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# FARMING

January 17th, 1899.

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Do you want to make your churning sure, safe, profitable? And easy, too? Do you want to find a quick market for your butter?

Then try WINDSOR SALT—the salt that is pure and dissolves so easily. It has no bitter taste—successful buttermakers recommend it, and they ought to know.

Progressive Grocers Sell

## Windsor Salt

The Windsor Salt Co.  
Limited,  
Windsor, Ont.

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### THE Best Job

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

The CENTRAL BUSINESS COLLEGE, TORONTO

opens the door to success for many young Men and Women each year. It offers splendid equipment, thorough work, a strong staff and good results.

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STRATFORD.

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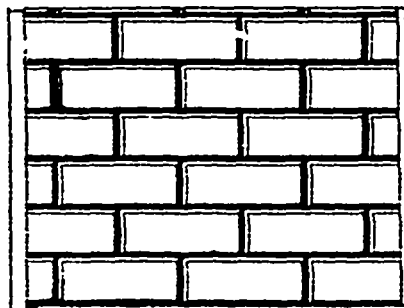
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Don't wait for something to turn up, get a business education and turn something up. Active, educated and well trained young men and women are wanted everywhere. We admit students at any time. Write for circulars.

W. J. ELLIOTT, Principal.

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Can't be equalled as a durable, economical, practical covering for buildings.



It gives a protection that is fire and lightning proof—keeps out the cold in the winter and the heat in the summer—is uniformly handsome—can be most easily applied—and costs very little.

Make a point of reading full particulars in our catalogue—you will find it pays.

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## Caustic Balsam

A Safe, Speedy and Positive Cure

The Safest, Best LISTED ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blisters from Horses and Cattle. SUPERBIDES ALL CAUTERY OR FIRING. Inexpensive to produce and of first-class quality.

Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.

THE LAWRENCE-WILLIAMS CO., TORONTO

## Fashionable Hackneys and

## Prize-Winning Clydesdales

OF THE . . . .  
BEST KNOWN STRAINS

For Sale

A number of superior Hackney stallions and mares, sired by such well-known prize-winners as Ottawa, Banquo, Seagull, and the world-renowned JUBILEE CHIEF, winner of the Hackney championship at the World's Fair.

Also a number of Clydesdale stallions and mares sired by such famous stockgetters as Sir Walter and Farnfield Laddie.

MATCHED HIGH-STEPPING CARRIAGE HORSES. FASHIONABLE COBS, SUPERIOR SADDLE HORSES, HANDSOME PONIES.

R. BEITH & CO., - Bowmanville, Ont.

HOLSTEIN.

## Brookbank Holstein Herd

CHAMPIONS FOR MILK and BUTTER

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

Write for just what you want.

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

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

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## Holstein-Friesians BULL CALVES FROM

QUEEN DeKOL 2nd. Winner of Prince of Wales' prize, over heifers of a 1 breed in public test.

LADY AKKUM 2nd. 67½ lbs. milk in 1 day and 2½ lbs. butter in a week.

KAATJE DE BOER. 43 lbs. milk and 3 lbs. butter per day at 14 years old.

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DAISY TEAKE. Dam of Daisy Teake's Queen, whose 4-yr. old public test has never been equalled.

G. W. CLEMONS, St. George, Ont.

## ROSE HALL STOCK FARM.

HOLSTEIN-FRIESIAN

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

## SPRING BROOK HOLSTEINS, TAMWORTH AND B. ROCKS

Great bargains in Holsteins from now till New Year's. Take advantage of cheap rates over holidays. Stock of best quality. Tamworth the choicest in the country. A few cockerels on hand.

A. C. HALLMAN, New Dundee, Ont.

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

GREGOR MacINTYRE, Renfrew, Ont., Breeder of Thoroughbred and High Grade Holstein Cattle. Stock for sale.

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

W. M. ARMSTRONG, Locust Hill, Ont., Breeder of Purebred and High-Grade Holsteins.

GALLOWAYS.

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

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

DEVONS.

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

## HENRY ARKELL, Arkell, Ont.

Importer and Breeder of OXFORD-DOWN SHEEP

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

PRICES REASONABLE.

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### SPRING PIGS

Ready to wean.

1 Pig, \$10.00

2 Pigs, \$18.00

3 Pigs, \$25.00

Cross-breeds Half-price

Orders booked and filled as received.

Tamworths Yorkshire Duroc-Jerseys Cross-breeds

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

## HICKORY HILL STOCK FARM



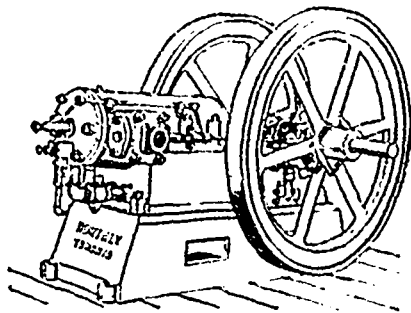
WAAMAN DYMENT, Clappison's Corners, Ont

3 Ayrshire Bull Calves from dams that have won milk tests.

Great Bargains if sold before winter sets in. Write or come and see.

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AN IDEAL FORM OF POWER FOR THE FARM



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

Our booklet tells all about it. Write for it.

Northey Manfg. Co., Limited, Toronto

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# Dentonia Park Farm

EAST TORONTO (Coleman P. O.)

W. E. H. Massey, Proprietor

Address DENTONIA PARK FARM, Coleman, Ont., Canada

## Dentonia Jersey Herd

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

## Dentonia Poultry Yards

Handsome White Leghorn Cockerels (from Wyckoff eggs), also Brown Leghorn Cockerels for sale.

## Dentonia Trout Ponds

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

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

### PINE GROVE STOCK FARM, Rockland, Ont.

On the C.P.R. and G.T.R. Railways. Special bargains on young bulls of superior merit and select Scotch breeding. Also thick young heifers at the right prices.

Ayrshires, Jerseys, Shropshire Sheep, and Clydesdale Horses.

Post Office, Telegraph Office, and Steamboat Landing, Rockland, Ont., on the C.P.R.

J. W. BARNET, Manager.



### LAURENTIAN STOCK and DAIRY FARM, North Nation Mills, Que.

Ayrshires, imported and homebred here headed by imported Tam Glen Ssd, No. 1310 D. A. H. B. Jerseys all of the celebrated St. Lambert family; herd headed by Lascar Fogs of St. Anne's 25704 A. J. C. C. Berkshire Pigs. Young stock of all the above breeds for sale.

Post Office, Telegraph Office, and Railway Station, North Nation Mills, P.Q., on the C.P.R.

A. E. BOHRYER, Manager.

## W. D. FLATT

HAMILTON P.O. and TELEGRAPH OFFICE



... OFFERS FOR SALE ...

TEN Choice Shorthorn Bulls, from six to twelve months; twenty-five Cows and Heifers served by imported bull, Golden Fame #29038; also Large Yorkshires of choicest breeding and quality from Imported and Canadian-bred stock of True Bacon Type. Catalogue sent on application. Visitors met at G.T.R. or C.P.R. if notified.

## CHOICE AYRSHIRE BULLS

FROM IMPORTED STOCK.

We offer for sale Three (3) BULL CALVES from 9 to 13 months old, sire and dams imported; also 5 calves from 1 to 4 months, good individuals and from the very best milking strains obtainable in Scotland.

W. W. BALLANTYNE, (formerly Thos. Ballantyne & Son) "Neidpath Stock Farm," Stratford, Ont. Farm adjoins city, main line G.T.R.

## Golden Link Herd of Berkshires

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

T. A. COX, Brantford, Ont.

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

# FARMING

VOL. XVI.

JANUARY 17th, 1899.

No. 20

## What Our Readers Say.

The following extracts are taken from among the many letters we are receiving daily containing appreciative words of FARMING:

MR. JAS. SMITH, Secretary of the North Grey Farmers' Institute, Inglis Falls, Ont., says: "Your subscribers are well pleased with the paper. I think it should be read by every farmer. The market reports alone are worth the money."

MR. JAS. HUNTER, of Carholme, Ont., says: "Enclosed find \$2 for subscription for FARMING. I can not get along without your paper, and if my subscription should run out again do not drop my name, for I want your paper."

Commercial Cross, P.E.I.  
Dec. 28, 1898.

I have been much pleased with your paper for the last six or seven years and every change in it has been for the better.

JOHN N. McDONALD.

Copenhagen, Ont., Jan. 11, 1899.

Editor of FARMING,  
Toronto.

Inclosed find \$1, subscription to FARMING. It is a bright, spicy, up-to-date agricultural paper, and being published weekly makes it much more acceptable in our homes. Wishing you the success your enterprise merits, and hoping that our Canadian farmers will show their appreciation for FARMING, as it supplies a long felt want.

Yours very truly,

R. LINDSAY.

## Agricultural News and Comments

A novel test is being conducted in Great Britain. It is an egg-laying competition. All the competing birds are pullets and are being kept under the same conditions and management. Each pen contains four birds and the competition is to last eighteen weeks.

The Essex Tobacco Growers' Association are sending a representative to England with a view to finding a market for their tobacco. In 1897 the counties of Essex and Kent produced over 10,000,000 pounds of tobacco, the acreage being 5086 in the former and 2140 in the latter.

The great increase in the high price of meat which has taken place in Germany during the past year has produced a powerful agitation against the high duties and numerous restrictions by which the Government has nearly stopped the importation of live animals and greatly increased the price of meat products. This increase in price has caused a decided decrease in the amount consumed.

Referring to the Irish Board of Agriculture the Lord Lieutenant of Ireland recently said: "There are few industries in which more money is wasted than in agriculture. The tendency of those engaged in it is not to learn scientifically how to use their best efforts for the cultivation of their land in the proper way, and the result is a waste of energy, a waste of capital, and loss instead of profit."

A peculiar cattle disorder has arisen in Australia. The complaint is very similar to that known as "wind" in horses. It comes on when cattle are exposed to a cold wet night after a hot day. The cattle had tremendous legs in the morning, the swelling being so great in some cases that the skin of the thigh would burst. The sudden chill to the cows seems to have caused the disease. When cows were under shelter no trace of the disease was found.

The German coach horse has been bred and developed by the German Government for a hundred years, under the management of the most skilful scientific breeders. They are the largest of the coach breeds introduced into America. They are strong, impressive sires, and when bred to good trotting bred mares they produce the popular type of harness horse to suit the export trade, as well as our best home markets horses with good size, fine graceful action and the outlines of beauty that command the best prices.

To estimate the weight of cattle by measurement, measure the girth close behind the shoulder and the length from the fore-part of the shoulder blade along the back to the bone at the tail, which is in a vertical line with the buttock, both in feet. Multiply the square of the girth, expressed in feet, by five times the length, and divide the product by 21, the quotient is the weight, nearly, of the four quarters, in imperial stones of 14 lbs. avoirdupois. When the cattle are very fat the four quarters will be about one-tenth more, while in very lean cattle they will be one-twentieth less than the weight obtained by the rule.

The returns of thoroughbred mares for the year 1898 in the English stud book are scarcely as satisfactory as could be wished, and there are proportionately fewer foals than was the case last year. In 1898 there were 5,585 mares accounted for, against 5,526 in 1897, but there are 59 fewer colts. The increase in the number of barren mares which amounts to 99 shows that 1898 has not been a good breeding season. The exports of mares fall nine short of what they were in 1897, but 29 more mares have been put out of the stud. About eight mares per thousand breed twins, and as twins are counted as two foals there requires a proportionate reduction in the number of mares.

## Co-operation in Dairying

Co-operation is the real foundation-stone of Canadian dairying. Though our dairymen realize this in a general way, we question whether all of them have such a grasp of the situation as will impel them to perform faithfully their share in making this huge co-operation a success. The maker and the manufacturer or company, with a few exceptions, perhaps, fully realize the true significance of what co-operation in dairying means; but, from our own experience in practical dairy work a few years ago, and from our observation since then, we question whether one-half of the patrons of our cheese factories and creameries do so. Too many patrons, though they recognize the co-operative principle in dairying, seem to feel that the responsibilities connected with it do not apply to them. For this reason progress in dairying, after it reaches a certain stage, is slow.

Co operation is defined as the act of working or operating together to one end. This being so, it is the duty of every one connected with a co operative cheese factory or creamery to do his utmost to make the concern a success. The patron who supplies the milk, the maker who makes it into butter or cheese, and the manufacturer, though not to so great a degree, are the factors concerned in operating a cheese factory or creamery, and upon the manner in which each one performs his part will the success of the industry depend. As we have pointed out on other occasions, while it is comparatively easy to reach the maker, it is very difficult to reach the man who supplies the milk, and to get him to feel his responsibility in the matter.

From the cheese and butter makers' standpoint, there should be little difficulty in raising the quality of our dairy products to the highest standard possible. What with our dairy schools, our dairy instructors and inspectors, and the fund of dairy information distributed by both departments of agriculture, Canadian makers have every facility provided for perfecting themselves in the latest and most improved methods of cheese and butter-making. And we say it advisedly, the cheese or butter-maker, who has a first-class quality of milk supplied him, and has suitable buildings and the necessary equipment, and cannot make a first-class quality of cheese or butter, cannot be excused in the least. If he cannot make good cheese and butter under these favorable conditions he should not be in the business, and should take up some other calling where skill, intelligence and good judgment are not necessary to success.

But with the patron it is different. When co-operative dairying was a new thing in this country, not much attention was paid to educating and instructing the man who supplied the raw product as to how best to perform his share in the co-operation. Of late years a more extended effort is being made in his direction; but the patron is a very hard factor to reach. Outside of the dairy conventions, the dairy bulletins and an occasional dairy meeting no systematic method is being adopted towards inducing the patron to perform the duties which devolve upon him in the best possible way. No doubt the makers can do, and many of them are doing, effective work in this direction, but they are hampered to a large extent. The maker's position does not always give him that independence necessary to one who is called upon to instruct another. Where the maker is engaged to make by the cwt., it is to his interest to get all the milk he can, and if he should send home a can of milk because of its being tainted or sour he would offend the patron, who would withdraw his support. The problem, then, of educating the patron in the best methods of handling and caring for the milk supplied to a cheese factory or creamery is a very difficult one to solve. Perhaps the system inaugurated in Western Ontario recently, where a few factories are placed under the control of a competent manager, who devotes his whole time to the work, may be a means of solving the difficulty. We are of the opinion, however, that the education of the patron in the best methods of caring for milk for cheese and butter-making is the most important work which our dairymen have before them to-day. It seems to be the one branch in our co-operative dairy system which just now needs attention more than any other.

Some serious charges were made last season as to the quality of the cheese made in certain sections. We heard more than one in the trade make the statement that no improvement whatever was being made in the quality of Canadian cheese, and that in many instances the quality was not as good as it was a few years ago. These are strong statements, and should be weighed well by every dairyman in the country. Whether the patron or the maker is the more to blame for this unsatisfactory condition of things is not known. It may be that both are to blame, and have been negligent in regard to the duties they have to perform in making our co-operative dairy system a success.

### Latent Fertility in the Soil

There is no more important question before the farmers of Canada to-day than that of maintaining and keeping up the fertility of the soil. The success of all farming operations depends upon it. Whether the farmer's specialty is live stock, dairying or grain-growing he cannot make a success of any one of them unless he gives special attention to maintaining the fertility of his land and making it as productive as possible. Too many farmers overlook this fact and condemn a certain line of farming as being an unsuccessful one to follow without getting at the very root of the cause of failure, viz., the condition of fertility in the soil.

The question of fertility is becoming of more vital importance to the farmers of Canada every year. Unless they give it first place in their farming operations the outlook for Canadian agriculture is not a very bright one. We have a country lavishly endowed with the elements that should go to make its soil productive. There are latent forces in the soil and atmosphere which, if the farmer knew how to control and utilize them, would make his farm much more productive than it now is.

In the December number of the *Industrialist* Mr. R. W. Clothier discusses the latent fertility of the soil. He states that farms do "run out" from long-continued usage and improper treatment, but adds that in the majority of cases a very small per cent. of their natural fertility has been taken away in the form of crops. By far the greater portion has been wasted by improper methods of cultivation. To quote :

"A very small per cent. of the total weight of plants is furnished by the minerals of the soil; and of this small per cent. the following elements are necessary to plant-growth: iron, sulfur, nitrogen, phosphorus, potassium, calcium, sodium, silicon, oxygen, and chlorine. Of these, all but potassium, phosphorus, and nitrogen are present in the soil in such abundance as to be practically inexhaustible. The amount of these three elements, then, contained in a soil will determine its fertility; and, since all of them may be considered of equal importance to plant-growth, a deficiency in any one of them makes the soil poor."

