.

The average cost of moving a ton one mile over the average country road is twenty five cents, and to move a ton ten miles it will cost two dollars, or twenty cents per mile, and this does not include the driver's time. In the United States the average distance of the farm from the local market or mill is ten miles. The average price of wheat on the farm is ten cents per bushel less than it is at the local mill or market. According to this the average cost of transporting wheat from the farm to the nearest market is ten cents per bushel, and this is about twenty per cent. of the price of wheat at the average local mill.

Some time ago the British Government asked the English Farmers' Club whether a State organization of experimental farms was or was not desirable. The answer was in the negative, or that it was not desirable for the Government to establish experimental stations. The Farmers' Club consists of about 400 out of 400,000 English farmers. They are the *élite* of the farming class and therefore have no need of Government assistance. Their view is not backed up by the English agricultural press, which considers experimental farms desirable even in Great Britain.

Nantyr, May 11th, 1898

DEAR SIR, Enclosed please find \$1 as one year's subscription to FARMING. I appreciate your paper very much, especially since its change to a weekly publication.

Yours truly,

H. A. McCULLOUGH.

Our British Letter.

The British Dairy Farmers' Association May Come to Canada Next Year—Canadian Products at the Dublin Show.
(From Our Special Correspondent)

London, Eng., May 9, 1898.

Every year the British Dairy Farmers' Association holds a conference or tour in either a different part of Great Britain or the Continent. In this we have copied other nations. The object is for the farmers who "do" the tour, etc., to see for themselves the system of farming followed in the different localities and to apply on their own farms any of the practices they may deem desirable. By the time this communication reaches my readers, the annual tour for this year will be over, commencing, as it does, on Monday, May 23rd, and winding up on Saturday, May 28th. The number of those who on each occasion set themselves out to gather information in this way is, roughly speaking, about one hundred; and, of these, a great proportion are, so to speak, regular annual travellers. I fear the bulk of the "tourists" regard the affair more as an annual holiday than as a means of gaining instruction. A few, however—a sort of residuum—are unquestionably knowledge-seekers, and to them the tour possesses, of course, a certain value. I am not aware, however, that a single farmer has yet convinced himself that he has, during the ten or more years that the tour has been established, been able to pick up much, or anything, that he could apply on his own farm in his daily practice.

As I have indicated, this year's tour will be from May 23rd to May 28th. It will thus be just before the hay harvest. We begin cutting hay in June and July in this country; and our wheat is cut in August and September. In Scotland one sees it cut in October, but the months first mentioned are the usual ones for cutting in England. Next year it is hoped that the British Dairy Farmers' Association may visit Canada. There are a few energetic spirits in the society who last year tried to bring this off; but somehow the matter fell through, and the touring party went to Denmark and Sweden instead. I am quite sure if we came to Canada we should meet with a hearty reception, and it would be pleasant to hear "God Save the Queen" and "Rule Britannia" sung on your shores by the united voices and from the lusty lungs of the peoples—kith and kin—of the two hemispheres. I cannot, however, persuade myself that any such treat is really in store. You see, practical farmers would find it difficult to be from home for four or five weeks or more in the spring or summer months. Of course, some of our "experts" could afford the time (and money) to take the journey, and, after all, they are perhaps our teachers of advanced methods. It is quite understood here that the Dominion affords a good illustration to-day of "advanced methods." No serious man in any position of responsibility can fail to observe and appreciate what co-operation has done and is doing for you all. There is thus a possibility that some of our people—our "experts"—may cross the "herring pond" in due time.

I ought to add that the British Dairy Farmers' Association consists of some ten to fifteen hundred members, nearly all of whom are in some way or other connected with the dairying interests of Great Britain. It is the only national body of the sort in Great Britain; its council is extremely energetic; and the work of the association is unequalled, in my opinion, by any other agricultural body in this country. There are a number (a dozen or twenty) of smaller dairying societies, which confine their operations to the interests of those farmers residing in the area or areas they (the societies) respectively cover—which is generally one or two counties of some 700 to 1,000 square miles each.

A fortnight or so ago I was in Dublin at what is known as the Spring Show. It consisted of live stock and implements chiefly, but at it were, as is usual at British agricultural exhibitions, a number of miscellaneous "stands." At the particular show in question there was this year a fine stand of Canadian produce which, I am able to state, at-

tracted a great deal of attention, though some of the "Paddies" objected to it as tending to lure the strong and healthy bone and sinew of the country away from home, i.e., to emigrate. The truth, however, as regards Ireland is that young men and women will not remain in Ireland if they can possibly help it, as there is no encouragement given either to agriculture or to manufactures; whilst the rail rates are most prohibitive. The Canadian government agent told me that two cases of goods cost just as much to carry them by rail from Liverpool to Dublin (about sixty miles) as from Canada to Liverpool by boat. As regards "encouragement," the government believe that self help is the best form of help, and that the less paternal a government is the better. That is so in the case of established industries, no doubt, but not otherwise. Anyway we are going to give a Government Board of Agriculture and of Industries to Ireland all in due course, though in farming matters from a legal standpoint Ireland is, I am bound to say, far and away better off than England.

Illustration Stations for Farmers.

Agriculturists will appreciate the more explicit statement of the Hon. Sydney Fisher before the House Committee on Agriculture a week ago regarding the proposed plan for "Illustration Stations." Though the original proposal as outlined by Professor Robertson was sufficiently clear to show the nature of the work proposed, yet we must confess to having had a little doubt as to the exact meaning of the term "Illustration Station." The Minister's explanation has thrown some further light on the whole subject, and yet the claim that these stations are not to be at all experimental in their nature is open to question. However, whether they are experimental in their operations or merely illustrative is neither here nor there; what is important is, will they do what is claimed for them; are they necessary for the development of our agricultural resources; can they be operated successfully, and is the expenditure justifiable?

In regard to the first we have not much to say. The proof of the pudding is in the eating. The scheme is an entirely new one in this country. We know of no similar line of work in any other agricultural country, excepting it be in France, and until it is put into operation and has been tested for a year or two it is not possible to say definitely what the results will be. The Department of Agriculture is adopting a wise course in deciding to make the venture tentative in its character, and to operate only a few of these stations at the beginning to prove whether the scheme is workable or not. The Minister in his address referred to the varied conditions existing in the different agricultural districts of the Dominion, and to the good services small illustration stations would render in showing the special lines of cultivation, etc., necessary for these respective localities. We would suggest that in making a trial the first year, as far as possible a station should be located in each of the districts in which the agricultural conditions are largely dissimilar. This would require about ten or twelve stations, and would give the scheme a fair trial.

As to the necessity for such a scheme in order to develop our agricultural resources very much more can be said. As we pointed out a couple of weeks ago there are many farmers badly in need of instruction of a kind that will enable them to make the very most out of their farms. There are many farms to day, especially in the older provinces, that are almost unproductive because of improper methods of cultivation, and because a system of farming has been carried on that has taken all the fertility out of the land and put nothing back in its place. If the establishment of local illustration stations in sections where the farms are pretty well run down will help to improve them and enable their owners to produce one quarter more grain per acre than they are doing now, the necessity for such stations is fully established. We are still in doubt, however, as to the wisdom of the Dominion Government under-

taking much educational work of this kind when the Provincial Governments are doing a large amount of work along agricultural lines. As we have previously stated there should be a definite understanding between the Dominion and Provincial Departments of Agriculture as to the particular line of work each one should follow in developing the agricultural resources of the country. There should be no overlapping of work, and we are glad to know that the Department at Ottawa fully recognizes this, and, as Mr. Fisher states, this new scheme will not be allowed to interfere with work carried on by the Provincial Departments of Agriculture.

Can these stations be successfully operated and is the scheme a practical one is what many persons are asking? To operate, control and direct the work on one hundred and fifty or two hundred illustration stations, which number, the Minister says there will be if the scheme is carried out in its entirety, is no small task. The first and chief task we think will be to secure a sufficient number of farmers who have experience enough in such work to make the illustration station sufficiently attractive. Notwithstanding what the Minister says in regard to the work now being carried on by the Ontario Experimental Union being entirely dissimilar to that of the proposed scheme, we think with very little modification the work of the Union could be made of a similar nature to that involved in the new scheme, and we would repeat what we stated a couple of weeks ago that it would be well for the Department to co-operate with the Union and utilize its members for conducting the stations in this province. There would be a two-fold advantage in such co-operation. It would enable the Department to utilize men with some experience in conducting experimental or illustrative work and add the knowledge of the various methods of cultivation and the various kinds of seeds obtained at the Ontario Agricultural College to that obtained at the Experimental Farms and from other sources. In fact, as we have previously pointed out, there should be the active co-operation of all the various institutions connected with agricultural training in making the scheme a success and where a Provincial Government has already an experimental farm or station the information to be obtained there should be utilized as far as possible in helping on the work in that province. One thing which commends the scheme and which is a sort of guarantee that it can be successfully operated is that it will be under the direction of Professor Robertson. If there is anyone in Canada who is able to push it to a successful issue, he is the one. The one doubt there is in regard to this is whether his other important duties will allow him to devote sufficient time to the new scheme to make it a success. We believe the first duty of the Dominion Department of Agriculture is in connection with transportation and the opening up of new markets for our food products. These special lines of work come under the Agricultural and Dairy Commissioners' Department, and should not be sacrificed in any way in order to further this new scheme. It would be a serious and an irreparable mistake at this juncture to be any lax in our efforts in regard to providing sufficient and suitable cold storage facilities on board the cars and boat to convey our perishable food products to the British consumer in the best possible condition. Then our export trade in these products, with the exception perhaps of cheese, is only beginning. Our butter export trade needs looking after; the export fruit trade has hardly made a beginning and much is to be done yet before it can be said to be thoroughly established; the dressed beef trade needs all the time and attention that can be given it, and the same might be said of many other lines of trade. We therefore speak plainly in regard to this whole question as we believe it is in the interests of our trade in farm products to do so.

There can be no two questions as regards the justifiableness of the expense if the scheme proves successful in improving the system of farming carried on by many of our farmers. Anything

that would accomplish this would not be dearer than five times the estimated cost. No scheme which is successful in developing and increasing the agricultural resources of a new country should be considered too expensive even if the cost is large. It is results that tell, and even at the present low estimate of its annual cost the new scheme would be dear if nothing were accomplished.

Cheap Money for the Farmer.

A few weeks ago we drew attention to a proposal made in the British Columbia Legislature to provide a means of supplying the farmers of that province with cheap money. The proposition then made has been incorporated into the statutes of that country in the form of a law providing for the organization of what are to be known as Agricultural Credit Associations. Some of the leading clauses of the act providing for the organization of these associations are as follows:

The objects for which an association may be incorporated under this act shall be to procure moneys by monthly or other contributions and deposits from the members thereof, and by means of loans upon debentures issued and guaranteed as hereinafter provided, and to lend the money so acquired at such rates of interest as the association may, subject to the provisions of this act and of the rules from time to time in force thereunder, determine to the members of the association only, and for the purpose of the aid and advancement of any such member in his trade or calling, and for no other purpose whatever.

The number of members and the number of shares in an association shall be unlimited; every member shall be a shareholder and no member shall hold, either in his own name or in the name of any other person in trust for him or otherwise howsoever, more than one hundred shares in the association.

The shares of the association shall not exceed in face value the sum of ten dollars each.

The rules of the association shall provide the amount of premium by way of membership fee or otherwise (not being less than five dollars in respect of each issue of a share or shares) to be charged upon the issue of shares, and the amount of calls to be levied pro rata upon the shares of the association for the cost of management thereof. (Sub-clauses of this provide for a deposit with the government of all premiums collected under this section and for recompensing the government for losses in assuming any liability of the association).

No loans shall be made by the association except to its members.

The rules of the association shall provide the manner in which and the terms and security upon which loans of the funds of the association shall be made to members thereof; provided that no loan shall be made to any member of an amount exceeding either the amount of the nominal value of the shares held by such member or the sum of one thousand dollars, whichever limit may be fixed by rules for the time being in force under the act, or in default thereof by the rules of the association.

Every person becoming a member of the association shall be entitled to obtain loans from the society for specified and approved purposes within the limit prescribed, for such periods and for such interest as the society may determine.

The important feature of these associations is their lending powers. The object for which loans are made and the conditions under which they may be made are summed up as follows:

(1) For aiding a member to drain, clear or cultivate lands owned or leased by him: provided that no loans be made in respect of leasehold lands held for a term of less than two years from the time of such loan.

(2) To enable a member to purchase live stock, stock in trade, implements, fixtures and trade or farming effects.

(3) To enable a member to construct or improve fences or buildings.

(4) To assist co-operative dairying or farming, and to assist in the conduct of the purposes of any incorporated association or society subject to the approval of the Lieut.-Governor-in-Council; and

(5) To enable a member to carry out and incur any reproductive work or expenditure reasonably expedient in the conduct of his trade or calling, and not prohibited by this Act or by any rules for the time being in force thereunder.

There are a number of other clauses providing for the issuing of debentures by the association at a rate of interest not exceeding six per cent. to the extent of the borrowing powers of the organization. All debentures must be sold to the highest bidder. Arrangements are also made for the establishment of a reserve fund after the debts and liabilities of the association have been met. These with what we have quoted above are the chief features of the bill, and are sufficient to enable us to see what the objects of these associations are.

The chief object, as may be inferred, is to provide a means whereby the farmer can get cheap money for carrying on his farming operations. The object is along the right line. What this country needs just now is some provision whereby the farmer may be able to get money on reasonable security at a low rate of interest. If the scheme of the British Columbia law-givers accomplishes this for the farmer of that province it will prove a boon to agriculture in the far west. But we must confess to having very grave doubts as to the effectiveness of the proposed plan to accomplish very much in this direction. As far as we are able to judge by glancing over the Act providing for the organization of these credit associations it seems to be too complicated and not definite enough. For instance, it is not stated definitely what rate of interest should be charged the members for money loaned. This, we think, is necessary in order to make the scheme successful. By leaving to the management committee the arrangement as to what rate of interest shall be charged seems to us to balk the real objects of the scheme. If a majority of the members are not borrowers they may feel like raising the rate of interest as high as possible, and therefore the real object of the association could not be attained; that is to help the needy farmer to obtain cheap money. One good feature of the scheme is its co-operative character, and uniting the farmers so as to render assistance to each other. Much good may be done in this way, but we are sceptical as to the power of this co-operative character to do much when the loaning and borrowing of money is concerned. If it is necessary to provide cheap money for the needy farmer—and we believe that it would be in the best interests of agriculture to do so—the best way to do it is for the Government to provide some means whereby the farmer could get it direct, and not have to go to the trouble of joining a somewhat complicated organization in order to get it. However, farmers in the East will watch with interest the working of this new Western scheme. If it prove successful there why not in the other provinces?

The Wool Situation.

The condition of the wool markets will be followed with interest during the next few months. A few weeks ago we drew attention to the influences that were at work in the United States and elsewhere that were likely to cause a reaction in the wool trade. As far as Canada is concerned the features in the situation that may be helpful to the American wool-growers are without avail here. The general opinion, however, of those in the trade is that the wool market will improve later on. There certainly seems to be good grounds for this contention, for if the situation improves in the United States, as many of those interested there expect, there is good reason to believe that the reaction will help Canadian wool-growers also.

