

Dr. Maria Montessori

PUBLISHED EVERY WEEK. \$1.50 PER YEAR.



* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE *

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VOL. XLIX.

LONDON, ONTARIO, FEBRUARY 12, 1914.

No. 1116

Make Your Stock and Poultry Pay Better With Royal Purple

At a cost of less than a cent a day per head of stock, ROYAL PURPLE STOCK SPECIFIC will increase their value 25 per cent. Permanently cures Colic, Debility, Worms, Bots and Skin Diseases. Tones up run-down animals so that they quickly gain weight and vigor. Increases the yield of milk cows three to five pounds a day, besides enriching the quality of the milk.

ROYAL PURPLE STOCK SPECIFIC is not a food. It is a conditioner—the best ever sold. If there was any better we would be making it. It enables your stock to eat the natural food they should eat and get the most benefit from it. Here is the advice of all thorough veterinary doctors: "Feed your stock on food of your own growing," not pamper them with soft predigested mush, so that after a time they cannot digest good, wholesome feed. Feed the good food grown on your own farm—hay, oats, bran, chop, etc. You know what these things cost you and what they will do.

ROYAL PURPLE STOCK SPECIFIC is an aid to these natural foods, and if you use it as directed, we can guarantee better results than if you feed any of the concoctions offered on the market as "prepared foods."

Try It on a Poor-Conditioned Animal

If there is a run-down, poorly nourished beast on your farm, see what ROYAL PURPLE STOCK SPECIFIC will do for it. A 50-cent package lasts a cow or horse 70 days. The cost is so trifling that no farmer in Canada has any excuse for having out-of-health stock around his place. Try it on the poorest-conditioned animal you have, and we know you'll be surprised at the result of a short treatment. Cattle and hogs fatten up a month earlier than without it, which means you save a month's feed and a month's labor. You can bring six pigs to the pink of condition at the cost of \$1.50. Steers treated in the same way cost no more than \$1.00 each to put in prime state for market. ROYAL PURPLE STOCK SPECIFIC fattens and keeps well horses, mares, colts, cows, calves, steers, hogs. Sold in packages, 25c., and air-tight tins, \$1.50.

NOTE.—We have hundreds of recommendations from all parts of the coun try. If ROYAL PURPLE STOCK SPECIFIC does not give you better results than anything you ever used, or give you satisfaction, we will refund your money.

No matter what you may think of other preparations, we want to induce you to try ROYAL PURPLE on your stock or your poultry, or both. The benefit will be yours.

Stock Raisers in all Parts of the Country Praise Royal Purple Stock Specific

We give below a few out of the hundreds of recommendations on file at our offices. Original letters can be seen any time. Write any of these people for further proof:

Cow Treated Gained; Others Lost.

Toledo, Ont., July 1, 1913.
I have used a part of your Royal Purple Stock Specific. I fed it to one cow according to directions. She gained six pounds of milk, while using part of a package. The rest of my herd reduced in milk while this one gained. I consider it has no equal.
T. J. BELLAMY.

Results in the West.

Saskatoon, Sask., Sept. 20, 1913.
Have tried your Royal Purple Stock Specific and find it to be the best conditioner we have ever used for our animals.
A. MARRIOTT, Mgr. Saskatoon Nursery.

Yearling Colt Soon Got Well.

Hammondvale, N. B.
This is to certify that I have brought from pasture a yearling colt that was hide-bound, hair dry and full of worms. I fed your specific and in a week's time he showed no signs of worms, and after three weeks' and a half course of your Specific, he is a sleek-looking animal.
R. PAXTON SHERWOOD.

On a combination order, amounting to \$5, we will prepay charges in Ontario and Eastern Provinces. In Western Canada these goods can be obtained from any of the Hudson's Bay stores or from Thos. Fletcher, Calgary.

STOCK AND POULTRY SPECIFICS

Try ROYAL PURPLE POULTRY SPECIFIC On Your Hens

N.B.—This is an entirely different preparation from ROYAL PURPLE STOCK SPECIFIC.

Do you know that ROYAL PURPLE POULTRY SPECIFIC makes hens lay in winter as well as in summer, and keeps them free from disease? It does, and helps them over the moult, fattens and keeps them in vigorous health. A 50c. package lasts 25 hens over 70 days. Shouldn't you try it? We have hundreds of recommendations from all parts of the country. If ROYAL PURPLE POULTRY SPECIFIC does not give you better results than anything you ever used, or give you satisfaction, we will refund your money. No matter what your opinion of other preparations, we want you to give ROYAL PURPLE POULTRY SPECIFIC a chance to show what it can do for your poultry—and a 50c. package will show you some fine results. Sold in 25c. and 50c. packages, and \$1.50 air-tight tins.

READ RESULTS OTHERS HAVE GOT! Makes Hens Lay.

Ivanhoe, Feb. 2, 1914.
This is to certify that I have used three boxes of your "Royal Purple" Poultry Specific, and there is nothing that can equal it. I purchased a box of your "Royal Purple" and started to feed my hens on the last week in November. The first two weeks in December I got three dozen eggs. The next week I got five dozen, the next week eight dozen and nine eggs. Your Poultry Specific made my hens lay well and kept them in good condition, and I would not be without it. I cannot say too much in favor of your Specific.
W. REID.

Gets Eggs—Others Don't.

Port Colborne, Ont., Nov. 21, 1913.
Please find enclosed \$8 for four tins of Poultry Specific. I am well pleased with its results. I get eggs right along every day during the winter when other people who are not using the Specific are not getting any eggs, and I find it very profitable to use your Specific.
C. RICHARDSON.

Royal Purple Roup Specific Costs You Little --- Saves You Much

For Roup, Pip, Diphtheria, Typhoid fever, Canker, White Diarrhoea, Swelled Head, etc., in Poultry. There are few poultry raisers who do not lose birds every year from roup. We print a letter from one of the most expert breeders in the country, a winner at all big shows. He finds it pays him well to use ROYAL PURPLE ROUP SPECIFIC, and it will certainly pay you.

ROYAL PURPLE ROUP SPECIFIC Is Sold in 25c Tins; By Mail 30c.

766 Waterloo St., London, Ont. Sept. 30, 1912.

Please fill my order for another 25c package of your Roup Specific. I have had very gratifying results from this cure. At the time I purchased the first package I had a very sick hen. She was not a very valuable hen, but a very sick one. I asked the advice of Mr. McNeil, the well-known poultry man, and he advised me to kill her at once. It was impossible to save her life. I had your Roup Specific and I thought I had better try it on her, as I might have a more valuable hen in the same condition. She then was almost dead, just gasping for breath. The Roup Cure relieved her at once and at the end of a week's time she was completely cured. I would not be without your Roup Cure at any price.
F. C. DULMAGE.

London, Canada, Jan. 5th, 1914.

I beg to state that I used your Poultry Specific and Roup Cure this Fall with remarkable success. I had a flock of about 70 Black Minorcas, that came from the country this Fall in very bad shape. (I hatched them and sent them out to be reared). They were running at the nostrils and generally out of condition. After using your Roup Cure for about ten days, they were entirely cured.
T. A. FAULDS.

Crediton, Ont., Jan. 3rd, 1914.

Last fall we had a large flock of fine turkeys, when they began to die from roup and swelled heads. We lost several a day after being sick about one week. I then heard of Royal Purple Roup Cure, and procured a box from Mr. Zwicker. Several of the birds were then affected with the disease, and I expected more of the flock to die; but, to my surprise, upon using the cure according to directions, each one of them recovered and soon began to thrive and do well. We have not lost a bird since we began to use the Roup Cure. We had equally as good success using it for our hens, which were also dying in numbers. I can heartily recommend its use to anyone raising poultry.
GOTTFRIED WEIN

WE ALSO SELL

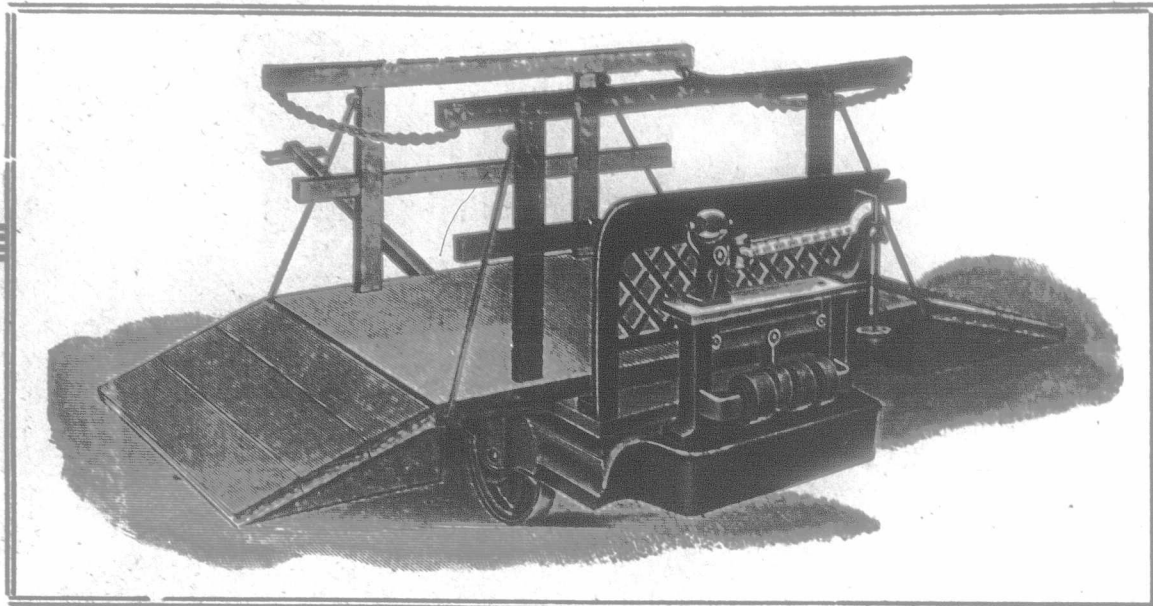
- Royal Purple Cough Specific for cough and distemper. (Will cure any ordinary cough in four days.) 50c. by mail, 60c.
- Royal Purple Sweet Liniment for lameness, rheumatism, sprained tendons, etc., 50c., by mail, 60c.
- Royal Purple Worm Specific for animals; removes the worm, also their larvae, 25c., by mail, 30c.
- Royal Purple Disinfectant, in 25c., 50c., and \$1.00 tins.
- Royal Purple Lice Killer for poultry and animals, 25c. and 50c., by mail, 30c. and 60c.
- Royal Purple Gall Cure for scratches, harness, scalds, open sores, etc., 25c. and 50c., by mail, 30c. and 60c.
- Royal Purple Roup Specific for roup, pip, diphtheria, typhoid fever, canker, white diarrhoea, swelled head, etc., in poultry, 25c., by mail, 30c.

Free TO STOCK AND POULTRY RAISERS

We will mail for the asking our new revised 80-page book on common ailments of stock and poultry. Tells how to feed light and heavy horses, colts, mares, cows, calves, steers, hogs; also how to feed and keep poultry so that they lay winter and summer. Cover lithographed in six colors showing farm utility birds in their natural colors. This is a book that should be in every farmer's possession. IT'S FREE. Write for your copy to-day.

W. A. JENKINS MFG. CO.,

London, Canada



The Aylmer Three-Wheeled Wagon and Stock Scale

Aylmer Scale is the only 3-point bearing scale on the market.
 The only scale that will weigh correctly on an uneven surface.
 The wheels are large and encased.
 All material and workmanship are first-class and guaranteed.
 Capacity of this scale, 2,000 lbs.
 Size of platform without rack, 24"x36".

Why should YOU not weigh your stock and grain and ascertain where you are making money, so as to enable you to increase your profits?
 This scale will pay for itself in a short time. Mail us \$26 to-day, and we will deliver this scale, with Government certificate attached, to your nearest railway station, if in Ontario, or \$35 with cattle rack.
 Let us hear from you.

The Aylmer Pump & Scale Co., Limited, Aylmer, Ontario

Cunard Line

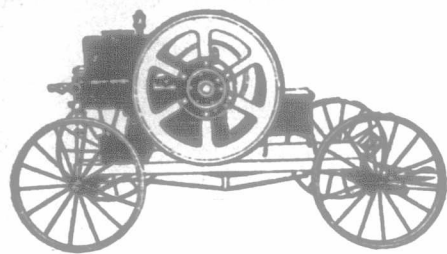
CANADIAN SERVICE
Immigration Department
 Farm help supplied.
 Write early for requisition forms.
 State if married couples, families or single persons wanted, also if experienced, partly experienced or inexperienced help required.
 State wages and conditions.
 Requisitions received before middle February will receive prompt attention.
 Passages can be prepaid.
 No charge made for securing help.
Cunard Steamship Co., Limited
 114 King Street West
 TORONTO

The Royal Mail Steam Packet Co'y

New, improved mail, passenger and freight steamship service from
St. John and Halifax
 To Bermuda,
 West Indies and Demerara
 All twin-screw, and fitted with electric fans, wireless telegraphy, bilge keels and submarine signals.
 These steamers have excellent passenger accommodation, and attractive tours are offered.
 Sailings from Halifax February 13th and 27th, March 13th and 27th. For literature, apply to any agency of the
Royal Mail Steam Packet Co.
 Or in Halifax to
Pickford & Black, Limited

CEDAR FENCE POSTS
 In car lots to farmers at wholesale prices.
 Write **C. O. ANNETT, Agent,**
 60 Springs, Ontario

SAFETY—SERVICE—SATISFACTION



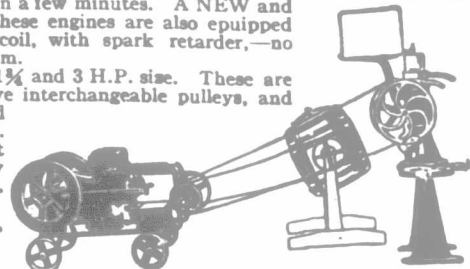
FOR EVERY POWER USER IF HE GETS A
GILSON
 "GOES-LIKE-SIXTY"
ENGINE
 MORE VALUE, MORE POWER, MORE SERVICE, MORE SATISFACTION.

Does SERVICE, SAFETY and SATISFACTION mean nothing to you? Does money saved in repairs and expense bills, time, equipment, etc., mean anything to you? Get Gilson Facts and find out how the Gilson 60-speed and 100% Service Engines do the greatest variety of work—give the maximum satisfaction—are trouble proof and fool proof. Their scientific design makes them absolutely safe—they are approved by the National Board of Fire Underwriters; no insurance troubles.

NEW FEATURES AND LATEST IMPROVEMENTS.

The new Gilson 100% SERVICE ENGINES, 4 H.P. and upwards, are equipped with our new friction clutch pulley with 5 interchangeable rims, each of a different diameter, Change to the proper speed for every job in a few minutes. A NEW and EXCLUSIVE GILSON FEATURE. These engines are also equipped with a magneto, without batteries or coil, with spark retarder,—no cranking necessary. A child can start them.
 We also make 60-SPEED engines in 1½ and 3 H.P. size. These are mounted on truck, with line shaft and five interchangeable pulleys, and pump-jack. Drop us a card to-day, and we will send you full descriptive literature. We are making special prices to the first purchasers of one of these engines in every locality. Write NOW. Agents Wanted.

GILSON MFG., CO., LTD.
 2209 York St., Guelph, Ont.



RENNIES SEEDS

PUREST-GLEANEST
 MOST RELIABLE
 GET CATALOGUE
 AT BEST DEALERS
 OR DIRECT
 TORONTO - MONTREAL
 WINNIPEG - VANCOUVER.

CLOVER SEEDS

Grown in County of Haldimand on clean farms. We guarantee Seed to satisfy you, and ship back at our expense.

- ALFALFA, Home grown, \$11.00 Bush.
- ALFALFA, Northern grown, \$ 8.50 Bush.
- RED CLOVER - \$10.50 Bush.
- ALSIKE - - - \$11.00 Bush.
- TIMOTHY - - - \$ 4.00 Bush.

Bags are 25c each extra.
 Cash must accompany order.
 Ask for samples if necessary.

If you want Feed or Flour at right prices, inquire of us.

The Caledonia Milling Company, Limited
 Caledonia :: :: Ontario

CANADIAN PACIFIC RY

IMPORTANT CHANGE IN TRAIN SERVICE

Train No. 27, now leaving Toronto 8.45 p.m. daily, arriving Sudbury 5.55 a.m. will be discontinued between Toronto and Sudbury after Saturday, January 3, 1914.
 Train No. 28, now leaving Sudbury 10.45 p.m. daily, arriving Toronto, 8.00 a.m., will be discontinued between Sudbury and Toronto after Sunday, January 4, 1914.
 Toronto-North Bay sleeping car will be discontinued with this service.
 Toronto-Sault Ste. Marie sleeping car will be handled Toronto to Sudbury on train No. 3, leaving Toronto 10.20 p.m. daily, and Sudbury to Sault Ste. Marie on train No. 27, arriving Sault Ste. Marie, Ont., 1.12 p.m. (Eastern Time), and Sault Ste. Marie, Mich., 12.40 p.m. (Central Time). Sault Ste. Marie-Toronto sleeping car will be handled Sault Ste. Marie to Sudbury on train No. 28, leaving Sault Ste. Marie, Mich., 2.30 p.m. daily (Central Time), and Sault Ste. Marie, Ont., 3.59 p.m. (Eastern Time), and from Sudbury to Toronto on train No. 3, arriving Toronto 9.00 a.m. Full particulars from any C.P.R. Agent, or write M. G. Murphy, District Passenger Agent, Toronto.

NINE LIVES Electric Flashlight

Only \$1.00 by mail

—gives a bright, powerful light instantly—just press the button. Compact, handy and safe. Four times as strong as any other and can be recharged for a trifle. Can't explode. The baby can handle it. Safe in a powder keg.

Mail your order to-day
 to
CANADIAN CARBON CO. LTD.
 90 West King St. - Toronto

\$1.00 prepaid

London Automatic Concrete Mixer

Does any kind of mixing automatically, measures and mixes. If you use concrete you better write us for price of this machine. We have the largest line of concrete machinery of any firm in the world. Tell us your requirements. **London Concrete Machinery Co., Dent & London, Ont.**

New Easier Better Spraying

Write For Free Book How to save money, labor, time. Banish blight, disease and insects from orchards, etc. Use **Brown's Auto Spray** Style shown has 4 gal. capacity—non-clogging Auto Pop Nozzle. 40 other styles and sizes—hand and power outfits.
E. C. Brown Co., 67 Jay St., Rochester, N.Y.

Corn That Will Grow

Canadian-grown seed corn. Your money back if not satisfied.
J. O. DUKE, RUTHVEN, ONT.

Dr. Maria Montessori

Batteries with Pedigrees
 Columbia Batteries are good stock. Quarter century reputation. Plainly built for hard work. Sold all over the world. Made in the largest factory. Handy for all battery purposes. Cost no more; last longer. Every cell signed by the makers.

Made in Canada by
CANADIAN NATIONAL CARBON CO., Limited
 Toronto, Ontario
 Finest stock spring clip binding posts at no extra charge.



ANTHONY FENCE



Every farmer is looking for the best fence that money can buy, and they get just what they are looking for when they secure ANTHONY FENCE.

A FEW POINTS ABOUT ANTHONY FENCE:

- A Fence that is made from all No. 9 gauge wire.
- A Fence that is made from the best galvanized wire.
- A Fence that will not bend down at the top or roll up at the bottom.
- A Fence that is tied together with the Strongest, Neatest and Most Compact tie on any Wire Fence.
- A Fence with Weaving as Perfect as human ingenuity and the most modern machinery can make it.
- Anthony Fence is the cheapest on the market when quality is considered.
- We make and sell 20 different styles of Fence, all made from No. 9 wire, besides the Poultry and Garden Fences, which are made from a lighter gauge wire and woven very close.

A trial order will convince you of the Superiority of Material and Construction of our Fence.

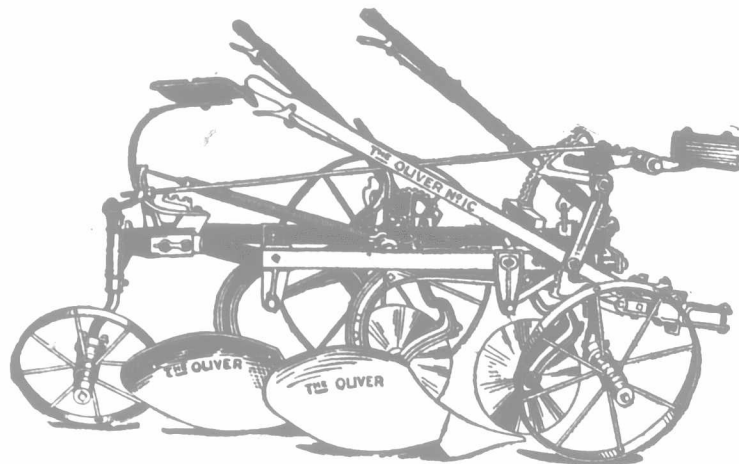
Live agents wanted in all districts where we are not now represented. Write us for our proposition.

The Anthony Wire Fence Co. of Canada, Limited

Walkerville Ontario



Oliver Plows



OLIVER Plows for Eastern Canada stand in a class by themselves as satisfaction givers.

The Oliver plow line includes walking plows, three-wheel sulkies, walking gangs, hill-side plows, high and low lift gangs, and riding cultivators. There are plows in the line which are specially adapted for most Eastern Canadian conditions. Among these are the Oliver 1-C sulky and 1-C gang. In both these plows most of the weight of the plow is carried on the two furrow wheels which, of course, ride on a smooth surface all the time. There is a spring on the land wheel which, in connection with the two bails on which the plow is hung, insures an even depth of plowing.

You can see any plow in the Oliver line at the place of business of the IHC local agent. If you will tell him what kind of plowing you want to do, he can show you an Oliver plow that will do your work best. See him for catalogues and full information, or write the nearest branch house.

International Harvester Company of Canada, Ltd

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.; Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.

Oliver plows are built at Hamilton, Ont.




Buy It Because It's a Better Car

Model T Touring Car \$650
 f.o.b. Ford, Ontario

Get particulars from Ford Motor Company of Canada Limited, Ford (formerly Walkerville), Ont.



Comfortable Cow ties - Increase Milk Production.



Your dairy profits depend largely on your dairy barn. In a sunny, sanitary barn like this, where Galvanized Steel Stalls prevent accumulation of filth and spread of disease, your cows grow up healthier. They give more and better milk. You get better prices for your stock and dairy products.

Note the long rows of clean, comfortable cows in this photo. No manure on their flanks or udders, because the special Aligning Device on BT Galvanized Steel Stalls lines every long and short cow up evenly over the gutter, so manure falls right into the gutter, and cattle stand remains clear.

BT SANITARY STEEL CALF-PEN

BT Steel Stanchions and Galvanized Steel Stalls, while keeping the cow lined up to the gutter, give her absolute comfort. There is no weight on her neck, nothing to jerk her head when she lies down. She can turn her head to either side, lie down on either side and card herself on any part of her body. The steel partition prevents her being trampled on by her neighbor and having her udder ruined.

BT GALVANIZED STABLE EQUIPMENT

BT Steel Stanchions and Galvanized Steel Stalls are easier to install than wood—we send you blue print plans to show you how. Last 100 years, because they're Galvanized and won't rot, break, burn or rust. Pay for themselves in a single year by increasing milk production, saving barn-work, preventing disease.

FREE BARN-PLAN SERVICE

Your barn must be carefully planned, or mistakes will be made in building, which will increase the cost, and will result in poor layout, or poor ventilation, lighting or framing. You will avoid these costly mistakes by letting Beatty Bros. help you plan your barn. Our service is free. Tell number of cows you will keep and size of barn.

FREE COUPON

Have many other money-saving advantages that you should learn before building your barn. Send for free book No. 21 that tells all the facts about BT Galvanized Equipment. Also ask for valuable book "How to Build a Dairy Barn." Address:

BEATTY BROS. Limited
 1231 HILL ST. FERGUS, ONT.

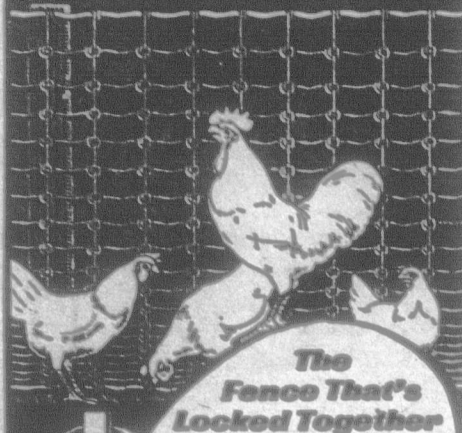
Please send me your Free Stall Book No. 21 about BT Galvanized Stable Equipment, also free book "How to Build a Dairy Barn." I expect to build or remodel in 1914, about _____ cows. I will keep _____ cows.

Name _____
 P.O. _____
 Prov. _____

Beatty Bros., Ltd.
 1231 Hill Street, Fergus, Ont.

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 \$1.00 by mail
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 Can't explode.
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 VEN, ONT.

PEERLESS PERFECTION



The Fence That's Locked Together

It's close enough to keep small fowl in and strong enough to keep large animals out. Securely locked together at each intersection of the wires. It's many times heavier and stronger than poultry netting, and being well galvanized, will last many years longer. Top and bottom wires are extra heavy. No top and bottom boards required. PEERLESS Poultry Fence is built so strong and heavy, that but half the ordinary number of posts are required. It gives you real fence service.

Here's How Strong It Is

Dear Sir: I am writing a testimonial as to the strength of PEERLESS Junior Chicken Fencing. Mine is four feet high. It turned two horses each weighing 1200 pounds. They ran full tilt into the fence about 2 rods from each other at the same time. The result was that they both turned a somersault over the fence, alighting on their heads and necks, scratching them up some, but the fence remained intact. Yours truly,
Surrey Center, B. C. Joe Rothford

Think of it—a poultry fence strong enough to withstand the combined weight of two big horses. And that without a top or bottom board either. If you are interested in such fencing, write us. Ask for our literature. We also manufacture farm fence and ornamental gates.

Agents wanted everywhere. Live agents wanted in unrepresented territory.
The Beavell-Hoxie Wire Fence Co., Ltd.
Windsor, Ont. Hamilton, Ont.

Aylmer Superior Lever Force Pump

For Hand and Windmill use. Has Six, Eight, and Ten-inch Stroke. Adjustable Base.

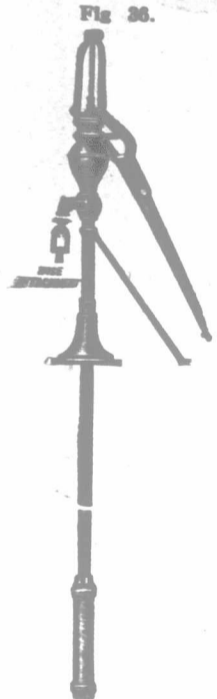


Fig. 36 represents our Superior Lever Pump, fitted for hand and windmill use. Made in 1 1/2 and 2-inch.

This style of lever and fulcrum has several advantages over the ordinary style; having longer stroke the power is greater, making it work easier. The handle, being wood, they are not so liable to break in frosty weather.

The base is adjustable admitting of top being raised or lowered to any position desired.

The handle is drilled for three lengths of stroke. Six, eight, and ten-inch stroke.

This is readily converted into a Windmill Pump by the addition of a flat bar, which screws into the cross-head on top.

Cylinders capped inside require to be two inches longer to obtain same stroke.

This pump is adapted for all depths of wells; furnished with Iron, Brass Body or Brass Lined Cylinder. You'll never regret placing

one of these pumps on your farm. Write us to-day for prices and illustrated catalogue free.

Aylmer Pump & Scale Co.,
Aylmer, Ontario

A FARMER'S GARDEN

Helps his wife to plan her table in busy times. Saves work and worry, saves buying so much meat, gives better satisfaction to the help. A good garden will be almost impossible in your busy life without proper tools. They cost little and save much hard work.

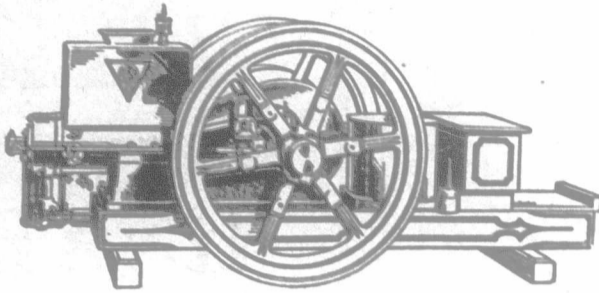
IRON AGE WHEEL HOES AND DRILLS

will sow, cultivate, ridge, furrow, etc., better than you can with old-fashioned tools and ten times quicker. A woman, boy or girl can do it. Can plant closer and work these hand tools while the horses rest. 32 combinations from which to choose at \$2.50 to \$12. One combined tool will do all of the work.

Ask your dealer to show them and write us for booklet, "Gardening With Modern Tools" and "Iron Age Farm and Garden News" both free. The Bateman-Wilkinson Co., Limited, 412 Symington St., Toronto, Can.



Alpha Gas Engines Are Farm Burden Bearers



The "Alpha" is a good engine for any purpose, but because there is no "mystery" in either its construction or operation it is ideal for farm use.

It isn't built of rough castings and high grade watch.

put together like a stove. It's built more like a high grade watch. It starts and runs on a slow speed magneto. That means you have no batteries to fuss with or to exhaust themselves.

You just give it a supply of gasoline or kerosene, oil it up, give it a pull and away it goes and saws your wood, cuts your fodder, grinds your feed, pumps your water, runs your cream separator or your washing machine, or anything else you want it to do. No worry, no bother, no tinkering—just plugs along like a steady well-broken horse.

Every farmer ought to have an "Alpha." Send for new catalog.

You Could Buy an IDEAL GREEN FEED SILO



every year and still be money ahead.

If you keep cows or raise stock you are losing money every year you try to get along without a silo.

Get our Silo Book and learn how to make more money with silage.

DE LAVAL DAIRY SUPPLY CO., Ltd.
LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA
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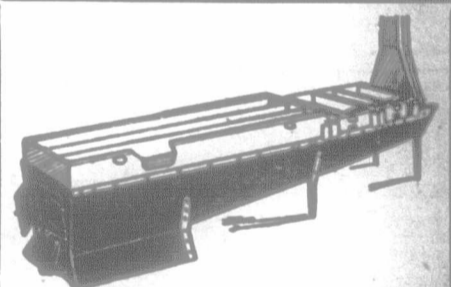
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LONDON, ONTARIO, FEBRUARY 12, 1914.

No. 1116

EDITORIAL

Buy seeds early, and get the best.

So far the winter has not been very "surlly."

The agitation for a better recognition of agriculture has not been in vain.

Prepare to sow the kind of seed which will ensure a good crop in 1914.

The man who will need an extra horse in the spring would save money by buying early.

By repairing implements and machinery now you are preparing for the season which is approaching.

The season of new-milk cows is at hand. Start now to weigh the milk and place each cow on a fair basis.

We recently read an enquiry for grass seed which contained this statement, "No. 1 quality not necessary." It is always necessary.

The United States has removed the embargo on arms entering Mexico from that country. If the Mexicans must fight this should hasten the end.

Which is the most likely to grow into a profitable cow, that good heifer calf from your own high-producing cow, or a nondescript heifer purchased at a public sale?

Sir Edward Grey, in a speech recently delivered at Manchester, England, stated that competition in armaments would eventually lead to disaster, and ruin the prosperity of Europe. If he persisted in there can be no other end.

One may retail sausage over a counter, shovel coal or guide the destinies of a street car with a moderate stock of capacity, but when it comes to twentieth-century farming, the problems involved call for a full endowment.

The members of the various live-stock associations who did not attend the annual meetings held last week in Toronto should not complain if things were not done according to their views. Each should attend and support his own ideas.

A fake promoter has been rounded up in Toronto by the police selling thousands of dollars worth of stock to gullible town folks in an illumination project contrived to light whole farms and enable farmers to plow all night. This is probably another scheme to pull down the cost of living.

"The Last War in the World" is the title of a lurid article in the Century Magazine by H. G. Wells, who describes a fearsome aeroplane conflict over Germany, the cities of which perish in a cataclysm of falling bombs. People may raise their eyebrows over the notion, but its no phantasy with your military enthusiast. The audacity with which he conceives new schemes and burdens to fasten upon a long-suffering people passes belief. France has already under way a public national subscription for a million-dollar aeroplane war fleet of 210 craft, military air posts and pilots all ready to fight. It is to be hoped that the last war will soon be over

Aiding Agriculture and Promoting Peace.

When the great nations of the world are straining every nerve in a useless competition of armaments, and year after year the expense incurred in an endeavor to overcome the danger of war by preparation for war increases, it would seem that the great poet, Tennyson who seventy-two years ago predicted that following a period in which the great navies of the world would be navies of the air, the war drum would no longer throb, and the battle flags would be furled "In the Parliament of man the Federation of the world" had thrown out a prophesy which would never come true. But turning from the preparation for strife, which is continuously going on in the naval yards and the armor manufacturing plants of Europe, to the public opinion which is gradually gaining ground in the New World, we see the beginning of the fulfilment of this prophesy.

People are commencing to understand that there are many industries more deserving of advancement than those connected with the manufacture of munitions of war. This was evidenced in the estimates which were recently brought down in the House of Commons at Ottawa. Reductions were made in both militia and naval expenditures, and at the same time a very marked increase in the amount allotted for the encouragement of agriculture, the basic industry of this country, was made. This is a beginning for which the government deserves praise, and it is to be hoped that as time goes on the precedent now established will be maintained and strengthened, and that more and more will the things that really make a country be fostered and encouraged, and more and more those intended to destroy be restrained.

We must agree with the writer, who away back in the seventeenth century made bold to state in those troublous times that "peace is that harmony in the state, that health is in the body, and no kingdom can flourish or be at ease in which there is no peace; which only makes men dwell at home and enjoy the labor of their hands, and improve on the advantages which the air and the climate and the soil administers to them, and which yield no comfort where there is no peace."

A larger grant to agriculture tends towards the enlightenment of the people with regard to and connected with that noble calling. It cannot help but improve the advantages of the man on the land, and thus work for the good of the nation. What benefits the producer must ultimately help the consumer. Let us have more for agriculture and a stronger sentiment for peace.

Who Does Your Thinking?

The business of agriculture is too important to the man engaged therein to permit of his being the dupe of men engaged in other occupations, and who have more time to exercise their minds and less work for their hands to do than has the busy tiller of the soil. Every man, no matter what occupation he is engaged in, should do his own thinking. This is especially true of the manager of a business like farming. Too often the man on the land sees himself as nothing more than a laborer, never allowing his mental faculties to become developed to such an extent as to very materially lessen his manual labor. He seems to think that it is enough for him to work with his hands. True, a man who works

at hard, bodily labor, long hours each day, has not the same opportunity to do deep studying of important questions as has the man whose business is to do nothing else but turn such matters over in his mind. However, busy as the farmer may be, he has still time to think. In fact much of his work should inspire thought. Driving a team in the field gives him plenty of opportunity to turn various matters over in his mind. He is right on the spot, and who is in a better position to weigh carefully in his mind what the farm needs in the way of cultivation, general management, and various other items connected with its operation? Then, too, he should be able to ponder in his own mind the large public questions of the day. The average farmer of the twentieth century is, comparatively speaking, and certainly ought to be, a well-read man. Very often he knows much more about public affairs and the large questions which are puzzling the minds of parliamentary leaders than do many of his city cousins, but many people are readers who are not thinkers. Good papers, magazines and books may do much and do accomplish a great deal in molding public opinion, but the man who passively takes the thought of another, word for word, does not dissect and weigh it in his own mental balance and form his own unbiased judgment can never hope to be anything more than a mendicant in the realms of thought. It is the man with ideas that is making most out of life for himself and for the community at large. Good judgment does not proceed from mental inactivity, and great success is not accomplished by men who allow others to form their opinions for them. We would urge the readers to digest more of what they read; ponder it in their minds, in other words think for themselves. Getting other people's opinion is a valuable asset to a thinking man, but acting upon his own if good judgment is used is far more important and valuable. Use good reading to aid in thinking, and by all means think.

The Peril of Poor Seed.

It may seem rather early in the season, but in reality it is none too early to commence preparation for next spring's seeding operations. If it has not already been done, every implement required for the cultivation of the soil and in preparation for the seeding should be carefully gone over and if any repairs are needed they should be purchased at once, and machines and implements fitted for the field.

Even more important than this is the selection of seed to be sown. The earlier the seed is in the ground, after the time when the soil has reached the proper conditions for seeding, the better the chances for a good yield. Thus it is important that when the warm days come and the soil is dry and ready for the seed, that no time should be lost and so it is necessary that the seed be got ready at this season. Every day lost in seeding means bushels less on the final yield.

Plenty of time should be taken to properly clean the seed, after it has been purchased or selected from the bin in the granary. The loss from sowing an inferior quality of seed can scarcely be estimated. Experiments carried on at the Ontario Agricultural College have shown that from large seed of barley 3.4 bushels per acre more is produced than from small seed, each quality being plump, while the difference between the large, plump seed and the shrunken was 7.8

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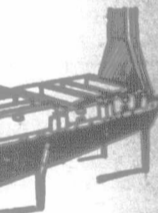
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JOHN WELD, MANAGER.

Agents for "The Farmer's Advocate and Home Journal,"
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bushels per acre. The variation in oats was even more marked, large seed giving nearly eight bushels per acre more than small seed, both being plump, while the large seed gave almost 16 bushels per acre more than the shrunken seed. The same is true of wheat, the difference between large and small winter wheat being over six bushels per acre, and between large and shrunken 15 bushels per acre. This is surely evidence enough that it pays to sow the best seed. Several days may be profitably spent in cleaning the seed grain for only a small acreage. Put it through the fanning-mill time after time until nothing but the largest, plumpest seed remains. It is generally wise the first time through to turn fast, put on all the wind possible and blow out all light seeds, dirt, chaff and many of the lighter kinds of weed seeds. Subsequent cleanings should be made, using a coarse screen which divides the large and small kernels, and takes out remaining weed seeds. For these latter cleanings it is necessary to run the grain through the mill very slowly. Clean and re-clean and, in some cases where a particularly fancy strain of seed is being propagated, it may be necessary to hand pick which will take some time, but it may prove very valuable by getting a superior strain of seed, absolutely pure from which seed for future crops may be taken.

Every grain grower who has had to fight the inroads of our increasing number of noxious weed pests knows how important it is that weed seeds be banished from the seed sown whether it be grain, roots or grass seed. It is not enough to be able to say that the seed is "fairly clean." It should be absolutely free from bad weeds. Many do not realize how rapidly these pests increase if only a few seeds are sown with the crop. Take some of our commoner weeds as an example. One plant of wild oats of the average size and growth will produce about 800 seeds annually. Quack grass which has given many so much trouble, is not a very profuse seeder, reproducing from root stocks, but even the average plant of this weed produces some 400 seeds. The well-known rag weed which is over-running field after field in this country is a heavy seeder,

an averaged-sized plant yielding about 5,000 seeds, which when disseminated means 5,000 new plants. Ox-eye daisy, the pest of permanent pastures and long-seeded meadows produces 7,500 seeds per plant. Our old friend, the Canadian thistle, troublesome, but not as difficult to eradicate as some perennial pests, produces about 3,500 seeds per plant, and then we have the perennial sow thistle which has almost driven farmers to despair and which when it once gains a foothold fairly crowds out all other vegetation, an upright-growing, branching perennial which has two methods of spreading, the main one being from root stocks, but still one small seed in your grain may produce a plant, which in its flowering season may spread 2,000 seeds over your field. One wild mustard seed, if it germinates in the grain and grows to full maturity will produce in the neighborhood of 15,000 seeds. The hardest weed to kill of them all, field bindweed, produces per plant somewhere in the neighborhood of 160 seeds, but relies mainly on creeping root stocks for its spread. There are dozens of others. False flax, a bad weed in some districts, will produce 40,000 seeds per plant. Pepper grass, bad in meadows, grows branching plants which will produce in the neighborhood of 18,000 seeds each. Bladder campion, night-flowering catch fly, and white cockle produce with average growth about 10,000 seeds each per plant.

Think what this means. One seed of any one of these noxious weeds sown with the grain may mean thousands of seeds to be distributed next fall, when the plant which grows from the single intruder matures and scatters the seeds which it has produced. For instance, if one wild oat seed germinates in your oats, grows to maturity, produces 800 seeds, and these 800 seeds, some of which will fall out on the ground before the crop is cut, germinate, you will have the following year 640,000 wild oat plants, each of which will be producing 800 seeds. Of course, this is taking for granted that all the seeds produced grow. With reasonable care a large number of them would not get back to the land, but once they gain a foothold it is difficult to eradicate them, unless the field is seeded down for a number of years and it can be readily seen how soon, if care is not taken, the weed will form a large percentage of the crop. This is even more marked in such weeds as rag weed, perennial sow thistle, wild mustard, and other heavy seeders.

Each weed means a loss to the farmer, as it is taking plant food which would go to the development of the crop on the soil. When they become thick they also do great damage by crowding other plants, and in many cases smothering them out. One could scarcely conceive in the face of all these facts how a man who has land to sow could be careless with his seed. More than most of us think the yield next summer depends upon the seeding this spring. Large, plump, pure seed, free from all weed pests, sown early means larger yields, less labor and more profit. Get the seed ready now, while there is time, for the days of spring cultivation are too short to be cut in upon by unnecessary labor, which should have been done during the winter months.

Nature's Diary.

By A. B. Klugh, M.A.

In the winter fields, and particularly along their edges, we often find a delicate tracery of small mammal tracks. These are usually the tracks made by field mice in their nocturnal rambles. The field mice are small animals, but they make it up in numbers what they lack in size. They are an example of the truth of the saying, "It's the small things that count," which is true as applied to animal forms as it is to the affairs of everyday life, for it is not the moose, deer and bears that cause the destruction, but such small forms as insects and mice.

Field mice are unobtrusively, but continuously, destroying farm products. In summer, they eat grass and the unripe seeds of grain and grasses. In the fall, they live on ripened seeds of these plants. In the winter, they feed on the roots of various plants, stores of which are often made earlier in the season, and on the bark of trees. They also eat the crowns of clover and other plants. It is in the spring that their work in the young orchards becomes visible. Then many fruit trees are found to be "girdled" and killed. The quantity of green vegetation eaten

by a single field mouse in the course of a year has been calculated at from twenty-four to twenty-six pounds. At this rate, a thousand mice in a meadow would require at least twelve tons of grass or other vegetation to maintain them for a year. And a thousand mice in a fair-sized meadow is a conservative estimate.

The damage above mentioned is the usual destruction due to field mice which goes on year after year. But when mice increase at such a rate as to become a plague, then the destruction is immense and at once apparent. Such plagues of the European field mouse, which is closely allied to our species, have occurred in Austria, Germany, France and Scotland. One year, in the district between Erfurt and Gotha, in Germany, about twelve thousand acres had to be re-plowed because of the destruction of the first crop by the mice. During this same plague, 1,570,000 mice were caught in fourteen days in the district of Zabern. The French naturalist, Louis Figuler, states that "whole districts have been reduced to destitution by this scourge" and also says that one department (Vendes) experienced a loss of \$600,000 caused entirely by these animals. In 1892, large areas in Southern Scotland were overrun by field mice and a great deal of damage done, so much in fact that a committee was appointed by the British Board of Agriculture to enquire into the cause of the plague. The commission reported that it was due to the destruction of hawks and owls, which are the chief natural enemies of field mice. This wholesale killing of birds of prey was done by the gamekeepers, who regarded them all as enemies of their game, and by farmers, who believed them to be robbers of their poultry-yards.

In North America, we have so far had no plagues of field mice, because their natural enemies are still abundant enough to keep them in check. But if some discrimination is not exercised in the killing of hawks and owls, we cannot foretell how long we shall continue to be free from plagues. It is high time that the farmer and the hunter realized that there are very few injurious hawks and owls, and many beneficial species, and that none of these birds should be killed unless caught robbing the hen-yard.

When we consider that the field mouse has from four to eight young in a litter, and four litters in a season, and that they breed when about six months old, we can see that we have always present a potential plague, and that it is only the work of their natural enemies which prevents this plague from becoming a reality.

An interesting case of the way in which birds of prey act in preventing an undue increase in the number of field mice is given by Prof. MacClement, of Queen's University. He states that one autumn the mice became very abundant on Wolfe Island, Ont. So numerous were they, that often a man in going from the barn to the house would impale from seven to nine on the tines of a pitchfork. As soon as winter set in snowy owls appeared and increased rapidly in numbers, until they became so common that Prof. MacClement found them to average three to the mile, in driving along the road. The owls made short work of the mice and in the spring the rodents were reduced to their usual numbers. In a case like this, it looks on the face of it as if the owls had a system of wireless telegraphy, and that those first on the ground sent out messages, "Hunting good on Wolfe Island. Come at once." As a matter of fact, these birds in their southward migration stop wherever the mousing is good, and consequently soon collect in large numbers.

While hawks and owls are undoubtedly the chief natural enemies of field mice, there are other animals which play a part in keeping them in check. Among these the most important are skunks, foxes, weasels, crows, shrikes and snakes.

THE HORSE.

A Stallion for the Neighborhood.

There are many districts in this country which could be greatly benefited if a first-class draft stallion of one of the breeds now recognized were introduced. It may be that no one man in a particular district cares to invest the amount of money necessary to buy a horse of the best quality, but no district is so poor but that by a little co-operation amongst the neighbors one of the best horses could be procured. The purchase of a stallion offers one of the best opportunities for farmers to get together and there should be no good reason why such a policy should not work out. It is a well-recognized fact that the sire, no matter what the breed or class of stock, is at least one-half the herd or flock produced.

The first thing necessary where a number of men combine forces in a community to improve the horse breeding on their farms is to decide what breed is best suited to that district. Keep in mind the brood mares already owned by those interested in the stallion. It would not, as a

Dr. Maria Montessori

general thing, be advisable to purchase a Clydesdale stallion where the mares were all of the Percheron breed and it would be equally bad practice to buy a Percheron for mares of the Clydesdale or Shire breed. Cross breeding is not, under average conditions, to be recommended. Having decided upon a breed, it becomes necessary to make the purchase. A representative or representatives from the club of men which are to be joint owners of the horse should be sent out early in the season to make the selection. It is generally advisable that one man or a committee of not more than three select the horse. If a larger number are sent differences of opinion generally arise and the outcome is dissatisfaction before the horse is purchased, whereas if a smaller number go a good horse is selected and he comes into the district and is backed up by every man belonging to the club. Choose the best horseman to select the horse. Of course, some agreement should be reached before he is sent out, as to the amount of money at his disposal. This he usually knows, because under most conditions each man subscribes a certain amount to be used in the purchase of the horse.

We must emphasize the fact that it is advisable to buy early. While stallions are fairly plentiful this year, very high-class sires are not too numerous and the earlier the selection is made the better the chances of getting the kind of horse the district needs. This would apply where an individual is buying a horse for his own use or to the company plan of procedure. If the buyer waits until spring or until the approach of the breeding season it is more than likely that all the good horses will have been picked up and those in the stables will be big, fat, soft, impotent, flabby individuals, not sure foal getters and not good breeding individuals. Such horses must be avoided. Go and see the horses. Look through the stables; select your individual carefully; get one which shows vim and intelligence; size him up from the ground to the tips of his ears; look over his joints; examine his muscling; get the right slope of shoulder and pastern; insist upon size, combined with quality, and avoid the horse with the very light middle. Get the good quality of foundation and after that get all the weight you can. When the horse is bought, take him to the home of the member of the company who is to look after him throughout the season. Feed him well, but do not overload him with fat and see that he gets exercise every day. It means work, but this work means a good deal to the breeders in the number and class of colts which they get next season.

We cannot urge too strongly this system for many sections of the country. Of course, there are other sections where individual horsemen make a business of keeping stallions for service and keep first-class individual animals. In such districts, the need for neighbors getting together and owning their own horses is not so urgent, but not all districts are so fortunate and it becomes necessary to either breed to the scrub horse which happens to travel the road or to combine forces and drive him out by getting in a top-notch destined to revive and strengthen horse breeding, which has in some instances been almost ruined by the use of indifferent culls. It is necessary in operating the horse business on this basis that the men interested in the stallion stand together. No "knockers" should be admitted to the little ring which is to own the horse. All must agree to stand by the animal which those appointed see fit to select and regardless of opinion of outsiders give him a chance to do for the horse-breeding industry of the community what it is intended that he should do and what undoubtedly he will do, if the right judgment has been used in his selection and he turns out as most good horses do.

The farmers of this country need a little more of the community spirit and the sooner they get to doing things for themselves the better; such practice would not in any way injure the big horse breeders of the country. It would help them. The big breeders and large importers are only too glad to sell to such companies, because they know that once suited such men are sure to come back for another horse when the one previously purchased has served his day in their community. They know well that such a system practiced in the districts where horse breeding is rather backward and in some districts where it is gradually forging to the front would drive the grade and inferior animals off the road. The trouble has been that individuals have hesitated upon placing a large sum of money in a horse, fearing loss, whereas if a number of individuals clubbed together and jointly bore the expense of buying and maintaining the stallion losses, if they should occur, would not be so severely felt, and a good horse would be at their service, in the place of the two-hundred-dollar individual which some poor horseman thrusts upon the mare owners, who have no other means of keeping up the horse supply of their district.

