

PUBLISHED EVERY WEEK. \$1.50 PER YEAR.

# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE  
SUCCEED  
FOUNDED 1879

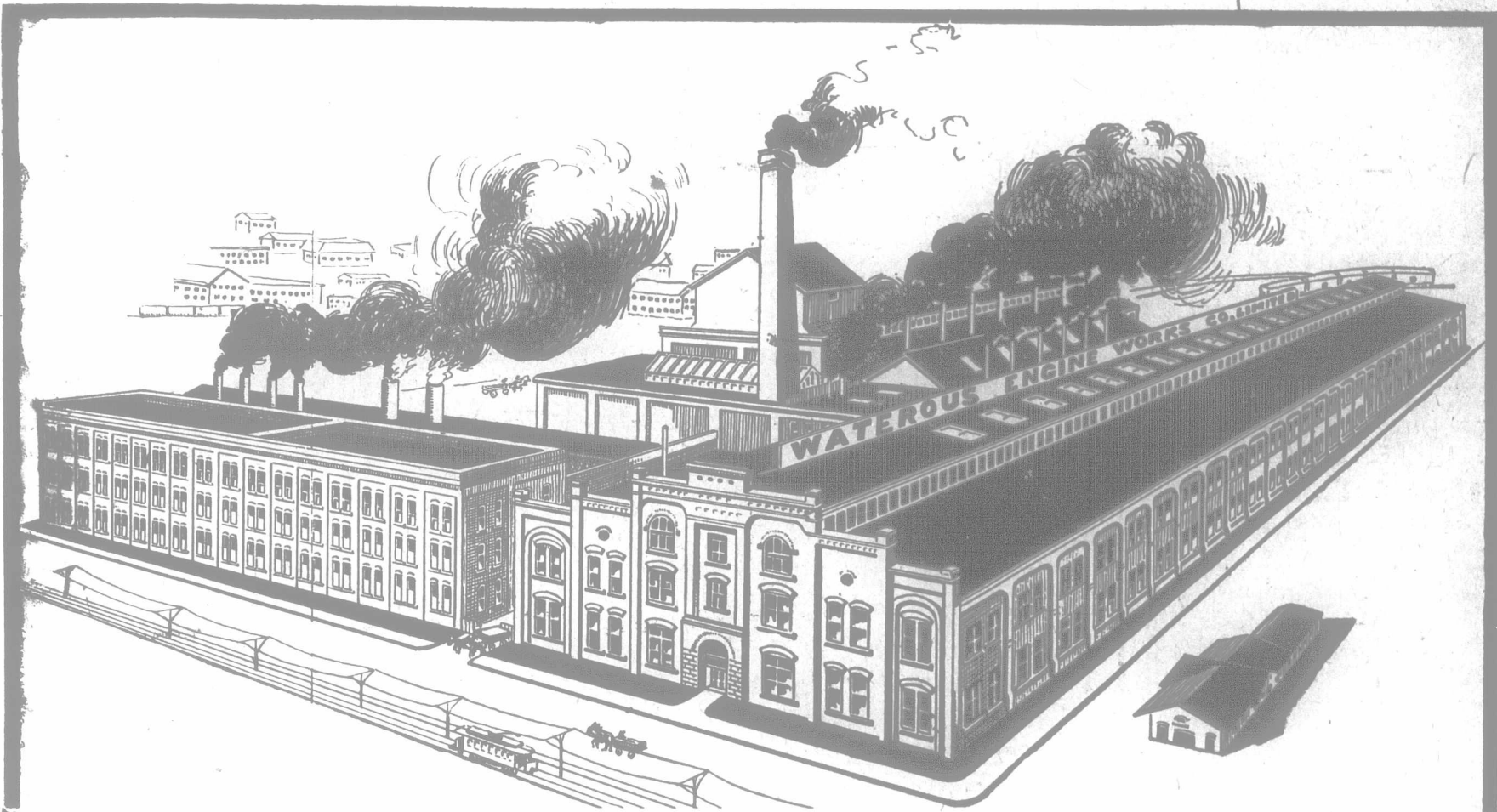
T. F. HORTON, Publisher  
Chief Office, Toronto  
Branch Office, London, Ont.

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

Vol. XLVIII.

LONDON, ONTARIO, APRIL 3, 1913.

No 1071



Here is the big plant of the Waterous Engine Works Company, Limited, manufacturers of Sawmill Machinery, Road Rollers, Engines, etc. These workers in iron are compelled by the nature of their business to roof their valuable plant and its contents with the next best thing to an imperishable roofing. Well—the roof here shown is

## BRANTFORD ROOFING

What does this bare fact mean to you? This: BRANTFORD ROOFING is known to be practically indestructible—its enduring qualities recognized by shrewd business men who must have the best roofing money will buy. Since it costs no more than ordinary roofing, it is the safe roof for you to invest your hard-earned cash in for the purpose of protecting your crops and stock.

Write to-day for our big FREE book. It contains samples of the best roofing—also facts worth money to you.

Brantford Roofing Company, Limited  
Brantford :: Canada



## McCormick Drills Have Durable Bearings

THE durability and satisfactory service of a drill depend to a large extent upon the disk bearings. The more durable the bearing, the better satisfaction the drill gives. It is an easy matter to make a disk bearing that will work well for a certain length of time, but one that will run true year after year requires an exceptionally strong bearing with a large bearing surface.

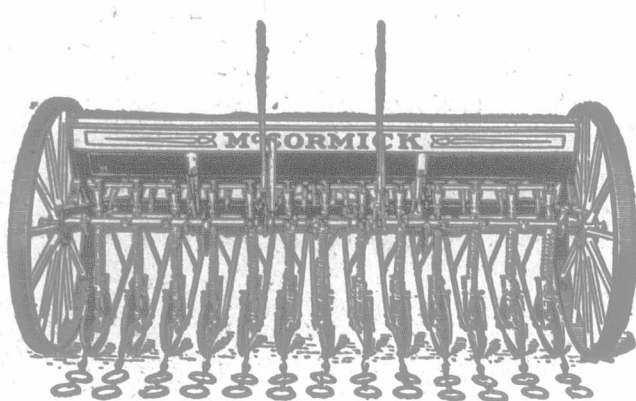
The McCormick disk bearing is strong and durable. It is simple in construction, having few parts to wear. It is as nearly dust proof as it is possible for a disk bearing to be. The oil enters the bearing from the inside, working outward, thus insuring that only clean oil reaches the bearing.

There are several other features which are appreciated by owners of McCormick drills. A careful examination of all these features will prove conclusively that they

## Are the Best Drills

that money can buy. The accurate and durable driving mechanism is exceedingly simple. The change in quantity of seed is easily made.

The double run feed makes the McCormick drill practically two drills in one. It is the best feed made for the purpose intended as it adapts the drill for every kind of seed from flax to corn and beans.



The angle steel main frame, removable scrapers, and folding levers all add to the durability and satisfactory service of McCormick drills.

The McCormick line includes hoe and single disk drills, disk harrows, cultivators, peg and spring tooth harrows, land rollers, etc. The nearest McCormick local agent will gladly give you full information and supply catalogues. If you prefer, write the nearest branch house and catalogues will be mailed at once.

International Harvester Company of Canada, Ltd.  
EASTERN BRANCH HOUSES

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

These machines are built at Hamilton, Ont.



Cost No More  
Last Longer

COLUMBIA BATTERIES for all purposes are honestly made. Ask

for COLUMBIA. Don't let your dealer tell you the "just as good" story.

You are entitled to COLUMBIA when you buy BATTERIES.

Manufactured by  
**National Carbon Co.**  
Cleveland, Ohio  
Factories in U. S. and Canada  
and for sale everywhere.  
Fahnestock Connections without extra charge.

TO FARMERS' CLUBS

Cunard Line, Canadian Service

Have opened up an

## IMMIGRATION DEPARTMENT

TO arrange for Labor for you from the Old Country. We have an organization of over 2,000 Agencies, many in the Heart of the Agricultural Districts of England, Scotland and Wales.

## Tell Us, If You Want Help

Drop the office a line, and if necessary we will gladly come and see you and arrange details.

The Cunard Steamship Co., Limited  
J. B. HOSEASON, IMMIGRATION AGENT  
114 King Street West, Toronto, Ont.

## The Call of the North

DO you know of the many advantages that New Ontario, with its millions of fertile acres, offers to the prospective settler? Do you know that these rich agricultural lands, obtainable free, and at a nominal cost, are already producing grain and vegetables second to none in the world?

For literature descriptive of this great territory, and for information as to terms, homestead regulations, settlers' rates, etc., write to

H. A. MACDONELL

Director of Colonization

Parliament Bldgs. TORONTO, ONT.

## STUMP EXTRACTOR

If you are troubled with stumps, give our "Patent Samson Stump Extractor" a trial. It has now been in use in Europe for the past three years with the greatest success. By its assistance, two men will do the work of three men and a horse. It can also be used for felling trees.

WRITE US FOR DETAILS.

The Canadian Boving Co., Ltd.  
164 Bay Street, TORONTO

## GRAND TRUNK RAILWAY SYSTEM

### HOMESEEKERS' EXCURSIONS

To MANITOBA, SASKATCHEWAN AND ALBERTA

Each TUESDAY until Oct. 28th, inclusive.  
Winnipeg and Return - \$35.00  
Edmonton and Return - 43.00

Proportionate low rates to other points.  
Return limit two months.

### Settlers' Excursions

To ALBERTA and SASKATCHEWAN

Every TUESDAY until April 29th inclusive, from stations in Ontario, Port Hope, Peterboro, and West, at very low rates.

Through coaches and Pullman Tourist Sleeping cars are operated to WINNIPEG without change, leaving Toronto 11.00 p.m., via Chicago and St. Paul on above dates.

The Grand Trunk Pacific Railway is the shortest and quickest route between Winnipeg-Saskatoon-Edmonton.

Berth Reservations and particulars from Grand Trunk agents.

## The Anthony Wire Fence

The Perfect Tie



See That Knot

ANTHONY WIRE FENCE is the **cheapest** on the market if you value **quality and workmanship**.

ANTHONY WIRE FENCE is made from all No. 9 hard steel wire thoroughly galvanized.

ANTHONY WIRE FENCE has the stay wires tied to the line wires with the **strongest, neatest and most compact lock** on any wire fence made.

ANTHONY WIRE FENCE is so constructed that it will not bend down at the top nor roll up at the bottom; but stands up straight when erected.

Buy it and try it, and be satisfied.

LIVE AGENTS WANTED IN ALL UNOCCUPIED TERRITORY

The Anthony Wire Fence Co. of Canada, Limited  
Walkerville, Ontario.

## PUMPING

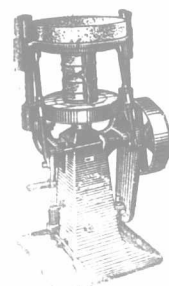
With a "GOES LIKE SIXTY" Pumping Outfit.

No more backaches. No more waiting for the wind. The Gilson 60 SPEED is the ideal pumping engine. It "GOES LIKE SIXTY". Furthermore, it is a portable power house, ready to operate pump wash machine, cream separator, churn, electric light dynamo, wood saw, feed cutter, grinder, pulper, etc. It is mounted on wheels, complete with line shaft, five interchangeable pulleys, and universal pump jack.

The only engine, fully equipped, ready to yield 100% service. A powerful, durable engine, built to last a lifetime. The simplest engine on the market. A child can operate it.

Write for full particulars and also catalogue of pumps, pump jacks, wood saws, etc.

GILSON MANUFACTURING CO.,  
301 York St., Guelph, Ont.



### "London" Cement Drain Tile Machine

Makes all sizes of tile from 3 to 16 inches. Cement Drain Tile are here to stay. Large profits in the business. If interested, send for catalogue.

London Concrete Machinery Co'y., Dep't. B,  
London, Ont.

Largest manufacturers of Concrete Machinery in Canada.

## CANADIAN PACIFIC

### EXCURSIONS To Manitoba, Saskatchewan, Alberta

#### HOMESEEKERS

Low Round Trip Rates each Tuesday, March to October Inclusive

Winnipeg and Return - \$35.00

Edmonton and Return - 43.00

Other points in proportion  
Return Limit two months.

#### TOURIST SLEEPING CARS

on all excursions. Comfortable berths, fully equipped with bedding, can be secured at moderate rates through local agent.

#### SETTLERS

For settlers traveling with live stock and effects.

#### SPECIAL TRAINS

Will leave Toronto

Each TUESDAY

MARCH AND APRIL

10.20 p.m.

Settlers and families without live stock should use

#### REGULAR TRAINS

Leaving Toronto

10.20 p.m. Daily

Through Colonist and Tourist Sleepers

#### COLONIST CARS ON ALL TRAINS

No charge for Berths

Home Seekers' Trains Leave Toronto 10.20 p.m. during March, April, September and October, and at 2 p.m. and 10.20 p.m. during May, June, July and August.  
Through Trains Toronto to Winnipeg and West

Full particulars from any C.P.R. Agent or write M. G. Murphy,  
District Passenger Agent, Toronto

## STEEL RAILS

NEW AND SECOND-HAND  
Cut to specification for any purpose

JOHN J. GARTSHORE

58 West Front St. Toronto, Ont.





## Pedlar-Culverts Make the Township Roads "O.K."

**INSTEAD** of wood, brick or concrete culverts, taking days to make, simply use Pedlar Culvert in nestable bundles, set it up at the job, roll it into place, and build your road across it. In a few hours you make a roadway good for years, frost-proof, strong, and freshet-proof. It can't wash out. You save weeks of statute labor. Use it on your place. See your Reeve gets it for 1913.

PEDLAR Culvert is made in corrosion-proof "Toncan" metal instead of iron or steel. Just as strong. It clamps tightly into a solid tube that cannot be washed out. Immense saving in road labor and repairs, and perfect culverts as well, at lowest cost. Examine a miniature "Pedlar Culvert—sent free."

# FREE

A Sample of Pedlar Culvert and a Special Book about it to every Farmer or Reeve or Municipal Officer

### You Can Use It on Your Farm

YOUR township ought to use Pedlar Culvert, as most of your statute labor can then go in gravelling and grading highways, instead of repairing rotten wood culvert and bridges, or excavating for cement culverts which frost will crack. A few hours' work installs a Pedlar Culvert. Use it on your farm for bridging ditches and gate entrances or lining wells. All sizes from 8 ins. to 7 ft in diameter. See your township adopts it. It means miles of good roads made with the labor now wasted on culvert repairs.

Est. 1861

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- MONTREAL 521-3 Craig St.
- ST. JOHN, N.B. 42-46 Pr. William St.
- OTTAWA 452 Sussex St.
- QUEBEC 127 Rue du Pont 200 King St. W.
- PORT ARTHUR 85 Cumberland St.
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- CHATHAM 202 Fairford St.
- WINNIPEG 76 Lombard St.



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- HALIFAX 16 Prince St.
- SYDNEY 194-208 George St.
- CALGARY Rm. 7, Crown Block
- MEDICINE HAT SASKATOON - Toronto St. Box 1645
- LETHBRIDGE VANCOUVER 1262 1st Ave. So. 108 Alexander St.
- VICTORIA 434 Kingston St. 418

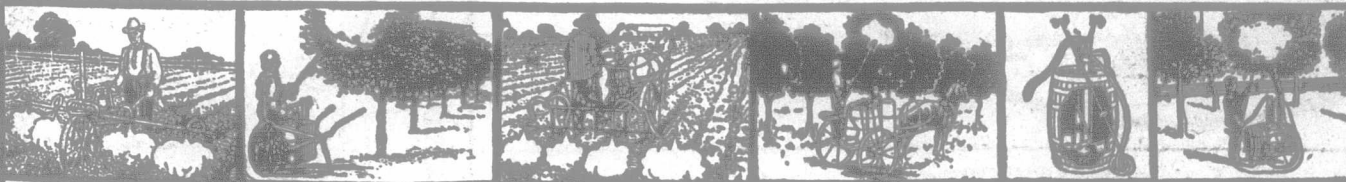
Remember, we also make Metal Shingle, Concrete Reinforcement, Metal Flume and Troughs, Metal Lath, Art Metal for Walls and Ceilings.

Send for Culvert Book No. 250 to Nearest Branch

## HURST SPRAYERS - FREE TRIAL

NO-MONEY-IN-ADVANCE  
PAY AFTER IT HAS PAID  
FOR ITSELF

LET US SEND YOU ANY OF THESE SPRAYERS—to try for 10 days, then if you buy, you can pay us cash or we'll wait till you sell your crop, then you can pay us out of the "extra profit." We pay freight. Wholesale dealers' prices.



**Man-Power Potato and Orchard Sprayer.**  
Sprays "anything"—potatoes or truck, 4 rows at a time. Also first-class tree sprayer. Vapor spray prevents blight, bugs, scab and rot from cutting your crop in half. High pressure from big wheel. Fumes easy. Spray arms adjust to any width or height of row. Cheap in price, light, strong and durable. **GUARANTEED FOR FIVE FULL YEARS.** Needn't send a cent to get it "on trial." You can get one free if you are first in your locality. Write today.

**Horse-Power Potato and Orchard Sprayer.**  
For big growers. Most powerful machine made. 60 to 100 gallon tank for one or two horses. Steel axle. One-piece-heavy-angle-iron frame, express wood tank with adjustable round iron hoops. Metal wheels. "Adjustable" spray arms and nozzles. Brass ball-valves, plunger, strainer, etc. Big pump gives vapor spray. Warranted for five years. **Try this machine at our expense with "your money in your pocket."** See free offer below. Write today.

**Fits-All Barrel Sprayer.**  
Fits any barrel or tank. High pressure, perfect agitation, easy to operate. Brass ball-valves, plunger, strainer, etc. Automatic strainer. No "cup leathers or rubber" about any of our sprayers. Furnished plain, mounted on barrel, or on wheels as shown. **Five year guarantee. It don't cost you "a cent" to try it in your orchard. Get one free. See below. Write today.**

**FREE**—Get a sprayer **FREE**.—After you have tried the sprayer and are satisfied that it is just as we recommend it, send us a list of the names of your neighbors and we will write them and quote them price and have them call and see your machine work, and for every Fits-All Sprayer we sell from your list we will credit you with \$2.00 or send you check if you have paid cash.  
For every Man-Power Potato and Orchard Sprayer we sell we will credit you with \$3.50 or send check.  
For every Horse-Power Potato and Orchard Sprayer we sell we will credit you \$5.50 or send check.  
We do all corresponding and selling. All you need do is to show the sprayer. Many have paid for their sprayer in this way. This offer is good for only the first order in each locality. Don't delay. Send the coupon or post card **NOW**.

**COUPON — Fill Out and send to-day** This Coupon will not appear again.  
THE ONTARIO SEED CO., Successors, 128 King Street, Waterloo, Ontario  
Send me your Catalogue, Spraying Guide, and "special offer" on the sprayer marked with an X below.  
— Man-Power Potato and Orchard Sprayer.  
— Horse-Power Potato and Orchard Sprayer.  
— Fits-All Barrel Sprayer.  
NAME.....  
ADDRESS.....

Also ask for catalogue of our superior home grown and imported Seeds.  
Order our famous collections: Farm Garden Collection, 26 selected varieties, \$1.00, postpaid; Trial Collection, 18 selected varieties, 50c. postpaid; Childrens' Collection, 15 selected varieties, 25c. postpaid.  
"Our Ideal" Mangel has proven the largest yielder in last year's co-operative experiments.

## Stock Watering Troughs



**PLENTY WATER. THE RIGHT QUANTITY. Correct Temperature. Prevents Disease.**  
Every stock breeder or feeder desiring a complete outfit and wishing to get the best results from a water system, should put in water troughs in each stall, and have these automatically regulated from the main supply tank by a float or valve in a small barrel or tank properly placed. In this way the stock can always have water and astonishing results are attained from animals having sufficient water when wanted, and of proper temperature.  
Trough—Inside Dimensions: Length, 16 inches; width, 8 1/2 inches; depth, 5 inches; weight about 20 pounds; screw holes at side. Complete trough includes strain erand coupling for 3/4- or 1 in. pipe. Fuller information and prices given on request.  
**BRUCE AGRICULTURAL WORKS**  
Teeswater Ontario

## Farm Help Supplied

With a view to securing to its many patrons the very best obtainable in the way of immigrated

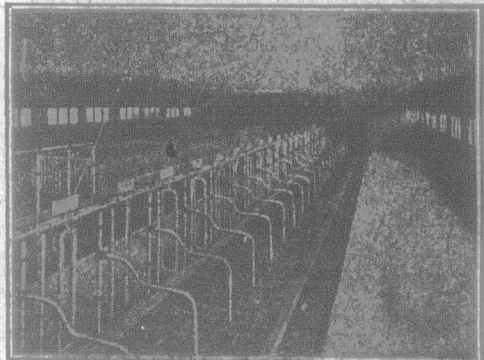
## Farm Laborers THE SALVATION ARMY

In this year putting forth special efforts in the rural and outlying districts of THE BRITISH ISLES

From such districts will come the very class of men, boys, and housekeepers required by Canadian farmers.

Apply by letter at once to—  
**IMMIGRATION SECRETARY**  
26 ALBERT STREET, TORONTO, ONT.

OR  
**MAJOR MCGILLIVARY**  
596 CLARENCE STREET - LONDON, ONT.  
**Max Stolpe**, Landscape Architect—Artistic plans, sketches furnished for all kinds of landscape construction work. Ornamental trees, shrubs, conifers, hardy perennials, etc. Ask for price list. 17 Main St. East, Hamilton, Ont. Phone 148.



## Build Your Barn Like This

A modern dairy barn equipped with BT Steel Stalls and Stanchions is a profit-maker on any farm. The cows are kept cleaner, healthier, more contented, and the increase in the quality and quantity of their milk production in the first year alone goes a long way towards paying for the whole equipment. Mail coupon now for Free Stall Book, showing

### BT STEEL COW STALLS Stanchions, Pens, Etc.

Read how the Aligning Device on the BT Steel Stalls and Stanchions lines up every cow evenly over the gutter, so no manure gets on the cattle-stand, on the bedding or on the cows. BT Stalls have a score of other advantages you ought to know about. Mail coupon to-day for Free Stall Book that tells them all. Address

**BEATTY BROS., Limited**  
551 Hill Street Fergus, Ont.

### FOR FREE BOOKS

**BEATTY BROS., Limited**  
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Please send me your Free Book on Steel Stalls. I have answered your questions below

Are you going to build or remodel?.....

If so, when?.....

How many cows have you?.....

Name.....

P.O..... Prov.....



If you are building or re-building this Spring—you need the  
**Louden New Catalogue**  
*Just Published*  
**"Everything for the Barn"**

1847-1913

**For 47 Years**

—the Louden Line has been finding easier ways to farming—saving labor—saving time—saving money.

Since 1867, when Mr. Louden took out his first patent on a hay carrier, right down to his latest patent on a cattle stanchion in 1912, the Louden perfect barn equipments have been taking the backache out of farming.

In these days when farm help is so scarce, expensive and independent, let the Louden tools and equipments reduce your labor problems.

**LOUDEN Barn Equipments**

have attained their enormous popularity out of sheer merit. Years of experience, experiment and constant improvements, have made them perfect to meet present day conditions.

You can't go wrong if you choose Louden Goods. We make

**Everything for the Barn**

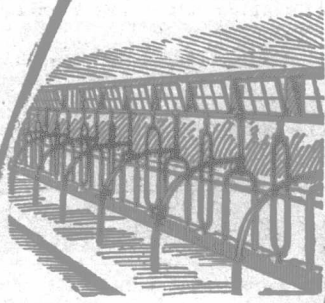
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| Cow Stalls and Stanchions    | Mangers and Partitions |
| Calf Pens                    | Bull Pens              |
| Feed Racks                   | Feed Cans              |
| Litter Carriers              | Milk Can Carriers      |
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We are pioneers and inventors of the largest and best line of

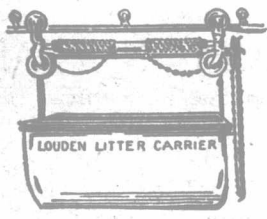
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| Harpoons     | Hay Slings    | Balance Grapple   |
| Pulleys      | Hay Forks     | Barn Door Hangers |
| Hay Carriers | Sling Pulleys | Trucks            |
- and every kind of Farmers' Hardware.

You surely should get a copy of our Catalogue. Write for it to-day. Free for the asking.

The LOUDEN MACHINERY CO.  
 Dept. 21 - GUELPH, Ont. 2



Sanitary Steel Stalls

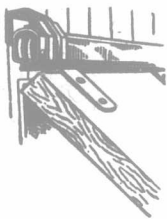


Feed and Litter Carriers



The Louden Junior

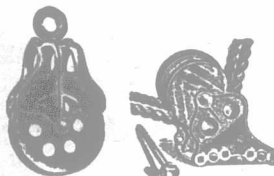
The best Carrier ever made



Barn Door Hangers



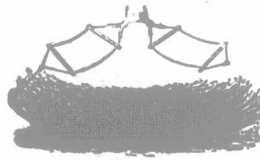
"Cow Comfort" Steel Stanchions



All kinds of Pulleys



Louden Balance Grapple



Hay Slings



Double Harpoon Fork



**Needs No Painting**

NO practical man who has had experience with painted roofings will continue to use them when he realizes that he can get a roofing which needs no painting whatever.

Many users of roofing have abandoned the "painted kind" and adopted Amatite exclusively. As their old painted roofings wear out they are replacing them with Amatite.

In fact, it is cheaper in the long run to lay a new Amatite roof over the painted roofing than it is to keep such roofings painted.

Amatite is sold in the usual handy rolls and is applied like any other ready roofing. Nails and cement packed in the center of each roll without extra charge.

Booklet and sample free on request.

**Creonoid Lice Destroyer and Cow Spray**

Cows tormented by flies yield less milk. Hens worried by lice lay fewer eggs. Let Creonoid increase your profits. It kills flies, lice, etc., and will not "mat" the hair on animals.

The Paterson Mfg. Co., Limited

Montreal Toronto Winnipeg Vancouver



**POTATO GROWING COSTS CUT IN TWO**

**EUREKA PLANTER**

Doubles your potato profits. Minimizes labor. Use a Eureka Potato Planter. Opens the furrow, drops seed accurately any distance or depth desired; puts on fertilizer if wanted, covers perfectly and marks for next row. Always plants uniform depth. Requires only one man. Drives over seed drop. Made in three sizes, for 1 or 2 rows.

**The Eureka Mulcher and Seeder**

A mulcher, smoothing harrow, cultivator, weeder and seeder all combined. Forms dust mulch and conserves moisture. Three sizes, 6, 10 and 12 ft. Lever with pressure spring regulates depth of cut. Pulverizes the soil. Levels the ground. Teeth are flat and can be removed to cultivate in rows. The driver rides. Seeding boxes can be easily attached to sow grass seed, alfalfa, oats, etc. Adjusts for seeding various quantities. Teeth cover seed thoroughly, either shallow or deep. Economical in price.

Prompt shipments from branch near you. Send for free catalogue today.

E. H. COMFORT  
 Box 24  
 North Pelham, Ontario.

**Have City Conveniences**



REPLACE the pestilent, draughty, dangerous and offensive out-of-doors closet with an in-doors closet which requires no sewer, no plumbing and no flushing system. Have city conveniences in your home.