However that may be, the wool situation on this side just now is anything but lively. Mr. John Hallam, of Toronto, in his annual wool circular for 1898, says: "The duty upon wool reimposed by the United States Government last year has, to a great extent, changed the conditions of the trade here. The rate of 12c. upon unwashed wool, as well as washed, and of three times that amount or 36c. upon tub-washed, will prohibit the export of anything but the strictest selection of merchantable fleece. Owing to the extraordinary purchases of last year, many of the large mills, having supplied themselves with stock sufficient for two years, there has been little or no demand for Canadian wool, and there is still unsold in the United States over 1,000,000 lbs. of last year's clip belonging to Canadian dealers. Current quotations in a number of the United States' markets for Canadian wool range from 28c. to 30c. Deducting from this 12c. for duty, 1c. for freight and charges, 16c. is all dealers should pay."

According to this statement the wool situation is not very bright. Like everything else a few

years of low prices lessens the production, and a reaction takes place. How long we will have to wait for this improvement in the situation it is hard to say. There are evidently signs of an improvement elsewhere. There has been a remarkable development of the sheep industry in the United States during the past year or two. Of course, this development has not been due to any great improvement in the wool situation over there. There is a strong desire on the part of American farmers to keep more sheep, because of their qualities other than wool production. We would like to see the same desire evinced on the part of Canadian farmers in regard to the keeping of more sheep. In addition to the value of the wool, which, even at present low prices, is not small, sheep are valuable in many other ways.

C. C. James, M.A.,

DEPUTY MINISTER OF AGRICULTURE.

A few weeks ago we published in full the address of Professor James on the "Relation of Agriculture to our Public School System," delivered before the Ontario Teachers' Association. The publication of this address has aroused considerable interest among the readers of FARMING in regard to the question of agriculture in our public schools. That Mr. James has a good grasp of the whole situation, and a proper conception of what is needed to make the study of agriculture in the public schools a success, is admitted by nearly everyone who read his recent address on the subject. We therefore take this opportunity of presenting our readers with a short sketch of Mr. James' life and work, as we believe a better knowledge of the man who writes enables those who read what he writes to appreciate it more fully.

Professor James was born at Napanee, Ont., in 1863. His early education was received at the Napanee public and high schools, from which he matriculated into Victoria University in 1879. In 1883 he was graduated from his *Alma Mater* with high honors, receiving the degree of B.A. and the gold medal in natural sciences. From January, 1883, to January, 1886, he held the position of assistant master in the Cobourg Collegiate Institute. During this period he took up the post-graduate course of study in the natural sciences at Victoria University. In 1886 Mr. James was appointed Professor of Chemistry at the Ontario Agricultural College, Guelph, which position he held till 1891, when he became Deputy Minister of Agriculture for his native province.

In these several capacities Mr. James has proven himself capable in every way. His lectures to the students were always prepared with the greatest care, and delivered with that clearness peculiar to his style, and which rendered them very attractive. He was popular both with the students and with his fellow-professors, and when he retired for the much wider field of Deputy Minister, it was felt that the Agricultural College had sustained a distinct loss. It is not necessary to say much about the work accomplished by Mr. James in his present position. His labors in connection with the Bureau of Industries and other branches of work connected with his department are well-known to almost every agriculturist in the province, suffice it to say that every branch of his work has been managed with his characteristic ability and foresight, and made effective in promoting higher agriculture in this province.

As a speaker at farmers' gatherings, Mr. James is in great demand. His addresses are always to the point, and are delivered in that impressive and forceful manner characteristic of the successful speaker. As we have previously indicated, Professor James is enthusiastic as to the possibilities of agriculture in his native province. He believes thoroughly in the need for devoting more attention to the study of agriculture in the public school, and we are pleased to be able to state that his views in this regard, as well as those of others interested in the same subject, are likely to be put to practical use before very long in the teaching of agriculture in the public schools of Ontario.

PHEASANT CULTURE.

By I. SHANKS McGINLEY, M. D. C. M.,
Hamilton, Ont.

(Continued from last week.)

CLIPPING WINGS.

We hope to be pardoned for saying, that if there is a marked stupidity among the fraternity, it is the usual way we find fanciers clipping birds' wings, including poultry. This stupidity is not confined to the novice alone, but we find it in old poultry fanciers. The old instruction solemnly spoken was, "Clip only one wing, so that the bird cannot balance. If you clip the two it can fly." This advice has gone from mouth to ear for generations given by wisecracks whose information is all founded on antiquated hearsay, and who never investigate for themselves. The average fancier clips the wing while it is closed. In this way one cannot help not only disfiguring the bird, but the heavy warm feathers which grow on the half of the wing next the body, and which nature intends more as a coverlet to keep the bird warm than to assist in flight, are removed. Right under this warm coverlet of feathers is the lung, and when this part of the wing has been removed, there is nothing to protect the lung, and it may be noticed that there is almost a bare spot so far as body feathers are concerned. The sleet and wet falling on the unprotected lung causes pneumonia, which is followed by a lingering death or a delicate bird.

Experience and experiments prove that birds after a little practice fly higher and farther with only one wing clipped than with two. When only one is clipped they are apt to injure themselves by going with great force against the weakened side.

HOW TO CLIP.

Extend the wing fully. Then cut each *pinion* feather between the shaft and quill from the middle of the wing to the top. Do the same with the other wing, and all is right. The bird cannot fly; he is not disfigured (in fact when walking round you could not tell that the wings were clipped); and his lungs are still protected by nature's coverlets.

HOW TO PINION.

It is generally recommended to pinion pheasants at two months old. We have performed the little operation at all ages, and never had one die from the effect.

The operation requires no skill. It means to take a pair of scissors and clip the wings off at the first joint. The birds never seem to mind it and in less than a week it is all healed over. This, of course, would not do for birds that were intended to be let loose in a game preserve, as they can never fly again. But for breeding stock to be fenced in fields it is much better than running the risk of watching and clipping their wings when necessary.

Pheasants should either be pinioned or have their wings clipped, even when in aviaries that are covered overhead with wire, as, if this is not done, they are continually injuring themselves by flying with great force against the wire.

FENCING.

Pheasants do best when not kept on the one ground too long. Therefore

it is better to have a movable fence made in sections 12 feet long by 7 feet high, and fastened together by hooks and staples. These may be put in any shape and moved to new ground when the old becomes soiled. The sections should have 12 feet of the common chicken netting wire, which is two yards wide, a footboard on the bottom, and two scantlings 2 inches square and 7 feet long for ends, and one scantling 12 feet long for top. This gives 1 foot of board and 6 feet of wire, making 7 feet high and 12 feet long. This can be duplicated as many times as desired. Four sections will make a pen 12 feet square, in which a pair of pheasants may be kept, and by adding sections, can be extended to any size.

WINTERING PHEASANTS.

So far as the care during winter is concerned we need say but little. We have already mentioned that it was best to have their roosting places sheltered from rain. They can stand any cold, and the more they are allowed to "rough it" the better they seem to thrive. The greatest danger is killing them with kindness. We have known fanciers who complained of heavy losses during winter, but they had used artificial heat, and we suppose heat and want of fresh air caused disease.

Feed a little corn or wheat with turnips, carrots and lots of clover hay that has been cut green and well saved. The hay should be run through a straw cutter and scalded before given to the pheasants. This is very cheap feed, and the birds are kept in healthy and fine condition for laying fertile eggs in abundance when spring comes.

BREEDING.

Pheasants adhere to monogamy in their natural wild state; but when domesticated most varieties degenerate into bigamists, and the males will then mate with more than one female. The Amherst, Golden, Reeves, Versicolor, Mongolian and English will all mate with four or five hens, while the Silver and Swinhoe are fairly true to one mate.

FEMALE HATERS.

Among pheasants, as well as among men, we occasionally find a "female hater." When we find a cock pheasant of this disposition he is very troublesome in breeding season, just when it is necessary that he should be with the hen. They are found in all varieties, but probably more frequently in the Amherst and Socimmerring. They pick the hen on the head and some times kill her. When one is so unfortunate as to own one of these birds, and has no other bird of the same variety from which he can breed, the following is the remedy. When the winter has passed and breeding season has arrived, the weather is then so mild that the chances of clipping every feather right to the flesh from the top of both the cock's wings may be taken. He should be kept in for a few days, lest he may take cold on the lungs. Then put him in an aviary with a hen, with a wire fence four and a half feet high across, dividing it in two halves, and whenever her lord and master takes one of his "tantrums" the hen will just fly the fence. He cannot follow, and she can wait and watch him through the wire until he comes to his

senses and is willing to behave before she will agree to "play in his back yard again."

Another way is to have round holes in the board large enough for the hen to run her head, neck, and breast through when the cock gets angry and wants to pick her on the head.

LAYING HENS.

Hen pheasants begin to lay about the last week of March, and, if not allowed to sit, may lay till the middle of July, and sometimes to the middle of August. Before laying time arrives, they should be all arranged in their aviaries, and the cocks put with the hens. The hens should not be disturbed during laying season by visitors, who too frequently will bring with them dogs. If they are timid and shy, the manager of them should always wear the same clothes when the eggs are being collected. The aviaries should be kept clean and well supplied with lots of clean water and an abundant supply of green food (lettuce is the best) if in small quarters where they cannot get grass. A heap of fine sand should be in one corner of every aviary for the birds to dust in. A broad board leaned against the side of the aviary with a nest behind it and an artificial egg in the nest should be provided for the hen to lay in. This should not be too easy for the male to get at, nor should there be too much light, lest they may learn to eat their eggs—a habit they are never guilty of if they have a large run. The artificial eggs sold in the stores are of no use. The birds know them, and if they have become egg eaters they can soon select the genuine from the bogus egg.

To make proper artificial nest eggs for pheasants, take bantam or guinea hens' eggs, make a small hole in both ends and blow the egg out, leaving the shell. Put a piece of mucilage paper over one hole, and fill the shell with newly mixed plaster of paris. Allow it to dry, then break the shell off, and with a real pheasant's egg as a sample, it may be colored so that the pheasant cannot tell it from a genuine egg. They are quickly and easily made, and with a free use of them before the pheasants begin to lay there is little fear of them learning to eat eggs. One or two should be kept around the aviary as well as in the nests. There are many other ways suggested, such as burning and cutting the points of the birds' bills, filling the eggs with coal oil, mustard, and pepper, and giving them to the birds to eat, etc., which we will pass over as being useless, and come to the only other plan we have found of any use in saving eggs from egg eating pheasants. It is to feed the pheasants all they can eat of common hens' eggs. This is not so very expensive, as hens' eggs are cheap at that season of the year.

If the pheasants are properly managed there will be no egg eaters, and all the drawbacks to pheasant culture may be avoided, and experience teaches with regard to pheasants that the "ounce of prevention is better than the pound of cure."

We started with eggs and their management until they produced birds, then continuing with the management of the birds until they have themselves produced eggs, which gives us one round year of pheasant culture—from egg to egg.

THE FINANCIAL POSITION OF THE FARMER'S WIFE.

By Mrs. L. H. BURNHULL, in *The Iowa Homestead*.

No good reason appears why husband and wife should not be equal partners in the home making business. Remember, however, that partnership implies equal responsibility for debts and expenses, outside as well as in the house. Women are sometimes inclined to think household expenses are the most important part of the business, forgetting that repairs, machinery and stock are legitimate expenses, necessary to insure an income, and that taxes must be paid, even if the same homestead does duty a second season. If we wish to be partners we should inform ourselves as to farm affairs outside the house, and be reasonable in our demands.

If a woman is possessed of a reasonable degree of common sense, she will be willing to practise necessary economy and make the most of her resources, but she certainly ought to be permitted to buy what she considers necessary and proper for the household. If she makes a few mistakes while learning, they will hardly cost any more than the mistakes made by the average man. I have known men, who could not trust their wives to buy fifty cents' worth of sugar, lose several head of stock every year through their own carelessness. I have seen but few homes, however, where this was the case, and no amount of money would tempt me, were I a man, to have my wife feel toward me as those women felt toward the husbands they had promised to love and honor.

Here is a chance to mount a very old hobby of mine, and insist, in the strongest manner, that boys and girls learn the use of money while under parental control. Give them a chance to earn and spend for themselves, kindly pointing out their mistakes, and they will soon use judgment and self-control in money matters. We have known young people who earned their own living, who yet were not deemed capable of selecting the smallest article of clothing for themselves. It is small wonder if it took years of married life to teach them how to average their expenses fairly with their income. I read a pitiful story, a short time ago, of a farmer's wife who was made a slave to her husband's desire for more land, and who received a good scolding for taking a dollar of the butter money to buy herself a hat. She landed in the insane asylum, was cured, and went home to her mother. I suppose she loved her husband, but it strikes me that she might better have shown her love by insisting on proper treatment than by giving up to his mistaken idea and ruining their home. I have known women to cry when their husbands failed to bring needful articles from town, and then to do without. No wonder the men thought it didn't matter much. Why didn't they say, pleasantly, "I'm sorry you didn't get the things, for now I shall be obliged to go after them myself"? And by the time a few extra trips had been made his majesty would probably improve in memory. The moral of all this is that, with rare exceptions, the woman who is abused is herself to blame. If she will calmly and kindly insist upon her rights, she will probably get them.

Under no circumstances should a

woman risk her happiness and self-respect by adopting underhand means to secure the desired object, or concealing purchases from her husband. Better stand a few harsh words than to destroy all chance of trust between you. After all, each family must arrange these things according to its own circumstances, and, while it may not be always possible for the wife to carry her own purse, there can always be a good understanding, so that she need not feel like a beggar when called upon to ask for money.

MIXED FARMING.

F. H. STANDING, Burford, Ont.

Mixed farming cannot be advocated under all circumstances. It depends upon certain conditions. It depends upon the quality of the soil, the distance from market, the demands of the market, and upon the capital of the farmer in question.

If a farmer's lands are flat and low, it may pay him best to go extensively into stock raising and dairying, as it would be impossible to raise the ordinary kinds of grain and vegetables which generally require a warmer and dryer soil. I have sometimes seen farmers year after year attempt to grow oats and sometimes other kinds of grain on very low fields, and perhaps they succeed one year in five if it happens to be a particularly dry season. These fields should be drained if possible, but, if not, it is a great waste of time to be plowing and cultivating and reaping year after year and getting very little more than the seed back. It should be remembered that it takes just as much work to get five bushels to the acre on such land as forty bushels on good land, and perhaps more, because where the grain does not grow the weeds will. Such land is better to be kept seeded down and used for pasture or hay, and there will not only be a larger return, but less trouble and expense.

Again, a man may live near a city, and, if his soil is suitable, he may with advantage go into market gardening or some special line that meets with ready sale, and keep his land fertilized with manures from the city. Of course, it depends on the size of the town how many can do this, because when we get down to gardening, land well manured may be made to produce great quantities of food, and overproduction in any line will soon bring the price down below a paying basis.

It is said that in France and Holland a farmer living on two acres of land not only produces enough for himself and family, but has something to lay by for old age. This may seem like getting things down fine, but it shows what can be done, and if a man's capital is small he can invest in a small farm and if he works it well he will have no trouble in keeping himself busy. But in this country land is plentiful and not very high in price and in most cases it probably pays us better to work a fair-sized farm, even though we rent it, rather than buy too small a one.