Taking Kansas soil as an example, the writer goes on to show that it contains 6,660 pounds of nitrogen to the acre to the depth of one foot. For an ideal crop of wheat 59.46 pounds of nitrogen per acre is required for both grain and straw. According to this an ideal crop of wheat could be grown yearly for 70 years before the supply of nitrogen would be exhausted. By the same cropping the phosphoric acid would last 115 years and the potash 200 years. But these represent the fertility in only the first foot of soil. Many of the roots penetrate below this depth, and, as the rain annually brings down to the soil from six to ten pounds per acre of nitrogen, it would seem that the fertility of the soil is practically inexhaustible. But the writer recognizes the fact that soils do wear out, and explains it as follows:

In the first place, only a small portion of this plant-food is ever available to the plant at any one time. Nearly all the nitrogen, for example, exists in the form of organic matter, which cannot be used until it undergoes the process of nitrification, the process by which the nitrogen of organic matter is converted into nitric acid and nitrates. Nitrification takes place by means of bacteria, which live in the soil. In order that these bacteria may thrive and perform their work well, they must have conditions of warmth and moisture, must be supplied with oxygen, and the acid formed must be removed or combined with some base. Quite often a base easily acted upon is not present and too much free acid accumulates. Then, too, in waterlogged soils the temperature remains too low and the air is excluded by the water. We must find some way to supply these necessary conditions.

But there might be plenty of available nitrogen and the soil fail to produce well on account of a deficiency in available potash or phosphoric acid. These elements exist in the soil in nearly or quite insoluble compounds; the potash in combination with other elements form double silicates, while the phosphoric acid is in combination with various bases which form insoluble phosphates. They may be liberated from these compounds and brought into solution by means of humic acids formed by the humus of the soil, by means of water holding in solution other salts, and by the action of the fibrous roots of plants. But, under the most favorable conditions, it has been estimated that less than one per cent. of these elements could be brought into solution in one year's time; and when once brought into solution their tendency is soon again to form insoluble compounds. Granting, however, that an abundance of these three elements exists in available form, soils may fail to produce because they lack the necessary water to carry this food to and into the plants.

The chief means by which these difficulties may be overcome is good tillage. There is no other way by which so much plant-food can be liberated as by thoroughly pulverizing the soil:

Good tillage loosens the soil and allows free circulation of air. It may often aid in hastening evaporation for a time, and

It also allows the sun's rays to have more power on cold "soggy" soils. As above stated, all of these conditions promote nitrification. Thorough tillage reduces the soil to fine particles, upon which water and humic acids may act more readily, and by breaking the surface crust, which always forms on untilled soil, makes more room and better conditions for the development of fibrous roots. It is a well-known fact that roots grown in a hard, crusty soil do not have as many fibres (which are the chief feeders of the plant) as those grown in soil of looser texture. It is also true that, though our cropping-plants send many of their roots to a greater depth, the major part of their feeding is done near the surface. These facts suggest that good plowing is one of the most essential features of good tillage.

### AN APPEAL FOR THE "COO"

We have pleasure in publishing the following production sent us by a fair reader in Manitoba. The appeal in behalf of man's best friend, the cow, is a touching one, and should make every dairyman think. The writer of the poem is evidently not of Irish descent:

#### THE COO'S COMPLAINT.

I'am only a coo, so I shouldna complain  
O' that higher (?) animal—*mizn*;  
But even a coo canna aye help her thochts  
Ony mair than human folk can.

No a body I ken, man, woman or bairn,  
Wi' a spark o' soond common sense,  
E'er thocht in the winter time they could keep warm  
At the back o' a straw stack or fence.

Yet they'll turn me oot on a snell winter day  
In the cauld blast to shiver an' shake,  
Nor think o' the misery they could spare me,  
If a wee thing o' thoct they wad take.

I'm a patient fu' beast an' to trouble folk sirs  
I'd rather no dae that ava,  
But I ask ye man "hoo wad ye like it yersel'  
Tae be set tae a meal o' dry straw?"

It wadna' tak' long to mak' a warm mash,  
An' syne, sir, I wadna' find faut  
If, tae keep it frae tastin' sae horridly wersh,  
Ye added a wee thing o' saut.

When tastin' yer coffee, or whiskey, or tea,  
Jist stop for a meenut an' think,  
An' it winna be ice water fresh frae the pump  
Ye'll gie me the next time to drink.

Whiles curry me doon as ye curry your horse,  
Clean ma stall an' I'll ask for nae mair,  
An' never again will ye hear me complain,  
An' I'll pay weel for trouble an' care.

#### MORAL.

If ye'd hae a coo pay weel in milk, cream an' butter,  
Ponder weel on the words ye hae heard this coo utter.  
—POLLY CRUMPLE.

### Breeding Cattle for the British Market

Written for "Farming" by James Bowman, Elm Park Farm, Guelph, Ont.

This is a very important subject for consideration at the present time when we are hearing so much, truthfully too, about the Americans being quite ahead of us; South America is promising soon to be, if not already, there. The principal reasons for this we believe are that they are breeding with that object in view, and are sending large quantities at a time of uniform cattle of the best beefing breeds; not mixed up with dairy grades as we so often see in Canada to-day. I firmly believe that no country can

feed better or produce a more varied and healthful ration for all kinds of stock than our own beloved Canada. The *Breeders' Gazette* of America states that, though there is a national prejudice against the American, they find that all good Britishers like American beef. We must be able to satisfy the Britisher's taste also if we are to get their gold, as we have great reason to believe the truth of the *Gazette's* statement.

A number of years ago I met with some farm laborers from England and Scotland, men who worked for or were the sons of tenant farmers, and I thought it a very good opportunity to find out how the tenant farmers bred their beef cattle for the best markets. They all seemed quite settled that the "Blue Grays" were the most profitable, size, quality, and substance combined. These cattle were got by crossing black cows with a Shorthorn bull, generally a white one. We have made a number of enquiries since then and have frequently read of the same plan. These are the kind of cattle that turn out the prime Scotch beef that tops the English market. This is an idea I had before I had a dollar invested in black cattle. This kind of beef stands first, with "John Bull." Our nationality is all right, our feed is all right. Then let us go ahead and breed for it, and get there.

But one of the first difficulties we meet with is where are the black cows to come from and purebreds are too high-priced to buy. To satisfy ourselves on this point I fed a heifer got by a Polled Angus bull and a Durham grade cow, raised on skim milk and fed on very common feed until she was two years old, when I fed her for beef and at last fall's shows she took first prize at the Toronto Industrial for the best fatted cow or heifer; first in Quebec in same class. She was the best one of the medal pair of fat cattle at the Provincial Fat Stock Show at Brantford and also got first for cow or heifer over three years in a strong class of Shorthorns. At the Smithfield of Canada at Guelph she was the best one of a pair of export cattle over twelve hundred pounds. She weighed twenty hundred and seventy pounds when we started for Brantford, being the heaviest animal at that show, as she was at Guelph. We feel that this is a reasonably good argument that the cross between a Polled Angus bull and grade Shorthorn cows, of which there are a good number in Canada, is fully as good a beef animal as the general run of either of the pure breeds, and got at a great deal less cost. I have often thought that if the every-day tenant farmer of the old land breeds in this way in order to make his business pay best, and can afford to pay such high rents, he is a very safe man to follow. Let us look for a moment at the swine industry. We are holding our own there all right in the bacon trade and the Americans know it too. We sometimes read articles of their talking of breeding along the same lines as our pork packers advocated so strongly and backed it up by only paying remunerative prices when they got the right kind of hog. What a turn over there has been in the breeding of hogs within the last few years and how often we hear farmers say that nothing pays them so well as their pigs. We hope the time will soon come when our export cattle will be second to none in quality at least, and if we are to get there we must breed for it.

If champion prizes at fat stock shows such as Smithfield and Birmingham (which I think breeders of all beef breeds acknowledge to be the most reliable and critical test of real quality in the world), count for anything then all the statements I have made here have good honest backing. For the last six years the records are: 1893, '94, '95, all Angus heifers; 1895, the Queen's heifer, three parts Durham one part Angus; 1897, Blue Gray Galloway (Galloway cow, white Durham bull), and in 1898, Lord Strathmore's purebred Angus heifer. Pure Angus heifers were winners four times out of six.

May we all feel the inspiration expressed by our Postmaster-General in the few words at the bottom of our two-cent foreign stamp and don't let the breeders of export cattle be the last to prove the truth of these little words with such a big meaning.

## An English Ration for a Dairy Cow

The following is recommended as a good ration for a dairy cow by an English authority:

	Albumi- noids. lbs.	Carbo- hydrates. lbs.	Fat. lbs.
17 lbs. of good meadow hay	0.65	4.82	0.12
3 lbs. of corn meal.....	0.25	1.81	0.14
3 lbs. of ground oats.....	0.27	1.30	0.14
3 lbs. of white shorts.....	0.27	1.64	0.08
4 lbs. of linseed meal.....	1.10	1.32	0.28
	2.54	10.99	0.76

These nutrient percentages represent the fat to be about one third the weight of the albuminoids, and the albuminoids about one-fourth the weight of the carbohydrates, which last consist of sugar, starch, gum, etc.; and in the above formula the three groups of nutrients are, chemically speaking, believed to be in well-balanced proportion, which reduces the waste in digestion to a minimum.

The above ration contains an excess of heat-producing elements, owing to the preponderance of carbohydrates; but this is a necessity in cold weather. Speaking of heat reminds us that it is not a good thing to allow cows to drink large quantities of ice-cold water. Even ice-cold turnips fed to cows will involve a waste of carbohydrates. This waste can be avoided by warming the water artificially or otherwise, while the turnips can be fed at a higher temperature by pulping and mixing with chaff or straw, when after a few hours they are heated by fermentation. It is a more difficult matter perhaps on the average Canadian farm to raise the temperature of the water the cow drinks. Where water is provided for the cows in the stable by means of a wind mill and tank the temperature of the water is considerably raised by being allowed to stand a few hours in the tank before the cows get it.

## Hints Regarding the Purchase of Fruit Trees

The Ohio Agricultural Experiment Station gives the following valuable advice to farmers contemplating the purchase of fruit trees:

As a rule, it is best to purchase trees direct from established nurseries, near home; but in exceptional cases it is safe to buy through agents, and also to send orders to distant nurseries. To give an order to an agent of a reliable nursery is as safe as to deal direct, but one needs to be sure that the party who claims to represent the nursery is an agent, and not a mere dealer, who buys where he pleases and sells at whatever price he can get. Dealers are seldom responsible and do not hesitate to make any promise to refill the order free of charge in case of loss in transplanting, nor to make any claim as to genuineness and superiority, in order to effect sales.

Honest men find it hard to compete with the rogues in this branch of the business, while the temptations to deceit are so great and the restrictions are so few that reliable tree dealers are rare, hence this class is to be avoided. If a salesman claims to be an agent he should be able to show papers to that effect, and the financial standing of the firm can be learned at the bank.

Financial standing is not a proof of honesty, but it is more or less dependent upon business integrity. At any rate one need not be in a hurry to order trees and can easily ascertain the business standing of any firm, especially the one near home. Agents very often exceed the authority given them by the nurseryman and make claims and promises which are unknown to their employers.

Insist that all such claims and promises be put in writing, with the name of the firm attached. If this is refused it is not safe to buy. An order is a contract and the buyer should see that it is not so worded that the nurseryman may substitute if he wishes. The nurseryman often takes this liberty, hence the words, "no substitution al-

lowed," should be inserted, and another clause might be entered in the contract which should specify that a list of such articles as cannot be furnished should be sent to the buyer within two weeks from the time the order is given. Keep an order of all trees and plants ordered, with price and size, or ages.

In selecting varieties it is not safe to invest in any high-priced novelty. Take old varieties of known merits, only, and do not be cajoled into paying fancy prices for trees propagated by special methods nor because they are said to have certain merits not possessed by trees offered by other nurserymen. If an agent makes statements which seem to be extravagant submit them to some one who is experienced in such matters, and if the agent is found to be lying about one thing it is safe to infer that he may be in others.

Do not be deceived into believing that the small home nursery has no assortment or varieties. Most likely it has just what you want and at half the price asked by the agent.

If the near-by nurseryman does not have all the cracked-up new sorts, it is a proof that they are untested. The home nurseryman can procure anything which he does not have as well as the agent can, for if it has merits it will be in general trade. On the whole, it is better before buying to have a talk with some nurseryman of reputation, as well as with fruit growers of experience. A little caution and common sense in buying trees will save lots of future trouble.

## A Woman's Institute

A Woman's Institute was organized at Stony Creek, Ont., in February, 1897, and seems to be in a very flourishing condition. A definite and systematic line of work is carried on, and to facilitate matters and cover the ground thoroughly this work is divided into six divisions or branches as follows: Domestic economy; architecture, with special reference to sanitation, light, heat, etc.; physiology, hygiene, medicine, calisthenics, etc.; floriculture and horticulture; music and art; literature and sociology; and education and legislation.

With this list of subjects to choose from, the varied tastes and inclinations of the members can have free scope in any direction they wish. By dividing the work, members are more inclined to make a special study of some one of them, and are able to give the institute the benefit of their research and study.

A woman's institute could with profit be organized in every county in the province. It may be said that the regular farmers' institute covers the whole ground and a second organization is not needed. But, though man's and woman's interests in the farm are similar, the work which each one has to perform in carrying on the farming operations is quite dissimilar. We consider domestic economy in the farm home to be one of the most important topics that could be discussed at a farmers' meeting and a woman's institute organized to discuss it and kindred subjects can do an immense amount of good in making the home life on the farm more pleasant and healthful.

## Losses of Butter Fat in Private Dairies

Many dairymen are not aware of the loss there is in butter fat on all farms where cream is raised by setting in ice water, cold water or cold air varying with the season. This loss is likely to be very large in summer and less in the winter. This loss, carried on year in and year out, amounts to a large sum when a whole herd is taken into account. The Kansas Experiment Station has been endeavoring, by a three days' test of a private dairy, to determine how much this loss is. They find that the skim-milk contained from .3 to .7 of one per cent. of butter fat, or an average of .44 of one per cent., while the butter-milk tested 1.1 per cent. of butter fat. The herd of five

cows tested showed a loss of 129 pounds of butter per year lost in the skim milk and 31 pounds in the butter-milk, a total loss of 160 pounds, or 32 pounds per cow. This, at 20 cents per pound, the price received from private customers, means a loss of \$6.40 per cow per annum. The farmer with twenty cows would at this rate save \$128 per year by using a farm separator, and we believe this estimate is not far from correct.

### Syndicating Stallions

This method of securing the services of good horses in a locality is not a new one. It has been tried in the States, but as crooked methods were practised in supplying the members of the syndicate with good horses the system has got into some disrepute. Many of the horses palmed off on syndicates by unscrupulous dealers have been poor affairs and have brought disaster to the horse-breeding interests of the districts. Attempts have been made by Americans to syndicate some of these inferior animals in Canada, but fortunately with very little success.

Though farmers in some parts have been imposed upon in a number of instances, the syndicating of stallions is a very effective means of introducing the best blood in a locality at a comparatively low cost. During the past year or two Graham Bros., Claremont, Ont., have been syndicating a number of horses in different parts of the country with marked success. Their high-class trotting stallion, Vrowsky, by Red Wilkes, was sold by them to a company at Markham and has done a most successful and satisfactory business for his new owners. They have also syndicated several Clydesdale stallions in different parts of the province. There are other Ontario breeders who have been equally successful in this work, and whose horses have given good satisfaction. The plan is a good one and the only caution necessary is that farmers, who contemplate organizing a syndicate, should deal with some responsible and well known breeder from whom the kind of animal they want can be secured.

### The Outlook for Clover Seeds

Red clover seed is likely to be very high before spring opens up. The American and Canadian crop is a very poor one. The English crop is of fine quality, but the yield is very disappointing, averaging only 1½ to 2 cwt. per acre, and it is clear that Great Britain will have to import largely from somewhere. The French crop is short, and Germany and Belgium will be buyers and not sellers. Russia will be able to spare a little, but it will not be much, as the drought last spring injured the clover plant in many districts. It is estimated that Europe will need from 100,000 to 150,000 bags of red clover seed next season, and it is very doubtful if America will be able to supply one-half of this quantity.

While clover seed is a fair crop in most producing countries, but really fine qualities are reported scarce. Alsike is a poor crop all over Europe, but American and Canadian seed of fine quality is evidently plentiful as it is obtainable at low prices.