Safeguard Family Health by installing a

**"TWEED" LOSET**

"Tweed" Closets can be installed in the bath-room, cellar, or any other convenient place indoors, merely requiring to be connected by a pipe for ventilation with a chimney hole. "Tweed" Liquid Chemical, used in connection with Tweed Closets, is both a deodorant and a disinfectant. Many hundreds of Tweed Closets have been sold in Canada. Send for illustrated price list. Sold on 30 days' trial.

Steel Trough and Machine Co., Ltd.  
 5 James St., TWEED, ONT.

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CHIMES AND PEALS

MEMORIAL BELLS A SPECIALTY

FULLY WARRANTED

McSHANE BELL FOUNDRY CO.,

BALTIMORE, Md., U.S.A.

Established 1866



Send your Raw FURS to John Hallam

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Hallam's 96 Page Trapper's Guide and Game Laws. Write for it to-day

I can pay you higher prices than you ever got. Send me your shipments at once and get top prices. We remit same day. Furs are received and pay express charges. Largest and best dealers in Canada.

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 111 Front St. East TORONTO



**The Marlin**

repeating shotgun, Model 28, is a fine-appearing, beautifully-balanced gun, without any objectionable bumps or bumps; no holes on top for gas to blow out through or water to get in; can't freeze up with rain, snow, or sleet; it's solid steel breech (not a shell of wood) permits a thoroughly symmetrical gun without sacrificing strength or safety; it is the safest breech-loading shotgun ever built. It is Hammerless with Solid Steel Breech (inside as well as out)—Solid Top—Side Ejection—Matted Barrel (which costs \$4.00 extra on other guns)—Press Button Cartridge Release—(to remove loaded cartridges quickly from magazine without working through action) Double Extractors—Take-Down Feature—Trigger and Hammer Safety. Handles rapidly; guaranteed in shooting ability; price standard Grade "A" gun, \$22.60. Send 3 stamps postage for big catalog describing No. 28 A, B, C, D, T and Trap Special and all other repeating rifles and shotguns. Do it now!

The Marlin Firearms Co.,  
 113 Willow Street, New Haven, Conn.

12-Gauge Hammerless "Pump" Guns



# Rogers' Portland Cement

is the highest-grade cement on the market. Our mills are well equipped and are a guarantee of uniform good quality.



Concrete piers recently completed for bridge over railroad at Sunnyside, Toronto, Ont.  
Crushed stone and cement supplied by Alfred Rogers, Limited.

Throughout the entire manufacture of **Rogers' Portland Cement** every precaution is taken to keep the product at its high standard. The care exercised in this regard has produced a high grade that is dependably uniform.

## A Few Reasons Why You Should Use Cement:

It is frost-proof and fire-proof.  
It is cheaper than wood, brick or stone.  
Everything you make of **Rogers' Portland Cement** is permanent.

You do not have to renew or repair good cement work. Therefore, if you use cement, the time which you have been spending in repairing buildings of wood would be free for other necessary work.

We have a handsome book containing 170 illustrations, the regular price of which is \$1.00, which you can obtain free in connection with our special offer as follows: Send us \$1.00 for the Rogers' Book, and we will mail you with the book an order for \$1.00 worth of Rogers' Cement on the nearest Rogers' dealer. This cement will make you a hog trough worth at least \$5.00, or many other improvements which you no doubt have in mind, namely, hitching posts, flight steps, hen nests, horse block, etc. If there is no Rogers' dealer in your vicinity, send us 50c., and we will send you the book by return mail; the information contained in the same is worth a good many dollars to you. This book explains many other reasons, besides those mentioned above, why you should use cement, and gives the reasons why you should use Rogers' Cement. Ask for the book, "Portland Cement on the Farm." In all your future building, no matter how small or how large, be sure and use cement. "Everything from a fence post to a silo."

## ROGERS' CRUSHED STONE for Sidewalk, Concrete Road and Other Contracts

We can furnish crushed stone in all sizes, clean and free from dust, dirt and mould, and evenly graded. This is the best line for road and concrete work—thousands of tons used locally.

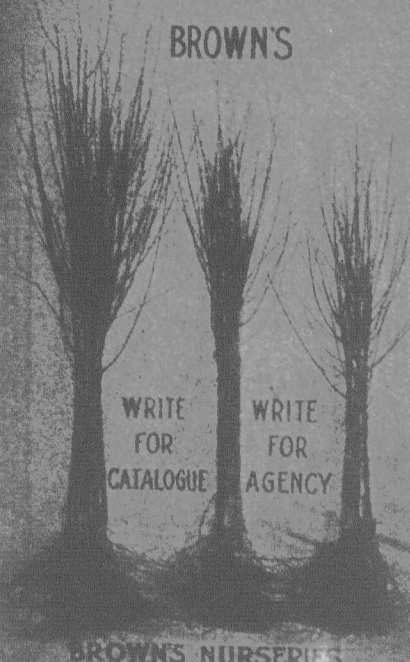
# ALFRED ROGERS, LIMITED

28 King St., West

TORONTO, ONT.



BROWN'S



WRITE FOR CATALOGUE      WRITE FOR AGENCY

BROWN'S NURSERIES  
WELLAND COUNTY, ONT.

Don't get caught with leaky roofs when the spring thaws come

Remember the roof on your house, barn or other buildings that leaked a few drops last fall—a little investigation now may mean a big saving when you put on a new roof or replace an old one.

**Certain-teed**

(Quality Certified—Durability Guaranteed)

**Roofing in Rolls and Shingles**



There is a **Certain-teed** Roofing and a simple method of applying it for every building on the farm. Look for the **Certain-teed** label of quality and 15-year guarantee on every roll and crate of shingles. Get prices from your local dealer—he will save you money.

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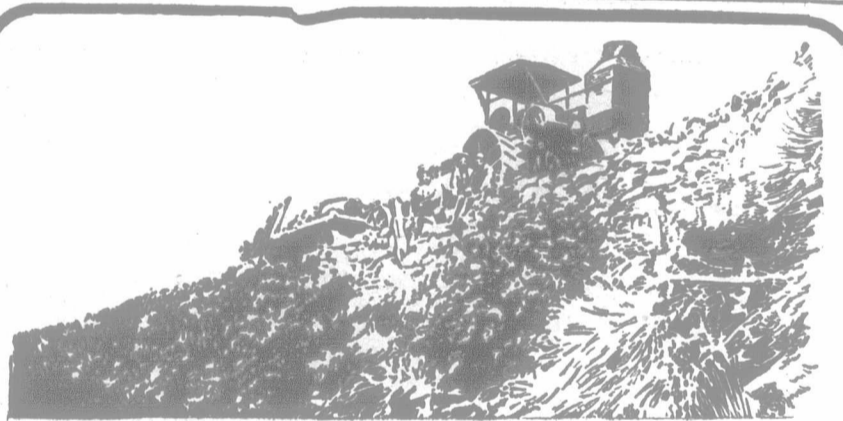
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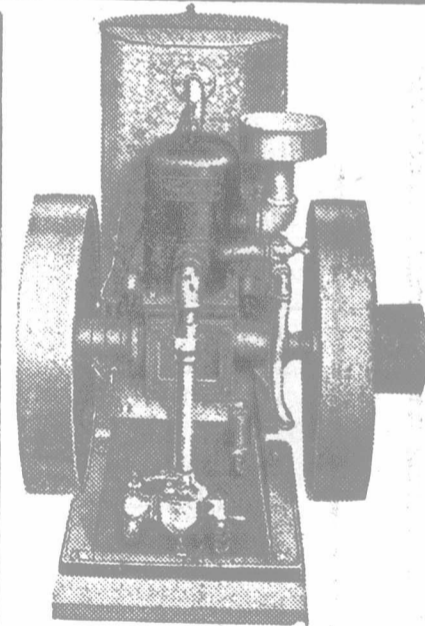
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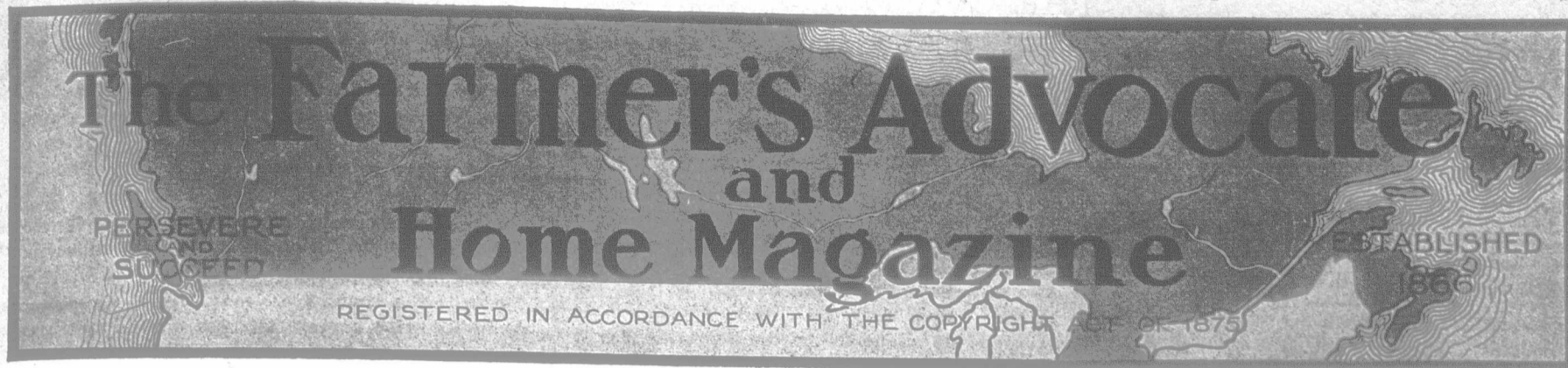
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VOL. XLVIII.

LONDON, ONTARIO, APRIL 3, 1913.

No. 1071

**EDITORIAL.**

What note is sweeter than the robin's?

April is an interesting month in the barn.

This is the time of year when many a shop and office man wishes he were a farmer.

Whether spring seeding arrives early or late matters but little, as a rule, so long as one is ready for it when it comes.

To lose the roof of a barn is bad enough, and it does not minimize the loss to have the contents afterwards soaked with rain.

Lanes and roadways can be very economically and satisfactorily graded during April with a plow and a split-log drag. The sloppier the mud the better, so long as it does not run or the horses mire.

Good thrifty stock, economically handled, is a profit-maker on any farm, even where the profit consists only in the manure produced. But pity the man with ill-doing scrubs. He works for small wages and low interest.

The Easter-tide season of storm and rain comes in time to emphasize the recent advice of "The Farmer's Advocate" to plant trees. Well-placed bluffs of trees protect buildings noticeably, but where a barn stands up exposed to an uninterrupted three-mile sweep of wind, look out!

Given a rich farm, maintained in fertile condition by a liberal supply of barnyard manure, it is easy to produce hay, corn silage and other crops at considerably less than current market values. The turning of a second profit through conversion of these into milk or meat, demands that only stock of the very best quality be kept.

Popular impressions are often erroneous. Prof. Wm. H. Day says April is the month of least precipitation. The belief that it is the wettest is due mainly to the accumulated saturation which has to be evaporated before the land may be dried out and warmed up to seed-bed conditions.

We fear the peach crop will be a failure this year. In a recent visit to the Niagara Peninsula, we heard not a single prediction of disaster. That is ominous. A big crop of early prophecies of failure generally precedes a normal harvest of the luscious fruit, but when the crop seems wholly promising in April it raises fears that the worst is yet to come.

A thousand dollars a year in the city will not secure as good a living as many farmers' families enjoy, nor will the social position be so desirable. Two hundred dollars a year rents but a small and modest city house. Fuel, bread, milk, butter, eggs, pork, beef and car fare run away with another good round sum which the farm supplies in whole or in part. Comparison of cash incomes is deceiving. Comparison of total incomes, or better still, of annual savings, makes the showing much more favorable to the farm.

**The Cow Question.**

"How many cows does he keep?" is usually the first question asked when enquiring as to the extent of a man's dairy business. "How much milk does he produce?" or "How much do his monthly checks come to?" would be more to the purpose.

There were herds of forty cows supplying milk for cheese factories in this country last summer earning no larger checks for their owners than other herds of ten cows supplying the same factories. The difference was due to breed, selection, feed, milking and general management. The cost of feed, stabling and care was undoubtedly somewhat higher per cow in the case of the good, than of the poor herd, but the cost per dollar's worth of milk would be nowhere near as great.

Think of the farmer and his wife and children and hired man toiling all summer, first of all to produce and store the feed, and then twice a day to fill the mangers, clean the stables and pull the teats of forty cows for a total annual income of ten hundred dollars, plus what may have been made out of the hogs, but minus interest on a farm, horses, implements and \$2,000 worth of cows, to say nothing of incidental running expenses! Or, more probably the owner was keeping only about twenty such cows on a hundred acres of land, and would therefore have but five or six hundred dollars, plus a little hog money, to pay for all the labor, interest and expense. The only chance such a business would have of holding boys and girls on the farm would be by keeping them too poor and spiritless to get off.

Hundreds of farmers in this country are doing little better or no better than that, and thousands more are exceeding it by a narrow margin. Other thousands are away in advance, feeding twenty-five or thirty first-class cows on a hundred acres and realizing returns from cheese or butter and hogs, over and above feed purchased, of two thousand dollars a year and upwards. Many thousands more, adopting a plan which for the average man is wiser than extensive dairying, milk eight to twelve good cows and devote the balance of their feed to the raising of colts, calves, sheep, hogs and poultry, and perhaps sell some seed grain, clover seed, beans, potatoes, vegetables or fruit, thus making, in the long run, nearly as much as the farmer with the twenty good cows and a great deal more than he with the twenty poor ones, and this too without the disadvantage of having himself and family continually tied to the cows' tails.

In its stern practical reality this cow question is mightily important. The great point is not how many cows you keep, but how good they are, how well you feed and care for them, and how much you make out of them per cow, or per acre of land required to produce their feed. It takes fifteen to twenty minutes a day to milk a cow and nearly the same for a poor one as for a good one. That means a hundred hours a year, worth twelve to fifteen dollars. Feeding, watering, cleaning stables and general care will require one hundred hours more, bringing the total charge for attendance up to, say, \$25. Other charges are interest \$3.60, depreciation, \$2, housing \$3 to \$5, various minor expenses, and finally feed, varying from thirty to fifty dollars, bringing the total cost of keeping a cow up

to a minimum of \$63.60, or a maximum of \$85.60. In return you have cheese or cream checks, skim milk, the value of a week-old calf and the manure. Combining these items, are your cows earning you \$85.60 apiece? Are they earning you \$63.60? Are they earning you what they cost to keep them? If not what is wrong—cows, feed or dairyman? Probably all three. First of all the cows. Are they in the thirty or sixty-pound class; the three-thousand or the ten thousand? Are they the kind of cows that can be fed up to a decent profitable production? Do you know for sure whether they are or not? Why not get some light on that question? The weigh scales, the milk record and the Babcock test for butter-fat shed rays on the subject, and the records, if studied, start trains of thought that lead to progress on the cow question. J. A. Ruddick, Dairy and Cold Storage Commissioner, Ottawa, who gladly supplies blanks on application, tells us the cow-testing movement is growing so fast now they can hardly keep up with it, and besides members of organized cow-testing associations, many dairymen are testing their cows individually. The man who tells you to keep more cows is not always your friend. The one who induces you to keep none but good cows, of whatever breed or class they may be, is your best friend and the best friend to the dairy industry. Write Mr. Ruddick to-day.

**The Feed Question.**

Along with the cow question goes the other important one of feed. Some one has wisely said: "Feed will tell with the breed but breed will not tell without the feed." Milk is not made wholly out of water, although water is the largest constituent. There must be nutriment and plenty of it, approximately balanced in composition according to the chemist's standards and suited also to the cow's appetite, digestive system and individuality. Do no radical culling in your herd till you have first, in the light of the milk-scale records, given each cow a fair chance by having her freshen in strong condition and then feeding her judiciously up to her capacity to respond. Except when working for high records, pasture alone will do well enough in June, but in winter, cows that are expected to give full paying yields must have some meal, even though the roughage consists of good silage, alfalfa hay and roots. This is particularly true of cows which have recently freshened, or which it is desired to develop to a free flow. One pound of meal to each three or four pounds of milk is a good rule, the variation depending upon the quality of the roughage and the nature of the meal. Of course, a discriminating herdsman will follow no rule rigidly, but will rely upon his judgment to adapt it wisely. But following an approximate ratio of feed to milk is a good way to test out the capacity of a cow, while keeping her cost of production within economical bounds.

Supposing one hasn't the meal, will it pay to buy some? The old-fashioned idea was that what you bought cost money, but what you grew cost nothing, so that milk or meat made with home-grown feeds was all profit. That idea came down to us from pioneer days, when cash was scarce, and labor alone was plentiful, and only a few products had any market value. Under such circumstances the conversion of un-



## The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL  
IN THE DOMINION.

PUBLISHED WEEKLY BY  
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

Agents for "The Farmer's Advocate and Home Journal,"  
Winnipeg, Man.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
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marketable hay into saleable butter or beef, must have seemed almost like so much clear gain.

But times have changed, and to-day almost every farm product has a cash value. At all events it costs money and time (which is also money) to produce it, and the value even of such unmarketable feeds as silage can be compared with saleable feeds on a ratio relative to their feeding value or cost of production, whichever you choose. The herd, therefore, which is to show a profit must first return the intrinsic value of all feed consumed, roughage as well as concentrates. The dairyman who is content to "throw in" the silage, hay and straw at a merely nominal rate will find himself working for very low summer wages. We must insist upon feeding these products to animals which will, if possible, pay for everything consumed. Putting the question in this light not only eliminates poor cows and three-year-old stockers from the farm, but turns a clear light on the problem of whether or not it pays to buy feed. In order to present this problem in a concrete form we shall submit a leaf from our own recent experience. At Weldwood we keep track of all feed consumed, the meal exactly according to weight, and the bulky feeds approximately, estimated from fairly frequent weighing of silage, hay and straw rations, even the bedding being counted. Just for the satisfaction of it we recently footed up the feed records for the months of November, December and January. Quite a lot of purchased meals were used in these three months, principally for the fattening stock, the bulk of the home-produced spring grain being reserved for cows that were to freshen later. The major items of feed were oil cake 1,400 lbs. at \$33.50 per ton; rolled oats, 755 lbs. at \$22; corn-meal, 1,656 lbs. at \$25; undecorticated cottonseed-meal, 400 lbs. at \$24; unsalable hay, 6 tons at \$8; mixed clover and blue-grass hay, 14 tons at \$10; corn silage, (well cured and with small moisture content.) 27 tons at \$5; roots 10½ tons at \$3; green rape, 4.15 tons at \$3. The summary showed:

4,713 lbs. meal worth.....	\$ 72.84
41,745 lbs. hay, etc., worth .....	195.86
27 tons of silage worth .....	135.17
10½ tons roots worth .....	30.78
4.15 tons rape worth.....	12.45
Total.....	\$447.10

This feed was consumed by nine head of beefing cattle, (mostly cows, four of which were fed for two months only,) milking cows, yearling heifers, calves and a bull, all being equivalent to an average of about 24 head of mature cattle for the full time. This means an average cost per feed of \$18.63 or \$6.31 per mature head per month. 'Did the cattle pay for all that feed? To be candid they did not. The increase in the value of the fattening cattle, the growth on the young stock and the milk checks together would not net that value. It is only fair to state, though, that most of the cows were approaching calving date and had previously given their best flow, producing milk at a moderate cost per hundredweight on grass and green feed. Still these figures were striking and promptly stimulated an already formed determination to retain, and if possible, to buy none but the very best stock. Also they suggested another line of thought. If it costs \$6 or \$7 per month to feed a fattening beast may it not pay to use a little more meal, increasing the cost of feeding a dollar or two per month, but also increasing the rate of gain and shortening the feeding period by a couple of weeks? A big point in feed economy is wrapped up here, and it applies to young cattle, cows and other stock as well. We submit these figures for what they suggest, and hope others will be stimulated to figure on their own feed-bills. That way lie some rather disturbing discoveries, but the best hope of profit is beyond.

### Look Out for the Book Agent.

An old and esteemed correspondent of "The Farmer's Advocate" writes us a letter of warning for the benefit of readers in other sections, which is another reminder that persons cannot exercise too great caution in the purchase of subscription books on the instalment plan from unknown agents or issued by comparatively unknown publishing houses. Many valuable works have, no doubt, been made accessible to the public in that way, but it will be well within the dear-bought knowledge of people in nearly every community to say that a host of such volumes have been disappointments, costly, trashy, ephemeral, and, in not a few cases, closely bordering on the fake order. Often they are hurried out on the heels of a war, the death of some distinguished personage or other sensational event, and it stands to reason that any work of a biographical or historical nature of any permanent worth is not likely to make its appeal to the public like hot cakes off a griddle. As a rule, it takes time to produce a book really meritorious. In auction rooms and junk shops one can run across old sets for a song, that a few years before were exploited on the public at ridiculous prices, and the last volume often proved inferior to the first and far below the gilt-edged prospectus, which the itinerant salesman carried in his beautifully pebbled leather satchel a few months before. It is an expensive way to dispose of books, and the publishers are bound to recoup themselves in one way or another. Something cheap and unreliable is usually the result. Illustrated volumes, religious works, and encyclopedias, too often fall into this category. Our correspondent calls attention to one of this nature which he states was found full of ridiculous and unreliable statements. Obviously, a work of reference of that description is worse than useless, being positively misleading. If one is within reach of a public library, good encyclopedias can usually be consulted without buying them, and one should not invest in a set without conferring with some one who is an authority, such as an experienced public librarian. Newness does not condemn a book if it is by an author and from a publishing house of repute. Another point to be borne

in mind is to know exactly the meaning of any orders signed, if one has fully satisfied himself with the offered publication and is certain that he is not just being "talked into" something for which he has no need, and which is not to be of real advantage in the home. Sometimes what is supposed to be a simple order turns out to be a promissory note which is turned over to the tender mercies of some bank for collection, by "due process of law," if need be, in addition to which the purchaser may have already been saddled with express charges on the consignment of books.

### Limit the Hours.

"I'll come over some evening and we can clean up those seed oats that I'm going to get so as not to stop the teams in the field," said one farmer to another many years ago before the ten-hour-day notion was general among rural workers. "You needn't bother coming in the evening," replied the other, "we don't work here after night; come in the day-time," was the startling response. "And I noticed," said the first party, who told us the incident lately, "that this man was never behind with his work, and financially he was getting ahead. He started with nothing when he came to this country, and to-day he is worth more than many of us who have been plugging through day and night."

It is usually so. Why? Because the man who is plodding through all hours of the day and night is fit neither to work nor plan. Instead of directing the work, the work drives him. Counting on the accustomed long hours, he undertakes too much, fags out and gets behind. The one who limits his work, but is sharp on the job, beats him half a dozen ways in the long race. The temptation to run the day into the night is insidious and mischievous. Resist it. Reserve some time for rest and play; time for observation and planning. As much work will be done, and it will be done to better advantage. Up to a reasonable extent, a farmer can save and make money faster with his eye and brain than he can with his arm. Husband your strength, keep a clear head, and a well-toned arm. Do it by limiting the hours of work. It pays.

By way of further emphasizing the economy of fast-working implements, we are pleased to publish Director J. H. Grisdale's letter, discussing two or three points of a recent editorial on the subject. We fully concur in his main contentions, but are still of opinion that it is exaggeration to state that three horses on a two-furrow plow can do twice as much plowing as two horses on a single walking plow. We have known two horses on a single walking plow to turn over three acres of fairly heavy clay land between dawn and dusk. Could three horses on a two-furrow plow turn six? There are few cases in which four of them could do it. As for finish at headlands and dead furrows, we have not denied that this could be accomplished with the big plow, but it is rarely or never done quite so neatly as is possible for a good plowman with a walking plow, and the starting-and-finish line is more ragged because both shares do not take hold or clear at the same relative point. The two-furrow plow is a decided success nevertheless.

Plant more trees, is the refrain of every gale that blows across the country.

A man with a well-grown double or even a single row of evergreens about his homestead, is likely to rest easier than he would without them, when the winds begin to howl.

There has been solid satisfaction, during the March storms, to many a man as he looked along the lines of sturdy maples which he planted as slender saplings a few years ago, and in a few weeks they will become again an annual thing of beauty.



**The Spring Query Fever.**

Monday being the first day of the week is always a busy day. It is "wash" day in most houses, and "clean-up" day in some offices. It seems strange that following a day set apart for "rest" the mail should be so heavy. With the chores, church services, and a copy of the Sunday edition of the daily paper, which tells not only what has happened during the past seven days, but gives an extremely accurate account of what is going to happen during the next seven, what time should a person have to sit down and in a clear, bold hand enumerate anywhere from one to seventeen of the most perplexing conundrums which confront him in his daily doings? These questions are often of such great importance that the writer becomes so agitated and finally so deeply engrossed in the subject that he almost reaches a state of coma, or soars in some spiritual or ethereal realm far from the plane of ordinary mortals, and entirely forgets his earthly name or at least forgets to sign it. As soon as he gets back to "terra firma" he promptly folds the piece of paper containing the complicated queries, whether it be the back of last month's sheet from the calendar, the fly leaf from the latest cook book, the brown paper which served as the wrapper for Jimmie's shoes on the way back from the cobbler's, or the finest piece of perfumed onion-skin sold at the corner's leading stationers, and places it in that oblong covering of a multitude of sins—an envelope, and through the excellency of His Majesty's Mail it reposes on the desk of an all wise editor sometime during Monday's clean up.

Some writer has said, "It is man's destiny still to be longing for something, and the gratification of one set of wishes but prepares the unsatisfied soul for the conception of another." So it is with questions; one consignment answered, another asked. Often the mania for asking so grips the interrogator that, exhausting all new lines of thought, to make a list long enough to be worthy the attention of the person of great knowledge he adds a few which have been answered in recent issues, but the particular copy of the paper in which they appeared has been used to cover the last basket of eggs which was taken to the grocery, and the grocer retained it to start his fire in the morning or perhaps Maggie folded it up and used it to protect her plump little hand while doing last week's ironing, or maybe the "kids" chewed it up into "wads" to throw at each other in school. "Articles come and articles go (back), but questions come on forever."

A bright child of three can ask more questions in a half hour that a professor can answer in a life-time, yet one or two human editors are expected to propound sound, logical, unquestionably correct solutions for all the questions which travel through the cerebrums and cerebellums of everybody over three years of age, whether the questions come to them during sane moments or are the result of "nightmares." All these must be answered "immediately," or "in your next issue." Small wonder if a query editor gets a bit impatient or imbibes once in a while. No wonder that when an occasional subscriber delivers his queries in person, he has to dig the editor out of a conglomeration of dictionaries, encyclopaedias, doctor books, cook books, veterinary works, and all manner of authorities from Webster and Shakespeare down to the blue books and bulletins so generously supplied by our thoughtful governments of the present day. When the man wanted is found, he in quest of information, while approaching filled with awe at meeting so great a personage, is usually almost speechless when he beholds a mere man (flesh and blood) doing the work. Really he marvels "how one small head could carry all he knew," but sometimes becoming a little skeptical after seeing the pile of available information (books) at the editor's command, he is inclined to make light of the advice given from the latter's personal knowledge, and leaves abruptly, saying, "I have tried that and it wasn't any good," or "I don't think it will work." We feel greatly offended upon such occasions. Our estimation of our own ability sinks lower and lower, until we are again buried deeply in prepared authorities. Nevertheless it is hard to "stick" us! We know a little ourselves, know some clever men and know where a lot of books are kept.