With the exceptions already referred to, farmers should as a principle either all go into special branches of farming or all go into mixed farming. And under circumstances under which the great majority of farmers find them-

selves, a system of mixed farming has very decided advantages over special lines. It is often advanced as an argument that a man going into a special branch can become more proficient than one having a number of things to look after. This may be true to a certain extent, but farmers as a class are at least as intelligent as men in other kinds of business, and a man who has the elements of success in him for a special branch is likely, with the extra advantages he will obtain, to make a greater success of mixed farming, providing he make a proper study of it. A man will not make a success in any business or profession unless he make a study of it.

The advantages of mixed farming are many. It is a well-known botanical fact that any certain kind of plant or grain requires food from the soil, and that different kinds of plants use to a large extent different elements of food for their nourishment. Therefore it will easily be seen that if only one kind of crop be grown for a number of years the soil will become impoverished, at least for that particular crop, while the chemicals that might be furnishing food for other crops will be going to waste. For instance, while with a good coat of manure we might scarcely be able to get two good crops of wheat grown consecutively, yet by following wheat with two or three other kinds of grain and a crop of clover, we can grow a second crop of wheat and so on for a number of years.

During the interval between the two crops of wheat the land was being replenished with fresh food material. This is done partly by the rains dissolving the ammonia and other gases from the air and washing them down into the earth, and partly by the action of plants, particularly the clover in drawing, both from the air by means of its leaves and from the subsoil by means of its long root and storing near the surface. For this reason clover is a very valuable crop to grow. It not only yields a good return in the shape of fodder, but leaves a large surplus of food suitable for other crops in its roots which can be plowed as soon as the crop is off.

It is hard to fix any hard and fast rule in regard to the proper rotation of crops. It is desirable to grow wheat immediately after clover, but it is sometimes difficult to get a catch of clover on a spring crop on account of the ground being too dry on top to sprout the seed, while by sowing on wheat early in the spring the catch is generally good. Therefore, as clover is generally recognized as one of the best of fertilizers and almost an essential to successful farming, we may have to arrange the rotation differently from what we would like. Neither is the same rotation always possible, because we cannot always grow the same number of acres of one commodity that we do of another. While it is well to have as large a variety as possible we have to watch the demands of the market and grow those which will meet with the most ready sale and bring in the largest margin of profit.

Some of the coarser grains and root crops, such as turnips and mangolds, can be fed on the place, as a reasonable number of beef cattle, dairy cattle, sheep and hogs can generally be handled with advantage. In fact it is necessary to keep enough stock on

hand to work the hay and straw into manure because if these were sold the farm would soon become impoverished. There is also a large amount of pasture and grain left on the fields after haying and harvest which unless gathered by the stock would otherwise be lost. If we raise the cattle and the feed why should we not sell the finished product ourselves rather than ship store cattle and then ship the grain, roots and hay after them, as is very often done. There would be a great economy in the cost of freightage as well as in keeping the manure on the place if these cattle were fed at home. The most suitable ones might be selected for dairy purposes and the rest after being properly fattened could then be shipped at very little expense compared with both cattle and feed. There is, perhaps, a more uniform market for dairy produce than for beef, but in the case of the former it is better to have the milk sent to cheese factories or creameries, if there are any near, on account of the better facilities for handling, and the likelihood of getting a more uniform article in grade and color.

The keeping of poultry is also an important factor on a well-conducted farm. To get the best results poultry, like everything else, require considerable attention, but the eggs which they will produce in return will make a material increase in the farmer's income as well as an additional delicacy for his own table. Poultry should not be left entirely to their own resources in regard to food. They are good workers, and will see that nothing suitable to their need goes to waste around them, thereby lessening the cost of their maintenance.

Bee keeping requires a great deal of study to know how to handle the bees and keep them in good condition, but if one has time to keep a watch on them during the swarming period this branch may very well be added. Although there is some expense about the hives the honey itself costs absolutely nothing, as it is gathered from the crops which are grown by the farmer, and instead of detracting from the value of the crops bees are of great value in fertilizing plants. This is particularly noticeable in the case of fruit trees. Sometimes the blossoms of one tree are all of one sex, and to produce fruit these must be fertilized by the pollen from those of another tree. If both kinds are on the same tree the wind may do a great deal towards carrying the pollen, but when on different ones it depends almost entirely upon the work of the bees and insects.

Now while it is advisable to grow crops in rotation it is also advisable to have the farm divided up into fields and grow all the varieties in the same year. This will keep the farmer constantly in seed and give him all the food necessary for his stock as well as for his family. It may also save him from financial embarrassment which might occur through the failure of the one crop upon which he was depending. The same argument holds good in going exclusively into the feeding of stock. If we buy all the feed and the price of stock goes below a certain figure we may be heavy losers, and a good many farmers are not in a position to meet with a reverse of this kind, although the average year may

bring in a fair profit. A man would at least need to have a larger capital so as to be prepared for such an emergency. And if any particular branch of farming pays well enough for a man to go exclusively into that branch it only proves that farmers as a class have not kept their eyes open to the demands of the market or they would have kept the balance by each one extending a little more into that branch.

Another thing deserving attention is that, in mixed farming, one can work almost the whole year doing one thing at a time and at the proper time and without being particularly overcrowded. This is quite important, as you can hire the necessary staff of men for the entire season at season's wages instead of getting a number of men for a few days at a time and paying high wages. Sometimes it is impossible to get extra men in a busy time. Or, in the case of dairy cattle being too much in evidence, it might require a number of men to get the feeding and milking done at the proper time while they would have very little to do the rest of the day. This would, of course, be the case more in summer than in winter.

In going into a special branch there is also the cost of handling and freightage to be considered. If we do not raise everything necessary to our business we must buy from others, and the added cost is sometimes considerable. Every time any article or commodity is handled somebody expects to make a profit, and if it is handled two or three times it increases the price very fast. For instance, if one man sells to another and makes a certain profit the second man not only wants a percentage of profit on the first cost of the article but also on the first man's profit, thereby compounding the price the same as in compound interest. This point is particularly noticeable in the case of dutiable goods, where sometimes 30 or 40 per cent. is charged, and then you pay the importer his profit on the duty as well as on the invoice price. In mixed farming speculation is reduced to a minimum. We have several strings to our bow. If one thing fails we have a number of others to fall back upon. There are no obligations to meet which can not be calculated pretty accurately at the beginning of the year.

A farmer can keep a good table at less cost than anyone else. He can keep an orchard with all kinds of fruit, a garden with all kinds of vegetables, in fact anything that can be grown he may have it fresh at his own door and at the actual cost of production. The farmer's occupation, although it contains a good deal of hard work and some drawbacks, is generally free and healthful and perhaps the most independent of any. There is no machine work such as is generally found in a shop where the operators have to do one thing all the time. The work is constantly changing, making it more interesting and less tiresome. Situations are constantly varying, giving plenty of scope for study and judgment as to the best method to be used in each particular case.

These things are important because, while we are all after money and want to make it as fast as we can, we do not want to leave all our enjoyment until the last ten years of life, but have some of the good things as we go along.

To make a successful farmer a man must have brains, and use them. The impression prevailing in some quarters that anyone can be a farmer is an entirely mistaken one. When land was new and prices high this may have been the case, but it is not so now. Prices for farm produce run lower, and competition is keener.

Farmers should strive to turn out a good article, as the cost in production between first and second grades is very little, while the difference in market values is often very great.

In taking up work in some line entirely new to us, it is well to find out the experience of others on the subject. Experiments are often expensive, and it may be that others can give us light on the subject and save us from making serious mistakes. The reports of the various Government Experimental Stations are of much service in this connection.

Economy is necessary about the farm. Mixed farming makes it possible to economize, as what cannot be used for one thing can for another, but stinginess is not always economy.

Sometimes people stick to primitive methods when, by the outlay of a moderate sum of money, more modern methods or machinery might be introduced, which would much more than pay for the extra outlay. There are many cases, however, in which, in the interests of true economy, we have to put up with inconveniences.

Farming is a large subject, and there are very few of us but have much to learn.

There are many issues which go to make the profits or losses which are not within our control. To be successful we must try to make the best use of those things which are under our control.

THE KIND OF DAIRYING THAT PAYS.

That the business of dairying is becoming more profitable in Canada, and our dairymen are each year gaining more knowledge as to the best methods of feeding and caring for their cows, is evidenced by the increased number who are making a large profit out of their cows. In these days of keen competition, to make a profit out of any branch of farming requires skill and marked business ability in managing the affairs of the farm. This applies to dairying as well as to anything else. In fact, there is no branch of farm work that will respond to skill, care and attention given it as quickly as the dairy business. Notwithstanding the low values for dairy products there are many farmers to-day making a large profit out of their cows just because they have given strict attention to business and to the little details in connection with the handling of the cow and her products. Unless this is done success cannot be attained.

A good instance of what can be done by applying the best methods is that of Mr. Wm. Willis, of Newmarket, Ont. In 1897 Mr. Willis had twelve cows, which returned him \$50 apiece in cash for the season's work. These cows were made up of purebred Jerseys, Jersey grades, and one grade Shorthorn. Four of the cows were two-year-olds with their first calves. In addition to the \$50 which each of

the cows brought in during the year Mr. Willis had the calves and skim-milk to the good, and milk and butter enough for a family of nine. This is a very good record, and far above what the average farmer gets for his cows per year. Of course nothing is allowed here for manufacturing, as the milk of the cows was all made into butter on the farm and sold in Toronto. But even if a reasonable allowance is made for the making of the butter, the net income which Mr. Willis received from his cows last year is far above that of the average dairyman.

Mr. Willis milks his cows on an average of ten months a year. He has several Jersey cows which give over 6,000 lbs. of milk in one year. One cow produced over 450 lbs. of butter during the year. Mr. Willis makes a practice of feeding some grain to his cows all the year round. His winter ration consists of 40 lbs. of corn ensilage, 10 lbs. of chop consisting of peas and oats mixed per day. He feeds ensilage night and morning with the chop, and oat chaff or hay at noon.

In making the butter Mr. Willis adopts the ordinary gravitation method and uses the shot gun can set in ice-water for creaming. He claims to get very good results from this method. He churns not less than three times a week, and sometimes four times when the weather is warm. The success of this dairy as well as a great many other private dairies is in a large measure due to the women folk on the farm. Mrs. Willis is a very successful butter-maker, and takes particular care that each pound of butter made is of the first quality. There are many other dairymen who are getting good results from their herds. We would like very much if they would let us have these results for publication.

HORSE-BREEDING.

By ALBERT DAVIDSON.

It is with pleasure I introduce the subject, although I know that horse-breeding has become unpopular. During the past few years prices dropped so low that horse-breeders sustained a serious loss. The market has not yet improved sufficiently to warrant any large ventures; still, I prefer to have an occasional horse to sell rather than one to buy. Horse-breeding ceased so suddenly that there may be a shortage of horses and a consequent rise in prices. The low prices of our horses has found them a market abroad, and will introduce them where otherwise they would probably never have gone.

The Canadian horse has proved himself to be among the best of his kind wherever tested, and for this reason those who buy him may want more from the same source in the future. The exportation of live cattle to Great Britain being in a measure restricted, would it not pay us better to send horses, against which there is no restriction? If we refer to the statistics for Ontario, we find that we have over 22,000 less brood mares in the province now than we had in 1894. Thus we find that the low prices of horses has had the effect of putting us in a position from which it will take years to recover.

During the past few years a good horse could be disposed of at some

price, while an inferior animal could not be sold. In this way we were forced to sell our best animals, whether gelding or mares, and thousands of our best mares have been shipped out of the country. We also find that we require over 38,000 more work horses in this province now than we required in 1894, and we know that this demand for home use will continue to increase as each year more land is brought under cultivation, while the number of unbroken horses or colts in Ontario show a decrease of over 60,000 during the same time. It is evident then that horses will be wanted, but as to the kind of horses we should endeavor to breed, there is a great difference of opinion. The horse stock of this country seems to be an admixture of every breed and type of horse in the known world.

Very little intelligent effort has been made to keep the breeds pure. We have crossed in and out until it is only occasionally possible to trace a pedigree for even four generations, without finding an admixture of blood from distant types. To this admixture of blood in the stock selected for breeding purposes is to be attributed some of the disappointments and failures we have had in breeding. We have been told that like produced like, but this is true only of characteristics which have become finally fixed in the ancestry. For this reason we should use a purebred male as a sire, even though we are obliged to use a mare less well-bred. The breeder must first decide what kind of a horse he wishes to produce. Farmers seldom agree on this point, and are, I believe, too ready to change from breed to breed according as there appears to be a demand in the market. If we would cease trying to breed trotters, cavalry horses, or extreme high steppers, and try to produce the kind of horses that are most suitable on the farms, we would have fewer disappointments, and soon a vastly better and more saleable class of horses would appear than we have at present. For the best class of carriage and road horses the price may yet be high, but I do not think that the ordinary farmer can afford to breed for speed. That should be left for gentlemen of means, who, with the choicest of brood mares as well as stallions, may take the chances of breeding a racer, for they are not produced with certainty even by the most experienced breeders, and when produced require an expensive training. The ordinary farmer must raise a horse that he can sell. He must breed from mares that are able to do the farm work satisfactorily and produce colts which at an early age will be saleable. As to what class of horses will be saleable four or five years hence, we can only conjecture, but I believe that there is a growing demand for farm horses, and those will be the most profitable to produce. Electricity or other motive power may displace the horse to a great extent in our cities and from our roads, but it is not likely to do so on the farm for many years. We may differ as to the kind of horse the farmer needs, but he should combine in a fair degree both action and weight.

I prefer a compact, short-legged horse weighing from 1,300 to 1,500 lbs. There is no practical difficulty in producing such horses even from our

miscellaneous bred mares, as well as bred draught stallions have proved themselves successful sires of this class of stock. Such a horse can be raised almost as cheaply as a steer of the same age, the only additional cost being the stallion fee, which is now at a very reasonable figure. There will be little or no expense for training or breaking, and as soon as old enough such a horse will sell readily unless seriously blemished. We have made mistakes in the past in being anxious to produce horses of extreme size and have bred for that regardless of quality. The product was not very satisfactory; they lacked endurance, were apt to have poor feet or unsound joints—especially the hock joint—with legs round and beefy, and predisposed to scratches and other ailments. The depressed horse market and the consequent close discrimination exercised by buyers have shown us the necessity of endeavoring to produce useful animals of superior quality, and to produce such we must select our breeding stock with more care. It is frequently the case that mares which have become worthless through some defect in the feet or legs, or on account of a baulky or vicious temper, are used to breed from, and the probabilities are that they will transmit to their offspring a predisposition to like defects, for defects are as likely to be transmitted as more desirable qualities. It is unprofitable to produce an unsound or vicious horse of any class, and if you wish to breed horses I would advise you to provide yourself with a good-tempered mare free from any unsoundness, and mate her with a sound horse of good quality. The time has gone by when the mere fact of being imported should commend a stallion to patronage, and breeders must be as careful in selecting a sire as they are in selecting a horse for their own work. Size, shape, color, action, and style should all receive some consideration, but undoubted soundness should be made the first requisite. The owner of the stallion or his groom may have very plausible excuses for apparent defects in their horses, but breeders must learn to discriminate very closely if they would produce good saleable horses, and those only are profitable.

FARMERS' EXCURSION TO THE ONTARIO AGRICULTURAL COLLEGE.