### The Argentine Cattle Trade to be Bonused

It is reported that at the session of the Argentine Congress, now in progress, the Minister of Agriculture will present a bill providing for the payment of bounties on the export of cattle, for special privileges to vessels under the Argentine flag which carry cattle, and for the remission of the dues now exacted from vessels under any flag which carry Argentine cattle to foreign markets. We have frequently drawn attention in these columns to the special

efforts the South Americans are putting forth to develop their export cattle trade, and this is another move along that line which, if it comes into effect, will bring Argentine cattle-dealers nearer the British markets than they are now. By importing largely of pure-bred stock for breeding purposes they have greatly improved the quality of their beef cattle, which even now is almost on a par with the quality of the cattle shipped to England from Canada and the United States. Though we are opposed to bolstering up a trade by a bonus of any kind, yet we believe our Federal Government could help the Canadian cattle trade immensely by securing better freight rates on export cattle. It costs us \$6 more per head to send cattle from Ontario to Liverpool than from the Western States to the same point.

## CORRESPONDENCE

### Bacon Production

To the Editor of FARMING:

We have read with great interest the articles appearing in FARMING from time to time on the above subject and among others those from the pen of Wm. Davies, C. C. L. Wilson, F. C. Fearman, and others. Mr. Davies speaks in the Exhibition number of the brutal treatment which the hog is subjected to before reaching the slaughter house. We are sorry to say that we, too, have seen the poor brute lying covered with marks, bruised and bleeding, and must before long if living be a mass of scabs and sores. We do not think this necessary with properly constructed pens and also with proper methods of loading and unloading at the shipping stations. The buyers could tax the marks found on the animal and in this way reduce the evil very materially. Mr. Fearman's letter gives very positive information as to breed and feed and a great deal of it is valuable, but like the cow with the "mullen," we must reject some of it. His absolute prohibition, "Do not feed corn" or "avoid corn" in the light of Professor Day's experiments, does not obtain. It does look unreasonable that sweet, well-matured corn with a mixed ration of mangels or sugar beet, barley or oats, etc. (which by the way I would advise instead of turnips because it is more palatable), could possibly make anything but sweet and nutritious bacon, providing the hogs have been kept in thrifty condition.

No doubt Mr. Fearman when advising out-door exercise for the hog was right when the weather is not too inclement, as the animal requires it in order that he may develop muscle or flesh instead of fat. It is also beneficial for health, and without health we cannot have growth or thrift. We do not agree with Mr. J. L. Wright when he says, "To allow hogs to range at will would simply spell ruin to farmers foolish enough to be led astray by such talk." We never had hogs do better than when fed in a clover or lucerne pasture and finished there, and we are convinced that Mr. J. L. W. would find his profits much larger if he adopted the more sensible plan of feeding his hogs and finishing them too while ranging in the clover or lying, stretching and growing in the orchard, for at least six months of the year. We have made a practice of penning only when we must. It must be understood that we do not allow the pigs to run everywhere or anywhere, but confine them to their own plots. It is important that further experiments be conducted at the O.A.C. with regard to result of feeding *corn*, as we have found a mixture of corn, shorts, and mangels or sugar beet a profitable ration in so far as growth is concerned.

A READER.

NOTE.—The above letter came to us without any signature attached, but as the writer evidently understands what he is talking about, we have pleasure in giving his letter publication. We should be pleased, however, to have his address.—EDITOR.



## Butter and Cheese Association of Eastern Ontario

The twenty-second annual convention of this association convened in Kingston on Tuesday, Wednesday and Thursday of last week, and as usual was a grand success. Unfortunately Ex-Governor Hoard, of Wisconsin, who was to have been present, was unable to be present owing to severe attack of "La Grippe" contracted early in the week. This was a great disappointment to many of the dairymen present, but as a large staff of speakers had been provided the time of the convention was well and profitably taken up with practical addresses and discussions on every phase of dairy work. Another speaker whose absence was very much regretted was Dr. Mills, who was unable to be present also through illness. Nevertheless an exceedingly profitable gathering took place and the keen interest taken in the addresses and discussions by those present showed that the dairymen are very much alive in reference to the dairy business and are determined that the quality of the dairy product of Eastern Ontario shall not be behind that of any other part of this great Dominion.

President Derbyshire, in opening the convention, delivered a well thought-out address on the dairy situation of the past year and upon the outlook for 1899. He made special reference to the loss of Prof. Ruddick, lately moved to New Zealand, and spoke in good terms of his successor, Mr. J. W. Hart, who has taken his place as superintendent of the Kingston Dairy School. He made special reference to the creamery work during 1898, and pointed out that great advancement had been made not only in quantity but in the quality of the product. Canadian creamery butter is fast obtaining an enviable position in the markets of Great Britain. We exported in 1894, 32,055 packages; 1895, 69,654 packages; in 1896, 157,321 packages; in 1897, 220,252 packages; in 1898, 280,000 packages.

While our make of cheese has not been quite so large as in 1897, still we have improved the quality, and have had a fairly successful season, and I feel sure we would have had a good season, and prices fully one cent higher throughout the season, had not one of our exporters tried to do all the business, and continually undersold everybody on the British market. Our exports in 1896 were 1,726,726 boxes; 1897, 2,102,985; 1898, 1,900,000, and we have about the same quantity on hand on the 1st of January, 1899, that we had one year ago—about 300,000 boxes, and our market is firm. So cheaper methods of production are needed, and though we have a large number of first-class makers there are many who are quite ordinary and need further training. One of the crying needs to-day is better curing-rooms and better buildings for cheesemaking purposes.

### THE TROUBLES OF CHEESEMAKERS AND REMEDIES FOR THE SAME.

The subject was treated in a thoroughly practical way by Prof. I. H. Dean, of Guelph. The one great difficulty of the cheesemaker in Canada is to get clean, pure milk, and the only way to overcome this difficulty is by education. Ontario needs better factories and better management. The losses occasioned by impure milk, bad dairies, poor utensils, etc., ought to be equally borne by all parties concerned. Many of the cheesemakers in Western Ontario have signed agreements that they will not be responsible for losses sustained unless such losses are the result of their own neglect. These rules go into operation next season. If patrons put alkaline into the milk to prevent souring, the makers will find trouble when applying the rennet. This alkaline condition may sometimes be caused by certain foods the cows consume.

Experiments were made last year with rennet powder instead of rennet extract. The powder is much more compact, and will probably take the place of the extract. Cheesemakers find difficulty of controlling the temperature in the curing-room. Cheese cured at a temperature of 50° or 65° are better in texture and flavor than cheese cured

at from 70° to 75°. The former will also command a higher price. Makers allow the temperature to run up in summer to 75° and more, thus allowing the butter-fat to escape from the cheese. A submerged duct and the use of ice regulate the temperature in summer. If cheese buyers and cheese sellers would deal honestly a good deal of trouble would be eliminated.

Makers meet with difficulty in cheese-making. Sometimes the cheese will be mottled, but the flavor will be bad. There are two kinds of coloring on the market, a mineral coloring and a vegetable coloring; either coloring will make no difference in the mottling of cheese. It would be better if no coloring were used in cheese. If people understood the coloring of cheese they would not want it. He believed there was a connection between the whey tank and mottled cheese. Patrons conveyed home whey in their cans, neglecting to thoroughly clean the latter before again using them as a receptacle for milk. When mottled cheese are found in the curing-room the whole room should be thoroughly disinfected. He hoped the time would come when the eastern and western dairying districts of Ontario would unite in their own good. Dr. Connell argued that mottled cheese is caused by bacterial infection, due in some cases to the whey tank.

### FEED AND MANAGEMENT OF THE DAIRY COW.

Prof. J. H. Grisdale, of Ames, Iowa, took up this subject. There were several reasons for adopting fall calving. There was more time to attend to the animals, and in the spring the calves were old enough to graze on the new grass. Alternately sweet and sour milk fed to calves will kill them. Cows should take on the responsibilities of maternity when they are two years old. It is easier then to determine the value of the animal. To end the period of lactation, just stop milking. Care, however, should be exercised to see that the udder does not cake. Over twenty-five pounds of dry matter is required for the average cow. To give a cow all she can eat will not ensure a good yield of milk. To produce health a succulent food of some kind must be used. Chopped oats and peas form a good concentrate to feed. Bran is rich in milk-forming properties. There is another value in food stuffs—their manurial value. Let variety also be shown in feeding. Animals should be protected from extreme heat and from flies. A large supply of water will result in a large supply of milk. Cows should be watered inside, for then they will have time to drink. Warmth is most essential to dairy cattle. He contended that reasonable exercise was not only good but necessary. It kept the cattle in healthy condition, and whatever did this helped to increase the milk yield. In the discussion which followed it was generally agreed that cows are better to be kept inside during stormy and cold weather.

### FLOWERS AND WEEDS.

These were taken up by Dr. Fletcher of the Central Experiment Farm, Ottawa, in his interesting and convincing style in two addresses. He dealt with flowers, chiefly in relation to the domestic life of the farmer. The existence of the agriculturist could be made more beautiful by giving him beautiful and artistic surroundings. Flowers were cultivated for their color, for their perfume, and for their foliage. After dwelling for some time on these qualities he pointed out very clearly that the prime requisites in the cultivation of flowers was good soil, good air, and plenty of light. He warned his hearers against using soil of too great richness, which was not healthy for plants any more than a continuous diet of plum pudding was good for the farmer's boy.

Weeds, he said, were better able to take care of themselves than other farm products, and the assent which greeted this utterance showed that the members of the association were fully alive to its truth. Continuing, he said that by weeds being permitted to grow on farms two crops were being produced where only one was required. Dirty seeds were one of the causes of weeds. The saving

of two cents a pound in buying seeds caused hundreds of dollars' worth of damage. Some careful farmers brought their own feed for their horses when they came to market, and by so doing avoided giving the animals deteriorated food and the resultant breeding of weeds from the manure. By the importation of clover fodder, weeds were apt to be introduced on the farm. There were, he proceeded, about fifty obnoxious weeds. Wild rose was the one that was annoying the farmers in Manitoba. In this locality the weeds that troubled the farmer most were the Canada thistle, ox-eyed daisy and quack grass. By ploughing shallow—not more than four inches deep—quack grass would be eradicated. Weeds should be divided into one year, two year and many year plants, and further distinguished as long root and shallow root plants. For annual plants there was only one treatment, and that was to put in a crop that would be cut before the weed seeded. Seeds must be fresh in order to grow, and weeds are no exception to the rule. To clean the grounds of weeds was not only to take out the weeds but to remove the seeds which were in the ground. Time must be taken, and the farmer must persist in the work of killing the weeds as they come up. They should be fought when young. It was all rubbish to imagine that ploughing in weeds would fertilize the ground. The penny-cress or stink-weed was an obnoxious weed in Manitoba, and the farmers were ploughing down the good crops to kill it. A weeder or fall harrowing would do it well.

The perennial plants were more difficult to handle. It was important to find out whether the weed was of deep or shallow root growth. It has been said that leaves were the lungs of a plant. While this was true, it should be remarked that they were also the stomach of the plant, because, while the leaves did breathe in gases the object was to secure nourishment for themselves. Cutting the stems was not sufficient. In the autumn there was a second growth which must be attended to. The devil's paint brush was destructive to pasture. Salt at the ratio of a ton and a half per acre was the remedy. During the past ten years fruit trees had been sprayed, and the fruit growers were saving 85 per cent. of what had been lost hitherto.

Prof. Robertson, Agricultural and Dairy Commissioner, Ottawa, delivered several practical addresses of interest to farmers and dairymen on the following topics:

#### FARMING AS AN OCCUPATION.

Canada was essentially an agricultural country. Of its people forty-five per cent. were engaged in agriculture and the progress of the country depended on its farmers. After instituting a comparison between the farming population and the value of their productions and all the other industries of the Dominion he said that the more he learned of the character, extent and availability of the agricultural resources of Canada the greater was his confidence that material prosperity would abound in this favored land. He emphasized the fact that the basis of prosperity and the means for attaining and maintaining it were not so much rich soil as intelligence, industry, skill, frugality, fairness, tenacity and untiring energy on the part of the people. He dwelt on the aid which the farmer had in the way of machinery, and pointed out that his own industrial life should parallel the progress made in this respect. He referred to the vulgar corruption of education and very strongly emphasized the fact that true education meant not the cultivation of theories but the ability to employ all the faculties of the mind in the best and most direct way.

#### THE STABILITY OF THE CANADIAN CHEESE TRADE.

About twelve years ago, he said, Canadians had adopted a systematic plan of cheesemaking, thus producing a uniform quality, which found favor in the British market. Of late, however, the taste of English consumers had changed, and the demand now was for a very insipid, mild-flavored cheese. It was necessary to cater to this taste if the market was to be retained, and unless Canadian makers cured their cheese at a low temperature their trade would

decrease. The curing-room, he said, ought to be kept at 61 or 62 degrees. A warm curing-room would make the cheese strong. If a curing-room went up to 90 degrees there would be awakened in the cheese dormant life, which could not be killed. Some makers had one stove in the curing room, and the result was that the cheese near the stove was roasted, while the temperature at a distance from the stove was allowed to go down to fifty or forty degrees. Improvement in the curing room was needed, and a uniform temperature should be maintained. Double doors and windows should be put on and kept on all summer. The walls and floor should be made light and close by two thicknesses of building paper and one thickness of tongued and grooved lumber. A building should cost from \$125 to \$200 inclusive of the ice house and curing duct. An old curing room should be washed with lime to kill the fungus growth. A curing-room in the cellar, properly ventilated, would make a good curing-room, and the cheese would not sweat.

#### THE REARING AND FATTENING OF SWINE BY DAIRYMEN.

All breeds of pigs, he said, could be kept with profit by the dairymen. He then entered on the proper methods to be followed in looking after them. He pointed out that the floor must be of wood, and not of cement or stone, the walls should be of wood or cement. Pigs were sensitive to cold and exposure and should be protected both in and out of doors. The pen in which they were housed should be clean, warm and well-lined and absolutely free from draughts. He impressed his hearers with the falseness of the old superstition that hogs were filthy in their habits. The fact was they were cleanly, and if the owner of these animals would see to it that the pen was kept clean for a few days the hog would after that keep it clean himself. He advised giving the hog during the winter a sod every day to chew. These sods could be cut in the fall and allowed to dry. The food should never be decayed and the pigs should never be overfed.

#### BACTERIAL INFECTION OF MILK.

This subject was discussed by Dr. W. T. Connell, Bacteriologist of the Kingston Dairy School.

Milk and its products, butter and cheese, he said, afforded excellent food material for the growth and rapid multiplication of those species of microscopic plants which were termed bacteria germs or microbes. If we examined milk some hours after milking there would be found large numbers of bacteria as a fairly constant factor. Further, it was a fact that in and about dairies and factories certain species of bacteria were found to flourish abundantly. If the cows, the milk sheds and the factory were well and cleanly kept, then only those species of bacteria which were commonly associated with milk, and which induced those processes which were looked at as natural, such as acid production and souring in milk, obtained a foothold. If, however, the reverse was the case, and little care was taken to keep the milk free from filth, dust or hairs during milking, or if the milk was kept in a place exposed to stable, yard or road dust, or if it was made at a factory which in itself or its utensils and surroundings were not cleanly kept, then it was usually found that the species normally present would have to enter into competition with those bacterial forms which flourished in such filth or dust. Dr. Connell emphasized the fact that the most common cause of trouble which the cheesemaker had to contend with was bacterial infection, which had its most common and constant habitation in the excreta of animals and in fowls and in dusts which contained decided particles of such excreta as was found in stable and road dust. From this source came mainly such conditions as bad or "off" flavored and grassy milk.

#### HON. SYDNEY FISHER

Delivered an address of interest to dairymen. He referred to the dairymen as the most skilful and intelligent agriculturists in the country. While in the Old Country last

summer he was very much struck with the favor shown to Canadian products. Canadians should take advantage of this sentiment, and put the very best products on the market. The butter placed upon the British market during the past season had been larger in quantity and better in quality than ever before, which he attributed largely to improved methods of cold storage. The success of the past has been obtained through excellence, and with excellence in our products we could command the British market.

#### CHEESE MAKING.

Mr. T. J. Dillon, of Prince Edward Island, gave some very practical points in reference to cheese-making. The man in charge of the factory should be paid a good salary. If he were the right man, a person in his position was worth the highest salary, and if not the right man he was worth less than nothing. On the manager depended the success of the whole institution; his judgment had to be sound, and, therefore, well and carefully trained.

J. W. Hart, Superintendent Kingston Dairy School, and several others delivered interesting and profitable addresses. The city of Kingston and the county of Frontenac tendered the dairymen a complimentary banquet, which was a notable function.

#### OFFICERS FOR 1899.

President—D. Derbyshire, Brockville; Vice-Presidents—J. McTavish, Vancamp; I. I. Gallagher, Harrowsmith; Directors—E. Kidd, North Gower; W. Eager, Morrisburg; J. R. Dargavel, Elgin, James Whitton, Wellman's Corners; T. B. Carlow, Warkworth, Henry Wade, Toronto; Auditors—M. Baird, Sterling; F. Benton, Belleville.