Get in the game early. Hold a meeting of the men who own good mares in the district, and at once decide upon the kind of horse you want; select your buying representatives and get the stallion in your stalls at as early a date as possible. It will pay and pay well and once established and properly managed the system is sure to grow in favor. No one should apply for membership in this little horse circle but those who are honest and straightforward enough to do as the agreement calls for. Too many so-called syndicates have ended disastrously because of the fact that some of the members have not lived up to their agreement, or that purchasing agents have been "handled" by the horse breeders and importers and in many cases inferior animals are unloaded upon them. This has meant death to the system in some localities. It is not the system that is at fault, however, but the methods of operation very often due to one or two crooked individuals which have gained access to the syndicate with little purpose other than to wreck it. Choose the men carefully and if everything that is done is done right success must eventually follow.

The Brood Mare.

During the winter there is a strong tendency to do one of two things in the management of the brood mare on the farm. The one tendency is to give her extra care and feed and keep her more comfortable than is for her good or is destined to produce strong, healthy foals. The other is to go to the opposite extreme with the idea that to produce healthy foals it is necessary for the mare to get out and rough it with the rest of the horses.

These ideas are based upon sound logic to a certain extent. The one idea is based upon the fact that the mare requires extra care, the other, that she requires exercise, and plenty of it. The one feature that is not given enough consideration is that these two requisites should be combined.

There is no particular way in which brood mares must be handled to ensure strong, healthy foals. A score of methods of management and feeding on as many different farms will be found to result in strong, healthy youngsters, but on all these farms these three factors, comfort, feed and exercise, are invariably given consideration.

About this season of the year, mares in foal will develop a crabbed nature, and will kick or chase any horses about the yard that they happen to be turned out with, particularly in this

outside scattered around in the yard. A little may be lost, but it will be worth while if it ensures the mare taking exercise. However, it is taking rather heroic measures to turn the mare out to get her entire feed on the prairie or on the stubble, and around the straw stacks to obtain this exercise.

When it is possible a box stall is an ideal place for the brood mare, but as this can not always be given the ordinary stall with plenty of straw for bedding will serve the purpose. She should, however, during reasonably fine weather spend only the nights in the stable, spending the entire day outside in shelter of straw stacks or buildings, and with plenty of roughage to pick over.

In feeds, absolutely nothing should be fed that is not clean and free from mustiness or plant diseases. Dirty or diseased fodder is another of the sources of abortion for which the owner can not account afterwards. As to what constitutes good feed, clean, whole oats in moderation, not exceeding two gallons a day unless the mare is doing light work, and all the hay the mare will eat will make a satisfactory ration. Keep salt where she can take a portion at will. If oat sheaves are fed instead of hay, reduce the oats fed very materially, unless the oats were cut before any grain whatever had formed.

One further point, sanitation of the stable should be maintained. The stable should be disinfected from time to time, and it would be well to wash the stalls of any brood mares with a two per cent. solution of creolin or carbolic acid frequently. See that any strange mares or horses put in the stable are not put close to the brood mares. These strange mares may have aborted recently, or both the mares and horses may be carriers of contagious abortion bacteria.

When one has taken the trouble to breed a mare, pay the service fee and get the mare well along in the gestation period, it is worth while to spend a little extra time and exert a little extra care to ensure the mare carrying the foal to the end of the gestation period and delivering a strong, normal foal. —Farmer's Advocate and Home Journal, Winnipeg, Man.

LIVE STOCK.

Management of Breeding Bulls.

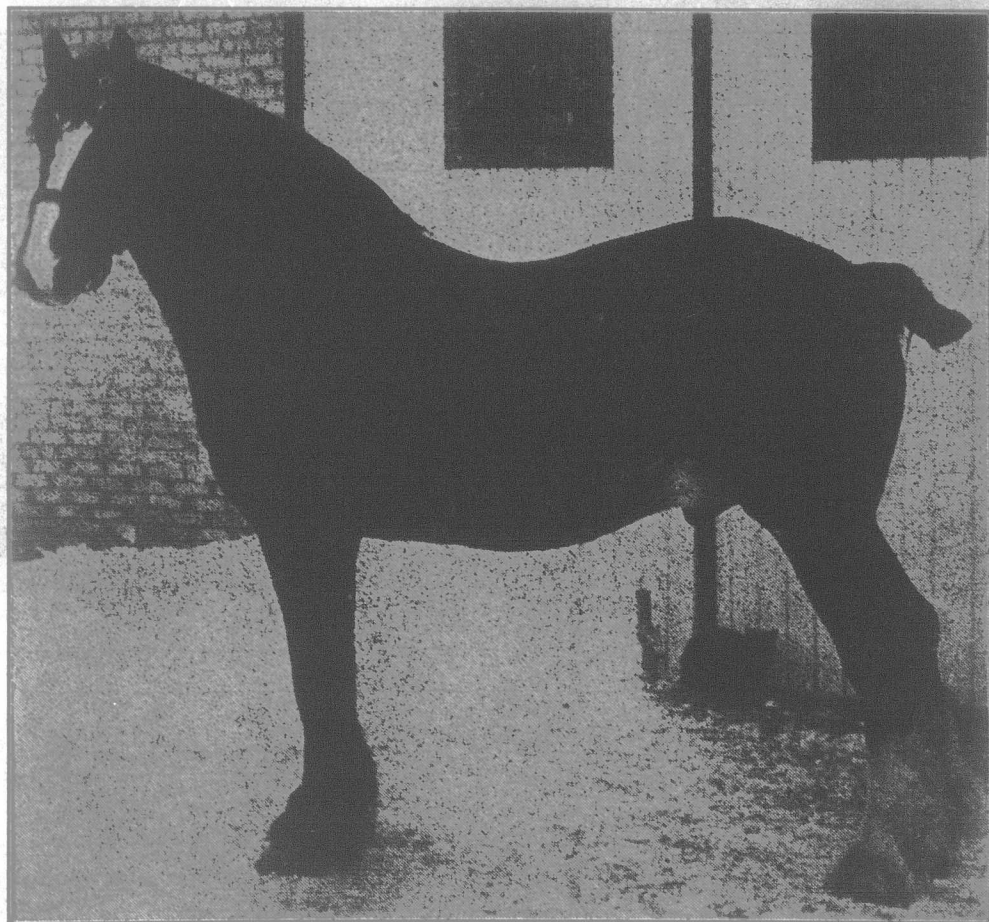
Editor "The Farmer's Advocate":

In order to produce the most desirable results, breeding bulls must receive intelligent treatment and a plentiful supply of nourishing food. The poorly conditioned, worn-out sire cannot beget healthy and vigorous calves. To be at his best he must have plenty of suitable food given him at the proper intervals. There should be plenty of bulky and succulent food, such as clover, alfalfa or mixed hay and roots or silage, with the addition of just enough wholesome grain foods to keep him in a vigorous, gaining condition. His water supply should be of the cleanest and given regularly, at least twice a day.

A large and comfortable box stall gives the bull more freedom and is more safe and convenient for the attendant in feeding and handling the animal. Such a bull pen should be well ventilated and arranged so that plenty of light will be admitted.

It is also well to have it so arranged that it may be darkened in summer to keep out the flies. He should be kept clean and provided with sufficient bedding material to prevent injury when getting up and down, as large animals, whose immense weight resting on their knees on a hard floor, such as concrete or plank, are very apt to bruise them and cause enlarged joints.

The care of the animal's feet is another important matter that should be given careful attention. The constant standing in the stable has



True Movement.

This Clydesdale stallion weighs over 2,000 pounds. He is a good sire, and for sale, at the stables of T. J. Berry, Hensall, Ont.

so of horses with which they are not familiar. While they may not be directly injured through kicking, a slip or the sudden jump at another mare or horse will often result in abortion, for which there is no apparent cause. Mares turned out for exercise should be put in a yard by themselves with their stable mates only, or with one or two colts.

A good many mares if fed in the stable will, when turned out, stand at the yard gate or stable doors for hours. To ensure exercise when possible feed all roughage, hay or oat sheaves

a tendency to cause the hoof to turn up in front and prevent the animal from walking squarely on his feet. If the hoof gets out of shape, it should be shaped properly by the use of a saw, pinchers and chisel.

Exercise is a very necessary feature to the health and general thrift of the breeding bull. The best way to afford exercise is to have a small lot tightly fenced and allow him to run with one or two in-calf cows. In this way he will be more contented than if kept confined alone. If kept confined in a small pen where he is constantly fretting he will have a spoiled disposition.

It is very important to always handle breeding bulls carefully and treat them with kindness. If proper precautions are taken there is very little danger, yet it is always best to be on the safe side and handle them with a staff attached to their nose-ring, as an animal of this class is never safe to trust no matter how quiet he may be. The idea that a bull must be ill-treated to know his place is a mistake. He is cunning and treacherous and if abused will await his chance to even up with you and when he does get his temper aroused he is a very dangerous animal to be around. It is many times best to put up with a few of his eccentricities than to undertake to club them out of him or you will have a merry time in bringing him to your way of thinking. Give him a little feed and pet him, even if you are playing the role of a Judas. I have handled dairy bulls for a number of years and have never had but one dangerous animal and this one I bought from a man who was afraid to handle him any longer. On the other hand, I never allow an attendant to take a bull, young or old, out of his pen unless he uses a strong staff. It teaches him you are his master and he willingly takes up with the program.

As a rule, it is best not to use a bull for service until he is fourteen or fifteen months of age, and then he should be used with extreme care. If handled properly during the first two years of breeding, he may give good service for many years. The folly of selling a good bull before his calves show their worth as individuals and breeders has been made plain to more than one man who has parted with a good sire. As a general thing, it is best never to allow more than one service.

The young and growing bull should have more feed, care and attention than a mature animal. He needs more exercise to build up healthy and vigorous vital and reproductive organs. This demands a strong and vigorous body and nervous system. No animal can develop into that symmetrical form that he should unless he has plenty of the right kinds of food and good care. Neither will he be able to beget calves that will be a credit to his ancestry if he is kept in a run-down, emaciated condition.

Good results from the breeding bulls are what we desire and to the accomplishment of this end we must feed them liberally and furnish them clean and well-ventilated quarters. Handle them quietly and not overtax their vitality by too much service. The well-kept bull and his calves are objects of admiration to successful stock farmers and dairymen. We must not forget when feeding the breeding bull that we are feeding half of the herd, that is, from the standpoint of reproduction.

Johnson Co., Ill.

Write Your Member.

Editor "The Farmer's Advocate":

I am glad to note by editorial in your issue of January 22nd, that you are urging the removal of duty from the parts or repairs for traction ditchers. A year ago some of the agricultural press suggested that readers should write their respective members of Parliament, urging the removal of duty from traction ditchers. I know that a considerable number did so, and am satisfied that these letters played an important part in the success that followed. I would suggest that those of your readers who are interested in having the duty removed from repairs for these machines should again write their members of Parliament, asking them to urge that these repairs be admitted free of duty.

I would further suggest that the new regulations should come in force by the first of March or by the fifteenth at the very latest, because most of the machine owners get their repairs in early so that they may have their machines fitted up and ready to start work as early in April as the ground is dry enough. A regulation coming into effect later than March 15th would be too late for the largest benefit during this present year.

O. A. C.

WM. H. DAY.

Causes of Loss in Animals and Poultry.

That the bovine and avian forms of tuberculosis are becoming more prevalent year after year seems evident. In looking over the latest report of the Veterinary Director General, which was very recently issued for the year ending March 31, 1913, we notice that the figures given regarding animals condemned as being unfit for human food were 7,258 carcasses and 624,382 portions of carcasses. It was stated in this report that this number represents only about 50 per cent. of the total number of animals killed in the Dominion, as not all killing establishments are under inspection. It was further pointed out that the animals bought for these establishments, which are under rigid inspection, are carefully inspected by the buyers, who reject any animal which shows clinical symptoms of disease, or which from general appearance suspicion is aroused. This being true, there is little doubt but that many animals which are rejected by the buyers for the inspected institutions find their way to the market through the channel of the uninspected meat shop and slaughter houses.

Of the number of condemnations, 55 per cent. of the cattle and 75 per cent. of the hogs were destroyed because they suffered from tuberculosis and of the condemned portions of carcasses, 20 per cent. from cattle and 90 per cent. from hogs are affected with this disease. Judging from these figures, a large number of the cattle and pigs in this country must be suffering from this dread disease.

There is nothing in the report to show the extent of the avian type, but from questions which come to this office and from the experience of poultry experts who have occasion to visit flocks throughout the country, we know that a very large percentage of the poultry in this country is affected by the malady. It is not always that the hens get thin and emaciated, but quite frequently hens heavy and plump topple over dead as a result of the trouble. Of course, they generally "go light" and become pale about the head and very often are lame, but not all show these symptoms or markings. If the fowl dies of this disease a post mortem examination will reveal raised spots on an enlarged liver or marked infection of the mesenteries. The disease is on the increase and those owning flocks of poultry should make it a point to isolate all birds as soon as they notice any symptoms of disease and thoroughly clean up the premises.

While on the subject of condemned carcasses, it might be well to state that in the report of the Chief Meat Inspector to the Veterinary Director General attention was called to the increased number of losses due to bruises, cripples and animals found dead. A good deal of this loss was occasioned by insufficient care in transportation. Cars are often overcrowded to such an extent as to cause death to dozens of prime animals. The overcrowding may be due to the shipper trying to reduce freight charges per head, but bruising and crippling cannot be attributed to that cause. Train workers often show lack of judgment in shunting the cars and very often the club is used too freely in abusing live stock while loading

and unloading cars. This is a point worthy of serious consideration and for the purpose of being humane and to increase the net returns from each carload shipped the greatest possible care should be exercised in handling the stock that losses may not be caused by abuse or neglect.

In this connection, another important point is brought out in the report—98 cattle, 36 sheep and 153 hogs were condemned on account of pneumonia. Nearly all these occurred during the hot weather and the inspector states that the disease is due to carelessness and improper handling, more particularly in the case of swine. How often when a farmer is called upon to deliver hogs on a very hot day he carries along with him a large pail or bucket which he uses to throw cold water over the heated pigs whenever he passes a handy pump or running brook! The practice is often continued after the pigs are loaded into the cars and cold water is dashed over them to rapidly lower their temperature. Reasonable care in this particular would no doubt prevent to a very large extent the waste of a considerable quantity of meat food, which at prevailing prices is very valuable. Cold water should be used with discretion in such cases.

THE FARM.

Artificial Fertilizers, Their Nature And Use—XI

By B. Leslie Emalie, C.D.A., P.A.S.V. F.C.S.

METHODS OF MIXING FERTILIZERS.

Machinery for mixing fertilizers is rarely available on the farm, but the operation may be easily and simply carried out with the implements, ordinarily at the farmer's disposal. The apparatus requisite for the operation are: (a) the fertilizers, (b) the mixing floor, (c) a shovel, (d) a broom, (e) a wooden post or tamper, to be used as a pulverizer, (f) a sand screen or a screen from the fanning-mill, and (g) a weigh scale. In mixing large quantities, the latter may sometimes be dispensed with, but is useful to check the weights.

The modus operandi is as follows: The mixing may be done on a solid, level part of the barn floor, but if a concrete floor is available, it would be preferable to the wooden one, since the shovelling and crushing could be more easily done thereon. One ton will usually be a sufficient quantity to manipulate at one time in order to ensure thorough mixing. Sweep the floor clean; empty part of the phosphatic fertilizer, spreading it level on the floor; on this put part of the potash, then the remainder of the phosphate and of the potash. If the nitrogen, either in the form of nitrate of soda or sulphate of ammonia, is to be mixed with the rest, empty it out by itself on the floor and, with the aid of the tamper or the back of the shovel, reduce the lumps, for both of these materials are apt to become caked in the sacks. When the material has been reduced to sufficient fineness, spread it over the heap. Then take the shovel and turn the heap, first to one side and then to the other. After doing this a couple of times, the whole heap may be put through the screen, any lumps



A Scottish Smiddy.

Dr. Maria Montessori

remaining being thrown to one side and afterwards reduced and again added to the heap, which may then again be turned a couple of times. It is not always necessary to use the screen, but it is usually a great aid to thorough mixing. After completing the operation in this way, fill the material into the empty sacks and proceed with the next batch.

METHODS OF APPLYING FERTILIZERS.

Fertilizers may be applied either by hand or machine. Some modern grain seeders, potato and corn planters have an attachment for sowing fertilizer, and there are now some makes of broadcast fertilizer distributors on the market. Where large quantities of fertilizers have to be applied, the machine is a great labor-saver and by its use a more equal distribution is ensured. Generally speaking, we prefer the broadcasting machine to the drill, or to any of the other mechanical devices mentioned.

Broadcasting by hand is easily and simply performed by means of a sowing "hopper" or basket. This might be described as a crescent-shaped, canvas-covered frame with waist and shoulder straps attached. Both hands are used in the sowing operation and to obtain the proper rhythmical motion, it is important to note that the right arm is swung backwards from the hopper as the right foot advances, and vice versa. The length of the stride can be adjusted to the thickness of sowing desired. The breadth of cast is usually about the width of four potato or turnip rows. Preparatory to commencing operations, the fertilizer sacks are placed at convenient intervals in the field; two men, or a man and a boy, can perform the work, one man doing the sowing and the other man or boy carrying the fertilizer in a pail from the sack to the sower.

The Broadcast Sowing Machine.—One of the most satisfactory distributors is of German manufacture, and several are now being used in Canada. The machine is made in various sizes, but possibly the seven-foot width will be found the most convenient. The fertilizers are ejected from the box by means of a chain, which runs longitudinally. Each link of the chain has a projecting finger which sweeps the bottom of the box from end to end, so that the chain itself does not come in contact with the fertilizer. The machine can be adjusted to sow from 25 to 2,500 pounds per acre and its mechanism prevents clogging of the material, when damp, and evenness of distribution is guaranteed.

Broadcasting Fertilizers on Potato Rows.—When the sets have been planted in the row, a heavy log, about nine feet in length or long enough to take four rows, may be dragged by a horse over the rows so as to slightly flatten and partially cover the potato sets. The fertilizers are then sown and the rows closed. This method may also be used in the case of root crops. We wish it to be emphatically understood, however, that the application of fertilizers at planting time for such crops as described can only be recommended for moist climates. Under conditions which ordinarily prevail, in Ontario for instance, the fertilizers (potash and phosphate) ought to be applied much earlier in the season so that the spring rains may aid in their solution.

Broadcasting on the Level.—Whether in field or orchard, is an equally simple operation; the fertilizers should be harrowed or worked into the ground with a cultivator, except on sod, where cultivation is unnecessary. In the latter case, however, it is usually possible to apply the fertilizers rather earlier than on cultivated land, and they will thus have a better chance to get washed into the soil by the spring rains.

Broadcasting Versus Drilling.—For various reasons, which shall be stated, we generally prefer broadcasting fertilizers to sowing them in the drill or row, although the latter practice has something to recommend it, chiefly, however, in that it saves time by combining the two operations of seeding and fertilizing. Our arguments in favor of broadcasting may be presented thus:

- (1) As broadcasting ensures a more thorough distribution of the fertilizers in the soil, encouraging a more extensive root development, which gives the plants a greater feeding area and, incidentally, promotes a wider distribution of humus in the soil.
(2) The crop succeeding that to which the fertilizers have been supplied will grow and ripen more uniformly. Take the instance of a cereal crop following a corn crop, where the fertilizers were applied directly in the rows or hills, and note the uneven growth: the old corn rows can, as a rule, be traced from end to end of the field.
(3) Broadcasting prevents an excessive concentration of fertilizers directly under the young plant, which, where very large quantities have been applied, might have an injurious effect.

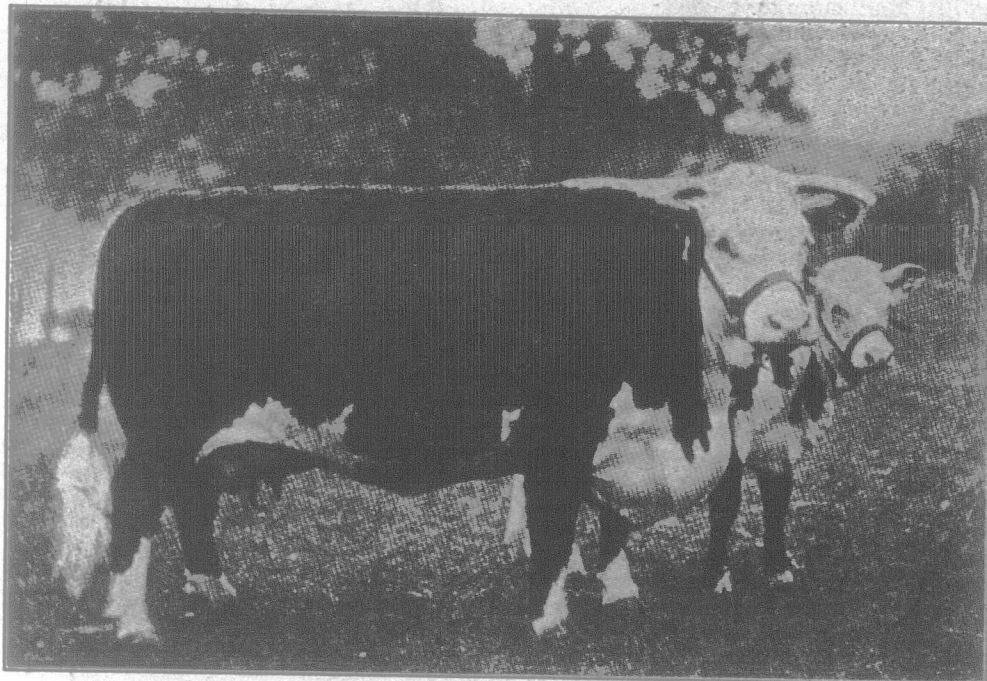
WHEN TO APPLY FERTILIZERS.

This will be determined by (a) the nature of the crop, (b) climatic conditions, and (c) the rate of availability of the fertilizer ingredients. Nature of the Crop.—For hay and pastures the fertilizers may be applied as soon as the frost is out of the ground, and, indeed, for most other

crops, the phosphatic and potassic fertilizers might be advantageously applied as soon as it is possible to go on the land. For grain crops the fertilizers may be drilled in with the seed, where there is a fertilizer attachment on the grain drill. For wheat the phosphate and potash and part of the nitrogen ought to be applied in the fall. For fruit trees and bushes, the application of the potash and phosphate may take place before the ground freezes in the fall, or as soon as the frost leaves the ground in the spring.

Climatic Conditions.—In localities with a low rainfall the fertilizers ought to be applied as early as possible, in order that their plant food constituents may become available to the plants, when the latter are ready to make use of them. In moist climates the fertilizers need not be applied so early, and such very soluble nitrogenous materials as nitrate of soda should be used sparingly.

Rate of Availability.—In nitrate of soda, sulphate of ammonia and dried blood we have three nitrogenous fertilizers, placed in the order of the availability of their nitrogen. Dried blood is the slowest acting of the three, and is, therefore, better adapted for early application in mixtures with the other materials. Nitrate of soda is exceedingly quick acting and, therefore, ought not to be applied long before the crop is ready to assimilate its nitrogen. In its rate of action, sulphate of ammonia is intermediate between the two. It is often considered desirable in making up a complete mixture to put in certain proportions of two or more different nitrogenous fertilizers to ensure a more gradual and continuous supply of nitrogen. The special virtue of nitrate of soda is due to the fact that it provides a readily available supply of nitrogen to the young plant at a time when nitrification in the soil is only commencing.



An English White Face and Her Calf.

Likewise in acid phosphate, basic slag and steamed bone flour, we have three carriers of phosphoric acid, placed in order of their activity. Basic slag and steamed bone flour, being slower in action than acid phosphate, may be expected to give best results when applied in the fall or very early in the spring. For late spring application acid phosphate is to be preferred unless on soils containing an excess of acid, where basic slag would be expected to correct the sour condition.

Both sulphate and muriate of potash are moderately quick in their action and suitable for spring application, although they lose nothing by being applied in the fall; in fact, if applied at the latter season, their potash would usually be more available for the spring-sown crop. Kainit gives distinctly better results when applied in the fall, as compared with spring application.

It follows then that, where it is found impossible to apply fertilizers early, those materials containing their plant food in most available form will be chosen.

(To be concluded.)

Nova Scotia Farmers' Association Convention.

The N. S. farmers met in annual convention at Bridgewater, Jan. 27-30, and put on a good program. The practical farmer is slowly going off the platform and the addresses are given more and more by trained experts from our agricultural colleges and stations. This is probably as it should be that these trained men should do the teaching of the association while the farmers attend to the prosecution of business. This convention was remarkable for the amount of work done of an executive nature. The evening meet-

ing for Thursday, 29th, was, as usual, devoted to welcomes, jokes and general sociability—participated in by mayors, members of parliament and other personages of greater or lesser note. The exhibition commissioners reported a successful exhibition, with about the usual entries and the usual deficit. Mr. Fraser, one of the commissioners, advocated the moving of the sheep and swine pens up nearer the entrance, since their present position away down in one corner of the grounds placed them out of the itinerary of the ordinary visitor to the exhibition. Mr. O'Brien pointed out that fancy trotting horses received large prizes, while steers and grade cattle, such as ordinary farmers would be likely to show and be interested in, got very little recognition in the prize list, and recommended that more money be given to the latter and less to the former.

The objection was made that the exhibition was held too many days, that it added to the expense of the show and to the expense of keeping the stock on the ground and added very little to the attendance or income. The general opinion was that four days, from Tuesday until Friday night was long enough, and this would allow exhibitors to leave home with their stock Monday morning and to be home again Saturday night. This discussion, though having no direct results, will probably result sooner or later in shortening the duration of the Provincial exhibition to one calendar week.

A discussion about better accommodation for attendants of the live stock resulted in a resolution asking the exhibition commissioner to provide temporary rooms for the men near the stables, so that the attendants might each have a small oil stove for cooking food and a chance to make up a bed, as now they have to sleep up among the rafters over the cattle in the cattle sheds. During the past year a provision of the

Federal Government had made it possible in sections where sufficient money or members could not be raised to form an agricultural society, that a live-stock association could be formed by ten farmers to whom a pure-bred sire would be furnished.

Under this provision, over a hundred pure-bred animals had been distributed in the province. It was felt that there was no need of two sources of distribution and a resolution was passed that steps be taken to have this live stock distributed under the direction of the Provincial Department of Agriculture.

The Legislative Committee of last year reported results from some ten resolutions passed at the last convention. Short courses in different parts of the Province were being put on, as requested. The provision for a combination of individual country exhibition grants to form a fund for a district exhibition was an act passed in line with the resolution asking for district exhibitions.

Other resolutions were that accommodation be provided for the education of women at the Agricultural College at Truro in the arts and sciences upon which housekeeping and homemaking depend; that a committee be appointed to make arrangements for better train accommodation to and from the Government Farm at Napan; that the Government be asked to so amend the tile-drainage act that farmers be able to borrow money directly from the Government without all the necessary red tape of working through the municipal council; that steps be taken to make possible more rapid and cheaper transportation of stock to and from exhibitions.

The election of officers resulted in the appointment of the following: President, Wm. O'Brien, Windsor Forks; first vice-president, A. S. McMillan, Antigonish; second vice-president, R. S. Starr, Port Williams; exhibition commissioners, H. S. Kennedy, Alma; W. W. Black, Amherst.

Mr. Trueman, agriculturist and live-stock husbandman at the Truro Agricultural College, gave a practical talk on the breeding of animals. While there were cases where dual-purpose cattle had been found profitable, success along this line was very difficult to attain, and it was better to take either the beef type or the dairy type and stick to it. For the amount of food consumed, the dairy cow produced more food for human consumption than the beef animal. However, if a farmer plans for a herd of dual-purpose cows

It was better to have as an aim the production of beef first and to get with the beef animal as much milk production as possible. Whatever was desired, however, must be determined on and stuck to and every effort made to succeed and success will follow. Another rule for success is to take good care of what you have and weed out the poor ones. There were two ways of starting a herd. One was to buy several good cows. This would be too expensive and after a few years we would be where we started. But if we spend a smaller amount for a good bull we could start with ordinary cows and build up. And it is very possible for farmers to combine to purchase a superior bull, one which has a splendid record of production behind him. A majority of his heifers will be at least as good as the average of their sire and dam. Then, if he is a very valuable bull, breed him to his heifers and the average will be raised and his heifers' calves have three-quarters of his blood. Then, if possible, get another bull of the same line, but not too closely related, and we will take another step forward, and so on, until we attain a very high standard. Violent crosses are rarely successful in improving a herd.

Another important factor in breeding is after you get your well-bred calf keep it going by feeding well. A rule that sounds paradoxical, but is nevertheless true, is that the higher the price offered the better it pays to feed well. These well-fed calves will make big cows and the bigger the cow the more feed she will take and the more she will produce. The raising of superior stock will also have its beneficial effect in keeping the boys on the farm.

The report of Dairy Superintendent McKay was very encouraging. The butter made during 1913 was 50 per cent. better than in 1912 in quality. He recommended the establishment of a few large cream-gathering creameries in large centers, rather than a number of little ones, as cream can be carried by rail and enough gathered by this means to ensure steady operation. He stated, in his opinion, that there was no better place for dairying in America than Nova Scotia.

Miss Jennie Fraser, superintendent of Women's Institutes, gave a very interesting address on the work of Women's Institutes, drawing a distinction between housekeeping and homemaking.

P. J. Shaw, of the Agricultural College, Truro, gave a practical talk on the renovating of old orchards, while soil cultivation was dealt with by W. W. Baird, of the Experimental Farm, Nappan.

The president, in his address, outlined the agricultural year in Nova Scotia, eulogizing the Dominion Government for their encouragement to agriculture in that Province, and discussed the various fairs and exhibitions, all of which pointed to progress.

Salts Hogs in Winter.

Editor "The Farmer's Advocate":

Perhaps one of the greatest difficulties that the hog raiser has to contend with in winter is feeding the hogs so they will thrive and do well all winter long. Sometimes they will do well at first and then, just as spring is nearing, they will begin to go back, and other times and oftener they will do poorly at the beginning of the winter and never do well during the entire season. When the winter weather sets in hogs that are fattening and other hogs too will appear drowsy and will cough. They will lie around the pens and put in the time sleeping and coughing. They eat well and are always hungry, but they get thin and gaunt and grow worse daily. The feeder thinks that they are not getting enough to eat, as they are always hungry and squealing every time he goes near them, but, of course, pigs often squeal even when they are full. But they are thin and you could count every rib on their spinal column, and you say, "My, those pigs are doing poorly, we must give them some more feed." But this will not do. The whole trouble is that the pig is getting too much feed in accordance with the amount of exercise and fresh air it gets, which causes indigestion. And as it is impossible, in most cases, anyway, to increase the amount of exercise and fresh air for the hogs, we have to find some other means to make them thrive. The best remedy that I can find is Epsom salts given along with their feed every day, either once or twice, depending upon the condition of the hogs, and the amount you feed at a time. I mix the salts about three double handfuls of salts with two pails of meal, ordinary meal that we feed them, and four pails of water in a barrel, and make a good slop. Then feed this slop on top of their ordinary feed. I would say night and morning. However, if you wish to feed it only once a day then put more salts in the mixture in the barrel.

If this feeding is continued for a while you will soon notice how well the hogs will get, and how they will pick up and show results for the feed you give them. Perhaps you would say that salts are too dear to feed to pigs—well, I don't think so, not while pork is worth more a pound than salts, as it is right now. When I

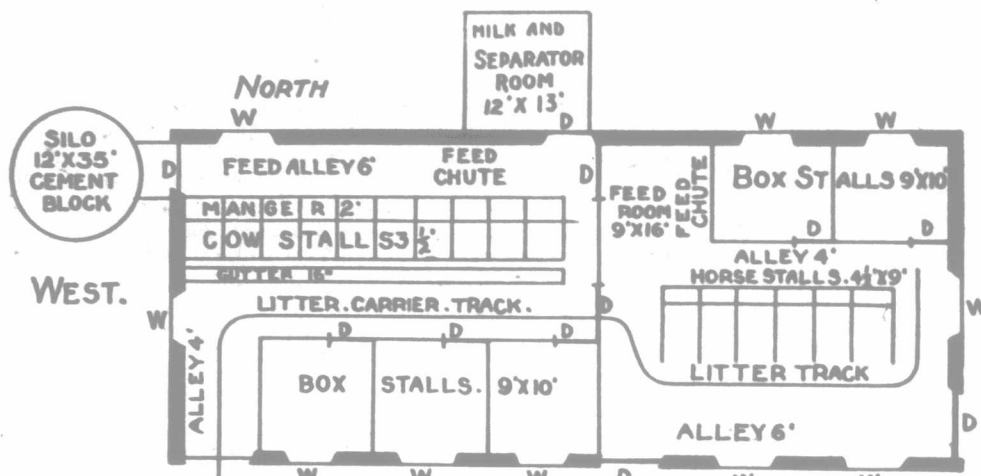
first bought salts for my pigs I went to my grocer and asked him how much he wanted for Epsom salts, and he offered eight pounds for a quarter, but I went to another grocer where I got ten pounds for a quarter, and the next time I went back the grocer was quite willing to give twenty-five pounds for a half dollar, and I found that that fifty cents was the best investment that I made in 1913.
Peel Co., Ont.

A FARMER'S SON.

Another Barn Plan.

Editor "The Farmer's Advocate":

I am sending you a stable plan of a barn 75 feet by 32 feet outside dimensions, with a two-foot stone wall nine feet high, which is used on a 75-acre farm. The barn was remodelled and made handier. The floor is of cement and the cattle stalls are steel throughout. Box stalls have iron corner posts with woven-wire partitions, also iron columns that support the overhead floor, which do not obstruct the light very much. The animals are placed so as not to have the bright sunlight shining in their eyes.



A Good Plan of Barn for an Averaged Sized Farm.

Water is in front of every cow, and in the box stall in the cow stable. The plan explains itself.

P. E. I.

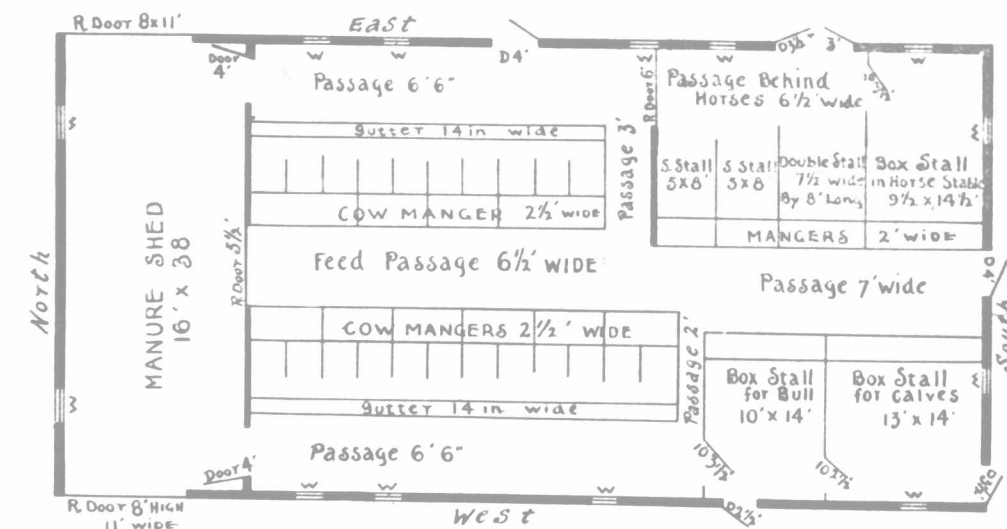
SUBSCRIBER.

A Handy Barn.

Editor "The Farmer's Advocate":

I am sending you the plan of my barn which I built last summer, hoping it may be of use to somebody intending to build. This barn is 38 feet by 78 feet. The side walls are 2 1/2 feet high, that is allowing 8 feet for stable wall and 16 feet for barn. It has a high roof, covered with corrugated iron, the side walls being of dressed pine.

The manure shed is 16 feet by 38 feet and is boarded off from the stable with tongued and grooved lumber; the swinging doors are 4 feet wide from stable to shed. There is a roller door 5 1/2 feet wide at end of feed passage. This



PLAN of BARN 38' x 78' for 100 ACRE FARM Scale 8' to 1 inch

stable will accommodate 22 cows, 10 on one side and 12 on the other. The cow stands are 4 feet 11 inches and 4 feet 10 inches; each cow has 3 feet wide of floor space, the gutters are 14 inches wide. There is a drop of 7 inches behind cows and 5 inches drop at wall. The feed passage in front of cows is 6 1/2 feet wide, mangers 2 1/2 feet wide at top, and the walls behind cows are each 6 1/2 feet wide. There are two box stalls, one for bull and one for calves, as shown in plan. The horse stable is boarded off by itself with one ply of tongued and grooved lumber, there being two-foot trap doors, the width of the stalls, for feeding. A six-foot roller door opens into the cow stable, which makes it handy clean-

ing. The stable will accommodate six head of horses. Each horse has eight feet of a stand. The wall behind horses is 6 1/2 feet wide; box stall is 9 1/2 feet by 14 1/2 feet; each single stall is 5 1/2 feet wide and double stall is 7 1/2 feet wide. The windows each have four panes 12 by 24 inches, and as there are 13 windows there is certainly plenty of light. There is a window in each gable end the same size. I use the windows for ventilating, which can be raised from bottom or lowered from top. The feed chutes are provided with slides, which can be opened or closed as desired, which lets out the bad air into the barn. This barn has cement floors throughout. It is also equipped with steel stalls and stanchions. There are two big roller doors, one on each side of manure shed, 8 feet by 11 feet, which make it handy, as one can drive through from either side.
Carleton Co., Ont.

LESTER SKUCE

A Time for Repairs.

Editor "The Farmer's Advocate":

For some time my cream separator had been taking more elbow grease than I cared to expend and than I thought was necessary. It occurred to me that the machine was worn out, and I had concluded to apply to the agent to supply me with a new one. As the stringency of the money market was affecting me considerably, I decided to see what a little overhauling would do. Accordingly I took the separator to pieces, following the directions of the manufacturer in so doing. When I discovered the amount had adhered to the running parts, I was not so much surprised that the machine had run heavily as that it had run at all. I soaked each bit of gearing and each bearing in coal oil, and rubbed and polished each part till it shone like the proverbial silver dollar. One or two parts had become somewhat worn, and these I replaced at a trifling cost. When the parts were assembled and oiled with a high-grade brand of oil I was delighted to find that the separator was as good as ever. I have no intention in the world of purchasing a new machine. Naturally, my next move was to look over some other machinery with similar surprising and happy results.

Why should not every farmer make it a part of his year's work to go over his farm equipment with a view to cleaning up and making repairs? The average piece of farm machinery is far too short-lived. Some say that the average binder does but little over ninety day's work. This should not be the case. However, it must be remembered that the average binder is not well protected against the dust, either during the summer or during the winter. All the greater, therefore, the necessity for at least an annual cleaning. Harrows, plows, rakes, drills, hay ropes, everything overhauled in detail. All these weaken or dull with use, and with the weakening or dulling is sure to come loss and danger. Every day has its story of accidents that ensue upon defective farm equipment.

It is no unusual sight to see the thrifty "rag and old iron man" taking on to the junk shop the remains of the farmer's implements. Meanwhile the farmer is replacing the old and misused with the new and costly. "It's all for the good of trade," smiles the manufacturer and the agent. Imperfect or defective machinery means for the farmer loss of power, loss of time, worry and disappointment. A binder going wrong at an inopportune time has frequently meant practically a ruined field of grain. A defective hay rope has endangered life as well as involved loss.

The moral of it all is that the farmer should make during the winter months a thorough survey of his equipment, watching for missing bolts

Dr. Maria Montessori

THE DAIRY.

Avoid Disease Dangers in Buying Cows.

It is a matter of comment that disease in dairy herds seems to be in some districts on the increase. We hear considerable about contagious abortion and tuberculosis as being two of the very worst diseases with which the cattle owner has to contend. A man with a healthy herd of cows requires to use a little care in the selection of new breeding stock for his herd. It is better to pay a high price for a cow that you are sure is healthy in every particular, and is not likely to carry the germs of a dread contagious disease to the herd than to buy an animal cheap, about which there lurks a suspicion that something must be wrong else she would not be offered for sale. The practice of buying up carloads of cows here and there throughout certain districts and shipping them some distance and holding an auction sale, spreading them among the herds in the new district is very often, we believe, responsible for the spread of contagion. Far better would it be for the man who wishes to add to his herd to go himself to the stables of those who have cattle to sell and select his animals. He should look into the conditions under which they have been kept, and find out as much as he can about the cow which he selects. Cows bought in car-load lots to be resold to the individual farmers are usually purchased by the latter upon their own snap judgment. The original buyer takes little pains to find out the past history of the cow, and there is always the shadow of a doubt about such an animal, no matter how good she may appear. Even where cows are selected from the herd by the purchaser himself, a certain amount of danger must be reckoned with. We would advise that the seller be questioned carefully in each case. The buyer should find out as much as he can about the herd. A pretty good indication in most cases is a number of healthy, robust calves. This shows that the cows are regular breeders, and that contagious abortion has not gained a foothold in the herd. The buyer should keep his eyes open on all occasions.

Injury from Neglecting Milking.

We recently received the following letter from the secretary of the London (Ontario) Humane Society complaining of cruelty to dairy cows: Editor "The Farmer's Advocate":

Among dealers who conduct auction sales of milk cows, it is a common practice to purposely neglect milking them for 12 to 24 hours before selling them. This is done in order that they may have "a good appearance for milk," as one dealer was heard to express it. This is, of course, a fiendish practice, as it results in extreme pain to the animal, and frequently in permanent injury. The "dealer" buys these animals from the dairyman or farmer under different circumstances, as they have been regularly milked. In justice to the animals, he should, when selling them, be forced to offer them for sale in the same condition. It is most unfair to the purchaser, and the only redress he has is to refuse to buy an animal unless it be in good condition. If this course were adopted the cruelty would soon cease. However, if this practice does not cease in the near future, the London Humane Society will be forced to prosecute those "dealers" who still persist in this cruelty. The inspector of this society has the matter in hand and will attend these sales, and so report on the matter.

LONDON HUMANE SOCIETY.

HORTICULTURE.

Insects Attacking the Tomato.

Editor "The Farmer's Advocate":

FLEA BEETLES.

There are several different flea beetles which feed upon the leaves of the tomato, but the most important is the potato flea beetle (*Epitrix cucumeris*). This is a very small species, measuring from about one-sixteenth of an inch to one-twelfth of an inch in length, black in color with pale reddish legs. The potato is also freely attacked, the beetles eating numerous small holes in the leaves. Other plants attacked are cabbages, cucumbers, beans, squashes, pumpkins, etc. The adult beetle passes the winter in dry, sheltered spots under leaves, rubbish, etc., and makes its appearance early in spring, when it attacks young and tender plants. The leaves of the tomato are often thoroughly riddled by the beetles soon after they have been planted out. In our experiments we have found that this flea beetle can be controlled by spraying with the ordinary Bordeaux mixture. When the beetles are present in extraordinary numbers it may be neces-

sary to spray at least twice a week, and if such is the case arsenate of lead might be applied with the Bordeaux mixture in the proportion of three pounds to 40 gallons of mixture. Remnants of crops, such as tomatoes, cabbage stumps, etc., and other refuse should be removed from fields and gardens in autumn, so as to reduce as much as possible suitable hibernating quarters for these and other destructive insects.

CUTWORMS.

These well-known caterpillars destroy many young tomato plants at the time these are set out. It is wise, therefore, to scatter a small quantity of poisoned bran around each plant when the same is transplanted. (Half a pound of Paris green is sufficient to poison fifty pounds of bran. The latter should be dampened slightly with sweetened water and the Paris green added slowly and thoroughly mixed through the bran.) There is one species of cutworm, namely, the spotted cutworm (*Noctua c-nigrum*), which has the habit of climbing the stems and feeding upon the fruit. This cutworm is of a pale brownish or grayish color, the conspicuous character by which it may be recognized being a row of triangular-shaped blackish markings (very conspicuous on the rear segments) on either side of the back. In some outbreaks we have found as many as a dozen of the cutworms eating into a single tomato. When not feeding, this cutworm remains hidden in the soil near the plant. If the fruit is noticed to have been eaten into, the placing of a small quantity of the poisoned bran around the base of the plants, near but not touching the stems, will prevent further injury.

BLISTER BEETLES.

There are three species of blister beetles which are liable at any time to attack the foliage of the tomato. These insects appear suddenly, mostly in July and August. The black blister beetle (*Epicauta pennsylvanica*) is uniformly dull black. The ash-gray blister beetle (*Macrobasis unicolor*) as its name implies is ash-gray in color, and the gray blister beetle (*Epicauta cinerea*) is black, uniformly clothed with short, gray hairs. All three of these beetles are of a similar size, namely, about half an inch in length. They are elongate in shape, soft-bodied, and have rather long legs. When these insects attack vegetable crops probably the easiest way of getting rid of them is for two or three boys to walk through the field waving from side to side boughs of spruce. This will cause the beetles to fly ahead, and when they come to the edge of the crop they will disperse and seldom return. Spraying with arsenate of lead, 2 or 3 pounds in 40 gallons of water, will, of course, kill many of the beetles.

TOMATO STALK BORER.

Complaints are often received of a boring caterpillar in the stems of tomatoes and potatoes. Upon investigation it has been found that the species was the tomato stalk borer—often spoken of simply as the stalk borer—(*Papaipema cataphracta*). The caterpillar, which is cylindrical in shape and smooth, is, when full grown, about an inch and a quarter in length. The head is yellowish brown, and the pale flesh colored body is marked with conspicuous longitudinal stripes. The presence of these caterpillars in the stems is usually detected by the unhealthy appearance of the plants, the tops of which become withered and fall down on one side. Unfortunately, owing to the boring habits of this caterpillar, the only remedy which can be suggested is to cut off the portion of the plant bearing the caterpillar and destroy the same. Injury by these caterpillars is usually noticed in the latter half of July. In addition to the tomato, the stems of potato, rhubarb and other plants are frequently infested by this insect. As the caterpillars also bore in the stems of certain weeds, such as thistle, burdock, etc., it is wise to keep fields as clean as possible of such useless plants.

THE TOMATO WORM.

Occasional reports are received of a large green caterpillar (*Phlegethontius quinque-maculata*) injuring tomatoes. This caterpillar when mature measures about four inches in length. It feeds on the leaves and also eats into the fruit. In some seasons in Southwestern Ontario it is very injurious. In gardens, the simple remedy of hand picking will usually stop the attack, but if at any time the caterpillars are abundant enough to require special treatment, spraying with Paris green or arsenate of lead will soon destroy the "worms."

THE TOMATO FRUIT WORM.

This caterpillar, which is usually spoken of in Canada as the corn worm (*Heliothis obsoleta*), on account of its habit of boring into the ears of sweet corn, is also destructive some seasons to the fruit of the tomato. In feeding habits it resembles the spotted cutworm, eating into the green and ripening fruit. When mature it is about an inch and a half in length and of dull greenish or brownish color, with longitudinal

or nuts, cleaning every bearing, replacing worn parts, and cleaning away the dust and sand that mean unnecessary wear and loss of power. Care of this sort will add a great deal to the efficiency of his equipment, to say nothing of adding years to its life. There are hours that are being wasted now discussing the high cost of living that would be better invested in increasing the usefulness of farm machinery, though the farmer who knows his business will find time for both activities. "The maximum of efficiency," that is the highest returns possible from the time and money invested, must be the slogan of the farmer who would get things done with profit. During the days that have meant a slacking up of manufacturing, big firms have employed experts to put their plants in the best condition possible in view of the return of the good times. These winter months afford the farmer his opportunity of proving himself his own efficiency engineer.

York Co., Ont. J. C.

Feeding Out Silage.

Editor "The Farmer's Advocate":

A great many farmers are not careful enough in taking out their silage. I came in touch with several neighbors last week and found, in their silos, six or seven and even more inches of ensilage frozen to the wall, to the height of five or six feet. This is the result of a bad practice. If ensilage is frozen, it will spoil, more or less, if exposed to the air for a considerable time. Experiments have shown that such ensilage, after being thawed out, did not smell as sweet as good silage taken fresh from the center of silos, neither is the former relished by the cattle as well as good silage.