Through the secretary we learn that the Welland County Farmers' Institute have arranged an excursion to the Ontario Agricultural College, Guelph, to take place on Saturday, June 18th. The train conveying excursionists will take on passengers at all stations on the G.T.R. between Fort Erie and Stoney Creek via Port Colborne and Welland R.R. Niagara Falls passengers take the early morning train. This is the first notification we have had of excursions this season, and no doubt a large number of farmers from the Niagara district will visit the College and Farm on the above date. The secretary of the above institute is Mr. E. Morden, of Niagara Falls South, who has charge of the arrangements.

You cannot spend five minutes more profitably than in carefully reading this week's list of premiums.

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', \$1; Sheep Breeders', \$1; Swine Breeders', 50c.

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; and while 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 20,000 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. HONSON, Secretary.
Parliament Buildings Toronto, Ont.

THE DOMINION CATTLE BREEDERS' ASSOCIATION.

Short horns.	
Bonnycastle, F. & Son	Campbellford..... 5 bull calves; 9 cows and heifers.
Fried, John & Sons	Caledonia..... 16 bulks, 2 to 8 months; young cows and heifers.
Jeffs, E. & Son	Roseville..... 4 bulks, 2, 10 and 26 months.
Milloy, D.	Bond Head..... Yearling bull; bull calves; cows and heifers.
Pettit, W. G.	Paris..... Bull, 3 years; 2 young bulks.
Sibbald, F. C.	Freeman..... 5 bulks, 13 to 15 months; cows and heifers, all ages.
Smith, J. S.	Sutton West..... 43 cows; 3 heifers; 6 yearling heifers; 2 bulks, 2 years; 24 bulks and heifer calves.
Johnston, Arthur	Maple Lodge..... 2 young bulks; 6 heifers.
	Greenwood..... 40 cows and heifers.

Jerseys.	
Bull, B. H. & Son	Brampton..... 12 cows and heifers; 6 bulks, 2 years and under.
Caldwell Bros.	Orchard..... 3 cows; bull, 11 months; 2 bull calves, 2 and 3 months.
Dent, T. H.	Woodstock..... 2 bull calves, 4 and 8 months.
Gibson, Richard	Delaware..... 2 bulks, 3 heifers; 6 yearling heifers.
O'Brien, John	London West..... 3 bulks, 1 year and under.

Polled Angus.	
Bowman, J.	Guelph..... Females, all ages.
Kaufman, A. E.	Washington..... 2 bulks, 1 year; 2 heifers, 1 year.
Sharp, James	Rockside..... 2 bulks, 10 and 14 months.
Stacey, R. G.	Brookville..... 5 bulks, 6 months to 1 year; 2 heifers, 1 year.
Stewart, Wm. & Son	Lucasville..... 5 heifer calves, 1 week to 6 months; cow, 2 years.

Herefords.	
Stone, Alfred	Guelph..... Bulls for sale.
Smith, H. D.	Compton, Que..... Bull calves.

Ayrshires.	
Caldwell Bros.	Orchard..... 4 bulks, 10 to 12 months; bull calf.
Guy, F. T.	Bowmanville..... Bull, 2 years; calves both sexes.
Yuille, J. & Sons	Carleton Place..... 3 bull calves, under 8 months; females any age.

Holsteins.	
Hallman, A. C.	New Dundee..... Bull, 10 months; bull calf, 6 weeks; heifer, 2 years;
Hoover, A., Jr.	Emery..... Bull and heifer, 9 months.

Galloways.	
McCrae, D.	Guelph..... 5 bulks, 20 heifers.

Devons.	
Rudd, W. J.	Eden Mills..... Stock both sexes, all ages.

THE DOMINION SHEEP BREEDERS' ASSOCIATION.

Leicesters.	
Campbell, J. R.	Palmerston..... Stock both sexes.
Smith, J. S.	Maple Lodge..... Shearing ewes and rams; ewe and ram lambs.
Wood, C. & E.	Freeman..... Stock both sexes.

Cotswolds.	
Bonnycastle, F. & Son	Campbellford..... 1 two shearing ram; 9 shearing ewes.
McCrae, D.	Guelph..... 5 shearing rams; 20 ewes and lambs.
Park, J. & Sons	Burgessville..... 10 ewes, 2 years; 15 shearing ewes; 10 shearing rams, ram and ewe lambs.

Shropshires.	
Bell, J.	Amber..... 6 shearing rams.
Ewing, J. B.	Amberford..... 1 ram and ewe lamb; 2 aged rams; 1 shearing ram.
Yuille, J. & Sons	Carleton Place..... Stock both sexes.

Oxfords.	
Birdsall, F. & Son	Birdsall..... Ram.
Jull, J. H. & Son	Mt. Vernon..... Yearling ram; ewes all ages; 30 ram and ewe lambs.

Suffolks.	
Rudd, W. J.	Eden Mills..... Stock, all ages, both sexes.

Lincolns.	
Stevens, R. W.	Lambeth..... Stock all ages; yearling rams.

Dorsets.	
Bowman, J.	Guelph..... 2 shearing rams; imported ewe; ewe lambs.

THE DOMINION SWINE BREEDERS' ASSOCIATION.

Yorkshires.

Howman, W. R.	Mt. Forest..... 20 boars and sows.
Clarke, John	Orangeville..... Boars and sows; young pigs.
Davis, C. G.	Freeman..... 4 sows, 6 months.
Day, Nathan	Powles Corners..... Stock all ages.
Gilbon, R.	Delaware..... Young sows.
Head, H. J.	Streetville..... 3 boars, 6 months; boars and sows, 2 months.
Flood, G. B.	Guelph..... Boar, 5 months; 10 boars and sows, 6 weeks.
Little, T. Jr.	Kirkwall..... 4 boars and 4 sows, 9 weeks.
McKnight, S. J.	Epping..... Stock all ages; aged boar.
Russell, J. A.	Precious Corners..... 3 sows, 2 months.
Wilson, Wm. C.	East Oro..... Stock both sexes, 7 to 12 weeks.

Tamworths.

Bell, J.	Amber..... 8 boars, 6 to 7 months; 6 sows, 5 to 6 months; 40 young pigs, 1 to 2 months.
Blain, N. M.	St. George..... Boar, 8 months; boars and sows, 5 months; young stock.
Brandow, A. W.	Wallingham Centre..... Pigs, both sexes.
Brown, W. J.	Paisley..... Sow, 5 months; 5 boars and sows, 2 months.
Caldwell Bros.	Orchard..... 7 boars; sows, all ages; 50 young pigs.
Fahner, C.	Credition..... 4 sows, 1 month; boar, 1 year.
Fisher, W. W.	Benmiller..... Boar and sow, 10 weeks.
Fulton, J. Jr.	Bramsville..... Boar, 4 months; pigs, 2 months.
George, T.	Mt. Elgin..... Boar, 11 months; 2 sows, 6 months; stock from 6 to 10 weeks.
Hallman, A. C.	New Dundee..... Sows, 8 weeks to 16 months; 10 boars, 8 weeks.
Holland, T. F.	Dereham Centre..... Sow, 1 year; spring pigs, both sexes.
Hoover, P. R. & Son	Green River..... Young stock, both sexes.
Johnson, F. P.	Moscow..... 5 sows, 6 months to 1 year; young pigs, both sexes.
Moody, Ed.	Humber..... Boar, 18 months; sows, 5 to 10 months.
Nichol, J. C.	Hubrey..... Sows; pigs, both sexes, 1 month.
Revel, H.	Ingersoll..... 2 boars, 6 and 18 months; pigs, 2 months.
Row, F.	Belmont..... Stock, 1 and 2 months.
Simonton, J. H.	Chatbam..... 7 boars, 3 and 4 months; 8 sows, 3 months; 5 sows and 6 boars, 6 weeks.
Smith, H. D.	Compton, Que..... Spring pigs.
Tierney, J. H.	Norham..... Stock all ages.

Berkshires.

Bonnycastle, F. & Sons	Campbellford..... 30 head, 5 weeks to 6 months.
How Park Co.	Brantford..... 200 pigs, both sexes, aged boar.
Bull, B. H. & Son	Brampton..... Young stock.
Cook, F.	Parkhill..... 12 sows, 6 weeks to 6 months; 3 boars, 2 and 6 months.
Day, N.	All ages..... All ages.
Decker, C. R.	Chesterfield..... 50 boars, all ages; sows.
Ewing, J. B.	Dartford..... 25 pigs, 2 and 3 months; boar, 2 years.
Fahner, C.	Credition..... 2 sows, 8 months; boars, all ages.
Ferguson, J. J.	Smith's Falls..... 4 boars, 6 and 12 months; sows, 10 weeks to 2 years;
Green, G.	Fairview..... Stock, 1 month and under, both sexes.
Harris, G. N.	Lynden..... Aged boar; 2 boars, 6 and 18 months; 4 sows, 4 to 6 months; 5 pigs, 6 weeks, both sexes.
Hartman, J. W. & Sons	Elmhedge..... Stock, 2 months to 1 year.
Hawkins, D.	Woodville..... Stock, all ages.
Holdsworth, R. L. & Sons	Port Hope..... Sow; boar.
Johnson, J. W.	Underwood..... 2 boars, 1 and 2 years; 3 sows, 6 months and 2 years.
Jeffs, E. & Son	Bond Head..... Young boar; young stock, both sexes; 5 young sows.
Johnston, A.	Bond Head..... 50 pigs.
Lahmer, J.	Carrville..... Young pigs.
McKenzie Bros.	Scotch Block..... 2 boars and 5 sows, 6 weeks.
Mutch, J. F.	Pilot Mound, Man..... Stock, all ages and sexes.
Neil, F. H.	Lucan..... Boar, 1 year.
Patterson, W.	Churchill..... 7 sows and 6 boars, 10 to 13 weeks; 2 sows, 6 months.
Pettit, W. J.	Freeman..... 3 sows, 5 to 6 months; sows, all ages.
Russell, H. A.	Precious Corners..... Stock, 6 weeks, both sexes; boar, 6 months.
Smith, H. D.	Compton, Que..... Spring pigs.
Thompson, W.	White Rose..... Boar, 4 years; sow, 7 months; 2 pigs, 1 and 2 months.
Watson, A. J.	Caledereg..... 35 sows and boars, 10 weeks; sow and boar, 11 months.
Yuille, J. & Sons	Carleton Place..... 33 young pigs.

Chester Whites.

Bennett, G. & Pardo	Charing Cross..... Boar, 1 year; 16 boars, 3 and 5 months; 13 sows, 7 and 8 months; 50 pigs, both sexes.
Birdsall, F. & Son	Birdsall..... 24 pigs, 6 weeks; 1 pig, 8 weeks; 3 sows, 6 months.
Brown, Wm.	Paisley..... Boar, 2 years.
Cairns, Jos.	Camlachie..... 10 sows; pigs, 6 weeks.
Clark, J. B.	Blenheim..... Boar and 2 sows, 10 months; 17 pigs, 4 months, both sexes; 4 months.
Fahner, C.	Credition..... Sow; young stock.
Herron, H.	Avon..... 33 spring pigs.
Holdsworth, R. L. & Sons	Port Hope..... 2 young sows; aged boar.
Neil, F. H.	Lucan..... 2 boars, 7 months; 4 sows, 7 months; 25 young pigs, both sexes.
Row, F.	Belmont..... Stock, 1 month, both sexes.
Tierney, J. H.	Norham..... Stock, 1 month, both sexes.

Duroc-Jerseys.

Berdan & McNeill	Strathburn..... Aged boar; 2 yearling boars; sow, 2 years; pigs, 6 weeks.
Fahner, C.	Credition..... 4 boars, 2 months; 3 sows, 2 months.
Fisher, W. W.	Benmiller..... 2 sows, 6 months; boar, 1 year.
Fraser, I. O. & Son	Fellows..... Stock boar; 3 boars, 7 and 8 months; aged sow; sows, 7 and 9 months; young stock.
Howard, N. H.	Lynden..... 2 young boars.
Park, J. & Son	Burgessville..... 2 boars and 2 sows, under 2 years; 2 boars and 6 sows, 8 weeks.
Shibley, J. E.	Harrowsmith..... 20 pigs.

Poland-Chinas.

Clark, W.	West Lorne..... Boar; 4 young sows; sow, 2 years.
McIntosh, A.	Winchester Springs..... 3 sows; hog; 12 young stock.
McKenzie Bros.	Scotch Block..... 2 boars and 4 sows, 6 weeks; 2 boars and 2 sows, 5 months.

Victorias.

Fahner, C.	Credition..... 2 sows; boar, 2 months.
------------	--

Remember...

That any one may obtain an Up-to-date Stem Wind, Pendant Set Watch

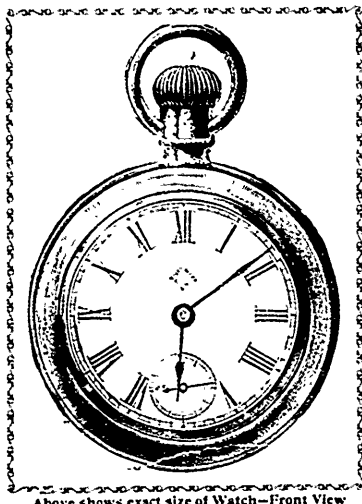
...Absolutely Free

By sending us Three New Yearly Subscriptions at \$1 each. The Watch is Genuine Nickel, Open Face, Stem Wind, Pendant Set, White Dial, Blue Steel Hands, Nickel back cap and inside cover. Made and warranted by the most progressive and best known company in America. Is accurate and reliable and equal in appearance to watches selling at from \$20 to \$50. On receipt of only \$3, with the names of

Three New Yearly Subscribers

we will forward one of these handsome Watches securely packed in a neat wooden box to any address in Canada

Absolutely Free of any expense. Every one wants a watch, but the opportunity to get one on such terms as these, and without the payment of any money, is ENTIRELY WITHOUT PRECEDENT. TAKE ADVANTAGE OF IT NOW, AS IT MAY NOT OCCUR AGAIN.



Above shows exact size of Watch—Front View

The Latest War News

Is anxiously looked for and eagerly scanned by every one, but no one can follow intelligently the movements of the opposing forces without having access to a map of the seat of war. We will send **The Standard War Map Free** for the asking to all subscribers who pay up arrears and renew their subscriptions, or who will send us \$1 with the name of one new yearly subscriber between this date (May 24th) and the 1st June. This is in addition to any other premium to which they may be entitled. All we ask is that in remitting subscribers mention this announcement and ask us to send them the map.

FREE SEEDS.

Purebred Poultry

One pair of any of the following breeds of Fowls, from prize-winning stocks: Silver and Golden Wyandottes, Barred Plymouth Rocks, Black Langshans and Single Comb White Leghorns, for six new yearly subscribers at \$1 each.

Sheep Labels

Very useful for owners of sheep

Sixteen of these Labels, with number and name on each, as in cut, sent free for one new yearly subscription at \$1.



Breeders' Bull Ringer

The only perfect Bull Ringer made that will punch the hole and successfully hold the bull while the ring is being put in. Simple, strong, durable. Price \$1.50. Free for three new yearly subscriptions of \$1 each.

Farmers' Favorite Babcock Milk Tester

Four Bottle Machine, price \$5, for seven new yearly subscribers at \$1 each.

Six Bottle Machine, price \$6, for eight new yearly subscribers at \$1 each.

Everyone who keeps cows should have a Babcock Milk Tester and find out what each cow is doing. Then discard the poor ones and keep only those which will return a profit for their keep. What easier way of securing one than by getting new subscribers to FARMING?