### American Poultry Association

The twenty-third annual meeting of this important organization convened in the annex to the Pavilion on the opening day of the Poultry Show. There was a good attendance of members, considering that the meeting was held here. Mr. I. K. Felch, of Massachusetts, opened the meeting and delivered a lengthy address on the work of the organization during the past year. He referred to the standards and discussed some fine points in the judging of white Leghorns. A high standard should be maintained. He thought that judging poultry by use of the score card would do good and would be of great assistance to beginners. At the close of his address, the president asked Vice President Pierce, of New Hampshire, to take charge of the meeting.

The secretary-treasurer, Mr. Theodore Sternberg, of Kansas, was not present, having been commissioned for service in Manila. Mr. A. E. Felch had taken his place temporarily and presented a report for the time during which he had charge.

The election of officers resulted in the selection of Mr. Allen Bogue, London, Ont., as president for 1899. In electing to so high an office a Canadian, the visitors showed their high appreciation of the hospitality they had received at Toronto. Mr. H. A. Bridge, Columbus, Ohio, was elected secretary-treasurer for the ensuing year.

### Ontario Poultry Association

The annual meeting of this association took place on January 12th. There was a very large attendance, the portion of the annex partitioned off for meetings being full to overflowing with excited and energetic breeders of the "fancy." In fact, so enthusiastic were they in regard to the business in hand that from 2 p.m. till 5.30 p.m. the "crowing" rooster and the "quacking" duck were completely outclassed in their business of entertaining the visitors to a "babble" of noises. It was decided at the opening that all routine business, such as choosing the place for next meeting and the election of officers, should be transacted before any essays or addresses were delivered.

This would have been a wise decision under ordinary circumstances, but where so much bickering and time-wasting resulted, as was the case in the present instance, it was very disappointing that a whole afternoon should have passed by without the members being afforded the privilege of hearing such well known speakers as Professors Robertson and Gilbert, of Ottawa, who were present, and also to discuss the several papers especially prepared for the meeting. It seems that this trouble and unrest, which has been brewing for some time among certain members of the association, came to the boiling point, and all that we can hope is that a sufficient amount of it boiled over to clear the atmosphere before the next annual gathering takes place.

The meeting was opened by Dr. A. W. Bell, Toronto, president of the association, who, in his opening address, made special reference to the great inequality in the amount of prize money given in the different classes. For example, there were 98 birds shown in the Poland classes, and the amount of prize money given was \$98, while in the Barred Plymouth Rock section there were 171 birds shown, and the amount of the prize money given was only \$15.

There was considerable strife in deciding the place for the next annual meeting. Representatives from Owen Sound and Peterboro contended for the coveted show. On a ballot being taken Peterboro secured the more votes, and the selection was made unanimous. Considerable time was wasted in electing the officers, some contending that they should be elected in one way and some another. The officers finally selected are as follows:

President, J. R. Stratton, M.P.P., Peterboro.

1st Vice-President, Allen Bogue, London.

2nd Vice-President, M. T. Burn, Tilsonburg.

Directors—D. C. True, Lindsay; Dr. Bell, Toronto; T. J. Senior, Hamilton; Dr. Hutton, Welland; T. H. Scott, St. Thomas; Thomas Brown, Durham; Wm. McNeil, London; Jno. W. Kidwell, Petrolia, and W. J. Bell, Angus. Auditor, H. B. Donovan, Toronto. The following are the representatives to the leading fairs: Industrial, R. Durston and Wm. Barber; Western, J. H. Saunders and Jas. McCormick; Hamilton, J. Cole and Wm. Dickenson; Brantford, T. A. Cox and Wm. Colwell.

The use of score cards in judging was discussed, and a motion made that the association go back to this old method, which was, however, defeated. Considerable discussion took place on that part of the president's address referring to the distribution of the prize money. Many members expressed themselves as being in favor of some change in this respect and of equalizing the awards in conformity with the number of entries and the extent of the breed. A resolution was passed requesting that the matter be taken up at their next meeting by the directors.

Some very valuable cups were given by the American Poultry Association for the best eight birds in any section shown by one exhibitor. There was considerable rivalry for these. Through some misunderstanding, in which the Ontario Association was in no way to blame, it was advertised that these cups would be open to competition by Canadians, and many of our exhibitors made special preparation for it, and found when the awards were made that only members of the American Poultry Association could compete for them.

On Thursday evening the poultrymen were entertained to a banquet in St. George's Hall by the Toronto Poultry Association. Mr. Charles Bonnick presided, and a really enjoyable time was spent. Instructive addresses were delivered by Mr. I. K. Felch, Prof. Robertson and C. C. James, Deputy Minister of Agriculture. The banqueters were favored by the presence of Mrs. Ethel Comyns-Lewer, proprietor of the *Feathered World*, of London, England.

#### AN EXCELLENT PAPER.

Mr. A. J. McNeil, of Ormstown, Que., says, "I enclose in this letter \$2 for FARMING, as I did not send my subscription for '98 so I send it now for that year and '99 also. I must give you credit; for FARMING is an excellent paper and well worth \$1 a year. Wishing you success and a Happy New Year."

## Jubilee Poultry Show

The twenty-fifth annual exhibition of the Ontario Poultry Association, which took place at the Pavilion, Toronto, last week, was one of the best poultry shows ever held in Canada, if not on the continent. In several respects, at least, it was ahead of the great New York and Boston shows of last year. These shows had a larger total entry, but a large share of the entries was made up of fancy stock, such as pheasants, pigeons, etc., and they do not come up to Toronto in the number of fowls shown. At the Jubilee Show last week there were 2,169 entries of fowls proper, while at Boston and New York in 1898 there were only 1,819 and 1,668 entries, respectively, of fowls, showing that, as a utility show, Toronto was far ahead of either of the two great American exhibitions. This fact must be very gratifying to the management and those who have worked so hard to make the show a success.

There were two things demonstrated at the show this year that are worth noting. The charge has been made in the past that the poultry show was a place where poultry fanciers, or breeders of what are known as the purely fancy breeds, held sway and carried off the bulk of the prize money, but no such charge could be made this year. There was really a splendid exhibit of what are known as the utility breeds, or farmers' fowls. In fact, leaving out the bantams, the large utility breeds were out in much larger numbers than the fancy breeds such as Polands, Hamburgs, etc., thus demonstrating that the former are becoming more popular in the country. Another thing that was clearly demonstrated was that Canadian poultry can successfully compete with the poultry from the United States. Owing to the annual meeting of the American Poultry Association being held here there was a large number of American birds entered for the show. In some of the sections there was the keenest kind of competition between breeders from both countries, but, as the prize list will show, Canada a great deal more than held her own. In the Barred Plymouth Rock class 171 birds were shown, and fully two-thirds of these were from the United States; but the four first prizes were divided equally between breeders from the two countries. In nearly all the other sections in which Americans competed the larger number of the prizes came to Canadians. This is the more striking when it is known that about all the judges were Americans. As a rule the Americans excel in the Asiatic breeds of fowl, with the exception, perhaps, of the Buff Cochins, of which it would be difficult to have found a more excellent exhibit than was shown in the Pavilion last week.

The attendance at the show was good, a great many ladies visiting the show for the purpose of seeing the old maid's favorite pet, "the cat." There were white cats, black cats, grey cats, brown cats, yellow cats, small cats, medium cats, large cats, cats with whiskers and cats with claws; in fact, about every variety of the feline tribe was to be seen in the little upstairs room in which they were domiciled. The splendid exhibits of pheasants, rabbits, pigeons, etc., also attracted a great many visitors. The farmers turned out in pretty good force considering everything, though we are sorry that many more of them did not avail themselves of this splendid opportunity of seeing the finest exhibition of poultry ever shown in Canada. The building in which the show was held was everything that could be desired, and, though every part of the Pavilion was filled with coops of all kinds, yet they were so arranged that visitors could see the show without any difficulty. The entire building was thoroughly disinfected three or four times a day, by The Pickhardt Renfrew Co., Stouffville, Ont., with their disinfectants, and the air throughout was as pure and wholesome as one could desire, and it was almost impossible to detect any "fowl" smell except, perhaps, inside the coops.

It is not our purpose to give a detailed report of the show, as space would not permit. Altogether there were over 2500 entries. All the leading breeds were well represented, and in most of the classes, especially the utility breeds, there was the keenest kind of competition, so that honors won were well earned. All judging was done by comparison, and where an exhibitor wished his bird scored he had to pay ten cents extra. Many, especially beginners, had this done for the purpose of learning the good and bad points in their birds.

*Asiatics.*—These were out in good force. In the Brahmas there were 57 light and 14 dark birds shown. The light ones were a specially fine lot. T. A. Cox, Brantford, was the winner of first for cockerel and hen in this class and T. G. Hilton, Welland, first for pullet and hen. The exhibit of Cochins was made up of 15 partridge, 50 buff, 17 black and 18 white Cochins and was a very creditable one. The show of Buff Cochins was considered by many American visitors to be one of the very best exhibits they had ever seen. Dr. A. W. Bell, Toronto, President of the Ontario Association, was a large

exhibitor in this class. The Langshans made a very good show, 51 birds of the black variety were shown and 14 of other variety.

*American.*—This was the largest section in the fowl class at the show, there being 531 birds in all. The different varieties of Wyandottes were well represented. There were 209 birds in all, the whites being out in the largest numbers, there being 78 of this variety alone. Some excellent birds of each variety were shown and prizes were not easily won. There were 12 Dominiques shown. These are a comparatively new bird and in appearance very much like the Barred Rocks. About forty Javas were shown of which 27 of them were blacks. W. R. Knight, Bowmanville, and R. Oke, London, were the principal winners in this class. The exhibit of Plymouth Rocks was one of the largest and best ever seen at a Canadian show; the exhibit of Barred Rocks being particularly fine. There were 270 Rocks shown, of which 171 were Barred, 63 White and 36 Buff. The competition in Barred Rocks was exceedingly keen, the Americans having fully two-thirds of the exhibits they carried off the bulk of the prizes. However, the first for cockerel went to Geo. W. Miller, London, Ont., and the first for hen to Jas. McCormick & Sons, Rockton, Ont. In White Rocks, where Americans had about one-third of the birds, they only won one first, two thirds, and two fourths. They also had about one-third of the exhibits in the Buff Rocks.

*Mediterranean.*—This section was well represented, there being 230 birds in the Leghorn varieties shown while White Leghorns made a very fine show. There were 68 Minorcas shown. In White Minorcas all the first prizes went to an American exhibitor. There were very good exhibits of Andalusians and Spanish. Newton Cosh, Brantford, was the chief winner in the former classes.

*Hamburgs*—and other more or less fancy varieties were well represented, some of the chief exhibitors and winners being Wm. McNeil, Rich. Oke and Allan Bogue, London. A very interesting exhibit was that of the "silkie." These fowls are rather small in size and have white feathers that look like fur. The flesh, blood and bones are said to be black.

*Turkeys, Geese and Ducks.*—These made a very fine exhibit. There were 67 turkeys shown, 31 of which were of the Bronze variety. W. H. Beattie, Wilton Grove, Ont., was the principal winner in this section. Mr. James Ford, Drumquin, won 1st for tom 2 years and upwards and on 1898 tom. In white and black turkeys W. H. Beattie was again the principal winner. There were 45 geese shown, with some very fine specimens among them. In ducks there were 78 birds entered and competition was keen. J. McCormack & Son was one of the chief exhibitors in this class. W. J. Bell, Angus, also made a good display of bronze turkeys, winning several prizes.

*Dressed Poultry and Eggs.*—The exhibit of dressed poultry was not large. Only 23 birds were shown and the quality was only fair. There were only 3 entries of eggs.

There was a large display of poultry supplies. John S. Pearce & Co., London, made a very fine display of their poultry tonic, poultry foods, bone cutters, etc. They also showed "The Best" incubator. J. E. Meyer, Kossuth, Ont., had on exhibition an incubator. The "Cyprus" incubator was also present and was in active operation hatching out young chicks. T. A. Willetts, was also present with his "Toronto" incubator. The display in this line was specially good throughout. The Pickhardt & Renfrew Co. had a large display of their insect powders, liquids and other disinfectants. Brock's bird seeds also made a nice display.

## Women at Institute Meetings

Mr. T. C. Wallace, Toronto, who has addressed Farmers' Institute meetings at Bolton, Caledon East, Inglewood, Brampton, Walton and Islington since the first of the year, reports a good attendance and splendid interest in the gatherings. One thing he regrets is that the ladies do not attend these meetings as they should. At the places named there were ladies present at only two meetings. Their presence at every meeting adds greatly to the interest, and even the speakers cannot do so well when their inspiring presence is not there. At Islington there was a good attendance of ladies at the evening meeting, and the proceedings were interspersed by music by the Glee Choir, a pleasing innovation that cannot be had where no ladies are present.

## QUESTIONS AND ANSWERS.

## THE VALUE OF BUTTER FAT.

To the Editor of FARMING:

I desire to ask you a few questions, which are a source of trouble to me, and, perhaps, to some of your other readers as well.

(1) How are pure fats, such as butter-fat, assimilated or digested?

(2) What are the relative values of butter-fat and casein as structure nourishment, or is fat capable of repairing or building up vital structures?

(3) Has butter-fat any greater food value than lard, fish oil, linseed oil, or any other animal or vegetable oil?

(4) Is it reasonable to suppose that the milk best suited to human consumption is that which approximates woman's milk in its composition (3.94 per cent. fat, according to the average of a large number of tests)?

(5) If fat alone gives commercial value to milk, why not feed infants, motherless lambs and calves on cream instead of milk?

Thanking you in advance,

I am, very truly yours,

W. A. C.

St. George, Dec. 26, 1898.

Answered by Professor A. E. Shuttleworth, Ontario Agricultural College, Guelph.

(1) During what is known as intestinal digestion by the action of the bile, which has the power of mechanically separating the fat into minute globules, which are readily taken up by the intestines.

(2) Casein can produce flesh, but fat cannot: therefore, upon this basis, fat and casein cannot be compared. Upon the basis of heat production, which may be taken as a means of comparison, casein is to fat as 1:2.14.

(3) A quantity of pure butter-fat has no greater heat-producing power than the same quantity of pure fat from other sources.

(4) Such milk is best suited for the nourishment of infants, but not necessarily for grown people.

(5) Fat alone is sometimes taken as the measure of the commercial value of milk, not because it is the only nutrient in milk, but because it is regarded as an accurate basis for the valuation of the butter or cheese-producing capacity or power of milk. Cream would cause serious disorder of the digestive system.

## MAMMOTH CLUSTER OATS.

Bouck's Hill, Ont., Dec. 26, '98.

Mr. J. A. McDonald:

MY DEAR SIR,—I see by reading (FARMING) that you speak of a new variety of oats (Plymouth Cluster) that a farmer in your county is sowing, which yields somewhat extra. Now, sir, will you be kind enough to give me his address, or what part of New York State that he got his seed; also the man's name that he bought his first seed from, and oblige

E.M.

I would say to E.M., as well as to other readers of FARMING, that I was slightly in error in naming the new



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**Famous Coiled Spring Page.**

It isn't like any other on earth—it's better. It was the first and it is still the foremost woven wire fence. For the truth about its uses and quality, address

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**The Original Non-Poisonous Fluid Dip.**

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

**FOR SHEEP**

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Prevents the attack of Warble Fly.

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

**No Danger, Safe, Cheap, and Effective.**

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

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and exposure is at hand. You don't want to lose your youngsters. With **Spratt's new-style Condition Tablets and Distemper Cure** you are safe. Send for full list of modernized medicines to Spratt's Patent, 239 to 245 East 56th St., New York. Manufacturers of all kinds of Dog and Poultry Supplies.

This month we draw attention to the following items of our big list of Poultry Supplies:—Ground Beef for winter feed, Cardiac (a tonic powder), Chick Meal for early youngsters. With the three above mentioned in stock you lose no birds.

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**A SMART PUBLICATION**

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

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Snoose, N.B.

variety of black oats, which yielded so abundantly the past season with a farmer in this county (page 256). The name of the oats is not Plymouth Cluster, but Mammoth Cluster. I may say that the farmer spoken of, who grew 650 bushels last season from 32 bushels sown, has not, I understand, any for sale, having sold every bushel for seed purposes at 50c. a bushel soon after threshing it. As far as I know the seed was originally obtained from the Leclair Seed Co., Brighton (near Rochester), N.Y. I had myself received a small packet of these oats from the above party two years ago. As the packet contained but about 100 seeds I never sowed them (I wish now I had). The quality of the sample was, of course, not as good as that grown in this province, the conditions being more favorable here for the growth of black oats than at Rochester. If the party in this county who grew the big crop of Mammoth Cluster oats has any yet to spare, and possibly some of his neighbors have a few, too, he or they should place a small ad. in FARMING stating the fact; as I have no particular desire to make sales for them. Farmers fail to grasp the idea that the ad. columns of an agricultural paper are primarily intended to be used for the sale of the farmer's products.