But it is the questions not discussed in any practical works which lother the walking encyclopedias of the present day. Here's a good one. "How many eggs does a hen lay before she sits?" Now, how many does she? After looking through all the poultry works in an up-to-date library and reading carefully Prof. W. R. Graham's bulletin, we don't know. Some young hens do not sit at all; neither do some very fat hens which "roost" most of the time. We are seriously thinking of buying a hen of each of some fifty or more breeds, and to be sure that

we get accurate information have these cooped on the ledge along the front of our offices where we may be able to observe all their many movements, including egg production. We hope to have definite information on this subject later.

Poultry problems are particularly puzzling. Another wishes to know how to keep turkeys at home. Get a piece of strong cord and fasten it securely to one of the lower appendages on each bird, and tie the other end of the cord to a tree, fence post, or some other solid object. Be careful to renew the cord when the old one gets frayed. If the cord is scarce and wire is plentiful, clip one wing and place the birds on a certain spot, and build the wire around them as a fence. How simple! If children are plentiful, six or eight of them might be assigned the job of turkey herding, provided there are no creeks in which to fish or bathe, and provided also the "marble" season is over.

"What causes cattle to die?" Now, sometimes they die by being hit with a hammer after which a knife is thrust into their throats. If this does not kill them cut off the tail directly behind the ears, and the animal thus deprived of nostrils cannot breathe any longer so dies. Cattle also get sick and die. There are at least several fatal diseases, as tuberculosis, apoplexy, indigestion and nervous breakdown, the latter disease also being prevalent among query editors. More on this question later.

"What is the most effective method of exterminating sparrows?" Here is a conundrum. Slip up very quietly behind the birds while they are feeding upon the heads of standing wheat. Have a little salt in your hand and place not less than, and not more than 15-17 of an ounce on each bird's tail. A guaranteed cure if the precaution is also taken to wring the bird's necks during the process of the operation. If this seems impracticable get a good gun, some powder and small shot, and a person used to such weapons and not likely to do himself or anyone else bodily harm.

it ruin him for breeding purposes?" No comment.

"Pigs fight, please say what to do?" When two "human" pigs get into such difficulty some one usually separates them. This seems logical treatment for the four-footed swine.

"We held a post-mortem on a bantam hen; she died; what ailed her?" Was the post-mortem held before or after she died? Fearing the operation she must have succumbed.

If this epistle does not soon cease there will be a more serious post-mortem to be held, a result of "nerves", or of severe punishment from an anxious clientele seeking sensible information.

However, this may not be a joke. It is more than a joke. Moral: Always think for yourself before asking a question. Don't send away 100 miles for an answer you can turn up at home. Write plainly on one side of the paper only, and on clean writing paper. Always sign your name and give your post office address plainly. Never ask questions which have been answered in recent issues. Preserve all copies of the paper. Never ask foolish questions. Always give particulars in full, especially when asking about diseases. Never expect to get a question answered "immediately" for such is generally impossible, and always remember that the query editor is a busy man and human.

Well the afternoon mail has just arrived with more questions, so au revoir.

PERPLEXED PETE.

**HORSES.**

For the light mare select a light sire and for the heavy mare a heavy sire. There is little or no excuse for crossing these two extreme types.

Is the stallion getting sufficient exercise or is his exercise increased in the same proportion as his feed is increased during the last month of preparation for the season?

Did you ever try unharnessing the horses for their noon spell during the close "muggy" days of seed time? This entails a little extra labor but it is worth it.

April is usually a hard month on horses. Make this April as easy for them as possible by attending carefully to their special needs at this season.

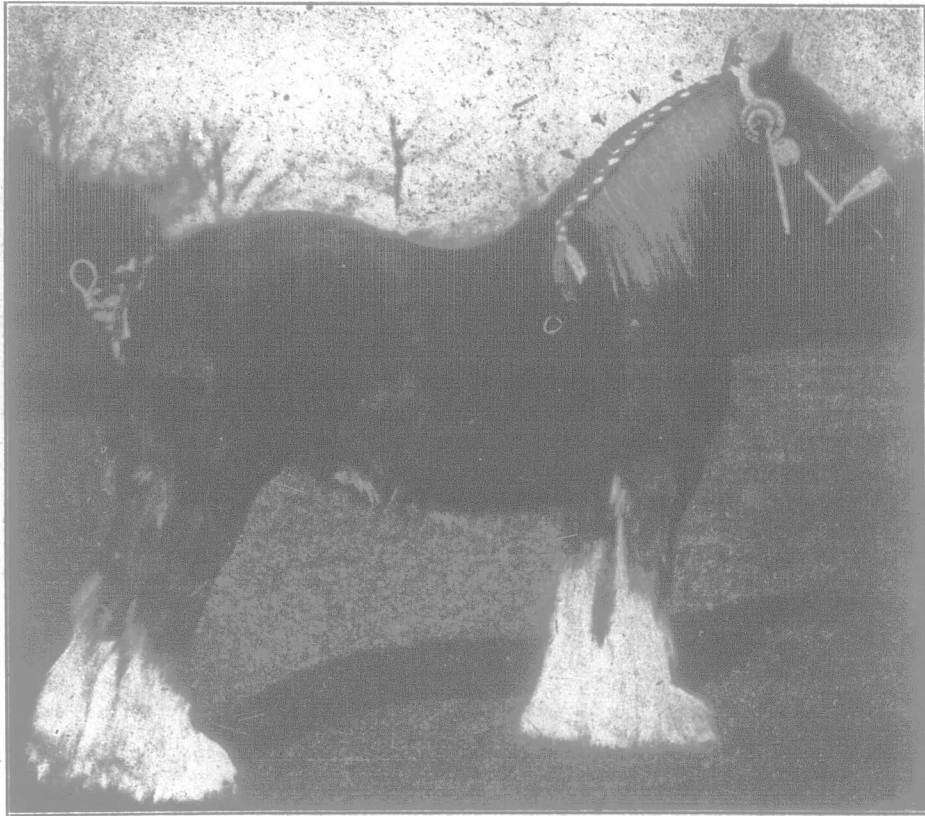
Don't forget that the colt, or in-foal mare working beside the big gelding may have due consideration for the difference in strength by giving them the "long-end" of the double-tree.

The ninth day after the mare foals is one of the best possible times to return her to the stallion. She is usually in oestrus then and if bred is likely to conceive.

If your mare has foaled early and is being used at the spring work do not allow her to go to the colt in an over-heated condition. Such often causes serious digestive derangements in the foal.

In another month the breeding season opens. Have you decided upon the horse to which your mares are to be bred? It is folly to put this matter off until the last minute and then take the "handiest" stallion whether he be good or indifferent.

Many make the mistake of suddenly increasing the grain ration of the horse the very day he commences spring work. This should not be done. By gradual increases the ration should be up nearly the maximum before the heavy work actually begins and the horses accustomed to the increase. The animal called upon to do heavy work after months of comparative idleness has sufficient strain placed upon him without being



**Dunsmore Chessie.**

Winner of first in her class and champion mare at the London Shire Show recently held. Owned by Sir Walpole Greenwell.

More intricate than any mere "animal" queries are those of affairs between man and man, or worse yet between man and woman. A correspondent recently wanted to know how a girl could be compelled to give back a "wring" which had been bestowed upon her by an ardent and admiring youth before the very eyes of another of the genus Homo. This question was fully answered in a recent issue by an expert on such matrimonial mix-ups. Don't fail to read it, as it may save you a lot of trouble.

"I have a cow with a wart." Poor cow. This trouble has been cured so many times through these columns that the query editor actually answers it now without looking it up. Small need of it ever being asked again when this is the case.

"Would a home course of education be advisable?" How can the poor child avoid such an education with plum trees, apple trees and all other kinds of trees growing switches so near at hand? The recollections of "home" education are vivid in most minds, although applications were made lower down.

"If I clip the tail feathers off my drake will



compelled to do the work of digesting over-large supplies of grain, work to which his digestive organs are unaccustomed and consequently not prepared to do.

### Bandaging, Administering Medicines, etc.

- (1) After a heat in a race, or a workout, should bandages alone be used on the horses' legs, or should cotton batting be used under them?
- (2) How long should the bandages be left on after a race?
- (3) Is it wise to give nitrate of potassium and arsenic in treating a case of scratches; would a tablespoonful of the nitrate and 1½ ozs. Fowler's solution of arsenic twice daily for ten days be too much?
- (4) Should cold or hot water be used to bathe a sprain before applying liniment, and should the leg be rubbed dry before applying a bandage, and what kind of bandage is best?
- (5) Should a bandage be applied over a case of scratches?
- (6) Are Bucha leaves good for horses?
- (7) How should a Hackney colt be shod to show at the Fall Fair?
- (8) What is the meaning of swedged heels on shoes?
- (9) Is rock mixed with water good to apply to horses feet in dry weather, or is oil better?
- (10) Which is the best to use, an over check or side check?
- (11) Will a horse do better fed on the floor than out of a high manger? Would it be wise to build stalls without mangers?
- (12) Do you like earth floors in box-stalls?
- (13) What's good treatment for a horse with a cough?
- (14) Does two parts of witch hazel and one part each of alcohol and water make a good leg-wash for race-horses, or would a mixture of laudanum, water and sugar of lead be better?
- (15) To reduce an enlarged leg should batting be used under the bandage and what kind of bandages should be used, and where can they be purchased?

F. M. G.

- (1) It is good practice to use the batting.
- (2) About two to three hours.
- (3) They should not be given together and arsenic should never be given except under instructions from a veterinarian. The doses of nitrate of potassium you mention given for ten days would cause a condition called diuresis, and as stated the two drugs should not be given in conjunction. As a matter of fact it is not wise for an amateur to give poisonous drugs in any doses except under instructions from a veterinarian. The too free or long-continued administration of arsenic causes fatty degeneration.
- (4) When soreness is acute hot water is better, when not very sore cold should be used. If a dry bandage be used it is well to rub before applying, but in many cases the bandage is soaked in cold water (called a cold water bandage,) before applying, in which case it would be folly to rub leg dry before applying. A bandage made out of flannel does very well, but there are bandages made especially, which give better satisfaction. One variety is called "Derby Bandages," but there are others of about the same kind called by different names.
- (5) No.
- (6) With rather heavy shoes without calkins, the toe rounded off in front and the heels swedged. The weight of shoe will depend upon the individuality of the colt. Experiment only will tell what weight he goes best with.
- (7) We have had no experience with this.
- (8) The shoe gradually becoming a little thicker towards the heels and without calkins.
- (9) Yes, anything that will hold moisture is good. Water is much better than oil.
- (10) This depends upon the animal, some go better with one and some with the other. Overdraws are used on most race horses, but there are exceptions and some horses go better without any check.
- (11) Yes, hence it is better for the horse if there be no mangers, but careful feeding is necessary to avoid waste.
- (12) They are better for the horses feet, but are very hard to keep clean and if the horse paws he will make holes.
- (13) It depends upon the cause of the cough. In most cases the application of mustard to the throat and bandaging the throat, and the administration of two drams chlorate of potassium and forty grains quinine three times daily gives good satisfaction.
- (14) Yes, the former prescription is much the better.
- (15) It makes little difference. The bandages already referred to can be bought at any up-to-date harness shop or dealer in horse goods.

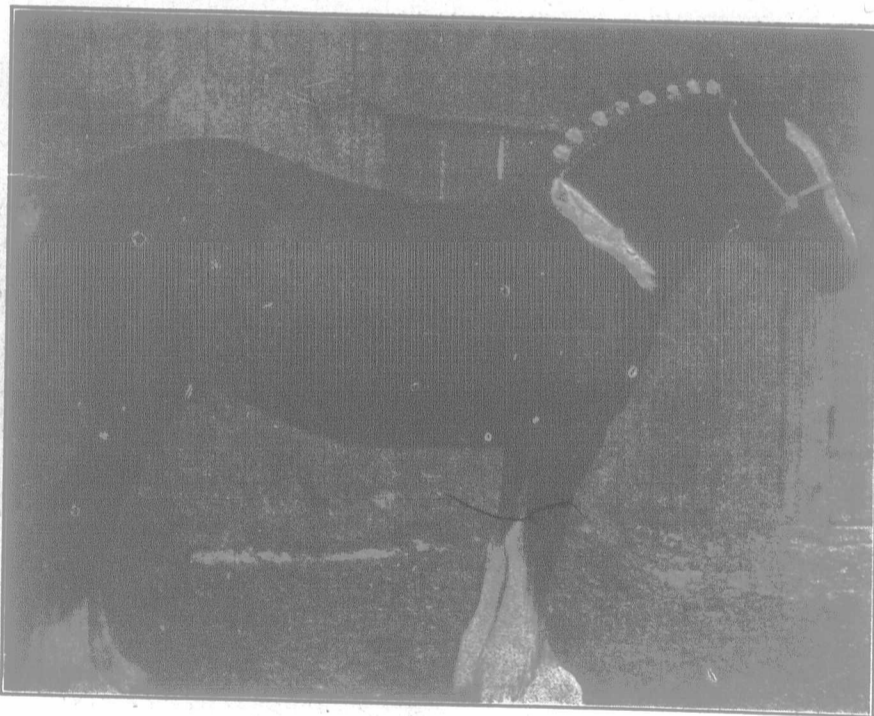
WHIP.

### Earnings of the National Bureau of Breeding.

Editor "The Farmer's Advocate.":

In your issue of the 18th inst., there appears a letter from J. Gordon McPherson, V. S., who says he has been in the horse business for almost fifty years. We wish to call attention to the fact that even such a glorious record as this does not qualify him as an auditor of the affairs of a company in which he has no interest. He states in his letter to you that the National Bureau of Breeding is making \$20,740.00 per year in government grants and percentage of service fees. As a matter of fact, the National Bureau has not taken in that much money from these sources in the whole five years of its existence. The National Bureau did not start out to make any money on its work, and its record is clear of commercialism. Only four men in Canada have returned any percentage of service fees to the National Bureau, and the others have not been asked. The Bureau has expended more in freight and express alone than the total amount received from all sources, including government grants. Every year has shown a big deficit, and this was expected and was cheerfully met by the men interested in the Bureau. We have paid out money for freight, express, insurance, registration, railway fares, stabling, wages, pedigrees, veterinaries, customs, blacksmiths, office expenses and printing. The best year we ever had was in 1912, and the deficit for that year was reduced to \$6,710.00, thanks, principally, to government support. That deficit was not large, but added to all the others, we think it makes a total greater than that assumed by any other group of men for the benefit of Canadian horse breeders.

Doctor McPherson, never having kept a Bureau stallion, and not yet having one in his County, is not in a position to give any facts regarding



Ruby Gay.

Grand champion Clydesdale mare, and winner of the Silver Cup for champion male or female of the breed at the Guelph Winter Fair, 1912. Exhibited by John A. Boag & Son, Queensville, Ont. Recently sold to David Little, Portage La Prairie, Man.

the returns to the men who have Bureau sires. We are in touch with all these men throughout Canada, and they are all entirely satisfied as far as we know. If any man in Canada who has a Bureau stallion thinks he is not getting a square deal at the hands of the National Bureau, he merely has to send word to us and we will gladly take the horse back, paying all transportation charges as when the horse was sent to him. In five years, under this rule, we have transferred four horses, and in two instances out of the four, the men were either moving out of the country or had sold their farms.

If a good Thoroughbred sire is such a financial catastrophe as Doctor McPherson suggests, how is it that the Bureau gets nothing but letters of thanks and praise from keepers of Bureau sires. And how comes it that we have over three thousand applicants for such sires on a waiting list.

Breeders of half-breds are on the eve of good times, despite any croakings which may crop up here and there. The advent of the motor may interfere with the trotter or Hackney, and even with the heavy horse, but as a remount and saddle horse, our best friend in the animal kingdom has a safe position.

During the past month a new Company—the National Live-stock Exchange, Limited—with an authorized capital of \$2,000,000 has been formed with a strong and representative Canadian

board. One of the first things before this Exchange is to collect all the half-breds that can possibly be secured through Canada, as yearlings and two-year-olds, to hold and mature them for cavalry purposes. If this does not mean quick returns to the breeder, I would like to know what it does mean.

The National Bureau is on the right track, and so is the government. This is proven every day, not only in Canada, but in England, France, Germany, Austria-Hungary, Italy, Argentina and Japan. What a small thing an individual opinion is against the best brains and the best judgment of all these progressive nations!

JOHN F. RYAN,

Mgr. Canadian National Bureau of Breeding.

### A Place for the Thoroughbred.

Editor "The Farmer's Advocate.":

Have just received the issue of "The Farmer's Advocate" containing Dr. McPherson's letter and also your request that someone who has handled a Thoroughbred horse give you his experience.

I have a very noted horse from the Canadian National Bureau of Breeding, Montreal, which has distinguished himself on the turf, being a grandson of the famous old "St. Simon," an illustration of which appeared in the Xmas number of "The Farmer's Advocate," 1912, and also in that number of 1904. Have only had him a short time, and cannot give you figures until after the season, to do the horse or the breed justice. I will say, however, that this horse arrived here on July 12th, after the season, and was mated to about twenty mares, with practically no advertising. Thirty mares would be a very small season for any horse, and profits would be very small, but any horse that is not being patronized may be sent back at any time. The Bureau delivers them to the farmer free of charge and does not hold him responsible for accidents or sickness, etc., unless in case of neglect or carelessness.

Further the Bureau was just organized a few years ago, in the spring of 1908, for the purpose of improving the breed of horses in Canada, by placing Thoroughbred stallions of class and pedigree within easy reach of farmers with good cold-blooded mares.

It is admitted by all governments, and was proven by the British Commission, in 1896, that the only way to get cavalry horses is by means of the Thoroughbred cross. Now to show the state of the breeding industry in Canada, it may be said that the North-west Mounted Police have difficulty in securing eighty saddle horses per year, which is necessary to keep their force up to the standard. I would ask Dr. McPherson to compare the horses and their ability of forty-five

or fifty years ago with the average horse of today. Like Simcoe County, the horses of Wellington County had a streak of Thoroughbred blood and I venture to say that these horses, like ours, were unequalled for strength and endurance. At present anything with hair on its legs appears to bring a good figure and though I do not approve of crossing the Clydesdale and the Thoroughbred for the market, yet the farmer would get a much harder animal for his own use from such a cross.

I wonder if Dr. McPherson, being a veterinary surgeon uses a pure-bred heavy horse when he receives a call to attend some sick animal, or does he make the poor farmer pay the expense of an automobile? He apparently does not wish to see any more light horses bred by the farmers.

On the other hand, I admit that the light horse is more liable to blemishes on account of his hot blood and restlessness, but a National Live Stock Exchange has been organized in Montreal which aims to collect a large part of the Bureau crops so that these half-breeds can be matured and developed for cavalry purposes. They intend to secure ranch land in Alberta and assemble these young horses there. The crop will be bought as yearlings and two-year-olds, thus giving the farmers and breeders quick returns and assuring them of a steady market and lessening the danger of accidents to a good



animal, to the age of five, when Dr. McPherson says the light horse is ready for the market.

When the Hackney horses were first imported they were very popular, but we find that they do not give us the expected results when crossed with our cold-blooded mares. Unlike a cold-blooded colt, the half-bred colt matures much younger and is ready for the market at the age of three, although he would grow into more money at the age of five or six. Also, the get, of any Thoroughbred stallion is eligible for registration in the half-bred register.

Now, one more point before I close. There is at present a great agitation, "Keep the boy on the farm." Does Dr. McPherson think he can solve that problem by telling us farmers to raise all heavy horses? What boy, who will make a successful farmer, does not love horses? And what boy will take any pleasure driving a pure-bred heavy horse on the road, while riding him would be out of the question?

Every farm should have at least one driver, and this animal, to give the most satisfaction to his owner must have a streak of Thoroughbred blood.

Wellington Co., Ont.

A. E. CURRIE.

[Note.—The register referred to in case of half-bred colts is not a "pedigree" register.—Editor.]

### Satisfied with the Thoroughbred.

Editor "The Farmer's Advocate":

The letter of J. Gordon McPherson, V.S., in your issue of March 18th, does not do justice to the Thoroughbred as a sire of useful and profitable horses. Dr. McPherson says the only profitable horse for a farmer to breed is the pure-bred heavy-draft horse. Now, I do not agree with him. High-class saddle, carriage and roadster horses are sometimes quite profitable for those who breed, feed and attend to them properly. I own a mare of the roadster type, for which I have been offered as high as \$350, but she is such a grand all-round farm horse that I would not like to farm without her. She is in place hitched to a binder, disk harrow, buggy or ridden under saddle, and can be driven by women and children, and she has won prizes in both the roadster and carriage classes at exhibitions. This is the type of horse that will help to keep our boys and girls on the farm.

If all farmers take Dr. McPherson's advice and raise nothing but pure-bred, heavy horses, who is to raise our saddle and carriage horses, the highest-priced horses in the Montreal market to-day? Farmers who are breeding and working heavy-draft horses, should, if up-to-date, have at least one horse of the general-purpose type. I don't mean a chunk but a clean-limbed horse of a somewhat rangy appearance, showing considerable breeding, one that will in a pinch do any work on a farm. A cold-blooded mare of good conformation and size, bred to a good typical Thoroughbred stallion will be almost sure to produce a good general-purpose horse—one that will not be out of place hitched to a plow, buggy or ridden under saddle.

But Dr. McPherson says these Thoroughbred crosses cannot be sold till five years old and then the price will be \$160 to the army, or a maximum price of \$200 to an outside party. Now this is not my experience. I sold a thirteen-month-old colt by Athel, a Thoroughbred out of a grade mare in May 1912 for \$175. One month later I was offered by the same man \$200 for a ten-month-old filly out of a small mare of mixed breeding. This offer I refused and several other offers for this filly as I wish to keep her for a brood mare. This filly is now nineteen months old, drives well both double and single, girths 70½ inches, 15-1 in height, and weighs 1,000 lbs. Her dam weighs 1,060 lbs., and is 15-1 in height. Next winter I expect this filly to earn her feed by doing some driving, choring in a team, etc.

I have also another colt ten months old for which I was offered \$125 recently, but I am asking \$150 for him now. These colts are by Athel, a Thoroughbred sire.

Owing to his prepotency and breedy appearance as well as his possessing stamina and gameness in the highest degree, the Thoroughbred will lay the foundation for high-class saddle, carriage and roadster horses; for the mares by good Thoroughbred sires out of ordinary cold-blooded dams, should be ideal brood mares to breed to Thoroughbred, Hackney or Standard-bred sires.

Dr. McPherson is a veterinary surgeon and I should judge has a country practice, for he claims to be an experienced farmer. Is he satisfied to drive a pure-blooded, heavy-draft horse on his sometimes hurried professional trips?

Argenteuil Co., Que.

J. FRED MORROW.

### Breeding Remounts in the United States.

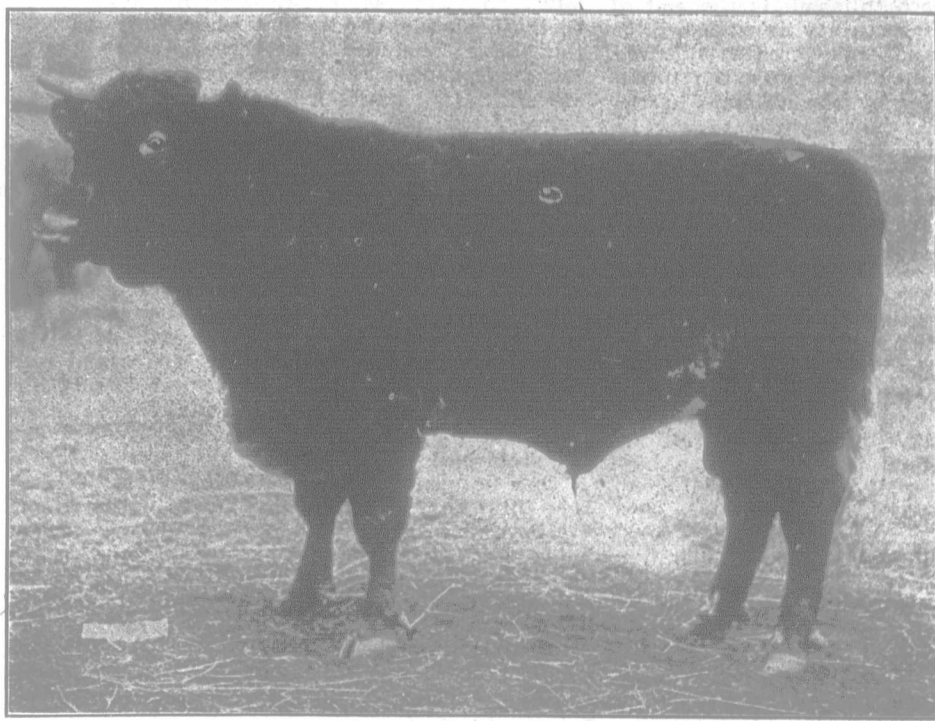
The United States Department of Agriculture has completed for the present the purchase of stallions for use in the encouragement of the breeding of horses for military purposes. Four Morgans, ten Standardbreds, eleven American saddle horses, and nine Thoroughbreds have been purchased. These stallions, with four or five Morgans from the Morgan Horse Farm and six Thoroughbreds presented to the Government, will be available for public service during the season of 1913, making a total of at least 44 stallions. The first requisites of these horses required were that they should be good, sound individuals, and registered in the proper stud books. Good breeding was therefore essential, and in many cases stake and show-ring winners were obtained, but no horse was bought solely because he was a race winner or solely on account of his pedigree. The owners of sound mares, with a square trotting gait, may breed such mares free of charge, provided they give the Government an option on the foal during the year it is three years of age at \$150. However, the Government will not hold the breeder of a foal to his option if he wishes to be released, but will allow him to cancel the option at any time by paying the service fee. This fee will be \$25.00 for mature stallions, and less for those under five years of age. In buying the colts, the War Department has agreed to purchase both mares and geldings. No service fee will be charged unless the owner elects to cancel his option. If the Government buys the colt, no fee is charged; if the colt is offered to the Government and purchase refused, no fee is charged.

Only those mares will be bred which are free from the following unsoundnesses: Bone spavin, ring bone, side bone, heaves, strangles, lameness of any kind, roaring, periodic ophthalmia, and blindness, partial or complete. Mares must also be free from manifest faults of conformation, such as curby hocks; pacing mares will not be bred. Approved mares will be given a certificate of registration in the Remount Brood Mare Register of the United States Agricultural Department.

## LIVE STOCK.

### A Profitable Flock of Sheep.

About two weeks ago the reports of Toronto markets contained an item of interest, to all those engaged in sheep breeding. This report stated that John Beamish, of York County, had marketed in Toronto twenty-two very choice



Pierrepont Peer.