Eggs for Hatching

One setting of 12 eggs of any one of the following varieties: White and Barred Plymouth Rocks, S. L. Wyandottes, Golden Wyandottes, B. Minorcas, S. L. White and Brown Leghorns, for two new yearly subscriptions at \$1 each.

Lang's Hand Weeder

Handiest Tool on Earth
50c. by mail prepaid. Free with one new yearly subscription of \$1.00

Milking Tubes

Price 25c. by mail. Useful for sore or torn teats, or hard milking cows. Every farmer should have one. Given free, along with a complete Butter Mould and Printer, for one new yearly subscriber to FARMING at \$1.

Books on Agriculture

First Principles of Agriculture, by Voorhees. . . \$1.00
Soils and Crops of the Farm, by Morrow & Hunt. . . 90
Milk and Its Products, by H. H. Wing. 90
Fertility of the Land, by Roberts. 1.20
The Soil, by King. 55

These five books will be sent free for eight new yearly subscriptions at \$1 each. Any single book for two new yearly subscriptions at \$1 each.

Feeds and Feeding. By Prof. W. A. Henry, Dean of the Agricultural College of the University of Wisconsin. Price \$2. Sent free for three new yearly subscriptions at \$1 each.

The Book of the Dairy. By W. Fleischman. 344 pages; illustrated. Price \$3.50. Sent free for five new yearly subscriptions at \$1 each.

Testing Milk and Its Products. By Professors Farrington and Woll. Price \$1. Free for two new yearly subscriptions at \$1 each.

COLLECTION A.

- 10 Packets Vegetables. Price, 50c.
- | | |
|---------------|------------------|
| 1 Packet Beet | 1 Packet Parsnip |
| 1 " Carrot | 1 " Cabbage |
| 1 " Cucumber | 1 " Radish |
| 1 " Lettuce | 1 " Squash |
| 1 " Onion | 1 " Tomato |

For one new yearly subscriber at \$1.

COLLECTION B.

- 10 Packets Flowers. Price, 50c.
- | | |
|---------------------------|----------------|
| 1 Packet Phlox Drummondii | 1 Packet Pansy |
| 1 " Stocks | 1 " Nasturtium |
| 1 " Petunia | 1 " Dianthus |
| 1 " Portulacca | 1 " Balsam |
| 1 " Mignonette | 1 " Aster |

For one new yearly subscriber at \$1.

COLLECTION C.

- 20 Packets Vegetables and Flowers. Price, \$1.00.
- | | |
|-----------------|-----------------|
| 1 Packet Aster | 1 Packet Squash |
| 1 " Pansy | 1 " Watermelon |
| 1 " Stocks | 1 " Mark Melon |
| 1 " Balsam | 1 " Lettuce |
| 1 " Phlox | 1 " Celery |
| 1 " Sweet Peas | 1 " Carrot |
| 1 " Cauliflower | 1 " Beet |
| 1 " Cucumber | 1 " Radish |
| 1 " Onion | 1 " Tomato |
| 1 " Cabbage | 1 " Vine Peach |

For two new yearly subscribers at \$1 each

COLLECTION D.

- 20 Packets Vegetables. Price, \$1.
For two new yearly subscribers at \$1 each
- | | |
|----------------|-----------------|
| 1 Packet Beet | 1 Packet Carrot |
| 1 " Parsnip | 2 " Cabbage |
| 1 " Cucumber | 1 " Lettuce |
| 1 " Musk Melon | 1 " Watermelon |
| 1 " Citron | 1 " Onion |
| 1 " Radish | 1 " Squash |
| 1 " Tomato | 1 " Vine Peach |
| 1 " Parsley | 1 " S. Savory |
| 1 " Sage | 1 " Thyme |

3 DOLLARS FOR \$1.50

containing nearly 600 pages of solid information relating to the Farm, the Stock, the Family and the Home. An absolute necessity in every household. Price \$2. FOR ONE NEW YEARLY subscriber at \$1 and 50c. additional. This book must be seen to be appreciated. But every one who gets this grand household book with FARMING for \$1.50 will acknowledge that it is the best value he ever received.

Agents wanted in all unrepresented districts. Address

FARMING

44-46 RICHMOND ST. WEST, TORONTO

THE CARE OF MILK.

LET US KNOW HOW YOU DO IT.

We should like a number of our readers, who supply milk to a cheese factory or creamery, to send us answers to the following questions within the next four weeks:

- (1) In what way do you guard against uncleanness when milking?
- (2) Do you strain the milk?
- (3) What plan do you adopt to have the milk properly aerated?
- (4) In what way do you keep the milk over night?

Make the answers as short as possible, and let us have your experience on these points.

Editor FARMING:

In preparing milk for a cheese factory we observe the following rules:

- (1) We see that the udders are rubbed clean and do not wet the teats when milking.
- (2 and 3) Instead of straining the milk we hang a tin pail 3 feet above the top of the can, with the bottom punched full of very small holes, and let the milk run through it into the milk-can, when it is aerated.
- (4) We keep the milk over night in a large tub with ice or cold water.

By observing the above rules we are never troubled with the milk being returned sour. Your paper is meeting with general satisfaction and can be highly recommended as a farmer's guide.

S. G. HOLBROOK,
Springvale, Ont.

CARE OF YOUNG TREES.

At this time in the year when so many of our readers are busy setting trees and planting small fruits and berries it is appropriate to devote much of this issue to the setting and care and cultivation of trees and fruits. We have tried to gather the best information from the best sources and furnish you a rich variety. If knowledge of plant life means success, then surely ignorance means failure.

By all means the most critical period in the life of a fruit tree, or similar shrub, is during the first year after it has been transplanted from the nursery. If properly cared for during this period it will generally be found in good condition in the following spring, and annually thereafter. On the other hand, if it receives a shock during the first few months succeeding its removal, it is liable never to recover.

The first care, of course, must be for the roots. These should be protected from excessive dryness, particularly during any period of drouth. For this purpose mulching furnishes the best protection. It may be put on as soon as the tree is set, but in any case should be placed before the ground becomes dry and baked. It should extend somewhat further from the trunk of the tree than the roots are liable to reach, in order that the smaller and tenderer fibres may have protection. Artificial watering is helpful in times of dryness, but the expedient can never fully take the place of natural moisture of the soil.

A careful lookout should be kept during this time for insect enemies, and if any appear they should be promptly and effectually removed by the most approved means; but in any operations looking to this end care should be taken not to do the young wood any injury which may possibly be avoided.—*Montreal Fruit Grower.*

FATTENING CHICKENS.

A well fattened chicken, when properly cooked, is a delicious morsel. Abroad the art of fattening is well understood; in this country too little attention is paid to the subject. If the chickens have been well fed, and have run at large during the whole time, nothing more is deemed essential. I think that poultrymen make a grave mistake by not paying more attention to this art. When the appliances absolutely necessary can be had for very little expense, and when the cost of fattening need not be very much, there is little excuse for not employing the means for so doing.

The return to the producer for fattening his stock comes in two forms—first, by an increase in the weight of the chickens, and second, by an increase in the price per pound. Suppose, for example, the poultryman has two hundred chickens to sell which, unfattened, would average four pounds each and bring 15 cents per pound—that is, he would receive for \$600 pounds, at 15 cents per pound, \$120. Now, suppose by fattening them he makes them weigh but one pound more each—a small gain—and he gets two cents per pound increase in price (a sum frequently greatly exceeded), his chickens will bring him, 1,000 pounds at 17 cents, \$170, an advance of \$50—a very convenient little sum. Should he add two pounds per chicken, and get five cents additional per pound—by no means an extravagant hypothesis—he will raise his \$120 to \$240, exactly double what he would have received in the unfattened condition. That it does pay to fatten the chickens follows very naturally from the fact, without the illustrations we have used, that in England there are men who make it their business to purchase unfattened chickens, fatten and then sell them.

Without adopting the more or less elaborate appliances used abroad, a great gain can be made by preparing a number of coops capable of holding, without undue crowding, from ten to twenty birds. The coops should be so constructed as to be quite dark, except in front, and after feeding, the fronts should be closed by hanging burlaps over them. I have seen used mere boxes with laths nailed across the front. In these coops chickens of the same sex and as nearly of an age and size as possible should be confined. Opposite sexes should not be confined together, for they will be more uneasy and fatten less rapidly if they are. They should be of about the same age and size to prevent the overbearing conduct that large chickens show toward smaller ones.

The coops should be cleaned out daily to prevent the unpleasant odor that arises from droppings and which is inimical to health, as well as to prevent vermin from multiplying. The chickens should be carefully treated for vermin, before they are put into the coops, by dusting them thoroughly with insect powder of some kind.

The fattening should be done as rapidly as possible. Too long close confinement is apt to injure the health of the chickens, and as soon as health begins to fail perceptibly they will lose flesh. The more rapid the fattening, too, the tenderer will be the chickens. Every farmer knows that an old cow,

if rapidly fattened, makes good, tender beef, but if the fattening process is slow, the quality of the meat deteriorates. The soft, swollen muscles of a rapidly fattening chicken make much better poultry than when the flesh is, so to speak, worked on and the muscles kept hard by vigorous exercise.

In this country, as the popular taste demands as yellow a chicken as can be had, the food should be chosen accordingly. For grain, I think nothing is better than sound, yellow corn, either whole, cracked or ground. For rapid fattening I prefer it ground and made into dough by being slightly moistened with milk. If to the corn meal is added 10 to 15 per cent. of ground beef scraps, the fattening will proceed more rapidly. For drink, nothing is better than sweet milk, except sweet milk sweetened with sugar, about a heaping tablespoonful to each gill of milk. If the droppings show a tendency toward diarrhoea, the milk should be boiled.

I have insisted on the rapidity in operation. It should be well done in three weeks, and, in many cases, even less time is necessary. I have added two pounds to the weight of a Plymouth Rock cockerel in two weeks without keeping him as closely confined as I deem best for fattening chickens. This bird was alone in a coop about eight feet long by two and a half feet wide, had abundance of light and took considerable exercise. Quite a number of chickens for fattening could be confined in a coop of that size.

A lady who reared chickens for us several seasons used to confine the cull birds in small coops for fattening. She gave them water to drink and fed them wholly on yellow corn; and the results she obtained were extremely satisfactory, for her chickens were fat, yellow, and commanded the best market prices. And yet she took but little more care of these fattening chickens than most poultrymen take of their growing flocks. They were fed and watered regularly and their coops cleaned occasionally, that was all. Her success in fattening chickens led me to take more interest in the operation, and to employ methods almost as simple as hers, that gave us even better results, because quicker than she obtained. —*Country Gentleman*.

SUMMERING CATTLE ON GRASS.

I don't know of any subject more timely than how cattle of all kinds should be treated while living on grass. The common method with most farmers is to let them all run together—calves that are fed by hand excepted—many or few, large or small, just one pasture and generally too small for the number that must get a good living or be half starved. Then close grazing and often long dry spells and a good number of cattle following each other day after day reaching through fences and in the hot weather the field looking so bare that the grass roots are often killed out entirely. This is no overdrawn picture. Now, how can a cow give a good yield of milk or young cattle take on much growth or flesh under such conditions? Unless they get a satisfactory feed and in reasonable time they cannot spare the time needed for rest and to chew their

cud. Every farmer should have two or more pastures. Milch cows do better alone, but if that cannot be had, there should be at least two pastures so that one of them could be rested a while; and if suitable weather, two or three weeks will start the grass so that when you turn them on it again just watch the difference in the growth and yield and see the grass start up in the one vacated. This is a better way than if the number of acres were all in one lot. I hope those interested will try it.

Where cattle are compelled to eat off the blades of grass scarcely an inch high and probably destroy others just peeping out, ten days, if left to grow, would furnish twenty times as much feed and no injury occur to the roots. People tell of leaks and losses on the farm, but too close grazing is the biggest one I know of. Then there is a big talk about calves dying from scours, etc., but it is generally those that feed their cows such a big lot of stimulating nostrums of different kinds that makes the milk rank poison to their offspring. Calves from such pampered matrons are as good as sick at birth. Cows should be fed almost entirely on what you can raise on your own farm and then like common farmers, losses would disappear. It is risky to buy cows of some men.

If calves get the scours, we stir flour in their warm milk and an egg too, until it is checked. We teach them to eat oats and ground feed and keep hay before them all the time until turned on to grass. When cows scour badly on tame hay and mill-feed, make a real hard boiled dumpling of flour and water only, boil it until hard and when cool cut into pieces and feed it to them. It will quickly stop the scours. This receipt is worth dollars if it works for others as it has for us. I may tell you what pastures are like in England and how they keep them good all the time. They have a more moist climate than we have, but we could greatly improve ours by following their methods.

WM. OXLEY.

Hancock Co., Iowa

—*The Ploughman*.

SCOURS IN CALVES.

With the advent of the spring calving season scours become prevalent, as usual, and precautions against the trouble, as well as preparations for its cure if it develops, should be made, because it requires a long time for a calf to recover from a really serious attack of scours, if indeed it ever recovers. Preventive treatment depends on a knowledge of causes, and the causes of scours are many. Speaking generally, anything that will produce diarrhoea in the babe will cause scours in the calf. The most usual causes are colds, which "settle on the stomach," and bad feed, whether direct or through the dam. We have no doubt that a great many cases of scours in the first few days of a calf's life are owing to the improper feeding of the mother during the period of gestation. The youngster comes into the world with a tendency to have an easily disturbed digestion. There are also barnyards and calf lots that cause a contagious species of scours.

Those cases that arise from colds are prevented by keeping the calf pro-

tected from exposure; those that come from bad feed suggest their own cure. Those that depend on inherited diathesis require very easily digested food, the milk, if necessary, being corrected with lime water; and those that depend on contagion demand a thorough cleaning up of the premises, with disinfection. As to remedies they are very abundant; nearly everybody has one, and there are scarcely any of them that do not fail sometimes. Raw eggs in the milk often prove effective, charcoal is given, and sometimes laudanum is administered, which is about as bad a remedy as can be used, although it sometimes seems that nothing else will help. Perhaps as good a remedy as can be used in the general run of cases is fifteen or twenty grain doses of sub-nitrate of bismuth, given three hours apart, until relief is obtained. Scours, however, is one of the instances in which an ounce of prevention is better than the proverbial pound of cure, for even a successful cure does not prevent the stunting which generally follows an attack of scours. —*The Homestead*.

GRAIN MIXTURES TO BE FED DAILY WITH COARSE FEEDS.

Prof. Lindsey in Bulletin No. 53 of the Hatch Experiment Station recommends the following grain mixtures to be fed with coarse feed:

1. One hundred pounds corn or hominy meal. One hundred pounds bran, mixed or chop feed. Seventy-five pounds cotton, gluten or linseed meal. Mix and feed eight to nine quarts daily.
2. Two hundred pounds chop or cerealine feed. Seventy-five pounds cotton, gluten or linseed meal. Mix and feed seven to eight quarts daily.
3. One hundred pounds oat feed. One hundred pounds Buffalo or gluten feed. Mix and feed eight quarts daily.
4. H. O. dairy feed. Feed six to eight quarts daily.
5. Gluten feeds. Feed five to six quarts daily.
6. One hundred pounds fine middlings. One hundred pounds brewers' grains or malt sprouts. Mix and feed seven to eight quarts daily.
7. Fifty pounds linseed meal. Fifty pounds cotton-seed meal. One hundred pounds oat feed or chop feed. Mix and feed seven to eight quarts daily.
8. One hundred pounds cornmeal. Fifty pounds bran. Fifty pounds cotton-seed meal. Mix and feed seven quarts daily.