The easiest way to prevent freezing of silage to the wall during cold weather is keeping the outside edges lower than the center. This is altogether too much neglected in this neighborhood. I also noticed some farmers taking out silage roughly, leaving an uneven surface and letting loose silage lie around on it. This increases freezing on the surface and should therefore be avoided. Keeping silage even on top and all loose particles raked off is good practice. A wooden hand rake is almost a necessity in emptying a silo. Another point which I would like to emphasize is, keep the wall entirely clean. It is not good to allow bits of leaves to hang around on the wall of the silo all summer. The moisture gathered between these leaves and the wall makes the latter moldy, and, as whitewashing is often neglected while filling, this mold extends into the silo several inches next year. An easy method of preventing this is scraping off the loose particles on the wall with the back of the fork every time after five or six feet have been taken out. I also don't like to see silos without a roof. I know when I first had my silo the first year no time was left to put a roof on. That winter I had to shovel out the snow after every snow storm before I could get at the silage and even then I had to take a little snow along with the feed. Freezing on the surface is also more serious without than with a roof. Considering the inconvenience and the labor, it does not pay to save the small cost of a roof by being without it.

In cold weather I generally take out the silage about two hours before feeding. This gives a little time for the frozen particles to thaw to some extent before feeding. I believe it to be a bad practice to feed frozen feed of any kind to farm stock. The ration I give to my cattle is: A bushel box full of silage and one gallon of oat and barley chop three times daily, the same box full of oat chaff twice daily and as much straw as they will eat at noon. This is the ration for milk cows. Other cattle get less, according to size. I believe the above to be an average good ration.

S. K.

Waterloo Co., Ont.

How He Fooled the Crows.

Editor "The Farmer's Advocate":

Last spring I sowed my corn in a field running downward to a swamp which was well inhabited with crows. Crows seem to know when corn should be sown, so for two days the crows sat on the fence waiting for me to sow it. I thought one or two more workings would not injure the soil any, so I gave it and left the land in extra fine condition. I sowed the corn with a common hoe drill, removing all the feet that I did not sow with—I sowed with every fifth hoe—so I got it in deep without making it heavy for the horses. If I dropped any seed turning the end I picked it up. As soon as I finished sowing, I rolled it, then harrowed it rather crooked. The crows had grown tired of waiting and disappeared while I was sowing, and I feel quite safe in saying that the crows did not get a dozen grains of seed.

B. N. F.

Wellington Co., Ont.

stripes. Where this worm has been troublesome in fields of corn it is inadvisable to use such land for tomatoes the following year. The insect passes the winter in the ground in the pupal state. If, therefore, infested fields are plowed deeply in autumn, many of the earthen cells protecting the pupae will be broken and the latter exposed to frost and other destructive agencies.

SLUGS.

Although these disgusting creatures are, of course, not insects, the entomologist is frequently called upon for a remedy to destroy them. In gardens, tomatoes are a favorite attraction for slugs, which come out of the ground at night and feed upon the ripening tomatoes. These creatures are often particularly abundant on rich land in dampish places. An excellent remedy is to scatter over the surface of the ground, where they occur, freshly slaked lime. This should be done in the evening, and when the slugs come out to feed the lime adheres to their bodies and causes them great inconvenience. By emitting a slimy secretion they are often capable of throwing off the effects of the first application, but two or three applications of the slaked lime on consecutive nights will thoroughly eradicate them.

ARTHUR GIBSON.

Chief Assistant Entomologist, Department of Agriculture, Ottawa.

The Outlook for the Apple Growers' Industry.

At a recent meeting of the Western New York Horticultural Society, Prof. S. A. Beach, of Ames, Iowa, reviewed the outlook of the apple-growing industry in the United States. The argument is based on United States conditions, but the underlying principles are so like those of the Canadian industry, and the chief factors entering into the situation are so nearly duplicated in this country that the contents of the address cannot fail to be of interest to Canadian fruit growers. The subject is treated under three heads, favorable factors, unfavorable factors, and what the grower can do to improve the situation.

Among the factors which appear encouraging to the apple grower these stand out as important: First, the actual decrease in recent years in the number of apple trees growing in some of the most important apple-producing States. This would appear to give a better chance to find good markets for the crops from those trees which remain. Second, the marked decline in the yield of apples per capita for the country as a whole. This also would appear to indicate a better apple market for the future. Third, the constant increase in population from which it is natural to expect a constant, if not a corresponding increase on the total annual consumption of apples. Fourth, the enlargement and improvement of the domestic fruit storage and transportation facilities argues for better distribution and better marketing of the apple crop. Fifth, with the probable extension and a possible better development of the facilities for delivering American apples to foreign markets in good condition, the export trade with Europe may be expected to materially increase. Besides this we look for the apple dealers of this country to be eventually in closer touch with Eastern Asia, from Siberia southward, and with the outlying islands from Japan to the Philippines; also with Australia and South America. Some of these improvements in the export trade will come in the near future.

In the outlook of the Eastern apple grower, as compared with the growers of the Rocky Mountain and Pacific Coast districts, these factors appear in his favor; cheaper land, cheaper labor, nearness to the great centers of distribution, opportunities for disposing of the lower grades of fruit at remunerative prices, either for direct consumption or for the manufacture of by-products, greater longevity of the trees, superiority of fruit in texture, flavor, quality and keeping qualities as compared with fruit of the same varieties grown in irrigated districts of the North West, but it is generally conceded that the North Western fruit has the advantage in bright color and often in size.

Among the factors which are less favorable for the Eastern apple grower, the following are significant: First, prospects for keener competition with the output of the orchards of the Pacific North West. Under the existing freight rates on apples from the Pacific coast to the Atlantic seaboard, which amounts to fifty cents per bushel, it is evident that only the better grades of apples may be expected to find their way to Eastern markets in any considerable quantities. This means that the Eastern growers will feel the competition with the North West most keenly among the lines of the better grades of fruit.

How much the existing situation may be changed after the opening of the Panama Canal remains to be seen, but by reason of the lower ocean freight rates as compared with transcon-

tinental tariff, the north Pacific growers could then offer their apples on Eastern markets at considerably lower prices than must now be maintained in order to return them a fair profit. They would gain a further advantage in competing with eastern apples in foreign markets, because, after once being loaded on shipboard in the Pacific ports, the fruit would not need to be handled again until it reached Europe.

The 1910 census shows a decrease of over 15,000,000 apple trees in the States of New York, Pennsylvania, Ohio and Michigan, which amount is more than the combined numbers of existing trees in Montana, Idaho, Oregon and Washington. It should be remembered, however, that these removed trees in the east and central States represent old, neglected orchards which contributed very few, if any, apples to the market. On the other hand the trees in the northwestern States have been mostly planted for commercial orchards. Many are on the speculative basis and represent the investment of college professors, public school teachers, clerks, clergymen, doctors, lawyers and other urbanites who have bought these properties at an inflated price. While there are, in the aggregate, thousands of acres of apple orchards under such ownership, which can never have any marked influence on the commercial apple crop of the country, there still remain tens of thousands of other orchards in the Northwest, the crops of which are competing and will continue to compete for the best apple markets at home and abroad.

Another factor not favorable to the Eastern grower is found in the fact that the Western growers are becoming more and more thoroughly organized. As evidence of what is being done in this particular, it may be stated that one organization in the Pacific Northwest handled over 3,000 cars of apples for its growers this season, and the returns were generally satisfactory. Another important factor is the inroad being made into the apple market by the increasing consumption of citrus and sub-tropical fruits. The banana trade, in a few years, has grown from insignificance to an industry representing \$15,000,000 in the United States alone. Citrus fruits are consumed to the extent of 100,000 car loads per annum. All these fruits are competing more and more strongly with the apple, not only in our domestic markets but also in the foreign trade.

In addition to all these disadvantages the area upon which apples might be produced is almost unlimited, but competition will finally determine what are to be the great apple orchard districts of the country.

How growers may improve the situation. Prof. Beach dwelt for some time on the remedies which must be applied to the industry in order to restore it to its proper place. Many things demand attention, some of which are orchard management and soil fertility as well as packages, methods of packing, storage, refrigeration and transportation. However, these are not the problems that must receive first consideration, but those which have to do with organization for the purpose of marketing the fruit, of buying supplies, of advertising the goods, and in other ways working for the common interests. If the Eastern grower does not rouse himself to meet the western competition, it will have the effect of crowding his fruit into those channels of trade where the cheaper and less profitable grades are marketed.

One organization in the West passed a bill for 60,000 dollars for advertising this past season. This explains in part their success and what may be done through united efforts, and suggests to the Eastern grower that he carry out the advice of Prof. Beach, and take up in a persistently aggressive way the extension and development of his markets for his brands of fruit. Also standardize the grade and pack for the apples of the region, and offer these standard goods in a supply large enough to develop and hold the best class of trade.

POULTRY.

Prince Edward Island Egg Circles.

Early in July, 1912, W. A. Brown, B. S. A., Chief of the Poultry Division of the Live Stock Branch, Department of Agriculture, Ottawa, visited Prince Edward Island to investigate the poultry industry of that province. Mr. Brown stayed in the province for some weeks, visiting the farmers and those who were handling the egg trade in the rural districts, Charlottetown and some of the large towns. In addition to making a very thorough investigation, he delivered addresses at many different points, and this assisted him greatly in that he was able to meet large numbers of farmers and others and familiarize himself, not only with existing conditions, but also with the views of all concerned, and the future outlook. The impression left on his mind was that conditions justified special assistance being given to Prince Edward Island, that reforms in all departments were needed, and

that in no part of the Dominion was there a greater future in store for the poultry industry than in this wonderful little province. Mr. Brown, on his return to Ottawa reported accordingly. The result was the appointment of T. A. Benson as Dominion Poultry Representative on the Island. Mr. Benson, who had for some time held the position of assistant district representative for Ontario County under J. H. Hare, B. S. A., whom he assisted to organize the successful Ontario County egg circles, landed on the Island at the end of September, 1912, and with the co-operation of the Provincial Department of Agriculture immediately set about investigating conditions.

The winter was spent in this way, and delivering addresses in the rural section preparatory to organization work. In the spring of 1913 organization of egg circles commenced, and in all, some eighteen egg circles have been organized up to this time, some of them quite recently. These associations have been well spread over the province with a view to demonstration.

So far 581 farmers have been registered as members of one or other of these circles. 381 additional stamps and ink pads for stamping the eggs have been sent out to managers upon their urgent request. 56,473 dozens of eggs have been shipped to the Montreal markets at an average premium over local prices of at least three and one-half cents per dozen after expenses being deducted, and not taking into account an undue inflation of prices by those in strong opposition to the movement.

Quality and new-laidness have been the watchwords of these associations, and deteriorated eggs have been sharply discriminated against. The Brooklyn egg circle sent one shipment of 270 dozens to Montreal, which was described by the buyers as a shipment that any egg circle in the Dominion might well be proud of, it was a record.

The extra profit to the producers is simply due to the elimination of waste and unnecessary handling, as a result of the interest awakened which may be described as almost phenomenal. Mr. Benson now has on file in his office applications from 56 different sections of the Island for organization, many of which take the form of demands and these in addition to applications for lecturers.

According to Mr. Benson the credit lies with the farmers of Prince Edward Island whom he describes as far seeing, intelligent and ready to take hold of a fair business proposition.

Incubators and Incubation.

The season is fast approaching when many of our readers will be bringing their incubators into use again. Artificial incubation is not always as simple as it would seem. There are many seemingly small matters in connection with an incubator which, if not properly attended to, result in a lower percentage hatch and much lower vitality in the chicks. The hatch is made or lost usually during the first week of incubation, according to Prof. W. R. Graham, of the Ontario Agricultural College, Guelph, who has recently revised his bulletin on "Farm Poultry," which should be in the home of every poultryman.

He advises that the temperatures should be kept well up to 103 degrees with the thermometer lying on the eggs and, of course, the temperature should be as even as possible. At Guelph, before the eggs are put into the machine the interior is thoroughly washed with a ten per cent. solution made from one of the coal-tar products such as Creoline or Zenoleum. This is applied hot. With the machines the best results have been obtained when water or moisture of some kind was used during the entire hatch. A pan is placed beneath the egg tray nearly the full size of the machine and the bottom of this pan is always kept covered with water or wet sand not more than one inch deep.

In selecting eggs for hatching, always avoid dirty eggs; those which have been washed, and small or very large eggs. There is often something abnormal about an unusually small egg or one over-large. It must be remembered that the shell of eggs is porous, and very often when much dirt adheres to such, it contains diseased germs which may gain access to other eggs in close proximity to it in the tray. Another point that Prof. Graham emphasizes is that when turning the eggs the attendant should always be particular to do so with clean hands, particular care being necessary not to handle the eggs when kerosene or other greasy material is present on the hands.

"The room in which the machine is operated should be clean and well ventilated. If possible, select a room that varies but little in temperature. Where there is a strong odor of lamp-fumes or where there are decaying vegetables or where molds grow upon bits of boards or upon the walls, an incubator will not usually do good work. The lamp burns brighter, the eggs hatch better and chicks have more vitality when the air in the incubator room is pure."

Dr. Maria Montessori

UNDED 1866

FEBRUARY 12, 1914

At Guelph, the best results have been obtained, largest average hatches and strongest chicks, other things being equal, by operating the machines at 103 degrees F. with the bulb of the thermometer resting on the top of an egg, not at the side of the egg or at the bottom. This heat is maintained throughout the hatch. They are particular to set clean eggs, usually not over two days old, which have been held at a temperature between 55 and 75 degrees. The eggs are best put in the machine in the morning, then the gradual heating of the eggs goes steadily on during the day and by night we know that the machine is not too hot or cold. Moisture is used from the start; this is more important during the first week of the hatch than at any other period. No ventilation is given until after the ninth day of incubation.

scheme for building up a large business that will employ many men. In order to make it prosper he must get a bonus or some special privilege, that can be made to look very trifling, though necessary. But if his business succeeds he will indirectly benefit a whole city or province. He will employ much labor, which will consume vast quantities of country products and the whole country will overflow with indirect benefits. It is very logical and also philanthropic, but the man who fixes the scheme so that he is the one who gets the necessary special privilege and direct benefits is the only one who takes to riding in a private car and dining on nightingale's kidneys. I defy any man to point to a millionaire whose fortune was accumulated from indirect benefits.

FARM BULLETIN.

Use Business Methods.

By Peter McArthur.

Last week I spent several days in Toronto, where I met some scores of business men. During those days I received more well-considered and conclusive advice about farming than I have been able to get from the Department of Agriculture and "The Farmer's Advocate" in several years. It seemed as if every promoter, financier, merchant, manufacturer and editor I met had been sitting up nights to solve the problem of how to get the farmers to produce more and be more enterprising and up-to-date. But alas, even the best of their homilies left me meek but unconvinced. I do not claim to be much of a farmer, but I have done enough to know a few things that I can do and a few that I can not. And chief among the things I cannot do is to get the results from a piece of good fertile land that these city farmers can get from a lead pencil and piece of paper. Still, they are so logical in their methods that they leave me almost perplexed. But one phrase was dinned into my ears so steadily that it finally brought enlightenment—but not of the kind it was meant to convey.

"Farmers must learn to use business methods."

Quite right. But the business methods they must use are the kind that are put into practice, rather than the kind that are taught in copy-books and applauded in the biographies of great and successful business men. There is one set of principles that business men use like their Sunday suits, to go to church with, and another that they use like their ordinary tweed suits, to go to the office with. The tweed-suit principles are the ones that enable them to make their fortunes and the others are the kind that are pointed to with pride in editorials and sermons. Without touching on the principles that justify them in employing lobbyists and doing the kind of things that are sometimes aired by investigating committees and in the courts, there is one clean and sensible principle that I think farmers could adopt profitably and with clear consciences. I refer to the principle of getting Direct rather than Indirect benefits from business and such legislation as affects business.

The average business man—or rather, every successful business man—works for Direct benefits. The benefits of his business go directly to him or to the shareholders he represents. If he is a merchant, manufacturer, financier or what not, he conducts his business with an eye single to the Direct profits that come to him from his business and if he gets them in sufficient quantities he will sit back in a leather-cushioned chair at his club, and while smoking an expensive cigar, will explain to the country visitor how enormous are the Indirect benefits of his business to the farmers, laboring men and the community at large. He can work himself into a beautiful glow of satisfaction over the thousands, perhaps millions, of dollars that go indirectly to other people from his business. And he is so large-hearted that he does not try to get any of those Indirect benefits. The Direct benefits are enough for him. It sounds wonderful—but I have noticed with concern that Indirect benefits almost always go in the wrong direction. The people who are supposed to get them do not belong to expensive clubs or send their families on trips to Europe. Only the men who get the Direct benefits are able to do that. This explains why all business men are always reaching for the Direct benefits and willing to go to considerable lengths to get them. As nearly as I can figure it out, the Direct benefits are the only ones that the man who wishes to prosper personally needs to take into consideration. That business principle alone accounts for every outstanding success in the business world.

The great trouble with the farmers is that they are expected to prosper and fatten on Indirect benefits. A business man promotes a

Now the lesson I learned from this little glimpse into business was that "farmers must adopt business methods." They must see to it that the Direct benefits of their enterprise reach them rather than someone else. If they find themselves cramped for lack of transportation facilities, lack of markets free from combines that put down prices, or any of the schemes that give Direct benefits to others they should get busy at once. Let them see to it that every kind of farm production will yield its Direct benefits to them. Then they can hire some competent writers and speakers to show the manufacturers and financiers and city business men that farming conducted in this way will yield millions of dollars of profit to Indirect benefits to Sir Philabeg McSporran and Sir Jingo McBores and the rest of the silk-stocking gang. Business is business and Direct benefits are all that are worth considering in business. Let the farmers once learn to apply this great business principle and see to it that they get legislation that will enable them to make it effective and they will prosper so that some men now in other business will come back to the land. The best possible proof that this talk about Indirect benefits is a complete farce is that no prosperous business man takes it into consideration where his own business is concerned. Farmers and laboring men should learn to treat it with the same contempt and look out for the Direct benefits that legitimately belong to them.

Good Prices at the Shorthorn Sale.

It was a large and enthusiastic crowd that gathered at the Union Stock Yards, West Toronto, on Wednesday, Feb. 4th, the occasion being the annual consignment sale of Shorthorn cattle. Breeders were present from all the Provinces of the Dominion and many came from the United States. Bidding for the most part was brisk and the auctioneers, Col. Carey M. Jones, Chicago; Col. Fred. Reppert, and Capt. T. E. Robson, of London, disposed of upwards of sixty head readily.

The top price of the sale was \$875, paid by Prof. G. E. Day, of the Ontario Agricultural College, Guelph, for Proud Diamond, a roan bull just about a year old. The second highest price was paid for Missie Marquis, the five-year-old bull which was last fall champion at the Canadian National Exhibition.

Much of the stock was young and on the whole the sale was considered to be a success. The outstanding feature was the demand for young bulls. There seems to be a great scarcity of the right kind of bulls to head herds in this country.

Sixty-five head sold made the grand total of \$16,900, an average of \$260 each.

Table listing cattle sales with names and prices. Includes entries like Gloster Lavender, J. Wilkin, Balsam for 195.00 and Augusta Queen 8th, Hearts Delight Farm, Chazy, N. Y. for 475.00.

Table listing various livestock sales with names and prices. Includes entries like Lavender Peer, Goodfellow Bros., Bolton for 300.00 and Lady's Best, Geo. Riby, Paisley for 185.00.

Hassard's Horse Sale.

During the week of the Live Stock Association meetings in Toronto an important event to horsemen was the big sale of Clydesdales and Percherons, the property of T. H. Hassard, of Markham, Ont., the sale being held at the Repository, Toronto, on Wednesday, Feb. 4th. A large number of horsemen from near and far attended this sale, which was, without a doubt, one of the most successful horse sales held in recent years. That grand span of Clydesdale fillies, Mary of Silversprings and Lily of Muirton, went to the bid of Robt. Graham, of Claremont, Ont., for \$2,500. This is a grand pair of big mares with all kinds of quality and they will be heard from again in the show ring. Nell of Aikton, the champion at the Guelph Winter Show in December, fell to the bid of the Dominion Transport Co., Toronto, at \$1,150. Some of the Percheron mares also made good prices, two of them selling for \$800 each and another for \$500. Of the Percheron stallions offered Kazak topped the lot at \$1,275.

The following is a list of the animals sold and their purchasers:

Table listing horse sales with names and prices. Includes entries like Mary of Silversprings and Lily of Muirton, Robt. Graham, Claremont for \$2,500 and Kazak, W. H. Comstock, Belleville for 1,275.

Large Numbers Attend the Live-stock Meetings.

Dominion Shorthorn Breeders.

One of the most business-like and successful in the whole series of gatherings in Toronto last week was held in the Temple Building on February 3, when the Dominion Shorthorn Breeders assembled to conduct their annual affairs and plan for the future. A spirit of confidence and prosperity permeated the entire proceedings, which manifested the faith of the breeders in an industry and a breed built upon the sure foundation—the nation's wants. It might be said that the association had its innings in 1913.

President Harry Smith reviewed the prosperity of the association during the season closed and made fitting allusion to the mantle of regret which overhung the members through the loss of the late W. G. Pettit and A. W. Smith. In reference to the newly established Record of Performance in the association, very marked approbation has been bestowed upon it by the members. A large number of entries have been received and the records of the tests have been creditable indeed. The underlying current of progress is apparently in the direction of combining milk production with beef conformation in-so-far as it does not detract from the excellence of the latter quality. In order to demonstrate the possibility of this achievement the president referred to the Scotch-bred cow, Beatrice 22nd, with a milk record of 57 pounds per day and yet was the dam of Bandmaster, first-prize bull at the Royal, and Golden Arrow, a champion steer at the Smithfield show.

At the last annual meeting a committee composed of W. A. Dryden, John Gardhouse and Prof. Geo. E. Day were requested to draft a standard for animals registered in the Shorthorn Record of Performance. The following qualifications were presented and adopted by the association:

Bulls admitted after having four daughters in the Record of Performance, each from a different dam.

Cows admitted fulfilling the following requirements of production and breeding as supervised by the Live Stock Branch of the Department of Agriculture. All cows admitted must equal or exceed the records specified below:

Class.	Lbs. Milk.	Lbs. Butter Fat.
Two-year-old	4,000	140.
Three-year-old	4,500	157.5
Four-year-old	5,000	175.
Mature cows	5,500	192.5

Tests to be made by the Babcock test.

Year's Milk Record.—If the test be commenced the day the animal is two years old or previous to that day she must produce within 365 consecutive days from that date 4,000 pounds of milk. For each day the animal is over two years old at the beginning of her year's test the amount of milk she will be required to produce in the year will be determined by adding 1.37 pounds for each such day to the 4,000 pounds required in the two-year-old class. This ratio is applicable until the animal is five years old, when the required amount will have reached 5,500 pounds, which will be the minimum amount of milk required of all cows five years old and over.

Year's Butter Fat Record.—If the test be commenced the day the animal is two years old or previous to that day she must produce within 365 consecutive days from that date 140 pounds of butter fat. For each day the animal is over two years old at the beginning of the year's test the amount of butter fat she will be required to produce will be determined by adding .048 of a pound for each such day to the 140 pounds required when in the two-year-old class. This ratio is applicable until the animal is five years old, when the required amount will have reached 192.5 pounds, which will be the minimum amount of butter fat required of all cows five years old and over.

Every cow accepted for registration of performance must drop a calf within 15 months after the commencement of the test. In the four-year-old class and mature cows, no cows will be accepted for registration of performance if the beginning of her previous lactation period was more than fifteen months before the commencement of the test.

All applications for the test must be addressed to the secretary of the Dominion Shorthorn Breeders' Association.

The Western Canada Live Stock Union, composed of all the live-stock associations west of the Great Lakes, sent in a strong plea for more representation on the Board of Directors.

In presenting their claims, Drs. Rutherford, Bell and Tolmie, with Andrew Graham, emphasized the growing importance of the live-stock industry in the Western Provinces and the necessity of Eastern branches keeping closely in touch with them.

Importers are under some restraint as to the registration of animals in Canada that may be duly registered in the Old Country. There is a feeling throughout America that the time has arrived when some change is warranted in the constitution, which stimulates that short-pedigreed cattle must be in the future. A committee will confer with a similar body from the United States in order to agree on some concerted action in this matter, but it may not be expected that any radical steps will be taken.

The annual report was received with satisfaction on the part of the members as it showed an increase of 2,365 registrations and 884 transfers over that of the previous year. In 1913 there were 9,046 registrations, 3,647 transfers and \$3,376 received in memberships. After the amount of the liabilities is deducted from the cash on hand there is a balance of \$7,835.73 left in the treasury of the association.

Fairs and exhibitions will receive a liberal grant during 1914 and it will be distributed in the following manner: Canadian National (Toronto), \$1,000; Western Fair (London), \$250; Central Canada Exhibition (Ottawa), \$100; National Live Stock, Horticultural and Dairy Show (Toronto), \$150; Winter Fair (Guelph), \$225; Winter Fair (Ottawa), \$175; Winnipeg Exhibition, \$200; Brandon Exhibition, \$200; Brandon Winter Fair, \$100; Regina Exhibition, \$200; Saskatoon Exhibition, \$200; Regina Winter Fair, \$100; Calgary Exhibition, \$200; Calgary Winter Fair, \$100; Edmonton Exhibition, \$200; Victoria Exhibition (Dominion), \$500; Sherbrooke Exhibition, \$200; St. John Exhibition, \$50; Halifax Exhibition, \$100; Charlottetown Exhibition, \$50; Amherst Winter Fair, \$50.

Officers.—President, Harry Smith, Hay; vice-president, John Gardhouse, Weston; second vice-president, W. A. Dryden, Brooklin; secretary-treasurer pro tem, Harry Pettit, Freeman, Ont.; directors, John Gardhouse, Highfield, Ont.; Dr. Sutherland, Saskatoon; J. A. Watt, Salem; P. M. Bredt, Regina; C. A. Archibald, Truro, N. S.; Wm. Smith, Columbus; J. G. Barron, Carberry; J. F. Mitchell, Burlington; J. A. McClary, Hillhurst; R. Amos, Moffat; R. W. Caswell, Saskatoon; H. M. Pettit, Freeman; S. Dymont, Barrie; W. D. Cargill, Cargill; W. R. Elliott, Guelph; delegates to Dominion Cattle Breeders' Association, Harry Smith and J. A. Watt, Salem.

Representatives to exhibition boards: Canadian National Exhibition, Toronto—J. A. Watt; Robert Miller, Stouffville. Western Fair, London—J. T. Gibson, Denfield; Capt. T. E. Robson, London. Central Canada Fair, Ottawa—W. A. Wallace, Kars, Ont.; R. E. White, Perth. Provincial Exhibition, Halifax, N. S.—R. S. Starr, Port William, N. S. Provincial Exhibition, New Brunswick—Harold Etter, Westmoreland Point, N. B.; A. E. Trites, Salisbury, N. S. Provincial Exhibition, Charlottetown, P. E. I.—Thos. Cass, North River, P. E. I.; John Richards, Bideford, P. E. I. Winnipeg Industrial Exhibition—James Yule, E. Selkirk; J. G. Washington, Ninga, Man. Calgary Exhibition—J. F. Lyall, Strome; J. A. Turner, Calgary, Alta. Brandon Exhibition—George Allison, Burnbank, Man.; Andrew Graham, Pomeroy, Man. Regina, Sask., Exhibition—Joe Barnett, Moose Jaw; Robt. Douglas, Tantallon, Sask. Sherbrooke, Que., Exhibition—E. V. Norton, Coaticook, Que.; F. R. Cromwell, Cookshire, Que. Winter Fair, Guelph—J. M. Gardhouse, Weston, Ont.; W. R. Elliott, Guelph, Ont. Edmonton Exhibition—James Sharpe, La Combe; A. R. Gillis, Clover Bar. Saskatoon Exhibition—Hon. Mr. Sutherland and R. W. Caswell, Saskatoon, Sask. Ottawa Winter Fair—W. A. Wallace, Kars, Ont.; Jas. Smith, Rockland, Ont. Regina, Brandon and Calgary Winter Fairs—Same delegates as appointed to summer fairs. Amherst Winter Fair—E. Crowe, Beaverbrook, and R. Albert Boswell, Pownell, P. E. I. National Live Stock, Horticultural and Dairy Show, Toronto—John Gardhouse, Highfield, and John Mitchell, Burlington.

Hackney Men Meet.

The announcement made at the annual meeting of the Canadian Hackney Horse Society, held at the Prince George Hotel, Toronto, Wednesday evening, February 4th, that this Society was now in affiliation with both the English and American Societies was received with much satisfaction by the large number of members present. The financial statement, as read by Secretary Harry Robinson, was the best yet, showing a healthy condition of the Society, in its twenty-two years of organization. Including the balance on hand at the beginning of 1913, the total receipts for the year were \$2,069.43, and the expenditure \$720.92, leaving a balance on hand of \$1,348.51, a substantial increase over that of last year's report. There was also a most satisfactory increase in both membership and registrations. The officers elected were: Honorary President, J. H.

Allison, Morrisburg; President, A. E. Yeager, Simcoe; Vice-President, Harry Boag, Barrie; Directors, Robt. Graham, Claremont; J. R. Thompson, Guelph; C. W. McLean, Pointe Claire, Que.; L. Mossip, St. Marys; Thos. Cussion, Whitby; Dr. E. Watson, Hudson Heights, Que., and R. P. Grann, Lancaster, Pa., U. S. A.

Canadian Jersey Cattle Club.

At the annual meeting of the Canadian Jersey Cattle Club, held at the Prince George Hotel, Toronto, on Wednesday, February 4th, a resolution was passed asking that a committee be appointed to act in conjunction with the committees from the other societies to interview the Minister of Agriculture, asking for legislation prohibiting the running at large of scrub bulls, or the running at large of a pure-bred bull of any breed, and in case such bulls are found within the confines of another man's property they can be lawfully detained until all damages are settled, and in case a pure-bred cow gets in calf to such bulls unlawfully running at large, the owner may recover damages. Another resolution was passed asking for a committee to act in conjunction with the committee from the other associations, with the object of recommending that in the R. O. P. test the period of lactation for the test be changed from 365 to 300 days, and that the period in which she must freshen from the commencement of the test be 400 days. Reciprocal registration between this and the American Jersey Club is now an almost established fact. The financial report of Secretary B. A. Bull showed an increased prosperity of the club over any former year. Registrations, 1,155; transfers, 675; total receipts, \$1,662.95; expenditure, \$780.62. Grants to the various exhibitions amounting to \$400.00 were voted. Some changes in membership and registration fees were made as follows: Annual membership, \$2.00; registration to members for animals under two years of age, \$1.00; to non-members, \$2.00; for animals over two years to members, \$2.00; to non-members, \$4.00. It was also declared that the Canadian Jersey Club wishes to go on record as deploring the fact that the salaries paid to the officers of the Live Stock Branch of the Experimental Farm, at Ottawa, are not of sufficient importance to keep the better class of man in those positions. A resolution expressing appreciation of the management of the National Live Stock and Dairy Show in their efforts looking to the comfort of the exhibitors, and their exhibits was passed. The election of officers resulted as follows: President, S. J. Lyons, Norval; Vice-President, D. O. Bull, Toronto; First Vice-President, F. L. Green, Greenwood; Directors, W. N. McEachern, Toronto; E. S. Archibald, Ottawa; R. J. Fleming, Toronto, and H. A. Dolson, Altona. Much feeling was expressed by several of the members in speaking to a motion expressing sympathy for the retiring President, David Duncan, Don, through his serious illness.

Clydesdale Men in Annual Session.

A slight falling off in the cash balance on hand at the end of 1913, as compared with that of the preceding year, due to the largely increased grants to fairs, was the most prominent feature of the financial report as read by Secretary Wheaton at the annual meeting of the Clydesdale Horse Association of Canada, held at the Grand Union Hotel, Toronto, on Thursday, February 5th, 1914. The cash balance on hand at the end of the year was \$16,824.39, an excess of assets over liabilities \$19,613.40. The Directors' report, which was of considerable length, dealt with the continued supremacy of the Clydesdale as the ideal draft horse, and the superior quality of the horses exhibited at the various exhibitions, particular stress being laid on the splendid success attained by horses of Canadian breeding at the International Show, held in Chicago last November. An amendment to the constitution was ordered, which provided that article 16 be amended by adding thereto the following: Vice-Presidents of the provinces shall have all the powers of Directors, and they with the other officers, provided for in said article 16, shall constitute the governing body of the Association. On motion a committee was appointed to confer with the Record Board re the changing of the form of pedigree to give a more extended line of the animal's breeding. Officers elected for 1914 are: President, John A. Boag, Queensville; Vice-President, W. Graham, Claremont; Vice-President for Ontario, Peter Christie, Manchester; Directors, James Henderson, Belton; Geo. Gormley, Unionville; James Torrence, Markham; Fred Richardson, Columbus; Walter Milne, Green River; T. D. Elliott, Bolton; W. Grant, Regina. By a unanimous vote the following were elected life members of the Association: Robt. Graham, Claremont; Peter Christie, Manchester; Col. D. McCrae, Guelph, Ont., and T. C. Graham, Claremont, all of them past presidents.

Dr. Maria Montessori

Dominion Swine Breeders.

The annual meeting of the Dominion Swine Breeders' Association, held at the Grand Union Hotel, Toronto, on Tuesday, February 3rd, was largely attended by breeders representing many of the provinces of the Dominion. The Directors' report showed the year 1913 to have been the most successful financially in the history of the Association, the membership having increased 177 during the year, and registrations 4,813 over the preceding year, the total for 1913 being 11,509; number of transfers, 1,228, while receipts reached the satisfactory sum of \$8,498.12, and expenses in connection with the swine records, \$3,624.95.

The result of the election of officers was: President, John Flatt, Hamilton; Vice-President, J. D. Brien, Ridgetown; General Director, Dr. Tolmie, Victoria, B. C.; Directors for the various breeds: Berkshires, P. McEwen, Kertch; Yorkshires, Wm. Jones, Zenda; Tamworths, W. D. Germain, St. George; Chester Whites, W. C. Wright, Glanworth; Hampshires, A. Hastings, Crosshill; Poland Chinas, G. G. Gould, Edgars Mills; Duroc Jerseys, Mac Campbell, Northwood. The newly elected President on taking the chair spoke in glowing terms of the general prosperity of the swine breeding industry, and the splendid financial condition of the Association. He prophesied a most prosperous future for the industry.

Representatives to the various fair boards were chosen as follows: To the Canadian National, S. Doison, and J. Flatt; Western, London, P. J. McEwen, and J. D. Brien; Canada Central, Ottawa, J. C. Stuart, and R. J. Garbutt; National Live Stock and Dairy Show, J. E. Brethour, and H. A. Dolson; Guelph Winter Show, Major Hood, Prof. G. E. Day, and John Flatt, and J. D. Brien; Ottawa Winter Show, J. C. Stuart, J. C. Stuart, and R. O. Morrow.

Following is a list of the grants to the various Ontario shows: National Live Stock and Dairy Show, \$100.00; Canadian National, \$100; Provincial Winter Show, Guelph, \$50.00; Eastern, Ontario Winter Show, Ottawa, \$50.00; Canada Central, \$50.00; Western, London, \$50.00. A letter was read by Secretary Westervelt from Western Canada Breeders setting forth their claims for representation on the directorate. Several members speaking to the question were strongly of opinion that their claim was a just one, and promised that next year representation should be given. A resolution of sympathy from this Association was ordered to be drafted and sent to the families of the late members, Thos. Teasdale, Concord; Joseph Featherston, Streetsville, and E. D. George Putnam; also a resolution from the Association expressing their appreciation of the efforts of the management of the National Live Stock, Horticultural and Dairy Show, for the interest manifested for the comforts of both the exhibitors and their exhibits, and promising their hearty co-operation and sympathy to the success of future shows.

The Back Lots Were Not Planted.

Our readers will remember that at the annual meeting of the Ontario Plowmen's Association one year ago it was resolved to plough a number of back lots in Toronto that people might utilize the same to plant with garden vegetables, potatoes and other like crops. At the annual meeting of this Association, which was held Tuesday, February 3rd, in the Foresters' Hall, Toronto, it came to light that while the plowmen ploughed the lots nothing was planted on them, and they developed into weedy or barren wastes. It is plain that you cannot make small farmers and gardeners out of city people, but we suppose they would have eaten the potatoes had the plowmen seen fit to prepare the land, plant and hoe the crop.

There was a large attendance at the Association meeting this year, and much interest was manifested throughout the day. One of the important steps was the appointing of a deputation to wait on Hon. Martin Burrell, Dominion Minister of Agriculture, to ask that part of the Federal grant for agriculture apportioned to Ontario be given to the Plowmen's Association. The Association also discussed telephone questions, and asked that the Dominion Railway Commission order the Bell Telephone Co. to give connection with a number of independent companies, which are still not connected.

The work of the year had progressed favorably, many of the most successful ploughing matches ever held in this province, characterizing the practical end of the Association's doings.

The following officers were elected for the coming year: Honorary President, Joseph Kilgour; Past President, Frank Weir, Agincourt; President, James McLean, Richmond Hill; First Vice-President, A. P. Pollard, Orono; Second Vice-President, William Doherty, Eglinton; Secretary, J. Lockie Wilson; Treasurer, T. A. Paterson, Ellesmere.

Yorkshire Swine Club.

The Ontario Yorkshire Club, at the annual meeting at the Grand Union Hotel, Toronto, on February 3rd, presented a most optimistic report, the finances being in a healthy state, the registrations for the past year totalling 4,414, an increase of 1,702 over that of 1912, and still increasing. The President, Wm. Jones, in his opening address was enthusiastic in his congratulations to the members on the unprecedented success of the Club during the year just closed, and the bright outlook for 1914. Secretary, A. P. Westervelt, in his report on the financial condition of the Club showed a cash balance on hand at the end of the year, \$192.83, and due the Club from the Dominion Swine Breeders' Association, \$506.00, making a total cash balance of \$698.83. A resolution was unanimously adopted expressive of appreciation of the efforts of the management of the National Live Stock, Horticultural and Dairy Show in their endeavor to cater to the wants and comfort of the exhibitors, and their charges at the late show in November last, and their hearty wishes for the future success of the show.

The following grants to the various shows were authorized: Canadian National, \$100.00; National Live Stock and Dairy Show, \$100.00; Guelph Winter Show, \$100.00; Ottawa Winter Show, \$75.00; Canada Central, Ottawa, \$50.00; Western, London, \$50.00; Dominion Exhibition, \$30.00.

The Directors elected for the ensuing year were: J. C. Stuart, Dalmeny; Major Hood, Guelph; John Flatt, Hamilton; J. E. Brethour, Burford; H. McDiarmid, Fingal; K. Featherston, Streetsville, and Wm. Jones, Zenda. A representative was asked for the National Live Stock and Dairy Show, K. Featherston received the appointment.

Thoroughbred Men Meet.

At the annual meeting of the Thoroughbred Horse Society, held at the Prince George Hotel, Toronto, on Monday, February 2nd, the Secretary's report showed the Society to be in a most flourishing condition. The total registrations for the year numbered 3,159, a substantial increase over the previous year, the largest provincial increase coming from Alberta. The total receipts for the year were \$2,292.72, including a cash balance on hand at the beginning of the year of \$1,323.44, and the total expenditure for the same period including a cash balance on hand of \$1,997.42, was \$2,442.78. The matter of grants to the various exhibitions was on motion left in the hands of the executive.

The election of officers for the current year resulted as follows: President, Col. Wm. Hendrie, Hamilton; First Vice-President, K. R. Marshall, Todmorden; Second Vice-President, A. E. Ogilvie, Montreal; Directors, J. W. Barbour, Toronto; R. M. Dale, Willowdale; Jos. Seagram, Waterloo; R. W. Davies, Toronto; M. B. Corlin, Victoria, B. C.; W. R. McCrackin, Brandon; C. Campbell, Montreal; J. C. C. Bremner, Bremner, Alberta; Secretary-Treasurer, J. J. Dixon, Toronto; Assistant Secretary, R. M. Dale; Representative to the Canadian National Exhibition, Col. Wm. Hendrie, Hamilton; To the National Live Stock Association, Col. D. McCrae, Guelph, and Dr. J. G. Rutherford; To the Record Board, Col. Wm. Hendrie, and Col. D. McCrae.

Ontario Horsemen Out Strong.

There was a large attendance at the Ontario Horse Breeders' annual meeting, held at the Grand Union Hotel, Toronto, on Wednesday, February 4th. Some plain talk was indulged in during the discussion on the Stallion Enrolment Act. It was pointed out that the Act was not framed for the protection of stallion owners, but for the protection of breeders by compelling owners of grade stallions to represent them in their true light. The unanimous opinion of the meeting was that inspection should be compulsory, and a motion was passed to that effect, as was also another recommending that an amendment to the Act be made prohibiting grade stallions standing for service and collecting fees. The financial statement showed a cash balance on hand over expenditure of \$392.22. Officers elected were: Clydesdales, W. F. Batty, Brooklin; Job. White, Ashburn; Wm. Smith, Columbus; J. A. Boag, Queensville; A. Scarf, Cumming's Bridge; Geo. Gormley, Unionville; Wm. Graham, Claremont; J. Torrence, Markham; J. Henderson, Belton; Dr. Hassard, Markham; P. Christie, Manchester; R. E. Gunn, Beaverton; A. E. Major, Whitevale; T. D. Elliott, Bolton; Robt. Graham, Claremont, and Walter Milne, Green River. Shires, John Gardhouse, Highfield; J. M. Gardhouse, Weston. Percherons, E. C. H. Tisdale, Beaverton, and M. Hamilton, Simcoe. Hackneys, J. W. Allison, Morrisburg, and Harry Boag, Barrie. Standard-breds, O. B. Shepherd, and Geo. Pepper, Toronto. Thoroughbreds, Col. Wm. Hendrie, Hamilton, and Col. D. McCrae, Guelph. Ponies, Harry Robinson, Toronto, and T. A. Cox, Brantford. Representatives appointed to the various fair boards were: Canadian National, Wm. Smith, M. P.; Western, London,

James Henderson, and Geo. Charlton; Provincial Winter Show, Guelph, Wm. Smith, John A. Boag, Peter Christie, and Geo. Pepper; Eastern Ontario Winter Show, Ottawa, Wm. Smith, Adam Scarf, Geo. Allison, and W. C. Smith; National Live-Stock, Horticultural and Dairy Show, Toronto, Wm. Smith, M. P. The matter of grants to the various exhibitions was left in the hands of the executive.

Dominion Cattle Breeders First.

The initial step was taken by the Dominion Cattle Breeders' Association in the series of interesting live-stock meetings in Toronto last week. In the Grand Union Hotel, on Monday afternoon, representatives of the different breeds assembled to discuss the outlook of the industry, and although, at such an early period of a busy week, the delegation was not large, the different breeds had their champions present.

Transportation of live stock to the West has long been a matter of discussion in this body of men. Last year several resolutions were adopted to present to the authorities in order to better the conditions, and Col. D. McCrae, and Col. R. McEwen, were commissioned to represent the Association in an effort to bring about a satisfactory understanding. At the last annual meeting Col. McCrae reported that the matter had received consideration, and that stockmen could soon expect a culmination of their efforts which would be highly satisfactory. It is now the desire of Eastern Stockmen to be allowed the privilege of sending as many men as are required, or at least two, in company with a car of pure-bred stock billed West for exhibition purposes. This is a commendable request which will no doubt be granted by the railway authorities who are looking to the future of the country's transportation business.

British Columbia had a representative present in the person of Dr. Tolmie, of the Dominion Live Stock Branch for that province. Dr. Tolmie invited Eastern breeders to exhibit at the Victoria Exhibition this coming season, where they might be expected to make satisfactory sales as well as advertise their herds. The Pacific Province annually imports from ninety to one hundred thousand live sheep, and in addition to this imports frozen mutton from Australia. Live hogs and dressed carcasses are annually imported, and last year over 5,000 head of cattle were brought in from Alberta. The dairy industry is paramount at the present time, but numerous requests are sent out for the dual-purpose type of Shorthorn.

John Gardhouse, Highfield, was re-elected President of the Association, and W. W. Ballantyne, of Stratford, as Vice-President. A. P. Westervelt, Toronto, still holds the office of Secretary. The general Directors for the coming year are John Gardhouse, and Prof. G. E. Day, O. A. C., Guelph, while the representatives to the various fairs and exhibitions are as follows: Canadian National, John Gardhouse; Western Fair, London, W. W. Ballantyne, Stratford, and Thos. O'Brien, London; Central Canada Exhibition, Ottawa, L. O. Clifford, Oshawa, and W. A. Wallace, Kars; Ontario Winter Fair, John Gardhouse, R. S. Stevenson, Ancaster. W. W. Ballantyne, and W. A. Dryden, Brooklin; Eastern Ontario Live Stock and Poultry Show, Peter White, Pembroke, W. F. Stephen, Huntingdon, Que., and J. H. Grisdale, Ottawa; National Live Stock, Horticultural and Dairy Show, Peter White, Pembroke, and H. D. Smith, Hamilton.

Holstein Breeders Alter Constitution.

One of the largest meetings of any live-stock association ever held in Canada was that of the Holstein breeders, gathered at the Temple Building, Toronto, on Thursday, Feb. 5. Never was there greater interest shown in the matters brought up for discussion than at this meeting and many a wordy battle took place, but in the main the recommendations of the committee carried.

President Jas. Rettie, of Norwich, Ont., in his address pointed out that owing to the fact that business has increased so rapidly it was thought advisable to close the books of the Association at the end of the calendar year, thus the month of January, which is a heavy one as far as membership fees are concerned, is not included in this year's report, which only covers eleven months. However, despite this fact and greatly increased expenses the Association has added over \$1,000 to its assets during the eleven months. The Executive believe it advisable to adopt now a new style of printing the herd books, using a condensed form and printing two columns to a page. Record of Merit and Record of Performance will be printed in the year book in greatly condensed form.

Several comments were made which were wholly unfavorable to the National Live Stock Records office at Ottawa and the Holstein breeders still stand aloof.

The annual report of the Secretary was very lengthy. During the year 676 official tests were accepted for entry in the Record of Merit, an in-

crease of 140 over the previous year, and 134 cows qualified in the Record of Performance, bringing the total up to 435. Ten bulls qualified for admission by siring four or more tested daughters, all from different dams.

The Secretary made a special note of the fact that the dairy tests at the various exhibitions throughout the past year were all won by Holstein cows. The outlook for the breed is bright. Good cows were never so high in price before.

In 1913, 6,814 animals were registered, 7,043 transfers were made and 21 farm names were recorded. This is a rich Association. The balance on hand Dec. 31, 1913, was \$3,110.79 and the total assets of the Association, at the present time, not taking account of the registration fees, annual dues, interest on bonds, etc., which have fallen due since Dec. 31, is \$16,804.03, with no liabilities. If all the assets were taken into consideration prominent men in the Association believe that they have \$20,000 at the present time.

Grants to exhibitions were made as follows: Toronto, \$250; London, \$150; Ottawa, \$150; Sherbrooke, \$150; Quebec, \$50; Winnipeg, Brandon, Regina, Calgary, Edmonton, Vancouver, New Westminster and Saskatoon, \$125 each; Lethbridge, Red Deer, \$50 each; Victoria, \$150; St. John, Chatham (N. B.), Halifax, Charlottetown, \$75 each. The National Live Stock and Dairy Show is to get the same grant as the Guelph Winter Fair, which is \$375, with \$150 added provided the championships are won by Holsteins. The same regulations are to apply to Ottawa and Amherst Winter exhibitions. The Association also passed a resolution that any small autumn show putting on a dairy test should get a grant of \$25.

The constitution of the Association was amended in so far as it governed supervision, qualification, eligibility of cows, eligibility of bulls, duration of test, production required, feeding and care of cows, etc., in connection with Record of Merit tests. The Secretary is given charge of the Record of Merit. The owner must report the completion of each test within thirty days after the record is completed. Six days must elapse after a cow freshens before a test may be begun. Bulls are eligible for record having four or more R.O.M. daughters. No test can be under seven days and the production required shall be 8 pounds, 9 pounds, 10 pounds, 11 pounds, 12 pounds, 13 pounds and 14 pounds ranging in seven days from the junior two-year-old to the mature cow form. Cows must not be drugged or blanketed during a test. Provision is made for retesting cows which have made high records. Anything over 15 pounds of butter fat for two-year-olds, 18 pounds for three-year-olds, 21 pounds for four-year-olds, and 24 pounds for mature cows shall be an abnormal test and subject to re-test.

Another amendment was brought before the meeting to lower the fees for import certificates from \$25 for males and \$10 for females to \$10 for males and \$5 for females, but to make very stringent rules regarding the production of sires and dams of these animals for import. This amendment was thrown out.

A resolution was also passed asking that committees be appointed to wait on the Governments of the several Provinces to obtain more stringent legislation regarding bulls running at large. Strict regulations were also passed to prevent borrowing of cattle for showing purposes. Hereafter a man who purchases show animals cannot sell them back to the original owner within twelve months after the date of showing.

Officers for 1914: President, R. F. Hicks, Newtonbrook; First Vice-President, D. C. Flatt, Hamilton; Second Vice-President, M. I. Halev, Springfield; Third Vice-President, John Richardson, Caledonia; Fourth Vice-President, M. Michener, Red Deer, Alta.; Directots, Dr. Tolmie, B. C.; W. P. Allison, Chesterville.