Winner of first prize in a strong class of Shorthorn bulls, between 10 and 20 months old, at Birmingham Show. This bull sold for £1,522.

lambs (one year old this spring) for which he received \$9.75 per cwt., or \$14.50 per head, the lambs averaging nearly 150 pounds each. This is very good returns. We wrote Mr. Beamish for further particulars, and his reply bears out the statement. These twenty-two lambs were raised from sixteen Shropshire ewes crossed with a Leicester ram, and were just eleven months old when sold. These same sixteen ewes in 1911 produced twenty-six lambs, twenty-three of which were raised and sold on Toronto market at \$8.40 per cwt., weighing 137 pounds each at ten months of age. Very good returns from sixteen

ewes, \$319 in the spring of 1913 and \$264.68 in the spring of 1912, or a total of \$583.68 for two years, not counting wool.

Mr. Beamish describes his feeding as follows:

"I run them on cabbage for three weeks in the fall, which I sow among the mangels. After the mangels are taken up the lambs are let in before being penned up for fattening, and then I begin feeding as follows:

"All the alfalfa hay they will eat night and morning, and pea straw at noon; a feed of turnips in the forenoon and afternoon of about seventy pounds each time, and for the last four weeks the turnips were omitted in the afternoon, and they got a feed of grain which consisted of half a bushel of mixed oats and barley. They got all the water they would drink, and rock salt was kept in the pen all the time."

Neither lamb crop was exceedingly large, although a fair crop. A lamb and a quarter to a ewe is often reckoned as very satisfactory, but it is often possible to raise a lamb and a half, and sometimes more. Mr. Beamish's results have not been attained by the unusual productiveness of his ewes, but rather by the using of good ewes and good sires, and giving good care and feed. Who will say that there is no money in sheep?

### Handling the Bull.

Editor "The Farmer's Advocate":

As I have been keeping bulls for nearly thirty years, I thought perhaps it would not be out of place to have a few lines put in your valuable paper to let your readers know of my experience in handling the bull.

It is worthy of note that peoples' ideas differ widely regarding the treatment of the bull. Some men think the more harshly the bull is used the better he will keep his place. I had a certain man working for me, and when he would go into the stable if the bull would bellow or bow his neck, the chances were he would get a kick or a crack from a club or a jab from a fork, and be told to take that and keep his neck straight.

My experience has taught me that a bull deserves to be treated as kindly as any other animal, as long as he keeps his place. If he does anything wrong, which deserves a whipping, give him one, and be sure you give him a good one. When you are through whipping him leave him, and don't go near him for two or three hours. When you go back to him be sure you are in good temper, and approach him with a whistle or a song in your mouth and a pair of turnips in your hand. Pet him, talk kindly to him and you and he will be good friends again, and the chances are he will not do anything wrong again for sometime.

Some years ago

I had a Shorthorn bull so much under my control that I could lift his hind foot and have it pared with a drawing knife when he was in his fourth year, and weighed over 2,300 pounds. I never allow a bull to run in a box stall after he is a year old, as he will likely get hard to catch. He may sometimes, when you are not aware, pin you in a corner. You need to be always on guard for them, for nine times out of ten it is the quiet bull which kills the man. Do not let him run in the pasture with the cows, as you may wake up some morning and he may be in with your neighbor's cows or in your field of grain, or he

and all the herd may be in your root crop. If you keep one keep him in the stable where he ought to be, or do not keep any at all. To give him exercise let him out in the morning or evening with the cows when they are in the yard. Do not try to catch him in the yard. Have some chop or turnips in his manger, and he will learn to go into his stall as quietly as a cow.

I do not ring a bull until he is over a year old. I ring him myself, and I could do it alone if no person were within miles of me. I have a piercing iron for the purpose, made by a blacksmith out of a tooth of a sulky horse rake,



sharp on one end and a D turned on the other end. I tie the bull by the neck with a chain to the left side of the stall. I take a rope and tie him by the horns to a post. I then take another rope and put it around his under jaw, and if I am to do it alone I tie it to something in front of him. If I have an assistant, the assistant holds the rope. This keeps his head solid. I then take him by the nose with the left hand, and take the piercing iron in the right hand and I pierce it as quickly as possible. When the ring is in it is a good plan to hold a pan under his nose while you are putting the little screw in the ring. If you should happen to let it drop, the chances are you would not see it again. Do not try to lead him by the ring for a week or so afterwards.

If you keep a bull keep a good one, as it is an old saying, that a good bull is half the herd, and a poor one is the whole herd. Always aim to blot out the scrub, and buy the best you can possibly buy, as the best is none too good.

York Co., Ont.

R. EAGLESON.

### Few Cattle at Winter Shows.

At the Ontario Provincial Winter Fair, held in Guelph, last December, cattle of the beef breeds formed a comparatively small portion of the show. The same was, to some extent, true of the Eastern Ontario Live-stock and Poultry Show, held in Ottawa, in January, and the Manitoba Winter Fair recently held in Brandon, brought out the same conditions only to a much more marked degree, there being only about thirty head of cattle out as against 450 horses. Regina exhibition following Brandon was also heavy on horses, while the cattle entry was light. Why is this? Are the prizes offered not large enough to be worth competing for? They should be. Thirty-five dollars is not a low figure for first prize on a beef steer, and a second prize of \$25.00 and a third of \$15.00 follows it up very well. It is a question whether it would not be advisable to add small money prizes in place of the ribbons "H. C." and "C.", transferring these two places further down the line.

But it is not the size or number of the prizes that is wholly to blame for the condition. The beef industry has of late years been decreasing rather than increasing in popularity. Good cattle are being bred and fed, but not in so great numbers as formerly. If an interest cannot be created in any class of stock, shows of that particular class are not likely to be outstanding successes.

Then again more interest nearly always centres in breeding classes. From a feeder's viewpoint fat classes are the most important, but we must have good breeders before it is possible to get good feeders. A finished bullock shows what has been accomplished, is the end of all the effort, but an uncertainty is attached to the breeding animal, and this creates renewed interest. This uncertainty is simply the possibilities offered the breeder by the animals in the breeding classes, which cannot in any way be connected with animals fitted for the block. Breeding classes would undoubtedly strengthen the numbers of cattle at our winter exhibitions. If horses should be a part of a winter live-stock exhibition, there seems to be no good reason why breeding classes of cattle should not have a place. No one would care to do without horses, why leave the cattle in the background? The growing popularity of the horse at these shows has almost crowded the cattle into oblivion. In the days when our winter shows were "fat stock shows", in every sense of the term, breeding classes had no place, but since breeding classes of horses have been added it seems but fair that breeding classes of cattle should have a place. While horses and horse-breeding interests are very important factors in this country, the beef-cattle industry also is or should be of sufficient value to warrant every possible consideration. Beef cattlemen should "boost" their business, and make every effort to ensure more and larger classes at our winter shows whether breeding classes are added or not.

### Castrating Lambs.

It is a good rule to follow with all grade live-stock on the farm, to castrate all the males at the age when the operation is likely to cause least shock to their systems. No grade should be kept for breeding purposes, and many of the inferior pure-breeds could profitably be submitted to emasculation. Most farmers castrate their colts, their calves and their pigs, but only a small proportion think of making wethers of their male lambs. This latter is one of the most profitable of all the operations. Wether lambs are quieter, grow faster and feed easier than the ram lambs. Wether lambs and ewe lambs may be fed in the same pen without difficulty, while such would be altogether impossible with ram lambs. The finished product with the wether is far superior to that of the ram. There is less

bone in proportion to carcass, and there is much less development of the inferior portions of the body as head and neck, and the meat of the wether has a better flavor than that of the ram, consequently wethers command a much higher price on the market than rams. Just take a look at the market reports from week to week, and see if the margin between the price paid for wethers and that for rams is not great enough to pay many times over for the little difficulty of castration.

Every grade ram lamb or every ram lamb to be fattened for the butcher's block should be castrated and docked when from ten days to two weeks old. If done at this age danger of loss is at a minimum. Have an attendant catch the lamb, avoiding excitement and undue running of the lamb, and when caught let him grasp the legs hind and fore on each side in either hand. Place the lamb's rump on a box (it is well to have a box long enough to allow of the attendant sitting on it, and leaving plenty of room to place the lamb down in front of him) and with a clean sharp knife cut a portion of the end of the scrotum completely off. To ensure that the knife is clean disinfect it in a five per cent. solution of carbolic acid, and it is well to put a little of this on the scrotum before cutting to be sure no infection is carried to the blood from this by the knife. Now with a pair of disinfected pinchers or with the disinfected thumb and finger draw the testicles, one at a time, casings and all. (English shepherds use their teeth for this operation with good success). This completes castration.

Now stand the lamb on all four feet, and with a sharp knife cut the tail from the under side upwards against the thumb, and the entire operation of castrating and docking is complete. Cut the tail at the second or third joint from that at which it is attached to the backbone. Cutting upwards in this way allows the knife to slip between the joints, and less injury is done than where a hammer and chisel cutting against a hard surface are used often severing the bone between joints in place of unjointing. If bleeding be over profuse, tie a soft cord tightly around the end of the stump until it ceases, when it should be cut off.

### Crossing for Dual-Purpose Cows.

Regarding the enquiries of H. R. L. in your paper of March 13th, re crossing Holsteins with milking Shorthorns I may say that I approve of it, as I have been breeding the dual-purpose cow for fifteen years.

I keep a registered Shorthorn bull of the milking strain. For three years my neighbors have been crossing the Holstein cows with him and they are more than pleased with the result, so much so that some of them are going to sell their Holsteins and buy Shorthorn grades, as they have concluded that there is more money in the dual-purpose cow in this part of the country, as it is not a dairy country, being more used for grain and hay. Now, if I lived in a dairy section and made a speciality of dairying, I would perhaps keep the pure-bred Holstein cow, but the trouble is right here there is not more than one cow in fifty a Holstein. If a farmer has a black cow she is called Holstein. If she has good markings (by chance) she is extra well bred. Buyers come around and give a fair price for a cow that is well marked, get a car-load of them and advertise a sale of Holstein cows, and farmers go for miles to attend that sale and get "soaked," as they are simply black and white cows.

The whole trouble lies here, some one buys a Holstein bull and he is used by a few farmers and if they happen to get a bull-calf well marked they keep him for service and charge a small price for it, and serve a good number of cows because he is near by and cheap. They also raise some heifers and perhaps a bull for their own use and the use of neighbors, hence, the Holstein grades, so called, as a rule are nothing more than black cattle.

Now, if you cross these cows (as above mentioned) with the milking Shorthorn, you have something the very first cross, (as it is half-Shorthorn.) If it is a bull-calf it will certainly make a good steer. It matters not what its color is, but if it is roan it will be still better. If it is a heifer, raise it, and it stands fifty per cent better chance of being a good cow than its mother ever did. If not she will make good beef with very little feed, after you have tested her as a cow, and when her hide is off, she will not look as blue as if she was more Holstein.

Now during the three years my neighbor has used my bull I have not seen one black calf, although one farmer told me this week that he has a black and white heifer-calf, and a nice one too, but he is going to veal it, as he says he will not own another black cow after he gets rid of the ones he has. It is true that they make good veal and make it quickly, as Holsteins produce good calves and the Shorthorn gives them

the quality. One man sold a calf last year three weeks old for eleven dollars and eighty cents, and brought all his cows back to the Shorthorn bull, and is going to do the same this season. Therefore, you will see that those who have tried this cross-breeding are well pleased with the result.

Norfolk Co., Ont.

A SUBSCRIBER.

[Note—In the first paragraph of our correspondent's letter he states that some of his neighbors are going to sell their Holstein cows and buy Shorthorn grades. Heavy-milking Shorthorn grades will surely give more satisfactory results mated with a Shorthorn bull than will Holstein cows. From the letter we would judge that the class of Holstein grades or "black" cattle in the district in which our correspondent lives, is inferior and not worthy to be called "Holstein." They seem to be mongrels, and no doubt good pure-bred Shorthorn bulls have a great uplifting effect upon stock from such cows. If the cows were real high-class grades of the Holstein breed and kept, with their progeny, for milk production the Holstein bull would be the thing to use, but in a district like the one mentioned, where the dual-purpose cow is desired, or where many of the calves are beefed, the Shorthorn cross on the common cows is a good one, and better yet is the pure-bred Shorthorn bull on good grade Shorthorn cows. Where cows are kept for milk and their calves sold or slaughtered, at a day or two old, or when dropped, would it not be well to have these calves sired by a good beef bull and plan to sell them to be raised for beefing purposes? Many such calves could be produced to make very good beef.—Editor.]

Canadian importers and breeders of cattle, sheep and swine, will welcome the official announcement, made in last week's issue, that permits for the importation of these classes of stock from Great Britain will now be issued. The new regulation took effect April first.

## THE FARM

### Experiments With Farm Crops.

The members of the Ontario Agricultural and Experimental Union are pleased to state that for 1913 they are prepared to distribute into every township of Ontario material of high quality for experiments with grains, fodder crops, roots, grasses and clovers, as follows:—

No.	Experiments.	Plots.
2a	Testing O.A.C. No. 21 barley and emmer	2
2b	Testing two varieties of two-rowed barley	2
3	Testing two varieties of hullless barley	2
4	Testing two varieties of spring wheat	2
5	Testing two varieties of spring wheat	2
6	Testing two varieties of field peas	2
7	Testing two varieties of spring rye	2
8	Testing two varieties of soy, soja, or Japanese beans	2
9	Testing three varieties of husking corn	3
10	Testing three varieties of mangels	3
11	Testing two varieties of sugar-beets for feeding purposes	2
12	Testing three varieties of Swedish turnips	3
13	Testing two varieties of fall turnips	2
14	Testing two varieties of carrots	2
15	Testing three varieties of fodder and silage corn	3
16	Testing three varieties of millet	3
17	Testing two varieties of sorghum	2
18	Testing grass peas and two varieties of vetches	3
19	Testing rape, kale and field cabbage	3
20	Testing three varieties of clover	3
21	Testing two varieties of alfalfa	2
22	Testing four varieties of grasses	4
23	Testing three varieties of field beans	3
24	Testing two varieties of sweet corn, including Golden Bantam	2
28	Testing Extra Early Eureka and Davies' Warrior (late) varieties of potatoes	2
29	Testing three grain mixtures for grain production	3

Each plot is to be two rods long by one rod wide, except No. 28, which is to be one rod square.

Any person in Ontario may choose one of the experiments for 1913 and apply for the same. The material will be furnished in the order in which the applications are received, while the supply lasts. It might be as well for each applicant to make a second choice, for fear the first could not be granted. All material will be furnished entirely free of charge to each applicant, and the produce will, of course, become the property of the person who conducts the experiment. Each person applying for an experiment should write his name and address very carefully, and should give the name of the county in which he lives.

C. A. ZAVITZ, Director.  
Ontario Agricultural College, Guelph, Ont.



Canadian vs. Southern Phosphates.

Editor "The Farmer's Advocate.":

Have any extended tests been made with our phosphate rock (Apatite) by grinding it fine and applying it to the soil in connection with plenty of organic matter in the shape of farmyard manure, or plowing down clover at the time of its application. I am aware that Prof. Shutt applied some on the Dominion farm at Ottawa, without results. I do not know what provision he made in supplying organic matter, without which I feel assured the test would be useless. But it would seem that the farm at Ottawa, at that time at least, was not in need of phosphorus, as he also applied acid phosphate with no more results than he got from the raw rock phosphate.

If our rock can be utilized for phosphorus supply it would seem a very foolish thing to be sending to Florida or Tennessee for the ground-rock phosphate to supply our farms with phosphorus, something which I am sure we will be doing (if the field test of the University of Illinois with raw rock phosphate means anything) instead of purchasing phosphorus in three or four times more expensive forms.

G. J.

The enquiry of your correspondent will in a large measure be met I think by the following information.

For ten years in succession finely ground Canadian phosphate rock (Apatite) was applied on certain plots in our fertilizer series without any appreciable benefit therefrom. It was then discontinued. The soil was light, sandy loam, fairly well supplied with organic matter, but the experiment did not include its application with manure. The humus content of the soil was kept up by an occasional crop of clover, but no special trial by plowing under the clover at the time of the application of the phosphate powder was made. Two criticisms of this work may be advanced: that the rock was not ground sufficiently fine and that the soil was not in need of a phosphatic fertilizer. The first of these may be in a measure true, for we found it impossible to obtain the rock in as fine a powder as we desired—as fine as flour. The machinery used left a fair proportion of it merely in tolerably fine granular condition. But as regards the phosphatic needs of the soil, I think the constant cropping over such a term of years should have fairly well exhausted the available supply of phosphoric acid and some advantages been apparent if any considerable amount of phosphate powder was decomposed in the soil.

An experiment was made in which the phosphate-rock powder was intimately mixed with actively fermenting manure—the mass being left for three months—and we found that under these conditions a small—very small—percentage of the phosphoric acid was converted into assimilable forms.

The ground phosphate rock used in the United States, from Florida, Tennessee, South Carolina, etc., is very much softer than our Apatite, and therein lies the great difference. Undoubtedly the Canadian phosphate, sufficiently finely ground, does in time—under suitable soil conditions—yield its phosphoric acid in more or less assimilable forms, but the conversion is so exceedingly slow that the application of the phosphate would not seem to be profitable practice. If a return from a fertilizer is not obtained in a reasonable time, its use in practical farming could not be justified or considered economic.

FRANK T. SHUTT, Dominion Chemist.

Manurial Requirements of Corn.

J. H. Grisdale, Director of Dominion Experimental Farms, is author of the following:

"The best fertilizing material for corn is undoubtedly good barnyard manure. A mixture of one part horse manure to three parts cattle manure applied green at the rate of twelve to fifteen tons per acre, may be expected to give very good results. The application might be made in the fall, winter or spring, or during the preceding summer. If plowed in only a shallow furrow should be turned. Commercial fertilizers are not necessary, nor are they likely to prove profitable where the above mentioned dressing of farmyard manure can be applied."

Come Over to Muskoka and Help Us.

Editor "The Farmer's Advocate.":

One reads in your well-printed paper all about profits, etc., for good farms. Now may I ask some of these professors who have got their money from good farms, and have, of course, all advantages of capital, to devote their attention to our poor, half-starved, stony, sandy, Muskoka farms, many of which have been left for new ones in the West and New Ontario. Now for the sake of the back-woods it is most important that the farms should not altogether go to the bad. Good farms will always have owners to

look after them. I would cry out like the people of Macedonia called to St. Paul "Come and help us" else we give up in despair and follow those already gone. Muskoka, Ont.

CHAS. HARLOCK.

The Two-Furrow Plow.

Editor "The Farmer's Advocate.":

I read with interest the front-page editorial on "Big Implements—Advantages and Disadvantages," which appeared in your edition of March 6th. In that editorial, however, you make two or three statements with which I cannot agree, and in the making of which I do not think you are justified.

In the first place you state: "The two-furrow plow, for instance, will not do quite so perfectly finished a job at headlands and dead furrows as the walking plow." This is true to a very limited extent only, since if the land is laid out properly, and the man handling the plow knows his business, there is no reason why every land should not be finished up in good shape, and, when it comes to headlands, if the plowman will properly set his machine, it is seldom indeed that he will find it necessary to use a walking plow to finish up.

Again, you say, "It certainly is an exaggeration to say that with three horses and a two-furrow plow one can do twice as much plowing as with a single walking plow." I am not prepared to admit that this is an exaggeration. Our experience here is that when three heavy horses are hitched to a two-furrow riding or sulky plow, they will do quite twice as much as will two of the same team hitched to a one-furrow walking plow. A careful consideration of the conditions will indicate why this seemingly doubtful statement may be true, and, according to our experience, is absolutely true. In the first place, the walking plow seldom cuts a furrow of uniform width, there are always slight variations; whereas, in the case of the sulky, at least one furrow is absolutely uniform in width, and the other usually so if the man is a good driver. In the second place, with the two-furrow plow, only half as many turns would be made in plowing any given area as with the walking plow. In the third place, with the walking plow, there being no sole plate and very little land side, friction is on this account minimized and the only work performed is the cutting and turning of the furrow; while, on the other hand, in the case of the walking plow, the full land side and the long sole seem to cause very considerable friction. At all events, our experience here goes to show that three horses hitched to run a riding plow readily do twice the amount of work that would be done by two of the same team hitched to a walking plow; and the work is very much more pleasant to the man handling the plow or driving the team, unless he happens to be one of those enthusiastic plowmen who take pride in their work, a class of men which is, unfortunately scarce, and, I am afraid, getting scarcer and scarcer every day. As to additional work being involved in keeping the horses clean, the harness in shape, etc., I admit that there is some truth in your contention in regard to this feature; but it should be remembered that when the man has not to walk all day, he is not so likely to raise objection to caring for the extra horse.

Further on in the article you state: "Too wide a disk gives violent swing to the pole, causing trouble with the shoulders unless one is very careful. Wheeled trucks to take the place of the tongue are not a wholly satisfactory improvement." I may say that our experience here during the last five or six years, during which period the truck has been in constant use, fails to support your observation that the truck in this harrow is not wholly satisfactory. The only trouble we have found has been in the corners of fields, when, on account of not being able to back into the corners with the harrow, a somewhat larger area is left untouched than when the pole harrow is used. However, it seems to be quite as important a consideration in favor of the harrow that the truck with the team may be driven right up to the fence without danger of the pole catching in the rails or wires and causing trouble.

Referring further to your remarks upon the double disk, I have to say that my emphasis of the value of this machine was not at all misplaced, and we are becoming more and more convinced of its usefulness and of the necessity of such a machine being in the hands of every farmer.

J. H. GRISDALE, Director Experimental Farms.

A Plea for Preservation of Quail.

Editor "The Farmer's Advocate.":

Would ask for space in your valuable periodical in which to say a word in the interest of the preservation of quail, one of the best friends of the agriculturist.

At this time, when so much is being said and done to promote better conditions on the farm, exterminating weeds, insects, etc., why not preserve the quail, one of the greatest enemies of weed seeds and insects? The last season for hunting quail was a closed one, and I hope the next may be similar in that respect and likewise all seasons to come, thus giving the quail a chance to flourish and multiply. No birds have so firm a hold on public interest as the game birds, and the quail should head the list from the farmer's standpoint.

Let us see what these birds live on. In one State Department of Agriculture, the contents of the crops of eight hundred quail collected in every month of the year, and more especially in the hunting season, were examined and found to contain weed seeds and insects, with about three per cent. of agricultural grains. They will eat spiders, beetles, bugs, grubs, cutworms, potato beetles, cucumber beetles, bean-leaf beetles, squash beetles, wire-worms and their beetles, corn weevil, clover-seed weevil, Hessian fly, and almost any other insect which they meet. One pair of quail with their brood would destroy all the cutworms in a large corn field. Then are they not of great value to the farmer? I think ten dollars a low estimate on the value of a pair of quail and their brood, if their feeding ground were confined to a corn field infested with cutworms, and it has been proven that the young quail will eat their own weight in insects every day.

Quail feed on foot like turkeys, seldom taking flight unless startled, and all summer their principal food consists of the insect pests of the farmer. When autumn comes, however, and the insects are killed by frost, they turn their attention to weed seeds. Their crops will be crammed with the seed of the rag weed, curled dock, lamb's quarters, pig weed, mustard, etc.

The quail is gallinaceous and prolific. I once found a nest from which the little ones were gone, but the egg-shells were still there. There were twenty one, and every one had hatched. A quail with her little ones will cover a wide circuit in one day, and when night overtakes them they will huddle in a fence corner or under a bush, or in any place that will afford them protection. In autumn and winter they are sometimes covered with ice, sleet or snow in their hiding place, by which means great numbers of them are destroyed.

Besides storms quail have many other hardships and enemies with which to contend, and although we all know that their numbers are greatly decreased in this country, the only wonder is that they are not altogether extinct. In the breeding season their nests are often destroyed by the mower. Crows steal the eggs. Cats, foxes, skunks, weasels, hawks, owls, etc., prey upon their young, and those which escape these dangers are only prolonging their lives until the fall, when the unscrupulous sportsman, with his dog and gun, will do his best to cut down the remaining birds. In regard to the last-named enemy, I once heard one man boast of shooting two beavies in one day, not leaving a single bird.

It behooves the farmer to prohibit the shooting of quail on his premises, and to see to it that the government takes them off the game list and places them along with the meadow-lark and other insect eaters, which are a benefit to agriculture. Some of the States are now importing quail to help save the cotton crop, which is being damaged to the extent of \$15,000,000 a year by the cotton-ball weevil. The ravages of this weevil have helped to advance the high price of cotton, one of the factors in the increased cost of living, whereas the quail as a destroyer of this as well as other injurious insects, would, if allowed help, aid in decreasing the high prices, and if protected by the government would increase rapidly as well as become much tamer. In many European nations birds useful to agriculture are protected by law and heavy fines are the penalty inflicted on those breaking such laws. Could we not do likewise while we yet have time?

Recall to mind a picture of this bird as it calls "bob-white" in summer from the fence post or runs across the lane, its trim, alert, figure, with its beautiful coloring of black, white and brown set off by other tints, and its mellow whistle as it summons the scattered flock to their nightly resting place. Can we afford to lose it, because of indifference or careless neglect in doing our utmost to protect it? Essex Co., Ont. A. R. JOHNSTON.



### Does the Manure Spreader Pay?

Editor "The Farmer's Advocate":

It has often been said that farmers keep themselves poor buying machinery for the carrying on of the work of the farm.

Now, it is a well-known fact that at the present time any man who is going to make a living out of the soil, to say nothing of making a profit over and above operating expenses, must use all the machinery that experience has shown to be labor-saving and efficient, and which is consequently profitable. But at the same time there are certain machines manufactured that are proving themselves more profitable to the manufacturer than to the farmer, and I think it might be well for us to give a little thought to the matter and find out if possible what machines belong to this class.

Now to take for instance one rather widely used implement, the manure spreader. Does this machine pay for itself on the average farm, especially in Canada with its severe winters? It costs in the first place, perhaps, one hundred and twenty-five dollars. The interest on this amount at six per cent. is seven dollars and fifty cents, to which must be added at least ten dollars for repairs and wear and tear on machine. Fifteen years being, I think, a fair estimate of the life of an ordinary manure spreader. So we have seventeen dollars and fifty cents a year as the actual cost in cash for its use. Now how are we going to have this amount returned to us.

One of the arguments used in favor of a spreader is that it saves labor. But does it? The usual method employed in handling the manure on a farm where the machine is used, is to draw the manure to the fields in the winter and put it in large piles to be spread when the ground dries up in the spring. Either this or it is left in the barnyard until the farmer has time to attend to it after the rush of spring seeding is over. This method simply means that the manure is hauled at least once for nothing. By forking directly onto the sleigh or cart and then placing in small piles in the field where it can be spread as soon as the frost is out, the greatest saving of labor is effected. And what is more, it is nearly all done at a time of the year when other work is not pressing, and cost of time hardly worth considering. Another argument of the implement agent is that it saves manure. But again I say, does it? When a pile of manure is allowed to stand in the open for several months it heats, and very soon shrinks to about half its original bulk. At the same time the liquid part drains into the ground, and is almost entirely lost. Now it is well known that rotted manure is worth very little, if anything, more, ton for ton, than is green manure. Consequently every pound lost in weight through fermentation and leaching is gone for good, for it is in no way compensated by any improvement in quality. Small piles placed in the field during the winter will not heat, and can be spread before leaching, to any appreciable extent, takes place. Scattering manure on the mow, whether done by hand or by a spreader, would seem to be a money-losing proposition. On ordinary fields and where the ground is frozen, the best part of the manure is carried off into ditches and creeks by the spring rains and melting of the snow.