J. A. MACDONALD.

ABORTION.

Editor of FARMING:

Toronto, Ont.

DEAR SIR,—Would you please let me know through the columns of your valuable paper the cause of abortion in cattle? I have a herd of seventeen cows and five of them have already lost their calves from one to two months before their time. I had one do the same last winter, and several neighbors are having the same trouble both last winter and this. I think it must be some contagious disease. If so, can you tell me the causes of the disease, and also if there is any prevention or remedy for it? It seems to be followed quite often by inflammation of the womb. Awaiting your reply, I am,

Yours truly,  
Jos. W. HUTCHINSON.

There are several causes for abortion in cattle. It may be caused by excitement of any kind, such as the

**GIVEN AWAY!** We ask not a cent of your money.

Simply send your name and address, and we mail you a shipment of the best wicks in the world, absolutely free of charge. Also our complete prize list of articles given for selling them. A few only are shown here. We have also Manture Sets, Sterling Silver Jewellery, Pure Gold Rings, Chains and Bracelets, Fountain Pens, Tool Sets, Magic Lanterns, Motors, Musical Instruments, etc., etc. Cash Commission if Preferred. You sell the wicks, return our money, and we forward your prizes, all charges paid by us.

**OURS IS THE PERFECT WICK** Its light is like the incandescent, steady, clear, strong and steady. No more sputtering, clogging and bad odor. It makes reading and needlework a pleasure. All we need is to have it introduced, and we can well afford to make the most generous offers to get agents. Lose no time. Order at once. You run no risk. Unsold Wicks are returnable. When writing mention this paper and the prize you want.

**The Whitelight Wick Co., Toronto.**

Free, with 100 Rounds of Ammunition, for selling 2 1/2 Doz.

Free, with Chain and Charm, for selling 2 doz.

Free, with Camera complete, for selling 5 doz.

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Free, with Battery for selling 2 doz.

Free, with screws, for selling 2 doz. Also Lathe, Borer, Best Spring Stairs, Free, with Straps, for selling 2 doz.

Free, with Chain and Charm, for selling 2 doz.

With every watch we send a Written Guarantee to repair or replace. Good for one year.

Extract from Annual Report for 1897

of the Consulting Chemist of the ROYAL AGRICULTURAL SOCIETY OF ENGLAND, published in their Journal, 31st December, 1897, page 732:

"It has been necessary to call attention to the fact that under the name of 'slag,' and sometimes even under that of 'basic slag,' have been sold refuse materials of a very different character, and having little or no manurial value. These have not been the product of the now well known 'Basic' or THOMAS process of iron or steel-making, and have contained little or no phosphoric acid such as basic phosphate has. In several instances the purchasers believed that they were buying the true basic slag. It behoves one, therefore, to be careful to stipulate for THOMAS-PHOSPHATE, and to have a guarantee of phosphoric acid contained, and of fineness of division."

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sold in Canada; and to be sure of genuine material, see that the bags have our name and address.

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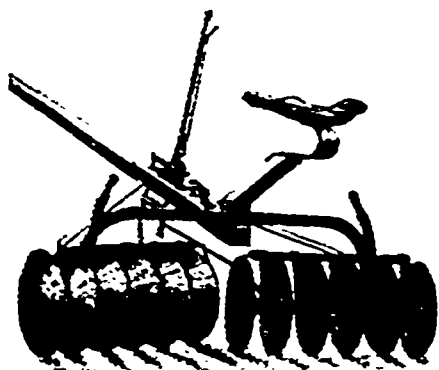
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smelling of blood or carrion, or the sight of another animal having aborted acting upon the nervous system. Abortion may also be caused by diseases of many kinds, more especially diseases of the digestive organs, which may produce abortion in all animals. Abortion is often caused by impure feeds and ergotism in grasses. Sometimes where cows are pastured or fed on wild grasses grown in swamps and low places abortion may result. Then there is a form of abortion in cattle which is contagious, and it is altogether probable that the cases mentioned above may be of contagious form, as so many of the herd have been affected by it. Occasionally the bull's influence may have something to do with abortion.

In the present case we would strongly advise calling in a reliable veterinary surgeon and the following of his advice. In the meantime all pregnant animals should be separated from all aborted animals. Destroy all foetal membranes and all discharges, as there is a danger of these containing the contagious virus which causes the disease.

### Stock Notes

The thirteenth annual meeting of the Stockholders of the Standard Poland-China Record Association will be held in Maryville, Missouri, on Wednesday, February 1st, 1899. Volume XIII. of the Herd Book closes on February 1st. Secretary, Geo. F. Woodworth, Maryville, Mo.

MR. NORMAN M. BLAIN, of St. George, Ont. writes: "I have on hand the best lot of brood sows I have ever owned, and the young stock are in strong, healthy condition, and find that the Tams are making a steady progress. Some of my recent sales are: Boar, Mr. Laurence, Princeton; boar, John Dalzell, Bright; boar, John McQueen, Kirkwall; sow, Charles Pogson, Plattsville; pair, A. E. Westbrook, Newport."

MR. L. ROGERS, of Cooksville, whose advertisement appears in this issue, encloses the following letter received by him from Mr. A. Gilmore, of Athelstan, Que.: "I am exceedingly well pleased with the sow, as I consider her a model of the breed. When I require any more I will surely give you the preference. I have bought a great many, but never got as good a sow before." Mr. Rogers reports his young stock doing well. Fall pigs made an average of a pound per day from birth.

MESSEURS. GRIFFITHS & MCPHERSON, of 121 Church Street, Toronto, have been receiving numerous testimonials from Canadian horsemen and stock breeders to the efficacy of their Menthol Liniment as an unequalled remedy for horses and cattle. For sprains, strains, curbs, sore throat, coughs, windgalls, rheumatism, overreaches, and other ailments requiring external treatment, the opinion seems to be that it is superior to any other liniment they have ever tried. As it is equally as good for human ailments of a similar character, and contains no poisons or irritants, and can be used internally as well as externally, it should be in every house. It is a medicine chest in itself. Send for circular giving full information.

## Style and Stamina

Cannot be expected in a horse which is "run down,"—"out of sorts" through impoverishment of the blood—but build him up with Dick's Blood Purifier and he has both. It destroys all the impurities in his system and fortifies it.

He feels good and his spirit is high. It aids digestion—gives gloss to his coat—brightness to his eye—vim to his action. It will double his usefulness and value.

50 CENTS A PACKAGE. TRIAL SIZE 25 CENTS.

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## Thorncliffe Stock Farm.

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



599

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

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

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



ROB. DAVIES, PROP. TORONTO, CANADA

### Publishers' Desk.

With Us Again.—We have a great deal of pleasure in again calling attention to the advertisement of E. R. Ulrich & Sons, of Springfield, Ill., who are advertising their celebrated Ensiling Corn, so long and favorably known in all parts of America.

**Safes for Cheese Factories.**—Mr. S. S. Kimball, of Montreal, Que., has sold a number of safes to the proprietors of cheese factories and creameries through his advertisement in FARMING, and we are informed that in every case they have proved entirely satisfactory. We can recommend Mr. Kimball to any one desiring a safe, as he has proved himself to be reliable by many years of straight and honorable dealing with the farmers and business men of the Dominion.

**A Calendar That Stays.**—The calendar crop is never short, as the post office people will testify. We always get our share, and begin the new year with a great assortment, but the one we select "for keeps" is that of N. W. Ayer & Son, the keeping-everlastingly-at-it advertising men of Philadelphia. This one spends the whole year in our company. It is a piece of fine printing, but its good looks do not constitute its sole charm. It is clear and plain. Utility has been put first. He who seeks the date can find; he who writes may read. The matter can interest more people every year, but the edition is limited. While they last a copy can be obtained postpaid by sending 25 cents to the publishers.

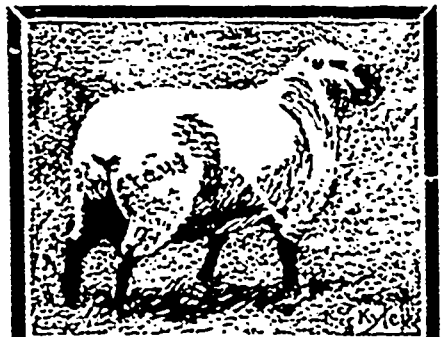
**Disk Harrows and Land Rollers.**—Making a special line and doing it better than anyone else is the course pursued by T. E. Bissell in the manufacture of his Disk Harrows and Steel Drum Land Rollers. Mr. Bissell has been connected

Trade  
Mark  
Reg'd



### LUMP JAW NOW CURABLE.

Safely, quickly and for good. FLEMING BROS., Chemists, St. George, Ont., have a remedy that quickly cures the most obstinate cases. Supplied by mail under a positive guarantee. Price, \$3.00. Valuable information and full particulars FILED.



### Persicatic Sheep and Animal Wash

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

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

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

The Renfrew Co.  
(LIMITED)  
STOUFFVILLE, ONT.



with the making of these special machines since 1887, and during the intervening period has devoted his whole attention to this line of business. Like all farm machinery, Disk Harrows have greatly improved in construction during the past ten years. Few Canadian manufacturers are as familiar with the history of these machines and the improvements added to them from time to time as Mr. Bissell. His long experience gives him an advantage possessed by few competitors. His workmen are also experts in the making of these goods, some of his most trusted employees having had fifteen, and some even twenty, years' experience. This rapidly extending business is an evidence of what experience and concentration of effort along a special line will accomplish

**Pearce's Special Prizes.**—The prizes offered by Messrs. John S. Pearce & Co., of London, Ont., in ten classes of poultry at the Ontario Poultry Show were won by the following: C. A. Stewart in Asiatics, Wray Bros. in American, Henderson & Billings in Mediterranean, R. Oke in bantams, W. McNeil in Hamburgs, A. Bogue in Polands, W. McNeil in "any other variety of fowls," R. Oke in French, A. Bogue in English, and W. Barber & Co. in games. The exhibit of poultry supplies, incubators and brooders and poultry foods made by this company attracted more attention than any other exhibit in the building. And when we say that a very large number of orders were placed we scarcely convey an idea of the large amount of business done. There can be no doubt about the popularity of the company's goods.

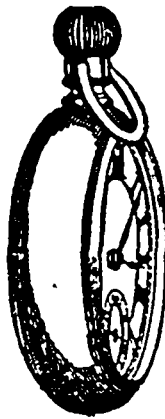
**A Combined Poultry and Animal Show.**—The exhibit of the Ontario Poultry Association held at the Pavilion, in the Horticultural Gardens, Toronto, last week, attracted widespread interest and attention. Both the American Poultry Association and the Toronto Poultry, Pigeon and Pet Stock Association met at the same time, making the most complete poultry and pet animal show ever held in Canada. The management took unusual care in their arrangement for the live stock, and officially appointed the well-known firm of Messrs. Pickhardt-Renfrew Co. Limited, of Stouffville, Ont., to disinfect the huge building with their Parisian Hen House Spray and Poultry Powder. This official recognition of the high qualities of this sterling preparation is an endorsement not to be lightly overlooked by farmers and fanciers. It acts both as a disinfectant and insecticide, destroying vermin and purifying the atmosphere of disease germs and gases, consequent upon the close confinement of fowls or animals. Can be purchased at all dealers.

**BOOKS AND BULLETINS RECEIVED.**

"Biggle Swine Book." A handsomely gotten-up treatise on the feeding, breeding, rearing, and marketing of swine. It is edited by Judge Jacob Biggle, a person of wide experience in swine rearing. The edition is profusely illustrated with photographs of the leading breeds of swine, together with models of piggeries, etc. There are forty half-tone engravings and forty other helpful illustrations. It is published by the Wilmer Atkinson Co., Philadelphia, and sells for 50 cents.

"Bulletin LXVI. Ontario Bureau of Industries." Containing valuable statistics relating to the various branches of agriculture carried on in the province, including a table showing the world's wheat crop for the past eight years.

**FREE! For a Few Hours' Work.**



We give these beautiful Premiums for selling our gold-topped, enamel-backed LEVER COLLAR BUTTONS at 10 cts. each. **NO MONEY REQUIRED.** you run no risk. Write and we forward the buttons, postpaid, and our prize list, which contains many articles besides those shown here, such as Magic Lanterns, Tool Sets, Work Boxes, Manicure Sets, Motors, Printing Presses, Fountain Pens, Sterling Silver and Gold Jewelry, etc., etc. Sell the Buttons, return our money, and we send our premiums promptly and **FREE OF ALL CHARGES.** Liberal Commission if Preferred. Our Buy's Watch is of American make, handsome, durable and reliable. Our Lady's Watch is a little gem, Swiss made, dainty and accurate. The Datsu Air Rifle and Boker's Skates With 5 Doz. speak for themselves. Our Cameras are of latest model, warranted for time or lightning exposures. In fact every article we offer is thoroughly reliable, as we find it to our best interest to handle only what we can guarantee. Unsold Buttons Returnable. **Free, with Guard or Chate-lant, for Selling 3 doz.** **Free, with Battery complete for selling 6 doz.** **Free, with a handsome Chain and Charm, for selling 2 doz.** **Free, with 500 rounds ammunition, or pair Boker's Best Hockey Skates with Screws free for selling 2 1/2 doz.** **Free, with 5 Doz. complete for selling 6 doz.** **Free, with Battery complete for selling 6 doz.**



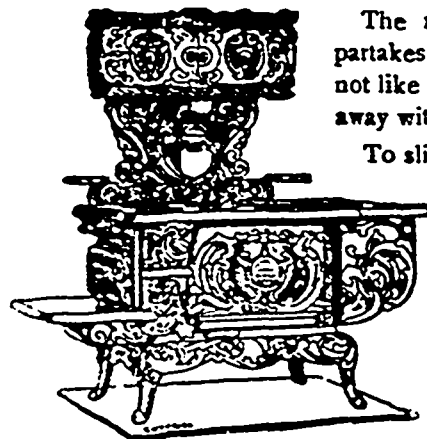
**Lever Button Co.**

**TORONTO, ONT.**

With every Watch we send a **WRITTEN GUARANTEE** to Repair or Replace. Good for one year.

**Time is on the Side of SOUVENIRS**

**Because they're a Perfect Stove**



The record of the Souvenir Kitchen Range partakes in no way of a flash in the pan. It is not like the early dew—a creation to be wiped away with the first ray of sunshine.

To slightly alter a saying of Gladstone's:—

"Time is on the side of the Souvenir kitchen range."

You are delighted with it when you get it. It's so much in advance of any kitchen stove you have ever used. But the more you use it the better you like it—the better it becomes.

It's the only stove where you can be entirely sure of perfection in cooking, because it's the only stove with an aerated oven—the only stove that ensures perfect cooking.

—A tasty and readable booklet, nicely illustrated, tells more about the aerated oven, and is yours for the asking.

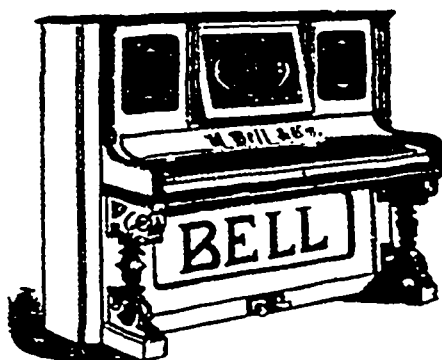
**The Gurney-Tilden Co., Limited**

Stove, Furnace and Radiator Manufacturers

Wholesale Agencies in **TORONTO, MONTREAL and WINNIPEG**

**HAMILTON, ONT.**

**The Unparalleled Reputation of**



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

Is accepted without dispute by all other makers

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

Only the best materials used. All others are rejected  
On Reasonable Terms from all Agents

Manufactories: **GUELPH, Ont.**

**THE BELL ORGAN & PIANO CO., LIMITED**



# Every Canadian Farmer Needs a Farm Paper

and a weekly paper is far more profitable from a business standpoint than any other. It costs no more and gives its readers many decided advantages over monthly or semi-monthly publications of a similar class.

**FARMING is the Only Weekly Farm Paper in Canada.** Try it for one year and you will be convinced of its superiority. Its **Weekly Market Reports and Forecasts** are accurate and will alone save many times the subscription price.

**The balance of 1898 FREE.** FARMING will be sent to new subscribers until the 1st of January, 1900, for only \$1.00.

## PREMIUMS FOR EVERYONE

### BOOKS ON AGRICULTURE.

**Feeds and Feeding.** By Prof. W. A. Henry, Dean of the College of Agriculture of Wisconsin. Every Farmer and Stockman should have it. Price \$2. Free with 3 new yearly subscriptions at \$1 each.