Ontario Sheep Breeders in Convention.

With a cash balance on hand at the beginning of the year of \$1,244.09, as shown by the financial statement read by Secretary Westervelt at the annual meeting of the Ontario Sheep Breeders' Association, and the words of cheer and optimism as put forth by President J. D. Brien in his opening address, it would seem that the sheep breeding industry was rapidly becoming one of the most important of the lines of pure-bred stock breeding. Last year a committee was appointed to wait on the management of the different railway companies asking for a half-fare rate on shipments of sheep in transit to the various shows. While no definite results were attained they were assured that at the annual meeting of the freight companies' management the case would be thoroughly considered. One hundred dollars additional prize money was given for special classes of pen of three lambs and breeders pen of Ontario-bred sheep to be competed for at the winter shows in Ontario. A resolution was passed voicing the appreciation and confidence of

the Association in the management of the National Live Stock, Horticultural and Dairy Show for the interest displayed at the first show in November last looking to the comfort and convenience of the exhibitors and stock. The officers elected were: J. D. Brien, Ridgetown; Vice-President, J. T. Gibson, Denfield; Executive, the President, D. J. Campbell, Woodville, and Herb. Lee, Highgate; Directors, Cotswolds, J. D. Brien; Lincolns, J. T. Gibson; Leicesters, James Douglas, Caledonia; Oxfords, H. Arkell, Teeswater; Shropshires, J. G. Hammer; Southdowns, J. W. Springstead, Abington; Dorsets, F. W. Hodgson, Toronto; Hampshires and Suffolks, G. W. Telfer, Paris.

Dominion Sheep Breeders' Association.

The patrons of all breeds of sheep met in the Grand Union Hotel on Friday, Feb. 6th. West and East were represented at this meeting and some animated discussion occurred relative to various points.

The Dominion Sheep Breeders are strong financially, although the cash on hand does not show as large as at the last annual report, there now being \$4,466.17.

The registrations for the last year totalled 3,934 and by Provinces they run: Ont., 1,770; Man., 226; Sask., 311; Alta., 239; B. C., 48; Que., 1,183; N. B., 20; N. S., 19; P. E. I., 30; U. S. A., 82. By breeds it is shown that the Shropshire far outnumbered any others in the number registered, showing a total of 1,535; Leicesters, 981; Oxford Downs, 510; Southdowns, 164; Cotswolds, 49; Lincolns, 44; Suffolks, 228; Hampshires, 219; Dorset Horns, 180; Cheviots, 74.

The total refund accruing to each Province will be as follows: Ontario, \$399.25; Quebec, \$344.50; Manitoba, \$44.25; British Columbia, \$11.29; Saskatchewan, \$57; Alberta, \$42; Maritime Provinces, \$21.75.

The matter of Western representation came before the meeting, but there would be intricate questions to solve before representation could be worked out to the satisfaction of all Provinces and all breeds. It has been customary to appoint representation by breeds, while some argued that it was a sheep breeders' association, not a society inaugurated to promote the welfare of any one particular breed. The newly appointed Executive Committee will take this matter up and report their findings at the next annual meeting. The matter of the power of a representative to the exhibition boards was discussed and the opinion prevailed that the fair boards do not recognize the representative to the extent that they should. This matter will also be taken in hand by a committee.

The Panama Exposition, occurring in 1915, has aroused interest in the sheep breeders to exhibit at that place. The Executive Committee will take the matter before the Government and ask that grants be made in order to maintain an exhibit at the Exposition.

A resolution which drew forth considerable debate was moved by John Campbell and seconded by J. D. Brien, asking that the managing boards of our Canadian fall and winter fairs be urged to accept certificates of registrations from all international registry associations as well as Canadian Certificates when certificates or registration numbers are required in making entries. The motion was carried by a small majority.

The meeting unanimously expressed itself in sympathy with the National Live Stock, Horticultural Show held annually in Toronto.

The officers elected were: President, J. E. Cousins, Harriston, Ont.; Vice-President, Col. Robt. McEwen, Byron, Ont.; Secretary-Treasurer, A. P. Westervelt, Toronto; Directors by Breeds, Cotswolds, John Rawlings, Forest, Ont.; Leicesters, Jas. Snell, Clinton, Ont.; Lincolns, L. Parkinson, Guelph; Oxfords, J. Dion, St. Sebastien, Que.; Shropshires, A. Denis, St. Norbert, Que.; Southdowns, Fred. Skinner, Indian Head, Sask.; Dorsets, Jas. Bryson, Brysonville, Que.; Hampshires, P. Sylvestre, Que.; Suffolks, J. D. McGreggor, Brandon, Man.; Cheviots, F. R. Cromwell, Cookshire, Que.; O. A. C. Director, Prof. Geo. E. Day, Guelph; General Directors, R. H. Harding, Thorndale, and D. J. Campbell, Woodville, Ont.

Representatives to Toronto Fair, W. A. Dryden, Brooklin, Ont.; Western Fair, John Rawlings, Forest, and R. H. Harding, Thorndale; Ottawa, J. C. Stewart, Dalmeny, Ont., and John Paul, Russell, Ont.; Ontario Winter Fair, L. Parkinson, Guelph; Jas. Douglas, Caledonia; J. D. Brien, Ridgetown; A. W. Whitelaw, Guelph; Ottawa Winter Fair, J. E. Cousins; W. A. Wallace, Fars; J. T. Ferguson, Renfrew, and Jas. Bryson; National Live Stock, Horticultural and Dairy Show, John Kelly and John Rawlings; Winnipeg Exhibition, Stephen Benson and A. J. McKay.

Herefords Still Popular.

When the Hereford Breeders' Association met in the Prince George Hotel on Feb. 4th it was announced that the breed had been popular and the Association prosperous throughout the past year. A great loss is sustained through the death of Robt. Mackie, the late Secretary of the Association, and the sympathy of the Society was extended to the relatives.

The Secretary's report gave the extent of the transactions for the past year to be as follows: Members, 301; importations, 84; registrations, 1,362; transfers, 634; duplicates and new certificates, 25; memberships, \$420.

The grants to exhibitions during 1914 is left in the hands of the Executive Committee and will be allotted at a later date.

The officers for the ensuing year are as follows: President, H. D. Smith, Hamilton; Vice-President, L. O. Clifford, Oshawa; Directors, Wm. Butler, Calgary; F. Collicutt, Calgary; J. A. Chapman, Beresford, Man.; Wm. Mitchell, Oshawa; Thos. Skippon, Hyde Park; A. S. Hunter, Durham; J. A. McDermit, Stayner; H. J. Reid, Epping; Jos. Lowe, Meaford; S. Downie, Carstairs, Alta.; Mossom Boyd, Prince Albert, Sask.; Henry Reid, Mimosa.

Canadian Shire Men Meet.

The weight of body and quality of bone desired by the market has maintained the Shire horse in good standing with lovers of the heavy horse. The President, Andrew A. Miller, drew attention to this in his address and from the outlook in America he prophesied that this desire for more weight would become universal and the Shire horse would grow in popularity as this demand for weight increases. In registrations and transfers the transactions have been up to those of previous years, while the financial report shows a balance in favor of the Association amounting \$1,510.67.

The grants for fairs and exhibitions will be the same as last year, with the exception that the Dominion Fair, in Victoria, B. C., will receive \$50 and Brandon \$20. Calgary also will receive \$20 and \$25 will be dispensed to the new National Live Stock, Horticultural and Dairy Show to be held in Toronto.

The matter of representation from the West came before the meeting and J. M. Gardhouse and the President were commissioned to confer with a like representation from the West.

The officers for the coming year are: President, Andrew A. Miller, Middlemarch; Vice-President, C. E. Porter, Appleby; Directors, G. E. Morden, Oakville; Jas. Bovaird, Brampton; Amos. Agar, Nashville; John Gardhouse, Highfield; Dr. C. E. Dougherty, New Westminster; O. J. Hopkins, Anerley, Sask.; J. M. Gardhouse, Weston.

Ayrshire Breeders Assembled.

The assembly of Ayrshire Breeders, which met in the Prince George Hotel, on February 5th, lacked nothing in the way of confidence and faith in the future of the Ayrshire Breed. The President, Wm. Stewart, Menie, drew attention to the type of cow they have established and urged the breeders to be very particular in their selection and mating. This is one of the strongest features of the breed, yet it is not superior to their ability to produce. The President referred to two new records established this year: That of Milkmaid 7th 12374, and Auchenbrain Brown Kate 4th 27943. The former produced an equivalent of 850.5 pounds of butter, and the latter 1,080 pounds.

The Secretary, W. F. Stephen, of Huntington, Que., presented an inspiring report. The membership increased last year by 162 members, making a total of 1,084. The increases are now coming largely from the Western Provinces, where the breed is becoming popular with the stockmen, but Ontario is not lagging in the race. The importations have been of commendable quality, especially the 90 head brought in by R. R. Ness and J. D. Duncan, both of Howich, Que. Fifty-four members have this past season registered their farms under a specific name, making in all 122 breeders who now use the name of their farm in connection with the certificates of their stock. Four Ayrshire Clubs are now established in Canada and they are instrumental in furthering the interests of the breed to a marked extent. Three thousand seven hundred copies of the Annual were printed and distributed in all countries, as well as a large number of the Ayrshire Records, setting forth the animals which have qualified in the Record of Performance.

The transactions in totals for the past season were: Registrations, 3,258; ancestors, 371; transfers, 1,418; certificates, 71; membership received, 1,374. By Provinces the registrations were: Ont., 1,154; Man., 72; Sask., 44; Alta., 155; B. C., 41; Que., 1,510; N. B., 141; N. S., 96; P. E. I., 33; U. S. A., 12.

With the growth of the Association has come the increase in the cost of publications and grants to exhibitions, but the Association has

Dr. Maria Montessori

closed this year with the handsome balance of \$4,654.07.

A matter of discussion before the Associations representing the dairy breeds was that of shortening the period of the test for the Record of Performance. Any change in this direction would depreciate the high value of the Canadian test, and the Association decided to have it remain as it is.

One condition, however, which is aggravating to stock breeders is the freedom allowed to bulls in the local neighborhoods, and the Secretary was instructed to communicate with all Provincial Governments, asking that they legislate more stringent laws to regulate and severely penalize the freedom of such bulls.

A recommendation will be forwarded to the Record Office, asking that they keep a card index for the progeny of bulls as they now do for cows and that a flat rate of 50 cents be established for recording ancestors, both dead and living.

The following grants were voted for the different exhibitions: Toronto, \$150.00. London, Quebec, Halifax, Charlottetown, Ottawa, Winnipeg, Regina, Calgary, Edmonton, Reed Deer and New Westminster will receive \$50.00. Saskatoon will receive \$25.00 and Sherbrooke \$75.00. Victoria (Dominion) will get \$150.00, as will the National Live Stock, Horticultural and Dairy Show.

Officers: President, P. D. McArthur, North Georgetown, Que.; Vice-President, A. H. Trimble, Red Deer, Alta.; Secretary, W. F. Stephen, Huntington, Que.; Directors, John McKee, Norwich; W. W. Ballantyne, Stratford; Alex. Hume, Menie; Wm. Stewart, Menie; Frank Harris, Mount Elgin; A. S. Turner, Ryckman's Corners.

Delegates to fair boards: Toronto, Wm. Ballantyne; London, A. Kains and Geo. Hill; Ottawa, R. R. Ness; Sherbrooke, Jas. Borden; Halifax, John Retson; Charlottetown, Jas. Easton; Brandon, Wm. Braid; Regina, F. Harrison; Red Deer, A. H. Trimble; Calgary, R. Ness; Winnipeg, W. J. Briggs; Edmonton, J. G. Clarke; New Westminster, E. A. Wells; Quebec, Nap. Lachapelle; Victoria; S. Shannon; Amherst, F. S. Black; Ottawa (Winter Fair), Jas. Bryson; Prince Albert, A. Millar; Vancouver, Jas. Thompson.

The Interest in Standard-breds is Dominion Wide.

A goodly number of Standard-bred promoters gathered to the Prince George Hotel on February 3rd. Some came as far as 2,000 miles to assist in outlining the future program in the interests of their favorite horse. The past year has been a prosperous one for 560 individuals have been registered, 98 have been transferred, and the memberships amounted to 146. The Secretary-Treasurer's report showed the assets to exceed the liabilities by \$2,520.06, leaving the association financially strong.

During the proceedings some discussion arose over the withholding of grants to exhibitions which had not complied with the rules governing the grants. It was decided to make no concessions in the matter whatever, but adhere firmly to the rules of the Association. This stand was not taken from a financial viewpoint, but in the best interests of the future of the breed.

The New Canadian Trotting Association, born last year as an affiliated society, was the subject for some animated discussion. The committee found difficulty in securing a Dominion charter so they directed their efforts towards a Provincial charter, which might in time make the acquisition of a Dominion charter more feasible. This did not meet with unanimous approval, but the proceedings being of a technical nature, the matter was left in abeyance to be dealt with by the Society.

Correspondence from the Department of Agriculture at Ottawa indicated that steps were being taken to put Standard-breds and Hackneys on the same footing as Thoroughbreds in respect to government bonuses to stallions for service in breeding and raising army remounts throughout Canada.

The total grants to exhibitions for 1914 amounts to \$1,000, to be divided in \$50.00 bonuses to 20 fairs. This \$50.00 will be divided between the best stallion any age, and best mare with foal by side, of this breed.

The following officers were elected: Hon. President, O. B. Sheppard, Toronto; President, J. Wesley Allison, Morrisburg; 1st Vice-President, W. J. Cowan, Cannington; Secretary-Treasurer, J. W. Brant, Ottawa; Directors, G. S. McCall, St. Thomas; R. J. Speers, Wilkie, Sask.; C. W. Spears, Brandon, Man.; J. M. Baldwin, Killarney, Man.; C. W. McLean, Brockville; Hon. Clifford Sifton, Ottawa; S. A. Proctor, Toronto; Alex. McLaren, Buckingham, Que.; Dr. W. E. Baker, Hamilton; H. Ashley, Foxboro; Hon. John Richards, Bideford, P. E. I.; Ald. Sam McBride, Toronto; Auditor, G. L. Blatch, Ottawa; Representative to Canadian National Exhibition, O. B. Sheppard.

The Canadian Pony Society.

An interesting and important meeting of the Canadian Pony Society was held in the Prince George Hotel on February 5th. The Secretary-Treasurer, G. de W. Green, in his report, congratulated the society on a prosperous year in 1913. Starting with a balance on hand of \$143.70, there is now to its credit in the bank \$562.09. Membership fees were \$92, as compared with \$76.00 in 1912, and registration fees \$453.40, as against \$139.85, a very satisfactory increase in both cases. The pony classes at the Toronto Spring Show and the Canadian National were better filled than they have been for some years with ponies of a splendid type. Reports from other shows were to the same effect. During 1913 no fewer than 359 ponies of different breeds were imported into this Dominion, which showed the increasing popularity of this class. From Great Britain came 55 males and 273 females, and from the United States seven males and 24 females. In 1912 the number brought in was very small.

The following officers were elected: President, Charles Lovejoy, Mimico; 1st Vice-President, W. J. Langton, Toronto; 2nd Vice-President, J. M. Gardhouse, Weston; Hon. President, T. A. Cox, Brantford; Secretary-Treasurer, G. de W. Green, Toronto. Directors, Jos. Creetch, Lambton Mills; H. M. Robinson, Toronto; Fred Richardson, Columbus; Robert Graham, Claremont; T. Cussion, Whitby; B. Mothersill, Oshawa; J. E. Marfies, Hartney, Man.; E. Watson, Hudson Heights, Que.; John Miller, jr., Ashburn.

Ontario Berkshire Breeders' Society.

The growing attendance at the Ontario Berkshire Breeders' meetings maintains a spirit of enthusiasm for patrons of the "Blacks." The President, John Kelly, gave voice to this in his address and, as forward steps, suggested that auction sales be held at the fall fairs that breeders might dispose of their stock to good advantage.

In order to encourage competition in the bacon classes and bring out a strong exhibit of Berkshires the Association will duplicate all prizes won by pure-bred Berkshires to the extent of 50 per cent. in those classes at the three winter fairs in 1914.

The financial statement showed the Association to have \$76.51 on hand and the coming year will turn \$150.00 more into the treasury than it has in the past from the Dominion Swine Breeders' Association. This additional amount will be dispensed to the various fairs and increased prizes.

The Canadian National, Guelph Winter Fair and National Live Stock, Horticultural and Dairy Show will each receive grants of \$75.00. The Ottawa Winter Fair will receive \$50.00, while the Central Canada Exhibition (Ottawa) and the Western Fair (London) each receive \$40.00.

The officers for the ensuing year are: President, P. J. McEwen, Kirch; Vice-President, J. M. Vandermid, Cainsville; Secretary, A. P. Westervelt, Toronto; Directors, J. D. Brien, Ridgeway; Frank Teasdale, Brampton; John Kelly, Shakespeare; Adam Thompson and S. Dolson, Norval Station; Executive Committee, P. J. McEwen, John Kelly and J. D. Brien.

Banquets.

During the week of meetings several banquets were tendered the stockmen by the societies and associated enterprises, all of which were thoroughly enjoyed.

The patrons of the Holstein met in Nasmith's Parlors on the evening of February 4th, and thoroughly enjoyed a sumptuous repast, supplemented with speeches and music.

The Ayrshire banquet, held on the same evening in the Prince George Hotel, was the most successful in the history of Ayrshire festivities. Nothing was lacking to make the evening a pleasant one, as well as inspiring and instructive.

The complementary banquet tendered the stockmen of Canada by the "Canadian Farm" was enjoyed by representatives from one end of Canada to the other. The large dining-room of the Grand Union Hotel was completely filled with men of different politics, opinions and creeds, yet a feeling of good fellowship permeated the entire assembly, and all were profuse in voicing their appreciations of the princely hospitality of the host, W. Moore. Among the speakers were: Hon. Martin Burrell, Hon. Geo. P. Graham, Wm. Wmth, M. P., Hon. Jas. Duff, Dr. Rutherford and John Bright. Music and song supplemented the speeches and substantial spread on the tables, and all were so admirably blended as to leave a lasting impression on the memory of the guests.

Ontario Fair: Had A Good Year.

On Thursday and Friday of last week the 14th annual convention of the Ontario Fairs and Exhibitions Associations was held in the Forester's Hall, Toronto. A large number of delegates were present, showing, as the Secretary said, that agricultural societies in this province are not slipping backward, but are forging ahead towards the pinnacle of perfection. The President, Dr. W. A. Crow, of Chesley, in his address, reviewed the condition of the Association as it applied to last year's work. The various societies were more fortunate in 1913 than in 1912, by being favored with better weather, which means almost everything to a county or township exhibition. Dr. Crow advised the convention to ask the Federal Government for more money to aid in the carrying on of this work. He also believed that district directors should be allotted more money for the purpose of furthering the work of their districts.

To avoid the conflicting of dates of fall fairs it was advised that each director call a meeting of each district to arrange the dates throughout the district, so as not to conflict with one another. It was his opinion that standing field crop competitions and showing of grain and sheaves from the fields entered therein is proving a valuable asset to the educative end of exhibitions.

Secretary J. Lockie Wilson, in his annual report, stated that a spirit of optimism permeated the several hundred reports which he had received from the various societies. Exhibits of live stock were never so numerous and of such a high quality as was the occasion last year. Roots and vegetables in some sections, owing to the fact that the crop was a failure, did not make as large a showing last fall as upon former occasions. Gate receipts at the fairs were large, and as a consequence only a little over \$3,600 of the appropriation to meet bad weather conditions was required to settle the claims made. It was pointed out by Mr. Wilson that the Act as it now stands is scarcely fair to societies which have been unfortunate enough to have experienced bad weather for two or three years in succession, seeing that it is based on one-half the difference between the gate receipts of the current year and the average of those of three previous years. He recommended that the wording of the Act be changed to read, "The average of the gate receipt of three previous normal years." An important duty, as a district director, he believed to call a meeting in a central location to be attended by at least one delegate, from each agricultural society, where questions pertaining to these societies, and the arranging of fair dates to avoid conflicting could be discussed, and he took it upon himself to endeavor to arrange that departmental judges could only be sent to the societies, the dates of whose exhibitions have been fixed in such a district meeting. One hundred and ninety-nine judges were sent out by the Association to fairs and exhibitions in 1912, and in 1913 this had increased to 242. The appropriation for this branch of the work was not large enough, and twenty societies whose applications came in late had to be refused. This is a good record. It was pointed out that no man sent to judge all breeds of cattle is likely to give as good satisfaction as where a dairy specialist is provided for the dairy cattle and a beef breeder for the beef cattle.

Field crop competitions have been carried on for seven years, and 3,500 farmers have taken part in these competitions. Nearly 100 judges were required to judge the fields of 159 societies the past season. Nearly 200 societies entered, but, owing to drouth and other conditions, some were unable to remain in the competition to the end. Prizes in all amounted to \$1,500 for sheaf and grain. Splendid exhibits were put on at the various shows in the fall, and the department has been retaining and distributing through the agricultural specialists the winning grain. Six hundred bushels of prize-winning grain and potatoes have thus been disseminated.

It is a matter of regret for the secretary that certain agricultural societies again in 1913 permitted the use of gambling devices on their grounds, where for the paltry sum of \$5.00 hundreds of dollars were filched from the pockets of the unwary. Grants to such societies are withheld.

The proper weights for the classification of Heavy Draft Agricultural and General-purpose horses have been decided upon. The directors were told that the prize lists are revised to comply with these regulations. Mr. Wilson thought that it would be wise to have exhibitors in these classes, when making entry, required to file certificates of weights of horses. Heavy Draft horses matured should weigh 1,500 pounds and upwards, Agricultural horses from 1,350 to 1,500, General-purpose from 1,150 to 1,350 lbs. The minimum height should be 15.3 for General-purpose animals.

Following the President's address a lengthy discussion was entered into after which Prof. S. B. McCready took up the co-operation of agricultural and horticultural societies with the depart-

ment of education in introducing agriculture into the schools. The rural problem, he believed, to be how to hold for the country an adequate population of contented, intelligent, progressive land-owning people, and the factors in the problem he named as five—the home, the school, the church, agricultural organizations, and last, but not least, the agricultural press. Among the defects which he sees in rural schools, that the teachers are isolated in their work, a large number of them being young women not rural-minded, nor equipped for leadership, and even these are forced to change schools frequently. Pupils attend irregularly, leave school early in life, and when in school come with lessons unprepared and very often do not look up to the teacher, or take pride in the work she is doing for them. Parents are often unacquainted with the work of the school, which makes more difficult the work of the teacher, and very often prone to criticize rather than help the teacher. Trustees too often try to save money, do not back up the teacher as they should, and have not a clear vision of the value of a good education. Unattractive school buildings, grounds, and fences, no facilities for play, poor seating accommodation, dingy unadorned walls, dirty floors, poor lighting, no ventilation and poor equipment are the cause of many school failures. There is urgent need, on account of their being so many weak schools, for co-operation and consolidation, also for township high schools for the country pupils. He advised that the agricultural societies aid in bettering these conditions, by appointing an agricultural education committee to work with the teacher and trustees, that they should increase the teaching of agriculture in the school, with systematic instruction by the teacher and practical work by the pupils in home or school plots as well as introducing agricultural books into the school, improving the grounds, and buildings, making better facilities for play and music, and thus make the school a centre of the community. The school fair should be encouraged by giving many and small prizes, which will tend to improve the conditions of the school. Among the prizes which he advised giving to schools were flags, banners, shields, pictures, sets of agricultural books, prize seed shrubs, bulbs and play ground equipment, and gardening tools. All this if carried out, he believed, would result in better teachers, pupils, trustees, school patrons and better schools, which would eventually be an uplift for education for country life and a better country. This, he believed, to be the biggest job in Ontario to-day.

The Sixth Annual Corn Show.

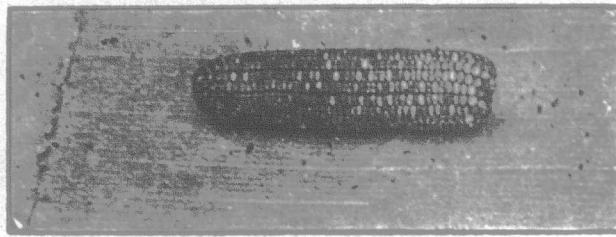
It is an eager, interested crowd that attends the annual Corn Show. The Show itself is a live institution. It has none of that staleness which is observable in some of our great fall exhibitions, which have run along without much change for several years. Nothing but corn is exhibited, and yet the prize money offered runs up to \$1,800.00 and over.

It perhaps, ought to be spoken of as the Corn Exhibition,—that is the official name for it,—but everybody calls it the Corn Show, and by that name it will likely continue to be known. It is held yearly in the southwestern counties of Ontario, and the sixth of the series came off this year at Chatham, Kent County, on Feb. 3rd to 6th.

In the display at the Exhibitions are to be seen the very best samples of corn grown in Canada. Dent corns are there, many varieties of them, white, yellow, and white cap yellow; flint corn, eight and twelve rowed, in white, yellow and red; popcorn in similar colors and sweet corn, that most toothsome species, in black as well as yellow and white. The exhibits are entered and arranged in various classes, such as general, county, part-county, township, junior,

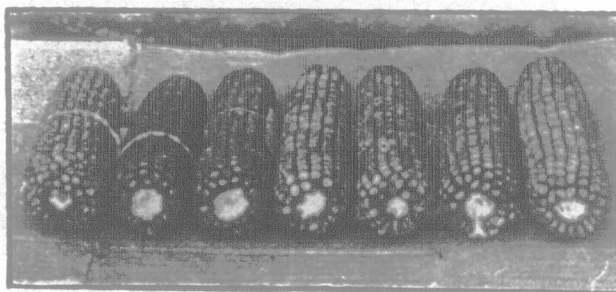
etc. Prizes are offered also for winners in judging contests for seed testing germinators, and for decorative erections done in corn. As this grain is specially suitable for decoration on account of its structure and bright colors, and as handsome prizes are offered in this latter class, most of the ornamental erections competing are very elaborate and attractive. There being many possibilities of securing a prize, owing to the great number of classes, accounts in part for the large number of exhibitors who enter, and in consequence for the keen interest of the throngs who attend the show. But the display is attractive in itself, and the whole countryside is interested in corn and its improvement, therefore, also the crowds which gather from all parts of the Southwestern Peninsula.

The directorate of the Corn Growers' Association has from the first paid special attention to educational as well as exhibition features. Every forenoon this year Prof. Norgord, of Wisconsin Agricultural College, Madison, gave practical in-



Best Ear Yellow Dent Corn in the Show.

struction in corn selection, both lecturer and listeners having corn ears before them. Many of those who attended this class had grown corn before Prof. Norgord was born, and yet were content to act as learners still. During every afternoon there were addresses given in Oddfellow's Hall (the show was in the armories) by several of the best qualified men in the country, Prof. Norgord, of course, included. Prof. Zavitz, O. A. C., Guelph., spoke of "Improvement of Farm Crops"; Jack Miner, Kingsville, of the "Value and Intelligence of Our Wild Birds"; L. H. Newman, Secretary Canadian Seed Growers' Association on the "Inter Canadian Seed Trade and the Types of Seed Corn Required." An illustrated address on "The Teaching of Agriculture in On-



A Good Septette.

Winners of seven prizes for Single Ear Yellow Dent corn. Counting from right-hand side—1st, 2nd and 3rd, Reid's Yellow Dent; 4th, Golden Glow; 5th and 6th, Bailey; 7th, Mortgage Lifter.

tario Schools" was given by Prof. McCready, O. A. C., Guelph. Prof. Norgord in his able address dealt with "Corn for Seed," "Silage," "Alfalfa," and kindred topics. Another address, and which excited keen interest on account of the present stringing of Niagara Power and Light cables from St. Thomas to Windsor, was on "Hydro Electric, its use on the Farm and in the Home," by J. W. Purcell, one of the engineering staff. A very full feast of good things, as every one will allow, and which was much appreciated, standing room being often at a premium. Professor Klinck, Macdonald College, Quebec, was to

have given several addresses, but his duties as judge kept him engaged almost to the last hour.

On the evening of the 4th instant a meeting, more in the nature of an entertainment was held, presided over by Mayor McCorvic. Speeches by Hon. James Duff, Minister of Agriculture, President Creelman, O. A. C., Guelph, G. W. Sulman, M. P. P., and the Chairman were interspersed by fine quartette music and readings, and everyone present seemed to enjoy the lighter part of the entertainment, and to appreciate the speeches.

Looking over the audiences gathered in the afternoon one could not but be struck with the fine-looking, intelligent, strong faces of the men and women and young people filling the hall. The story of the lives of the older men in particular could scarcely fail to be read in their expression and attitude. They had not had an easy time all through; they had faced many difficulties, but had steadfastly surmounted them, not losing temper in the process, strength of mind and brain power being developed meanwhile, and now in comfort and in good conscience they were at peace with all men, their interest in affairs and "corn" not in the least impaired.

Considerable freedom was allowed and taken by the audience in the afternoon meetings. For instance:—Prof. Norgord took occasion in his commendation of alfalfa as a valuable farm crop to give some hints as to how the hay should be treated. Care should be exercised to keep the leaves from being lost, as they were easily broken off and were by far the most valuable part. He advised putting the hay into coil before it was quite dry, covering with hay caps and allowing it to remain in the field for a few days to sweat.

"But," spoke up one, "you couldn't then use the hayloadeer."

"No," said Prof. Norgord, "but I think this the more advisable way."

"Then," continued the other, "you wouldn't recommend cutting after the dew was off in the morning, raking up the same evening, hauling it in the next day, and tramping it well down in the mow?"

"No, I wouldn't," was the answer, "it would likely heat and spoil."

"Well, you come down to my barn and I'll show you some cured in that way, and it's all right," was the retort. This provoked a great laugh on the professor, who was not abashed, however, but insisted that while that might answer at times it was not safe practice as a rule.

Other Glints From Speakers.—"Varieties of oats that weigh heaviest per measured bushel, as a rule, are poor yielders and of poor quality. Have large percentage weight in hull," Prof. Zavitz.

"Silage is a wonderful feed," Prof. Norgord.

"Seed corn should be dried and kept indoors," Prof. Norgord.

"We make a big mistake when we kill our birds," Jack Miner.

"A robin eats, in the early season, fourteen feet of worm per day, yet we hang him over when we see him getting two cents worth of cherries," Jack Miner.

"Hydro Electric is the people's plant. All profit must be returned to users," J. W. Purcell.

"A blower on a cutting box takes four times the power that an elevator or carrier does," Purcell.

"Agriculture is taught more effectively by nature study than by books," Prof. McCready.

"Twice as much food value per acre of corn as of roots," Prof. Norgord.

"Remarkable improvement in the type of corn exhibited since the show started," A. McKenney.

The officers of the Ontario Corn Growers' Association were, at the annual business meeting on the evening of the 5th inst., all re-elected.

President, Byron Robinson, Wheatley; Secretary, W. E. J. Edwards, Dept. of Agriculture, Essex; Treasurer, J. H. Coatesworth, Kingsville; 1st Vice-President, R. W. Knister, Comber; 2nd Vice-President, Lester Gregory, Darrel.

Markets.

Toronto.

At the Union Stock-yards, West Toronto, on Monday, February 9th, the receipts of live stock numbered 96 cars, comprising 1,566 cattle, 1,134 hogs, 250 sheep and lambs, and 61 calves; the quality of the cattle was fair to good; prices were steady. Steers, \$7.25 to \$8.35; heifers, \$7 to \$8; common to medium steers and heifers, \$6 to \$6.75; cows, \$3.75 to \$7.25; bulls, \$6 to \$7.50, and one sold at \$8 to-day; milkers, \$50 to \$89; calves, \$6 to \$11. Sheep, \$5.50 to \$7; lambs, \$8 to \$9.50. Hogs, \$9.15 fed and watered, and \$8.90 f. o. b. cars.

REVIEW OF LAST WEEK'S MARKETS

The total receipts of live stock at the City and Union Stock-yards for the past week were:

	City.	Union.	Total.
Cars	5	207	212
Cattle	85	1,718	1,753
Hogs	78	7,322	7,400
Sheep	55	920	975
Calves	16	203	219
Horses	28	8	36

The total receipts of live stock at the two yards for the corresponding week of 1913 were:

	City.	Union.	Total.
Cars	44	358	402
Cattle	433	4,902	5,335
Hogs	194	8,319	8,513
Sheep	376	972	1,348
Calves	11	397	408
Horses	52	102	154

The combined receipts of live stock at the two yards for the past week show a decrease of 190 carloads, 3,582 cattle, 1,113 hogs, 373 sheep and lambs, 189 calves, and 118 horses, compared with the corresponding week of 1913.

Receipts of live stock at the Union Stock-yards for the past week were light. The quality of the bulk of the fat cattle was far from being good, not as good as they should be after being two to three months in the stable. There were a few choice loads, not more than ten during the week. There were many cattle that ought to have been kept in the stable for two months longer, instead of bringing them on the market, cattle that had just got in good, thriving condition. Trade was quiet nearly all week, and prices were no higher than at the close of the previous week. The top price paid during the week for two loads of choice steers was \$8.50. Stockers and feeders were few in number, and prices remained very firm. Fresh milkers and forward springers were in good demand, at firm prices. Sheep, lambs and calves, were firm, at steady prices, but hogs sold at lower quotations at the close of the week than at the commencement.

Butchers'.—Choice steers, 1,300 to 1,340 lbs., sold at \$8.15 to \$8.50, and

only two loads at the latter price; good steers and heifers, \$7.50 to \$8; medium, \$7 to \$7.25; common, \$6 to \$6.60; choice cows, \$6.75 to \$7.25; good cows, \$6 to \$6.50; medium cows, \$5.25 to \$5.75; common cows, \$4.50 to \$5; canners and cutters, \$3.50 to \$4.25; choice bulls, \$6.75 to \$7.25; good bulls, \$6.25 to \$6.50; common bulls, \$5.50 to \$5.75.

Stockers and Feeders.—Receipts were light all week, not enough to supply the demand. Prices remained firm. Choice steers, \$7 to \$7.35; good steers, \$6.50 to \$6.75; stockers, 600 to 700 lbs., at \$5.50 to \$6.25.

Veal Calves.—Receipts were light all week, which caused firm prices. Choice veal calves sold at \$10 to \$11.50 per cwt.; good calves, \$9 to \$10; medium, \$7.50 to \$8.50; common, rough calves, \$5.60 to \$6.75.

Sheep and Lambs.—Sheep, light ewes, \$6.50 to \$7; heavy ewes, \$5.50 to \$6; rams, \$5.25 to \$6; lambs, choice ewes, and wethers, 90 to 100 lbs., \$9 to \$9.50; heavy lambs, \$8 to \$8.75.

Dr. Maria Montessori



A Savings Account As An Investment

A savings account in the Bank of Nova Scotia is an ideal investment for three reasons. First, it has the most important requisite—Safety. Second, it is always readily available in cash. Third, the interest is certain, and, if you do not wish to use it, is compounded for you twice a year.

The Bank of Nova Scotia

BRANCHES OF THIS BANK in every Canadian Province, and in Newfoundland, West Indies, Boston, Chicago and New York

per bushel; Canadians, hand-picked, \$2.25; primes, \$2. Potatoes.—Car lots of Ontarios, track, Toronto, 80c. to 85c.; New Brunswick Delawares, 90c. per bag. Poultry.—Receipts were liberal; prices about steady. Turkeys dressed, 20c. to 22c.; geese, 15c. to 17c.; ducks, 17c. to 18c.; chickens, 16c. to 18c.; hens, 12c. to 14c.

TORONTO SEED MARKET.

Alsike, No. 1, per bushel, \$8.50 to \$9; alsike, No. 2, per bushel, \$7.50; alsike, No. 3, per bushel, \$6 to \$7; timothy, No. 1, per bushel, \$2.50 to \$3; timothy, No. 2, per bushel, \$2 to \$2.25; red clover, per bushel, \$8 to \$8.50; red clover, No. 2, \$7.50 to \$8.

HIDES AND SKINS.

No. 1 inspected steers and cows, 13c.; No. 2 inspected steers and cows, 12c.; city hides, 13c.; country hides, cured, 13 1/2c.; calf skins, per lb., 16c.; lamb skins and pelts, 75c. to \$1.25; horse hair, 38c. to 40c.; horse hides, No. 1, \$3.50 to \$4; tallow, No. 1, per lb., 5 1/2c. to 7c.

FRUITS AND VEGETABLES.

Receipts of all kinds of fruits and vegetables were liberal, especially apples, which are easy, at the prices quoted. No. 1 Spies have to be extra choice to bring \$5. Apples, Spies, \$4.50 to \$5 per barrel; Greenings, \$3.50 to \$4.25; Baldwins, \$4 to \$4.50; Canadian yellow onions, 100-lb. sacks, \$3.50 to \$3.75; cabbages, per case, \$3; turnips, 50c.; carrots, \$1 per bag; parsnips, \$1 to \$1.25 per bag; Cauliflower, per case of two and a half dozen, \$2.75 to \$3; strawberries, Florida, 50c. to 60c. per quart; cucumbers, Florida, case, \$3.50 to \$3.75.

Montreal.

Live Stock.—Trade in cattle was rather slow at the local market last week. Supplies, however, were small, and as a consequence prices showed a firm tendency. There was no really choice stock offering, but the best on the market sold at 7 1/2c., while the great bulk of the trading was done at 7c., and medium quality ranged all the way from 6c. to 6 1/2c. Lower grades of steers brought as low as 5c. per lb., while the lower classes of bulls and cows ranged down to 4c. per lb. It would seem that there has been quite a demand of late for milk cows, at prices ranging all the way up to \$100 for choice milkers, and even higher, while common milkers sold at \$70 to \$75. Some choice lambs sold at 8 1/2c., while medium brought about 8c., and sheep ranged from 5 1/2c. to 7c. per lb. Trade in calves was fairly active, and prices ranged from \$3 to \$6 for common, and up to \$12 for the best. The live-hog market was firm in tone, and prices of selects ranged from 9 1/2c. to 10c. per lb., weighed off cars.

Horses.—The market was moderately active, and prices firm. Heavy draft, weighing from 1,500 to 1,700 lbs., sold at \$275 to \$325 each; light draft, 1,400 to 1,500 lbs., \$225 to \$250 each; broken-down, old animals, \$75 to \$125, and choicest saddle and carriage animals, \$350 to \$500 each.

Poultry.—Prices continued steady, and trade was good. Turkeys, 19c. to 21c. per lb.; ducks and chickens, 15c. to 17c.; fowl, 12c. to 14c., and geese, 14c. to 16c.

Dressed Hogs.—Dressed hogs were firm last week. Abattoir-dressed, fresh-killed stock sold at 13 1/2c. to 14c. per lb., while country-dressed sold at 11c. to 13c. per lb., according to quality.

Potatoes.—Supplies were fairly large. Green Mountains, 80c. per bag, ex track, in car lots; Quebec varieties, 65c. to 70c. per bag. In a jobbing way, prices were 15c. to 20c. higher, ex store. Bags weigh 90 lbs.

Honey and Syrup.—White-clover comb was 15c. to 16c. per lb.; extracted, 10 1/2c. to 11 1/2c.; dark comb, 13c. to 14c., and strained, 7 1/2c. to 8 1/2c. per lb. Tins of maple syrup sold at 9c. to 10c. per lb., while syrup in wood was 7c. to 8c., and maple sugar, 9c. to 10c. per lb.

Eggs.—Prices of eggs were considerably easier last week, supplies being larger. Strictly fresh stock was 40c. to 41c. per dozen, selected eggs being firm, at the former price of 35c. to 36c.; No. 1 candled at 30c. to 31c., and No. 2 candled at 26c. to 27c. Butter.—The market was unchanged.

Choice makes were 28 1/2c. to 29c. per lb., wholesale; fine butter was 27 1/2c. to 28c., while second grades were 26 1/2c. to 27c. Dairy butter was firm, at 23c. to 24c. per lb. for Ontarios, and 22c. to 22 1/2c. for Manitobas.

Grain.—No. 2 Western Canada oats were unchanged, being 42 1/2c. per bushel, ex store, in car lots; No. 3, 41 1/2c. to 42c., and No. 2 feed, 40 1/2c. to 41c.

Flour.—Manitoba first-patent flour was quoted at \$5.40 per barrel, in bags; seconds being \$4.90, and strong bakers' \$4.70. Ontario winter-wheat flour was unchanged, at \$4.75 to \$5 for patents, and \$4.35 to \$4.50 per barrel, in wood, for straight rollers.

Millfeed.—The market for millfeed again advanced. Bran sold at \$23 per ton. Dillings were \$25, including bags. Mouille dings were \$25, including bags. Mouille was \$30 to \$32 per ton for pure, and \$28 to \$29 for mixed.

Hay.—Prices were about steady. No. 1 pressed hay, car lots, Montreal, ex track, \$15 to \$16.50 per ton; No. 2 extra good, \$15 to \$15.50, and No. 2, \$13.50 to \$14.

Seed.—Timothy seed was steady. Dealers bid 5 1/2c. to 6 1/2c. per lb., country points. Alsike was about the same as a year ago, at \$8 to \$10 per bushel of 60 lbs. Red clover was lower, at \$8 to \$9.50 per bushel.

Hides.—Beef hides were 12c., 13c. and 14c., for Nos. 3, 2 and 1, respectively. Calf skins were 15c. and 17c. for Nos. 2 and 1, and lamb skins were \$1.10 each, with horse hides ranging from \$1.75 for No. 2, to \$2.50 each for No. 1. Tallow sold at 1 1/2c. to 3c. for rough, and 5c. to 6 1/2c. for rendered.

Buffalo.

Cattle.—Receipts of cattle for the past week were about ten carloads stronger than for the preceding week. Trade, except on choice, weighty, and handy, butchering steers, was a shade lower, and medium weight, half-finished grades, reled very slow, and sold a shade lower. Heifer stuff, excepting the fancy kinds, ruled a shade easier, and at no time during the week was there any considerable life to the market. The West was weak on anything but the best-finished steers, and Eastern order buyers here went very slow on the warmed-up steers, as they have been showing a low percentage of kill. Topy steers ranged from \$8.95 to \$9.10, sellers reporting that real prime, heavy steers, would possibly bring up to \$9.25, but there are few of the kind coming to any of the American markets at this time. It is a question with the feeder, whether to forward the warmed-up steers to market and take a dollar and more per hundred less than for the prime ones, or keep them on a thirty- or sixty-day feed and take the chance, feed being regarded as rather high at this time. Butchering cattle are running largely to the medium, light-weight grades, and local consumers are shy at them, preferring to pay more money and get the better-killing ones. Stock and feeding cattle have been coming in light numbers, and are bringing strong prices, demand being especially strong. Bulls are selling higher, in comparison, than any other class, top bulls being quotable up to \$7 to \$7.50. Heavy, best-producing milkers, and very forward springers of the more desirable class, are selling satisfactorily, but the common kinds in this division are selling in plenty of instances at beef prices. Receipts the past week were 4,250 head, as compared with 4,025 the previous week, and 4,075 a year ago.

Quotations: Best 1,350 to 1,450 lb. steers, natives, \$8.85 to \$9.10; best 1,200 to 1,800 lb. steers, natives, \$8.50 to \$8.75; best 1,100 to 1,200 lb. steers, natives, \$8.10 to \$8.40; coarse and plain, weighty steers, natives, \$7.25 to \$7.75; Fancy yearlings, baby beef, \$8.25 to \$8.50; medium to good, \$7.50 to \$7.75; Best Canada steers, 1,350 to 1,450 lbs., \$8.25 to \$8.50; best Canada steers, 1,150 to 1,250 lbs., \$7.50 to \$8; choice, handy steers, 1,000 to 1,100 lbs., \$7.75 to \$8.25; fair to good steers, 1,000 to 1,100 lbs., \$7.50 to \$7.75; extra good cows, \$6.75 to \$7; best cows, \$6 to \$6.50; butcher cows, \$5 to \$5.50; cutters, \$4.25 to \$4.50; trimmers, \$3.50 to \$4; very common, old rims, \$3; best heifers, \$7.50 to \$8; medium butcher heifers, \$6.50 to \$7; light butcher heifers, \$6 to \$6.25; stock heifers, \$5.50 to \$6; best feeding

steers, dehorned, \$7 to \$7.25; fair to good steers, \$6.25 to \$6.75; fancy stock steers, \$6.50 to \$6.75; best stock steers, \$6.25 to \$6.50; common, light, stock steers, \$5.50 to \$6; extra good bulls, \$7.25 to \$7.50; bologna bulls, \$6.50 to \$7; stock bulls, common to good, \$5 to \$6; best milkers and springers, \$7.50 to \$100; medium to good, \$45 to \$50; common, \$30 to \$40.

Hogs.—Hog market on the jump all of last week, the wind-up being a record-breaker for the year, and the highest time since the fore part of October, 1913. Generally, a \$9.25 market for best-weight grades the latter part of week, three or four decks reaching \$9.30. Pigs, \$9 to \$9.10; roughs, \$8.25 to \$8.35; stags, \$6.50 to \$7.25. Some authorities are predicting the \$10 hog. Receipts the past week, 27,200; previous week, 35,360; year ago, 34,400.

Sheep and Lambs.—Lamb trade very dull first four days last week, buyers getting choice ones towards the close of the week down to around \$8, reaction on Friday bringing them up to \$8.25. Cull lambs, \$7.50 down; best yearling wethers, \$7 to \$7.25; choice wether sheep, \$6 to \$6.25; ewes, \$5.25 to \$5.75; cull sheep, \$4.75 down. Receipts the past week, 32,200; previous week, 31,600; year ago, 26,000.

Calves.—Market past week was active, first day of the week being the high day, tops reaching \$12.50, balance of week general market for tops being \$12. Culls, \$10 down; fed calves, \$5 to \$6.50. Receipts the past week, 1,225; previous week, 1,300; year ago, 1,650.

Butter.—Demand fair; steady. Creamery prints, 29c.; dairy, choice to fancy, 25c. to 26c.; dairy, fair to good, 22c. to 23c.

Cheese.—Trade fair; steady. Fancy, new, 18c. to 19c.; good to choice, 16c. to 17 1/2c.

Eggs.—Trade fair; steady to easy. White, fancy, 34c. to 35c.

Dressed Poultry.—Active, firm. Turkeys, per lb., 24c. to 26c.; chickens, fancy, 18c. to 19c.; chickens, fair to good, 16c. to 17c.; fowls fancy, 17c. to 18c.; ducks, per lb., 18c. to 22c.; geese, per lb., 15c. to 17c.

Live Poultry.—Demand fair; firm. Turkeys, per lb., 20c. to 22c.; fowls, choice, 17c. to 18c.; fowls, fair to good, 16c. to 17c.; chickens, per lb., 16c. to 18c.

Chicago.

Cattle.—Beeves, \$7 to \$9.50; Texas steers, \$6.90 to \$8; stockers and feeders, \$5.50 to \$8.10; cows and heifers, \$3.50 to \$8.50 calves, \$7.25 to \$10.25.

Hogs.—Light, \$8.45 to \$8.70; mixed, \$8.45 to \$8.75; heavy, \$8.40 to \$8.75; rough, \$8.40 to \$8.50; pigs, \$6.25 to \$8.50; bulk of sales, \$8.60 to \$8.70.

Sheep and Lambs.—Sheep, native, \$4.65 to \$5.85; yearlings, \$5.65 to \$6.50; lambs, native, \$6.75 to \$7.75.

At an auction sale by various breeders, at York, Pa., January 22nd, the top price reached was \$650, for a sow, listed by C. F. Curtiss, and the highest for a boar was \$550.

The attention of dairy farmers and the public generally is called to the advertisement in this issue of the auction sale on February 20th, of high-class, record-making Jersey cows, richly-bred cows and heifers in milk, and bred to high-class sires, the property of Wm. J. Beaty, Guelph, Ont. Included in the offering are a number of horses and pigs, and the terms of the sale are easy. Look up the advertisement, and, if interested, attend the sale.

SALE DATES CLAIMED.

February 18th.—F. E. L. Talbot, Lambeth, Ont.; Holsteins; grades. February 20th.—W. J. Beaty, Guelph, Ont.; Jersey cattle and horses.

March 4th.—Annual Provincial sale of pure-bred cattle, at Guelph.

March 5th.—H. Nichol & Son, Hagersville, Ont.; Shorthorns and Clydesdales.

March 11th.—G. H. McKenzie, Thornhill, Ont.; Holsteins.