THE ADVANTAGES OF COW PEAS.

Dr. Stubbs, of Louisiana station, in summing up the advantages of cow peas, gives these points:

1. It is a nitrogen gatherer.
2. It shades the soil in summer, keeping it in condition most suitable to rapid nitrification, and leaves the soil friable and loose, in the best condition for a future crop.
3. It has a large root development, and hence jumps up from great depths and large areas the water, and with it the mineral matter needed by the plant.
4. Its adaptability to all kinds of soils, stiffest clays to most porous sands, fertile alluvial bottoms to barren uplands.

5. It stands the heat and sunshine of Southern summers.

6. Its rapid growth enables the farmer in the south to grow two crops a year on the same soil.

7. If sown thickly will, by its rapid growth and shade, effectually smother all weeds, and thus serve as a cleansing crop.

8. It is the best preparatory crop known to the southern farmer, every kind of crops grow well after it.

9. On the alluvial lands of the Mississippi bottoms it serves to pump off excessive water, evaporating it through its great foliage, thus keeping the soil in a condition for most rapid nitrification during the entire growing season.

10. It furnishes a most excellent food in large quantities for both man and animals. With all these advantages, it is no wonder that it is called the "Cover of the South," and were it used regularly, as one of the crops in a regular but short system of rotation, the soils in this section would soon rival in fertility their primitive condition.

TRANSPLANTING TOBACCO.

At a time after the first of May or when the weather becomes settled tobacco plants should be set out. By this time the leaves should be about 2½ inches wide. Before transplanting soak the plant bed so that the plants can be moved without injury to the roots. Then they can be drawn out one at a time. The field to which they are to be transferred should be put in such condition that comparatively little intervention will be required. Lay off the land in rows 3½ feet apart, making check rows. It is usual to ridge up little hills with the hoe at the intersections of the rows. Make a hole in the hill with the finger and insert the roots of the plants, pressing the earth firmly about them. If any of the plants are killed out by cut worms replace them as soon as possible in order to secure an even stand. Stir the soil often to keep it moist, loose and mellow. *The Ploughman.*

RAISING TURKEYS.

Perhaps one drawback to raising early poultry near our small towns, unless we have a larger town for shipping to, is that the people in our northern states have not learned that poultry is as good always as other meats, and does not cost very much more, if any. We are all bound by habit, more or less, and poultry is considered a sort of holiday meat. Consequently just before these days the markets are glutted, and poultry goes down to almost nothing; we lose money on it and become discouraged. The rest of the year poultry is high, and people buy it as a luxury.

You never lose money on young and growing turkeys and chickens if you keep them till after the holidays are over. Turkeys are light eaters on the whole, and constantly growing until one year old, and it costs no more to raise a good turkey than it does a little one.

They do not require the attention of other fowls after they are feathered, so cost much less care.

I have learned by experience that

the more you let a turkey alone after it is big enough to hunt, the better it is off. Feed them regularly, let them roost out of doors, and they are a very healthy fowl.

If it has been raining and they are all wet, and it suddenly turns cold and snows, drive them under shelter as such storms will kill them quicker than the coldest winter weather. — *Mrs. A. W. Lehman, in The Farmers' Journal and Live Stock Review.*

A TEMPTING OFFER.

Our premium list this week is more attractive than ever before. There is not an article in it that would not be valuable to every reader of FARMING. Dr. Carlin's Receipt Book and Household Physician is a veritable treasury of information on everything pertaining to the farm, the stock, and the home. It should be seen to be appreciated. We are offering it for 50c. with one new yearly subscription — an unparalleled offer in the history of this or any other Canadian journal. It will pay you to read and carefully consider our premium list this time if you never did it before.

A SUBSTITUTE FOR PARIS GREEN.

The Ohio Agricultural Experiment Station has discovered a cheap substitute for Paris green, to use in destroying fruit and vegetable pests. The bulletin issued by the station gives a detailed account of this substitute, arsenite of soda.

One great objection to Paris green is, that it is expensive; another is that, as it does not dissolve readily, there is a sediment which is liable to be distributed unevenly, some plants receiving so much as to injure the foliage, while others escape altogether.

The arsenite of soda is a rank poison, and, as it is a colorless liquid which might easily be mistaken for water, it is rather unsafe to keep any quantity on hand, for fear a mistake might be made. By coloring it with a cheap dye, and labeling it poison, this difficulty would be overcome.

White arsenic, in a soluble form, can be obtained at one-third the price of Paris green, and it dissolves readily.

The following is the method of preparing arsenite of soda, as given by the bulletin: "Dissolve two pounds of commercial white arsenic and four pounds of carbonate of soda (washing soda), in two gallons of water, and use one and one-half pints to a barrel of Bordeaux mixture (50 gallons)

The easiest way to make the solution is to put both the white arsenic and carbonate of soda in a gallon of boiling water, and keep boiling about fifteen minutes, or until a clear liquid is formed, and then dilute in two gallons.

The arsenite of soda, as well as Paris green and London purple, is best used in combination with the Bordeaux mixture for spraying, as the combination does not injure the foliage, while the arsenite of soda alone is apt to burn the leaves. A receipt for making the Bordeaux mixture was given in the January issue of *The Age* under the heading "Potato Blight."

You cannot spend five minutes more profitably than in carefully reading this week's list of premiums.

BEST FOOD FOR FOWLS.

The natural food of fowls is composed of seeds, insects and grass. In the domestic condition we allow grain, grass and meat. Turkeys and chickens drink very little water when feeding, and even ducks and geese resort to water when feeding, sometimes in order to wash their bills more than to drink.

This brings up the question of the propriety of feeding soft food. It is known that ground grain absorbs a large volume of water, and when the mixture is apparently dry, quite a large proportion of water exists in it, though more so when the mixture is very moist and sloppy. It is not beneficial water, as the results are sometimes injurious, bowel disease and indigestion prevailing.

It is better to feed all food dry if possible and keep a trough full of water where the fowls can take what quantity they desire. Even ground food may be given in a dry condition, the different substances being thoroughly mixed and placed in a trough. When chicks are fed they have cornmeal moistened, several times a day, and bowel disease results, simply because too much water is forced upon them in the food. The fowls never resort to wet foods if they can get dry kinds, and this is a matter that deserves attention. *American Poultry Keeper.*

THE DRY CURING OF BACON.

The dry process of converting pork into bacon makes an excellent article, sweet and firm. Every one knows how different is the taste of fresh, dry salt from that in a dissolved state.

After the carcass of the hog has been divided, place the pieces of pork intended for bacon to one side. Rub them well with coarse salt, and let the blood drain for twenty-four hours. Mix 1½ lbs. coarse brown sugar, 6 ozs. saltpetre, and 1½ lbs. of salt. After these ingredients are well mixed, rub into the pork well, especially on the flesh sides. Pile these pieces of pork on top of one another in a salting trough, with a groove or gutter round its edges to drain away the brine. To allow this brine to soak into the meat will impart a vile taste. Turn the meat every two days, rubbing in more of the salt and sugar preparation. The proportion given is sufficient for 14 lbs. of bacon. The sugar possesses preserving qualities in a very great degree, without the pungency and astringency of salt, and imparts a mildness and mellowness to the cured meat. Too much salt contracts the fibres of the meat, thus rendering it hard and tough. The meat remains in this state two or three weeks, according to circumstances. In dry weather it requires a longer time than during damp weather.

The place for salting should always be cool, but well ventilated. Confined air, though cool, will taint meat sooner than the mid-day sun, accompanied by a breeze. When the meat is sufficiently salted, wipe it dry and smoke for two or three weeks, according to size. The meat must be hung to smoke in a dry place, where no water will touch it, and the smoke must proceed from wood. Before you hang the meat to smoke, rub the flesh side

well with bran. This prevents the smoke from getting into the little openings, and makes a crust that dries on. As to the quantity required to smoke the bacon, it depends upon the size, and whether there is a constant smoke. If the smoke is constant and rich—from hard wood—it requires about two weeks' time. The bacon must not be dried up, and yet it must be perfectly dry.— *The Rural World.*

SHEEP AS MISSIONARIES.

A paper was recently read before the twenty-seventh annual meeting of the Kansas Board of Agriculture, giving a number of reasons why the farmers of that state should keep sheep. The various forms of income and their value to the land were instanced, but a reason not usually urged was the influence of sheepculture upon character. "Sheep," said the writer "are the gentlest, the most cleanly, they will not soil their feet if they can avoid it, much less track dirt into their houses. Their sweetness of disposition, modesty, pliable docility, patience, evenness of temper and contentment with whatever may be their lot must, just as surely as the dripping of the water wears the rock, have a potent influence over their master. This may be an entirely new attribute of the sheep; but I am fully persuaded that the man who tends his flocks, and follows them for many years, unless wholly depraved, becomes a gentler, kinder and better man." Perhaps, then, it is the smaller number of sheep than formerly, and the general shrinkage of the industry of sheep raising, that has made the conditions easier for the country to fall into a warlike spirit. But, on the other hand, Spain has always been a warlike country, an ungentle, even a cruel, country, and yet the Spanish merino flocks have been the most famous in the world, and were regarded by the natives with as much pride and affection as an Arab feels for his horse. But as missionaries of peace and gentleness they have not yet been a success in that country.— *Transcript.*

BAD DAIRY MANAGEMENT.

Permitting a cow to fail in her milk for want of a suitable food is bad management; even if she can be restored to her full flow, which is doubtful, it takes more feed to do it than would have been required to keep her in good milking trim from first to last. Cows to do their best must be pushed with feed of the proper kind, and the more the better. You can't get milk without feed any more than you can get meal without corn. To get the best work from a mill it must be run to its full capacity—no corn in the hopper, no meal in the spout. So it is with the cows, no feed, no milk; little feed, little milk; plenty of good feed and proper care, plenty of milk for a long time.— *Rural World.*

Secrets of Success.—Attention is called to the advertisement of Mr. H. H. De Weese, of Dayton, Ohio, who advertises the now famous book entitled "Secrets of Success, or, Many Years of Successful Farming." The volume contains a vast amount of practical information which will be found useful in every farm home. It is very highly commended by those capable of appreciating its merits.

CORRESPONDENCE.

THE MANITOBA ELEVATOR QUESTION.

EASTERN PEOPLE SYMPATHIZE TOO MUCH WITH THE C.P.R.

To the Editor of FARMING:

An impression seems to prevail among a certain portion of the Eastern people in reference to the above subject, that leads them to rather sympathize with the railway company that carries out the largest portion of Manitoba's produce and at whose good pleasure the elevator restrictions have had their inception and fifteen years' existence.

This sympathy for the railway company, while it might probably have been deserving at the time that the C.P.R. contract was entered into and the company started upon the greatest railway undertaking that the Canadian people have ever seen, should surely cease after the company has not only completed its original contract with the Government, but has become so powerful as to extend its system several thousands of miles beyond its original charter and has reached a stage of development and prosperity, exciting the envy of nearly every great railway system on the American continent. In addition to this, the C.P.R. Company have been able to find capital, not only to build and equip a great railway system in Canada and in part of the American Union, but are able to leave railroading entirely to build vessels on the lakes and ships upon the ocean. Furthermore, its millionaire magnates, even then, have capital left for a large number of private enterprises involving the outlay of large sums of money.

Under these circumstances, the farmers of Manitoba and the Northwest Territories, who have been furnishing the C.P.R. Co. with rolling stock for the past fifteen years (for it is candidly admitted that the elevator system takes the place of rolling stock to the company), honestly considered that the sympathy which has heretofore been given to the railway company by the eastern people should now be transferred to the struggling settler of the West in his battle for liberty in the ship ment of his produce.

When the youth makes his first financial venture with perhaps a small portion of parental capital, his operations are watched with a good deal of interest by both parent and friend and, if the struggle for success should prove a severe one, increased sympathy and even further financial assistance are often forthcoming to aid him in the conflict. But when the youth has developed into mature manhood and his business has been not only truly established, but he is able to count his profits yearly by millions, then taking into consideration the fact that the greater part of the son's original capital was the gift of the father, the writer ventures to suggest that "the old man" had better keep a little sympathy in reserve for himself. He might need it later on.

The western farmer is not an unreasonable creature, making complaint where no just cause can be given therefor, as some railway and commercial journals would lead the public to believe. But when he sees the C.P.R. Co. building extensive lines elsewhere and equipping them with abundance of rolling stock, he is sufficiently simple-minded to think that after all these years of elevator monopoly which has cost him millions of money unjustly, the railway company should now provide him with the same facilities for shipping his grain as they do the settlers of Minnesota and Dakota.

London, Ont., May 16th. W.A.R.

QUESTIONS AND ANSWERS.

Woodstock, April 15th, 1898.

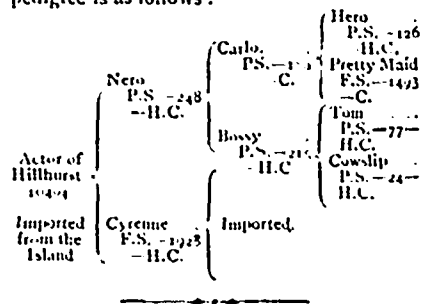
DEAR FARMING:

Will you kindly publish in your next issue a full pedigree of the Jersey bull Carlo of Glen Duart, as we have a young bull from him imported by the local Government, and we have not got the family ancestry established.

W. S. SANDERS.

We had some trouble in getting the exact information desired above. However, through the kindness of Mr. A. McLean Howard, jr., of Toronto, we are able to give the following data. Carlo of Glen Duart was bred by Mr. Howard, and sold by him to the late A. C. Burgess, of Carleton Place. His sire was

Actor of Hillhurst, who was imported direct from the Isle of Jersey at a high figure by Mr. Cochrane, from whom he was purchased by Mr. Howard, who states that he was the finest Jersey bull he ever owned and the finest he had ever seen. The dam of Carlo of Glen Duart was Beta of Hillhurst 22809. The Model Farm purchased their first herd of Jerseys from Mr. Howard; they did not import the bull Carlo of Glen Duart, whose pedigree is as follows:



A NEW AGRICULTURAL MACHINE.

For some years experiments have been in progress upon a machine by the aid of which it is hoped the cost of production of cereals, roots, and all other products of the soil will be very materially reduced. If we can believe the reports of experts who have seen the machine in operation, it is simply the most wonderful invention of the age, and bids fair to revolutionize the

A RELIABLE OFFER.

HONEST HELP FREE TO MEN.

FARMING is authorized to state by Mr. D. Graham, Box 133, Hagersville, Ont., that any man who is nervous and debilitated or who is suffering from any of the various troubles resulting from overwork, excesses, or abuse, such as nervous debility, exhausted vitality, lost vigor, unnatural drains and losses, lack of development, etc., can write to him in strict confidence and receive free of charge full instructions how to be thoroughly cured.

Mr. Graham himself was for a long time a sufferer from above troubles and after trying in vain many advertised remedies, electric belts, etc., became almost entirely discouraged and hopeless. Finally he confided in an old clergyman, whose kind and honest advice enabled him to speedily obtain a perfect and permanent cure. Knowing to his own sorrow, that so many poor sufferers are being imposed upon by unscrupulous quacks, Mr. Graham considers it his duty as an honest man and a firm believer in Christian sympathy and kindness to give his fellow-men the benefit of his experience and assist them to a cure. Having nothing to sell, he asks for no money, the proud satisfaction of having done a great service to one in need, he rightly considers an ample reward for his trouble. If you write to Mr. Graham, you can rely upon being cured and upon absolute secrecy as well.