**Woll's Handbook for Farmers and Dairymen.** Every Farmer and Dairyman is interested in this book. Price \$1.50. Free with 3 new yearly subscriptions at \$1 each.

**The American Standard of Perfection.** The recognized standard work on poultry, adopted by the American Poultry Association. Price \$1. Free with 2 new yearly subscriptions at \$1 each.

**Silos, Ensilage and Silage.** By Manly Miles, M.D., F.R.M.S. A practical treatise on the ensilage of fodder corn, with most recent and authentic information on this subject; illustrated. Price 50c. Free with one new yearly subscription at \$1.

**Canning and Preserving.** By Mrs. S. T. Rorer, the best known teacher of cooking in America. Price 40c. Free with one new yearly subscription at \$1.

**Agriculture.** By Prof. C. C. James, Deputy Minister of Agriculture for Ontario. The latest work on the subject. Free with one new yearly subscription at \$1.

**The First Principles of Agriculture.** By Mills and Shaw. This well-known work should be in the hands of every young man in Canada. Price 40c. Free with one new yearly subscription at \$1.

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

**Dr. Carlin's Receipt Book and Household Physician.** Contains over 6,000 valuable receipts, with treatises on the care and management of horses, cattle, sheep, swine, poultry, bees, dogs and other pet animals. Directions for the care of the sick, and the treatment and prevention of disease, and a thousand other useful and necessary items of interest for the farm, the household, the sick room and the kitchen. Free with one new yearly subscription at \$1.

**The Shepherd's Manual.** Enlarged edition. By Henry Stewart. Price \$1.50. Free with three new yearly subscriptions at \$1 each.

### DAIRYING APPLIANCES

**The Melotte Hand Separator.** Capacity 330 lbs. Price \$100.00. This is one of the latest and best cream separators made, and splendid value for the price. Will be sent free with 100 new yearly subscriptions at \$1 each.

**Farmers' Favorite Babcock Milk Tester.** Four bottle machine. Price \$5. Free with seven new yearly subscriptions at \$1 each.

**Milking Tubes.** Every dairy man should have them. Price 25c. each. TWO of them free with one new yearly subscription at \$1.00.

**Platform Scales.** Capacity 500 lbs. Strong, compact and well-finished. Price \$15. Free with twenty-four new yearly subscriptions at \$1 each.

**Farmers' Union Scale.** Capacity 1/2 oz. to 240 lbs., with tin scoop. Price \$6.00. Free with ten new yearly subscriptions at \$1 each.

**Even-Balance Scale,** with Side Beam and Weights. Capacity 10 lbs. Price \$3.75. Free with seven new yearly subscriptions at \$1 each.

### FOR THE BOYS.

**An Up-to-Date Watch.** Open face, nickel case, stem-wind, pendant set. Guaranteed by the maker for five years. Price \$3.50. Free with three new yearly subscriptions at \$1 each.

**A Two-Bladed Pocket Knife.** Brass lined, horn or ivory handle, best steel. Price 75c. Free with one new yearly subscription at \$1.

**Hohner's Up-to-Date Cased Mouth Organ.** A fine organ for concerts, with shaped nickel covers, 20 holes, brass plates, 20 reeds. Each organ in a velvet, satin-lined case, with clasp. Price 40c. Free with one new yearly subscription at \$1.

**A 24-inch Football.** Fair quality of leather, superior shape, well sewn; rubbers of best quality; with bladder, complete. Price \$2.50. Free with five new yearly subscriptions at \$1 each.

**One Pair of Purebred Silver Laced Wyandotte Fowls.** Beauties. Worth \$5. Free with six new yearly subscriptions at \$1 each.

### HOUSEHOLD AND FARM NEEDS.

**Handsome Parlor Clock.** Black polished wood, with gilt ornaments. Price \$5.00. Free with nine new yearly subscriptions at \$1 each.

**Ear Labels for Sheep or Swine.** With name and number. Price \$3 for 100. 32 for one new yearly subscription at \$1.

**The Whiting Saw Set.** The favorite tool for setting all kinds of saws. Price 60c. Free with one new yearly subscription at \$1.

**Repair Outfit.** For boot and shoe, rubber and tin repairing; 44 articles in neat, strong box. Every family needs one. Price \$1.75. Free with four new yearly subscriptions at \$1 each.

**A First-Class Washing Machine.** Price \$8. Free with only twelve new yearly subscriptions at \$1 each.

**The Old Favorite Royal Canadian Wringer.** Brass-bound frame, 11-inch solid rubber rollers - warranted. Price \$2.75. Free with six new yearly subscribers at \$1 each.

**A "Daisy" Churn.** Everyone knows this churn. Capacity 1 to 4 gallons. Price \$3.00. Free with six new yearly subscriptions at \$1 each.

**Bull Snap.** Tinned, with chain and screw eye. Price 50c. Free with one new yearly subscription at \$1.

**Farm Bell.** Gold bronze, japanned mountings; diameter 13 inches; weight 40 lbs. Sent carriage free to any express office in Ontario only for four new yearly subscriptions at \$1 each.

**Your Own Subscription Free** for six months for one new yearly subscription, and for one year for two new yearly subscriptions, at \$1 each.

**Five Trial Subscriptions** from now until the end of the year, at 20c., will count as one yearly subscription at \$1.

N.B.—Articles which may be sent by mail will be prepaid to any address in Canada. Those which require to be sent by express or freight are F.O.B. at Toronto, and consignee will pay charges for carriage in every case.

Address, **FARMING** 44-46 Richmond Street West,  
TORONTO, ONT.

# The Ontario Agricultural Gazette

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

## THE DOMINION CATTLE, SHEEP, AND SWINE BREEDERS' ASSOCIATIONS.

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

### BENEFITS OF MEMBERSHIP.

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

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

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

The name and address of each member, and the stock he has for sale, are published once a month. Over 50,000 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. HOSOW, Secretary.  
Parliament Buildings, Toronto, Ont.

## LIST OF STOCK FOR SALE.

### THE DOMINION CATTLE BREEDERS' ASSOCIATION.

#### Shorthorns.

Bonnycastle, F. & Sons.....Campbellford ..... Bull, 4 years; 6 bull calves; heifers and heifer calves.  
Chapman, G. C. & Son..... St. Thomas ..... 5 bulls, 2 to 13 months; female, 2 years.  
Douglas, J..... Caledonia..... Bulls, 9 to 15 months; females, all ages.  
Fairbairn, H. K..... Thedford..... 2 bulls; 15 cows and heifers, 2 years and over.

#### Jerseys.

Bull, B. H. & Sons.....Brampton ..... 6 yearling bulls, 5 bull calves, females all ages.  
Davies, R..... Toronto ..... Bull calf, 3 months.  
Duncan, J. H..... Sault Ste. Marie ..... 2 bulls, 8 and 13 months.  
Wallis, W..... Newmarket..... 4 bulls, 7 months to 2 years.

#### Polled Angus.

Kaufman, A. E.....Washington ..... Bull, 1 year; 3 bull calves; 2 yearling heifers; 1 heifer calves.

#### Ayrshires.

Davies, R..... Toronto..... 10 bulls, 1 to 12 months.  
Yuill, J. & Sons..... Carleton Place..... 24 bull and heifer calves, under 4 months; cows and heifers all ages.

### THE DOMINION SHEEP BREEDERS' ASSOCIATION.

#### Dorset Horns.

Hunter, J.....Wyoming ..... Rams.

#### Shropshires.

Yuill, J. & Sons..... Carleton Place ..... Ewes and ewe lambs.

#### Cotswolds.

Bonnycastle, F. & Sons.....Campbellford..... Ram, 2 years; 8 ram lambs; ewes and ewe lambs.

### THE DOMINION SWINE BREEDERS' ASSOCIATION.

#### Berkshires.

Bonnycastle, F. & Sons..... Campbellford ..... 20 head, 4 weeks to 8 months.  
Bull, B. H. & Sons..... Brampton ..... 10 sows and 3 boars, 8 months; 20 boars and sows, 3 months.  
Decker, C. R..... Chesterfield..... 30 head, both sexes.  
Yuill, J. & Sons..... Carleton Place..... Sows, all ages.

#### Yorkshires.

Connolly, P. J..... Middletown, P.E.I..... Stock, both sexes, all ages.  
Ross, A. W..... Douglas..... 17 sows, 3 to 5 months; 6 hogs, 3 to 6 months.

#### Tamworths.

Bill, J..... Amber..... 23 boars, 3 to 9 months; 50 sows, 3 and 9 months.  
Laurie, R. J. & A..... Wolverton ..... 4 boars, 3 to 13 months; sows, 3 to 10 months; pigs, 2 months.  
Simonton, J. H..... Chatham ..... 14 boars, 6 weeks to 9 months; 33 sows, 6 weeks to 7 months.

#### Duroc-Jerseys.

Fraser, I. O. & Son..... Fellows..... Stock, both sexes, all ages.

#### Chester Whites.

Harding, R. H..... Thorndale..... 4 hogs; imported boar, 9 months; pigs, 4 months.

## FARMERS' INSTITUTES.

The Secretaries of Farmers' Institutes are respectfully requested to forward to the Department their lists of members as rapidly as they receive them, otherwise the editions of some of the valuable reports will be exhausted before the members who have already paid their subscriptions receive copies due them.

The following institutes have sent us lists:

Addington.....	56
Algoma, East.....	21
Amherst Island.....	43
Brant, North.....	143
Brant, South.....	45
Brockville.....	74
Bruce, Centre.....	20
Cornwall.....	48
Dundas.....	163
Durham, West.....	83
Frontenac.....	84
Glengarry.....	84
Hastings, East.....	62
Hastings, North.....	97
Huron, South.....	89
Huron, West.....	55
Kent, East.....	44
Kent, West.....	15
Lanark, North.....	168
Leeds, South.....	86
Lennox.....	26
Middlesex, North.....	127
Middlesex, West.....	62
Muskoka, Centre.....	27
Muskoka, North.....	118
Norfolk, South.....	24
Ontario, North.....	55
Parry Sound, East.....	61
Parry Sound, West.....	62
Peterboro', West.....	99
Prescott.....	64
Renfrew, North.....	55
Renfrew, South.....	52
Stormont.....	99
Victoria, East.....	101
Waterloo, South.....	6
Welland.....	50
Wentworth, North.....	62

The average attendance at Farmers' Institute meetings up to date is as follows:

Addington.....	36
Amherst Island.....	143
Brant, North.....	143
Brant, South.....	153
Brockville.....	206
Bruce, Centre.....	115
Carleton.....	91
Cornwall.....	156
Dundas.....	207
Durham, West.....	47
Frontenac.....	213
Glengarry.....	244
Grenville, South.....	256
Haldimand.....	193
Hastings, East.....	166
Hastings, North.....	185
Hastings, West.....	176
Huron, South.....	140
Kent, East.....	45
Kent, West.....	35
Lanark, North.....	363
Lanark, South.....	194
Leeds, South.....	178
Leeds, North and Grenville, North.....	82
Lennox.....	34
Muskoka, Centre.....	60
Muskoka, North.....	38

Middlesex, West.....	112
Northumberland, East.....	306
Northumberland, West.....	121
Ontario, North.....	79
Ontario, South.....	41
Parry Sound, East.....	52
Parry Sound, West.....	21
Peel.....	76
Peterboro, East.....	101
Peterboro, West.....	159
Prescott.....	170
Prince Edward.....	131
Renfrew, North.....	118
Renfrew, South.....	140
Victoria, East.....	231
Victoria, West.....	148
Wentworth, North.....	125
York, East.....	98
York, West.....	200

It will be noticed that the attendance at the various meetings varies a great deal. In some cases this may be accounted for in part by the roads and the weather, but in other cases by the efficiency or lack of efficiency of the local officers. In 99 cases out of 100 bad roads and bad weather will not prevent a large crowd assembling at a Farmers' Institute meeting where the officers are alive and the meeting well advertised and well conducted. In one of the best counties in the province is one of the poorest Institutes. In East Durham we had a striking example of this. For several years the gentleman who was secretary continually said he could not get an audience together, that nobody was interested in Farmers' Institute meetings, and that agricultural topics were threshed out. Robert Vance, of Ida, and his brother, W. Vance, of Millbrook, were asked to take the matter in hand, which they did, and in less than three months they had an Institute organized, sufficient members to obtain a grant, and ever since the Institute has been in a flourishing condition, having a large membership. The meetings are always well attended.

In the issue of Jan. 6th, 1899, of the *Freeholder*, published by that able Institute Secretary, C. W. Young, Cornwall, appears the following, which we commend to the attention of farmers everywhere:

JOIN THE INSTITUTE, ATTEND THE MEETINGS, GET THE BULLETINS, AND IMPROVE YOUR BUSINESS.

A leading member of the Stormont Farmers' Institute dropped in to see the secretary the other day, with a nice list of members, and a fund of pleasant chat. He is a good farmer, who has made money out of his business and has been an institute member since they were established here, to which he attributes a good deal of his success in late years. He has lately put up a windmill, has invested in a grinder and a pulper, built a new hog building, with accommodation for double the number he kept formerly, an agricultural furnace to cook the food and heat water at killing time, and generally fixed things up-to-date.

"I tell you, Mr. Secretary," he said, "these things cost money but they pay. I was talking to a neighbor the other day about it. He is a good farmer and has a lot of cattle in his barn, but they are there yet, while

# FUR COATS

ORDERS are pouring in from all sections of Canada. The values in Fur Coats are the "biggest" ever offered by a reliable firm. Every garment exactly as represented. If you want one or more of these splendid coats take our advice and send for it now. The demand has been so great we cannot guarantee all sizes after this week. We can furnish any size now.

## ONE MAN'S OPINION

John Humbly, Regina, N.W.T., writes as follows: "I received the 'Buffalo Coat' all O.K. and find it even better than expected. Storekeepers here are asking \$50 for the same kind of coat. Please send your catalogue."

**LOT 1.—Walloby Fur Coats.** These coats are a dark grey fur, 50 inches long, storm collars, quilted farmer's satin linings, fur binding, with loops and barrel buttons, our regular price \$25.00. Selling now for ..... **\$18**

**LOT 2.—Matissina Buffalo Coat** —long strong fur, made same style as above. An excellent coat for teaming and rough wear, will last a lifetime. Every farmer should have one. The regular price was \$35. We are selling them now at ..... **\$25**

**LOT 3.—The strongest coat ever made, Prairie Dog Fur,** looks exactly like Coon, well made and lined, inside and outside pockets. We have only a few of these left and will sell at \$15. Don't think of buying a cloth coat when you can get one of these fur coats for \$15. You'll never regret it and we'll guarantee them.

**LOT 4.—The finest assortment of Real Coon Skin Coats** in Canada. They are all you can desire. Beautiful long hair, well made, nothing wanting, any size, 50 inches long. Regular \$50. Selling at..... **\$35**

Established 50 years.

## DINEEN'S

140 YONGE STREET TORONTO

### BRAMPTON JERSEY HERD.

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

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

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

ROBT. REESOR, Locust Hill, Ont., Breeder Jersey Cattle and Shetland Ponies. Young stock for sale. Locust Hill is 20 miles from Toronto on the C.P.R.

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

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

### Hursley Stock Farm.

## A.J.C.C. JERSEYS

St. Lambert Blood.

Registered Stock, all ages, including some excellent choice Young Bulls ready for service. Also some choice Grade Milkers and Heifers, cheap.



Large Improved Yorkshires

Six Young Boars ready for Service cheap.

Some Choice Young Breeding Sows. Also Young Stock, at right prices.

SILLS SHAVER & SON, Winchester Springs, Ont.

## IMPROVED YORKSHIRES

Boars fit for service and sows same age. Bred from the best show stock. Pairs not akin supplied. Orders booked for spring pigs. Shipped to any station in Ontario free.

L. ROGERS, Cooksville, Ont.

## 3 SHORTHORN BULLS 3 FOR SALE.

Two of them are over 14 months; are good and fit for service. All are reds.

WM. MILLER, Box 112, MARKHAM, ONT.

Railroad stations: Markham, G.T.R. 4 miles. Locust Hill, C.P.R. 3 miles.

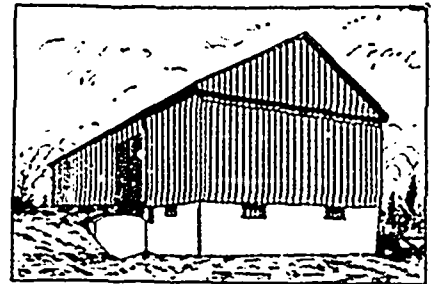
# Patchall

THE Twentieth Century Mender bids good-bye to the needle and thread. Welcomed by thousands of women and praised by men. No more dirt in your home from mending bags. PATCHALL mends grain bags, binder canvas, and all kinds of cloth. It is a great saver for the farmer. Straw passing through small holes, winding on the rollers of the self binding harvester breeds evil. A small piece of canvas and a little PATCHALL saves time and money. A great success in grain warehouses wherever tried. Thousands of bags are now patched by PATCHALL. Eight patches, two inches square, cost a cent. If you cannot obtain it from your hardware dealer, send 25 cents, and we will mail a can to your address prepaid. Manufactured by

Domestic Specialty Co., Hamilton, Ont.