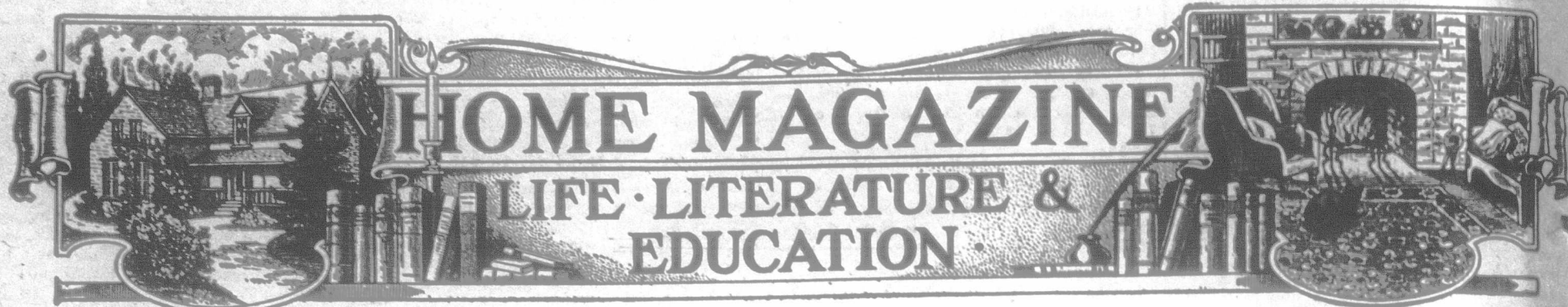
March 10th.—Norfolk Holstein-Friesian Breeders' Club, at Simcoe, Ont.; Holsteins.

March 12th.—H. R. Patterson, Paris, Ont.; Holsteins.

March 24th.—Bales Bros., Lansing, Ont.; Holsteins.

April 9th.—P. J. Sally, Lachine Rapids, Que.; dispersion sale of Holsteins.

Hogs.—At the commencement of the week, selects, fed and watered, sold at \$9.35 to \$9.50; but at the close, \$9.15 fed and watered, and \$8.90 f. o. b. cars. There were about 40 decks of Manitoba and North-west hogs arrived on this market during the week. Horses.—There was little doing at the Union Horse Exchange, Union Stockyards, last week, and, in fact, all the several horse exchanges are reported as doing very little. Only one full carload was shipped out from the Union Exchange, and a few small lots were sold to local buyers. Prices were unchanged, as follows: Drafters, 1,600 to 1,800 lbs., sold up to \$250 each; general-purpose, \$175 to \$225; expressers, \$150 to \$200; serviceably sound, \$30 to \$60; drivers, \$100 to \$175. BREADSTUFFS. Wheat.—Ontario, No. 2 red, white or mixed, 85c. to 86c., outside; 89c., track, Toronto. Manitoba, No. 1 northern, 96 1/2c., track, bay points; No. 2 northern, 94 1/2c. Oats.—Ontario, new, No. 2 white, 34 1/2c. to 35c., outside; 38 1/2c. to 39c., track, Toronto. Manitoba oats, No. 2, 41c.; No. 3, 39 1/2c., lake ports. Rye.—No. 2, 62c. to 63c. Peas.—No. 2, 98c. to \$1, outside. Buckwheat.—No. 2, 75c. to 76c., outside. Corn.—American, No. 3 yellow, 70c., all rail, track, Toronto. Barley.—For malting, 54c. to 55c.; for feed, 43c. to 45c., outside. Flour.—Ontario, 90-per-cent, new winter-wheat patents, \$3.55, bulk, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.30; second patents, \$4.80; in cotton, 10c. more; strong bakers', \$4.60 in jute. HAY AND MILLFEED. Hay.—Baled, car lots, track, Toronto. No. 1, \$14 to \$15.50; No. 2, \$12 to \$13.50. Straw.—Baled, car lots, track, Toronto, \$8.50 to \$9. Bran.—Manitoba, \$22.50 to \$23.50, in bags, track, Toronto; shorts, \$23 to \$25; Ontario bran, \$23, in bags; shorts, \$24; middlings, \$26. COUNTRY PRODUCE. Butter.—Market about steady. Creamery pound rolls, 32c. to 34c.; creamery solids, 28c. to 30c.; separator dairy, 27c. to 28c.; store lots, 24c. to 25c. Eggs.—New-laid, 40c. to 42c.; cold-storage, 35c. to 36c.; cold-storage, selects, 38c. Cheese.—Old, twins, 15 1/2c.; large, 15c.; new, twins, 14 1/2c.; large, 14c. Beans.—Imported, hand-picked, \$2.25



A Love-Song.

O, mistress mine! Where are you roaming?
O, stay and hear; your true love's coming,
That can sing both high and low,
Trip no further, pretty sweetening;
Journeys end in lovers' meeting,
Every wise man's son doth know.

What is love? 'Tis not hereafter;
Present mirth hath present laughter;
What's to come is still unsure;
In delay there lies no plenty;
Then come, kiss me, sweet-and-twenty,
Youth's a stuff will not endure.
—Shakespeare, "Twelfth Night."

St. Valentine's Day and Its Superstitions.

A mystery that is not likely to be solved, is just how any one of the several Saint Valentines became regarded as the patron-saint of lovers. It appears, indeed, that an old heathen festival in which young men and maidens took part, was held in the early ages on the 14th of February. Later, this day was set apart as the festival of the two most celebrated Saint Valentines, the one a priest, the other Bishop of Terni, both martyred on the same day during the reign of Claudius, and it is possible that the association originated in this coincidence, but nothing definite is known.

At all events, St. Valentine's Day soon became popular, and, whatever his connection, good St. Valentine himself, it is to be feared, was, ere long, not even an echo at the feast.

Chaucer and Shakespeare, both allude to the day, and delightful Samuel Pepys, who wrote his famous "Diary" in the reign of Charles II, speaks of it more than once. In his time, it seems, it was customary for married folk also to be "valentines," for he tells with his usual detail of how one "little Will Mercer" came up to be his (Pepys') wife's valentine, "and brought her name written upon blue paper in gold letters, very pretty, and we were both well pleased with it." "I am also my wife's valentine this year," he adds ruefully, "and it will cost me five pounds, but"—with resignation—"that I must have laid out if we had not been valentines."

Scarcely so generous was he as the Duke of York, who, he tells us, gave his valentine a jewel worth £800.

During the centuries, many pretty superstitions have become clustered about St. Valentine's Day, and among them all, none is prettier than the idea prevalent in parts of rural England, that all birds choose their mates at that time. How old this belief is, is not known, but it is at least as old as the days of Shakespeare, for he makes one of his characters say,

"Saint Valentine is past,
Begin, then, wood birds but to couple now?"

With the superstition, naturally, have become interwoven many love tests and "spells," which last, for nonsense' sake, even to this day. "It is customary in the Peak district," says a writer in T. P.'s Weekly, "for unmarried girls to peep through the keyhole of the house early on St. Valentine's morning before anyone else in the house is astir. They believe that if this is done fasting, omens of the year to come will be seen. For instance, should a cock and hen pass together, the girl may be sure that she will be married ere the year is out; if she sees a robin alone, it is a sign that she will have a fortune left her; if a sparrow fly up to the door and peck about as though for crumbs, she may take it as a warning to be careful, and

that her good name will be in danger unless she take heed; whilst if a hen stroll by, it is a sign that she will be an old maid.

"The Icelanders are very superstitious concerning the raven, and many quaint legends are associated with St. Valentine's Day and the doleful bird. In many parts of the British Isles, too, we find that the bird is believed to have a knowledge of the future. Old folk tales tell us that Odin, the great god, had two ravens, which were let loose every morning to roam all over the world, and to collect intelligence of what was going on. In the evening they returned, and would then perch on Odin's shoulder and relate to him all the news they had gleaned. As a reward, they were allowed one day in the year free, when they might, if they chose, vent their spite on any who had offended them in their wanderings. Folklore tales tell us that the ravens selected St. Valentine's Day as their annual holiday, on which they would play pranks with mortals—hence the belief in them as birds of ill omen on this particular day. An Oxfordshire tradition has it that the first person seen on St. Valentine's Day is the luck of the year. A dark man is supposed to bring much good fortune; but a dark woman means that there will be jealousy and strife. A red-haired man means that one's friends will be true; but a red-haired woman denotes that one will be unfortunate in business dealings. To put on any article of apparel wrong side outwards on this day is, by many people, considered a fortunate omen—particularly so with stockings; but in Scotland it is said that she who hooks in a wrong hole or buttons her clothes awry on St. Valentine's Day, will meet with some misfortune before the day is ended. A new dress, or even some trifling article of clothing, worn new on this day, is said to bring luck.

"Formerly, every swain sent his Phyllis a dainty Valentine epistle, she shyly tendering him her offering in return. The custom is still observed in rural districts, and much attention is paid to the color of the missive. Blue is said to be the luckiest color in the Midlands, and happy indeed is the lass who gets a filigree satchel with a wreath of forget-me-nots, or some other blue flower. A green valentine denotes that the lover is tiring of his flame, a yellow one that he is jealous, and an old saying runs:—

Blue is true, yellow is jealous,
Green forsaken, Red's brazen,
White is Love, and Black is Death.

Another rhyme of the Southern Counties runs:—

If you love me, Valentine true,
Send me a ribbon, a ribbon of blue,
If you hate me let it be seen,
Send me a ribbon, a ribbon of green.

"Charms and spells as a means of inspiring love potions have always been famous on this day. In the Middle Ages, such love medicines were advertised for sale, and it is well known that the ancients believed in their uses. Lucretius, the Roman poet, took his life in an amorous fit caused by a love potion, and Lucullus lost his reason in a similar way. Italian girls practice the following charm on the Eve of St. Valentine: A lizard is caught, drowned in wine, then dried in the sun, and its body reduced to powder. A little of this, sprinkled on the back of the man she wishes to marry, will cause him to turn to her, and she will wed him ere the year is out; but the charm must be worked on the Eve of St. Valentine. The Slavs say that to cause a man's heart to turn with passionate adoration

to a maiden, all she has to do is to cut, or prick, her finger, the ring finger being chosen, letting five drops of blood fall into a glass of wine, which she must afterwards give to the man of her choice to drink on St. Valentine's Day. He will then be madly in love with her."



Robert Cavalier, Sieur de la Salle.

Little Trips Among the Eminent.

THE HERO OF THE MISSISSIPPI.
(Continued.)

In 1678, the first step towards the accomplishment of La Salle's great dream of the expansion of the power of France to the westward seemed achieved. He had gone to France, and after a series of urgings upon those in authority—a publicity that was ever gall and worm-wood to his shy and sensitive soul—had obtained a commission for the exploration of the far west, with authority to erect forts and to hold a monopoly of the trade in buffalo skins. It does not appear, however, that means to cover expenses were forthcoming, for it is known that La Salle, having exhausted his own money, raised extensive loans among his friends, loans to be repaid from the lucrative fur trade which was to be established.

These arrangements completed, he at last set sail for Canada with thirty followers, including the valiant Tonti, later known among the Indians as the "big one-armed chief of the French." (He had lost an arm in a former siege in Europe.)

On the 18th of November, the first division of the expedition for the west left Fort Frontenac—La Motte, the Recollet friar Hennepin, and sixteen others, in a vessel of ten tons. Following the north shore of Lake Ontario, in ten days the little barque reached an Indian town on the site of the present city of Toronto. At the mouth of the Humber it was frozen in, but the mariners cut a way out of the ice, and the vessel crossed without further event, to the mouth of the Niagara River, and thence up as far as the foot of the rapids.

Here a landing was made, and the party proceeded along the top of the cliff above the gorge to the Falls. One can imagine the breathless wonder with which the Frenchmen gazed upon the great cataract, then in all its pristine majesty, with the great, deep forest, for its setting,—the falls, "the like whereof is not in the whole world!" exclaims Father Hennepin in his journal. Here, it may be of interest to note that Father Hennepin's account of the now famous spot, is the earliest known. Also, there is still in existence a curious old draw-

ing made by him, amusingly guiltless of perspective and faithful in detail,—the earliest picture made of the famous cataract.

Retracing their steps, the little party began to erect a fort at the mouth of the river, a process of no little difficulty, for the weather had become intensely cold, and it was found necessary to thaw the ground with hot water when putting up the palisades.

THE FIRST VESSEL ON LAKE ERIE.

In the meantime, evil fortune had fallen upon La Salle, who, in a second vessel, had also set out for the mouth of the Niagara. Thirty miles west from that point the little ship had been wrecked, and practically all of the provisions lost. The ropes and rigging of the wreck were, however, carried above the Falls to a point at which it was proposed to build a vessel to be launched on Lake Erie, and after marking out the foundations for two block houses on the high point where Fort Niagara now stands, La Salle set out on foot for Fort Frontenac with two men, and a dog that dragged the baggage on a sled. Nothing but a bag of parched corn was taken for food, and for two days the little party, struggling through the woods and over the ice, had no food at all.

Tonti, in the meantime, was left in charge of the ship-building, and the Indians gazed with amazement as the little vessel took form.

In the spring, fully equipped and rigged, and with five small cannons aboard, she was launched, and, with much ceremony and chanting of the Te Deum, was called the "Griffin." As the Indians had at times shown signs of becoming hostile, she was anchored a little way out in the stream, and here, at night, the Frenchmen slept in comparative security.

At last, about the first of August, La Salle returned, and on the 7th of that month the "Griffin" floated out upon Lake Erie, her sails the first to shine upon that expanse of broad, blue water.

MICHILLIMACKINAC.

In three weeks, having passed the long chain of waterway via Lakes St. Clair and Huron, the Griffin reached the mission of St. Ignace of Michillimackinac, where were already the house and chapel of the Jesuit missionaries, and the houses of some French traders, in addition to the cabins and wigwams of the Huron and Ottawa villages. There seems to have been, however, but little welcome for La Salle at this point. All were alike, jealous of him, and somewhat suspicious of his designs, and even the pilot of his vessel appears to have been among the disaffected. Indeed, at a later day, La Salle blamed this pilot bitterly for the loss of the Griffin, which, sent back from this point with a rich cargo of furs, and commissioned to pay some of La Salle's creditors and bring back supplies, was never heard of again. La Salle always believed that she was purposely wrecked, and some point seemed to be lent to the suspicion by the report of some Indians that some men, ostensibly her crew, had been seized, while making way with canoes filled with furs, and had probably been killed by their dusky captors.

BUILDING OF FORT CREVECOEUR.

In the meantime La Salle, with Tonti and Hennepin, sailed down Lake Michigan with four canoes. The trip was by no means a pleasant one. There were storms, and wet, cold weather, game was scarce, and the food supply ran short, so that had it not been for the finding of plenty of wild grapes, and a deer killed by wolves, sustenance itself might have been a problem. Moreover, there was the constant tension of watching for hostile Indians, and the worry of the

Dr. Maria Montessori

desertion of some of the men who had become despondent and mutinous.

The peace pipe, however, availed to keep off enemies. "Because the calumet of peace," says Hennepin, "is the most sacred thing among the savages, I shall here describe the same. It is a large tobacco pipe, of a red, black or white marble. The head is finely polished. The quill, which is commonly two feet and a half long, is made of a pretty strong reed or cane, adorned with feathers of all colors, interlaced with locks of women's hair. Every nation adorns it as they think fit, and according to the birds they have in their country. Such a pipe is a safe conduct amongst all the allies of the nation who has given it; and in all embassies the calumet is carried as a symbol of peace, the savages being generally persuaded that some great misfortune would befall them if they should violate the public faith of the calumet. They fill this pipe with the best tobacco they have, and then present it to those with whom they have concluded any great affair, and smoke out of the same after them."

At last, following rivers and portages, the heart of the Illinois country was reached, and, on the bank of the river, the great town of the Illinois, quite deserted when the French first saw it, for all the inhabitants were away on a hunting trip. Hennepin relates that he counted 460 lodges, with tops arched like the top of a van, and all covered with woven mats of rushes.

Within a short distance of this town, on the top of a high square rock, La Salle determined to build a fort, a fort to which, by some strange fatality, he gave the name of "Crevecoeur," or "heartbreak."

A TERRIBLE JOURNEY.

At Fort Crevecoeur, La Salle waited a weary time for the tools and supplies which were to be brought back by the Griffin—the Griffin lost so completely amidst the waters of Lake Huron, that not even the finding of a timber of her was ever reported, first vessel to perish in that great inland sea—then he determined to make a trip to Fort Frontenac himself, to see what the matter could be, to set straight his affairs, and secure the necessary supplies for his work of expansion in the west.

On the 3rd of March, 1680, he set out with four Frenchmen and a Mohegan, leaving the trusted Tonti in charge at Fort Crevecoeur. It was a weary journey of 500 leagues through an untamed land. Now canoes could be used on the icy water, now it was necessary to take to the woods on snow-shoes, dragging the canoes over the slushy snow, so tedious a mode that at last they were left behind altogether. It was impossible to carry sufficient provisions, and so necessary to live on such game as could be secured along the way, and game was very scarce that season. Worse than all, the travellers were harassed by Indians, who took them for friends of the Iroquois on account of the blazing they had left on some trees. For days they were dogged by a war-party, and dared not light a fire at night to dry their wet clothes. As a result of the hardship, one of the Frenchmen and the Mohegan fell ill with fever and began to spit blood.

Even bad news came to rob the journey of its little ray of hope, for on the way two men were met who told of the evident loss of the Griffin, with its rich cargo.

At Detroit, a canoe was made, and while two of the Frenchmen were sent north, La Salle, with two others and the Mohegan, crossed to Lake Erie to a spot somewhere near Point Pelee. Here another canoe was made, and all pushed out, arriving finally, on Easter Monday, at the cabin of logs on the Niagara River where the Griffin had been launched.

La Salle alone had the strength to go on. Alone, after his already terrible journey, he left this haven of rest, and, eventually, after sixty-five days' travel in all, came within sight of the bastioned walls of Fort Frontenac, having accomplished "the most arduous journey ever made by a Frenchman in America."

But here again, instead of rest and peace, a blow awaited him, for the first news to come to him was that his credit, on a rumor that he had been drowned with the sinking of the Griffin, had seized all his property. He learned,

moreover, of the wreck of a ship from France, laden with his goods, in the St. Lawrence.

A "NEW BEGINNING."

It was necessary to begin all over again, but the determination of La Salle never flinched.

On the 10th of August, he again started out with twenty-five men and everything that was needed to outfit the vessel that was being built at Fort Crevecoeur, but this time a different route was taken. The party went up the Humber River from Lake Ontario, crossed to the Holland River, and thence on via Lake Simcoe, Lake Huron, Lake Michigan, and the rivers to the southward, to the fort on the Illinois.

On the way down the Illinois, the records tell us, herds of buffalo were seen browsing over the prairies, and upon one occasion a buffalo-hunt was held, the result being that in three days twelve of these great animals were killed, and the meat cut into strips to take to Tonti and his men at Fort Crevecoeur.

On arriving at the Indian town in the vicinity of the fort, however, a scene of terrible omen was presented. The town had been burned, and the graves of the dead in its cemetery rifled and desecrated; skulls were stuck on the charred poles of the houses, and wolves fled and crows wheeled away from above the dismal spot. Evidently the Iroquois had made an inroad, and, finding the houses deserted, had wreaked their fury on the dead.

With sinking heart the brave leader hurried on, but his worst fears were realized. The vessel, partially-finished, still remained on the stocks, but the fort itself had been demolished, and there was no sign of Tonti or his men.

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On again down the Illinois, passing, again and again, evidences of recently-occupied Indian camps, Illinois on one side of the river, Iroquois directly opposite on the other, then a spot was reached where had occurred a terrible massacre, chiefly of Illinois women and children.

Reaching the Mississippi, La Salle tied a letter to Tonti to a tree overhanging the water, then returned to the ruined fort.

On again, up the Kankakee in search of him, and at last there was evidence of being on the right track; a cabin was found, and a piece of wood cut with a saw. Then snow fell continuously for nineteen days, and it was necessary to travel a-foot again. "I never suffered so much from cold," says La Salle, "or had more trouble in getting forward, for the snow was so light, resting suspended as it were among the tall grass, that we could hardly use snow-shoes. Sometimes it was waist deep; and, as I walked before my men as usual, to encourage them by breaking the path, I often had much ado, though I am rather tall, to lift my legs above the drifts."

At last Fort Miami was reached, but there was no word of Tonti, nor did La Salle see aught of him again until the middle of June (1681), when he found him and those of his men who were left, at Michillimackinac.

TONTI'S STORY.

Of the hair-breadth escapes and many adventures through which Tonti had passed after the onslaught of the Iroquois, but little can be said here. Shortly after the departure of La Salle on his long trip to Fort Frontenac, the garrison at Fort Crevecoeur had mutinied, had plundered the stores and destroyed the fort. Seeing nothing better to be done, Tonti and the seven men who remained faithful to him, removed to the Indian town. The arrival of 500 painted Iroquois, however, disturbed the tranquility there, and Tonti tells of a fierce battle, and of his once appearing among the Iroquois as mediator, and of hearing, while there, their discussion as to what should be done with him. "There was a man behind me with a knife in his hand," he says, "who every now and then lifted up my hair."

He was let go, however, and finally, with his little party, living on acorns and roots, and suffering bitterly from the cold, reached Green Bay and friendly Indians.

Father Hennepin's party, in the meantime, which had been sent to the upper waters of the Mississippi, had also fallen upon adventure. They had been cap-

tured by the Sioux, but finally made their escape and returned by way of the Great Lakes to Canada.

Next time will be told something of La Salle's descent of the great river—the Mechasepe, the Colbert, the Mississippi.

Hope's Quiet Hour.

Fellow-workers With God.

We are God's fellow-workers; ye are God's tilled land, God's building.—1 Cor. iii: 9, R. V. (marginal rendering).

Life is a splendid adventure, every day comes to us fresh and new, laden with opportunity. Whatever the day may bring—sorrow, joy, or the apparently dead level of commonplace living—we can transform it into power and the beauty of ennobled character. I am speaking to many kinds of people; whose surroundings and daily occupations are widely different, and yet I am sure you all are alike in this. You can begin each day with the inspiring question: "What shall the great God and I make of myself to-day?"

We are God's fellow-workers. We are not to lie helplessly in His arms, as if we were babies, expecting Him to make us saints without any effort on our part. St. Paul says: "Work out your own salvation with fear and trembling. For it is God which worketh in you both to will and to do of His good pleasure." The first half of that most practical advice is powerless without the second half; and God knows that if He were to make us perfect, without effort on our part, the gift would be valueless. We should be machines, not human beings. A child turns to his teacher for help; but a teacher who works out all his sums for him, writes all his compositions, and helps over-much in any way, is a serious hindrance to his education.

It is discouraging to work alone, but inspiring to remember that God is working in us every moment. "Ye are God's tilled land," says St. Paul. God Himself is the Husbandman, He ploughs hard hearts with sharp pain, puts in good seed, and waters it carefully, gives bright sunshine and strengthening cold. What return are we making for His years of careful husbandry? It is possible for a heart to be like the barren fig tree, which received the most careful and individual attention, and yet brought forth no fruit. It was at last cut down as hopeless.

When we are working with God, we have a right to expect results far beyond our powers of achievement. Men are doing this every day in earthly matters. They place a message in the hand of one of God's mighty servants, and it is sent flying at lightning speed to its destination. They call gravitation (another mighty servant of God) to their assistance, and the heaviest weights are carried with ease thousands of miles along the great rivers. They harness electricity to cars and machines, and great power is at once brought to bear on the work to be done. A ship in distress sends the "S.O.S." call thrilling through space, and help comes rushing from all directions. Men know that they can do many marvellous things by co-operating with the great powers of nature—God's servants—how much greater works can be done by one who is a fellow-worker with the Master of nature Himself.

Mr. Patterson started the "Catch-my-Pal" Society in July, 1900, feeling that every man and woman—no matter how degraded—js worth catching. He says that a man lying drunk in a ditch is "a diamond in the rough, to be lifted, cut, and polished, and made a thing of beauty and a joy forever in the crown of Jesus Christ." In about fifteen months from that eventful July day, he speaks of 140,000 members of his Society, who had taken the pledge of total abstinence—many of them had been drunken and degraded for years. How little the founder of that Society dreamed that God would work so mightily through him. The movement went ahead with astonishing speed, spreading swiftly from Ireland into Scotland, England, and Wales. Soon Mr. Patterson received letters from Canada, the United States, South Africa, Australia, Jamaica, France, Switzerland, Italy, Germany, Holland, Denmark and

Sweden. Temperance workers in all these countries wanted to learn his secret. He even addressed the International Congress on Alcoholism at The Hague, in September, 1911. He says: "An Irish chaplain started the work among the troops to whom he ministered on the coast of China, and information about the movement has been sent, by request, to Japan. A missionary in British East Africa writes to say he is thinking of starting Catch-my-Pal among the pagan people who are being ruined by rum."

Many men—working with God and for His cause—have started great movements which have astonished themselves. But a great and grand work is being done quietly by the vast multitude of Christian workers everywhere. Seeds are being sown without observation—except the observation of the Master of the workers—which are bound to yield a magnificent harvest of good.

You are not only working for God, but with Him. As the head of the great business concern is found first in one room and then in another, giving encouragement and guidance to his work-people; so our Master stands always invisibly but very really in our midst. The remembrance of His Presence, the touch of His hand on ours, can bring sweetness and courage into the heart of one who loves Him. Long ago, some men had toiled all night at their fishing and caught nothing. They made one more attempt—under the direction of their Master, who was dimly visible on the shore—and now they were not able to draw the net into their boat, for the multitude of fishes. Working with Him made all the difference, and they dragged their spoils to the shore to lay them at His feet.

Working with God, we must learn to trust Him even when we have no outward proof of His love. Trust is a very beautiful thing, and one who trusts God when all hope seems to have gone—as Abraham trusted the promise concerning Isaac—must give great joy to Him. There is a story told of a great emperor whose physician was also his trusted friend. The emperor was ill, and he received a letter saying that his physician intended to give him poison in his medicine. The emperor trustfully took the offered medicine from his friend's hand and drank it down, then handed him the letter. "Though He slay me, yet will I trust in Him," said Job; and many a heart is uplifted in beautiful trust to One Who seems to give nothing but pain and death in return. So He works out holiness, so He produces great harvests, so He builds polished temples here on the earth. We must work with Him, trustfully and patiently, even when He does not reveal His plans. Otherwise we shall hinder His purposes of love. Even Christ, our perfect Leader, had to pass through the awful darkness when He felt forsaken by God as well as man. Can we be perfected without some hard lessons? Can we learn Trust unless we are sent on God's errands through the darkness? Can we learn patience if all difficulties are cleared out of our way? Can we grow strong in courage if there is nothing terrible to approach fearlessly? The Master-Worker has gone over all the ground, and still walks alone beside us—He has come again to escort His loved comrades home.

"Teach me Thy patience; still with Thee in closer, dearer company. In work that keeps faith sweet and strong. In trust that triumphs over wrong. In hope that sends a shining ray. Far down the future's broadening way. In peace that only Thou canst give—With Thee, O Master, let me live."

Life is a grand adventure, a glorious privilege. Shall we waste it in petty aims and successes which leave no lasting result? What shall it profit if we gain great wealth and fame in this world, yet fail to win the "Well done!" of the Master? It is not only the good work which men call "great" that He wants. The woman, who was honored by God and revered by men above all other women, lived quietly in a little village home. She attempted no world-wide reform, but accepted God's plan for her life—the personal pain and shame through which He could work out the salvation of mankind—in the meekest, most abso-

lute self-surrender. She was ready to lay aside her own plans and do His will: "Mary said, Behold the handmaid of the Lord; be it unto me according to Thy word." In the R. V., the marginal rendering is "the bondmaid." She desired no greater vocation than to be used by God in any way He might choose, as His slave, expecting no reward. No wonder He was able to work mightily through her. No one need fret about lack of opportunity and a narrow environment. God can easily provide opportunity—He can do anything He chooses through a life that is really surrendered to His will.

We spend so much time, money, and nerve-force in pushing our own plans. We worry when the way looks dark before us. We are conceited over apparent success, and disheartened over apparent failure. Does not this prove that our lives are not wholeheartedly placed at our Master's disposal?

The Psalmist says he keeps his eyes on God, as the eyes of a servant look unto the hand of his Master, and as the eyes of a maiden unto the hand of her mistress. In Eastern countries the mistress will often give an order by a movement of the hand, without a spoken word, and a servant who is on the watch will hasten to obey. If we are to work faithfully under our Master, we must keep our eyes on Him. We must remember His presence often during the day, and ask—with full purpose of obedience—"Lord, what wilt Thou have me to do?" Our prayers must not be self-willed pleading for our own will to be done, but under the petition for our heart's desire must always be the unshaken foundation prayer: "Nevertheless, not my will, but Thine, be done."

It is easy to say this, but it takes a lifetime to learn the lesson of self-surrender perfectly. Perhaps you think that I imagine myself to have learned it—because I preach "Trust" to you so often. Indeed, no! Day after day I stumble over the big words in God's primer—His first book. But I am quite sure the lesson is worth learning, and that the Master's patience will not fail; therefore I pray and struggle for trust, and the capacity for ready obedience. He can do His work through trained workers, and we cannot get our training easily. Let us accept the daily lessons thankfully, rejoicing when the Master is evidently taking trouble over our progress. It is easy to thank Him for pleasant days, let us not forget to thank Him for the hard and valuable lessons set us from time to time. Let us work under His direction, expecting lasting success. His is the power.

"Great things attempt for Him, great things expect,
Whose love imperial is, Whose power sublime."
DORA FARNCOMB.

The Beaver Circle

Our Senior Beavers.

[For all pupils from Senior Third to Continuation Classes, inclusive.]

A New Competition.

Dear Beavers,—We haven't had a competition for a long time, have we? How would you like to write on the following:

All the girls write about "Boys."
All the boys write about "Girls."
The letters to be at this office not later than March first.

Now, Beavers, do your very best. The letters need not be very long, but they should be bright and interesting. . . . By the way, we have not forgotten that we promised to print a few of the Honor Roll letters in the Garden Competition. Next time perhaps there will be room.

Ski-ing.

Have any of the Beavers learned to ski? How do you think you would like to take a big jump, as the man in the picture is doing? You would be afraid of coming down in such a way as to hurt your nose, would you not? But the people in Switzerland, Sweden, and Norway, are very expert on skis, and after such leaps in the air, can keep

their balance and glide off down the mountain sides like birds.

Skiing is becoming very popular in many parts of the world, especially where there are hills. The other day we saw a picture of a merry skiing party in Wales, while such parties may be seen on any fine winter day in many parts of the United States and Canada. Indeed, it is said that should there chance to be an international contest, Canada will stand a very good chance of coming off with honors.

I hope you, will learn to ski; it is good, healthful exercise. But if you do, don't try high jumping too soon.



Ski-Jumping in the Tyrol.

Captain Ben's Valentine.

By J. Graham.

"Secrets, secrets again!" said Mother Harper, as she saw the children whispering together in groups.

"I thought there would be no more secrets for another year, now that Christmas is past, and old Santa Claus gone back to his home in the North. Whose birthday is coming? And what are these secrets all about?"

"Oh, mamma! said Mabel, "is it possible that you've forgotten that St. Valentine's Day comes next week?"

"Why, bless your heart, child! I had forgotten all about the good old saint. Whom are you going to send Valentines to this year?"

"The same ones as last year, Lillie and May, and all the rest of our crowd, and maybe some new ones. We have not decided yet," said Mabel, as she turned her head away to hide the guilty look, which she felt sure had crept up into her face.

She wondered what her mamma would say if she knew of the valentine she had made for the boys to send old Ben Leamont, the old sea captain, who lived at the other end of Scott's farm, and whose house they passed on their way to school every day.

She was startled out of her reverie by hearing mamma say, "Well, I'll leave you to choose your valentines yourselves this year, trusting that my children will make wise choice."

Mabel tried to ease her conscience by saying to herself that she was not sending the valentine to Old Ben herself. But still, if she had not made it for the boys, they could not have sent it, as she was the artist of the group.

How she wished she had not done it now. She felt sure the boys would not give her the sketches back, they had been so delighted with them, and had laughed at the grotesque-looking pictures so heartily.

Captain Ben was the special ogre of almost every child in the village. He scowled fiercely, and shook his doubled fist at them whenever he met them, and if they dared stop but a few minutes to peep at the beautiful flowers in his old-fashioned garden through the bars of his gate, he'd set his pet dog, Pincher, on them, a tawny, yellow creature, with wicked, snappy-looking eyes, who seemed as though he understood that war was



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That guarantee means that I believe Cream of the West to be the best bread flour on the market. If your bread doesn't beat any you ever baked before, if it fails to rise or doesn't give extra satisfaction in every way, your grocer will pay you back your money on return of the unused portion of the bag.

Cream of the West Flour

the hard wheat flour guaranteed for bread

If people will fairly and honestly try Cream of the West they will have success with it. That's why we guarantee it. We are sure of it.

Prices Direct to the Farmer

We want to make "Cream of the West" flour better known in every locality in Ontario. And with this end in view we offer the following special prices to-day on flour and feed direct to the farmers:

FLOURS	Per 98-lb. bag
Cream of the West Flour (for bread).....	\$ 2 80
Queen City Flour (Blended for all purposes)....	2 40
Monarch Flour (Makes delicious pastry).....	2 35

FEEDS	Per 100-lb. bag
"Bullrush" Bran	\$ 1 25
"Bullrush" Middlings	1 35
Extra White Middlings	1 45
"Tower" Feed Flour	1 55
"Gem" Feed Flour	1 70
Whole Manitoba Oats	1 45
"Bullrush" Crushed Oats	1 50
Whole Corn	1 45
Feed Cornmeal	1 50
Cracked Corn	1 55
"Geneva" Coarse Feed	1 55
Manitoba Feed Barley	1 40
Barley Meal	1 45
Oil Cake Meal (old process).....	1 70

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TERMS: Cash with order. Orders may be assorted as desired. On shipments up to five bags buyer pays freight charges. On shipments over five bags we will prepay freight to any station in Ontario, east of Sudbury and south of North Bay. West of Sudbury add to above prices 10 cents per bag. To points on T. & N. O. line add 15 cents per bag to cover extra freight charges. Make remittances by express or post office money order payable at par at Toronto. Prices subject to market changes.

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With every purchase from us of not less than three (3) bags of Campbell's Flour (any brand) you will get a Household Book Free. But bear in mind, that if you order up to five (5) bags we will pay the freight to any station in Ontario east of Sudbury and south of North Bay (see terms above). To get the book, at least 3 bags must be flour—the other two bags may be flour or any other product mentioned in the list printed above. Read the list and make up an order to-day. Add 10 cents to your remittance to cover postage and wrapping of book.

Address all letters to the Sales Manager

The Campbell Flour Mills Co., Limited

TORONTO

Mention This Paper.

Dr. Maria Montessori

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Fine Grain — Medium Grain — Coarse Grain

To have every grain alike, size of dots at left, each one choice extra granulated White pure cane sugar, get the St. Lawrence in bags, with red tag—100 lbs., 25 lbs., 20 lbs.

In the bags of St. Lawrence "Medium Grain"—blue tags—every grain is choicest granulated sugar, about size of a seed pearl, every one pure cane sugar.

Many people prefer the coarser grain. The St. Lawrence Green Tag assures every grain a distinct crystal, each about the size of a small diamond, and almost as bright, but quickly melted into pure sweetness.

Your grocer's wholesaler has the exact style you want—grain, quality and quantity all guaranteed by

St. Lawrence Sugar Refineries Limited, Montreal.



12



Laying Hens MUST Have Meat

In summer when nature expects hens to lay she provides meat for them. Mrs. Hen picks up a bug here, a worm there and over yonder a grasshopper.

So she finds an important part of the food that makes eggs.

Black Victor Meat Scrap contains exactly the same egg-producing value. Clean meat—freed from moisture and waste—and a small portion of bone. Just the animal food that Government Bulletins and poultry experts recommend.

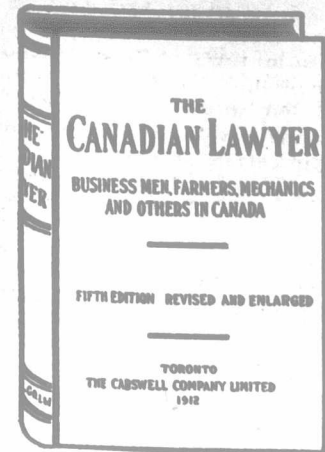
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Write now for complete price list, while the price of eggs is high.

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How the Farmer can keep out of Law Suits

The "Canadian Lawyer" is a book that will protect the farmer against the sharp practice of agents or any person else, who might like to get him into a tight place. It is just what farmers of Canada have been looking for, for some time. It gives the most important provisions of the Laws of the Dominion and of each of the Provinces. The information is given in simple, every day language, so that

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THE CARSWELL COMPANY, Limited, 19 DUNCAN ST., TORONTO, CANADA

declared between his master and the school children.

Pincher lived beautifully up to his name whenever he got a chance, by pinching the tails of their pet cats as they raced up trees to escape him, and by snarling and barking at their own heels, with all sorts of deep-throated growls and dark threatenings to do dreadful things.

The children had got into the way of retaliating upon Captain Ben, whenever they got a chance, by sending him anonymous parcels containing all sorts of old rubbish; while occasionally some of the most daring would risk the chance of being caught by Pincher, and steal in and help themselves to apples, or even chase his pigs and geese.

They did not mean to be wicked, but considered it a sort of pay-back for all his unkindness and gruffness to them. "He started it," they always stoutly maintained when questioned about the matter.

But now they had the best of him; at least they thought they had, as the news had gone around the village that Pincher was dead. In fact, Captain Ben had told Joe Harper so himself, saying in his gruffest manner as the boy passed by to school, "Pincher is dead; he'll not bother you no moah," with such a fierce look, "just for all the world as though we had killed him," said Joe, when repeating the old man's speech to his chums.

"They had not killed him; oh, my, no! although they had threatened to do so often enough. He had been run over by an auto, late in the autumn, and never had recovered from it."

So they had begged Mabel to make them a valentine in the form of a little booklet, each leaf having on it a ludicrous and ugly sketch of Pincher and his master, from the time when the dog had been a puppy, ending with the last page, the burial scene, where Captain Ben was heartily shedding tears over the grave. On the grave-stone they had placed the following epitaph:

"Here lies the tawny, yellow brute, The sneaking cur, the fierce galoot, A fitting mate for his master gray, Whom we sincerely hate more and more each day."

The children did not realize how much the old man loved his dog, or they would not have thought of doing anything so heartless.

Later in the day as Mabel was showing the valentines she had made all ready to send to her friends to Mildred Jones, Mildred said, "Oh, my, but aren't they just lovely! I just wish I could draw like you; but then I'd have no money to get the materials with even if I could, so I might as well cry for the moon at once and be done with it," she finished with a little laugh.

"The first one I'd send a valentine to, if I had one to send, would be old Captain Ben," she said, looking out of the window across the fields to where the smoke from the little cottage could be seen making its way up into the clear, frosty air.

Forgetting her promise to the boys to keep silent about it, Mabel said, "He's going to get one."

"Is he!—oh, let me see it. I hope it's all roses, and violets, and blue ribbons, and gold lace, like the one I've been admiring in Simpson's window every day I passed," said Mildred, her eyes dancing in pleased expectancy.

Mabel turned rosy-red as she said, "Mildred Jones, are you crazy? Roses and violets and ribbons for Old Ben! I guess not. Why, he's perfectly horrid to us all the time; as horrid as"—here Mabel stopped as though searching her brain for a fitting comparison.

"As horrid as the Jones crowd," said Mildred, with a gleam of mischief in her eyes. The Harpers, Jones crowd, Kemps and Scotts, were inseparable friends now, ever since the episode of the Christmas-tree, and the remodelled slide.

"Oh, no, indeed," said Mabel hastily, "that is, I mean you are not horrid now, and never would have been, had we been inclined to be friendly with you all at first."

"Perhaps Old Ben's the same," said Mildred. "If we'd do him a kindness, now and then, perhaps he would not be so grumpy. But come, show me the valentine anyway. What is it like?"

"I can't show it to you, the boys have

it; but I'll have to confess, it's not at all like the kind you would have sent him—just the opposite."

"Well, then, we must not let the boys send it," said Mildred firmly.

"Poor old Captain Ben, I've always felt a sort of pity for him. You see, I know how it feels to be lonely, and how cross and horrid it makes one to feel and know for certain that no one loves us." Here Mildred's voice trembled a little, her loneliness was of such recent date that she had not forgotten it yet.

"You poor darling," said Mabel warmly, "you're not lonely now, are you?"

"No; not since you and Lillie and May, and all your other chums have taken me up and have been so kind to me; even our housekeeper seems to be finding out that we have hearts, and are human. But still all these little things I have to be thankful for only make me long to help Captain Ben more and more. I should like to send him something bright and pretty, just to let him know that someone cares."

Mabel looked at her friend's flushed face and tender eyes in surprise, as she said, "And to think that we ever called you heartless and mean. Why, you're a better girl than any of us. We've all been rejoicing over the thought that he was going to get a valentine that would make him more unhappy. But come, we'll hunt up the rest of the girls, and get them to help us persuade the boys to give up the idea of sending it."

In the meantime, a similar consultation was being held amongst the boys. They had shown Mabel's work of art to Len Jones, expecting him to admire it as much as they had done themselves.

Judge their surprise when he handed it quickly back to them as though the touch of it burnt his fingers, his face reddening as he said:

"Don't you think it a bit rough on the old fellow, lads?"

"Course not. Why, we're sending it to pay him out for all his scowls and threats, and the times Pincher has chased us."

"I thought," said Len slowly, "that you lads did not believe in kicking a fellow when he was down."

"Neither we do,—but I don't see that Old Ben's down. He's lost Pincher, but he's too hard-hearted to care about anything," said Joe Harper.

"I don't know about that. Pincher was all he had in this world to love, and although he looked ugly to us, I've no doubt the old fellow thought he was a beauty; in fact, I am sure he did, because I passed there last night after dark, going to the store, and Captain Ben was outside digging a grave for Pincher. He did not hear me, but I could hear him sobbing to himself, and saying, 'Poor old Pincher; poor old dog, you're gone, and the old man's all alone now.' It made me feel so badly that I had to run all the way to the store to keep the sound of that lonely old voice out of my ears."

"You see, lads, I know what it feels like to be down and out, and I would not send a valentine like that to Old Ben for a pocketful of gold."

The boys looked at each other a little shamefacedly. This, from a so lately despised Jones.

"Say, fellows," said Johnnie Kemp, "let's not send it, even if we can't be friends with the old chap, let's not give him anything more to be mad at us for."

"John's about right," said Bob Scott, "we've done some mean things, too; things we need not have done. Let's make a ship-shape resolution, as Captain Ben would say. For instance, Jones here, being the starter of the thing, will write it out, and we'll all sign it; something like this," scribbling with a pencil:

"We, the undersigned, do hereby solemnly promise to abstain from plaguing Capt. Benjamin Leamont, in all such ways as sending him ugly valentines, stealing his Duchess apples (which, by the way, only makes us want more and more all the time), chasin' his swine, and old tuff-neck, his pet gander."

Signed this day, February 10th, 1914.

1914.
Len Jones, Paul Jones,
Bob Scott, Joe Harper,
John Kemp, John Harper,
Dick Kemp, Alan Harper,
Grant Scott, Carl Jones.



Peep again in your oven.
See those loaves, those pleasing
loaves you've made.
How fat—rounded—substantial.
No, they won't fall when colder.
Because the Manitoba strength that
is in FIVE ROSES will hold them up
till eaten.
This sturdy elastic gluten has kept them
from dropping flat in the oven.
No unsightly holes 'twixt crust and crumb
—never.
All risen evenly—to stay risen.
Never heavy—sodden—soggy—indigestible.
Yours are the FIVE ROSES loaves—
Crinkly and appetising of crust.
Golden brown and tender.
Snowy of crumb—light as thistledown.
FIVE ROSES helps a lot.
Try it soon.

Five Roses Flour

Not Bleached



Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED MONTREAL

"There, now," said Bob Scott, "it doesn't look bad, though I'm not at all sure that the spellin' is just up to the mark, as Miss Webb says in school, and the word 'swine' looks grand somehow, besides just common 'pigs.'"

A gay shout of "Hello, boys!" made them jump from their seats on the Kemp's front-lawn steps, and look at each other in dismay; they had quite forgotten that Mabel might not like them to go back on their word, seeing that she had taken such pains to make the valentine for them.

"Seems as if they had been making resolutions, too," said Bob, as Mabel waved a white paper at them.

Handing it to them, she said, "Here, boys, is a paper we young ladies have brought for your consideration. It's a petition signed by all of us, asking you not to send that horrid valentine to old Captain Ben."

The boys gave vent to their relief and surprise in a joyous "Hip, hip, hooray! Good resolutions have come to stay."

Seeing the girls' surprised looks, they hastened to explain that they had got up a resolution to refrain from tormenting him any more, and it only waited the girls' signature to make it perfect.

Gladly the girls signed the paper, and it was given into the hands of the Jones crowd to keep for them.

Seating themselves back on the steps, girls and boys consulted together, as to how they could do something to give Uncle Ben a pleasant surprise instead.

Numerous plans were thought of, all to be set aside as useless, "until we got to be better friends," said Mildred Jones, as though that part of it was really assured.

"I've got it; oh, I've got it!" said little Carl Jones, "Mr. Judd Hope's got some little pups for sale, and there's one just the image of Pincher, at least like what Pincher must have looked when he was tiny."



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"How'd we give it to him, though?" queried Mabel.

"Put it in a basket and leave it on his doorstep," said Bob Scott.

"But a basket big enough to hold a pup, and a cover for it, would cost nearly a dollar, and Judd Hope's pups are \$3 I am sure. I don't believe we could scare up \$4 before Valentine's Day, no matter how much we try."

"Let's make a collection and see," Bob said, and when the collection had been made they had \$1.75. The girls said they could make up the rest of the \$3 from their banks, but where was the basket to come from?

"That's where it comes in," Len Jones said, "we've no money to give, but Mildred learned to weave baskets from an old Indian woman who used to live next door to us in town. Your Aunt Julia knows her well. So if you'll let us do our share that way, I'll go to Mr. Hopkins' swamp for willows now, so Mildred can make it this afternoon."

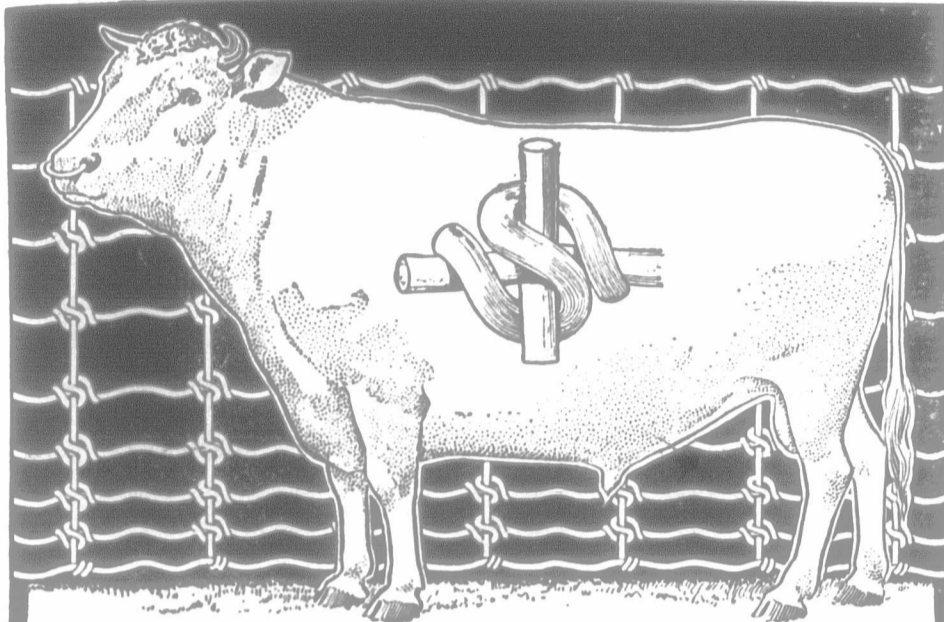
"Why, Len, you and Mildred are bricks through and through; we'll only be too glad to let you do it, and you can come with us in the morning to buy the pup."

With this arrangement, the children parted for dinner, feeling more light-hearted than they had done since that valentine had been made.

Valentine Day dawned bright and clear. To the children it seemed an ideal day. But to old Captain Ben, brooding all alone, it seemed to be getting lonelier and lonelier all the time. He missed the short, sharp bark of Pincher, as he gaily capered over the crusty snow after squirrels, or the neighbor's cats; and the thump, thump of his tail on the floor as he lay watching his master, walking about tidying up their little home.

Four o'clock came, and made him feel worse than ever, as he saw the children hurrying home from school, bubbling

Dr. Maria Montessori



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Ask your nearest "IDEAL" representative to show you "IDEAL" FENCE and to give you a price on your requirements. If you do not know him drop us a card and we will send you our complete proposition by return mail. Write for Catalogue 121 which tells all about "IDEAL" FENCE.

The McGregor Banwell Fence Co., Limited, Walkerville, Ont.

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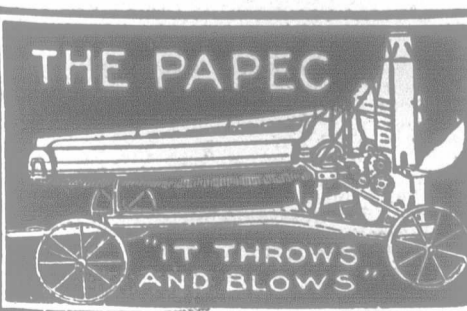
Our hot bed sash are built to last. All the joints are tight-fitting, blind-mortised and white-leaded before being put together. A half-inch oak rod runs through the bars and into the stiles. A metal pin is driven into each of the bars and stiles through the rod. In this way each bar is held in proper place and prevented from sagging.