Again it is said that the spreader does the work better. It is done more evenly. This is quite possibly so. But let any man who knows how to handle a manure fork do the spreading by hand, and then, as soon as the ground will carry the horses, go over the field with a set of ordinary drag harrows, turned upside down in the case of a meadow that is being top-dressed, and I will venture to say that the difference in results from the same amount of manure, between that spread by hand and that put on with a spreader will not be great enough for him to tell where the one began and the other ended.

Altogether I entirely fail to see the advantages attending the use of a manure spreader in a climate such as we have in this country. That this opinion is shared by some of my neighbors who have spreaders, I have no doubt, for during the past winter they have drawn the manure from the stable daily and put it in heaps on the field, from where it will be spread by hand in a few weeks.

In summing up the case I would say that to deal satisfactorily with this problem of keeping up the fertility of our farms, the consideration of two of the foregoing points is absolutely essential, viz., economy of time and the prevention of waste in the handling of barnyard manure. Neither of these objects is gained by the use of a spreader, as I have pointed out. We must do as much work in the winter as possible to prevent loss of time, and we must get the manure to the field daily to forestall waste of practically our only fertilizer.

I know many will not agree with me in the above, implement agents for example. How-

ever, it is the case as I see it, and if my ideas are not sound I will be glad to have them straightened out.

Glengarry Co., Ont.

J. E. MAC.

### Building Lessons from the Late Storm.

Editor "The Farmer's Advocate":

The great destruction of farm buildings, following the wake of the terrible storm on Good Friday tells a lesson that brands not a few professing workmen as frauds.

Looking over the debris, a deplorable condition of workmanship is brought to light—shingles were blown off, leaving great patches of bare sheathing; openings in barns where boarding has been blown off, revealing in most cases the lack of nails. We hear workmen bragging how many squares of shingles they can lay in a day, and we take it for granted that they are good workmen; but "dishonest," might well be put in place of "good," when speaking of them, for quality and honest work, are too little thought of to-day.

We depend on a contractor doing a job in accordance with specifications and agreement. How often are these adhered to? Only in a few cases.

A contractor of known dishonesty, tenders, so also does one that would not slight a job nor overcharge for extras. The dishonest contractor gets the job, because he is a few dollars lower in his offer, or, if the honest contractor gets the job, it is not in accordance with his estimate, for the tender of the dishonest contractor is flaunted in his face, and he agrees to take it at less than his judgment (after a careful balancing of conditions and outlay) had decided, and he finds, when finished, that he would have been better working for day-wages, and running no risks.

Do not think, Mr. Editor, that I think all jobs improperly done. I would only emphasize that it is sometimes unduly difficult for a thoroughly conscientious man to get a job.

Many of the accidents to buildings have been from a lack of understanding of proportions. "A chain is only of the strength of its weakest link," and one weak point in a building may cause the collapse of the whole.

In nearly all unroofed buildings, one thing seemed positive, and that was, the rafters were not nailed firmly enough on to the plate, little consideration being taken of the wood the nails entered. Often this is a soft wood, and nails are easily pulled. In some cases I find that the heel of the rafter is all right, but the top has only been tacked together, and the great suction on the lee side and the downward pressure on the windward side pull the ends of the rafters apart. There should always be a piece of good board nailed to the rafters at the ridge.

To prevent nails from pulling at the heel, go up any time before the next storm, and tie rafters and plate together with soft No. 8 or 9 wire. This will never give way even if all the nails are loose, and many roofs would have been saved, if a few rafters had been tied, after owners had noticed roof-lifting. "A stitch in time saves nine." A slight prop in time would have saved many buildings from blowing over. Pig houses, hen houses, implement sheds, etc., are now often built of concrete, and usually the plate is laid on top of the wall, with nothing to hold it there. This is the principal reason of so many of these roofs going off. In building such structures, it is well to put a number of looped wires into the concrete, about four feet below where the plate is to lie, and have them coming out of the top of the cement, far enough apart to let the plate lie between the wire coming out of the face and the one inside of the plate. Twist these wires together over the plate, and if the wall is good, the plate cannot get off. The same advice may be given regarding sills placed upon cement basements. Tie them down, and also tie each post to the sill. Some new barns have been blown over that a precaution of this sort would have saved.

A few words on chimneys. A very great loss in town and country has resulted from chimneys blowing down. I have not seen one blown over, in which much of the mortar had not been washed out, or blown out, owing to poor material. Some of this I ascribe to building when bricks are too dry, and absorb so much moisture when laid on, that the bond is loosened if brick is shifted in the slightest. I believe it a good plan to steep the bricks in water before laying them, and to have less mortar between the bricks. The walls are only the strength of the mortar it is built with.

A like result may follow freezing.

Bruce Co., Ont.

Wm. WELSH.

## THE DAIRY.

### Parturient Troubles in Cows, MAMMITIS.

Mammitis—Mastitis or inflammation of the udder—often called garget, may appear at any stage of lactation, but is more common shortly after parturition. In most cases, especially in heavy milkers, there is slight mammitis for a few days after calving. This may be called a normal result of the gland suddenly assuming activity, and will pass off without special treatment. In acute mammitis, a case in which the symptoms are more marked, there is constitutional disturbance, and a more or less well-marked alteration in the quality of the milk will sometimes be noticed apparently from the same cause. It may also appear at any period of lactation from various causes, as blows, kicks or bruises to the udder from any cause, exposure to cold is also cited as a cause. Probably the most well-marked cause is irregular milking. If from any reason a cow in full milk misses a milking, mammitis is very likely to follow. Some cows are particularly subject to the trouble. Repeated attacks of one or more quarters of the udder, in some cases the same quarter each time, in others different quarters are involved, occur without appreciable cause. While in many cases the attacks yield readily to treatment, they recur frequently. Cases of this kind indicate tubercular disease of the udder, but there is no means of diagnosing except by the tuberculin test, and even that does not locate the disease in an animal that reacts. When the udder is tubercular there is a strong probability that the milk will contain the bacilli of the disease, and this can be determined by the examination of the milk by a bacteriologist.

Symptoms.—The symptoms are not difficult to recognize. In some cases they appear very suddenly, while in others the progress is somewhat slow. The quarter or quarters involved will become swollen and hard, are warm to the touch, and give more or less pain upon pressure. If the whole udder or even both hind quarters are affected, the cow will stand with her hind feet well apart, and walk with a straddling gait. Sooner or later the appearance and quality of the milk becomes altered. It consists of small lumps or strings and a thin fluid, and, in some cases, it contains a percentage of blood which has escaped from the small blood vessels which have become ruptured. In quite acute cases there are well-marked constitutional symptoms, the principal of which are a loss of appetite and marked increase of temperature. The degree in which these symptoms will be marked, will depend upon the intensity of the inflammation.

Treatment.—Constitutional treatment consists in administering a purgative of about 2 lbs. Epsom salts and 1 oz. ginger to be followed up by 3 to 4 drams of nitrate of potassium (salt-petre) three times daily for two days. This treatment reduces plethora, temporarily checks the secretion of milk and reduces fever. Local treatment consists in applying heat to the udder. This can be done by the application of hot poultices of bran and linseed meal, woolen cloths, spent hops or other material which must be kept to the udder by a suspensory bandage with holes made for the teats, and fastened over the loins and croup. Lightness of the material used is important, as it is more easily suspended and kept close to the udder. Spent hops is probably the best, but, of course, these can be obtained only in localities where breweries using hops are situated. Whatever is used must be well suspended and kept warm by occasionally applying warm water. If poulticing is not properly attended to, it is better not attempted, as the reaction caused by alternate heat and cold is harmful. Frequent bathing with hot water and after bathing rubbing well with camphorated oil gives good results. Camphorated oil can be purchased from a druggist or home-made by placing an ounce of camphor in a pint of sweet oil, and standing the container in a hot water bath until the camphor is dissolved. The affected quarters should be milked three or four times daily. If poultices are used they should be changed at least three times daily, and the udder well rubbed with the oil before each fresh one is applied. Treatment should be continued until inflammation is allayed. If complications arise the services of a veterinarian should be procured as they will require treatment according to symptoms.

Occasionally we notice an outbreak of mammitis in a herd, which appears infectious. Several cows, especially those milked by the same milker, suffer from a slight attack without appreciable cause. These cases usually yield readily to treatment, but their appearance indicates that they are caused by an infection that is carried from a diseased to a healthy animal on the hands of the milker. These outbreaks



usually occur apparently spontaneously, but the virus of the disease must have been introduced into the herd in some unknown way. Care in preventing the contagion being conveyed from cow to cow, as stated, will usually result in abating the trouble in a short time.

**BLOODY MILK.**

We have stated that in some cases of mammitis the milk becomes bloody. This is due to rupture of some of the small blood vessels which have become weakened by the inflammatory action of the parts, and when the inflammation subsides the escape of blood ceases. But there are cases of bloody milk being yielded by one or more quarters without accompanying inflammation, and without appreciable cause. This may occur from an injury that exhibits no other symptom, and it will yield to treatment and not recur; while, on the other hand, some cows repeatedly yield bloody milk apparently without cause. This indicates congenital, or at least chronic weakness of the blood vessels of the gland, and while the case will probably yield to treatment it recurs more or less frequently and its recurrence cannot be prevented. Such a cow will probably never make a satisfactory milker, and it would be wise to fit her for the butcher.

Treatment consists in administering styptics. The tincture of iron is probably the best styptic. It should be given in doses of about 1 oz. in a pint of cold water as a drench three times daily until blood ceases to pass. If this treatment causes a constipated condition of the bowels (as it will if continued for some days) it should be counteracted by a pint of raw linseed oil as indicated.

**Losses in Separating Cream.**

The day is past for the use of the shallow pan system for creaming milk. If you have not a separator, then use the deep setting system. This demands an abundance of cold water, and a liberal supply of ice.

The cream separator requires careful attention. (1) Place on a firm foundation amid clean, well-ventilated surroundings, and away from stables and bad odors. (2) Thoroughly clean the separator as soon as possible after each skimming (it washes easier), taking the bowl apart, washing, scalding, and leaving to dry before again putting together. (3) Do not heed the person who advises washing the separator only once a day or twice a week. Such advice is absolutely wrong. (4) Put a quart of warm water in bowl before starting to separate. This prevents cream from lodging, and warms up the bowl. Speed the handle to the number of revolutions advised by the maker, before turning on the milk; keep the speed regular and uniform. (5) Skim each milking as soon as milked. There is additional loss in the skim milk and more work when saving one milking over and skimming only once a day. The milk has to be cooled to keep sweet until skimmed, and then warmed again to get a thorough separation. This additional heating and cooling tends to deterioration in quality of cream.

With the best separators, well cared for, there will be a certain loss of fat in the skim milk. This loss, under good conditions, has been estimated at about \$25.00 a year from a herd of 40 cows. This loss will be much larger when the separator is improperly handled.

The accompanying illustration, reproduced from a pamphlet published by the Ontario Department of Agriculture, shows the loss proportionately, and gives the money value of the fat in the skim milk (from forty cows) under the following conditions. (1) Normal loss. (2) Loss when separator is washed only once per day. (3) Skimming milk too cold. (4) Bowl out of balance. (5) Separator turned too slow.

Is your separator losing you money from any of these causes? If so, correct it.

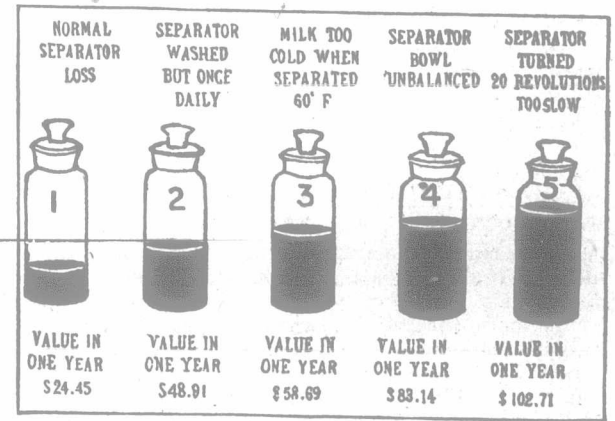
Cream testing 30 to 35 per cent. fat gives better satisfaction to both patrons and maker than lower testing cream. It will keep sweet longer, there is less bulk to look after, a larger yield of butter is secured, more skim milk is kept on the farm and less weight to haul. Do not be misled by the belief that cream slightly sour will show a higher test and thus give you larger returns than sweet cream. Deliver your cream sweet, of uniform quality, free from bitter or other undesirable flavors. It will pay. See that the other producers do the same.

Variations in the test of richness of cream may be due to numerous conditions. Changes in temperature of milk when separating, changes in the speed of the separator bowl, variation in the amount of milk running through the separator in a given time, the amount of water or skim milk used in flushing out the bowl after separating, changes in the richness of the milk seasons of the year, lactation period of the cows, etc.

An undesirable, thin cream may be the result

of too slow a speed, too heavy feed of milk into the bowl, improper temperature of the milk (proper temperature for separating 90 degrees to 95 degrees), too much water or milk used in flushing out the bowl, or the regulation of the cream or skim-milk screw. A rich cream will be obtained by proper speed, or increasing the speed, reducing the flow of milk into the bowl.

Important.—Flush out all bearings of machine once per week with kerosene; do not allow too much oil to run in bearings, just enough to lubricate well. Do not leave spilled milk or cream around machines, but wash it up at once. It



Losses from Mismanagement of Cream Separators.

is business suicide to send good cream one day and poor the next. It means loss of trade and reputation. The flavor of the butter will be the same as the cream from which it is made. Poor cream, poor butter, poor prices. Good cream, good butter, good prices. In Ontario the production of butter from gathered cream is growing rapidly, and from present indications the output from year to year will be greater. We appeal to the producers and manufacturers to do all they can to improve the quality in order that the industry may be placed upon a more substantial basis.

**Making Good Dairy Butter.**

Editor "The Farmer's Advocate." j

There are several essentials to the making of good butter: First, the quality of cows; second, the kind of feed and water given; third, cleanliness and care; fourth, interest taken and willingness to work.

Cows in very poor condition, or diseased in any way, produce milk that in turn produces poor keeping and poor tasting butter. The very best cows are none too good. Often the butter maker complies with every condition necessary for the making of good butter, and fails because of some detrimental quality in the milk, feed or water. Cows fed on extra quality of properly selected food will produce more and better milk than a third more cows fed on anything that comes handiest to feed. Cows that drink from stagnant pools, eat weeds or moldy hay or musty corn fodder, or anything ill-

smelling or highly flavored, give milk from which good marketable butter cannot be made.

Cleanliness does not mean just to use care with the milk after it has reached the milk room, but it means from the time you come in possession of your cows, until you market your butter and get your money, the greatest care and attention should be given the cow. Pasture should be well cared for, stables well kept and white-washed, with the use of plenty of air-slaked lime as purifier. Use nothing but the best of tin buckets for milking purposes. I also wish to emphasize that milk buckets should not be used for any other purpose than to milk in. Everything which comes in contact with the milk, cream or butter, should be kept in a cleanly condition. Care must be taken of milking utensils. Use plenty of warm water and sal soda for washing, more hot water, and sunshine and fresh air to purify.

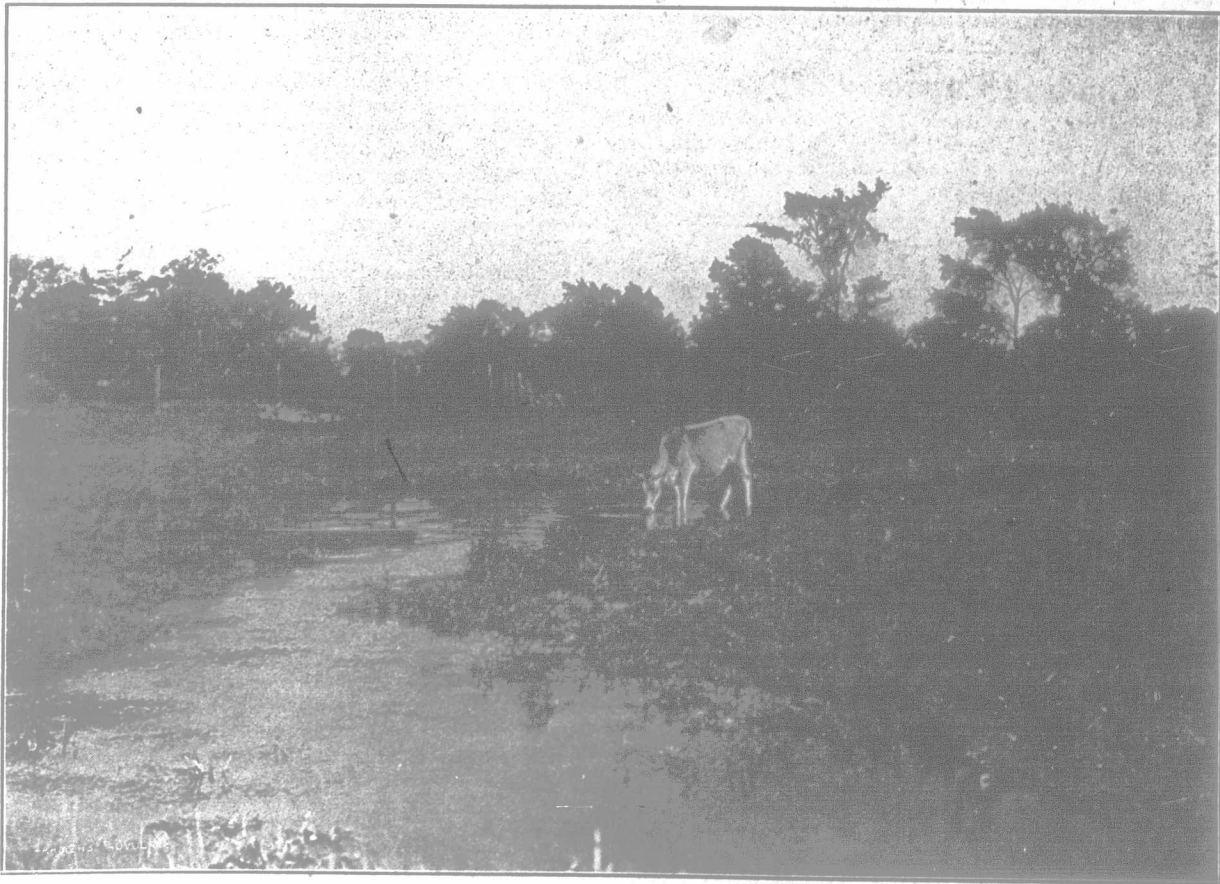
Always stable cows in summer and winter to milk them. Use a brush and cloth before beginning to milk. As soon as the milk is drawn, strain and separate, or set in milk pans submerged in cold water. As soon as possible after milking, if hand separator is used, place the cream in a cold place, where the temperature is about 55 degrees. After the cream is thoroughly cooled to that temperature, it can be emptied in with the other cream. Every time a new skimming goes into the cream jar it should all be thoroughly stirred into the cream below, and the sides of the jar above the cream wiped clean of adhering cream. This, if left, always ripens too soon and mottles the butter.

I am a friend of the cream separator. With it one can get more and better cream than by the old plan of skimming, and, as a rule, better butter is made from the separated cream. To make good butter one must not go to guessing at the temperature of the room the cream is kept in, the ripening or the churning temperature. A good dairy thermometer is a necessity. When you have the amount of cream you want to churn, the ripening or souring comes next.

Bring the temperature of the cream up to 70 degrees by placing in a warmer room with a thermometer hanging by the cream can. After the cream is ripened, which will take about 12 hours after bringing to a temperature of about 70 degrees, cool down to 62 degrees by placing in a cool room, then hold from three to four hours before churning.

It is very essential in cream ripening to stir the cream frequently to insure uniform ripening. When cream remains undisturbed for sometime, the fat rises in the same way that it does in the milk. Instead of being smooth and glossy, it will appear coarse and curdy when poured from a dipper. As a rule quick ripening gives better results than slow; for instance, when we attempt to ripen cream at a low temperature more or less of a bitter flavor is the result; if kept too long after ripening enough to churn, it will have an old flavor.

Before putting the cream in the churn, the churn should be scalded thoroughly with hot



Taking a "Loner."

Shade, abundance of grass and running water—important factors in stock and dairy husbandry.



water, then rinsed well with cold water. This will freshen the churn and fill the pores of the wood with water so that the cream and butter will not stick. Let me say right here that we think the churn has a great deal to do with the appearance of the butter. We use an ordinary barrel churn, because it churns easily and quickly, and there is no dasher inside to beat and break the grain and make the butter look like lard with butter coloring in it.

All cream should be carefully strained into the churn. This removes the possibility of white specks in the butter. These usually consist of curd or dried particles of cream. Butter should be churned until the granules are about the size of wheat grains. When larger than this it is more difficult to remove the buttermilk and distribute the salt.

As soon as the butter granules are the proper size, draw off the buttermilk and put in as much water, (the same temperature as the buttermilk or a degree or two warmer) as you have buttermilk. Turn three or four times, draw off, have a bucket of clear cold water, the same temperature as before, and pour on butter until the water runs off clear.

It is needless to say that nothing but the best grade of salt should be used in salting butter. I would prefer the flake salt, as it dissolves more readily and is not so liable to make mottles. The amount of salt to use in butter, is a matter of taste and opinion. Salt adds flavor to butter, and materially increases its keeping qualities. Very high salting, however, has a tendency to detract from the fine delicate aroma of butter, while at the same time it tends to cover up slight defects in flavor. As a rule butter-makers will find it to their advantage to salt rather highly. Salt very readily absorbs odors and must therefore be kept in clean, dry place where the air is pure and should be the same temperature as the butter when used.

The chief object in working butter is to evenly incorporate the salt. Our method is as follows: After wash water is drained off, salt is carefully distributed over the butter, worked in the churn just enough to get the salt into the butter, covered up and let stand for twenty minutes or half an hour to allow the salt to dissolve. Then remove to the butter worker, and finish by working enough to get the salt evenly distributed. The rule to follow is to work the butter just enough to prevent the appearance of mottles. Just how much working this requires every butter-maker must determine himself, for the reason that there are a number of conditions that influence the length of time that butter needs to be worked. After working then mold. We use the one-pound brick molds. Wrap each cake separate in a parchment paper, and the butter is ready for market.

Johnson Co., Ill. W. H. UNDERWOOD.

### Pasturization Temperatures.

Temperatures recommended by the Ontario Dairy Instruction Staff for pasteurizing milk, whey, skim milk and cream, are thus charted by Chief Instructor Hens:

For milk for city supply, 140 degrees Fah. (for twenty minutes); for whey, 155 degrees Fah.; for skim milk, 155 degrees to 180 degrees Fah.; for cream, 160 degrees to 180 degrees.

### Cooling Capacity of Ice.

For cooling purposes 10 pounds of ice equal 100 pounds of cold well water. Ten pounds of ice plus 100 pounds of cold well water equal 200 pounds of water.—Frank Hens.

## POULTRY

### To Ensure Good Produce.

Editor "The Farmer's Advocate."

Having read the article in your most valuable paper, issue of March 13th. "Sell the eggs to the consumer," I may say that I for one would gladly sell to some good reliable consumer if such can be found. I do not doubt but that plenty such can be located, but it has too often been the case, as stated in the article in question, that finally producers lost eggs, crate and all. If producers and consumers could be better protected through some legislation or any other honest means, they could cut out the middleman's profits and run the business on a C. O. D. basis, and the consumer would be more likely to get fresh butter and eggs for his table. And I would also recommend protecting consumers by stamping every egg with the producer's name and post office address. There would not be so much complaint about stale or bad eggs, as we are all aware that some farmers are in the habit of storing up eggs when they are cheap, and rushing them onto the market when the price soars. The consumer who probably has a hard time

to make both ends meet goes home from the grocer with probably half a dozen eggs for which he pays the tempting price the producer has waited perhaps two or three months to obtain, added thereto the middleman's profits, and when his good wife perchance breaks the first shell that fresh egg, laid two or three months ago, proves to be stale. Now why should farmers or producers attempt to market any products which they would not eat themselves? The same might also be said of butter, but in that case the flavor can be detected more readily than in eggs. Why should not producers unite and say let us stamp our eggs and have our butter wrappers with our names and post office address printed plainly on same, then all goods could be sold on their merits?

In your issue of March 6th we readers were presented with a gestation table worth a year's subscription alone to farmers.

Perth Co., Ont.

M. WAGLER.

### Improve the Flock.

Editor "The Farmer's Advocate."

How to improve the farm flock is a problem making itself felt all over Canada at the present date. Up to a few years ago poultry raising, by farmers in general, was not practiced to any extent, as very few farmers thought, or tried to make, their poultry profitable. Eggs and a roasted fowl once in a while were desirable, and fowl of a nondescript variety were allowed to exist around the barns in order that these "desirables" might be obtained when wanted. Eventually people began to see the great possibilities latent in the poultry industry and began to give their fowl more attention than formerly, with the result that at the present time the poultry industry is making remarkable progress, and farmers are beginning to see that, given the same care and attention as other stock, fowl are the most important side line on the farm.

Of course there are a large number still in the "doubting Thomas" class, but the more intelligent are finding the silver lining of poultry keeping in the shape of profitable returns for both eggs and poultry. It is not necessary farmers specialize either for eggs or meat in order to make poultry pay. In my estimation it is better for them to give both some attention, but in any event let them do away with the "scrubs" in the poultry yard, for they are neither profitable nor beautiful.

The spring is a good time to prepare for the change if you have not already taken steps toward the desired end. Some people prefer purchasing a breeding pen of say six, eight or ten hens and a male, but the spring is a poor time to think about doing this, as purchasers are usually much more numerous than really good pens of birds, and those who have stock to sell are not very likely to have wintered any more than they need themselves, or if they have it would be a fancy price that would induce them to part with their best ones or almost any but their poorest stock. The best plan then is to buy eggs for hatching, and if possible to see and know the stock from which you are getting them. If this is not possible, then get some reliable information about the stock you are intending to get eggs from, or you are liable to be disappointed. If you are getting any quantity I would advise setting a few of them, say, two or three settings, early, so as to have enough early pullets to form a good strong breeding pen for next year. It is not wise to have them all early, as you would not be likely to have as good hatch from early-set eggs, and unless the spring is favorable the May hatch has the best chance to come to maturity, but May-hatched pullets would scarcely be in fit condition for the breeding pen next year, so if you think of doing away entirely with your scrubs, follow this plan and get a few settings of good eggs early and more later on. Then give them all the best possible chance to mature without any set-backs, and if you have got a good healthy laying strain of whatever breed you have chosen, then your chances for substantial profits are good. Those who have turned from the nondescript class of dairy cattle, so common a few years ago, to an improved grade or pure-bred dairy stock, would not think of putting the two in the same class. The former lack appearance, size and milking qualities as compared with the latter, but their digestive capacity is quite as good, if not better in many cases, than that of their better-bred sisters. It has been proved in the dairy world without doubt that a pure-bred or good grade cow will produce more and better milk on the same or less feed than the common cow, it is the same in the poultry world. A pure-bred or even a grade chicken at the same age and on the same feed will weigh far more at maturity or when taken from the fattening crate than any scrub stock of the same variety that you like to choose, and if they have been from "bred-to-lay" stock they will lay earlier, will lay more

eggs in the year, and the eggs will be of a better size, just as the pure-bred cow of good milking strain will give more and better milk than the common cow.