Established 1841.

## Thorold High in Quality Low in Price Cement 58 years in use



BARN OF GEO. AXFORD, TALBOTVILLE, ONT.

Size of Basement Walls 31 x 88 x 9 feet. Built with Thorold Cement.

Talbotville, Elgin Co., Dec. 22nd, 1897. During the past summer I have built a basement with your Thorold Cement under my barn 31 x 88 x 9 feet high from bottom of foundation; footing for foundation 18 in. thick; above the footing 12 in. thick I used 6 parts of gravel to 1 of cement. I also built a cistern under the approach to the barn 8 x 18 x 7 feet high; wall around cistern 16 inches thick; arched over the top 10 inches thick.

I also put a floor into my cow stable, 32 x 57.4 inches thick, in which I used 27 barrels of Thorold Cement. I used six parts gravel to one of cement, except one inch on the surface, which was three parts gravel to one of cement. The floor is as hard as a stone. I consider both wall and floor better than I could have made of any other material, and much cheaper. Yours truly, GEO. AXFORD.

Our Thorold Cement is the best and cheapest for Silos, Barn Walls, Floors for horses and cattle, Pig Pens, Etc. Write us for free pamphlet.

Estate of Jno. Battle Thorold Ont.

Mention FARMING.

none are sold and the money in the bank. He was wondering why it was, and I told him it was because he wasn't an institute member, didn't take the papers nor read the bulletins, and didn't keep up with the times. I cut up all my rough fodder, pulp my roots, draw my manure out in the winter as it is made, and have it just where I want it in the spring, and can actually make two pounds of beef where I made one before. I took two ordinary cows and made them up to nearly 1,250 each, and have, as a rule, no trouble in getting a cent a pound, at least, more than the average of my neighbors. More than that, I can assure you that having a good deal to do with the cheese factory, I can tell the institute members among the patrons; they have, as a rule, more milk and deliver it in better shape—are more intelligent every way. Every farmer who wants to keep abreast of the times should join the institute, attend the meetings, get the bulletins, read them and make use of the latest information about his business."

The *Freeholder* is one of the best papers which reaches the office of the superintendent, and has done a great deal to assist agricultural education by its active advocacy of farmers' institutes, poultry associations, and other kindred societies. Country papers can do a great deal to help the farmers of the country by publishing reports of institute meetings, etc., and this the *Freeholder* has done and is doing. Farmers should heartily support the papers published in their locality and encourage the editors to publish first-class agricultural matter. I look upon the country paper as one of the greatest educators of the people.

SUPERINTENDENT.

**THE FARMERS' INSTITUTE HELPS OUR RED BROTHER.**

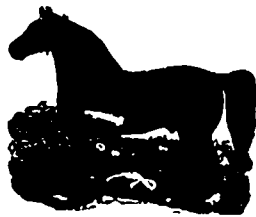
W. H. Metcalf, Secretary of the South Brant Farmers' Institute, in reporting the meeting held at Ohsweken, a point on the Indian Reserve, says: "The attendance in the afternoon was about 150, and about the same number in the evening. Rain fell in the afternoon and evening, and the attendance was not as good as last year. The deputation was heartily received. The chiefs say their people farm 100 per cent. better than they did before the institute began. The speakers were Major James Sheppard, R. F. Holtermann, and Jos. E. Gould. The Indians were greatly delighted with Major Sheppard's addresses, and decided to hold a council of the chiefs and warriors and give each speaker a name and take them into whichever tribe they would like to join. I will give you the names conferred:

- Major Jas. Sheppard—Dal-Kel-be-don-tye (a row of trees); Totem or Clan—Bear.
- R. F. Holtermann—Sa-Ks-we-heh (one who gives); Totem or Clan—One-handed.
- Jos. E. Gould—So-heb-reh-seh (long stalks); Totem or Clan—Wolf.

See our Premium List on page 370 of this issue.

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

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



IT CURES

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

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

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

Sold by Druggists everywhere—  
25 and 75 Cents

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

**Thoroughbred Poultry For Sale**

Trlo Dark Brahma Fowls for \$4.50.  
Trlo Dark Brahma Chicks for \$5.50.  
A few Dark Brahma Hens at \$1.50 each.  
Two Partridge Cochins Cockerels at \$2 each.  
One White Cochins Cockerel at \$2.50.

White and Barred Rocks and White Wyandotte Cockerels for breeding purposes cheap. All from prize-winning stock. Write

A. J. GEORGE,  
Clarence St., - London, Ont.

**SOLD ON TRIAL!**

Buy no incubator and pay for it before giving it a trial. Many people have lost faith in incubators because they bought one that was never intended to hatch chicks—made merely to sell. **The Von Cullin Incubators** are sold on trial subject to your approval. Simplest machine made. A child can operate it. The biggest catalogue and "poultry pointers" book published, sent for free. Plans for Houdans, Poultry Houses, etc., sent on receipt of 25c. Von Cullin Incubator Co. 80 Adams St. Delaware City, Del.

**INCUBATORS** Our Machines are the best manufactured in Canada, both hot water and hot air. Surest, simplest, and best system of regulating. Every machine warranted. Prices \$10 up.

**EGGS FOR HATCHING** from Silver, Golden, and White Wyandottes, Barred Plymouth Rocks, and Pekin Ducks only \$1.50 per setting. Stock unsurpassed.

J. E. MEYER, Box M, Fossuth, Ont

**Pearce's Poultry Supplies**

Green Bone Meal; Guaranteed No. 1..... \$7 00  
" " " " No. 2..... 10 00

**"THE BEST" INCUBATOR AND BROODER**

Are not only the best in name, but are also the best in simplicity of running, the best in economy of fuel, the best for a large percentage in hatching, and also "The Best" are the cheapest, being placed so low in price that farmers, amateur poultry keepers, etc. can afford to purchase. "The Best" incubators are made throughout with thoroughly kiln-dried white pine, and are well put together. It is not got up for show only; it is as well made on the inside as it is without, and is built to hatch.

Incubators, 100 egg size, \$15.00; 200 egg size, \$21.00  
Brooders, 100 " 6.00; 200 " 8.00

Send for circular giving full particulars regarding application of heat, ventilation, moisture, nursery, etc. Our 1899 Seed Catalogue now ready to mail. Address

JOHN S. PEARCE & CO., London, Ont.

Kindly mention this paper.

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,**  
CLINTON, ONT



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



**SHOEMAKER'S POULTRY BOOK ON POULTRY** and Almanac for 1899. 160 pages. 100 illustrations of Poultry, Incubators, Brooders, Poultry Houses, etc. Tells how to raise chickens successfully, their care, diseases and remedies. Diagrams with full descriptions to build poultry houses. All about INCUBATORS, BROODERS and Fancy Poultry, with Lowest Prices. Price only 15c. C. C. Shoemaker, Freeport, Ill., U. S. A.



**HATCH CHICKENS BY STEAM**—with the simple, perfect, self-regulating **EXCELSIOR INCUBATOR**. Thousands in successful operation. Lowest priced hot-air incubator made. **GEO. H. STABLE,** 114 to 122 S. 6th St., Quincy, Ill.

**STRATFORD BROS.**  
BRANTFORD, ONT.

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

A. ELLIOTT, Pond Mills, Ont.

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

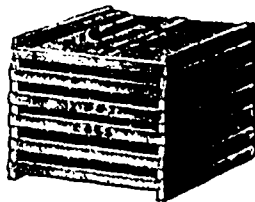
**THE PRACTICE OF A SUCCESSFUL DAIRYMAN.**

The Waterloo *Chronicle* in a recent issue gives an interesting sketch of the farm and farming practice of Mr. A.C. Hallmann, New Dundee, Ont., one of our advertisers, from which we take the following:

"Mr. Hallmann farms for all there is in it, his principal forte being in milch cows. In his stables at present there is a herd of thirty-two and not an inferior animal in the entire lot, for as soon as he discovers a drone she is at once prepared for the butcher. All his cows are in the best condition possible and are good milk producers, the result of proper crossing, good wholesome milk-producing rations and kind treatment. In the herd are several thoroughbred Holstein-Friesians that are superb animals. There are also quite a number of fine grades, a cross between the Holsteins and Jerseys. At present Mr. Hallam is considerably the largest patron of the Haysville cheese factory. That dairying pays him a handsome profit we have proof in the following: He has taken to the factory as high as 900 pounds of milk in one day. From May, 1895, to May, 1896, he realized from 30 cows \$1,044.91, or an average of \$34.83 per cow. From May, 1896, to May, 1897, from 30 cows he had \$1,296.40, or \$43.21 per cow. The present year will average \$46.60. Mr. Hallam has his milk converted into cheese the year round, for when the main factory closes down he sends it to a private concern until the former again commences operations. He exercises particular care in feeding. His favorite feed for winter is hay, roots, grain and bran, together with good pure water and salt. After harvest, when the summer pasture has become somewhat scant, he raises "catch crops," or, in other words, plows up the stubble and sows peas or oats. This makes a luxuriant and nutritious pasturage for "Bossy" late in the fall. He is quite a prominent authority on dairying in the Farmers' Institute, and has already given that society some excellent papers on this subject."

For doing their very best laying pens ought not to contain more than half a dozen pullets. The same individuals should be kept together all the time in order to avoid fighting and disturbance which follows the introduction of strangers. Any kind of discomfort and disquiet means loss of eggs.

I remember hearing of a law-court case, where a man had entered an action against a railway company for an injury to his arm in an accident. Said the opposing lawyer: "I understand you have lost the use of your arm entirely through this accident?" "Yes," said the plaintiff. Lawyer—"How high can you lift your arm now?" Plaintiff with great difficulty moves it about an inch. "How far could you lift it before the accident?" "Right up there!" at the same time shooting it right up over his head.—*Philadelphia Saturday Evening Post.*



**Humpty-Dumpty Egg Crates**

Save their cost to the Farmer many times every year.

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

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

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

**THE DOWSWELL MAN'G CO LIMITED**

...Hamilton

**COLOR** and flavor of fruits, size, quality and appearance of vegetables, weight and plumpness of grain, are all produced by Potash.

**Potash,**

properly combined with Phosphoric Acid and Nitrogen, and liberally applied, will improve every soil and increase yield and quality of any crop.

Write and get Free our pamphlets, which tell how to buy and use fertilizers with greatest economy and profit.

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

**THE HOME MONEY MAKER**

**HOME WORK.**

We want the services of a number of families to do knitting for us at home, whole or spare time. We furnish \$20 machine and supply the yarn free, and pay for the work as sent in.

Distance no hindrance. \$7 to \$10 per week made according to time devoted to the work. Write at once.

Name references.

**CO-OPERATIVE KNITTING CO.**  
TORONTO, ONT.

**FREE FOR BOYS and GIRLS**

Fine German Silver Keyless Watch, guaranteed for 5 years, with Chain, or a "Snap-Shot" Camera with all attachments ready to take pictures, given free for selling for us 25 Magic Pollsters at 10c. each—SELLS IN EVERY HOME. Send name and address, we'll forward goods without money. Canada Supply Co., Toronto.

**FARMERS WANTED**

To take orders in their section for the famous land renewer,  
**Alberta's Thomas-Phosphate Powder (Reg.)**  
Purity and analysis guaranteed. Correspond at once, as fall dressing of the land is important.

**WALLACE & FRASER**  
Canada Life Building, - TORONTO

**TORONTO ENGRAVING Co.**

**THE ART ENGRAVING HOUSE OF CANADA**  
CUTS BY ALL PROCESSES  
**92 BAY ST. TORONTO**

**HELDERLEIGH FRUIT FARMS and NURSERIES**

—400 ACRE—

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

SEND FOR CATALOGUE, which is furnished FREE to applicants.

DO NOT MAKE THE MISTAKE OF BUYING CHEAP STOCK—IT IS DEAR AS A GIFT

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

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

**MARKET REVIEW AND FORECAST.**

Office of FARMING,

44 and 46 Richmond street west,

January 16, 1899.

The general trade situation is good. Country merchants have more money, and though trade, so far, has been good they are looking forward to even better trade when farmers begin to bring forward the grain that is still in the country. The Americans have also begun the new year under most auspicious prospects, so that the business situation all over this continent is good.

**Wheat.**

The wheat markets are somewhat unsettled, and grain dealers are more or less puzzled as to what the future will be. Western prices have been fluctuating within a narrow range lately, and but little pronounced advance in value has taken place during the week. The *Cincinnati Price Current* of January 12th, says, "In regard to wheat, the offerings are not being maintained, and the situation is one of indicated strength, with chances favoring a turn toward a higher position of values. It may be observed that the trade sentiment has had the influence of a recognized perfect promise for the new crop—so that all forces from this source have been availed of, and any change must necessarily be from the standpoint of a less promising outlook."

The situation, generally speaking, is considered strong. The Argentine crop is about the only factor that may change the present trend of things. A big crop is reported there, but until it begins to come forward, which will be soon, its real effect upon the market will not be known. So far countries buying wheat have taken it from America. The following extract from *Bradstreet's* gives some idea of the stocks in sight in America and Europe on January 1st: "The entire American stock on January 1st is over 4,500,000 bushels smaller than at this time a year ago, 11,000,000 bushels smaller than in 1897, 48,000,000 bushels smaller than in 1896, and 71,000,000 smaller than on January 1, 1895, which marked about the maximum of recent years. European stocks, too, are the lightest reported in January since 1892, being 8,700,000 bushels smaller than a year ago, 27,000,000 bushels smaller than on January 1, 1897, and 39,000,000 bushels smaller than on January 1, 1894, at which date the total stocks were within a few million bushels of the largest ever held in Europe. The combined European and American stocks on January 1 were smaller by 13,000,000 bushels than a year ago, 37,000,000 bushels smaller than on January 1, 1897, 75,000,000 bushels less than in 1896, 86,000,000 bushels below the 1895 stock and 93,000,000 bushels less than the total held on January 1, 1894. The European markets have been a little weaker during the week. Deliveries in Canada have been light, but millers do not seem to have the difficulties in getting supplies that they had a few weeks ago. The offerings have been light here, and prices are unchanged at 69 to 69½c. for red and white west, but exporters will not pay these figures. Goose wheat is quoted at 70c., and Manitoba No. 1 hard at 80 to 81c., Toronto. On the local market red and white brings from 72 to 74½c.; spring sif 71 to 71½c., and goose at 71c.

**Oats and Barley**

There has been more enquiry for oats for export as well as locally. Oats in store at Montreal are quoted at 32c. The quotations here are 29 to 30c. west. On the local market they bring about 34c. per bushel.

There is but little doing in barley and prices are a shade lower at 46 to 47c. west.

**Peas and Corn.**

Peas are firm and in good demand. In store at Montreal they are worth 70c. and are firm here at 66c. north and west. On the local market they bring from 59 to 66c. per bushel.

Corn is not moving very rapidly at American points, and there is a tendency to hold, as it is reported that feed is likely to be scarce in the west before spring. American old is quoted here at 45½c., and new American at 42½ to 43½c. on track. Canadian yellow is quoted at 36c. in car lots, but these are very hard to get.

**Bran and Shorts.**

Ontario winter wheat bran is quoted at Montreal at \$14 to \$14.50, and shorts at \$14 to \$15 in bulk. Here city mills sell bran at \$14 and shorts at \$15 in car lots f.o.b. Toronto.

**Clover and Timothy Seeds.**

On the local market here red clover is quoted at \$3.50 to \$4.00; white clover, \$6 to \$9; alsike, \$4 to \$5; and timothy seed at \$1.25 to \$1.35 per bushel.

**Eggs and Poultry**

The demand at Montreal has been more for No. 1 candled or lime stock and quotations are 28 to 30c. for new laid, and 17c. for straight candled. Eggs are in good demand here, and the market is firm at 20 to 22c. for choice new laid, which are scarce, and 16 to 18c. for held stock.

Though the demand for dressed poultry at Montreal has slackened somewhat, quotations have not changed much, and are 9 to 10c. for fine turkeys; 7 to 8c. for ducks; 5 to 6½c. for geese; and 6 to 7c. for chickens. There is a fair demand here especially for chickens, and the market is steady at 8 to 10c. for turkeys; 6 to 6½c. per lb. for geese; 40 to 70c. per pair for ducks; and 25 to 50c. for chickens.