Sizes:

- 3 ft. 2 ins. wide by 6 ft. long, for 4 rows of 8-in. glass, \$1.20
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THE ARNOTT INSTITUTE Berlin Ontario, Canada

over, as it were, with some joyous excitement.

He was sure they were glad of Pincher's death, and he hated them for it, and shook his fist after their retreating forms, from the cobwebby window, where, in spite of himself, he had been drawn to watch them.

Such a dreary stillness seemed around the place as the last sound of their gay laughter died away, and the old man went back to his chimney corner, stirred up the fire, relighted his old clay pipe, and sat down to smoke. His head sank lower and lower as the fire made him drowsy; soon he had forgotten all his troubles in a sound sleep, from which he was awakened by a noise which sounded like his pigs squealing.

As hastily as he could, the old man rose to his feet, his pipe clattering to the floor unnoticed as he hurried to the door.

Opening it, he passed outside muttering, "Them young villains! I'll shoot some o' them yet if they don't leave my pigs alone."

Arriving at the pen, he was surprised to find all still, and the pigs asleep in their corner, as though they had not been awake for a week.

"Curious, curious," muttered the old man, "I could ha' sworn by the fo'castle and yardarms, that I heered the pigs squealin'."

Coming outside, he looked all around, but saw nothing. If he had looked up in the fir tree outside the pen-door, he might have seen two small boys hidden in its branches, each with a rubber blower, and from thence had come the squeals which had wakened him up and drawn him away from his house, leaving a good chance for some of the other boys to leave the basket on his doorstep, and run to cover again where they could watch proceedings.

As Captain Ben reached the house, still pondering the mystery, he saw the basket sitting there. With an angry snort he reached out to kick it into the snow. "Some more o' their 'tarnel tricks," he said, then drew back suddenly as a new thought entered his mind.

"Haul in yer sea-legs, Ben Leamont," he said to himself, "that may be one o' them bomb things the papers are so choke-full of these days. I'll just stand back and watch it a bit for fear it frazzles up and blows a real sou'wester."

All at once a sharp, yelping cry, as of a puppy in trouble, issued from the basket. With bulging eyes the old man ran to it, lifted the lid, and saw a little yellow puppy making vain attempts to climb to the top of the basket, and falling back with a yelp of fear each time.

As he tenderly lifted it from its nest, smoothing its fur with trembling hands, the old man noticed that it wore a collar, and attached to its collar was a white card with writing on it. Quickly he carried it into the house, put on his glasses, and read, "A valentine, with love, from the children." His glasses grew misty, so that he had to take them off and wipe them before he could read the name "Pincher" on its collar.

Needless to say, the old man was not lonely that night, and the next morning the children found him waiting to thank them, the tears running down his cheeks, as he said gruffly, "Thank ye, kindly, children, for yer kindness to poor Old Ben, and I'll niver think hard o' ye agin. Come and see how the puppy grows, won't ye, sometimes?"

They all promised, with a chokey feeling in their throats, and I should not wonder if we found them all together on Arbor Day, planting a tree on old Pincher's grave.

A Valentine.

A little bird, a pretty bird,
Came singing to my door,
And I in every measure heard
A pledge of winter o'er;
A promise of the coming days,
Of budding tree and vine
And him, I named, in highest praise
The season's Valentine.

A little maid, a pretty maid,
Came singing to my heart,
That long in loneliness had strayed,
From love and maids apart.
I clasped her close; grown newly wise,
I knew that she was mine;
The light of springtime in her eyes,
My life's fair Valentine.

—By Lalia Mitchell.

Senior Beavers' Letter Box.

Dear Puck and Beavers.—This is my first letter to your Circle. My father has taken "The Farmer's Advocate" for about twenty-seven years. We live on a 140-acre farm, situated on the north shore of P. E. Island, a mile and a half from the Gulf of St. Lawrence, in which are quantities of fish of many kinds. Oysters and clams are very plentiful. New oyster-beds are being planted, and will be very profitable in a few years. This is also the home of the little black fox, and every few miles large ranches are to be seen. We have to walk about a mile to school in summer. In winter we are driven there.

For pets, I have a cat and two pairs of pigeons. I must close now, as my letter is getting long, hoping this will escape the w.-p. b.

CECIL M. SIMPSON.
(Age 11, Junior IV.)

Bay View, P. E. Island.

P. S.—I wish some of the Beaver Circle boys would correspond with me.

Dear Puck and Beavers.—I am a very interested reader of your Circle. I like books very much, and have read a few, such as "Wolf," "Tip Lewis," "Mac, a Dog's Story," "Brock," "Swiss Family Robinson," and school and camp stories for children.

I now think I will tell you what I do on the farm. In the spring I have not many chores, as I go to school. When summer holidays come I get ready for hard work. First comes haying, then comes the barley and oats. When the grain is drawn in the barn we thresh it. After this, the fruit is to be picked and corn to be cut. Then comes the drawing of the corn. There is usually a number of mice and rats, which are hard to catch. Then comes school again. When it freezes up, we go skating and playing hockey. At night, when I come home from school, I feed the poultry. I will close now, wishing the Beaver Circle a Happy New Year.

JOHN A. HAIR (age 11, Sr. III).
R. R. No. 7, Watford, Ont.

Dear Puck and Beavers.—I wrote once before to your charming Circle, but did not see my letter in print in "The Farmer's Advocate," so I thought I would write again. I go to school every school-day. Our teacher, Miss Morrison, has left us, and our new teacher's name is Miss Petty.

I am going to tell you about the concert we had at our school on the last afternoon of school before Christmas holidays.

About the last of November our teacher told us that we could have a concert on the last day of school. Every boy and girl was pleased when they heard this, and were anxious to get something to recite or sing. My friend and I sang a song entitled, "The Volunteer Organist." There were many recitations, songs and dialogues, to make up the programme. After the concert was over, our teacher gave us some taffy. It had been boiled three times, and, of course, it was soft. Well, I guess I had better not say any more, hoping that my letter escapes that horrible waste-paper basket.

MILDRED C. SCOTT.
(Age 12, Jr. IV Class.)

Varney, Ont., R. R. No. 1.

P. S.—Will some of the Beavers about my age, please write to me?

Dear Puck and Beavers.—I think I will describe my surroundings. I live in a stone house on a farm of one hundred acres, with large maple trees at the front of the house, and locust trees all out the lane leading to the road. We call our farm "Locust Avenue."

For pets, I have a bantam rooster, a cat, and a dog. Their names are Banty, Tommy, and Collie.

How many of the Beavers can skate? I am just learning, and think it is fun. I like reading, too. I have read "Old Curiosity Shop," "Elsie Dinsmore," "David Copperfield," "The Winning of Barbara Worth," "The Shepherd of the Hills," and several of L. T. Meade's books, and like them fine. Well, Puck, my letter is getting long. Good-bye.

LILLIAN COLLIER.
(Age 11, Jr. IV Class.)

Maitland, Ont., R. R. No. 1.

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We can help you to a most economical purchase by our direct-from-factory plan of selling furniture. Write for our large, free **PHOTO ILLUSTRATED Catalogue No. 7**

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POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisements inserted for less than 80 cents.

A FEW Rose Comb Rhode Island Red cockerels; for prices write: J. Harold Cameron, Cataraugus, Ont.

BARRED Rocks, R. I. Reds, White Wyandottes, S. C. Brown and White Leghorns, Wm. Bunn, Denfield, Ont.

BREEDER of high class barred Rocks. Stock for sale. Prices low. Write me. Leslie Kerns, Freeman, Ont.

BROWN Leghorns, Black Minorca, and Indian Games, also Indian Runner Drakes. Sunnyside Poultry Yards, Highgate, Ont.

BARRED Rock Cockerels from our bred-to-lay Hens, two Dollars each. Sunnyside Poultry Yards, Highgate, Ont.

BRONZE Turkeys a few more choice toms for sale; I won all firsts and specials at Buffalo, January, 1914. Chas. Gould, Glencoe, Ont.

CHOICE R. C. Rhode Island Red cockerels; well-matured birds; three dollars each. R. Wilson Douglas, Caledonia, Ont.

EMBDEN Gander, Rouen Drake, Light Brahma cockerels. A. Stevens, Lambeth, Ont.

FOR SALE—A few choice Rose Comb Rhode Island Red cockerels, from my best laying strain, two to five dollars each, Howard Smith, Winona, Ont.

FOR SALE—Yearling Embden ganders. Two young male Embden ganders. Few extra young Rouen male drakes left. Cheap. C. Maier & Son, River View Poultry Farm, Delaware, Ont.

HATCHING eggs for sale from Kellerstrass Chrystal White Orpingtons and heavy laying strain of White Leghorns. Glenhurst Poultry Farm, Galt, Ont.

PURE Bred Bronze Turkeys, Brown Ducks single comb White Leghorns. Prices reasonable. C. A. Powell, Arva, Ont.

S. C. White Leghorns for sale, a number of choice cockerels. Geo. D. Fletcher, R. R. No. 2 Erin, Ont.

THIRTY S. C. White Leghorn cockerels from prize-winning Cornell University stock, bred for size and egg production, every bird good \$2.00 each. E. C. Mitchell, R.R. No. 3, St. Thomas, Ont.

WHITE Wyandotte cockerels from heavy laying strain, \$3 each, two for \$5. Write quick. They won't last long. W. B. Powell, Galt, Ont.

O. A. C. BRED-TO-LAY Cockerels from the noted bred-to-lay strain of Barred Plymouth Rocks. One of these cockerels will greatly increase the production of your flock for years to come. Price \$3.00 crated and f. o. b.

H. C. NIXON, St. George, Brant Co., Ont. You can make \$3,000 to \$10,000 yearly, raising **Mink, Fox, Skunk, Muskrat**. Fur farming is a big success. For particulars write **W. H. Katt**, B 423 Ridgeway Ave., Chicago, Ill.

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That's the hardest problem for poultrymen. We have solved it. **NATURAL FEATHERS** retain and distribute heat—ventilate just like **NATURE INTENDED**. Chicks thrive—gain size and vitality when hatched under the **NATURAL FEATHERS** in the **SIMPLEX PERFECTION FEATHER ROVERS** and **BROODERS**. Prices \$4.00 to \$10.00. Sizes 50 to 150 chicks. Investigate at once. Ask for catalog A 23. **Simplex Supply House**, Postoffice Bldg., Chicago, Ill.

The name of the Mutual Life Assurance Co. of Canada, has become a household word among the Canadian people. This is due largely to the honesty and integrity existent in the management, as well as the shrewd business methods adopted by the executive. In 1912, a 10-per-cent. increase in business was written over that of the previous year, but the year 1913 saw a leap of 30 per cent., and the business of the Company at the end of the year amounted to \$87,392,026. A matter of moment is the extreme care with which selection of risk is made, which is shown by the fact that the mortality loss was 46 per cent. less than that expected during the last year. This is of interest to every individual policy-holder, as well as to the prospective policy-holders of the Company.

Dear Puck and Beavers.—As I did not see my letter in "The Farmer's Advocate," but saw my name in the Honor Roll, I thought I would write again and see if it would be in print. The name of our best horse is "Darkey." He is twenty-five years old, and is as lively as a seven-year-old. Yesterday morning my sister Ollie, and my brother Frederick, went on a trip to Saginaw to visit my aunt, uncle, and cousins. Santa Claus used me pretty well this Christmas. He generally does.

(VA JOY LOBB (age 12, Sr. IV). P. S.—Will you please put my name in the paper as "Joy"?)

[It is against the rules to use pen names in the Beaver Circle, Joy.]

Dear Puck and Beavers.—After having been a silent reader of your charming Circle for five years, I will now write my last letter. I wrote one letter before. It was my introduction to your Circle, and this is my farewell. I am 15 going on 16. I will be a Beaver no more after the 19th of February.

When I last wrote we lived at Granton. Now we live at Kirkton. I asked for correspondents last time. I got two, or three, rather, but I answered one, and that is almost eight months ago, and have not received an answer. Where is Sadie Bageint gone, and Effie Groh? We never hear of Effie now. Perhaps she is busy.

I am a great bookworm. Some of my favorite books are "Black Beauty," "Black Rock," "Beulah," "Inez," "St. Elmo," "A World of Girls," and "A Bevy of Girls." How many Beavers have read the Henty books? I have read two. They are, "By Right of Conquest," and "Under Drake's Flag." I like books with lots of adventure in them. The Henty books have a great deal of adventure.

Well, I think I have taken up all the room that the precious Circle can spare. Farewell, Puck and Beavers. Hoping to see this in print.

IVA DENHAM, Kirkton, Ont., R. R. No. 1.

P. S.—Here is a riddle for Beavers to answer. "How many peas in a pint?" We have decided not to set any age limit for the Senior Beavers, Iva, so your farewell need not be a real farewell after all.

Our Junior Beavers.

[For all pupils from First Book to Junior Third, inclusive.]

The Cozy Dark.

When I am tucked in bed at night
As safe as safe can be,
The gentle Darkness comes around
And snuggles up to me.
Close to my ears it whispers thoughts;
It very often seems
To be a blackboard where I draw
The nicest kind of Dreams.
The Darkness gives my tired eyes
Another kind of sight,
So I can see the tenderness
Of all the quiet Night.
The Darkness watches near to me;
I rest beneath Its arm
That spreads above my cozy bed,
Protecting me from harm.
O, how can children be afraid
Of Darkness, anyway?
Why, Darkness is the satin cloak
That hides the Heart of Day.

Junior Beaver's Letter Box.

Dear Puck,—I wrote a year ago last August, but did not see it in print till near Christmas. I hope that it was not

that my writing could not be made out, and hope it is better now.

I am going to tell you about my garden. In the spring I planted seeds in a quite large spot. They came up, only my corn and parsnips did not grow very well. One day when my corn was growing, the geese ate all the ears off. I am getting ten cents for my turnips, and five for my parsnips. My cucumber vines had cucumbers on before my mother's. My carrots, beets and sunflowers, were the best of my garden.

I have read quite a few books this year, "Seven Little Sisters," "The Guiding Angel," "The Dargest Guest," "The Hoosier Schoolboy," "Outdoors," "Plant Life in Field and Garden."

Our school-teacher's name is Miss Edna Frost. GRACE PRINDLE.

(Age 8, Book II.)
Thomasburg, Ont.

This is a very good letter for a little girl, Grace.

Dear Puck and Beavers.—I thought I would write you a letter. This is my first letter. My father has taken "The Farmer's Advocate" for as long as I can remember. Just as soon as "The Farmer's Advocate" comes I want to read the letters. I have a little sister only five months old. Her name is Martha Pearl; we call her Pearl. She also likes to see "The Advocate." I go to school every day I can. I am in the Junior Third Class. We are going to have a Christmas entertainment in our Sunday-school. I guess that will be all this time, so good-bye.

HAZEL M. SPURTZINGER.

Dear Puck,—As I did not see my other letter in print I thought I would write another. I am going to tell you a story about a dog which I think the Beavers will be very much interested in.

One time a man had a dog. The dog was old and not very useful. He heard his master say he was going to kill him. The next day the dog told a wolf that was a friend of his to come and carry away the man's little child. The dog would run after him and would take it back, and his master would not kill him for saving his child.

Wishing the Beaver Circle every success. JEAN ANDERSON.

(Age 9, Class III.)
Winchester, Ont.

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for a number of years, and he likes it fine. I have a dog; his name is Sport. I have harness for him. One day I hitched him to my sled, and he ran everywhere. I fell off my sled and he ran away on me. One day he pulled me down the hill against the fence and hurt my leg. Another day he pulled me so fast past our pig-house, that I fell off and hit my head against it. I have two sisters; their names are Grace and Anna Mae. We have a new teacher at our school. Our old teacher's name was Miss McDonald. She went away at Christmas. I guess I will close, wishing the Beavers every success. RAE TUSSLER.

(Age 11, Jr. III.)
Wellesley, Ont.

Dear Puck and Beavers,—This is my first letter to your charming Circle. My brother has taken "The Farmer's Advocate" for over two years, and he would not be without it. I enjoy reading the letters very much, but never had courage to write before.

I have two pets, a dog and a colt. My dog and I go after the cows in summer; his name is Sport. My colt's name is Polly. She is very quiet. She will come up and taste salt out of my hand. Well, my letter is getting long. I would like some of the Beavers my own age to write to me. GREETA BAILEY.

(Age 9, Book Jr. II.)
Evansville, Ont., Manitoulin Island.

Honor Roll.

Madeleine Taylor.
Bertha Walker.
Carl Winter.

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As a wife or daughter of a farmer, mechanic, millionaire, etc., you should learn dressmaking. No accomplishment you can acquire will prove to you of such everyday, life-long value as a practical knowledge of dressmaking. If you do not want to be a professional dressmaker, the cost of learning our method is so small that you can well afford to take this course, if only to do your own sewing. Our method will teach how to cut and finish everything, from plainest waist to most elaborate dress, etc.

Write for free booklet, terms and information.

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Handiest tool on the farm. Cuts bolts, iron rods, etc., saves trips to town. Frame adjustable. Takes from 8 to 12-inch blades. Our price gives you the frame and one 8-inch blade delivered to your post office charges paid, only 50c.

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Balance The Ration With "GOOD LUCK" COTTON SEED MEAL

41-48% Protein.
Price \$34.50 per ton, f. o. b. Toronto.
Send money order or postal note.

CRAMPSEY & KELLY,
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"The Home of High Quality Feeds."

THIS WASHER MUST PAY FOR ITSELF.

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much. And I didn't know the man very well either.

So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was n't "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it?

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that in washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50 cents a week 'till paid for. I'll take that cheerfully, and I'll wait for my money 'till the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

Address me personally,
I. U. MORRIS, Manager 1900 Washer Co.,
357 Yonge St., Toronto.



Dr. Maria Montessori



Musgrave Says

MY machine has netted me about \$15 a day and something like \$300 a month. My expenses have been about \$3 a day including everything and all my customers are satisfied.

SAMUEL MUSGRAVE
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BUCKEYE TRACTION DITCHER

A perfect trench at one out

The Buckeye is built in a number of sizes to meet conditions in various parts of the country. We sell you the machine best adapted to your territory.

No other farm machinery pays such big profits on the investment. There is steady demand for Buckeye Ditches and Buckeye owners are always busy.

Write today for the Buckeye Book of Facts. See what other men are doing and what you can do.

The Buckeye Traction Ditcher Company
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Builders also of Buckeye Open Ditchers and Buckeye Gasoline Engines for farm use.

WANT AND FOR SALE

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock.

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

FOR SALE—Essex grown seed corn, Wisconsin No. 7, and White Cap Yellow Dent. Guaranteed to grow or money refunded. \$1.25 per bush. H. J. Hyland, R. R. No. 2, South Woodlee.

FOR SALE—Four pure bred Scotch collie pups, two are females. Price \$3.50 each. W. D. Rankin, Wanstead, Ont.

FARM MANAGER or foreman seeks engagement, thoroughly competent in all branches of farming and dairy cattle, first class references. Apply H. Farley, Les Hirons, Rouville Co., Que.

FOR SALE—100 acres; good fruit and dairy farm; 500 fruit trees and small fruits; 2-story house and good farm buildings; spring water. Apply John Muxlov, Jr., R. 2, Watford.

FARM FOR SALE—Owner retiring. Sec. land Regina on main line C.P.R., and four miles from Edgeley on C. T. R. 1/4 Sec. Summer fallow; 1/4 Sec. Summer fallow stubble; balance pasture land about 550 under cultivation; balance pasture land with running water, never failing supply spring well water at buildings. Extra large frame dwelling, good frame horse-cattle stable, hog pen, poultry house, rep. ir shop with tools. Would also sell seed, feed, horses, implements, threshing outfit, household effects, or any part to suit purchaser. Any kind of stock taken in carload lots on deal. Apply for further particulars to Wm Nichols, Box 128, Qu'Appelle, Sask.

I HAVE a large number of housekeepers and good domestics requiring advanced passage remaining in situation until fare repaid. Hughes, 3 New Street, Birmingham, England.

PARTNER WANTED to manage thirty-seven-acre farm (poultry, fruit) in South Norfolk. Church, station, school and post office near. R. Mason, 1 Church St., St. Catharines.

SNAP—307-acre farm, Saskatchewan; choice land, best district; good buildings and water; be sold. Low price and easy terms. Must London, Ont. Apply Box 65, Farmer's Advocate.

SEND for wholesale catalogue to Lancashire's Cheapest Drapery Warehouse, and learn how to increase income. Make money selling British goods, tablings, towellings, ready-made dress materials, ladies' overalls, pinafore muslins. Cochrane's Warehouse, Victoria Bridge, Manchester, England.

WANTED—Single man with good farm experience. Must be smart; good milker, good nationality. Give name of last employer, State wages by the year. Apply Farmer's Advocate, London, Ont.

WANTED—A man and wife for farm, man must be a first-class general farmer and capable of managing a farm household. Apply stating age and experience to Farmer's Advocate, London, Ont.

The Ingle Nook.

[Rules for correspondence in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen-name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month in this department for answers to questions to appear.]

Plum Pudding.

J. W. asks for a recipe for plum pudding. Here are a few:

English Plum Pudding:—1 lb. finely chopped suet; 1 lb. stoned and halved raisins; 1 lb. currants; 1 lb. sultanas; 1 lb. chopped mixed peel; 1/2 lb. flour; 1/2 lb. bread crumbs; 1 teaspoon mixed spices; 1 lb. brown sugar; 8 eggs well beaten; 1 wineglass brandy or hard cider (if liked). Flour the fruit before using. Mix all together, adding the egg and brandy last. Stir well, over and over, then put in moulds or cloths and boil 10 hours if in one pudding, 7 if in smaller sizes. This recipe will make one large or several small puddings.

Another:—1 lb. currants; 1 lb. sultana raisins rolled in flour; 1/2 lb. chopped suet; 1/2 lb. each stale bread crumbs and flour; 1/2 lb. each of sliced citron, orange and lemon peel; 1 grated nutmeg; 1 teaspoon each of salt and ginger; 1/2 teaspoon each of allspice and cloves; 1/2 cup each of chopped filberts, walnuts and almonds; 8 well beaten eggs; 1 wineglass brandy or strong coffee. Boil in a floured bag for six hours.

Number Three:—2 quarts bread crumbs soaked in 2 quarts milk; 6 beaten eggs; 2 cups molasses; 1 cup chopped suet; 2 lb. raisins; 1 lb. currants; 1 tablespoon vinegar; 2 tablespoons salt; 1 teaspoon cinnamon; 1/2 nutmeg, grated; 1/2 teaspoon ground cloves; 1/2 teaspoon ginger. Put in a buttered mould, cover and bake from 4 to 6 hours with a very slow fire. Before serving steam.

Carrot Pudding:—(This is preferred by many to plum pudding). 1 cup sugar; 1 cup chopped suet; 1 cup raisins; 1 cup grated raw carrots or beets; 1 cup grated potatoes; 1 teaspoon soda; pinch salt; 1 1/2 cups flour. Steam or boil 3 hours.

"EGGLESS" RECIPES.

"Anxious," who asks for "eggless" recipes, will find a number on pages 192, 193, of our issue for Jan. 29th.

Cookery for St. Valentine's Day.

Cupid Sandwiches:—Bake angel cake or any other cake in a plain sheet. Cut into small hearts with a heart-shaped cutter, then split and insert a layer of chopped preserved ginger and figs in equal proportions. Finally ice the hearts with pink icing. More substantial sandwiches may be made in the same way by using a rich biscuit dough as a foundation, and filling with chicken salad.

Blanc-Mange:—Tint the blanc-mange with juice of canned strawberries, then let it stiffen in a sheet. From this cut hearts and range them around a mound of stiff whipped cream. Decorate the top with candied cherries. Either rose or almond flavoring may be used for the blanc-mange.

Fairy Cream:—Add 1 cup candied cherries and 1 cup sugar to a quart of whipped cream. (The candied cherries should be cut in small bits), and pour into a freezer. Line a heart-shaped mould with plain vanilla flavor, whipped cream tinted a bright pink. Half freeze this, then press it to the side of the mould and fill the center with the cherry cream. Leave packed in ice and salt for an hour. No turning the freezer is necessary for this recipe.

Rose Cake:—Make a good light cake, adding plenty of chopped nuts to the batter, and bake. Before icing cut the cake into as many pieces as there are

guests, and in each piece embed a couplet or stanza of poetry, to be read aloud by the recipient. Ice the cake with white icing and decorate it with little pink roses made of pink icing squeezed through the pastry-tube into the required shapes.

Cranberry Jelly Moulds:—Fill wet coffee-cups two thirds with cranberry jelly and set in smaller cups to make cavities in the jelly. Fill with any kind of salad you choose—celery, waldorf, or salmon. Decorate with little white hearts cut from hard-boiled eggs.

CAKE ICING, FUDGE, COOKIES.

Dear Junia,—I have never written you before, but nevertheless I have always enjoyed the friendly chats of the Ingle Nookers and your helpful suggestions. I am a very young girl yet—probably the youngest Nooker, and I'm trying very hard to learn how to cook. Don't you think, Junia, that cooking, wholesome and temptingly done, is the grandest accomplishment for a girl? I would like a few hints on cake icing and fudge. I refer to boiled icing, you know. I either boil it too long or stir too much. At any rate it is always too hard. I have a good receipt for cookies which someone might like. One and one-half cups sugar, 3 eggs, 1 cup of pork fryings, 1 teaspoon of soda, enough boiling water to dissolve, 1/2 spoon of grated nutmeg, flour.

Someone kindly gave me a bunch of cigarette tags this Christmas. There are not enough to make a cushion by sewing together, so I've decided to stitch them on a background of dark satin. I don't know of a pretty way to arrange them. Would it be too much trouble, Junia, for you to publish an illustration of a cushion made thus? I would like to see it very much. Thanking you in advance, and wishing you and all the Nookers much joy for this year. I remain.

Oxford Co., Ont. FLUFFY.

I certainly do think that every girl should learn, not only to cook, but to be an artist in cookery. The health of the nation depends greatly on its food, and the work of the nation upon its health. See? So momentous events may hang upon the work of the cook in the kitchen, may they not?

Try using sweet cream for your boiled icing. Let the mixture boil without stirring until it "hairs" from a fork, then beat into the stiffly-beaten white of an egg, and keep on beating until the proper consistency is reached.

Here are some definite recipes:

Chocolate Icing:—Take the white of 1 egg, 8 tablespoonfuls powdered sugar, 1 inch-square of chocolate, 1/2 teaspoon vanilla. Do not whip the white of the egg but stir the sugar into it until smooth, beating well. Put the chocolate in a cup over boiling water and cover. When it melts stir it into the frosting. Add the vanilla, and spread on the cake.

Mocha Icing:—Stir confectioner's sugar with a little butter until of the right consistency then spread on cake. Lemon juice or a little milk may be used instead of the butter. When milk or cream is used, flavor with vanilla or almond.

Boiled Frosting:—In a double boiler boil together for 6 minutes 1 cup granulated sugar, 1/2 cup boiling water, and 1/2 teaspoon cream of tartar. Do not stir. Beat an egg stiff and gradually add to it the boiling syrup, pouring the latter on in a thin stream and stirring rapidly. Beat for 5 minutes after the last has been added, and flavor to taste.

Rustic Icing:—1 cup sugar, 2 table-spoons water. Boil these together, then add 1 cup chopped raisins, 1 cup chopped walnuts, and whites of 2 eggs beaten stiff. Boil all together.

Icing Sugar Icing:—Into 1 tablespoon cream stir icing sugar until proper consistency is reached. Flavor with almond and spread on cake. Desiccated coconut may be added if liked.

Maple Fudge:—Break a pound of maple sugar into bits, and put over the fire with a cup of milk. Bring to a boil, add a tablespoonful of butter and cook until a little dropped in cold water becomes brittle. Take from the fire, stir until it begins to granulate a little about the side of the pot, then pour into a greased pan. Mark into squares with a knife.



A Garden of Beauty and Fragrance.

WHETHER you love the dear old Marigolds, Heliotrope, Nasturtiums and Petunias—the gorgeous Poppys and Asters—the many-hued Sweet Peas—the heavy-scented Nicotiana—or the huge and picturesque Ricinus—you'll find in Ewing's Catalogue the particular varieties which will make your flower-garden a real satisfaction.

Ewing's Reliable Flower Seeds have been delighting beauty lovers for more than forty years. Write for Illustrated Catalogue to-day, and if your Dealer hasn't Ewing's Seeds, order from us direct.

THE WILLIAM EWING CO., LIMITED,
Seed Merchants,
McGill St., MONTREAL.



FARMERS

Intending to go West may find it to their advantage to communicate with Box N, Farmer's Advocate, concerning a few improved farms in an excellent mixed farming district in the western part of Manitoba, for sale on easy terms, or to let at money rent or on shares. Schools and churches convenient, excellent railway facilities. Only well qualified farmers need apply.

Cream Wanted

Toronto consumes daily the milk and cream from over 14,000 cows, and the butter from over 70,000 cows. We need your cream. Write

TORONTO CREAMERY CO., Limited,
9, 11 and 13 Church St., Toronto

Cream Wanted

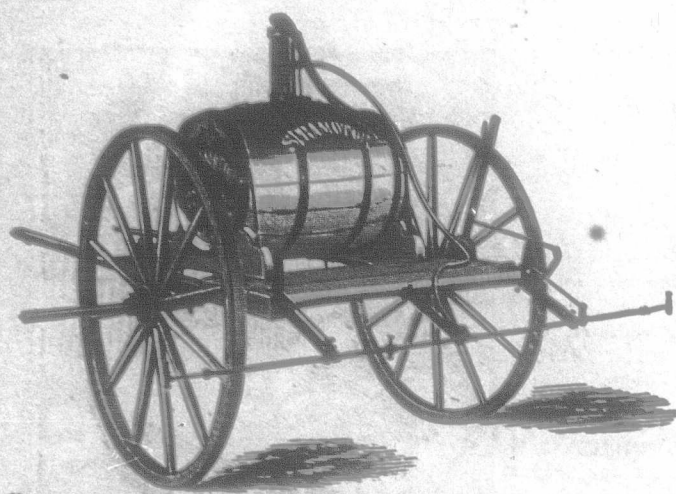
We pay express charges on cream from any express office within 200 miles of Ottawa. We also supply cans. Sweet or sour cream accepted. Write for particulars to

Valley Creamery of Ottawa, Limited,
Ottawa, Ontario

WANTED—HIDES TO TAN

For robes, coats, etc., horse hides, cattle hides and furs. No leather tanned.

B. F. BELL, Delhi, Ontario



Here is an Unsolicited Letter From One of Canada's Foremost Authorities

Macdonald College, St. Anne De Bellevue, P.Q.
Jan. 19th, 1914

The Spramotor Co., London, Ont.
Dear Sirs:

We used one of your Model C power sprayers in our 30-acre orchard last year with entire satisfaction. With two lines of hose we had no difficulty in maintaining a steady pressure with the pump running only about two-thirds of the time, each line of hose throwing as much spray as a man could handle efficiently. We could easily have carried an extra line of hose had we needed it.

I might say that this power sprayer was one of the first power sprayers ever used in this Province, and from the interest now being taken in spraying, there should be a large number of power sprayers brought in during the next few years, and I feel confident that from our experience with it your machine will give good satisfaction to any one using it.

Yours very truly,
(Signed) T. G. BUNTING,
Professor of Horticulture.

Spramotors Bought 20 Years Ago Still Do Good Work!

Twenty years ago takes us back to somewhere around 1894, yet we are constantly receiving letters from men who bought Spramotors as long ago as that, and are still able to write us that their machines are in active and efficient use to-day.

What does this mean to you men who are thinking of getting a spraying outfit? Simply this: That you can't buy a better or more durable machine than the Spramotor!

The Spramotor of twenty years ago was not the advanced machine of to-day, yet the basic principles were right, and are proven so by the fact that men are getting good results from our earlier models right now. With the added experience and the various improvements we have been able to effect in all that time, rest assured that in the present Spramotor you get the utmost in spraying efficiency, durability, convenience and economy.

We want you to know that there is, in the Spramotor line, a machine that will fill your needs to a nicety. If not, we will make one! We have a first-class hand Spramotor selling as low as \$6. This will do all the work necessary on smaller farms. Then we have machines mounted on hand carts, others on horse carts, still others drawn by one or two horses, in which the horse does all the work of pumping, and finally we build what is acknowledged to be the last work in spraying machines—our Model "C" Gasoline Power Outfit, with every modern improvement and full accessories.

FREE

Write us particulars of what your spraying needs are, and we will forward you by return mail a copy of our valuable illustrated treatise on Crop

Diseases, without charge. This put you under no obligation whatever, and secures you useful, reliable information that can be got no other way.

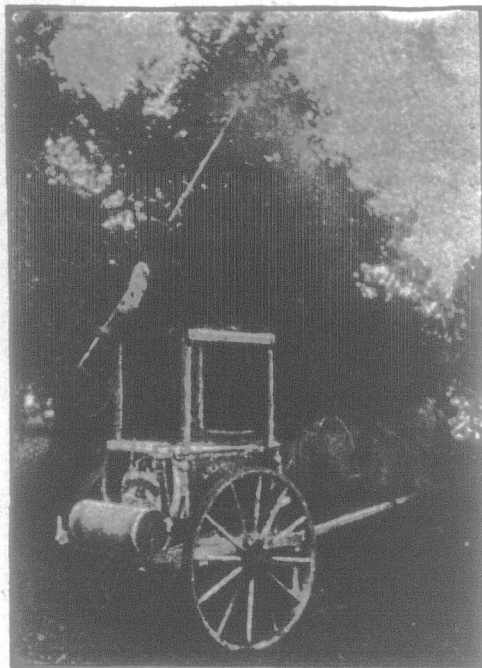
In addition, we will send you full details of a Spramotor that will exactly fit your needs.

You should at least know the facts, so write us, to-day.

Spramotor Ltd.

1732 King Street

LONDON, CAN.



Surplus Sale of JERSEY CATTLE AND HORSES

at "JANEFIELD FARM", GUELPH, 1 mile south of O.A.C. and street car.

Friday, Feb. 20th, '14
Sale to commence 1.30 p.m.

Owing to part of Janefield Farm being sold recently, it has become necessary to reduce the stock of Jerseys which have been kept especially for cream producing purposes.

The cows have all milking records, nothing having been kept except what would produce and nothing more need be added than that the fact that from the sale of cream of twelve cows \$30.00 per week has been made.

The cows are all in calf to Brampton Merger and the heifers are good foundation stock.

All the cattle are from the best strains and have been selected from such stocks as J. B. Cowieson & Sons, Queensville, Mr. Clark, Norval and Mr. Hy. Glendinning, Manilla. This is a good chance to get a good cow and the record of each cow will be given. All offered are for unreserved sale.

20 head of Jersey cattle including 10 cows fresh and to calve includes cows giving 10,000 lbs. milk per year, 2 two-year-old heifers due in April 8, one-year-old heifers, 7 horses, 8 pigs.

TERMS—10 months credit or 6% off for cash.

WM. J. BEATY, Proprietor, Guelph, Ont.

CHAS. M. CRAWLEY, Auctioneer, R. R. No. 6, Guelph, Ontario

BUY BRUCE'S SEEDS

The most successful of the market gardeners in Canada, many of them customers for two generations, and some for three, buy Bruce's seeds, because, ever since this business was established by us *Sixty-four years ago*, they found they could rely on them in every way, getting better results than from any other seeds.

To these men quality and germination is the big consideration, as their bread and butter depends on their crops.

We would say to the amateur and also the farmer, who are not customers,

"It Will Pay You To Buy Bruce's Seeds"

for it takes the same time and trouble to plant and care for poor seed as for good, and poor seed means dissatisfaction and loss for a surety.

Write for our 112-page illustrated and descriptive catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Poultry Supplies and Garden Tools and Implements, etc. It will be mailed *FREE* to all applicants. *WRITE TO-DAY.*

John A Bruce & Co LIMITED
SEED MERCHANTS
HAMILTON ONTARIO

The Farmer's Advocate and Home Magazine
Published Once a Week. \$1.50 per Year in Advance.

Chocolate Fudge:—2 cups sugar, 2 squares chocolate, $\frac{1}{2}$ cup milk, 1 tablespoon butter, 1 teaspoon vanilla. Boil sugar, milk and chocolate until the chocolate is melted, then add the butter and cook without stirring to "soft ball" in water, then remove from the fire.

I am sorry to say that we have no illustration for a cushion cover made with cigarette tags. Try drawing out patterns on paper until you get one that suits you. One can do wonders in that way.

ABOUT HELEN KELLER.

Dear Junia.—I have just been reading an account of the life of Helen Keller in "The Farmer's Advocate" and was very much interested in it. I have a daughter attending Normal School at Ottawa who want to hear her, and she was so impressed that she went home that night and put it into verse. I could not but notice the similarity of thought when I read yours.

I would be very much pleased to see these verses appear in the Advocate. We have taken this paper for upwards of twenty years, and look forward each week for its coming. The "Home Department" is better than most of their lauded magazines.

Wishing you every success in your work, sincerely yours.

MRS. C. D.

HELEN KELLER.

Helen Keller, Helen Keller.
You have put us all to shame,
You have struggled through the darkness
And the silence up to fame,
We, with all our boasted senses,
Fall, faint-hearted by the way;
We, who never knew the darkness
And the silence of the way.

Through thy long and lonely childhood
Never shone a ray of light,
Ne'er a sound of merry voices
Broke the stillness of the night,
Closed away from fellow-creatures,
Fancy what a prison, such!
Till thou foundst the key to freedom
In the blessed sense of touch.

What a miracle had happened!
What a joy this thing would bring!
Now the thoughts and now thy feelings
Could be borne on fleeting wing.
Now the prison doors were open,
Far aside the bars were hurled,
And our noble Helen Keller
Came in contact with the world.

Struggling bravely, slowly upward,
Groping through thy starless night
With thy eager, searching fingers
Precious as to us our sight,
For along the slender nerve-cords
Leading to the darkened mind
Flowed the wisdom of the ages
Binding thee unto mankind.

Now thou comest with a message
To thy brethren in the light
From thy lonely land of silence,
Cheering others in the flight,
Teaching us to count our blessings,
Telling each one o'er and o'er
These, the mercies of our Maker
As we never felt before.

Helen Keller! Helen Keller!
You have put us all to shame,
You have struggled through the silence
And the darkness up to fame.
We complain and halt and murmur
In the race we have to run;
You, though bound by bands of darkness,
You have willed and worked and won.

Rideau View. BEATRICE DUNLOP.

TO PREVENT SWEATERS FROM STRETCHING.

To prevent sweaters from stretching across the shoulders stitch a straight piece of cotton cloth, the same color if possible, from the neck to the armhole on the wrong side. The strip should be about one and a half inches wide.

Who Sent for These Patterns?

We have received an order for six patterns, 60 cents enclosed, but neither name nor post-office appears on the letter. On receipt of this information patterns will be sent.

Dr. Maria Montessori

Little Economies and Using Up Left Overs.

(Continued from last week.)

An economical suggestion is that dried fruits, which themselves contain a certain amount of sugar, require very little extra sugar, provided they are cooked long enough.

To Clarify Fat.—Fat from bacon, sausages, etc., can be used for frying potatoes (do not use too much), but all other scraps of fat which are not strongly flavored may be clarified and used for "deep fat" for cooking doughnuts, French potatoes, croquettes, and fritters, or it may even be used for shortening.

Stale Cake Pudding.—Crumble up the stale cake and cookies. In the bottom of a baking-dish put a thick layer of stewed apples, then put in a layer of crumbs, alternating until the dish is full.

White Bread Brewis.—Heat a pint of milk in a double boiler. Stir into it enough bits of stale bread to absorb all the milk.

Milk Toast.—Dry six slices of stale bread in the oven, then toast it to a golden brown. Heat two cups milk in the double boiler, add two tablespoons butter, and two tablespoons cornstarch blended with a little milk.

Croquettes.—Nearly every left-over of meat or fish, as well as some vegetables and cereals, may be made into croquettes. The meat should be minced in the meat-grinder. It may then be mixed with thick, cold, brown gravy, or white sauce, seasoned well with whatever is liked, salt, pepper, onion juice, nutmeg, chopped parsley, etc.

If there is not enough meat, mashed potato, rice, soft bread crumbs, etc., may be added. When baking croquettes, remember three things. (1) Have the fat smoking hot, else the croquettes will break open.

The Scrap Bag.

POTTING PLANTS.

One of the chief causes of trouble with potted plants is improper drainage, due to three causes, planting in too large a pot, watering too much, or using soil which has a tendency to pack and puddle.

CLEANING KITCHEN WALLS. When cleaning painted walls add a little kerosene to each pailful of soap-suds. Do not have the water very hot.

RAG CARPET. A very good "hit-or-miss" combination

The Mutual Life Assurance Co'y of Canada

HEAD OFFICE, WATERLOO, ONTARIO

FORTY-FOURTH YEAR

The forty-fourth annual meeting of the Company was held at its Head Office on Thursday, February fifth. The detailed reports of the transactions of the year indicated that 1913 passed into history as one of exceptional prosperity, as may be gathered from the following

SIGNIFICANT FIGURES

Table with 4 columns: Category, Amount, Gain over 1912, Amount. Rows include Payments to Policyholders, Income, Total Assets, Surplus, New Assurances, Assurance in Force.

Surplus Earned During the Year, \$852,163.

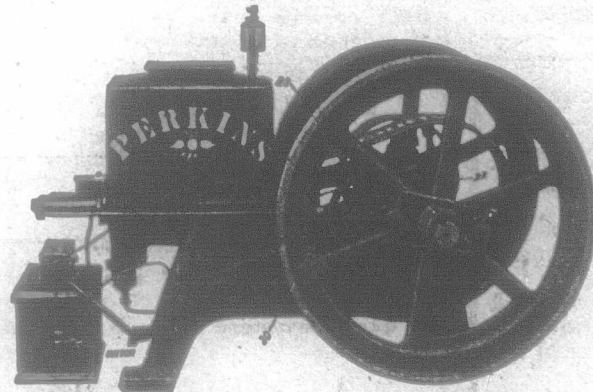
This excellent result of the year's operations cannot fail to be extremely gratifying to the policyholders of the Company, as it guarantees to them the continuance of the payment of very generous dividends.

The usual booklet, containing in detail the complete financial statement and a report of the proceedings of the annual meeting, will be mailed to every policyholder in due course.

E.P.CLEMENT, K.C., GEORGE WEGENAST, PRESIDENT, MANAGING DIRECTOR.

DON'T SPEND YOUR VALUABLE TIME FUSSING AND TINKERING

with a complicated Engine. Get the PERKINS Gasoline Engine—the special farm-built engine that saves time for the busy farmer, who has work to be done—the "PERKINS" does it.



The illustration shows how simple, solid and durable this farm engine is. Requires no cranking. Is easy to operate. Uses the minimum amount of fuel and does not get out of order, if ordinary care is used.

Write for our booklet which gives in simple, clear, understandable language the advantage points of the "Perkins Engine." PERKINS WINDMILL & ENGINE CO. 90 KING STREET LONDON, ONT.

It Will Pay You Better To Use Ideal Stock and Poultry Foods

Our foods are composed of the healthiest and purest ingredients money can purchase. IDEAL STOCK FOOD will give you good results, it will make that worn out horse feel like a colt. It will improve both the quantity and quality of cows' milk very materially; this we can prove. Calves can be raised on IDEAL FOOD and separated milk. It will fatten hogs. Try it on your young pigs. It is equally good for sheep. IDEAL STOCK FOOD has the highest guaranteed analysis of any Food we know of. It stands supreme. We guarantee good results. We have a very high percentage of protein which is very essential to the life of any animal to be healthy.

Advertisement for Black Knight Stove Polish, featuring an image of the product and text: BLACK KNIGHT STOVE POLISH FOR BRIGHTNESS BLACK AND LIGHTNESS, USE KNIGHT A PASTE NO WASTE THE F.F. DALLEY & LTD. HAMILTON, ONT. No DUST No RUST

Harab Fertilizers

Write for FREE Fertilizer booklet and prices. THE HARRIS ABATTOIR CO., LIMITED Strachan Ave., Toronto

O.A.C. 72 OATS Government tested. For sale by the grower R. F. Klinck, Victoria Square, Ont.

CALDWELL'S

Molasses Meal

Guaranteed 84% Pure Cane Molasses. Tell it by the smell.

CALDWELL'S

Cream Substitute Calf Meal

Analysis equal to cows milk.

CALDWELL'S

Dairy Meal

A high protein balanced ration.

CALDWELL'S

Scratch Feed

Made from selected whole grains.

CALDWELL'S

Laying Meal

A dry or wet mash for egg production.

CALDWELL'S

Chick Feed

A growing feed for young chicks.

Ask your dealer for booklets on these feeds or write direct to

**The Caldwell Feed Co. Ltd.,
Dundas, Ontario**

for rag carpet is green, gray, tan, a little blue and a touch of black evenly distributed. Do not use red or bright yellow, as they have a tendency to make a rug of this kind look "common." Gray or brown warp will be found satisfactory.

WHEN YOU ARE CATCHING COLD.

If you feel that you are catching cold take a hot drink and engage in some vigorous exercise, anything that will bring about a reaction. When a cold has settled take plenty of hot drinks of any kind, and a dose of some laxative medicine.

TO REMOVE INK SPOTS.

To remove ink spots from wash materials soak the spot with kerosene. Finally rinse with kerosene, then wash as usual.

EASILY WASHED BED COMFORTS.

Cover the cotton first with cheesecloth or mosquito netting and tack firmly. Make the sateen cover separate and tack lightly in place over the comfort. When the cover becomes soiled remove it and wash. Hang the body of the comfort meanwhile on the line to sun and air; finally iron the cover and tack in place again.

LOOSE KNIFE HANDLES.

When knife handles loosen, fill the cavity in the handle two-thirds full of mixed resin and brick-dust, then heat the shaft of the knife and press it into its place. Hold it till firmly set.

CARING FOR A PIANO.

A competent piano tuner says that pianos often deteriorate because they become too dry. He gives this remedy. Keep a growing plant in the room, and so long as the plant thrives your piano should do so. Some place a vase with a wet sponge in it near the piano if there is too much dry heat in the room.

ENAMEL WARE CEMENT.

Take equal parts soft putty, finely sifted coal ashes and sifted table salt, mix and pack well into the hole. Place pan on stove with a little water in it until the cement hardens. Afterwards the vessel will hold water as well as ever.

CLEANING WOODWORK.

Woodwork may be easily cleaned by rubbing it with a little kerosene, polishing well afterwards with clean cloths. If you dislike using the coal oil, use milk and water mixed, with a little mild soap. Rub dry and polish.

NEW SHIRTWAISTS FROM OLD.

Very good shirtwaists may be made from men's shirts which have been discarded because frayed at the cuffs. Cut the shirt carefully apart, leaving the front opening intact to serve as the front finishing of the shirtwaist.

TO GET RID OF RATS AND MICE.

A writer in Harper's Bazar says that rats and mice may be driven away by laying heaps of powdered sulphur about wherever the rodents are in the habit of coming.

KEEPING BREAD WARM.

A good way to keep a pan of bread dough warm over night is to set it on a warm soapstone wrapped in a clean flannel.

A DOUGHNUT WRINKLE.

As you take each cake from the kettle after frying it, dip it immediately into a pot of boiling water and take it out as soon as wet. This will take all superfluous grease from the doughnuts.

STAMPS STUCK TOGETHER.

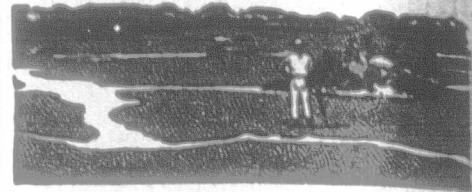
If stamps have become glued together, lay a thin paper over them and run a hot iron over it. Take stamps apart at once.

MAKING EYELETS.

When punching eyelets, place the material over a cake of white soap. This makes a firm edge, which is easily worked over.

TO KEEP LEMONS.

Put a layer of dry, fine sand, an inch deep, in the bottom of an earthenware crock. Place the lemons on this, stalk ends down, and be careful that the lemons do not touch one another. Cover with sand, then put on more lemons and more sand. If kept in a cool, dry place, the lemons will keep good for a long time.



Why not invest in permanent roofing?

Avoid needless expense for roofing that demands frequent repairs. Get Genasco, made of "Nature's everlasting water-proofer"—Trinidad Lake asphalt.

Genasco

THE TRINIDAD-LAKE-ASPHALT

Ready Roofing

is a sure and lasting protection against sun, rain, snow, wind, heat, and cold; it is attractive and economical as well.

Write us for samples and the Good Roof Guide Book. Ask your dealer for Genasco. THE KANT-LEAK KLEET makes seams water-tight without cement and prevents nail-leaks.