Another but slower method by which you may improve your stock is by getting pure-bred males of the best obtainable laying strain and mating them to a few of your best-looking and best-laying hens, but here again it is rather late to get good males, as the best ones of every flock will long ago have been bought up unless you can get them from some one who is "selling out" where everything is being let go. In that event again you would need to know your stock and use judgment in purchasing. Very often people improve by buying a setting of eggs and mating the cockerels raised from it to some of their own flock, but this is both slow and uncertain as it takes years of careful selection, out of an ordinary flock, to produce a strain of really profitable layers, whereas, by the purchasing of a large enough number of eggs in one season to raise enough pullets to keep over, you can "get into" a good laying strain that will much more than pay for themselves in one season. Pure-bred cockerels, of a good strain, find ready sale as breeders in the fall at a good price, and the sale of your surplus of them alone will go far toward paying for your eggs, and in many cases will more than do so.

Carleton Co., Ont.

H. C. S.

## GARDEN & ORCHARD.

### Prune the Orchard.

Editor "The Farmer's Advocate."

I think there is no branch of farming so little understood, neglected and little written about, as trimming an apple orchard. As we drive along the road and look at the orchards, one may suppose that the press has been silent in regard to trimming an orchard, but where trimming has been practised it seems as though the only object has been to make a well-balanced tree, and possibly also to make it so thin that a goose could fly through it. I will admit that in the centre of the tree a goose could find its way through its bare branches. But follow the limb out farther where "the man with the saw" dare not go, a robin would have to dodge considerably or the morning papers would have a head-on collision to report.

I have been more or less connected with apple-packing all my life, and before people started spraying it seemed to me that there were about as many apples spoiled by improper trimming as not sprayed. Now let us have an improvement in trimming equal to that of spraying, and we are ready to grow apples right. First thing, let us drop the word trimming and substitute pruning; get a good ladder, a pair of hand pruning shears, and an improved pruning hook, with a handle four or six feet long, and still use the saw a little for cross limbs and where two limbs are close together.

In a year, in which apples are a full crop, a limb will produce more apples than it can bear up without breaking, so do not cut many of them off but thin them out, then, after cutting off the few limbs take hand clippers and climb ladder and thin out the twigs according to your judgment, thin enough so that leaves, twigs or apples will not touch any other apples to cause them to be misshapen. In a Spy I have taken out one-half of the brush, and usually clip it just beyond the fourth fruit-spur as that will be about all the twig will grow to perfection, but do not cut twigs close to the trunk limb unless they are very thick. If trimmed in this way very few, if any, fruit-spurs will need clipping unless it be a Baldwin or perhaps a Greening.

Care should be exercised to leave twigs all through the trees so you can grow as many perfect apples as possible. The suckers should be clipped about a foot long and left two or three years (according to the growth made), and spread out so they will fill the whole centre of the tree.

All twigs should be cut immediately above a shoot, and limbs cut close to the trunk limb as to insure quick healing of the wound. Large cuts should be painted, so they will heal over before the wood decays and the wet gets in and spoils the tree.

In forming the shape of a tree crotches should be avoided, but if allowed to stay they should have a long bolt put through each, over to another limb.

Norfolk Co., Ont.

CHARLES W. CURTIS.

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**Growing Fruit in the North.**

Editor "The Farmer's Advocate.":

About eighteen years ago I bought some land near Fort William, and after constructing buildings and putting about 160 acres under cultivation, I decided to plant an orchard. My early home being on the river Thames, in the County of Middlesex, one of the finest fruit sections in Canada, I naturally felt the lack of the orchard. A fruit-tree agent hearing I was interested in farming called one day, showing me a catalogue, beautifully illustrated, of varieties of fruit which he claimed would grow in this Northern country. He claimed to have several apple trees which he called the ironclads, and which, he said were adapted to this climate. I believe the names were Duchess, Hibernian, Wealthy and one or two others. He also claimed that any variety of the crab apple would certainly produce good fruit here. After carefully examining his catalogue, I purchased about fifty dollars worth to be delivered in the spring. They were delivered and planted, all doing well the first summer. In the

properly protected from the sun. This is the critical time for the tree, especially the apple, and without proper shelter failure is sure to follow. Even our hardest woods will not grow in this country on a hill which faces the south.

Before planting the trees the first thing I did was to thoroughly plow and cultivate the ground. I decided to use, for sheltering, the native white spruce, which for planting should be five or six feet high. The trees used for this purpose should be grown in the open, as they are hardier and accustomed to exposure. I then proceeded to dig holes for the trees in rows two rods apart running east and west, and leaving ten feet between each two holes, after which I placed barrels of water along the rows. Selecting a dull, cloudy day, I sent a team and two or three men to some of the pasture fields where the proper kind of spruce grows. In getting these trees one must be careful to avoid cutting, as little as possible, any of the roots. It is also necessary to replant as soon as taken from the field. Before placing spruce in holes, I put in

row or two of spruce. I now have a row ready which I consider will make good shelter, between which I intend to plant a row of Wealthy apples this coming spring.

Thunder Bay District, Ont. W. S. PIPER.

**Growing Large Onions.**

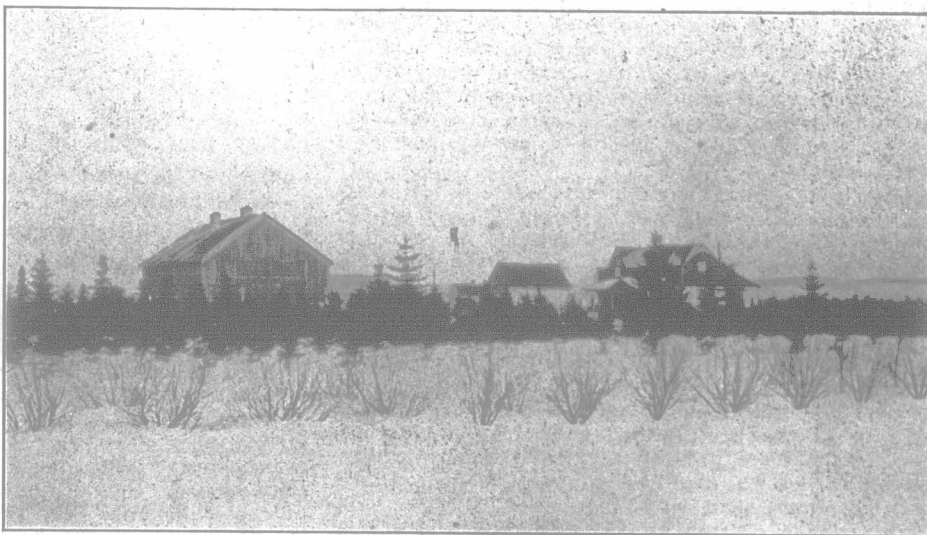
Editor "The Farmer's Advocate.":

Two methods of onion-growing are in general use. Both give very favorable results, although some localities are better adapted for one than the other method. The one is onions grown from seed, that is, sowing the seed outdoors as early as climatic conditions will permit. The other is transplanted onions, simply the same varieties sown in hotbeds or frames in March or April. Taking season after season, particularly in eastern Canada, transplanted onions are the most profitable of the two. Last year was considered a good year for seeded onions.

An advantage of transplanted onions, is good six weeks extra growth by sowing in March,



A Row of Siberian Crabs.



A General View of Orchard and Buildings.

following spring only two were alive, the balance were all either winter-killed or destroyed by mice. Sometime after, I interviewed this fruit-tree agent and he told me that I should have planted my apples in the fall. He said that he had just recently found out that it was the proper time, and was now taking orders for fall planting. Some of those which were planted in the fall did not do as well as those I had planted in the spring.

Of the first planting of my first orchard only one tree remained, and desiring to make a lawn in front of my house I moved this tree, which is a Hyslop crab apple, and placed it between rows of spruce trees, which form an avenue to the house. It has been bearing fruit almost every year since. I had seen Duchess apple trees grown in various places around here and had known them to fruit, but I noticed that they were planted in shelter.

In 1906 I again made an attempt to have an orchard, and have been improving it every year since. Now my desire was to make a success of this orchard. Having met with failure in my first attempt. I did not wish to do so again. The first and most important thing to do before growing an orchard in this country is to carefully select a site. The surest place is on a slope facing the north, with some shelter all around and extra shelter on the south. The sun in this country is very hot in April, which quickly draws the sap to the stock of the tree. This warm spell may continue for several days, freezing hard again and destroying the trees if they are not

two or three pails of water thoroughly mixing it with earth like thin cement. I then set the trees in this, which holds them firm keeping the air from the roots. This will nearly always insure the growth of the spruce. After planting I continue to cultivate them for two years, until they are large enough to give shelter. Between each two rows of spruce I planted a row of fruit trees, so that a spruce is directly south of each fruit tree. Great care should be taken not to plant trees too deep, as all trees in the north spread their roots near the surface. I continue cultivating these trees during June and July. I had been planting crops such as potatoes and other vegetables between the rows, but have discontinued the same as I have found it best just to keep the land clear, having all grass and weeds kept down. Since I have cultivated my trees I have not suffered the same loss from mice as I did on my first orchard, although we have to tie the trees up with tar paper in winter to protect them from rabbits, as the spruce trees are an attraction for them.

The following is a list of trees which I have under cultivation: Apples: Duchess of Oldenburg; crab apples: Hyslop, Transcendants, Siberian crabs; Plums: tame, wild; compass cherries; high-bush cranberries; Russian mulberries; currants: black, red; gooseberries; Russian jelly berries: red raspberries; and the following have borne fruit: All the crab apples, tame plums, high-bush cranberries, raspberries, gooseberries, and Russian mulberries. The Duchess and cherries have not fruited. Every year I plant a

escaping the onion maggot. Also they are set out in the garden at a proper distance for cultivation; weeding is lessened and facilitated; the crop is heavier and more serviceable for most purposes, and onions for exhibition are easily produced.

Very often the farmer will sow a patch of seed to meet his own supply, and he has a poor germination, or some foe attacks the plants in their young state, and alas he finds the onion patch a wretched affair. In late localities, with backward spring, transplanted onions are a decided success, either on a small scale or commercially.

Having grown and studied this plan of culture, I would like to see others interested, for no farmer should be buying Spanish onions or in fact any other garden produce which could be produced at home.

The following are the pick of the varieties—Red Wethersfield, Southport White Globe, Silver King, Yellow Globe Danver's, Giant Prizetaker, and Ailsa Craig Yellow. The latter kind is in exhibition onion, originally raised in the west of Scotland. Hence its name. I have found it to respond very well to Canadian conditions and to grow immensely large in Canadian soil. An Ottawa seedsman lists it at 25 cents an ounce.

Seed of these sorts should be sown in March or April in the hotbed. Failing that convenience in a cool frame, protecting it at night with sacking over the sash. Label each variety. Keep moist and in two weeks with the warmth of the sun through the glass the onions will be through the soil. Allow air in small quantities during



A Row of Gooseberries and Red Currants Between Spruce.



A Row of Plums Four Years Old.



sunny weather. A box filled with four inches of soil will supply a household's needs. Let the box be two feet by fifteen inches. Towards the tenth or middle of May, remove the sash all-day first and after a few days at night also. You then have a box of plants two or three inches high ready for the garden or field. With my own plan I sow early in March and transplant in hotbed in April and have plants about the thickness of a pencil for setting outdoors, an extra transplanting and for keen competition it is necessary. The ground for this crop cannot be too rich. Deep-worked soil and large quantities of manure from the stable are necessary. Preparation for most crops commences in the fall. Bone-meal raked into the onion bed is a wonderful assistance and where this is applied yearly and stable manure added, you have ground prepared for years to come. This crop succeeds well without change of ground. Rake the ground level and get it into good condition. Select a dull day for transplanting, set out in rows fifteen inches apart and six inches apart in the rows. Use a small dibble and avoid planting deep or thick necks will follow. Onions adapt themselves to transplanting and take hold quickly. Those transplanted in the hotbeds are planted with a trowel in the garden. They have a nice ball of soil attached and require more space in the row. Cultivate in ten days or so when they are all straightened up, and continue it all summer and keep weeds out.

They will stand weekly applications of artificial manures in July and August, if you intend to make the onion patch a "hummer." A rotation of nitrate of soda and garden fertilizer is satisfactory. These should be applied thinly between the rows and cultivated in previous to rain, if you have no water to apply by hand. Nitrate must not come in contact with the bulbs or foliage or a burn-out will be the result.

With the intention of exhibiting at fairs, a selection of the best onions should take place a week or ten days previous to the date of exhibition, in order to dry and mature them. Place in a dry open shed with plenty of light. This should wither off the stems. Cut off the stems and wipe any mud off with a wet cloth. Sometimes onions are pulled and the stems cut off and staged on the show-board in one day. Such onions lack firmness, finish, maturity, appearance and generally commence to grow again. They seldom get to the front.

Size is the dominant factor in onions, but ripeness and similarity of type are considerations. A large onion among eleven others of equal size counts for nothing. Symmetry is essential to success. Adhere to the quantity called for. You will find it a pleasure to exhibit. You will have a double interest in your local fair and a three-fold interest in your garden next year. The whole question of keeping onions in winter is to have them properly ripened in the fall by turning them over to the sun and getting the stems thoroughly dried up before cutting off. Use or dispose of all thick-heads and those not properly ripened first. A decaying onion seems to contaminate others. A cool place that keeps out frost is needed and must be dust-dry. It is the damp ill-ventilated places which cause onions to sprout. Ripeness is the prime factor in winter-keeping. Try this large onion growing. Our motive is to have every farmer grow his own supplies in the vegetable line and to have them choice at that.

Carleton Co., Ont.

A. V. MAIN.

### Tomato Culture.

Almost anyone with a garden or farm in a temperate climate can grow tomatoes with greater or less success but there is a great difference between the extent and quality of the crops grown by different persons in the same locality. These differences are due to several causes among which the varieties grown and methods of cultivation practised are perhaps the chief.

According to experiments carried on for years at the Experimental Farm at Ottawa, Earliana, of which there are several strains, is the best early sort, but Bonny Best and Chalk's Early Jewel are also good early kinds. Of later varieties, Matchless Trophy, Livingston's Globe and Plentiful, rank high.

It is the early fruit that makes the profit. In growing plants what should be aimed at is the production of a stocky, sturdy plant which will have some fruit set upon it when set in the field. After planting the chief work is cultivation which should be done both ways in the plantation.

In order to protect tomato plants from diseases, of which there are several, they should be repeatedly sprayed, even when quite young, with Bordeaux mixture. These and many other points, which cover practically the whole field of tomato culture in the green-house as well as in the garden and field, are fully treated in pamphlet No. 10 of the Central Experimental Farm, prepared by the Dominion Horticulturist, W. T.

Macoun. This work is for free distribution to all who apply for it to the Publication Branch of the Department of Agriculture at Ottawa.

## THE FARM BULLETIN.

### P. E. Island Notes.

Editor "The Farmer's Advocate.":

On the 27th of February, the annual meeting of the Dairymens' Association was held in Charlottetown. The attendance was only fair but those present were the men who had the interest of co-operative dairying uppermost in their minds. The President, J. A. Dewar, read an opening address in which he discussed the dairy situation on the Island. He urged the dairymen to stand together, support and lead on to greater success the dairy industry which engaged in intelligently was about the most remunerative branch of our agriculture.

The secretary, in his report gave the figures of the production of butter and cheese in the factories for the past year. 25,201,885 pounds of milk was made into 2,424,636 pounds of cheese, the gross value of which, \$315,003.22 and the net value to patrons, \$258,495.77—The price of milk ranged from 98c. to \$1.08. The amount of milk to make a pound of cheese showed a wide range, all the way from 10 lbs. to 10.85.

The butter factories received 12,200,944 pounds of milk and produced from it 527,494 pounds of butter of a value \$119,023.39 which was divided among 931 patrons.

Compared with the previous year there was a falling off in cheese to the value of \$2,000 and a gain in butter amounting to \$6,000. Quite a few of the smaller cheese factories have gone out of business, or only ran for a very short time during last season.

Mr. Morrow, the travelling instructor, reported nearly all the factories well kept and doing good work—but he found that in some cases cheese-makers should get instruction on the care of boilers and other factory machinery. The price of cheese here last year was the highest ever received—and the quality of the output, with very few exceptions was equal to any in the market.

One of the greatest needs of co-operative dairying here is the improvement of the dairy herds. Some patrons have set the pace in this matter, and by making a specialty of milk production are reaping large rewards—but too many patrons are still going on in a haphazard way, neglecting to improve their herds by selection or to properly feed and care for the cows they have.—This makes it difficult to make the factory-system the success it ought to be—as a sufficient quantity of milk is not available near enough to a factory to ensure cheapness in manufacture.

A central creamery is to be established in Charlottetown, in connection with the Cold Storage plant there. This with the condensery in the same city, will have a tendency to lessen the supply of milk available for cheese the coming season. But it will result in a better quality of produce than is generally put up on the farms, and will return more cash to the milk producers who have been making butter at home.

March has been a month of seed shows, no fewer than five being held. King's County had three so located as to cover the County well. Then the Provincial Show was held in Summerside, and last, but not least, the "Central Seed fair" in Charlottetown. At each of them the attendance was large, and the samples on exhibition were ahead of the usual high standard of Prince Edward Island seed shows. The Island Province is fast becoming an important source of supply of the very best varieties of grain for the other Maritime Provinces, and some is also finding a good market in Quebec and Ontario. We have here quite a large number of farmers who make a specialty of producing good seed in oats, wheat and barley. Quite a number of them are practising hand selection, and have been working along that line for over twelve years—or since the McDonald-Robertson competition was inaugurated.

The Island is particularly adapted for the growth of pure seed grain on account of the absence of noxious weeds, such as wild oats and many others that we are still free from. Since the inauguration of these seed shows, and the good teaching disseminated from them, a strong demand has arisen for good, pure seed from our own farmers, till now everybody wants the best, and is willing to pay a good price for it. Just now while ordinary shipping oats are worth about 48 cents, good clean selected seed can find purchasers at 75 to 85 cents per bushel, and we

believe that some members of the "Seed Growers' Association" are getting \$1.00 a bushel for registered seed oats. As a result of the teaching given at our seed shows and the rigid selection of seed grains, the crops here are yielding an increased average each succeeding year. Our Department of Agriculture is alive to the wants of the farmers, and each year is doing more and more to educate and stimulate them to follow a more successful and profitable system. These seed shows are object lessons on what can be accomplished in improving farm seeds, and the lectures and addresses by expert judges have been a great education to all our farmers on the necessity of grading up all along agricultural lines.

Prince Edward Island has now quite a strong and vigorous Agricultural Department. Our Live-stock, Poultry and Fruit Departments each have an expert to direct effort along these lines, and our popular Commissioner of Agriculture, Mr. McKinnon, has proved his ability to grasp the agricultural situation, and with his efficient staff, is leading farmers forward along all lines of up-to-date agriculture. The next forward move is a horse show. This will give farmers a chance to see and examine and choose the best stallions that will be in the stud this season. In connection there will also be a sale of horses.

W. S.

### The Aid Agriculture Needs.

Editor "The Farmer's Advocate.":

After reading your editorial on that busy farmer and a lot of free advice given by people who do not know what they are talking about, but think they do, and all about the ten million given by the government in aid of agriculture, supposed to be spent on education, but which will, no doubt, dribble through the hands of a lot of political buccaneers till there is nothing left to aid agriculture or anything else, we are moved to sit back and reflect on the aids other industries get, and which, if applied to agriculture, would solve the problem very quickly. For instance, Mr. Editor, when a man seeks to start any other industry, the first thing he seeks is exemption from taxation. How many farmers would throw up their hats if they could get rid of taxes? Then they try to get all their raw material free of duty. Ah, if the farmers could only get that thirty per cent. leak hole stopped! Then further, the steel industry received enough hard cash in bounties to pay the wages of their entire staff of employees. Oh, Mr. Editor, if the farmer could get all the hired men he needs paid, wouldn't the old farm flourish? It could then be worked to the best advantage, and its production would, no doubt, suit the worst skunk of a millionaire "pooh bah" that ever gave advice to a farmer. I want you to reflect on this bounty idea. It's a good one. Just suppose the government gave so much for every hundredweight of beef, mutton, pork, milk, butter, cheese and poultry, so much for every case of eggs, etc. I won't admit cereals to the list for I am sticking to the factory idea, and if the production of our farms is to be increased, we must turn out the finished article and return the by-products to keep up and increase the fertility of the land. But you say where is the money to come from to carry out this idea? I do not believe in taking money from those that have little or none, it's only the politicians that do that, but I would have you notice that Sir William MacKenzie and thirty-nine others in Toronto, and Sir Rodolphe Forget and a lot more in Montreal have millions of it. Hon. H. R. Emerson named twenty-three in parliament the other day who held the commerce of all Canada in their hands, these are the lads to bleed. No doubt they would, to use a McArthurism, "swell up like toads," at the very idea, but then agriculture has been bled till it staggers for these men and their like, and I deem it only fair to put the shoe on the other foot. There are so many vexed questions that might be laid at rest if agriculture received the suggested aids, why there would be no "back to the land" cry. Everybody would be scrambling for land—no need to talk and plan all sort of useless schemes to keep the boy and girl on the farm; they would never leave. No need to talk "under production" and "high cost of living," for, with government paid help, the farmers would make those problems fade away. Sure, these aids have made the others millionaires—now, let the farmers have them.

WAUBAGEZEK.



### The New Brunswick Legislature and Agriculture.

After one of the most business-like sessions on record the New Brunswick Legislature prorogued in exactly five weeks from date of opening. Legislation of great importance to the Province was passed, much of which was directly or indirectly connected with the interests of the farmer.

The Act relating to the Crown Lands deals with the better conserving of the forest wealth of the Province with a view to perpetuation of the timber crop, the conserving of the water supply and the future revenue from Crown Lands.

#### A PROVINCIAL HIGHWAY SYSTEM

The new Highway Act aims to bring to the work of road-making the best skill and business direction that can be obtained and \$100,000 per year is being set apart for strictly permanent work beginning at those places on the main trunk roads most in need of repair. In 1908 the experiment was tried of handing over to the highway boards of the various municipalities full power and all the provincial appropriation for the upkeep of the highways. This policy, while theoretically placing the control of the roads in the hands of the people themselves, has only worked out to the best advantage where the citizenship of the people was considerably above the average and even there the frequent change of road officials and the consequent change of methods as well as the absence very often of good engineering principles caused a large waste of expenditure. The act just passed provides for a Provincial Highway Engineer and expert county road-builders under him who will supervise the work of the local roadmasters. Taxes may be worked out on the highway under the direction of the roadmasters up to July of each year. After that the tax is payable in cash only, and the trend of the Act is to encourage work of a permanent character as well as the patrol of the roads for maintenance.

The act to establish two agricultural schools, one at Woodstock and one at Sussex, and looking to their increase so that each county shall in time have such a school, is an experiment that if well managed and conducted along the lines the promoters have in view, should do much to assist agricultural education. It is proposed that the Agriculturist in charge of each of these schools shall be a thoroughly practical and competent man of the same training as the District Representatives sent out by the Ontario Department of Agriculture, and who shall do similar work, laying great stress upon short courses, at such seasons as the largest numbers of farmers can take advantage of them.

#### OTHER PROVISIONS

The act to enable the Lieutenant-Governor-in-Council to put in force stringent regulations dealing with nursery-stock, insect pests and plant diseases, is also a move that will do much to encourage and protect fruit-growers and farmers generally.

The act to enable Boards of Health to put in force regulations and inspections in regard to milk and cream supplies in any part of the Province from which they are obtained will enable city and town boards of health to deal directly with milk producers no matter where they may live in the Province, and this, coupled with cow testing and inspection promised by the Department of Agriculture, should benefit both producer and consumer.

The Agricultural Committee of the Legislature during the session just closed has shown much more activity than in previous years and it has discussed many questions and passed resolutions as suggested to the Minister of Agriculture.

These resolutions dealt with the encouragement of cow testing, the growing of more dairy feeds on the farms of the Province and the teaching of facts regarding milk-production and milk testing in the public schools. Also urging the employment of a veterinary surgeon, whose duty it will be to test with tuberculin all herds whose owners may desire such a test, and to give instruction in stable sanitation, etc., aiming especially at the prevention and eradication of bovine tuberculosis; also asking that the Department import one or more power ditching machines and use it or them in giving demonstrations in different parts of the Province.

A resolution was also introduced in the committee recommending the establishment of demonstration farms in as nearly as possible every parish in the Province where the best principles and methods applicable to the district could be illustrated and results shown. At the request of the Minister this resolution was withdrawn after discussion, as he stated that he had in view a system of farm to farm instruction by expert practical men, that he thought might well precede the establishment of such farms.

The appropriation for agriculture was barely

as large as in 1912, as the total this year is only \$60,800, against \$61,315 the preceding year. The large increase in the proposed work of the Department is made possible by the receipt of the Federal subsidy which will make available during the Provincial Fiscal year of 1913 about \$58,000 from that source. The following figures show the items of appropriation for the two years from the Provincial Treasury.

	1912	1913
Departmental salaries, etc.,	\$ 7,400	\$ 8,600
Agricultural societies	14,000	17,000
Butter and cheese factories	1,000	1,000
Encouragement of dairying	4,500	4,500
Dairy school	2,000	2,000
Farmers' Institutes	3,000	3,000
Maritime Stock Breeders' Assoc.	800	800
Cold storage	750	750
Encouragement of Horticulture	5,500	4,500
Encouragement of stock raising	1,000	1,000
Assistance to scholars attending agricultural colleges	500	
Poultry raising encouragement	2,500	2,500
Crop competitions and seed fairs	750	1,050
Roller mill bonuses	1,000	1,000
Farm Settlement Board		1,500
Brown tail moth extermination	11,000	11,000
Exhibitions	15,000	10,000
Miscellaneous	615	600
<b>Total</b>	<b>\$61,315</b>	<b>\$60,800</b>

As yet the items for expenditure of the Dominion subsidy have not been made public, but it is understood, that educational work for the encouragement of horticulture will receive a fair share, that dairy educational work will be looked after and also knowledge upon fertilizer drainage and bee keeping will be disseminated. The upkeep of the proposed agricultural schools will come from this source, as will the farm to farm instruction, Womens' Institutes and several other items.

### Test the Seed Oats and Barley.

Have you tested the seed oats you are about to sow? If not do so at once. Immense quantities of oats will be sown in Canada this year that will germinate but a low percentage and the worst of it is that those which do sprout will germinate weakly. Should subsequent weather conditions be adverse, some of the plants will dwindle and perhaps die or at least make a poor growth, easily set back by wire-worms, grubs, cold or drouth. A low percentage of germination, if known of in time, may be compensated by using an extra quantity of seed, but a low vitality in the kernels which do sprout can be remedied only by substituting other and more vigorous seed.