**Potatoes.**

Potatoes at Montreal bring 55c. per bag in car lots, and 65c. out of store. Cars of choice on track here bring about 60c., and out of store 65 to 70c. per bag. They bring from 60 to 70c. per bag on the local market.

**Hay and Straw.**

The local hay trade is very dull at Montreal, and there is not much doing for export. Quotations are \$6 to \$7 for No. 1 baled hay, and \$4.25 for No. 2. The demand is slow here, and cars on track are quoted at \$7 to \$7.50. Baled straw is quoted at \$4.50 to \$5 in car lots. On the local market timothy hay is quoted at \$9.50 to \$11 and clover at \$6 to \$9 per ton.

**Cheese.**

The demand for cheese since the holidays has been very light at Montreal, and the advance in the market a few weeks ago is barely held, though the cable quotation for white and colored remains steady at 49s. 6d. There is a kind of deadlock in the market, holders being very firm and buyers declining to come forward to meet the prices asked. Fine westerns are quoted there at 10½ to 10¾c., and easterns at 9¾ to 10¼c. per lb. It is

stated that finest westerns were offered at 10c. during the week, which shows quite a falling off in values.

**Butter.**

The creamery butter market is a little easier. Finest creamery is quoted at Montreal at 19½ to 20c. One dealer offered a lot of winter-made creamery in tubs at 19c. There seems, however, to be a good enquiry for creamery boxes at 19½ to 20c. There seems to be a better feeling on the New York market. In regard to this the New York *Journal of Commerce* says: Some of the large buyers that have been holding off for the past two days became convinced this morning, under the influence of light receipts, that the market was on a pretty substantial basis, and they took hold with some freedom. This has seemed to change the tone of the market somewhat, and a steady to firm holding was noted on high-grade goods.

The market here is somewhat quiet and the receipts are chiefly creamery and large dairy rolls. Creamery is steady at 20 to 21c. for prints, and 19 to 20c. for tubs. Choice dairy prints are somewhat scarce and prices are 15 to 16c. per lb. Large rolls are quoted at 13 to 15c., and choice tubs at 13 to 15c. Pound prints on the local market bring from 14 to 21c., and large rolls 13 to 14c.

**Cattle.**

A firmer feeling has set in in the British cattle markets. Canadian steers were quoted at 11 to 11¼c. at Liverpool, while some of the best States steers were quoted at 12c. The American markets, and especially Chicago, have been dull, chiefly due to the inferior quality of the stock offered. The market here has been fairly active, with the prices of the week well maintained.

**Export Cattle.**—Choice heavy ones of good quality bring from \$4.40 to \$4.62½, and light ones \$4 to \$4.25 per cwt. Choice heavy export bulls are worth from \$3.75 to \$4.12½, and medium ones \$3.37½ to \$3.50 per cwt.

**Butchers' Cattle.**—Choice picked lots of these, equal in quality to the best exporters, and weighing from 1,050 to 1,150, are scarce, and bring from \$4 to \$4.25. Good butchers' cattle bring from \$3.65 to \$3.87½, and medium from \$3.35 to \$3.50 per cwt.

**Stockers and Feeders.**—Prices for stockers remain about the same at \$3 for inferior to \$3.40 for good, with \$3.50 for a few picked lots. A few heavy feeders are being offered, for which prices are \$3.50 to \$3.60 for common to good, and \$3.65 to \$3.75 for extra choice quality.

**Calves.**—These have been in fair supply at Buffalo of late, with a good demand. Very few are being offered here, and prices remain at \$3 to \$6 each, with \$5 per cwt. for choice veals.

**Milk Cows.**—There have been quite a few offered, but generally of inferior to medium quality. Quotations are from \$25 to \$38 each, with some choice extra milkers bringing as high as \$50.

The same thing over and over again. Read what the AMERICAN has done this time.

**WILL PAY ITSELF IN 4 MONTHS**

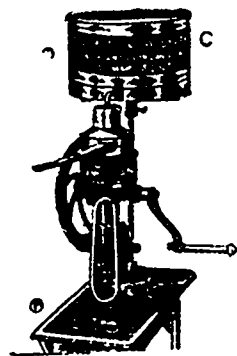
BLYTHESWOOD, ONT., JUNE 8TH, 1898.

MESSRS. RICHARDSON & WEBSTER,  
St. Mary's, Ont.

DEAR SIRS,—Enclosed find settlement for the Separator and oil received from you on May 28th. I placed the Separator on trial with Mr. S. D. Wilkinson, Leamington, and after 4 days he bought it. He is perfectly satisfied. I have tested the skim milk several times for him and it has never shown more than a trace of butter fat. I consider it a perfect machine in every respect and would like to act as your agent in this part of the county. Mr. Wilkinson is one of the most prominent dairymen around here. He says he will save enough in butter to pay for the Separator in 4 months. Yours truly, (Signed) F. A. LEAK.

Write RICHARDSON & WEBSTER, St. Mary's, Ont., for Catalogue and Prices. It will pay you to have a Separator as well as others.

W. G. GLENN, Agent for Owen Sound and vicinity



**RICHARDSON & WEBSTER,**

**ST. MARY'S, ONT**

## Sheep and Lambs.

The Buffalo and Chicago markets have been fairly active during the week. At Buffalo sheep have been in good demand and firm for choice grades, but lambs are a shade lower. The deliveries of sheep here have been light. On Friday ewes sold at \$3.25, and bucks at \$2.50 to \$2.75 per cwt. Lambs are scarce, and prices are firmer at \$4.25 to \$4.40, the latter price being for picked lots only.

## Hogs.

Deliveries of hogs have been very large. There were about 2,300 offered on Friday. Prices are \$4.50 to \$4.62½ per cwt. for choice bacon hogs weighing from 160 to 200 lbs. each, unfed and unwatered, off cars: \$4 to \$4.25 for light hogs, and \$3.75 per cwt. for thick-fats. Too many light and thick-fat hogs are coming forward. It is complained that too many farmers are buying American corn and feeding it to their hogs, with the result that they are too fat for the best export trade. If it is necessary to feed corn, it should be fed in limited quantities and mixed with other foods.

## HOW TO SELECT A DAIRY COW.

First, see that she is of the breed you desire.

Second, see that she is in good health and has apparently strong constitution.

Third, see to her udder and teats and dairy shape.

Fourth, ascertain the amount of milk she is giving, and if she is a regular breeder.

Fifth, analyze her milk by the Babcock test.

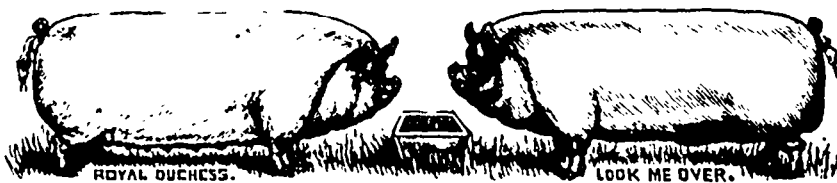
Sixth, churn her milk into butter and don't forget to inquire if she is a persistent milker.

## DIPPING PIGS.

An American breeder has adopted the practice of dipping his pigs when from four to twelve weeks old, and claims that it is a great benefit. We give his experience in his own words:

"Having a number of pigs, I noticed after they were eight to ten weeks old, old enough to wean, some of them were not doing just as I would like to have them; some of them were lousy, some a little mangy, and others looked measlyfied. I had used kerosene and it did not have the desired effect. I was disappointed, but had some sheep dip in store; seeing it was good for lice and mange and skin diseases in sheep, concluded to try it on the pigs.

"I put in a barrel 25 gallons of water and one quart of dip, and stirred it up good, then dipped the pigs. Never saw such a change; not over fifteen minutes' work. Left barrel in pen, and whenever I saw a pig the least thing the matter with the skin, I dumped it in the barrel of dip. I have the cleanest, nicest lot of shcats ever raised, and advise all raisers of hogs to try it. Dip your pigs several times at four to twelve weeks old and see for yourselves. It will more than save the price in feed, better growth; kills all lice and humor in skin, besides disinfects them."

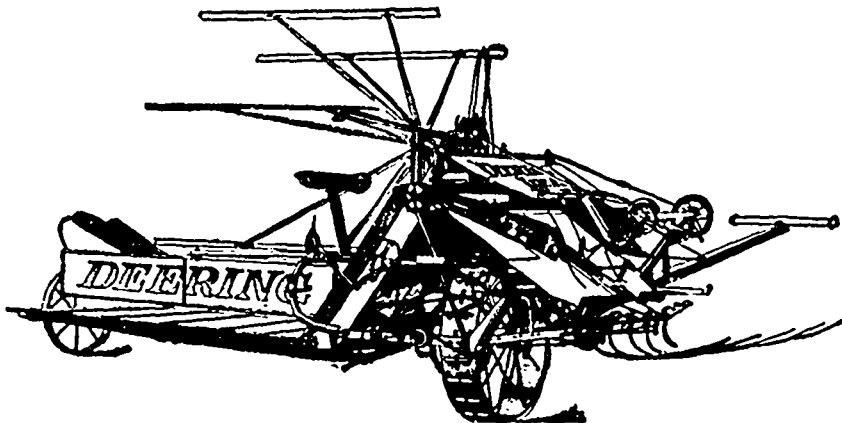


**Summer Hill Herd of Yorkshire Hogs**—Large Lengthy English Type—Among them being the undefeated prize-winning boar "LOOK ME OVER"—2602—acknowledged to be as good as any if not the best of his kind on the continent of America to day. Also "ROYAL DUCHESS," a first-prize sow at the Royal Show, Birmingham, England, in 1898, together with a choice lot of other sows, young boars fit for service, and pigs eight weeks old, single or in pairs not akin. Also choice young sows bred to "Look Me Over." We ship to order, prepay express charges, guarantee stock as described.

D. C. FLATT, Millgrove

Telephone and Post Office

## The Machines that made America Famous



### Deering Ideal Binder...

Five, six, and seven feet cut. Awarded the Gold Medal at Quebec Exhibition, September 12 to 21st, all Canadian and three American machine manufacturers competing.

Main Office and Factory:

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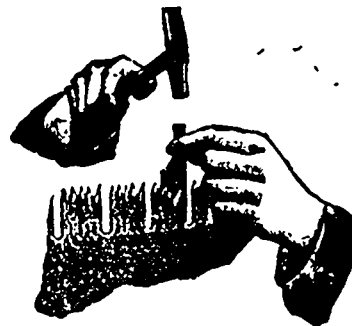
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WE take pleasure in offering to the public a Saw manufactured of the finest quality of steel and a temper which toughens and refines the steel, gives a keener cutting edge and holds it longer than any process known. A saw to cut fast "must hold a keen cutting edge." This secret process of temper is known and used only by ourselves. These saws are elliptic ground thin back, requiring less set than any Saws now made, perfect temper from tooth to back. Now, we ask you, when you go to buy a Saw, to ask for the MAPLE LEAF, RAZOR STEEL, SECRET TEMPER SAW, and if you are told that some other saw is as good, ask your merchant to let you take them both home, and try them, and keep the one you like best. Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand. It does not pay to buy a Saw for one dollar less, and lose 25 cents per day in labor. Your saw must hold a keen edge to do a large day's work. Thousands of these Saws are shipped to the United States and sold at a higher price than the best American Saws.



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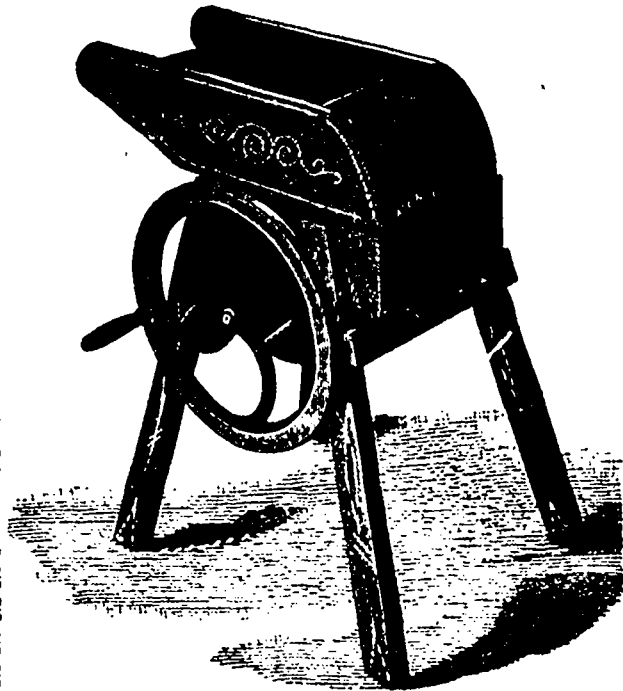


**Directions.**—Place the Set on the point of tooth as shown in the above cut, and strike a very light blow with a tack hammer. If you require more set, file the tooth with more bevel. If you follow directions you cannot make a mistake. Be sure and not strike too hard a blow, and it will set the hardest saw.

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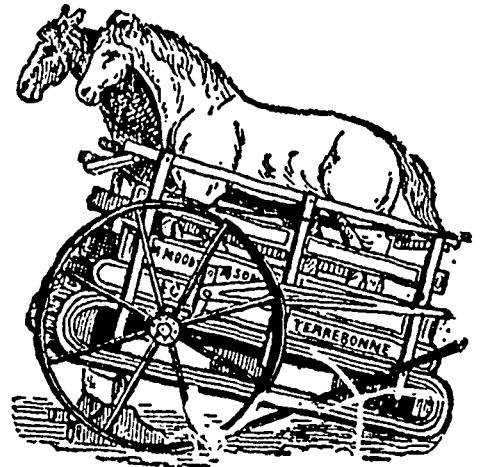


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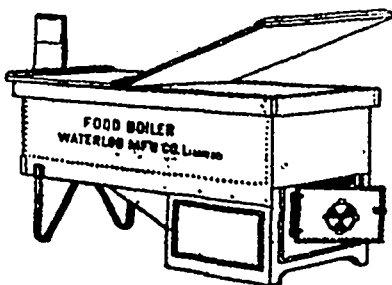
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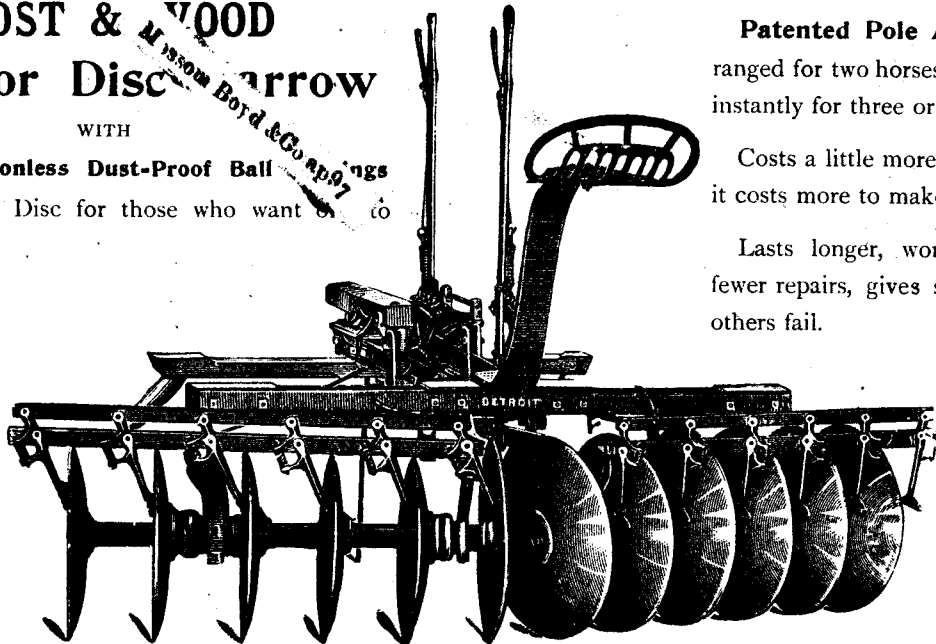
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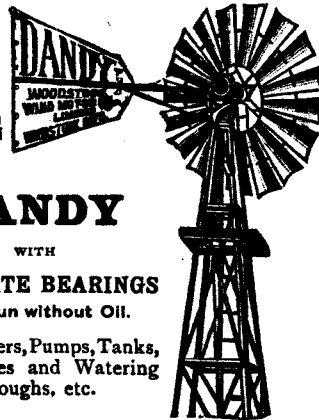
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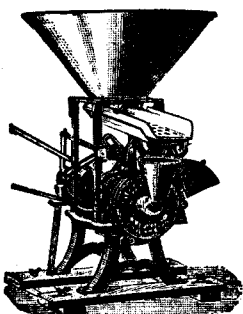
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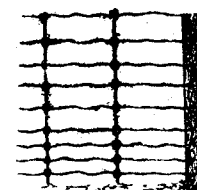
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