Address as above, enclosing a stamp and refer to FARMING. No attention, however, will be given to those writing out of mere curiosity, therefore state that you really need a cure.

BUY
Coleman's Salt
THE BEST

For Dairy or Table Use

IT IS UNEQUALLED.

Salt on the Farm

for wire worm, joint worm, army worm and all insects that destroy crops. Salt is the best insecticide. It is also a fertilizer.

TRY IT.

R. & J. Ransford
OLINTON, ONT

whole system of agriculture. The Improved Romaine Automatic Machine is the name by which this invention is known. It is now claimed for it that it has now passed the merely experimental stage, and that it will soon be placed on the market in a complete and perfected condition, capable of being utilized in every department of agriculture. The machine works on the rotary principle, and by means of various attachments provided will do any kind of work desired. The plow pulverizes the ground far more effectively than the spade, and performs the work with a rapidity that is astonishing. It is calculated that the ground can be thoroughly prepared for the crop, making a seed-bed ten to fifteen inches deep, sowing and covering the grain, all at one operation, and doing fifteen acres per day, at a total cost, including all expenses of labor, oil, etc., of about \$6. It is claimed that it can also be used with great facility in the cultivation of the growing crops, harvesting, threshing, etc. The machine has been on exhibition at Exposition grounds in Montreal for some weeks, and was visited a few days ago by a large delegation of senators, members of parliament, and other prominent men, who were greatly interested in seeing it at work. We hope to be able to give our readers a more detailed description of the machine in our next issue.

Publishers' Desk.

Veterinarians Know Its Use.—Since I have practised my profession (Veterinary Surgeon) in this place I have had occasion to prescribe your "Gambutt's Curative Balm," contrary to my usual method of practice, which is to avoid the use or recommendation of any proprietary medicine, but experience has shown me its value. When I came here in '93 the remedy was unknown. I think if I can make some arrangement with you for an exclusive agency for this community I can push the sale of the same in a way that will be highly satisfactory to you and profitable to myself. If you will come to some understanding with me, please advise me of the terms you are willing to give. WALTER P. KELTY, V.S.

Butter-Making.—All who are interested in butter-making should write to Messrs. Wilson Bros., Collingwood, for their circular advertising the "Maple Leaf" Churn. In addition to pointing out the advantages of this excellent new churn the circular contains some hints on butter making, which are not only well worth reading, but which should be learnt by heart by every farmer or dairyman who wants to excel in producing butter. All may know what it says, but yet it is good to have the matter brought to mind again. Wilson Bros. will be glad to send the sheet free and post-paid to any who may apply and mention this paper.

Change Your Ads.—The advertiser who changes his ad only semi-occasionally not only fails to reap the benefits that flow from advertising rightly done, but he sets a bad example for other advertisers. This keeping the advertising columns bright and fresh is a question that affects both publisher and advertiser, and while it is nominally the advertiser's duty to see to the frequent changing of his ads, it is greatly to the publisher's advantage to see that the work is done. The advertiser, who takes an interest in advertising (how ridiculous it is that there are advertisers (?) who are not interested in even their own advertising!) requires no "punching up" from the advertising manager, so that once an advertiser is really interested, there is one less sleepy man to keep awake. —*Veres-papendom.*

Stock Notes.

AT FAIRVIEW FARM, Woolville, Ont., customers can see the best and most promising flocks of Shropshires that have ever been seen on that farm. Old Newton Lord's sons and daughters are once more showing what a wonderful sire the World's Fair Champion is, while several lambs by Queen's Caus-

Vegetables

can be raised at a profit, and the yield enlarged, if properly fertilized. Most fertilizers do not contain enough

Potash.

Vegetables need plenty of potash — at least 10% — besides the phosphoric acid and nitrogen.

Write for our books which tell all about fertilizers. They are free.

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

color, imported last year, are all that any critic would be pleased to own. A lot of rams and another of ewes are being fitted for the fall showings, but possibly may not be exhibited by their present owner, as extensive building operations are going on this season at Fairview. A brick dwelling is now well under way, and the old house destroyed by fire last fall is being rebuilt, so that will occupy the attention very largely for a few months of the proprietor, when herd and flock must necessarily route a bit. (See new ad. on cover page 2.)

Mr. W. H. E. Massey, the head of the great implement firm, will soon rank as one of the foremost stock breeders in Canada if not in America. Recently he imported a herd of high-class registered Jersey cattle, and he has an offer for sale from the best herd on the Island of Jersey now in quarantine at the New York yard. His farm of 220 acres is in close proximity to this city, an ideal location for a stock farm, with splendid grazing lands, and convenient to both railways and to the street cars. Mr. Massey has progressive ideas, and I believe in the use of printers' ink as the best means of developing any business. He thinks Canadian stockmen, as a rule, do not advertise freely enough, and instance the vigorous character of stock advertisements in the American papers in support of his ideas. Mr. Massey advertises for sale in another column a first-class St. Lambert bull, and several young cows and bull calves. In a future issue we propose giving our readers an interesting description of Mr. Massey's farm and equipment.

Mr. Wm. Willis, of Newmarket, breeder of high grade Jersey cattle, reports his success as doing very well. His herd consists of over twenty purebred Jerseys, beside a number of Jersey grades. He has on hand at present 7 purebred Jersey cows, chief of whom is St. Lambert's Florence, who made 2 1/2 lbs. of butter a week, last fall, for several months after calving. This is an exceptionally good record and speaks well for the character of Mr. Willis' strain of Jerseys. St. Lambert's Florence was sired by Canada's John Bull 5th. His stock bull is Caesar of Pine Ridge; dam, Milly McLeffan, sire, King of Glen Duart. Lena of Glen Duart is another good cow of Mr. Willis' herd; she is 7 years old and won first prize at Toronto last year. Lively of St. Lambert is another good animal in his herd. She gives a particularly large percentage of butter fat in her milk. Special mention should be made of young six months old Jersey bull belonging to this herd. It is of exceptionally good quality and possesses in a large degree the dairy type. Its dam is St. Lambert's Florence, Mr. Willis' noted butter cow.

Mr. Willis is also a breeder of purebred Cotswold sheep. His flock this spring consists of 17 high grade ewes. The ram at the head of this flock is of exceptional merit. Though clipped last fall for show purposes this ram gave to lbs. of washed wool this spring. Mr. Willis has sixteen fine lambs which will be for sale a little later on. Though not a regular exhibitor at the larger shows, he does exhibit occasionally. Mr. Willis intends exhibiting sheep and cattle at the coming Toronto Show, and from what we know of his stock other exhibitors will need some good stuff in order to prevent him carrying off a large share of the premier prizes.

ALL PEDIGREE STOCK-BREEDERS

Should keep in touch with Herd, Flock and Stud movements by reading the

FARMER AND STOCK-BREEDER

The best, most complete and attractive Agricultural and Live Stock newspaper. Enlarged to 36 pages weekly, frequent special issues 40 to 48 pages. Illustrations are a specialty, each number containing many of the leading prize-winners, etc. Brilliant and practical articles on the Farm, Dairy, Horses, Cattle, Sheep, Pigs, Poultry, Veterinary, etc.

Unequaled as a medium for advertisements intended to reach the best class of breeders and farmers throughout Europe.

Subscription, postpaid for one year, \$2.50

Intending purchasers of British Purebred Stock should send us particulars of their requirements, large shipments and extensive connections having given our staff of expert buyers that experience which is indispensable in live stock transactions. Enquiries welcomed. Address:

FARMER AND STOCK-BREEDER, London, Eng

MARKET REVIEW AND FORECAST.

Office of FARMING,

44 and 46 Richmond Street W., Toronto, May 23rd, 1898.

There has been nothing very striking in general trade circles during the week. The general prosperity previously noted in nearly all lines of trade continues. Paper is met readily, and a general feeling of good times prevails. The money markets of the world are somewhat dull, and there is not much doing in stocks owing to the Spanish American war.

Wheat

The wheat situation continues about the same. European markets are still excited, though there is a slight feeling that the whole situation is not so bad as it looked a while ago for the consumer. Some late cable despatches show a slightly easier feeling. The action of the French Government, however, in removing the duty on wheat till the first of July is causing some activity in British wheat circles. It is now more evident than ever that London manipulators have had more to do with the excitement in the wheat market than was at first supposed. In some European centres all the misery and want from the rise in the price of bread is laid upon his shoulders. Developments during the week are decidedly in favor of the consumer. Reliable reports from Argentina state that the total shipments from that country will be about 1,000,000 tons, the largest quantity since 1894. The high prices in the west have brought on larger supplies, and it is probable that the week will witness a large increase in the supplies of wheat in 1898 in America.

At Montreal there have been better enquiries for Manitoba and Red winter wheat, but bids have been too low to admit of business being done. Sales of Red winter are reported at equal to \$1.18 to \$1.19 for Red Amber, and Manitoba at \$1.33 to \$1.41 bid down here. Manitoba wheat was quoted at 12c. to 13c. higher than that price at Fort William ten days ago. At Toronto prices have ruled a little higher than the week previous. \$1.08 to \$1.10 have been the ruling figures for Red winter wheat north and west. \$1.08 is all that buyers can pay for export. Manitoba was a little firmer at the end of the week at \$1.43 to \$1.45 for No. 1 hard at Owen Sound.

Barley and Oats

Late cable reports show a somewhat easier feeling in the British market, and prices are down a shilling from the top. Stocks, however, are not large, and orders are not seeking business. Receipts at Montreal show an appreciable increase over the week previous. The market is somewhat lower, and it is difficult to get 30¢ with the end of the week. At Toronto the market has been dull with prices ranging from 30¢ to 35¢.

There is nothing doing in the barley market here. At Montreal prices are a little lower. Good barley is quoted at 47¢ to 48¢ and malting barley 52¢ to 53¢.

Rye and Buckwheat

There is some demand for rye for export, and the market is higher at 62¢ east and 61¢ west. Receipts at Montreal during the week have been large; the market is heavy but quiet at 71¢ to 72¢.

Buckwheat here is nominal at 47¢ west. At Montreal supplies are higher, with no export feeling at 50¢ to 51¢.

Peas and Corn

The market for peas has been quiet at 60¢ north and west. There was a cent or two more than the figures. Oats are somewhat light at Montreal and the market is quiet and 11c to 12c lower, quotations ranging from 10 to 70¢ all at.

Corn is steady at 37 1/2 to 37 3/4 for Canadian at 44 1/2 to 45 for American. At Montreal receipts are increasing. There is a heavy export trade in progress, and though dull from the west. Cuts on track are quoted at 14 to 45¢.

Bran and Shorts.

There is no change in price of mill feeds. Bran is quoted at \$10.50 to \$11 west, and shorts at \$12 to \$13. At Montreal Ontario bran is quoted at \$13.50 to \$14 in bulk, and shorts at \$15.50 to \$16.

Potatoes

Potatoes have been steady during the week at 70¢ in cars on the track, and 75 to 80¢

out of the stores. At Montreal the market is reported steady and higher at 75¢ on track. Sales to Americans at interior points have been made at 60 to 65¢.

Eggs and Poultry

The British eagle reports a weak market, and prices are declining under heavy receipts from the continent. There has been a drop during the week of 15 to 30 per cent hundred per dozen. This, however, has stimulated demand. No fresh Canadian eggs are reported yet. Receipts at Montreal continue about the same, with prices ruling about 10¢. At Toronto there was a slightly better feeling towards the end of the week, with prices from 10 to 10 1/2¢.

There is not much doing in poultry here. 100 per pound is the ruling price for turkey and 60 to 70 per pair for chickens.

Hay and Straw

The market for hauled hay is quiet, with quotations at from \$8 to \$8.50 for extra on track. Baled straw is easier at \$1.50 for cuts on track. At Montreal the hay market is steady, with choice No. 1 on track at \$11.50 to \$12; \$4 to \$5 are the ruling figures for straw on track.

Wool

The wool season is much earlier this year. The price paid by local leaders here is 100. No new wool was received last year till the end of May, when the price was 210. The present price of 100 is considered fair, owing to the duty of 12 per cent imposed on foreign wools by the United States since last year. The offerings of new wool so far have been small, and quotations are 107 for washed and 110 for unwashed.

Cheese

There was a decidedly easier feeling in the cheese situation last week. The English market is reported weak and unsettled, with a decline of 1 to 10s. 6d. for white, and 4s. 6d. for colored. These quotations are for old cheese, offerings are liberal, and hold is an anxious one to realize. The exports from Montreal for the week ending May 16th were 2,241 boxes, as compared with 20,250 boxes for the corresponding week last year. The make of cheese is increasing very fast, and it is expected that the exports will be larger in a few weeks. It is also expected that with the advent of full grass cheese better prices will prevail. The local markets during the week were very disappointing to the farmer. The prices have ruled about 10 per cent lower than the week previous; 7 1/2 being about the ruling figure at the local markets for which cheese was sold. It is estimated that the bulk of the cheese up to May 15th has been sold at 7 1/2¢. At Montreal during the week 70 boxes of finest Brackwell's sold at 7 1/2¢, and 100 boxes of choice color 1 Western sold at 8. A small lot of early cheese sold at 7 1/2¢.

Butter

The British market is still weak, but there is a scarcity of Canadian creamery and until the arrival of grass butter it is difficult to give quotations. Receipts at Montreal are increasing, and though the market ruled fairly early in the week there was an easier feeling later on, when it was difficult to obtain 17c for finest creamery. A small lot of fresh grass goals were reported sold at 16 1/2¢. Since the arrival of the fresh grass creamery there has been more demand for export. Though receipts have been larger they seem to be pretty well absorbed for the local and export trades. The receipts at Toronto have been large and the market is somewhat easy and slow. From 16 to 17c are about the ruling figures for creamery tubs, prints being from 17c to 17 1/2¢. Dairy butter is very plentiful, and the ruling prices are 11c to 11 1/2¢ for large rolls and 11 1/4 to 12c for tubs.

Cattle

There is a somewhat easier feeling in the cattle markets. This is perhaps more so at some of the western market than here. There has not been the improvement in the situation that some expected when the war broke out, though an improvement is still looked for later on. In fact some are inclined to hold their stock for this better market later when more meat will be required for the armies. The receipts at Toronto have been very liberal. In fact there has been room for all the stuff and better accommodation is wanted.

Export cattle. Though United States supplies have been large there was an advance in 10¢ per stone on the London market during

the week. The difficulty here is to get an accommodation on the outgoing vessels. This tends to keep the price of export cattle down. It is even expected that space on ocean vessels will be more scarce a few weeks hence than it is now. The offerings have been heavy and consequently an easier feeling prevailed on Friday's market, when the ruling figures were from \$4 to \$4 3/4. The top price on Tuesday was \$4.40.

Butcher Cattle. Though the supplies were heavy the market was firm on Friday. Prices ruled from 3 1/4 to 3 1/2 for the best cattle, and common to medium sold for 30¢ to 3 1/2¢ per lb. Poor cattle are hard to sell.

Hogs. There is not much demand for feeding hogs, but shipping hogs are in fair demand at from 3 1/4 to 3 1/2¢.

Stocks and Hides. There is a good demand for stockers for Buffalo, and prices are firm at \$3.50 to \$3.00 per cwt. There is not much demand for feeders.