The Barber Asphalt Paving Company

Largest producers in the world of asphalt and ready roofing.

Philadelphia

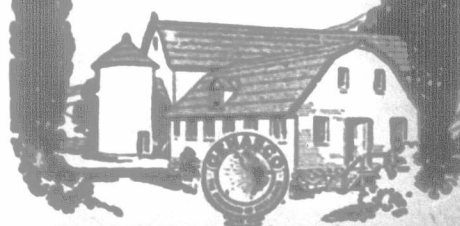
New York Chicago
San Francisco

D. H. Howden & Co., Ltd.
London, Ontario

Canadian Asphalt Company, Ltd.
Winnipeg

Lewis Bros. Ltd., Montreal,
Ottawa, and Toronto

Evans, Coleman & Evans, Ltd.
Victoria



SOW SIMMERS

ESTAB'D 1856

Used by successful planters

for over half a century

Our large and beautifully illustrated CATALOGUE FREE

J. A. SIMMERS, Limited
TORONTO, ONT.

SEEDS

Big Poultry Profits

Secure this year—if well equipped. Get Cyphers Company's big Free book (Canadian Catalogue). Tells all—164 pages—illustrated—pictures—describes Incubators and Brooders World's Standard. Learn about Cyphers Company's Free Service. Write for book today. (CYPHERS INCUBATOR CO. Dept. 184 Buffalo, N. Y.)

BARLEY & OATS

We have another fine supply of 21 barley, samples excellent; also a supply of improved Siberian oats. Our original supply was grown from registered seed. Present supply was specially grown for seed purposes and is clean, barley, ninety cents; oats, fifty-five. Bags extra. JOHN ELDER & SONS, Hensall, Ont.

Now is the time to install one of our Hay Carriers

In the winter months when you are not busy is the time to figure and plan for your next summer's work. Every farmer should have in his barn a Hay Carrier, and we feel satisfied when you look into the merits of the Stratford Short Draft Hay Sling Carrier, you will agree that it is one of the best on the market.

It is not a complicated machine. Its simple construction assures no expense or time lost in repairing.

The team can elevate and the car can easily handle 2,000 lbs. per draft. Team can be stopped at any point, and the load will be sustained instantly by the Carrier. There is a great saving of rope when you use the Stratford Hay Carrier. Do not wait till the busy spring-time or haying-time comes to install one of our Carriers, but order one now and install the same in your slack time this winter. We are making an exceptionally low price on the Carrier at this season, namely \$8.00.

Write us, giving measurements of your barn, and we will quote you price on a complete outfit. We carry in stock: Carriers, Pulleys, Slings, Steel Track and Hay Forks. Ask for Catalogue No. 1.

The Stratford Mfg. Co., Ltd., Stratford, Ont.

We make Ladders of all kinds and Lawn Swings. If your dealer does not handle our line, write us for Booklet "A."

Seed Oats

—Dalmeny winner of 1st, 2nd and 4th prizes in field crop competition, 1913. GARTON'S RECORD—Garton's latest production, pure seed from Lord Rosebery's stock, 2nd year in Canada, strong strain and large yield, 65c. per bush, bags free. Send for sample.

W. T. DAVIDSON & SON,
MEADOWVALE, ONTARIO

A JERSEY BULL

For Sale—pure St. Lambert, solid color, 22 months old, a splendid individual; his dam is an extra good cow, she is a great granddaughter of Nixie of St. Lambert = 12509 = with an official test of 21 lbs. 9 1/2 oz. of butter from 280 lbs. 12-oz. of milk. For particulars, address: H. M. Rolph, Glen Ridge Farm, Markham, Ont. Please mention "The Farmer's Advocate."

Dr. Maria Montessori

ENGLISH HAND-MADE LACE

MADE BY THE COTTAGERS OF BUCKINGHAMSHIRE.

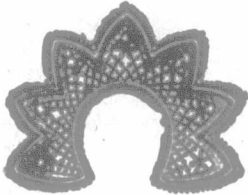
This is the old-fashioned lace made on the cushion, and was first introduced into England by the Flemish Refugees. It is still made by the village women in their quaint old way.

Our Laces were awarded the Gold Medal at the Festival of Empire and Imperial Exhibition, Crystal Palace, LONDON, ENGLAND, for general excellence of workmanship.

BUY some of this hand-made Pillow Lace, it lasts MANY times longer than machine made variety, and imparts an air of distinction to the possessor, at the same time supporting the village lace-makers, bringing them little comforts otherwise unobtainable on an agricultural man's wage. Write for descriptive little treatise, entitled "The Pride of North Bucks," containing 200 striking examples of the lace makers' art, and is sent post free to any part of the world. Laces for every purpose can be obtained, and within reach of the most modest purse.

Collars, Fronts, Plaistons, Jabots, Yokes, Pichus, Berthes, Handkerchiefs, Stocks, Camisoles, Chemise Sets, Tea Cloths, Table Centres, D'Oylies, Mats, Medallions, Quaker and Peter Pan Sets, etc., from 25c., 60c., \$1.00, \$1.50, \$2.00, up to \$5.00 each. Over 200 designs in yard lace and insertion from 10c., 15c., 25c., 45c., up to \$2.00 per yard.

Every sale, however small, is a support to the industry.

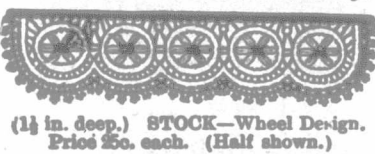


COLLAR—Pure Linen, \$1.00.

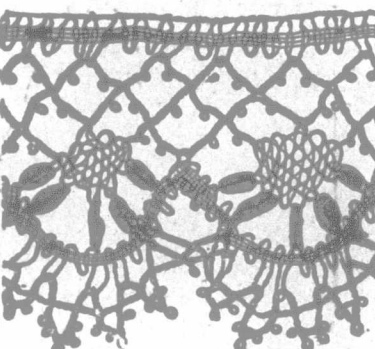


DAINTY HANDKIE—70c. No. 910.—Lace 1 1/2 in. deep.

IRISH CROCHET.
Mrs. Armstrong having over 100 Irish peasant girls connected with her industry, some beautiful examples of Irish hand made laces may be obtained. All work being sold direct from the lace-makers, both the workers and customers derive great advantage.



(1 1/2 in. deep.) STOCK—Wheel Design. Price 5c. each. (Half shown.)



No. 122.—80c. per yard.

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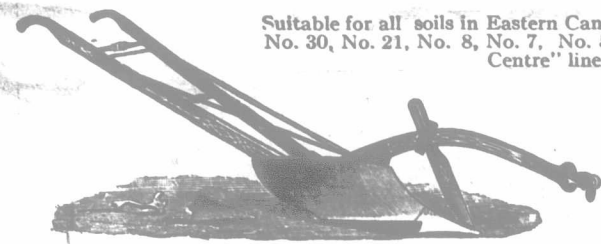
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\$10 each

Send immediately if you are to be a lucky one. Your money back if not entirely satisfactory. State kind of soil your farm is, so that we may fill the order to suit the land.

Wheels extra, 75c. each.

Skimmers extra, 75c. each.

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Rennie's New Seed Annual for 1914.

THIS complete book, bound in lithographed covers, is YOURS for the asking. It is an elegant book—the best seed catalogue we have yet issued—and offers some most desirable Novelties in Vegetables and Flowers which can be obtained only direct from us. Many a winter's evening can be spent profitably in planning your garden, by a careful study of this book. Shall we send you a copy?

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Branches at Montreal, Winnipeg and Vancouver

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TO REMOVE RUSTY SCREWS.

Apply a very hot iron to the head of the screw for a minute, then use the screw-driver at once.

A DARNING HINT.

Sew black netting over the hole in stockings and darn in the usual way, but through the meshes, skipping every other one. The result will be a firm, neat darn. If white netting be used, the same idea may be used for knitted underwear.

TO CLEAN A STEEL BUCKLE.

Steel buckles and ornaments that have become slightly rusted, may be cleaned as follows: Rub well with sweet oil; let stand for a couple of days, then rub with powdered, unslaked lime, and polish with chamois.

A BREADMAKING HINT.

A housekeeper says that bread dough will not stick to the mixing-pan if the pan is first greased with lard, and the flour is put in next, then the water. Before mixing the bread with the hands, first wash them well and clean the nails carefully, then grease them before working with the dough. A patent bread-mixer is, of course, the ideal way to mix bread.

TO TEST A BROOM.

When buying a broom, test it by pressing the edge against the floor. If the straws bristle out and bend, the broom is a poor one. They should remain in a solid, firm mass.

TO RUN RIBBON.

To run ribbon through beading, or through a hem, fasten a small safety-pin to one end of the ribbon and use as though it were a tape-needle, which is seldom to be found when wanted.

CHOPPED CHEESE.

When preparing macaroni and cheese, put the cheese through the food-chopper instead of grating it. Much less time will be required.

WIRE "DISH-CLOTH."

Use a wire dish-cloth, which may be bought for a trifle, for cleaning pots. It will save much time.

DROP COOKIES.

One and a half cups brown sugar, 1 fine, 1/2 teaspoon soda, 2 1/2 cups flour, cup of butter, 3 eggs, 1/2 cup of seeded raisins, 1/2 cup of English walnuts chopped. Drop on a well-greased pan, about a large teaspoon for each cookie, and bake in a quick oven. LORENE.
Haldimand Co., Ont.

A ST. VALENTINE'S EVENING.

Dear Junia,—Will you kindly give suggestions for a "St. Valentine's Night" for a Literary Society? J. M.
"Heart Games" are, of course, appropriate for a Valentine party. Here are a few suggestions:

- (1) Prepare a number of small pasteboard squares with letters of the alphabet. Let each of the company take a handful and write sentences (preferably sentimental) from the letters which they draw, the words to begin with the letters drawn. At the end of a certain time, read the sentences aloud and award a prize for the one voted best.
 - (2) Have each person read or recite what he or she considers the most beautiful love song in the English language. Give a prize for the one voted best. (A good suggestion for a prize for this is "An English Woman's Love Letters.")
 - (3) Distribute paper and pencils, and have each write a rhyme for a valentine. Those who wish may also draw a picture to illustrate, as well as write a verse.
- At a Literary Society meeting, a paper on the origin of St. Valentine's Day, should, of course, be read, and some pretty love-songs should be sung.

If it is desired to divide the party into "partners," here are two rather novel ways: (1) Cut as many hearts from red tissue-paper as there are girls in the party. Let someone take up one at a time and send it with a puff from a palm-leaf fan into the ranks of the guests. Each man must catch a flying heart, and take as supper-partner the girl whose name appears on the heart.

We Specialize in the Treatment of

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and other skin troubles, and assure satisfactory results. We give treatments in our offices, and have home treatments for those who cannot come to us. Consultation free at office or by mail. 21 years' experience and success in the treatment of the above and other skin, scalp, hair and complexional troubles, including

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are made right, and with the free advice and lessons I give my customers, no one can possibly fail to make biggest batches of strongest chicks. Write me. A postal brings all facts, books, prices and propositions. "Proper Care and Feeding of Chicks, Ducks and Turkeys"—sent for 10c. Successful Grain Sprouters furnish green food, make hens lay in winter. Ask about my high grade poultry—all leading varieties.

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Then, of course, you'll pay off the indebtedness in time. But suppose you should die suddenly—will the mortgagee foreclose, or will your wife be able to meet the payments?

And even if she can, won't it make a big hole in her resources?

Well then, why not ensure its repayment, whether you live or die, by means of an Imperial Endowment policy for the amount of the mortgage.

Hundreds of men have adopted this method. It is the surest way yet devised for protecting the home.

Write for further particulars today. Tomorrow may be too late.

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(2) Have the girls and men draw from two baskets the names of famous lovers, then look for their 'mates.' Here is a list of names in order:

Napoleon, Adam, Abelard, Jacob, T. I. tram, Benedick, Samson, Romeo, Dante, Petrarch, Pericles, Antony, Cupid, and Ulysses.

Josephine, Eve, Heloise, Rachel, Iselt, Beatrice, Delilah, Juliet, Beatrice, Laura, Aspasia, Cleopatra, Psyche, Penelope.

An interesting item would be to have members of the party read, as "after-dinner speeches," short accounts of the lives of these famous lovers.

Decorations for a Valentine party should, of course, consist largely of red hearts, Cupids, etc. These can be bought all ready for use.

Some Embroidery Patterns.



No. 768.—A design for embroidering a slipper or work-bag.

The work can be done in solid embroidery, all in outline or in a combination of solid embroidery with outline, or of outline with long and short stitches.

Stamped and tinted on tan art ticking, with mercerized floss to work, 40c.; or transfer pattern of this design sent to any address for 10c.



No. 771.—A design for embroidering the ends of a table or dresser scarf. Two ends twelve inches wide are given.

The design can all be worked solidly, all in outlining or in a combination of solid work and outline, or the material can be tinted between the lines and the design outlined with a contrasting color.

When making solid embroidery, pad the stamped figures by darning backward and forward lengthwise, and then cover closely with over and over stitches worked in the opposite direction from the padding.

Stamped and tinted on art crash, 17x56 inches, with mercerized floss to work 40c.; or transfer pattern for 10c.



No. 764.—A design for embroidering a handkerchief case in envelope shape.

The scalloped edges are designed to be banded and buttonholed; the sprays of leaves worked either in solid embroidery or as eyelets; the stems to be outlined, and the round dots in solid work or as eyelets.

Stamped on best white pure linen, mercerized floss to work, 35c.; or transfer pattern for 10c.

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Here's why you should select the Eureka Potato Planter—Furrow Opening Plow is directly under the axle—that means uniform depth at all times. The seed drops in sight of driver. Steel and malleable construction makes long life and few repairs. Made in three sizes—for one or two rows. We also make the Eureka Mulcher and Seeder.

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My Registered Green Mts. yielded last season over 600 bus. per acre. Write me for price list of other varieties.

C. Fred Fawcett, Upper Sackville, N.B.

Dr. Maria Montessori

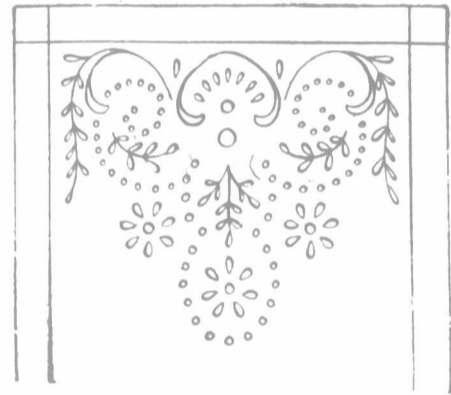
Some Embroidery Patterns—Continued.



No. 765.—A design for embroidering a cover for a pillow or cushion twenty-two inches square.

The flowers and leaves are designed to be worked in long and short stitch, or to be simply outlined. The seed pods are to be worked in solid embroidery, the stems and veins are to be outlined, and the stamens worked in French knots.

Tinted in fast colors on tan ticking 22x22 inches, with green duck back and mercerized floss to work, 40c.; or transfer pattern for 10c.



No. 610.—A design for an embroidered table or dresser scarf. Two ends fourteen inches wide are given.

The flowers and leaves of the design can be worked in solid embroidery, or the flowers may be made solid with the leaves in eyelet work, or both can be as eyelets; the stems are to be outlined; the scroll-like figures to be worked solidly; the dots may be made as eyelets or worked solidly.

Stamped on best round thread white linen, 20 x 54 inches, 98c., or transfer pattern for 10c.

One dozen of 12-yard skeins of mercerized floss in two sizes, 20c.

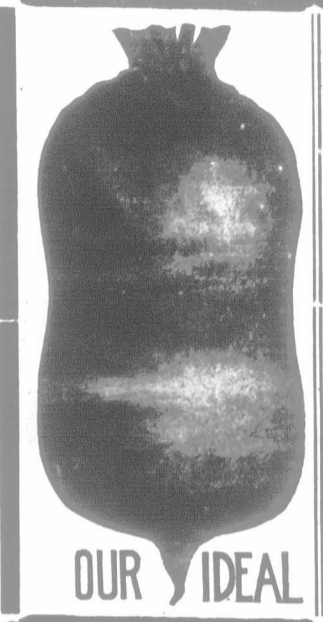


No. 772.—A design of the poinsettia flowers and leaves for a table cover 36 inches in diameter.

The embroidery can be done in long and short stitch for the flowers and leaves, with the veins of the latter as well as the stems worked in outline stitch, while the flower centers are made of French knots, or the embroidery may all be done in the outline stitch with heavy floss.

772 Centerpiece.—36 inches, stamped and tinted on gray Linene, with mercerized floss to work, 60c., or transfer pattern for 10c.

Address all orders to the Pattern Department of this paper; be sure to give name and post-office address. Many forget to do this.



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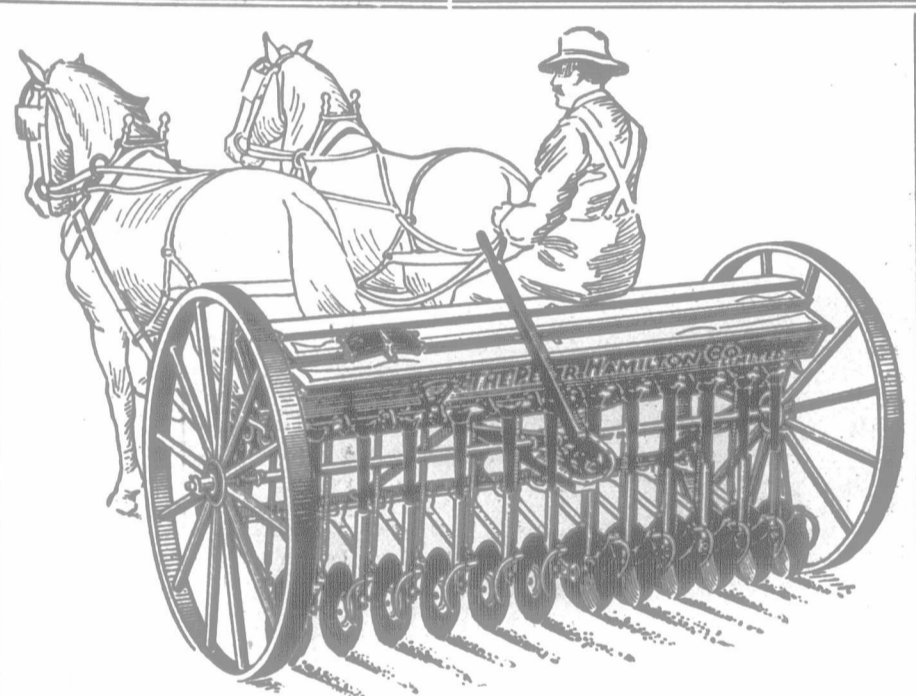
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45c. per lb. postpaid.
Sow 5 to 6 lbs. to an acre.

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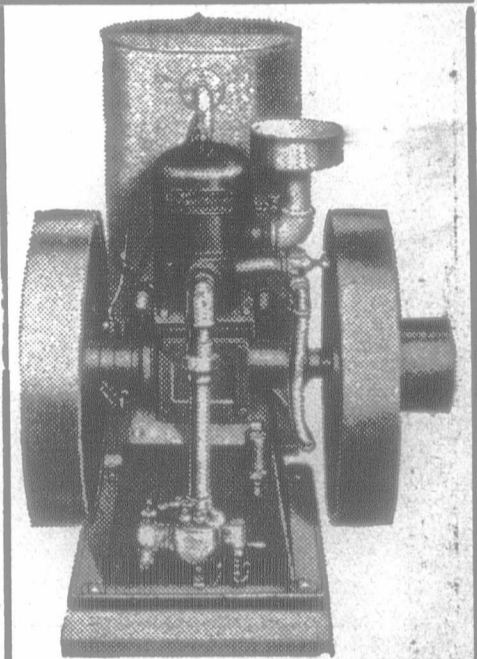
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In the "LEADER," the shields go well down to the bottom of the disc, depositing the seed right down in the furrows instead of merely dropping it anywhere behind the disc. The high-grade steel from which our discs are made ensures you greater durability. They run on chilled bearings lubricated from dust-proof hard oil compression cups. Write for booklet giving further facts.

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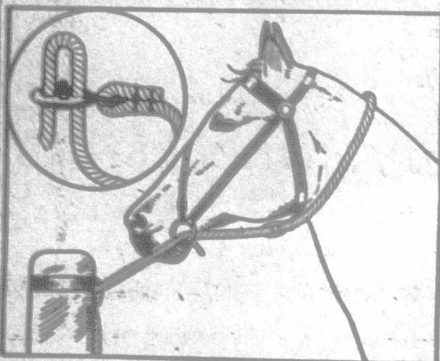
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Prices, Prepaid

1/2-inch Rope 9-16-inch Rope
30c. 35c.

If your dealer cannot supply you, send us his name and address, and we will mail you one, PREPAID, on receipt of price.

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Cured Caked Udders
Douglas'
Egyptian Liniment
Did It In One Day

Clear proof of the efficacy of Douglas' Egyptian Liniment is found in the report given below—one of the many endorsements constantly being received.

D. W. Shea, Esq., a prominent stock owner of Odessa, Ont., writes:—"I have used Douglas' Egyptian Liniment for cattle with caked udders, and consider it a marvelous remedy. In 24 hours after applying this Liniment, our cows milked freely. No farmer or cattleman can afford to be without Egyptian Liniment on his premises."

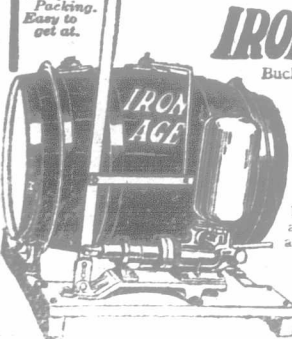
This statement seconded by many other stockmen, indicates only one of many uses for this reliable remedy. It has quickly cured sore feet, cuts, cores, sprains, bruises and congested conditions and has prevented blood poisoning or lockjaw.

Douglas' Egyptian Liniment has also proved a blessing in human troubles. Not only has it healed wounds of all sorts but it has immediately relieved muscular rheumatism, neuralgia, tooth, chilblains, etc. after other things had failed.

Get it at all druggists. Free sample on request.
DOUGLAS & COMPANY,
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Bucket, Barrel, Power and Traction Sprayers for orchard and field crops and other uses. Built complete or in units—buy just what you need. Ask your dealer to show them and let us send you our spray booklet, spray calendar and "Iron Age" Farm and Garden News. The BATTERY-POWERED Limited, 111 Spynington Av. Toronto, Can.

Questions and Answers.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In Veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Miscellaneous.

Permanent Pasture.

Would you kindly give me, through your columns, a permanent grass mixture for:

1. A very light, gravelly soil?
2. A heavy loam?
3. Would it be any use trying to grow a grain crop on No. 1 when seeding down? If so, what grain?
4. Not having any barnyard manure to spare, would fertilizer do any good, and if so, what kind, to give things a start, or would it wash through in No. 1?

"ASSAM."

Ans.—1. For the light soil, try orchard grass, 5 lbs.; meadow fescue, 5 lbs.; tall oat grass, 2 lbs.; meadow foxtail, 2 lbs.; alfalfa, 5 lbs.; white clover, 3 lbs., and red clover, 1 lb. per acre.

2. This would do all right on the heavier soil, provided it is not too low. If low, try orchard grass, 4 lbs.; meadow fescue, 4 lbs.; meadow foxtail, 2 lbs.; red top, 4 lbs.; timothy, 2 lbs.; alsike clover, 3 lbs.; white clover, 2 lbs.

3. With No. 1, you might try barley, 1 bushel per acre. It might not produce much grain.

4. Fertilizer consisting of from 100 to 200 lbs. of nitrate of soda; 250 to 350 lbs. of acid phosphate, and 80 to 150 lbs. of muriate of potash, per acre, would likely aid materially on the light soil. Old pastures may be helped by an application of basic slag.

Preparing for Corn.

I have six acres that I wish to plant with corn, and which I have no manure for. I was thinking of sowing land-plaster.

1. Do you think land-plaster would be any benefit?
2. How would you put it on, and how much per acre?
3. When would you sow it, before it is plowed or after corn is planted?
4. How many pounds per acre would be equal to ten loads per acre of well-rotted manure?
5. Did you, at Weldwood, ever sow a variety of corn called Huron? If so, how does it compare with Leaming for silage?

SUBSCRIBER.

Ans.—1, 2, 3 and 4. We would not advise the use of land-plaster alone for corn. Land-plaster is sulphate of calcium, and is often called gypsum. It is of very limited value, and most suitable for leguminous crops, as clover and alfalfa, or for root crops, which seem to do well with a large percentage of calcium in the soil, and also considerable sulphur. On virgin or new soil, gypsum gives, sometimes, wonderful results with clover, but we would not advise using it as previously stated for corn, unless it were that a small amount of it could be used in the stable with the manure, to prevent the escape of volatile ammonia. If you have no barnyard manure for your corn, we would advise using a mixed fertilizer of from 100 to 250 pounds of nitrate of soda, 300 to 400 pounds of acid phosphate, and 100 to 150 pounds of muriate of potash.

5. So far, we have never sowed at Weldwood a variety of corn called Huron, so cannot give any comparative statement as to yield and quality of silage.

In Georgia they tell of a prisoner who had been convicted a dozen times of stealing, who, when placed at the bar for his latest offence, displayed a singular curiosity.

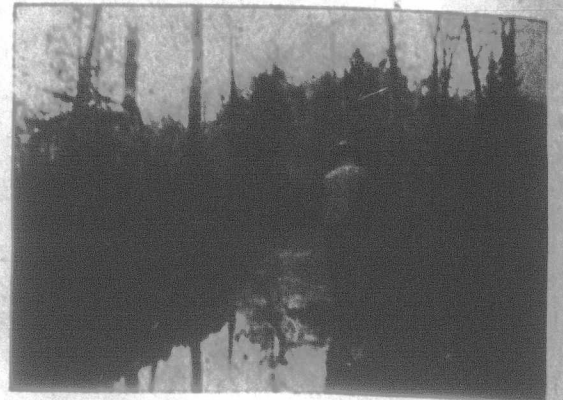
"Your Honor," said he, "I should like to have my case postponed for a week. My lawyer is sick."

"But," said the magistrate, "you were caught with your hand in this gentleman's pocket. What can your counsel say in your defence?"

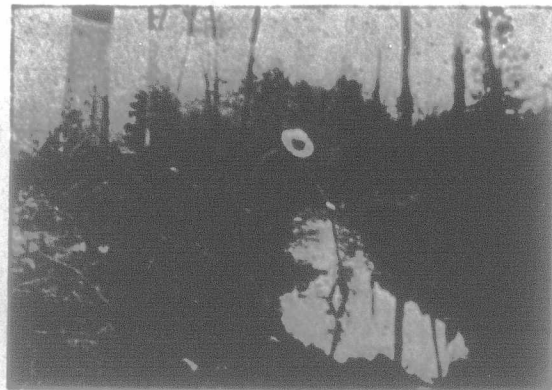
"Exactly so, Your Honor, that is what I am curious to know."

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C.X.L. Stumping Powder

Costs less than half of shovel method. Ditches four to five rods long excavated in an instant. One man can do the work. No shoveling of dirt necessary.



The accompanying cuts were taken from photographs of a ditch blown with C. X. L. Explosives at Kolapore, Ont.



Write for our booklet to-day. It tells you how this can be accomplished.

BLASTERS
WANTED

Many farmers prefer to hire blasters. Demand exceeds the supply.

Write for information

Canadian Explosives Limited, MONTREAL, QUEBEC VICTORIA, B. C.

Credit Auction Sale on



WEDNESDAY
February 18, 1914
OF
Farm Stock
AND
Implements

The farm is sold. Everything offered to be sold without reserve. 56 head of cattle, 8 brood sows, 14 young pigs, 150 hens, team of horses, 7 and 8 years, weigh 1200; one high-class hackney filly, one hackney gelding, rising 3 years. The cattle consist of the second-prize herd in the Western Ontario Dairy Competition, and others carefully selected and of the best quality. All grade Holsteins except 6 head, and all supposed in calf.

TERMS: Eight months' credit on approved joint notes; 4% discount for cash. On Traction line, near Lambeth Village, 6 miles southwest of London. Stop 18.

J. W. LAIDLAW, Auctioneer. F. E. L. TALBOT, Prop., Lambeth, Ont.

This FREE BOOK is
Worth Dollars to You

It will save you money by telling you how to obtain the experiences and methods of others who have made a success of poultry-raising. It shows the best kind of incubator and hover. Tells how to build your own brooders. Gives the kind of feed to use at the different ages of a chick, and "Reasons Why" the Famous

Prairie State
Incubators

Hatch the greatest number of strong, healthy "Chicks that Live." Write for it to-day. We offer the best cash market in Canada for eggs and poultry. Ask for quotations.

Gunn, Langlois & Co., Limited
62 St. Vincent St., Montreal

HOW TO HATCH
CHICKS THAT LIVE

Prairie State
Incubators
Universal Hovers &
Poultry Supplies

This Book Describes a Better Silo

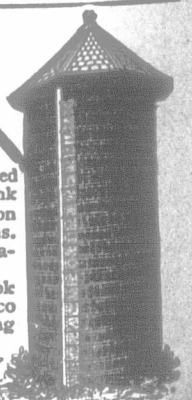


IT'S full of valuable information on ensilage and describes the silo that preserves it in a fresh, sweet and succulent condition right down to the last forkful. The

NATCO EVERLASTING SILO

is built of hollow blocks of vitrified clay. Each layer reinforced with continuous steel bands. There are no staves to warp, shrink or split. No hoops to tighten. No repairs or painting. Any mason can erect a Natco Everlasting Silo and it lasts for generations. A monument to your good judgment and an asset to your permanent farm buildings.

Write for Free Silo Book Send today for this book and learn why the Natco Everlasting Silo is better and more economical in the long run. Ask for Catalog
NATIONAL FIRE PROOFING COMPANY
Toronto, Ont



Dr. Maria Montessori

Questions and Answers.
Miscellaneous.

Lightning Rods.

As I am interested in lightning rods, I ask your opinion as to the protection they afford, and also the class of rods you would recommend, if any. H. G.

Ans.—It has been conclusively proven that lightning rods of the proper material and properly installed, are a protection to buildings, and for kinds of rods and installation, we would refer you to our issue of December 25, 1913, page 2286, article from a paper delivered by Prof. W. H. Day, at the Ontario Provinces, Winter Fair.

A Cattle Deal.

A sold two cows to B. B gave him two dollars down on them. There was no stated day for him to take them away. In the meantime, one cow dies. Who is the loser, A or B?

FARMER.

Ans.—From our understanding of the question, B, being the owner of the cows at the time of the loss of the one, would be the loser, no time being stated as to when they were to be taken away. The cows were the property of B as soon as bought. However, in such case, some consideration should be made, and one man should not be compelled to bear all the loss unless there was carelessness on the part of the man in whose charge the cows were. In such case, that man should be held responsible.

How to Tan.

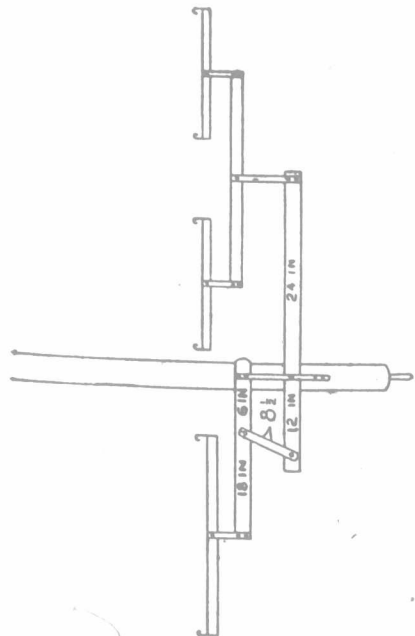
1. How to tan (Indian tan) deer hides, with hair off?
2. How to tan mink, muskrat, etc., with hair on? E. J. P.

Ans.—1. We advise against attempting to tan these at home. Send them to a tannery.

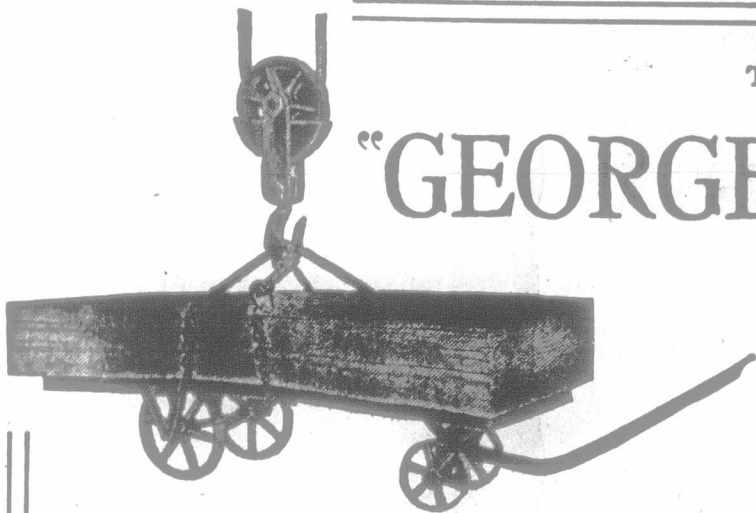
2. Again we say, send them to a tannery. But if you choose to tan at home, try soaking the hide in soft water for three days. Then scrape off all flesh and fat. When thoroughly cleaned, put into a tan composed of equal parts of alum and salt dissolved in hot water (seven pounds of alum and salt to twelve pounds of water, or in these proportions). Leave in this for two days. Hang up and scrape to soften. Put hide back again in brine for two days. Then hang up until quite dry, and shave and scrape again. After this, apply a coat of oil, roll up in sawdust, and lay away until dry. Apply a coat of soft soap and lay again in sawdust. Scraping and working the skin must be thoroughly done to get it soft and pliable.

Three-horse Eveners.

Would be pleased to have you publish in your paper a three-horse evener, for use on a riding plow, so that each horse will do his share without the tugs rubbing the pole. R. H.



Ans.—For a plow with a tongue, the illustration here given is all we have. It has been criticised as not distributing draft evenly, but it gives fairly good satisfaction.



TALK No. 3
ON THE

"GEORGE" STEEL GALVANIZED SHINGLE

Now for a little talk on the QUALITY of PEDLAR'S PERFECT PRODUCTS

IN this respect our customers get the fullest protection. All steel used is specially selected. It is actually higher priced stock than is considered standard.

It must be level and free from surface defects.

It must be galvanized to stand the copper sulphate test for coating.

Care in manufacture, retrimming of sheets and triple inspection guarantee a perfect fit.

"Pedlarize" your buildings by using the big "GEORGE" Shingle (24 in. x 24 in.) on your barns, and the smaller "OSHAWA" Shingle (16 in. x 20 in.) of identical pattern and quality on your houses, sheds and smaller buildings. They will outlast the building and the builder.

PEDLAR'S METAL SHINGLES PROTECT YOU FROM FIRE, WIND, WATER AND LIGHTNING

Get our prices on Siding, Corrugated Iron, Vents, Eaves Trough, Conductor Pipe, Finials and Ornaments. Every article is standard throughout Canada.

The All-perfect Metal Shingle. No greater cost, but greater service and satisfaction. : : :

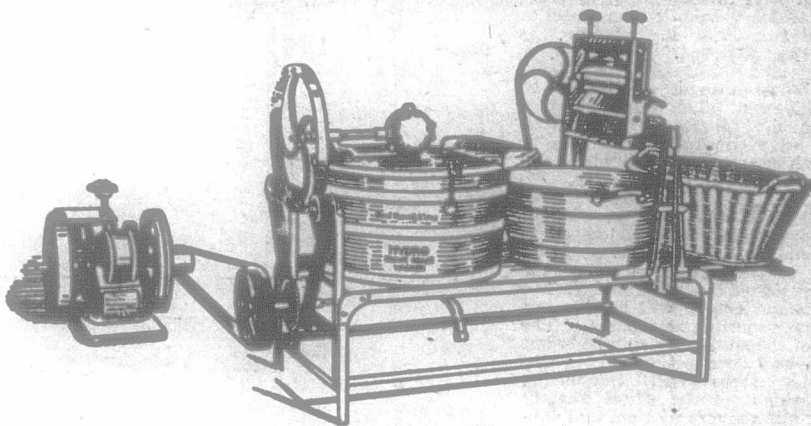
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Large and varied stocks always carried at Oshawa, Montreal, Toronto, Chatham, London, Quebec, Calgary, Halifax, St. John, Sydney, Ottawa, Winnipeg, Vancouver.



Let the Gas Engine help your wife to do her washing



HAS it occurred to you that your other business partner—your good wife—is still using the out-of-date, back-aching methods of years ago—wearing herself out with the drudgery of the old-fashioned washday? If you have a gas engine on your farm you need a

Maxwell

"HYDRO" BENCH WASHER

That little 1½ H.P. gas engine that works your churn and cream separator and operates your Pump Jack, Root Pulper and other small implements, will do the clothes washing and wringing for your wife—and do it quickly and satisfactorily. This Maxwell "Hydro" Power Bench Washer works equally well by gas power or by electricity, and can be driven by a one-

sixth H.P. motor. We make it in one, two and three tub machines, and the mechanism is as perfect as science can invent. One of these machines would be a genuine boon to your wife when washday comes round. Make her a present of one—and let your gas or electric power help her to do her part of the work and lighten the burden of washday!

Write to-day for further particulars of this Maxwell "Hydro" Power Bench Washer.

DAVID MAXWELL & SONS, DEPT. A ST. MARY'S, ONT.

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Use the Available Kind of Fertilizer

For many crops all the available plant food that is needed is one grain to each pound of soil. When such a small quantity of food must do all the work for your crop, it is exceedingly important that what you put into the soil in the form of fertilizer shall be available—that it shall have not only the right quantity, but the right quality and right crop value.

It has cost us forty years of experience to know how to mix the right kinds and the right quantities of ingredients for fertilizer.

Bowker's Fertilizers

accomplish also the more difficult task of getting the right blending, the right solubility into a mixture which will run readily and freely from the farmer's planter, and which will remain dry and drillable as well as efficient until used in the field. We make a brand to fit every crop need.

Write and tell us what your crops are, and we will send you our illustrated catalogue.

BOWKER FERTILIZER COMPANY
43 Chatham Street, Boston, Mass.
60 Trinity Place, New York. P. O. Box 805, Buffalo, N. Y.

WINDMILLS

Fig. "A" shows wearing out of line of old style shaft. Fig. "B" shows uniform wearing whole length of bearing when stationary spindle is used.

Keying the wheel to a shaft and turning the shaft in a boxing has given place to our method of using a stationary spindle, the wheel to revolve around the spindle, as shown at Fig. B.

The advantages gained can be readily seen. The weight of wheel is equally distributed on spindle, the wear is uniform the entire length of spindle. The wheel will never dip towards the tower. No part can be thrown out of line, while with other mills the weight and leverage of the wheel keyed to the end of shaft will wear the lower side of the out boxing and the upper side of the inside boxing. The wheel and engine will become out of line, requiring new parts. The use of the stationary spindle brings the wheel close to the tower which greatly lessens wear. Supporting the weight of the wheel directly over hub reduces friction, and substantiates our claim that it is the easiest running mill in the world.

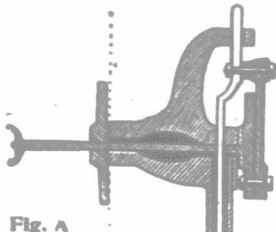


Fig. A

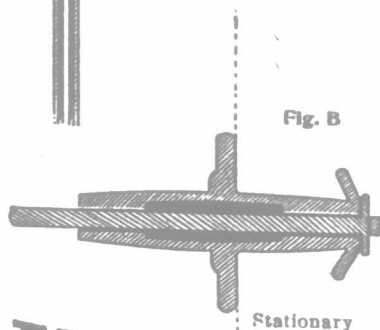


Fig. B

"DIFFERENT"

Stationary Spindle

The Neller-Aller Co.

WINDSOR - ONT.

BAKER

Make Your Seed Bed Perfect

Let us mail you descriptive literature about the Acme Pulverizing Harrow. It does more than other harrows. It has long, sloping knives that cut, turn, crush and level the entire seed bed.

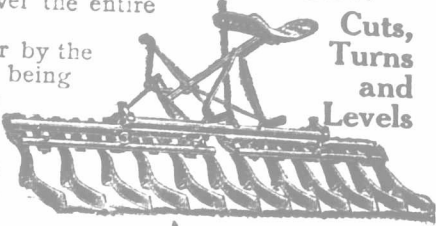
The manure or trash turned under by the plow is thoroughly mixed without being torn out. A fine mulch is left on the surface to hold the moisture. Only a little tool needed after the plow.

The Acme is sold by all John Deere dealers. Write us at once for full facts. You can get better yields per acre.

Duane H. Nash, Inc., 355 Division Ave., Millington, N. J.

Pulverizing Harrow

Cuts, Turns and Levels



When writing advertisers please mention this paper.

Gossip.

A LITTLE HORSE HISTORY.

Across the sea, in the land of the heather, an annual tabulation of the winnings of the get of the various sires among the Clydesdales has proven an infallible index for breeders requiring the services of the most successful sires of the day. With the importance and number to which the Clydesdale breed has attained in this country, and the high standard reached in a large proportion of the brood mares, it would seem that the time has arrived when something along those lines should be attempted in Canada. The following short history of the remarkable success as a sire of showing winners of the eight-year-old, Black Ivory (imp.) 7761, will be of considerable interest to many of the readers of this paper. Imported and owned by Smith & Richardson, of Columbus, Ont., he was sired by the unbeaten champion, Everlasting, dam by the Highland and Royal champion, Prince Thomas, granddam by the Glasgow champion, Lord Erskine. From this remarkable breeding he rightfully gets his own show-ring quality and his ability to sire winners. At Castle Douglas, in 1907, he was first, beating the winner at the Royal. He was third at the Winter Show in Toronto in 1908, and in the fall of the same year he was second at Toronto and first at Ottawa. In 1909, he was first and reserve champion at the Winter Show in Toronto, and first and champion at Ogdensburg, New York. As a sire of winners, he is in a class by himself among stallions owned in Canada, in this or any previous decade. At the largest county show held in Ontario, namely, Oshawa, in 1909, for best five colts of one sire, his was first; also first and second in draft colt class. In 1910, at the same show, his get was first on both stallion and filly colts, and first for the best colt at the show. At Guelph, in December, one of his sons, Fascination, won first and championship. In 1911, the same colt won the same honors at the Ottawa Winter Show. Another son, Bay Ivory, was third at Toronto in the fall of 1910, and first at Ottawa; at the Winter Show at Guelph the same year he was fourth, and at Ottawa in January, 1911, he was second. At the same show, another foal, get of his, was first. Again, at the big Oshawa Show in 1911, his get won first on group of four, and first, second and fourth on stallion colts. At Guelph, in December, Prince Ivory was first in a class of twenty-one, and champion over all ages. In January, 1912, his colts won first and second in a class of fourteen, Prince Ivory again winning championship. In January, 1913, at Ottawa, another son, Baron Shapely, won first and championship. In Winnipeg the same year, Prince Ivory again won championship, and at Toronto, Belle Ivory was first and champion. At Ottawa, in the three-year-old filly class, Ivory Queenie was first and reserve champion, and Black Queenie, third. In the two-year-old filly class, Princess Ivory was first, and the yearling stallion class, Glen Ivory was first and champion over all ages, an honor he repeated at Guelph in December. This is a remarkable record of winnings for an individual sire, all the more creditable when it is considered that he is yet but young in years, and should he live the allotted span of horse life, he will have left a name almost as immortal as that of the renowned Baron's Pride, his grandsire.

Questions and Answers. Veterinary.

Unthrifty Colt.

Weaning colt, when eating, salivates a great deal, and it is not thriving.

R. B. S.

Ans.—The symptoms indicate irregularity of the teeth. This is unusual in a colt of its age, but is sometimes seen. Get your veterinarian, or someone who understands the mouth of horses, to examine it, and probably he will be able to correct the fault. There may be something wrong with the tongue or cheeks. The trouble is doubtless in the mouth.

MAKE THE FARM PAY IN WINTER

You can make winter a harvest time, with money-making crops of lumber, if you have an "American" Portable Saw Mill. Your own wood lot, and your neighbors' await your axe and your saw and your mill, ready to yield a valuable crop of first-class lumber that will find a ready local sale at good prices. You have the team, the time and the engine. Buy an inexpensive "American" mill and you'll have all the outfit you need to do a profitable lumbering business. Start with your own wood lot, then work out into the country around you. Every wood lot has money in it for you. Show its owner how you can make lumber and money for him. Begin by sending to us for our new book No. 88 which tells the story. Write nearest office today.

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AMERICAN SAW MILL MACHINERY CO.
118 Hope Street, Hackensack, New Jersey
1307 Terminal Building, New York

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NEW ORLEANS SEATTLE

With 8 H. P. Cuts 2500 ft. Per Day

Free Land for the Settler in New Ontario

Millions of acres of virgin soil, obtainable free and at a nominal cost, are calling for cultivation.

Thousands of farmers have responded to the call of this fertile country, and are being made comfortable and rich. Here, right at the door of Old Ontario, a home awaits you.

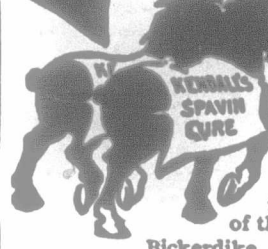
For full information as to terms, regulations and settlers' rates, write to

H. A. MACDONELL
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Parliament Bldgs., TORONTO

HON. JAS. S. DUFF
Minister of Agriculture
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Be Safe!

Don't take too many chances with spavin, splint, curb, ringbone, bony growths, swellings and lameness. Use the old reliable remedy—



KENDALL'S Spavin Cure

It has been used by horsemen, veterinarians and farmers for 35 years—and it has proved its worth in hundreds of thousands of cases.

Bickerdike, Alta., Jan. 29, 1913.

"I have been using Kendall's Spavin Cure for a good many years with good results. In fact, I am never without it."

H. NEIDORF.

\$1 a bottle—6 for \$5, at druggists—or write for copy or our book "Treatise on the Horse" free.

Dr. B. J. KENDALL COMPANY
Enosburg Falls, Vermont, U.S.A.

Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with

Fleming's

Fistula and Poll Evil Cure

—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in

Fleming's Vest-Pocket

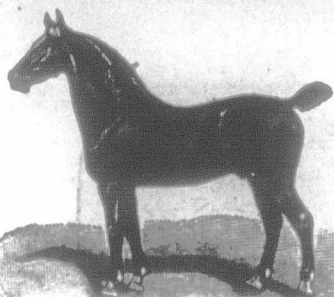
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Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durably bound, indexed and illustrated.

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Dr. Maria Montessori

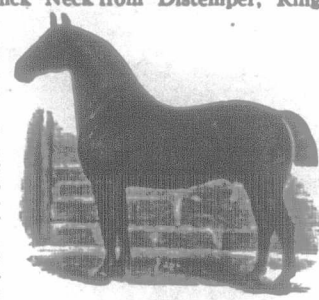
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Warranted to Give Satisfaction.
Gombault's Caustic Balsam
Has Imitators But No Competitors.
A Safe, Speedy and Positive Cure for
Curb, Splint, Sweeney, Capped Hock,
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Puffs, and all lameness from Spavin,
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Cures all skin diseases or Parasites,
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Bunches from Horses or Cattle.
As a Human Remedy for Rheumatism,
Sprains, Sore Throat, etc., it is invaluable.
Every bottle of Gombault's Balsam sold is
warranted to give entire relief. Price \$1.50
per bottle. Sold by druggists, or sent by ex-
press, charges paid, with full directions for
its use. Send for descriptive circulars,
testimonials, etc. Address
The Lawrence-Williams Co., Toronto, Ont.

DR. PAGE'S ENGLISH SPAVIN CURE

For the cure of Spavins, Ringbone, Curbs,
Splints, Windgalls, Capped Hocks, Strains or
Bruises, Thick Neck from Distemper, Ring-
worm on
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This prepa-
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This is the
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Spavin or money refunded, and will not kill the
hair. Manufactured by Dr. Frederick A.
Page & Son, 7 and 9, Yorkshire Road, London,
E.C. Mailed to any address upon receipt of
price, \$1.00.—Canadian agents:
J. A. JOHNSON & CO., Druggists,
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ABSORBINE

Removes Bursal Enlargements,
Thickened, Swollen Tissues,
Curbs, Filled Tendons, Sore-
ness from any Bruise or Strain;
Stops Spavin Lameness. Allays pain.
Does not Blister, remove the hair or
lay up the horse. \$2.00 a bottle,
delivered. Book 1 K free.
ABSORBINE, JR., the antiseptic liniment
for mankind. For Synovitis, Strains,
Gouty or Rheumatic deposits, Swollen
Painful Varicose Veins. Will tell you
more if you write. \$1 and \$2 per bottle at
dealers or delivered. Manufactured only by
W. F. YOUNG, P. D. F. 258 Lyman Bldg., Montreal, Can.