Before spending valuable time preparing, sowing and reaping a crop, make sure, if possible, of having vigorous grain to sow. Test your likely bins of oats and barley for germination. Take a plate, cover the bottom with blotting paper or wollen cloth, put 100 or 200 representative kernels of the grain to be tested on this paper or cloth, cover with a similar piece and put on enough water to dampen the cloth well but not enough to submerge any part of the kernels. Dampen the paper or cloth at least once a day and keep the plate covered with another one inverted over it. Keep the plate in an ordinary living room temperature. At the end of five days count the percentage which have sprouted in each plate and make a note not only of the percentage but of the strength.

What suggests this subject so strongly to our mind is some testing we have done lately ourselves. Taking uncleaned grain from the lots, we had it tested by the local district agricultural representatives with the following results: One lot piled loosely on some boards over the bins last fall tested ninety per cent, nearly every kernel with anything in it sprouting. Another sample from a narrow-bin tested eighty-five per cent, and another from the bottom of a larger bin only eighty per cent. The germination not being so strong, as we might desire, we tried to secure a better sample of the same variety—but with not very encouraging results, some samples obtained proving worse rather than better. It may be impossible for all of us to secure first-class seed this year but let us sow only the very best we can obtain.

Co-operative experimenters who grew the O. A. C. No. 72 variety of oats last year seem to be hanging on to it for seed this spring. One farmer a short time ago sold one hundred pounds for \$25. There should be a good supply of seed in Ontario by this autumn. In fact there should be some thousands of bushels. It will probably not be easy for anyone to secure a quantity until then.

C. A. ZAVITZ.

The first National Marketing and Farm Credit Convention will be held in Chicago, U. S. A., April 8-10th.

### Barnyard Happenings.

By Peter McArthur.

Is there such a thing as an official score-card for marking up the points of a cow? If there is I should like to see one. I want to know just how many marks are given for powers of digestion. This week the red cow did something that almost lifts her out of the cow class and places her with the ostrich and boa-constrictor. The other day after the cows had been turned out to water she was somehow left untied. True to her predatory instincts as soon as she discovered her freedom she started to nose round for something she could steal and had the luck to find a tubfull of corn in the ear, from which the hens were being fed. She promptly began to wrap herself around it and before being interrupted in her feast she had eaten over a bushel. Now, "The Farmer's Advocate" has never published any "First Aid to the Gluttonous," and I didn't know what to do. When I asked for advice people told me sad stories of the death of cows from over-feeding. Some had been killed by eating tailings after a threshing, others by bloating after eating clover, others by a surfeit of chop feed. It was all very disheartening for a fresh cow that gives eight quarts of milk rich in butter-fat at each milking is a valuable asset in these days when the bank act is being revised so as to allow farmers to raise money on their cattle. I couldn't call up the veterinarian for we have no telephone, and with the roads in their present condition I did not feel like driving three miles to consult one. Still I was not so much worried as I might have been. The look in her eye was re-assuring. She looked more like the cat that had eaten the canary than anything else. She wore an air of unmistakable satisfaction and when she began to eat some clover hay that was in her manger as dessert to her banquet I felt that she might pull through. Her previous raids on the swill-barrel, soft-soap, apples and other things gave me confidence in her powers of digestion, so, after murmuring a few words, "more in sorrow than in anger," I gave her Shakespeare's blessing—"Let Good Digestion Wait on Appetite"—and left her to her fate.

At milking time she was still perfectly normal though kind of lazy about standing over and "histing." Acting on advice, I cut out her evening ration of unthreshed oats, so that her stomach would recover from the surprise she had given it in the afternoon. Her gastric juices had their work cut out for them without having their troubles increased. But she made no protest when the other cows were fed and she was skipped. In fact she reminded me of the bereaved fowl described by "Pet Marjory," the little girl whose rhymes and sayings were recorded by Sir Walter Scott:

"She was more than usual calm.

She did not give a single dam."

And yet, though she was in such good form I couldn't keep from worrying. All evening I listened to tales about cows that had come to untimely ends through over-eating, and look at it in any way I tried, a bushel or more of corn seemed a big dose for any cow. So after the others had gone to bed I lit the lantern and went out to the stable to see how she was doing. As I opened the door she heaved a sigh of repletion, like an alderman after a banquet. Then she stretched out her neck, brought up a cud and began to chew placidly. Still, I was not entirely easy in my mind if I could only get to see her tongue, or to feel her pulse, or take her temperature, I would be more satisfied. But how to get her to put out her tongue was the problem. The only way I could think of would be to hold an ear of corn before her nose and let her reach out her tongue for it, just as I had seen her try to lick grain through a knot-hole in the granary. But I was afraid to try that scheme for I knew by experience that she would probably get the start of me and add that ear of corn to the pile she had already accumulated. When it came to feeling her pulse I was stumped worse than in trying to get her to put out her tongue. How do you feel a cow's pulse anyway? The longer I live on a farm and grapple with its problems the more I find I have to learn. And all the time I was fussing and worrying she kept on contentedly chewing her cud. Restraining an impulse to give her a kick for looking so exasperatingly comfortable, when in the best judgment of the neighborhood she should be dying, I closed the door and left her to her job of digesting a bushel of corn. And she did it to the king's taste. In the morning I went to see her before I gathered the duck eggs and found her bawling for her morning feed. She never batted an eyelid—never turned a hair. And at milking time she gave a brimming pail of milk, just as if nothing unusual had happened. Later in the day, when she was turned out for water she bolted for the spot where she had found the corn on the previous day and seemed ready to repeat her exploit. It is not because she is starved either, for she is beef-fat.

This exploit of the red cow's recalled an ex-



perience we had years ago with the "Highway Cow," the one who was named after the poem I asked for a couple of years ago and which was promptly furnished by several readers of "The Farmer's Advocate." Her stunt was pushing down rail fences with her nose. On one occasion she broke into a clover field and stuffed herself until she bloated. We put a gag in her mouth and she "rified gas like a torn balloon." When she was finally empty we turned her into the orchard so that she could get rest and recover from the shock. Just as soon as our backs were turned she walked across the orchard, let down a fence and filled herself to the Plimsoll mark with half-ripened wheat. She was the limit, and the red cow when compared with the old "Highway" is an anaemic degenerate.

Having spoken of ducks in the previous paragraph let me tell you something about them. They were about the last thing on the farm that I would think of educating but I find them very apt pupils. Along in February they began to lay eggs in a dissipated way all over the place. We would find them in snow-drifts, on the ice in the old creek bed and all over the barnyard. In order to remedy the difficulty we were told to pen the ducks every night and not let them go out in the morning until they laid their eggs. A pen was prepared and I began in a resigned way to drive in the ducks every night. Ducks cannot be driven like other creatures. You can't hurry them. By nature they waddle along slowly and if you try to hurry them they begin to flap their wings. They cannot fly and their wings merely lift them off the ground so they lose their toe-hold and practically stop or fall over. If you crowd them they dodge between your legs and make all kinds of trouble. After I had mastered the secret of driving them—shooting them along slowly I settled down to penning the ducks every night as an added chore, but to my surprise it soon became unnecessary. After being driven to the pen a few times they learned what was wanted of them and went in themselves every night so that all I had to do was to close the gate of the pen so that they could not get out too early in the morning. They proved easier to train than anything else on the farm. I wonder why some vaudeville actor has not tried a sketch with trained ducks. It would be far more taking than a turn with trained dogs or seals or anything of that kind. Here is a chance for Prof. Dean to exercise his dramatic talents and make the fortune needed to back his dairy drama.

[Note—All Mr. McArthur's inquiries have been covered at various times in "The Farmer's Advocate." To take the pulse of a cow; stand at the left side, reach over the neck and take it from under the right jaw. The normal pulsation should run from 45 to 50 per minute in health. For over-eating the best treatment is to withhold feed (but not necessarily water) and give a brisk purgative of oil. If there are symptoms of bloating add turpentine. An ordinary cow should be given four ounces spirits of turpentine in a pint of raw linseed oil or sweet milk, repeating the dose two or three times if necessary at intervals of a half hour or less. In cases that are not extreme the turpentine will generally neutralize the gases and no further treatment will be necessary when there is no sign of bloating a pint and a half of oil may be given alone but it is not bad practice to add a little turpentine as a precaution.—Editor.]

### Nature's Diary.

By A. B. Klugh, M. A.

The voice of one of our most beloved musicians of spring now rings out in our thickets and fields. It is the song of the song sparrow. The day may be gray, snow may even be flying in the air, but when the song sparrow sings it is spring. Many birds sing in a dreamy way, not so with the song sparrow, he puts his whole heart into his song.

The songs of different individuals of this species all, or nearly all, belong to one type, so that we can easily recognize the species by the song, but there is an infinite variety among them. So well marked is this variety that one soon learns to tell individual birds by their song, for the song of each individual is always the same. Round my cottage at Puslinch Lake three male song sparrows lived, and I could tell by their songs where each bird was at any time when they were singing. These three birds had a regular route they followed day after day for weeks, and they followed each other in pretty regular order. One would perch on the woodshed, sing there, fly to the fence in front of the verandah, sing there, fly to the fence to the east of the cottage, sing there, fly to a little tree at the corner of the cottage, sing there, fly to the edge of the woods at the bottom of the garden, sing there and then repeat the round. The other two would follow, selecting the same perches, so that the three were nearly always singing from as

many points of the compass. This route was gone over by each bird from eight to twelve times a day. I said that nearly all song sparrows' songs belong to one type. I have in mind one which differed widely. It was a bird which lived in the centre of a large sphagnum (peat) bog—a rather unusual habit for a song sparrow. Its song had the three high opening notes all right, but after this, in place of the complicated warbling trill of the usual type of song, there was a low trill on two notes.

The song sparrow often goes by the name of "gray-bird", a name it shares with many other birds. It may always be recognized by the streaks on the sides of the breast and the dark blotch in the centre of the breast.

The song sparrow is worthy of our affection, not only because of its familiarity and its cheery song, but because it does no harm to agricultural products, but on the other hand consumes great quantities of weed seeds and numbers of injurious insects. It has a partiality for cut-worms, grasshoppers, weevils, click-beetles (parents of wire-



Song Sparrow.

worms) and crickets. It eats the seeds of a large number of weeds, consuming particularly large quantities of the seeds of several species of knot-weed or smart weed (polygonum) which are often troublesome weeds in damp places.

In the autumn the song sparrow does not go very far south, as it winters from Illinois and Massachusetts to the Gulf States. I have once seen it in Ontario in winter. On January 18th, 1904, I saw one at "The Rocks" on the river Speed, near Guelph. It was feeding on the seeds of the maple-leaved goosefoot, which was abundant there.

Another welcome spring arrival is the bluebird, the little bird which carries the blue sky upon its back. Its soft note drops to us as it flies over-high in the air.

This is one of the birds which will avail itself of a nesting-box in the orchard—if the house sparrows are kept away from the box—and it will repay the attention of consuming numerous insect pests.

The bluebird belongs to the thrush family, a fact one would hardly suspect from its plumage, as most of the thrushes have spotted breasts. Though the adult bluebird does not reveal the "family connection" in its plumage, look at a young bluebird and you will find the characteristic spotted breast.

The groundhog has awakened from its long sleep, and is now busy hunting up "early greens."

The spirit of spring has stirred the chickadee into frequent and enthusiastic utterance of his beautiful minor song, moved the white-breasted nuthatch to veritable volleys of "quanks" and started the golden-crowned kinglet out on its migration to the great North land, now released from the bondage of ice and snow.

### A Supervisor of Cow-testing for Ontario.

The Dairy Commissioner, J. A. Ruddick, announces that N. W. Coleman, who has been recorder for the Lanark Dairy Record Centre during the past two years, has been promoted to the position of supervisor of cow testing for the Province of Ontario. Mr. Coleman has shown special aptitude for this kind of work and has made a success of the Record Centre in Lanark.

Joseph Burgess, who has been supervisor in Ontario for several years, will be required hereafter to give more of his time to cold storage work. The administration of the Cold Storage Act, which is assigned to the Dairy and Cold Storage Commissioner, involves a lot of travelling for the purpose of inspection.

Dr. F. Torrance V. S., Veterinary Director General for Canada, informs us that a ministerial order has been issued prohibiting, for a period of three months from April first, 1913, the shipment into Canada of cattle from Great Britain, Ireland and the Channel Islands, on steamers carrying horses from Continental Europe.

### Horseshoers Want License Legislation.

The Master Horseshoers' Association of Ontario, held their second annual convention in Toronto, Monday, March 24th, with about 160 delegates present from the various provincial branches. The main topic discussed was the matter of special veterinary training for, and the licensing of, horseshoers. What the association would like to do is to get a bill passed by the Legislature making it law that every horseshoer must pass an examination and obtain a license before he can work at the profession. To prepare apprentices for this examination it was suggested that a special course should be provided at the Ontario Veterinary College covering more especially the anatomy of the legs and foot of the horse, common diseases of these caused by defective shoeing, injury, etc., and best methods of relieving these troubles through shoeing in a proper manner. The proposed legislation is only to affect apprentices and is not to apply to men already in the business.

There is little doubt but that harm is sometimes done horses by bad shoeing. Anything that will serve to raise the standard of this work in the country will be appreciated.

The natural outcome of the getting of better service is likely to be higher prices for the work but if these are not made exorbitant the horse-owning public will welcome the day of better horseshoers. People do not mind paying for a good thing. However the legislation has not yet been passed and some of the horse-shoers hold out little hopes of it being put through in the near future. The proposition is worthy of consideration but should be thoroughly looked into before being made law.

The report of the Association's organizer showed 2,644 to be the number of shops in Ontario employing 4,000 men and 237 apprentices. The Association has sixty-five branches and the officers are: President, George Church, Hamilton; 1st Vice-President, Fred King, Aylmer; 2nd Vice-President, Rodger Cropp, Simcoe; 3rd Vice-President, T. R. DeGreers, Toronto; Treasurer, C. A. Ostrander, Tillsonburg; Secretary and Organizer, E. Devlin, Tillsonburg.

### Co-operation Among Farmers.

A practical demonstration of the successful working of co-operation among farmers, of a given district, is seen in the County of Simcoe in what is known as the Smithvale Club, an organization effected last year through the instrumentality of James Laughland, B. S. A., District Representative of the Department of Agriculture, at Collingwood. This farmers' club started its organization with a membership of fifty, and has now grown to nearly the hundred mark. Meetings are held bi-monthly at which, after the general routine of business, questions of general interest are discussed, and debates on various subjects or addresses by members is the order or proceeding. Interest in these meetings is indicated by the large number present on every occasion, and much benefit has been derived by the members through the interchange of ideas in the various topics of interest to themselves. Co-operation in the purchase of supplies, seeds, corn, etc., is one of the big factors of this club, and is of very material financial benefit to the members. Another strong factor is the periodical gathering of the members for stock-judging contests. It was the privilege of the writer to be present at one of these contests a few days ago, held at the splendid farm of David Smith, Smithvale. The contest was conducted by Mr. Laughland, assisted by J. C. Steckley, B. S. A., District Representative in Newmarket, York Co. There was a large turnout, and the interest manifested showed the members were there for information. Shorthorn cattle, Leicester sheep and Yorkshire swine were supplied from the noted herds and flocks of Mr. Smith, Clydesdales from the studs of Wm. Laugheed and R. Smith. Shorthorns, sheep and swine were most ably demonstrated by Mr. Laughland and Clydesdales by Mr. Steckley. After the usual descriptive lecture on the ideal to be attained, the members took a hand in the judging of the various animals, which, with their explanation of reasons for their decisions, made a most interesting and profitable afternoon for all present. There is scarcely a district in Ontario, or probably in any of the other provinces, but what could very profitably take a lesson from the Smithvale Club, and the Scotch descendants of Simcoe County.

H. VANZANT.

### Best on the Continent.

I take three other agricultural papers, two Canadian and one American but none of them are in the same class. They do not fill the bill like "The Farmer's Advocate."

Durham Co., Ont.

W. E. JEWELL.



**Markets.**

**Toronto.**

**REVIEW OF LAST WEEK'S MARKETS**

At West Toronto, on Monday, March 31, receipts of live stock numbered 32 cars, comprising 614 cattle, 215 hogs, 14 sheep, 17 calves, and 18 horses. No business transacted. Sixty-two hogs sold at the City market at \$9.60 f. o. b. cars. As long as the roads are bad, hog prices will not quote lower. The total receipts of live stock at the City and Union Stock-yards last week were as follows:

	City.	Union.	Total.
Cars .....	14	216	230
Cattle .....	397	2,481	2,878
Hogs .....	289	4,539	4,828
Sheep .....	48	158	206
Calves .....	49	580	629
Horses .....	—	103	103

The total receipts of live stock at the two yards for the corresponding week of 1912 were as follows:

	City.	Union.	Total.
Cars .....	170	232	402
Cattle .....	2,217	3,345	5,562
Hogs .....	4,972	3,903	8,875
Sheep .....	257	62	319
Calves .....	528	67	595
Horses .....	—	249	249

The combined receipts of live stock at the City and Union Stock-yards for the past week, show a decrease of 172 cars, 2,684 cattle, 4,047 hogs, 113 sheep, and 146 horses; but an increase of 34 calves, in comparison with the corresponding week of 1912.

On account of the country roads being bad, the receipts of live stock at the Toronto markets were not as large as they have been for some time past, especially in cattle and hogs. The cattle receipts, however, were quite equal to the demand, and prices were no higher for the best grades. If there was any change, it was for the medium-quality steers and heifers, weighing from 850 to 950 lbs., for which there was a good demand, at firm prices.

Exporters.—There was no demand for cattle for export, although there were probably 200 cattle of export weights and quality that sold to the abattoirs at prices ranging from \$6.65 to \$6.85, which was the highest price paid, and that, only one car lot.

Butchers'.—Loads of good sold at \$6.25 to \$6.50; medium cattle, \$5.90 to \$6.25; common, \$5.50 to \$5.75; inferior, light-weight steers and heifers, \$5 to \$5.25; cows, \$4 to \$5.50; canners and cutters, \$2.50 to \$3.50; bulls, \$4 to \$5.50.

Stockers and Feeders.—Feeders, 800 to 900 each, sold at \$5.40 to \$5.65; stockers, 500 to 750 lbs., \$4.75 to \$5.25.

Milkers and Springers.—Receipts of milkers and springers were light, and it was well that it was so, as there was little demand, and trade was very slow and dull, unless for an odd, choice-quality cow. The bulk sold at from \$40 to \$65 each, although an extra-quality cow is still worth \$70.

Veal Calves.—Receipts of calves were moderate, and prices firm, at steady quotations; good choice calves sold at \$9.50 to \$10; fair to good calves sold at \$8.75 to \$9; strong-weight calves, \$6.75 to \$8.25; inferior, rough, heavy calves, \$3.50 to \$5.

Sheep and Lambs.—Trade in sheep and lambs was much the same. Sheep—Ewes, \$6.75 to \$7.25; rams, \$5.50 to \$6. Lambs—Yearlings sold at \$8.50 to \$9.50 per cwt.; spring lambs, from \$5 to \$10 each.

Hogs.—Receipts were light all week, and prices steadily advanced. Selects, fed and watered, sold at \$9.85, and \$9.50 f. o. b. cars, and \$10 to \$10.10 weighed off cars.

Horses.—Trade at the Union Horse Exchange, Union Stock-yards, was better last week than for some time. Two carloads of lumber-woods' horses sold on Wednesday at \$140 to \$200 each. Sales were made of carloads of heavy-drafters to go to Prince Albert, Sask.; one carload to Moose Jaw, Sask., and many local sales were made to different firms in the city. It now looks as though trade would be fairly good for some time to come. Prices were not much changed. The average ranged as fol-

lows: Drafters, \$200 to \$250; general-purpose, \$150 to \$200; express and wagon horses, \$150 to \$200; drivers, \$150 to \$200; serviceably sound, \$45 to \$100.

**BREADSTUFFS.**

Wheat.—Ontario, No. 2 red, white or mixed, 93c. to 95c., outside; inferior grades, down to 70c. Manitoba, No. 1 northern, 97½c.; No. 2 northern, 95c., track, lake ports. Rye—No. 2, 60c. to 63c., outside. Oats—Ontario, No. 2, 33c. to 34c., outside; 33c., track, Toronto. Manitoba oats, No. 2, 41c.; No. 3, 39½c., lake ports. Peas—No. 2, \$1 to \$1.05, nominal, outside. Buckwheat—51c. to 52c., outside. Barley—For malting, 51c. to 53c.; for feed, 43c. to 48c., outside. Corn—No. 3 American yellow, 56½c., track, Toronto, all-rail shipment. Flour—Ontario, ninety-per-cent. winter-wheat flour, \$3.90 to \$3.95, 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, \$12 to \$12.50, for No. 1; \$10 to \$11 per ton for No. 2.

Straw.—Baled, car lots, track, Toronto, \$9 to \$10 per ton.

**TORONTO SEED MARKET.**

Alsike No. 1, per bushel, \$11.50 to \$12.50; alsike No. 2, per bushel, \$10.50 to \$11; alsike No. 3, per bushel, \$9.50 to \$10; red clover seed, Ontario-grown, \$7 to \$9 per bushel; timothy No. 1, per bushel, \$1.50 to \$2.25; timothy No. 2, per bushel, \$1.25 to \$1.60.

The above quotations are prices paid to farmers for seed that has to be re-cleaned by the seedsmen.

**COUNTRY PRODUCE.**

Butter.—The market remains steady, supplies being quite equal to the demand. Creamery pound rolls, 32c. to 34c.; creamery solids, 23c. to 29c.; separator dairy, 28c. to 30c.; store lots, 22c. to 24c.

Eggs.—Receipts were large; greater than the demand, and prices were easier. Strictly new-laid, 22c.; cold-storage, 17c. to 18c.

Cheese.—Market firm, but prices unchanged, at 14c. for large, and 15c. for twins.

Honey.—Extracted, 12½c.; combs, \$2.75 to \$3 per dozen.

Potatoes.—Market a little firmer. Ontario, 65c. to 70c. per bag, car lots, Toronto, and New Brunswick Delawares, car lots, track, Toronto, 80c. to 85c.

Poultry.—Receipts light, and not equal to demand. Turkeys, 27c. per lb., dressed; geese, 18c. to 20c.; ducks, 20c. to 22c. per lb.; chickens, 22c. to 23c. per lb.; hens, 16c. to 18c. per lb.

Beans.—Broken car lots, hand-picked, \$2.60; primes, \$2.25, down to \$1.25 per bushel for inferior qualities.

**HIDES AND SKINS.**

No. 1 inspected steers and cows, 13c.; No. 2 inspected steers and cows, 12c.; No. 3 inspected steers, cows and bulls, 11c.; country hides, cured, 11½c.; country hides, green, 10½c.; calf skins, per lb., 14c.; lamb skins, \$1.10 to \$1.50; horse hides, No. 1, \$3.50 each; horse hair, per lb., 37c.; tallow, No. 1, per lb., 5½c. to 6½c.

**FRUITS AND VEGETABLES.**

Apples—Spies, No. 1 per barrel, \$4 to \$4.25; No. 2 Spies, \$3.50 to \$3.75. Greenings, No. 1, \$3.25 to \$3.50; Greenings, No. 2, \$2.50 to \$3; Kings, No. 1, per barrel, \$4; cabbage, \$1 per barrel; carrots, 65c. to 75c. per bag; parsnips, 65c. to 75c. per bag; onions (Canadian), per sack of 90 lbs., 80c. to \$1.

**Buffalo.**

Cattle.—Prime steers, \$8.75 to \$9; shipping, \$8 to \$8.50; butchers', \$6 to \$8.40; heifers, \$6 to \$8; cows, \$3.75 to \$7.25; bulls, \$5 to \$7.25; stockers and feeders, \$5.50 to \$7.50; stock heifers, \$5 to \$6; fresh cows and springers, \$35 to \$80.

Veals.—\$5 to \$12. Hogs.—Heavy, \$9.75 to \$10.25; mixed, \$10.80 to \$11; yorkers and pigs, \$10.90 to \$11; roughs, \$9.45 to \$9.50; stags, \$8 to \$8.75; dairies, \$9.75 to \$11.

Sheep and Lambs.—Lambs, \$6.50 to \$9.15; yearlings, \$5.50 to \$8.25; wethers, \$6.75 to \$7.25; ewes, \$3.50 to \$6.75; sheep, mixed, \$5 to \$6.75.

**Montreal.**

Live Stock.—Prices of live stock of all kinds continued exceptionally high, and there was no surplus of anything. Some very choice cattle sold here last week at 7½c. per lb., by the load, while 6½c. to 7c. was paid for fine stock freely, and good cattle sold at 6c. to 6½c.; medium at 5½c. to 5¾c., and common ranged down to 4c. Calves were in fair demand, and prices were \$3 to \$13 each, according to quality. Sheep were firm. Ewes sold at 5½c. to 6c., while yearlings ranged from 8½c. to 8¾c. per lb. Some spring lambs were sold, but the supply was exceedingly light. Hogs were firm in tone, and as high as 10½c. per lb. was paid for selects, weighed off cars.

Horses.—Prices steady, as follows: Heavy-draft horses, weighing from 1,500 to 1,700 lbs., \$300 to \$350; light-draft, 1,400 to 1,500 lbs., \$225 to \$300; light horses, weighing from 1,000 to 1,100 lbs., \$125 to \$200, and broken-down animals, \$75 to \$100, or \$125 each. Choice saddle and carriage animals sold at \$350 to \$500.

Poultry.—Stocks were very light here, and it was said farmers have absolutely nothing for sale.

Dressed Hogs.—Abattoir fresh-killed hogs sold as high as 15c. per lb. From this, the price ranged down to about 14c., according to quality.

Potatoes.—The market for potatoes continued to decline. It was very hard to get good stock. Quotations for Green Mountains were from 65c. to 67½c. per 90 lbs., carloads, track, while Quebec grades ranged from 55c. to 60c. In smaller lots, prices ranged about 25c. more than the above.

Honey and Syrup.—New syrup was spoken of, but none was received. Honey steady. Prices for white-clover comb, 16c. to 17c. per lb.; dark, 14c. to 15½c.; white extracted was 11½c. to 12c., and dark, 8c. to 9c. per lb.

Eggs.—The market for eggs showed very little change. Prices were about 24c. to 26c. per dozen for new-laid stock. Some merchants quote storage stock, but no one wants it.

Butter.—There was no butter offered. Top grades of butter held firm, and prices ranged from 31c. to 32c. per lb. From this, prices ranged down to 28c. for seconds, and to 23c. to 25c. for dairies. Fresh makes were quoted at at 24c. to 26c. per lb.

Grain.—Prices were steady, at 41½c. to 42c. per bushel, for Canadian Western oats, carloads, ex store, and 40½c. to 41c. for No. 1 feed, extra.

Flour.—The market for flour held steady. Prices were \$5.40 per barrel for Manitoba first patents; \$4.80 for seconds, and \$4.70 for strong bakers'. Ontario patents were \$5.25, and straight rollers, \$4.85 to \$4.90.