Wool and Springs. The market is steady at \$25 to \$40 each. Fresh calved cows are in demand.

Cheese. There are a little firmer, though the price varies from \$2 to \$9 as to quality.

Sheep and Lambs

Cable reports liberal receipts of sheep from Argentina. Notwithstanding this, the market is firmer and prices are 20¢ per stone higher. Most United States markets, excepting Buffalo, report large increases in supplies. Early in the week at Buffalo sheep were 50¢ to 10¢ higher and lambs 15¢ to 25¢. The market here is steady and unchanged. Yearlings are quoted at 50¢ to 60¢ per lb. Sheep are selling at 30¢ to 40¢, with a good demand, and bucks at 30 to 32¢. Spring lambs are selling at from \$3 to \$4 each.

Hogs

The western markets show considerable movement in hogs, with prices averaging 25¢ to 30¢ per 100 lbs. higher. The market here was slightly easier early in the week, but was reported firm on Friday's market, when choice singers were quoted at \$5 to \$5.10 per

.. Windmills ..

The Canadian Steel Airmotor has been adopted by the Imperial Government and C.P.R.

Painted or Galvanized.

MEERITS: Power Strength Durability Full line of Pumps, Tanks, Grinders Hay Tools Woodward Watering Basins N farmer should be without them

Ont. Wind Engine & Pump Co. Limited LIBERTY ST. - TORONTO

The Maple Leaf Churn EASIEST AND BEST Ask your dealer for it, or send direct to the manufacturers. WILSON BROS. COLLINGWOOD, ONT.

cwt., weighed off the cars; thick, fat, and light hogs sold for \$4.75 per cwt.; sows for 30¢ to 32¢ per lb., and stags for 20¢.

Horses.

A special cable to The Trade Bulletin of May 10th reads as follows: "The demand for desirable animals from Canada, both heavy draught and light driving is good, and for all such the market is firm. Receipts from Canada are light."

Mr. W. H. Cuddy, Amland, Ont., writes: "I like your publication very well. Coming weekly, as it does, it gives us readers information more to hand than in monthly publications. The market reports are good, and the contents interesting and useful."

THE ANNUAL MEETING OF THE Welland County Farmers' Institute Will be held at the Court House, Welland, On Tuesday, June 7th, at 1 p.m. A. B. ROBERTSON, Pres.; F. MORDEN, Sec. Ft. Robinson, Niagara Falls, N.

Advertisers can reach 100,000 farmers in the Maritime Provinces by advertising in the Co-Operative Farmer Sussex, N.B. A neatly printed, sixteen page semi monthly, and the only exclusively agricultural paper in that part of the Dominion. Write to the publishers for sample copy and adv. rates. Address CO-OPERATIVE FARMER, Sussex, N.B.

THE ELECTRIC WASHER The Leading Machine - Excels all Others Made from the best of material, and guaranteed not to leak. N.B. - Agents wanted. Territory for sale SEMMENS & SON, 174 York St., MONTREAL

New Metal Roofing..

Our Patent Safe Lock Shingles are so constructed that they lock or fasten on all four sides, making perfect joints, absolutely proof against the weather. Buildings covered with our roofing look pretty, are fire and lightning proof, and will last a lifetime. Samples and Prices sent free upon application. Metal Shingle and Siding Company Limited PRESTON, ONTARIO

Farmers' Binder Twine and Agricultural Implement Manufacturing Co., Limited.

(BRANTFORD, ONTARIO).

WE think it necessary to immediately advise you to refute the treacherous and damnable reports that are being put out and circulated against this co-operative movement of farmers by our enemies. Some are stating that this mill is closed down, others that we are pleading with the Government to reinstate the duty on binder twine; others that raw material has so tremendously advanced, that the present moment is the correct time to buy twine requirements for the harvest of 1898; while still others are claiming that the great American combine must absorb this enterprise, as it will be impossible for us to manufacture twine on a free trade basis. We have simply to say, in answer to all these diabolical statements, that there is not a single word of truth in them; the mill is being run three hundred days in the year to its utmost capacity; we have requested the Government not to reinstate the duty on twine; and we are just now manufacturing a quality of pure Manilla 650 feet long, known as our Sampson brand. It and our splendid Red Star (the farmer's pride) are superior to anything that has ever yet been placed on the Canadian market. As in the past, we will again shortly set prices on binder twine for the coming harvest at a fraction above actual cost of production, that all other manufacturers and dealers will have to follow. All we now ask, after five years of honest and determined endeavor in the interest of agriculturists of Canada to hold this Company as an independent concern, is that they, the farmers, give us their continued loyal support. Order our twine early from our appointed agents, listen to no statements made by the enemy, and remain truly loyal in not purchasing one single pound of American or other twine in opposition to us until they inform themselves positively that every ball of this Company's twine is exhausted. Small samples and prices will be sent you in the near future, or can be had on application.

See copy of a letter enclosed that appeared in *The Farmers' Weekly Sun*, February 24th, for your careful perusal. We specially request you, as an intelligent man, to plead with your people to realize the importance of this company getting their undivided individual support instantly, and to understand what our being driven from existence through indifference or scepticism on their part would mean to them in the future. The Salt Act would simply be repeated a hundredfold.

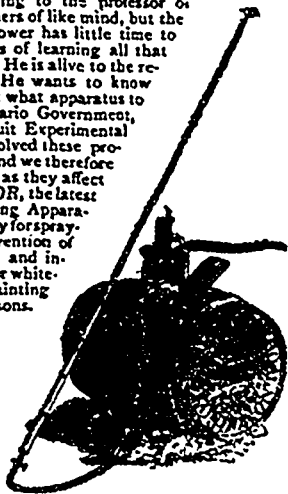
General Manager, Brantford



Faithfully yours,
JOSEPH STRATFORD.

The History of Spraying

may be interesting to the professor of learning and others of like mind, but the average fruit grower has little time to devote to process of learning all that has been done. He is alive to the results attained. He wants to know how to do it and what apparatus to use. The Ontario Government, through the Fruit Experimental Stations, have solved these problems for him, and we therefore show the results as they affect the **SPRAMOTOR**, the latest and best Spraying Apparatus made, not only for spraying for the prevention of fungus diseases and insect pests, but for white-washing and painting for sanitary reasons.



Send 2c. stamp for 26-page copyrighted edition of catalogue and treatise on the diseases affecting fruit trees, vegetables, etc., and their remedies.

SPRAMOTOR CO.

357 Richmond St., London, Ont.

Mention this paper. Agents Wanted.

Is Your Butter Bitter?

Ten to one, it's the fault of the salt you use in your churning. Inferior salt makes bitter butter—impure salt spoils butter.

Next time you churn try Windsor Salt—it is the salt that suits the taste of particular buttermakers—and butter eaters.

Other salt is said to be "as pure as Windsor Salt"—that usually settles it.

Progressive Grocers sell

Windsor Salt

The Windsor Salt Co. Limited, Windsor, Ont.

The Vessot Fertilizer Distributor

Patent applied for.

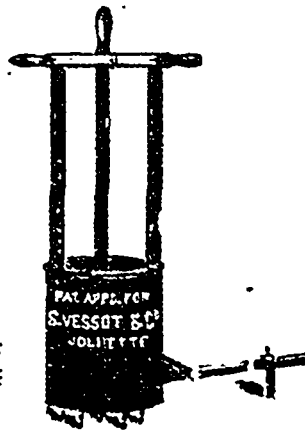
PRICE, \$5.00

The simplest and most effective hand machine for the placing of chemical fertilizers before planting. Saves time and money, and will pay for itself in two days. Write for circulars.

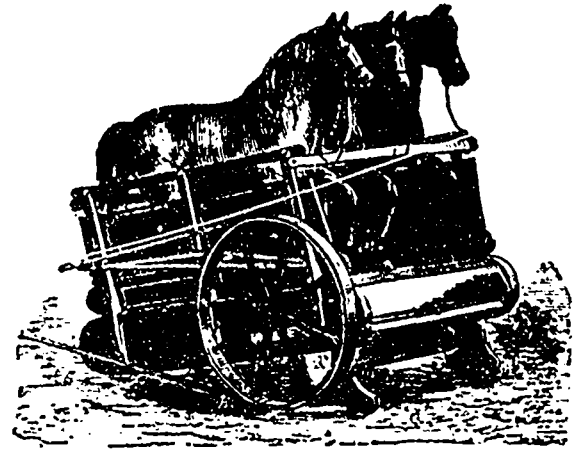
S. Vessot & Co.,

Joliette, Que.

Use no other grinder than the "Joliette." We are the sole manufacturers.



Three Horses



WE provide a special brake with our three-horse tread power, as stopping the machine suddenly with ordinary brake is apt to force the band wheel.

We have two centre tracks and rollers on three-horse power, making a bearing on each side of each horse. Our tread powers are made with a view to their being durable. Send for catalogue.

We manufacture also FEED GRINDERS, FEED CUTTERS, HAY PRESSES, THRESHERS, CIRCULAR SAW MACHINES, etc.

MATTHEW MOODY & SONS, TERREBONNE QUE.

ULRICH'S ENSILAGE Seed Corn

This Celebrated Corn is Sold all over Canada.

Giant Prolific,
Mammoth White,
Red Cob
Yellow Dent,
Improved Leaming.

Ask your dealer to procure SEED for you and you will be well pleased with results. No fancy prices. Write for Free Samples and Book of Testimonials.

E. R. ULRICH & SONS,
Springfield, Illinois.

Secrets of Success

SECRETS OF SUCCESS contains 268 pp.: cloth bound; indexed; illustrated, and conceded by all purchasers to contain more practical common sense information than any other Farmer's Book ever put in print. Mailed Post Paid on receipt of Price, \$1.25. To any one who cannot derive the special benefit from any one single article we will refund your money.

Our 50-page Pamphlet, entitled "Farming, the Farmer, and Force of Habit"

Paper back, mailed Post Paid on receipt of Price, 50c., or the two Post Paid \$1.50. The practical information these two volumes contain turned into practical account will be the means of causing the face of nature to blossom as the rose and to smile in prosperous abundance. Believing that he who does good unto his fellow man does good also unto himself, and awaiting your esteemed favors, I beg to remain, yours for success.

Address—**H. H. DRWESE,**
The Gilt-Edged Farmer,
DAYTON, OHIO.

CREAM . . . SEPARATORS

THE ALEXANDRA
Hand and Power. Capacity 160 to 2,000 lbs. \$50 to \$350.

THE MELOTTE
Hand Style only. Capacity 330 to 850 lbs. Price \$100 to \$185.

Up-to-date Dairy Machinery and Supplies.

AGENTS WANTED.
R. A. LISTER & CO., Ltd.,
18 St. Maurice Street, MONTREAL.

BRANTFORD



GALVANIZED STEEL WINDMILLS

For Power and Pumping
With Patent Roller and Ball Bearings



Makers of the lightest running and best constructed Galvanized Steel Windmills and Towers made.

Write for Illustrated Circulars.

GOLD SHAPLEY & MUIR CO. LIMITED
BRANTFORD CAN.

WHY the Canadian Farmer should buy Canadian made Implements from the

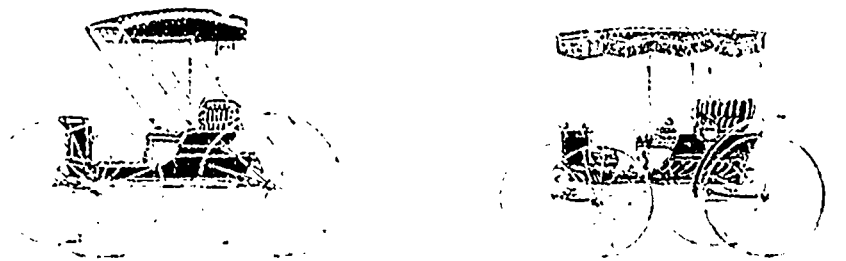
Massey-Harris Company

BECAUSE Canadian labor builds them: they have won the highest awards everywhere. They are thoroughly reliable

MASSEY-HARRIS CO., LIMITED
TORONTO



McLaughlin Carriages are Good Carriages



Common-Sense Manuring

Extract from a letter by Digby Caley, Esq.:

"I was much interested at the result of your experiments in trying to arrive at the proper amount of nitrogenous manure necessary to produce correct proportion of grasses amongst

THE LUXURIANT CLOVERS

ALBERTS' THOMAS-PHOSPHATE POWDER HAD CALLED INTO EXISTENCE."

"I congratulate and commend you most heartily on what you have already accomplished and demonstrated, and I consider you have conferred a great public benefit to agriculture generally by having allowed such convincing proofs of what can be done by the liberal use of

ALBERTS' THOMAS-PHOSPHATE POWDER."

WALLACE & FRASER

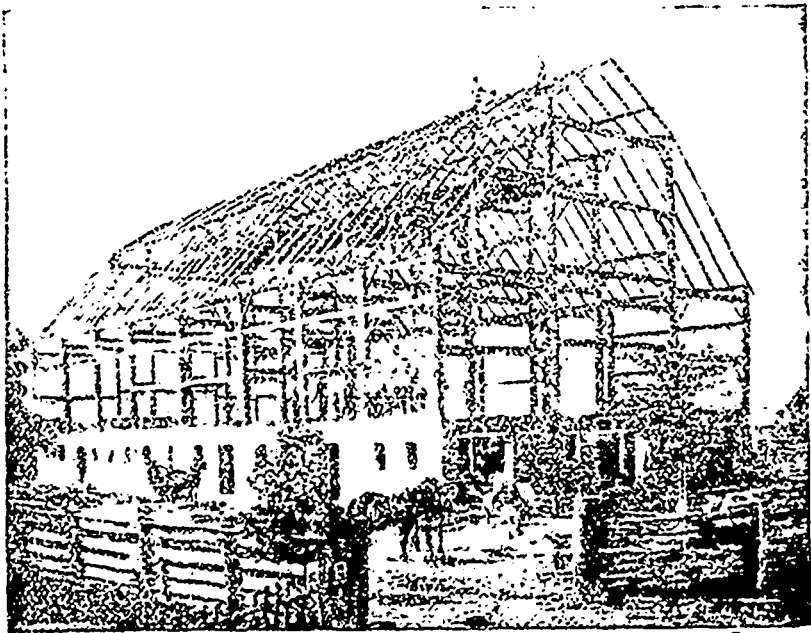
Canada Life Building
TORONTO

ST. JOHN, N.B.

THE Thorold Cement

High in Quality 50 Years in use.
Low in Price

The Leading Cement for Building Bank Barns, Cement Floors in Stables, Silos, Culverts, Pig Pens, etc.



Mammoth Barn of Beswetherick Bros. near Hagersville, Ont. Floors for horses and cattle were put in this barn with BATTLE'S THOROLD CEMENT.

Has been tested in every capacity. Most perfect Cement made.

For full particulars address

ESTATE OF JOHN BATTLE,

THOROLD, ONTARIO.

All Eyes are on this Invention!



The Genuine Tolton Pea Harvester with New Pat. Buncher at work

Harvesting in the most compact manner from eight to ten acres per day. Harvesters to suit all kinds of mowers.

EVERY MACHINE WARRANTED

BE SURE TO ORDER EARLY AND SECURE ONE

Our Motto: "Not How Cheap But How Good."

No drilling holes in Mower Bar or Inside side. A wrench is all that is required to attach it to any Mower. Give your orders to any of our local agents, or send them direct to

TOLTON BROS.,

GUELPH, ONTARIO