HICKMAN & SCRUBY

Canadian Bred Clydesdales
We now have our Toronto and Guelph winners in
our stables; consisting of stallions from one year to
to six, and fillies from one to five years; prices and
quality hard to beat. Thos. McMichael & Son,
Seaford, Ont. Bell Phone Connection

DR. BELL'S Veterinary Medical Wonder

FREE to horsemen who will give The Wonder a
fair trial. Guaranteed to cure Inflammation, Colic,
Coughs, Colds, Distemper, Fevers, etc. Agents
wanted. DR. BELL, V.S., Kingston, Ont.

For Sale Two Imp. Clydesdale Stallions.

Silver Strand, 9-year-old and Baile
Boy 3-year-old, both good color and first class
animals and must be sold as I have sold my farm
and going out of business. Address, James Paton,
Proton Station, R. M. D. No. 1, Ont.

Gossip.

The Scottish Farmer Album of 1914,
which has been recently received, comes
as usual with a list of Clydesdale stallions
and their respective standing according to
the winnings of their get at
Scotland's leading horse shows. First
in the list for 1913 is Baron of Buchlyvie
with a total of 58 prizes won by his get.
These include 22 firsts, 17 seconds, 7
thirds, and 6 championships. Second
place goes to Apukwa, with a total of
32 prizes, including 11 firsts, 5 seconds,
2 thirds, and 8 championships. In third
place is Dunure Footprint, with a total
of 27 prizes, including 6 firsts, seven sec-
onds, and 6 thirds. Fourth place goes
to Baron's Pride, with a total of 25
prizes, including 6 firsts, 4 seconds, 4
thirds, and 2 championships. As this
great horse has been dead over a year,
he must take a lower place year by year.
Fifth place went to Hiawatha, sixth to
Revelanta, seventh to Scotland Yet,
eighth to Everlasting, ninth to Auchen-
flower, and tenth to Oyama.

H. F. PATTERSON'S HOLSTEIN SALE

On Thursday, March 12th, at the big
Holstein sale to be held by H. F. Pat-
terson, three-quarters of a mile from
Alford Junction Station, on the main
line of the G. T. R., between Hamilton
and Brantford, one of the cows to be
sold is Evangeline 2nd's Snowflake, with
a three-year-old record of 21,043 lbs.
This cow, in the dairy test at the Guelph
Winter Show in 1912, was fourth in gen-
eral standing. She is now giving 83
lbs. a day, and is one of the great cows
of the breed in Canada. Another one
is a daughter of hers, Snowflake Three
Spot, that in a R. O. P. test starting
at one year 363 days, made 7,729 lbs.
milk, testing 3.49 per cent., and 270 lbs.
butter-fat. They are a high-class pair
of show cows. Another big, level cow
of show form, is Beta, a seven-year-old,
that in general standing at the Guelph
test in 1912 was sixth, and in 1913 was
seventh. This is easily a 100-lb.-a-day
cow. Her yield this fall, without forc-
ing, was 95½ lbs. Two of her daughters
are in the sale, one of them, Beta's
Nellie, starting in the R. O. P. test at
one year 307 days, made 7,633 lbs. milk,
testing 3.34 per cent., and 255 lbs. but-
ter-fat. Blanche Kay is another of the
good ones to be sold. Her mature rec-
ord is 23.12 lbs. One of her daughters,
Blanche Kay Beauty, commencing R. O.
P. test at two years and 23 days, made
in 320 days 10,339 lbs. milk, testing
3.54 per cent., and 366.194 lbs. butter-
fat. Something particularly choice is
Spinks' August Daisy, with a two-year-
old R. O. M. record of 14.62 lbs., and a
R. O. P. record of 10,776.25 lbs. milk,
and 401.746 lbs. butter-fat. Another
with a two-year-old record of 11.39 lbs.,
made three months after calving, is Pi-
tertje Alice. Eunice Jane Posch, as a
four-year-old, made 18.09 lbs. butter, and
446.2 lbs. butter-fat. Topsy Canary De
Boer is a two-year-old untested. Her
dam's record is 21.91 lbs., and grand-
dam's 30.23 lbs., both with a butter-fat
test of 4.02 per cent. Boutsje Posch De
Boer, another of the big, attractive
cows, has a record of 23.03 lbs. butter,
and 422.4 lbs. milk, testing 4.36 per
cent. as a two-year-old, now, as a six-
year-old, her 30-day record is 85½ lbs.
butter, and 1.855 lbs. milk. Her dam's
record is 25.77 lbs., and her sire is a
son of the famous College cow, Boutsje
Q. Pietertje De Kol. Luella De Boer, a
three-year-old, has a two-year-old record
of 11.15 lbs., her dam 19.81 lbs., and
sire's dam 25.71 lbs. Boutsje Posch De
Kol, a five-year-old, has a record at four
years of 20.06 lbs., milk test 4.03 per
cent., and her dam 27.35 lbs., test 4.35
lbs., sire's dam the College cow. An-
other two-year-old soon to frshen, has
for backing: sire's dam's record 27.35
lbs., and dam's record at 12 years of
age 16.39 lbs., R. O. M. and R. O. P.,
at same age, 12.475 lbs. One of the
cream of the entire lot is a two-year-old,
just calved, a show proposition of a high
order. An alluring yearling has for
backing a dam with a record of 20.06
lbs., her dam 27.35 lbs., sire's dam 30.23
lbs. Another heifer's dam and sire's
dam have records averaging 26.56 lbs.,
and butter-fat test of 4.05 per cent.
Enough has been mentioned to show the
high standard of the herd, a standard
of production seldom or never before
offered by auction. Write Mr. Patterson
for catalogue to R. R. No. 4, Paris, Ont.

A SOIL ROBBER

HE is a so-called farmer who has cropped and cropped, year after
year, without returning a pound of plant food to the soil to replace
the hundreds he has sold off the farm. His soil has become so barren
that nothing will grow decently but weeds, and these flourish indecently.
Such a farmer is a menace to the community and a blot on his class.
Many other farmers are trying to maintain the fertility of their soil on
a limited supply of manure, and find their soil becoming poorer. Every
crop removes varying quantities of Nitrogen, Phosphoric Acid and POTASH
from the soil. If fertility is to be maintained, these must be returned in
some form to the soil. This can be done by artificial fertilizers, and by
so doing a farmer will not only maintain the fertility of his soil, but greatly
increase his crop production. POTASH is an essential plant food, and no soil
that does not contain a readily available supply will raise a maximum crop.

Muriate of Potash and Sulphate of Potash

can be obtained from the leading fertilizer dealers and seedsmen.
Write for FREE copies of educative bulletins, which contain results
of fertilizer experiments. These include:
"Artificial Fertilizers: Their Nature and Use." "The Principal Potash
Crops of Canada." "Fertilizing Grain and Grasses." "Fertilizing Orchard
and Garden." "The Potato Crop in Canada." "Farmer's Companion," etc.
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O. W. MONSON, one of the best known poultrymen in Indiana, says—"I
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tested it on my hens. They laid eggs all winter. No one around
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INTERNATIONAL POULTRY FOOD."
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For this season's trade we have Clyde Stallions and Fillies that were up to champion-
ship honors in Scotland, and the same honors in Canada. Breeding characters, quality
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Seven 4-year-olds and two 3-year olds with an average weight of 1750-lbs. all of them safe in foal,
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Yes, they are here, our 1914 importation, and if you want a big young stallion with
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In the modern Clydesdale there must be big size, draft character, quality at the
ground, and straight clean action. Come and see what I have with the above requi-
sities in both Stallions and Fillies, also one French Coach Stallion. JAMES TORRANCE, MARKHAM, ONT., G.T.R.; LOCUST HILL, C.P.R.

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STATISTICS prove that the majority of accidents could have been prevented by a little forethought.

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5 Yearling Clydesdale Stallions 10 Young Holstein Bulls 1 Stallion (Imp.)

in dam, others by Baron's Pride, bulls got by King Fayne Segis Clothilde, a grandson of King Segis and Grace Fayne 2nd's Homestead, 35-lbs. butter in 7 days (world's record), and 2 other sire's dams in R.O.P. milking up to 8-lbs. per day, and 1000-lbs. in a year. Write, or better come and see them (a few Ponies).

Manchester P.O. on G.T.R.
Myrtle C.P.R. Bell 'Phone.
R. M. HOLTBY

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Commission Agent and Interpreter,
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Will meet Importers at any port in France or Belgium and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking, and pedigrees. Many years' experience; best references; Correspondence solicited. P.S.—Nogent is in the heart of the Perche horse district.

Questions and Answers. Miscellaneous.

Tax Discount.

A owns property in Calgary, Alta., which is rented to B for a term of years, agreement in lease that B pays rent monthly, in advance, and all rates and taxes. B did not pay general tax in time to get rebate, and threatens to deduct 10-per-cent. discount of taxes from rent, because A did not advise B when taxes were due. A never received tax account from City of Calgary, and thought B had attended to matter, and only discovered after taxes were overdue that tax was not paid by writing to treasurer of city. B has since paid taxes in full, but is deducting the 10-per-cent. rebate from rent. Can B do this?
ENQUIRER.

B. C.

Ans.—We do not see that he is legally entitled to do so.

Feeding Oats and Roots.

What is the proper way to feed pulped roots and crushed oats to steers? If they should be mixed together, please give the reason why. We have taken "The Farmer's Advocate" for years, and would not be without it.
H. M.

Ans.—We do not know that it matters very much whether the oats are fed together or separately. There might be a little less waste in some instances by feeding them mixed, or with some stock it might make a little more palatable feed, but oats and roots are palatable either alone or fed together. Some good feeders practice feeding grain, roots, and roughage, all cut and mixed together. It is a very good practice indeed, the hay and straw being cut fine and thoroughly mixed up with the pulped roots and crushed or ground grain.

Cobbed or Uncobbed Corn for Silo.

1. Just heard of a man who had experience with a silo. He says that corn without cobs is better ensilage than corn with cobs. I am contemplating building a silo, and would like to hear of anyone who had such experience.

2. Is it necessary to have drainage from a silo?
B. N. F.

Ans.—1. An experimental station in the United States reports, from an exhaustive amount of experimental work done, that silage made from corn not cobbed up, provided the corn has had as long a period of growth as that which has produced cobs, is even better than the corn carrying a large percentage of cobs. Very little has been done on this subject, either here or in the United States, but we should like to get from any of our readers who have tried the two methods, their experience.

2. It is always advisable to have tile around the base of a silo to preserve the wall.

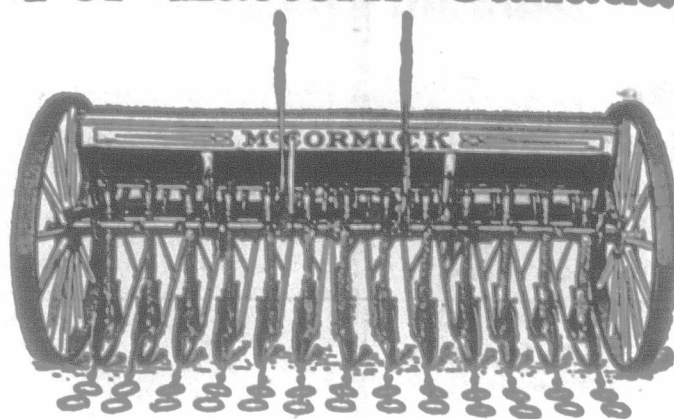
Lumber Dispute.

A received blocks from B for raising barn in 1909, to be returned or pay value of them. Carpenter who raised barn said they were only worth the price of firewood. A inquired of B several times by 'phone, what he wanted for them, but got no satisfactory answer. A went to B about two years ago and told B if he wanted more than the price of wood he would return them. B said A and B would not differ on the price as they were not worth much. There was a trifle less than a cord. Now B sends A bill for twenty dollars, board measurement of blocks. Can B collect twenty dollars, or can A pay price of wood, or would A have to return blocks? They are not all available now.

A SUBSCRIBER.

Ans.—Such a misunderstanding as this should be settled amicably between the parties. We are not in a position to state the value of the blocks. If the man who loaned them valued them at the time they were loaned as board measure, it is more than likely that he will be able to collect that amount of money for them. Seeing that A did not return them, and has destroyed some of them, he is not in a position now to take them back to B. He might buy like blocks, but this would cost him, in all probability, board measure. It is more than likely that B can collect for these blocks more than wood.

McCormick Drills For Eastern Canada



A McCORMICK drill prepares the best possible seed bed, and McCormick drills are longest-wearing. Any man who owns one of these implements will assure you that these are facts. When you buy a drill, buy a McCormick.

McCormick single disk and hoe drills have continuous axles, strong, light, thoroughly braced frames of angle steel, and durable, wide running drive wheels. They have a double run force feed which adapts them perfectly to the sowing of all kinds of seed.

Bearings are simple, as nearly as possible dust-proof, and easily oiled. Grain boxes are of large capacity, and they are too firmly supported to allow sagging.

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CLYDESDALES---STALLIONS AND FILLIES

WE have again landed at our stables a large and choice collection of Clyde Stallions and Fillies of strictly high-class show calibre. We never had a lot that measured up to the standard of this lot, big, flashy quality; close, straight action, and bred in the purple. We can supply winners in any company. Write us.

SMITH & RICHARDSON :: COLUMBUS P. O.
Brooklyn, G.T.R.; Myrtle, C.P.R. Long Distance Telephone

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We have a better bunch of stallions and mares in our barns at present than ever before, and are in a position to sell cheaper than any other man in the business. We raise our own feed, do our own buying and selling. No commission agents to share profits with. We have nice, big, stylish blacks and greys, with right kind of bone and feet and good, straight, true action. Every stallion guaranteed a foal getter. Every mare a breeder. List of prizes won: Sherbrooke and Ottawa on 16 head, 15 firsts, 6 seconds, 4 thirds, 3 fourths and 6 championships. This speaks stronger than words as to the quality of my stock.

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Grenville is midway between Montreal and Ottawa C.P.R. and C.N.R. Three trains run daily from each of these cities.

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To the Clydesdale men of Canada we wish to say our 1913 importation is home, and we have some of the best show material in this country. More size, more style; more quality, more character and better breeding than ever before, in both stallions and fillies
JOHN A. BOAG & SON, Queensville, Ont. Electric cars every hour.

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QUALITY
My fall importation of Clydesdale Stallions and Fillies are now in my stables; there never was a better bred lot imported, and their standard of character and quality is the highest and my price the lowest.
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TOPPERS IN CLYDESDALES AND PERCHERONS
I have just landed a big importation of Clydesdales and Percherons, if you want a big ton stallion with the best of quality, come and see me, I can show you the best lot of stallions you ever saw.
T. D. ELLIOTT
BOLTON, ONTARIO

Clydesdales & Shires
If you want Stallions, Fillies or Foals of the above breeds, personally selected from A. and W. Montgomery's Clydesdale Stud and the Bramhope Shire Stud, Cheshire, and home-bred of the most fashionable strain. See and select from the large stock now offered. Prices and terms will please. D. McEachran, Ormsby Grange, Ormskirk.

Clydesdales, Imported and Canadian-bred—with over 25 head to select from, I can supply, in either imported or Canadian-bred, brood mares, fillies, stallions and colts.
Let me know your wants. L.-D. 'Phone.
R. B. PINKERTON, Essex, Ont.

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If you want to buy Percheron Horses and Mares, I will save you time and money and all trouble with papers and shipment. Will meet importers at any landing port. I am acquainted with all breeders and farmers. 30 years experience. Best reference. Correspondence solicited.

Aberdeen-Angus of Show Form and Quality. For this season my offering in young bulls and heifers, are toppers every one. Show-ring form and quality and bred from show-winners. T. B. BROADFOOT, Fergus, Ont. G. T. R. and C. P. R.

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Bulls all sold, choice females for sale. 1 yearling Clyde stallion, 1 weanling Clyde stallion, big, best quality and breeding.

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SHORTHORNS, COTSWOLDS, BERKSHIRES

For sale—A few Shorthorn females, a limited number of young Cotswold ewes and a number of Berkshires about three months.

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I have for sale a most attractive offering in young bulls and young females, pure Scotch, breeding unsurpassed, the low thick kind. Write me your wants. G. M. FORSYTH, North Claremont, Ont.

Please mention "The Farmer's Advocate."

Questions and Answers. Miscellaneous.

Sweet Clover.

- 1. Where can I buy sweet clover seed, and at what price?
2. Do you sow it alone, or with a nurse crop?
3. How long will it remain in the soil without reseeded? J. M.

Ans.—1. You can purchase sweet clover seed from any of the seedsmen advertising in these columns.

2. It may be sown alone, or with a nurse crop.

3. It is a biennial plant.

Farmers and Line Fence.

A and B are neighbor farmers. B's farm is all bush. B has been taking out the timber for two years. He sleeps in the bush, and horse stable is also in the bush. He has a sawmill and saws all the lumber. B will not do anything regarding the line fence. Of A's farm, there is about 60 acres cleared, part wire fence. The remainder is bush. He is willing to put up remainder of his half. Can A force B to put up his half this spring? A SUBSCRIBER, Ontario.

Ans.—No.

Carriers and Blower.

Could you, please furnish me any information re the filling of silo with a six- or seven-horse power gasoline engine? Which would be the most satisfactory, a small blower or cutting-box and carriers? If any of your subscribers have had any experience with either method, I would be pleased to hear from them. Is there any other method of elevating the corn from the box? G. B. B.

Ans.—With an engine of only six- or seven-horse power, it might be rather difficult to work up enough power to operate a fairly large cutting-box with a blower attached. The blower requires more power than carriers. If any of our readers have had experience with this type of engine filling silos, either with the cutting-box and blower or the cutting-box and carriers, they might give other readers the benefit of their experience. We do not know any other satisfactory method of elevating the corn from the box.

Warts—Unthrifty Colt.

1. Would you please let me know what is the cause of large clusters of warts on a heifer? It started with small warts all over the belly, and now hangs in one mass, which I should imagine would weigh four or five pounds. The nearest thing I can compare it to is a hornet's nest. The heifer is rising two, and a steer standing next to her has one starting on his shoulder. Kindly give a simple and effective cure.

2. We had a very unthrifty calf last summer, and had a man come and castrate him. He said the calf had only one testicle, and he would not take it out till the other one came down. The other testicle never came down, so we butchered the animal when a yearling, and only found the one testicle. The animal never grew after about three months old, and the meat was so tough the dog had a job to eat it. We have another bull calf this summer in the same condition, by the same bull, but a different dam. Please explain. R. D. R.

Ans.—1. This is not contagious. Any animal is liable to warts, and the cause is not well understood. They sometimes appear quickly, and when not large, frequently disappear spontaneously. Those with constricted necks should be cut off. Large, flat ones, should be dissected off, and the raw surfaces dressed once daily for three or four days with butter of antimony applied with a feather, and after that, three times daily with one part carbolic acid to thirty parts of sweet oil until healed. Small, flat ones, should be dressed with butter of antimony once daily until they disappear.

2. This is difficult to explain. There is a hereditary tendency in some male animals to produce male calves with only one testicle down, especially if the sire himself has only one. The calf's being so unthrifty should not be due to this fact, however. There must be something else constitutionally wrong with the calf. If he is valuable, have your veterinarian examine him.

Sydney Basic Slag

The ideal fertilizer for stiff clay lands and all sour or muck soils. All farmers in Ontario realize that something is lacking in the soil, and thousands of them will this season start using fertilizer for the first time. They will be pressed to buy all kinds of fertilizers, but we ask them to

Give Basic Slag a Trial

because it is much more reasonable in price than, and will give as good results as the bulk of the fertilizers offered elsewhere. Ask the district representative of the Department of Agriculture as to the merits of BASIC SLAG, and be guided by his opinion. Do not be misled by the statements of unscrupulous agents for other goods. Twenty thousand tons of BASIC SLAG were used last season by the farmers of the Maritime Provinces and Quebec. What is good for Nova Scotia will be equally beneficial in Ontario. If you think you would like to take an agency for BASIC SLAG, write at once to any of our

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We test and weigh each can on arrival, and send you a statement for same.

We pay all patrons once a week, and the price is increased as the price of butter advances.

Drop us a card, and we shall be pleased to furnish you with any further information you may require.

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CANADA'S CHAMPION HEREFORDS

When selecting a herd header or foundation stock, come to the fountain head; for years my herd have proved their title as the champion herd of Canada.

L. O. CLIFFORD I have always both sexes for sale. OSHAWA, ONT.

Elm Park Aberdeen-Angus and Clydes

We have for sale a few two-year-old heifers by imported bulls and out of imp-cows bred to good bulls. We also have four good Clydesdale fillies, 2 two-year-olds and 2 yearlings. Also 2 stallion foals. Five of them out of Lord Charming mares by King Seal, imp. Address: JAMES BOWMAN, Elm Park, Guelph

100 SHORTHORNS IN OUR HERD 100

For sale—Imported yearling show bull; 14 calves 8 to 14 months old; cows and heifers and show material all ages. Herd headed by 2 high-class imported bulls, all 3 were prizewinners at Toronto this year.

Farm 1/4 mile from Burlington Junction MITCHELL BROS., Burlington, Ont.

SHORTHORNS Scotch, Bates and Booth. Yes, we have them, pure Scotch, pure Booth and Scotch topped Bates, Young bulls of either strain. Heifers from calves up; one particularly good two-year-old Booth bull, ideal dairy type. GEO. E. MORDEN & SON, Oakville, Ontario

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8 head from 10 to 18 months, bred from cows which are from imported dams and sired by choicely bred bulls, prices are not high as I need the space for stabling cattle. Shropshire and Cotswold ewes bred to imported rams. BLAIRGOWRIE FARM JOHN MILLER, Jr., ASHBURN, ONT.

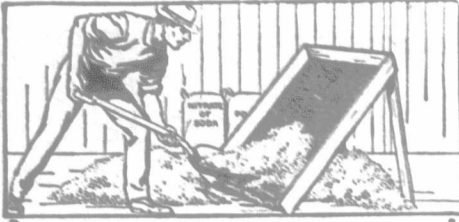
SHORTHORNS Our present offering consists of Nonpareil Lord =87184= Dam Imp. Dalmeny Nonpareil 6th. 7 young bulls from 6 to 12 months old. 15 cows and heifers of choicest quality and breeding. Myrtle C.P.R. and G.T.R. COLUMBUS, ONTARIO Long-distance phone.

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5 Bulls of serviceable age, choice quality, some of them herd headers, sired by His Grace (imp.) =69740= and a number of cows and heifers. One stallion rising 3-year-old. A big good quality horse also four choice fillies, all from imported stock.

A. B. & T. W. DOUGLAS :: L. D. Phone :: STRATHROY, ONT.

Springhurst Shorthorns Four of the first-prize Shorthorns at the late Guelph Show, including the champion and grand-champion fat heifer, were all sired by bulls of my breeding. I have now for sale ten young herd headers of this champion-producing quality. HARRY SMITH, HAY P. O., ONT. Exeter Station. Long-distance Telephone.



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They buy straight materials and mix them into balanced fertilizers containing two or three times as much

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Five of the best bull calves ever in the herd, ranging from 9 months to 15 months. A "Kilblean Beauty" calf, a show proposition. A number of choice heifers, all ages. Write for prices.

W. M. SMITH, Columbus, Ontario

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Bulls and females of No. 1 quality. Present offering is three grand bulls, 11, 15 and 20 months respectively. Also a few females of milk strain. Visitors say they find things as represented.

J. N. ELDER & SON, HENSALL, ONTARIO

Spring Valley Shorthorns

A few of the best young bull prospects we ever had. They will please you. Will sell females too. Visit the herd; we think we can suit you. Particulars on application. KYLE BROS., R. R. No. 1, Drumbo, Ont. Telephone, Ayr

Shorthorns For Sale

8 yearling bulls of the right kind, 2 high-class herd headers, 12 months, one from imp. cow, 4 bull calves, also young cows and heifers, some good milking strains.

Stewart M. Graham, Lindsay, Ont.

1854 MAPLE LODGE STOCK FARM 1914 Shorthorns and Leicesters

I have a most excellent lot of young rams for sale, mostly sired by imported Connaught Royal. Something very choice in young bulls. House one mile from Lucan Crossing G. T. Ry.

A. W. SMITH, MAPLE LODGE, ONTARIO

SHORTHORNS FOR SALE

I have two extra roan bulls; fourteen and fifteen months old, one from imp. dam. Also some heifers, all bred in the purple. Phone or write: Hugh Thomson, Box 556, St. Mary's, Ont.

Spruce Lodge Shorthorns & Leicesters
Present offering: A number of good heifers and young cows, with calf at foot, from good milking families. A few ram heads and a choice lot of shearing ewes, now bred to imp. ram.

W. A. Douglas, R. R. No. 2, Caledonia, Ont.

Questions and Answers. Miscellaneous.

Soiled Suit.

Would you please tell me what would remove slag from a navy-blue suit? It became smeared while attending to acetylene-gas lights, and the slag burst out on the clothes. It leaves a bluish mark. M. F.

Ans.—Can any of our readers answer this?

Farm Fencing

A's and B's farms join. The concession road allowance lies between them. B has all the road allowance and he has his land all cleared. B has always kept the line fence in repair. Now he wants to make A build half of line fence. A's land being in bush, can B compel A to build half of line fence?

Ontario. A SUBSCRIBER.

Ans.—No.

Seed Oats.

Having seen the item of "What the Experimental Union is Doing," discussing the different varieties of farm crops, I thought it would be no harm to write and ask you where a person could obtain some seed grain of either the O. A. C. No. 72, or O. A. C. No. 3 varieties of oats?

Ans.—At the present time, there are very few farmers who have any considerable quantity of O. A. C. No. 72 oats, or O. A. C. No. 3 oats. You may be able to get seed through the Experimental Union, or from some of the seedmen advertising in these columns, but at present the quantity, especially of No. 3, is limited. If you would become a member of the Experimental Union, you might be able to get a few pounds for a start for experimental purposes, free of charge. Many growers of good seed grain have commenced by this method, and have succeeded in producing, after a few years, large quantities of the best varieties of our present-day cereals.

Sale of Colt.

What is the law on selling a colt that was altered last spring? There was one stone that could not be found, and no sign of it since. If the colt was sold without saying anything about it, and it caused the purchaser any trouble later on, could the purchaser collect damages from the man who sold it?

W. C. K.

Ans.—We think that it is likely that the purchaser of the horse could collect some damages, or make the seller take the colt back. However, this depends to a great extent upon the agreement between the two parties when the sale was put through. You state that it was not mentioned that the colt was a ridgling. The seller certainly should have mentioned this. It would be impossible for the buyer to ascertain this in some instances, no matter how good a horseman he was, and taking all circumstances into consideration, we think that the seller should be liable for damages under such conditions.

Pasturing Wheat.

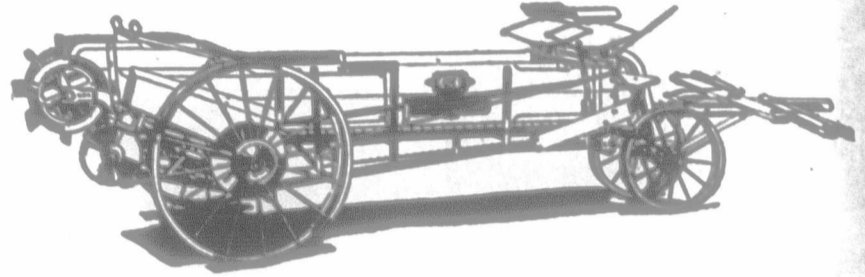
1. Does it do any harm to fall wheat to pasture it in the fall, it being sown the same fall?

2. Does it hurt new seeded alfalfa to be pastured the first fall?

Ans.—1. Under some conditions, where the fall wheat has an exceedingly large top in the fall, it is thought to be beneficial rather than harmful, to pasture it lightly. Of course, it would not do to pasture it closely, and on the whole we do not believe it is good practice to pasture wheat. We think that more wheat is injured through not having enough top than by having too much, although we have seen fall wheat come through in very good condition and yield large crops after having been pastured in the fall. However, some care is necessary, and unless the top is very large, we would not advise pasturing.

2. Pasturing alfalfa in the fall is not the best practice. However, sometimes it grows considerable food, and may be pastured lightly. If pastured too closely it is quite likely to winter-kill. We have seen people run the mower over it very early in the fall, or late in the summer, and then let it grow up again. Of course, it should not be pastured at all in wet seasons when the stock is likely to punch the land.

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Reapers, Mowers
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Hay Loaders
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Orders booked for bull calves from well bred dams with good A. R. O. backing. No females for sale at present.
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Maple Grove Holsteins
Present offering: a few bulls fit for service, sired by the great King Lyons Hengerveld, who is beyond doubt the richest butter and milk bred bull of the breed in Canada. These bulls are out of high testing R.O.M. cows and heifers, and individually are unsurpassed. Also a few heifers just freshened. If you want the best write me for prices and particulars.
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Young bulls and bull calves, sired by Duke Beauty Pieterje; sire's dam's record 32.52 lbs. butter, and his two grand-dams are each 30-lb. cows, with 30-lb. daughter, with 30-lb. granddaughter. Three generations of 30-lb. cows. If you want a bull that will prove his value as a sire, write
A. KENNEDY & SONS, R.R. No. 2, Paris, Ont.
Stations: Ayr, C. P. R.; Paris, G. T. R.

The Maples Holstein Herd
Headed by Prince Aaggie Mechthilde. Present offering: Bull calves born after Sept. 1st, 1913. All sired by Prince Aaggie Mechthilde and from Record of Meat dams. Prices reasonable.
R. R. No. 5, WALBURN RIVERS, Ingersoll, Ontario

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GLENWOOD STOCK FARM HOLSTEINS
3 yearling bulls for sale, out of big milking strains; at low figure at quick sale. Thos. B. Carlaw & Son, Warkworth, Ont. Campbellford Station.
Please mention "The Farmer's Advocate."

Gossip.
Robert Miller writes: "The auction sale is over, and I am ready to quote attractive prices again for good young Shorthorn bulls and heifers of all ages. The demand has remained active, and good Shorthorns are getting harder to buy and more difficult to find. The shortage in the bull supply will be greater than it has ever been, and more men will go without good bulls than has been the case before. I have quite a number, and will supply the demand as long as possible. Have never had so many good young bulls, and have never sold half so many before, as within the past three months."

GEO. E. MORDEN & SON'S SHORT-HORNS.
With a big herd to select from, Geo. E. Morden & Son, of Oakville, Ont., are in a particularly favorable position to supply the wants of the public in Shorthorns of pure Scotch breeding. Pure Booth breeding, or Scotch-topped Bates breeding, several of them, hand milked, on only ordinary care and feeding, will fill a twelve-quart pail night and morning, which is no mean producing, and demonstrates that there is such a thing as a dual-purpose cow. Nonpareils and Roan Ladys are the principal Scotch tribes, while the Booth tribe is represented by the old, popular, Souerby strain, the Bates, tracing to several of the old, imported cows of past years. Practically all the young things are the get of Pride's Ruler 70491, a son of the Roan Lady bull, Scottish Pride (imp.), and out of Gladys 5th, by Red Chief. The calves now coming are the get of the present stock bull, Mountaineer 77726, the Missie-bred son of the great Uppermill Omega (imp.), dam Mistletoe 21st (imp.), by Nonpareil Victor, grand-dam by Scottish Archer. The Booth- and Bates-bred cows were bred to the Booth-bred bull, Royal Albert 83738, a red two-year-old son of Prince Albert 81244, dam Souerby's Flower, by Imp. Patriot. This is a level-lined, typical dairy bull. He is for sale, as well as younger ones of the same breeding, also others pure Scotch and Scotch-toppers, as well as heifers of the different strains. Write Mr. Morden.

CLYDESDALES AND SHORTHORNS AT AUCTION.
One of the most important auction sales ever held in the county of Haldimand will be the complete dispersion of the high-class stud of Clydesdales and herd of English milking Shorthorns owned by Robert Nichol, of Hagersville, Ont., on Thursday, March 5th, 1914. Mr. Nichol has sold his farm, and consequently everything will be sold, positively without reserve. The Shorthorns number twenty-seven, four of them bulls, among which is his wonderfully good-breeding bull, Imp. Dorothy's King; the other three are along about ten months of age. In next week's issue will be a short resume of the Shorthorns. This week a little insight into the breeding quality of the Clydesdales is given, but for full particulars, write for catalogue to Robt. Nichol, Hagersville P. O. Among the Clydesdales are several unbeaten at the local shows, up to plenty of size, they have the character and quality so much sought after. Ivy Baron 15605 is a brown two-year-old stallion, got by Imp. Opulence, dam Blossom 6173, by Imp. Alexander's Heir. He is a colt of outstanding merit, winner of first wherever shown. Gay Spark Jr. 15606 is a bay, nine-months-old colt, by Imp. Gay Spark, dam Blossom 6173. This is an exceptionally good colt. Among the mares, all of which are big, well-balanced show mares, are Lady Amber 32264, a bay, nine years old, by Alexander's Heir, and her filly foal, by Gay Spark; Imp. Rosie Amber 32266, bay, five years, by Rose Crown (imp.), and Betsy Amber 32265, bay, four years, by Opulence (imp.), are daughters of Lady Amber. These, and a filly foal out of Betsy Amber, got by Opulence (imp.), will also be sold. Intending purchasers will not be disappointed in the quality of these Clydesdales.

50 R.O.M. Holsteins, R.O.P. Holsteins 50
BY AUCTION

Having rented his Farm Mr. H. F. Patterson, R.R. No. 4, Paris, Ont., will, at his farm on

Thursday, March 12th, 1914

hold a complete dispersion sale of his entire herd of 50 R.O.M. and R.O.P. Holsteins, 45 females and 5 bulls, every one a high-class proposition both as individual's and as producers and all in the finest condition.

R.O.M. Records from 18 to 23-lbs., Mature 3-year-olds up to 21.43-lbs.; 2-year-olds up to 14.62-lbs. R.O.P. records from 10,776-lbs. for 2-year-olds, up to 21,556-lbs. for mature cows, the latter a private test, many of them with delivered to the Brant factory from any 15 cows. On day of sale all trains from any direction will stop at Alford Jc. Station, where conveyances will be in waiting.

TERMS: Cash, or 7 months at 7%.

WELBY ALMAS, Brantford, Ont., Auctioneer.
For Catalogue, write: H. F. Patterson, R.R. No. 4, Paris, Ont.



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Fairview Farms Herd
Offers for sale: A son of Rag Apple Korndyke 8th out of a daughter of Pontiac Korndyke with a record of 27.72 lbs. in 7 days, averaging 4% fat. Grand dam has a record of 29 lbs. Calf is nearly ready for service. Write me for description and breeding.
E. H. DOLLAR, HEUVELTON, N. Y. (near Prescott, Ont)

Riverside Holsteins
Herd head by King Johanna Pontiac Korndyke whose near dams and sisters, 12 in all, average 25.77 lbs. butter in 7 days. His sister, Pontiac Lady Korndyke, has a record of 38.02 lbs. butter in 7 days 156.92 lbs. in 30 days—world's records when made. We are offering several females bred to this bull also a few bull calves.
J. W. RICHARDSON, R. R. NO. 2, Caledonia, Ont.

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We have more Cattle than we can stable. Some of the finest young bulls and heifers we ever offered; their breeding and quality is the very choicest, they will be sold worth the money. Don't wait to write, but come and see them.
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Senior herd bull—Count Hengerveld Fayne De Kol, a son of Pieterje Hengerveld's Count De Kol and Grace Fayne 2nd. Junior herd bull—Dutchland-Colantha Sir Mona, a son of Colantha Johanna Lad and Mona Pauline De Kol. Third bull—King Canary Segis, whose sire is a son of King Segis Pontiac, and whose dam is 27-lb. three-year-old daughter of a 30-lb. cow. Write for further information to—
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A few heifers and young cows in calf to the Chicago winning herd bull, for sale as well as some very strong young bulls. Four very promising puppies from imported stock are also offered.

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Shorthorn Cattle, Yorkshire Hogs—Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Bueno Vista Farm, Harriston, Ont.

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We are sold out of Tamworths, also females in Holsteins, but still have some choice bulls for sale, from two to six months, officially backed and right good ones.

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Pine Grove Yorkshires
Bred from prize-winning stock of England and Canada. Have a choice lot of young pigs of both sexes, pairs akin, to offer at reasonable prices. Guaranteed satisfaction. Joseph Featherston & Son, Streetsville, Ont.

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No matter what your needs in Berkshires may be see Lang the live Berkshire man. He is always prepared to furnish anything in Berkshires. Write or come and inspect. C. J. LANG, Hampton, Ont., Durham Co.

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R. R. No. 1, CORINTH, ONTARIO

Please mention "The Farmer's Advocate."

Questions and Answers. Miscellaneous.

Sweet Clover.

Do you know anything about white or yellow sweet clover? It seems too bad for it to be making such a nuisance of itself along the roads if it is good for feed, as it will grow on the poorest of clay.

A. S.

Ans.—There are two varieties of plants known as sweet clover, one having a white flower and the other a yellow flower; one known as Melilotus alba, and the other Melilotus officinalis. These plants live but two years, and if seeding is prevented should not be bad weeds. In the United States, and in some parts of Canada, this crop is now being grown for feed, and judging from reports, with good success. In last week's issue of "The Farmer's Advocate" there appeared an article by Wm. Linton, of York County, Ont., praising this crop very highly. It is a coarse-growing biennial, and must be cut early to avoid woodiness and preserve palatability. This latter point is one upon which there is still difference of opinion in the minds of farmers and stockmen in this country. Stock must be educated to eat it, but it is claimed when once they have developed an appetite for it, afterwards they will always eat it. It has a high protein content, and if cut early should be a very valuable roughage feed. It will grow on any soil, and has considerable value for plowing under to increase the fertility of the soil. We believe it is worth a trial, and intend, during the coming summer, to sow a little at Weldwood to ascertain for ourselves and the benefit of our readers its real value.

Miscellaneous Queries.

1. A and B own farms side by side. Has B the right to cut trees down that A has his line fence tacked to?
2. If not, how far from the line has he the right to cut tree down?
3. Nine-year-old mare has had core (running) eyes, alternately, lasting about one month each. Referred case to my veterinarian who said it was cold, and gave me treatment to cut coating off. This is the first trouble with her eyes.
4. Is this mare likely to go blind?
5. Are there any treatments?
6. Would alfalfa do well on gravelly land, with good railway gravel underneath?
7. Would cement do to make a ceiling in a root-house?
8. If so, how should it be put on?

J. S. K.

Ans.—1 and 2. Are these trees right on the line? If the trees are on the property of B, it is more than likely that he would have the right to cut them down. If they are on the property of A, he has no right to touch them. This is a matter which should be straightened out by the two parties, as trees of this kind, right on the line, and used for fence posts, are of considerable value, and should not be cut down without a conference between the two parties.

3 and 5. It is more than likely that your mare has what is known as periodic ophthalmia, and it is also likely that the disease will develop, and that the mare will, in time, go blind. It is a constitutional disease, and the attacks cannot be prevented. All that can be done is to treat them when affected. Keep her in a partially-darkened stall, bathe the eyes well three times daily with warm water, and after bathing put a few drops of the following lotion into each eye: Sulphate of zinc, 15 grains; fluid extract of belladonna, 20 drops; distilled water, 2 ounces.

4. As stated, the mare is quite likely to go blind if the trouble continues.

6. Alfalfa does best on rolling clay land, but it may do fairly well on the gravelly soil. We would not hesitate to try it if the land is rolling, but we would, before sowing it, inoculate the seed.

7 and 8. Our root-house at Weldwood has a cement ceiling, but it is under the barn approach, and the ceiling is the covering for the approach, but in this way it requires to be reinforced. We are not sure where your root-house is, but if you want a top for it, you can easily put it on with reinforced concrete.

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on your soil. The soil must be sweet to produce good crops. Where sorrel, horse tail, moss, etc., appear, the soil is sour, and you cannot expect the maximum yield of hay, cereal or fruit without correcting this acid condition. Lime Carbonate (Caledonia Marl) will do this. In many instances it has more than doubled the yield. We furnish blue litmus paper free with directions for testing your soil. Write us for further information. Agents wanted.

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This fall I have the best lot of lambs I ever bred. I have plenty of show material, bred from the best stock procurable in England. Order early if you want the best. Ram lambs, shearlings and ewe lambs Yorkshires of all ages.

J. A. CERSWELL, Bond Head P.O., Ont.

Bradford or Beeton stations

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Special Offering of SHROPSHIRE EWES—40 imported shearing ewes and 40 home-bred shearing and two shear ewes. These ewes have been bred to choice imp. rams. One crop of lambs should nearly pay for them at prices asked. Also some good ewe lambs at a low price.

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From our recent importation of sows, together with the stock boar Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.

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Gramandyne Yorkshires & Tamworths
Gramandyne Stock Farm
Co., 656 Parkdale Ave., Ottawa, Ontario, can supply Yorkshires and Tamworths, either sex, any age, bred from prize-winners, none better. Long Distance Phone, 3874 Ottawa.

Morrison Shorthorns and Tamworths
bred from the prize-winning herds of England. Have two choice young bulls for sale 10 months old, out of large, deep-milking cows and also some choice cows. Tamworths both sexes.

CHAS. CURRIE, Morrison, Ont.

Large White Yorkshires

Have a choice lot of sows in pig Boars ready for service and young pigs of both sexes supplied not akin at reasonable prices. All breeding stock imported, or from imported stock from the best British herds. Write or call H. J. DAVIS, Woodstock, Ont.

Long-distance phone C. P. R. and G. T. R.

Hampshire Swine

I have a choice lot of Hampshire belted hogs for sale. Will be pleased to hear from you, and give you description and prices.

J. H. Rutherford, Box 62, Caledon East, Ont.

Duroc Jersey Swine

Twenty-five sows bred for fall farrow; a few boars ready for service; also one Jersey bull, 11 months, and two bulls, 6 months old, out of high-producing dams.

Mac Campbell & Son, Northwood, Ont.

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are founded on the famous old Sally tribe, noted for big size, length of body and strength of bone. We can supply pairs and trios not akin. Show stock a specialty. Also high-class Cotswolds, ram and ewe lambs, shearlings.

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HAMPSHIRE SWINE

Both sexes and all ages, from imported stock. Prices reasonable.

C. A. POWELL, ARVA, ONTARIO
Four miles north of London.

Prize Chester White Swine

Winners High-class in type and quality, bred from winners and champions. Young stock both sexes, any age, reasonable prices.

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BERKSHIRES

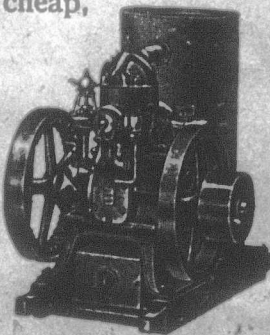
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This is the cost for Coal Oil per horse power to run this engine, figuring the price at 16c. a gallon. Don't let the high price of gasoline prevent you from having cheap, safe and dependable farm power.

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Will develop more power on a gallon of the cheapest coal oil than other engines will do on a gallon of high priced gasoline; no danger of fire or explosion. Simplest engine on the market, only three working parts; starts without cranking; runs either way; no excessive weight; guaranteed 10 years and will last a life-time. Anyone can run it; very complete instructions furnished.

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"Have used the 3 h.p. 'Ellis' on the grinder, cutting box and saw. Run it on coal oil all the time."

"Am running on coal oil with the best of satisfaction. Every one thinks it is a dandy."

"We have the 6 h.p. 'Ellis' hitched to a 10-inch grinder. Am entirely satisfied. Engine has wonderful staying powers."

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"My coal oil engine is a perfect wonder in power. Am more than satisfied."

"The 'Ellis Nine' is the best engine I ever saw run."

Names and Addresses of these men and hundreds of others on request.

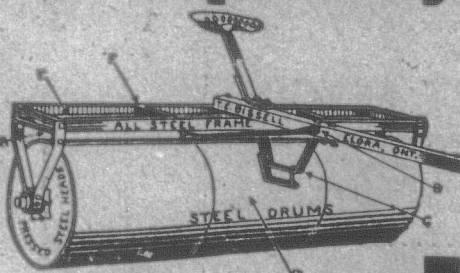
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We don't ask you to pay us a cent until you have used this wonderful modern light in your own home for ten days, then you may return it at our expense if not perfectly satisfied. We want you to prove for yourself that it gives five to fifteen times as much light as the ordinary oil lamp; beats electric, gasoline or acetylene. Lights and is put out just like the old oil lamp;

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Gives a powerful white light, burns common coal oil (kerosene), no odor, smoke or noise, simple, clean, won't explode. Guaranteed.

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Will be given to the person who shows us an oil lamp equal to this Aladdin in every way (details of offer given in our circular). Would we dare make such a challenge to the world if there was the slightest doubt as to the merits of the Aladdin? We want one person in each locality to whom we can refer customers. Write quick for our 10 Day Absolutely Free Trial Proposition, Agents' Wholesale Prices, and learn how to get ONE FREE.

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A Concrete Road

is the most satisfactory and economical road that can be built. It requires practically no expenditure for upkeep, and enables road taxes to be invested in more good roads instead of being spent in filling mud holes and ruts. It is permanent, safe, clean and passable the year 'round.

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Simple to operate. Price so moderate that anyone can buy. Made of first quality material. Sold you direct. Makes the small bush profitable. Every one guaranteed. If not as represented when it reaches your station, fire it back at our expense.

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Study the prices quoted below for genuine PAGE WIRE FENCE. Compare with them the prices of other fences. Remember that PAGE WIRE FENCE is the finest farm fence ever made. That it will outlast several ordinary fences. The more thorough your price comparisons are, the more strongly you realize that PAGE prices are the lowest at which GOOD wire fence has ever been sold.

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104 pages, illustrating and describing a hundred useful things for the farm. Many of them aren't carried by your dealer. All are sold at remarkable low prices for cash. Write to-day for this catalog.

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		No. 8 Page Wire Throughout in 22, 26 and 40 Rod Rolls, Freight Paid		12	16	20
		Spacing of Horizontals in Inches		ft.	ft.	ft.
4	30	22	10, 10, 10	\$0.18	\$0.18	\$0.19
5	37	22	8, 9, 10, 10	.19	.20	.21
6	40	22	6½, 7, 8½, 9, 9	.21	.23	.24
7	40	22	5, 5½, 7, 7, 7½, 8	.23	.25	.26
7	48	22	5, 6½, 7½, 9, 10, 10	.23	.25	.26
8	42	22	6, 6, 6, 6, 6, 6, 6	.26	.28	.29
8	42	16½	6, 6, 6, 6, 6, 6, 6	.28	.30	.31
8	47	22	4, 5, 5½, 7, 8½, 9, 9	.26	.28	.29
8	47	16½	4, 5, 5½, 7, 8½, 9, 9	.29	...	...
9	48	22	6, 6, 6, 6, 6, 6, 6	.29	.31	.32
9	48	16½	6, 6, 6, 6, 6, 6, 6	.31	.33	...
9	51	22	4, 4, 5, 5½, 7, 8½, 9, 9	.29	.31	...
9	51	16½	4, 4, 5, 5½, 7, 8½, 9, 9	.31	...	...
10	48	22	3, 3, 3, 4, 5½, 7, 7, 7½, 8	.31	...	...
10	48	16½	3, 3, 3, 4, 5½, 7, 7, 7½, 8	.33	...	...
10	51	22	3, 3, 3, 4, 5½, 7, 8½, 9, 9	.33	...	...
10	51	16½	3, 3, 3, 4, 5½, 7, 8½, 9, 9	.31	.33	...
11	55	16½	3, 3, 3, 3, 4, 5½, 7, 8½, 9, 9	.36	...	...
		MEDIUM WEIGHT FENCE				
		(Maritime Province prices of Medium Weight, also Special Poultry Fences, include painting.)				
		No. 9 Top and Bottom, and No. 12 High Carbon Horizontals between; No. 12 Uprights; No. 11 Locks.				
5	36	16½	8, 8, 10, 10	.18	.19	.22
6	36	16½	6, 7, 7, 8, 8	.20	.21	.24
6	42	16½	7, 7, 8, 10, 10	.20	.21	.24
7	42	16½	6, 6, 7, 7, 8, 8	.22	.24	.27
7	26	8	3, 3, 4, 5, 5, 6	.23	.25	.28
8	48	16½	4, 5, 6, 7, 8, 9, 9	.26	.28	.31
9	36	12	3, 3, 3, 4, 5, 6, 6, 6	.27	.29	.32
9	50	16½	3, 4, 5, 6, 7, 8, 9, 9	.28	.30	.33
10	54	16½	3, 3, 4, 5, 6, 7, 8, 9, 9	.30	.32	.35
		SPECIAL POULTRY FENCING				
		No. 9 Top and Bottom. Intermediates, No. 13 Uprights 8 inches apart.				
18	48	8	Close bars	.42	.44	.46
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		PAGE "RAILROAD" GATES				
48			10-ft. opening	3.80	4.00	
48			12-ft. opening	4.00	4.20	
48			13-ft. opening	4.25	4.45	
48			14-ft. opening	4.50	4.75	
		STAPLES, 25-lb. box, freight paid		.75	.80	.85
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