Millfeed.—Considerable millfeed was sold to go to the country, as feed for live stock, and prices held firm. Bran was \$20; shorts \$22, and middlings \$25 per ton, including bags. Mouille was in fair demand, at \$35 to \$36 per ton for pure grain, and \$30 to \$33 for mixed.

Hay.—The market was very uncertain. Some dealers claimed that prices were fully 50c. per ton less than the quotations which follow: No. 1 hay, carloads, track, \$13 to \$13.50 per ton; No. 2 extra, \$11 to \$12, and No. 2 ordinary, \$9 to \$10, and ordinary \$8 to \$9.

Seeds.—Dealers still quoted the same prices to farmers, on the following basis: Timothy, \$3 to \$4 per 100 lbs., country points; clover, \$6 to \$10 per bushel of 60 lbs., and alsike \$10 to \$12.

Hides.—The only change from the previous week was the advance of 1c. per lb. in the price of calf skins, to 16c. and 18c. per lb., for Nos. 2 and 1 respectively. Beef hides were 12c., 13c. and 14c. per lb., respectively, for Nos. 3, 2 and 1. Sheep skins were \$1 to \$1.10 each, and lamb skins, 10c. each. Horse hides were \$1.75 and \$2.50 each, as to quality; tallow, 1½c. to 3c. per lb. for rough, and 6c. to 6½c. rendered.

**Chicago.**

Cattle.—Beeves, \$7.10 to \$9.10; Texas steers, \$6.60 to \$7.70; stockers and feeders, \$6.10 to \$8.10; cows and heifers, \$3.60 to \$7.90; calves, \$6 to \$9.

Hogs.—Light, \$9.05 to \$9.45; mixed, \$9 to \$9.45; heavy, \$8.75 to \$9.35; rough, \$8.75 to \$8.90; pigs, \$7 to \$9.20. Sheep and Lambs.—Sheep, native, \$5.90

to \$6.70; yearlings, \$6.85 to \$7.85; lambs, native, \$6.90 to \$8.65.

**Gossip.**

Shorthorn bulls are in good demand, and good ones are scarce. Attention is called to the advertisement in this issue of Stewart M. Graham, Lindsay, Ont. These bulls are from heavy-milking dams, and will be sold at reasonable prices. Look up the advertisement if needing a good one.

At the annual show and sale of Shorthorns, at Penrith, England, March 21st, 132 head, 80 females and 102 bulls, sold for an average of \$155. The highest price attained was 220 guineas, for the roan senior yearling bull, Balacava, bred by Lord Brougham and Vaux, Penrith, and sired by Sir Keith Cadigan, dam grand Duchess of Oxford 122nd, purchased by F. B. Wilkinson, for exportation. The highest price for a female was 85 guineas.

Geo. Amos & Sons, Moffat, Ont., breeders of Shorthorn cattle and White Wyandotte and Leghorn poultry, inform us that they still have for sale three extra-good young bulls, including Meadow Signet, by Scottish Signet, dam Imp. Meadow Beauty. This is one of the best young bulls ever bred at Pleasant Valley. Also the grandly-bred young roan bull, Orange Signet, by Scottish Signet, dam Orange Miss, by the grand champion, Old Lancaster, granddam Flowery (imp.). Orange Miss was one of the winning calf herd in 1907. Either of these young bulls is fit to head the best herd in the country. Eggs, from excellent varieties of S.-C. Leghorns and White Wyandottes are also for sale. Messrs. Amos will be pleased to correspond with parties interested, or, better still, to have them call and see their stock before buying.

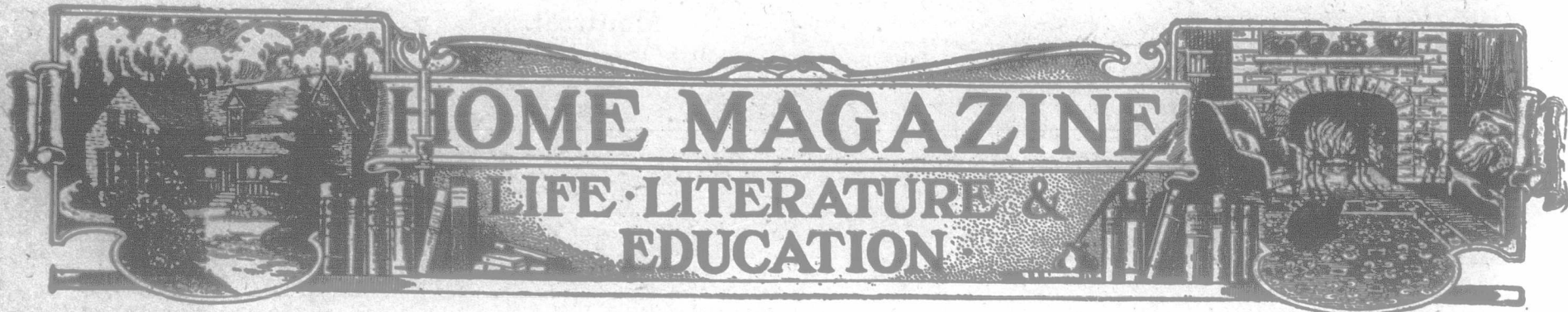
The Pontiac State Hospital, Pontiac, Michigan, is breeding some high-class Holsteins. See the advertisement in another column. They report the sale of a young bull combining the blood of the celebrated Colantha Johanna Lad, Creamelle Vale, Pontiac Korndyke, and Hengerfeld De Kol, to Richard Clarke, Hensry, Ont. This calf was dropped February 6th, 1913. His sire is Pontiac Dutchland 2nd, a grandson of Colantha Johanna Lad and Creamelle Vale. His dam is Pontiac Bernice, a granddaughter of the celebrated Pontiac Korndyke. This is a rare combination of the blood most sought for by the largest dealers. A half-brother of this calf, dropped January 21, 1913, is still on hand, and an extended pedigree and photograph will be supplied to any breeder interested.

**Trade Topics.**

The attention of horse-breeders is directed to an advertisement in this issue of artificial mare impregnators. Read the advertisement carefully and write the Breeders' Supply Company, Cleveland, Ohio, for their catalogue of impregnating devices, hobbles, stallion bridles, shields, supports, and other specialties.

The slaughter of new-born calves is held responsible in some quarters for the high cost of meat. The custom of killing calves a few days old is directly responsible for a tremendous drain on the dairying industry of the country. Advocates of efficient dairy farming declare that it is much cheaper to raise stock than to buy for the purpose of replenishing the dairy herd. They also point out that calves should be vealed, at least, or raised and sold as beef. But farmers have been getting good prices for whole milk, and so they've slaughtered their calves when very young. The "feed" manufacturers were quick to realize the possibilities of the market for a calf feed, but it has been difficult to get a feed approximating whole milk in nutrient and value. The Caldwell Feed Company, of Dundas, have been experimenting on a calf meal for some time, and they claim to have solved the problem. Caldwell's Cream Substitute Calf Meal is guaranteed, after chemical analysis, to contain almost the same nutrient as whole milk. See the advertisement in another column.





### A School Flower Club.

(By John Finlayson.)

Only a little shrivelled seed,  
It might be flower, or grass, or weed;  
Only a box of earth on the edge  
Of a narrow, dusty window-ledge;  
Only a few scant summer showers;  
Only a few clear shining hours;  
That was all. Yet God could make  
Out of these, for a sick child's sake,  
A blossom-wonder, as fair and sweet  
As ever broke at an angel's feet.

—Van Dyke, The Builders.

Flowers! Flowers! the pretty flowers!  
Are you to have a flower garden in your school? Do your pupils know how to rear a "tame" flower? Are they acquainted with the wild flowers? If not, dear teacher, your duty with regard to the child and nature study has been sadly neglected. To the child, the love of flowers is one of the earliest and most enduring of passions. We may learn something from Nokomis in Longfellow's Hiawatha. She was grandmother and teacher to him:

"Saw the rainbow in the heaven,  
In the Eastern sky the rainbow  
Whispered, 'What is that Nokomis?'  
And the good Nokomis answered:  
'Tis the heaven of flowers you see  
there;  
All the wild flowers of the forest,  
All the lilies of the prairie,  
When on earth they fade and perish,  
Blossom in that heaven above us.'"

Here was an ideal teacher of nature. There was no dissecting, but a living interest in what these things did.

In order to bring the children into touch with their friends of the wood and field, a flower club should be organized at once, having for its motto, "How to know the tame and wild flowers." Get into the woods, become acquainted with the beautiful wild flowers.

The following plan may be found helpful before anything can be accomplished in the school-garden. Begin by asking the children: What flowers do you like best? Why do you like these better than any others? Other questions may be asked to arouse their interest. Let the information thus derived be a writing lesson. If any do not like flowers, encourage them to state the fact and let them give the reasons for their dislike as they are able. Next, have a composition lesson on what they know about cultivating flowers. Organize your club after you note the interest aroused in flowers, including every member of the class. Allow the children to elect officers as you would in any other society club.

After you have been successful in forming the club, have your school board vote supplies to obtain sufficient packages of seeds for each member of the club. Give each pupil a package of the seed of the flower which he or she loves best. Ask how many would like to take some seeds and see who can raise the best plant. Give a simple lesson and demonstration on the preparation of the soil, and the best way to plant. This should be done early, so that the plants may be well grown and in fine bloom for a flower "show" near the end of the spring term. The seeds should be planted and reared at home in flower pots. Have the pupils tell you about the growth of their plants from time to time while they are growing. Three or more prizes should be awarded at your flower show. The children should be given to understand that each must find out for himself, from books or parents, or anybody who knows, the best way to rear his plant. The object of the lessons should be simply the culture of the

tame flowers. Blanks should be made out on paper, by the teacher, for future reference, as follows:

#### TAME-FLOWER CALENDAR, 1913.

Flowers.	How obtained.	By whom cared for.
Roses .....		
Lilies .....		
Violets, etc.....		

In the above manner we cultivate thoughtfulness and power to reason, and initiate unconsciously into scientific experiment, directed toward tangible and practical courses.

When the wild flowers have come out, daily excursions should be made to the woods, either during the last hour of school, or after four. Begin by giving a few simple language lessons, to find out what the children know about the common wild flowers. Have them make lists of the flowers with which they are acquainted. The teacher should be well acquainted with the woods to be visited before a nature-study trip is attempted. The names of the most common plants should be taught the pupils as well as the characteristics that distinguish each. In order to do this, the flowers should not be touched by the fingers, but should be left entirely on the stalk.

"It is murder to dissect."

—Wordsworth.

No advanced work should be attempted by the teacher. Leave this for the High School or Collegiate Institute. What I mean by advanced work is the learning of the botanical names and difficult botanical terms. Fancy introducing a chicory flower or plant to a young child in the terms of a dead language, as "Cichorium intybus." To create the love of a flower in the heart of a child with some knowledge about trees, poisonous plants, and a little knowledge of horticulture, is the botany that should be required in the public school.

The following device might be written on the black-board:

#### WILD-FLOWER CALENDAR, 1913.

Date.	Name of flower.	Pupil who first finds it in bloom.
April 13...	Hepatica.	Mary Smith.
April 25...	Buttercup.	James Ross.
and so on until the board is full.		

Then the school club will copy the list into their nature-study note-books.

To make the identification of a plant possible, do not take the whole plant to the school-room. Encourage the child to bring in descriptions, or only so much as will make identification possible. It is a distinct loss to have our rarest and most beautiful flowers so completely exterminated in the wild woods, and near our towns and cities, that few ever see them blooming.

It will not be too much to learn at least twelve plants a year by grouping, drawing, and writing lessons about them.

"Hast thou named all the birds—without a gun?  
Loved the wood-rose, and left it on its stalk?"

—Emerson.

Such a nature-study course will enable the children to keep their eyes bright and wide open on their way to school. Besides this, it will give them life-long interests, acquaintances and friends.

But, perhaps, while the teacher is performing her or his duty in this noble work, the wary parent will thrust in a hasty demand at the teacher. He asks, "What good is derived from this nature

study?" Is the parent aware that a weed or plant is either his best friend or his worst enemy? Is it not of economic value to the farmer to know what plant to cultivate or what one to destroy? What will call forth a child's best activities or develop patience better than this study of flowers and weeds? What other occupations stand in such fundamental relation to life and civilization? All of these questions are worthy of serious thought before replies should be made. Finally, dear teacher and parent, begin when the child is young. Earliest impressions are the deepest. Fathers, parents, teachers, let us be up and doing! What we lack, let us provide for our children. Remember that the child is dealing with living, breathing flowers—not dead, inanimate things.

One of the most important objects of our present education is to train the child to think for himself when he is young. By a series of well-selected questions, this habit may be easily acquired. These questions force him to reason for himself, thus making the child more self-reliant, since education is child-training. Is not the child that is trained to think led at the same time to develop powers of industry, activity, and diligence, which should be the important virtues of our home and country? Activity is constructive. This activity of the child is now one of the underlying principles, or methods, of education. As a result, children are not allowed to grow up thoughtless, idle, and, therefore, dead.

Boys and girls rear plants for the sake of the flower. The flower seems to be the attractive part. Each pupil strives to see who will have the largest and prettiest one. Many fail. It is this throwing of the old plant away to rear better that develops patience in children. Thus, patience, carefulness, and faithfulness, in such a little thing as a flower, and the continuity of purpose, are all instilled unconsciously with preaching. The pupils love their flowers, as parents love their children.

This study of the plant and flower enables the child to express his views by models and drawings, as well as by writing. Reflective attention upon flowers is exercised and developed. By this method, the child discovers for himself the end, reflects upon their desirability, and upon their means to attain them. All of these require mental activities which must be deliberate, independent, and permanent.

No man yet knows how to rear any single plant best. The competitive element seems to be in the child. It brings into action every tittle of power to think, reason, investigate, and experiment. This becomes a lesson for the human race in learning the best cultural conditions for difficult plants of the same family. It represents a step from barbarism to civilization. The child, in this simple, easy, and natural way, has done more than anything else to uplift human life. I say, let the whole child play and delight in this study of flowers and plants.

On the mental side of education, the child's powers of observation are trained. He sees, or must see, the wonderful life-story of his plant from the seed, through root, stem, leaf, and flower, to seed again, guided by the direction of selected questions on the teacher's part. There is no book in the world which could teach him so much as this one plant so closely associated with his own thinking, feeling, willing, and doing. Observation is education.

In the education of the race, sound brain-tissue and mental powers must be attributed to "Dame Nature," a very old, kind, and useful nurse. When living in contact with nature, studying the

flowers, the child comes in contact with the other phenomena of nature. This change offers a relief to the mentally cramped and distressed pupil and teacher.

From an economic standpoint, it is essential that the child know what plants with their flowers are valuable to mankind, and what ones are detrimental. Laws have been formed to protect all useful and economic things of nature, as birds, game, fish, etc., while the evils of nature, such as insect pests, noxious weeds, bacterial diseases, and injurious animals, are nothing but a continual menace to public property. No man has the right to allow things to breed and grow upon his premises that would be an injury to his neighbor. The child must be trained to carry on the fight for the good, and against the bad, in nature, which should be entirely for human good.

Flower culture is a very ancient line of human interest. What is there in modern times that equals the hanging gardens of Babylon? We, as teachers in the public schools, do not expect to come up to this degree in the art; nevertheless, the child can be turned instinctively to the beautiful in nature to complete his satisfaction. A flower club in every school should fill and surround many homes and schoolhouses with the most beautiful things attainable. Within their minds, there should be instilled the spirit of creating and preserving the natural beauties of roadside, field, and forest, rather than that of ruthless destruction.

The love of right and the hatred of wrong depends largely upon the study of the plant and its flower. It is because of pure ignorance that a boy has little idea how much harm he is doing when he kills the birds or destroys the nest, and plucks some valuable or pretty plant. Any effort for the protection of property is ethical, and the moment the child takes this stand, he places himself on the side of law and order in his community. This ethical and social idea may elevate the moral and aesthetic tone of a household, for to rear a flower is an ideally ethical act.

Lastly, the study of the plants and their flowers will lay the surest foundation for religious character, because no one can love nature, and not love its "Author." As Prof. Hodge says, "The child that puts forth creative effort to make the world better, the child that plants a seed or cares for the life of an animal, is working hand in hand with nature and the Creator, and what higher religious development can we desire than that he become the 'reflected image of God?'"

Surely, a child that has nursed and cared for another living thing, though it be of a much lower order than himself, will be led more easily to guard and foster his own life. To observe and care for the living children of nature, such as beetles, butterflies, birds, plants, and their flowers, is a lesson that is a distinct step upward from barbarism to civilization.

Children welcome the opening of spring, with its bees, butterflies, and beautiful flowers. He is a bright boy who follows the seasons by its flowers. Through his close friendship with them, he proudly calls them his own. The swamps and the woods, the hills and the roadsides, are his especial domain. The impersonal love of flowers is one of the characteristics of modern poetry. The great poets of Canada and the United States have shown a profound appreciation of the incomparable wild flowers. I say again, "Go ahead and organize that flower club in co-operation with your school garden without delay." Do not hesitate, dear teacher, for the work ahead of you is ample and cheery.



# Hope's Quiet Hour.

## Stored Treasure.

Lay not up for yourselves treasures upon earth, where moth and rust doth corrupt, and where thieves break through and steal: But lay up for yourselves treasures in heaven, where neither moth nor rust doth corrupt, and where thieves do not break through nor steal.—S. Matt. vi. 19, 20.

How familiar those words are, and yet how little attention we pay to them. The world is full of busy people who are acting as if their business in living were chiefly to pile up treasure on earth. One day is considered to have been a profitable day because more money than usual has been secured. Another day appears to have been wasted because no addition has been made to the heap of earthly treasure. And yet we know that our Lord was speaking the truth when He warned us that the earthly gain, so eagerly sought, could not be kept by any mortal man. A man may be a multi-millionaire, may invest his money in the best securities, and yet utter destitution may suddenly come upon him. There was a rich man once—our Lord sadly called him a "fool"—who felt quite secure because he had much goods laid up for many years. How easily God swept aside his wealth, when He said to that poor man who thought himself rich: "This night thy soul shall be required of thee: then whose shall those things be which thou hast provided?"

Yesterday I stood beside the cold body which had a few days before been the home where a man lived, and I listened to the solemn truism which we all know so well and heed so little: "We brought nothing into this world, and it is certain we can carry nothing out." It is strange that we can act as if it were a reasonable thing to spend many years—the best years—of life in heaping up treasure on earth, when each one knows that the words of the Psalmist are true: "When he dieth he shall carry nothing away."

A man once sat in a church in Glasgow and listened to the words recorded in the fifth chapter of Genesis. If you look up that chapter you will probably think it very uninteresting, for it is a record of the genealogy, age and death of the patriarchs from Adam to Noah. Nothing there to convert a man, one might think; and yet that listener went out of the church a converted man, with his outlook in life completely changed. Why? Because he heard of men who lived for hundreds of years on the earth, and yet the record of each long life—except one—ended with the words, "and he died." The listener suddenly realized the fact, which he had known long before, that he also must die. What next? No one but a fool could live as if this world were all, when God might at any moment summon him to give an account.

If we are going to make a success of this earthly life, which is only ours to use, not to keep, we must make our chief aim and ambition something worth while, something that can be stored up. The noble Carey used to say: "My business is serving the Lord. I cobble shoes to pay expenses." So it is with the great Apostle to the Gentiles. His business was preaching the glad tidings of Christianity, bringing light into the darkest places he could find—he made tents, by the way, to pay necessary expenses. His advice to other people was to work honestly for reasonable pay. Was it in order that they might become rich men, above the common crowd? No, it was that they might have something to give away to those in need (Eph. iv. 28).

St. James is very severe when speaking of rich people who come to church grandly dressed, securing the best seats for themselves, and giving nothing but advice to their poor brothers. He reminds us that faith is dead and useless unless it blossoms out in good works.

Once a lady called on Mrs. M— to ask her for a subscription in aid of some poor neighbors, who had been burned out and had lost all their possessions.

Mrs. M— said she would pray for her afflicted neighbors, but—as she needed something very particularly for herself just then—she would not be able to contribute anything towards the fund. When the visitor had gone away, disappointed, little Amy said to her mother: "You always pray instead of giving, don't you? It's better to pray than to give, 'cause then you can have all your money for yourself. I believe in praying and keeping your money."

Mrs. M— did not answer, but she felt very far from comfortable. A little later she overheard her two children, who were talking in grown-up style. Amy was saying:

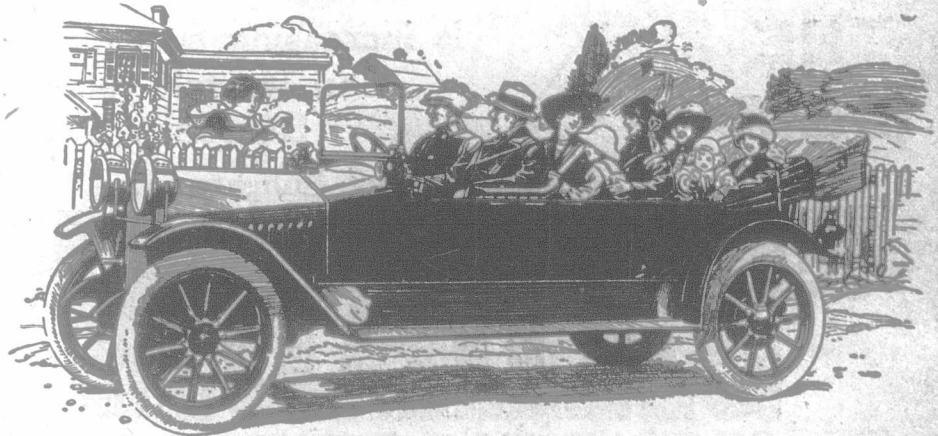
"No, I never give anything, never. I pray."

Her little sister—who represented a visitor—pleaded: "But this is a worthy object. The poor man has broken his leg and has six children."

Mrs. M— heard all her favorite excuses set forth, and saw for the first time that they were excuses she would never have dared to offer to the Master she thought she was serving. Later on she found that her husband, who was kind-hearted, but made no profession of religion, had been held back largely by her easy, selfish Christianity. She had never thought it worth while to sacrifice herself or her own luxuries to help forward in any way the cause of Christ, and a religion with so little enthusiasm about it could never inspire an outsider. When we are selfish, and indifferent to the welfare of our fellows, we are doing terrible harm to the cause we profess to love. If a man is enthusiastic about any favorite hobby, he proves it by the expenditure of money and time. If a woman makes a specialty of dressing well, she cheerfully pays out money and time for that object. If we really care about Christ, and about the welfare (physical, mental, and spiritual), of our brothers and His, we shall not wait until we have all possible luxuries for ourselves before we spend money for His cause. There should be no feeling of sacrifice in offering any gift of money or service to Him Whose wonderful love has won our hearts. At an enthusiastic meeting of a thousand members of the Brotherhood of St. Andrew of New York, held recently, one of the speakers said that a man had once brought him a generous offering for missions. His pleased thanks were cut short by the giver, who asked what he was thanking him for. "It was just his expression that he was a soldier and servant of Christ."

It is a privilege, not a sacrifice, to have the opportunity of copying the Good Samaritan, and helping a brother who has fallen by the wayside. It is a dead loss to be trying to be "an economical Christian," paying out as little as possible for your religion. The best investment you made last year was the money you spent wisely and generously for the cause of Christ and humanity. Even from the selfish point of view, it is a poor economy which saves money at the expense of character. Even here on earth, kindness pays better than wealth, it gives more happiness, wins more friends, and is worth infinitely more than selfish, grasping miserliness. A few years ago two brothers were found by a neighbor in their home. One had starved to death, and the other was dying from lack of food. Yet they had with them, in actual cash, more than a thousand dollars. Gold in their hands—all wasted. May God keep us all from wasting His property—our health, time, talents, money, and life.

Just as I wrote that last word the postman arrived, bringing a card from "A Country Woman," expressing her pleasure in having been able to reach out and help an over-burdened sister to carry her heavy load. Thank God, there are many servants of Christ who feel it a glorious privilege to offer Him a gift of love through a needy comrade of His. How He treasures those shining gifts, counting them over and over as a miser does his gold. Not one cup of cold water, given in the spirit of love, will ever be forgotten by the King Who stoops to lift it from your eager hands. Life is such a grand opportunity, so full of chances to be kind. Don't let us waste it by making earthly treasure or ambition our object in life. Men often "die poor," though leaving millions of dollars to their heirs; but we shall be



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If a woman could tell exactly how many needless steps she takes in 'the kitchen without a cabinet', she wouldn't wonder why she was generally over tired.



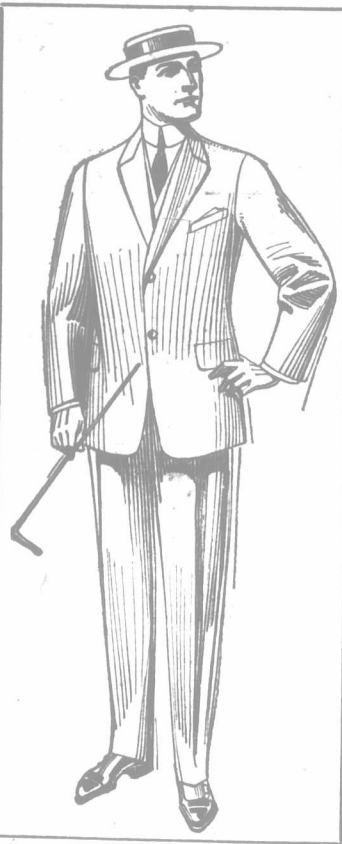
is a labor saver because everything a woman uses for cooking is at hand; it cuts out the hundred and one needless journeys across the kitchen and enables you to sit down and do your work quickly and tidily.

A K.K.K. saves money because groceries kept in it are perfectly kept and there is less danger of accidental waste. The Knechtel Kitchen Cabinet has flour, sugar and meal bins, spice jars, air-tight canisters, bread and cake boxes, plate racks, sliding shelves, and many other practical features.

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rich in deepest reality—rich in the sight of God—if our life has been poured out joyously in His service. "There is that maketh himself rich, yet hath nothing: there is that maketh himself poor, yet hath great riches."

"Don't you know it's the part of a brother of Man to find what the grief is and help when you can? Did you stop when he asked you to give him a lift, Or were you so busy you left him to shift? Oh, I know what you meant—what you say may be true— But the test of your manhood is WHAT DID YOU DO? Did you reach out a hand? Did you find him the road, Or did you just let him go by with his load?"

DORA FARNCOMB.

**The Roundabout Club.**

Some more of the prize essays, Study III.

**A Book on Social Problems**

To the most of us, the prospect of being cut off from civilization for the space of a year would be anything but enticing.

Human nature, in almost every instance, craves companionship. It is one of the necessities, or pleasures, if you will, that nature demands in order that each may give to the world the best that is in him.

We need our friends for the broadening influence they bring to bear on our lives; for the stimulus we receive through coming in contact with the opinions of others. A most valuable part of our education is received by mingling with other people—where we learn to sympathize with, and understand, that strange mixture of good and evil which we call nature. Even Thoreau, the recluse, recognized the need of a friend.

To be sure, there are times when solitude is welcome—times when we must get away from the hurry of life to think our own thoughts—to re-adjust ourselves. It was from solitude, we are told, that our greatest thinkers gave to the world those plans and ideas which have been of such untold value to their fellowmen. But it was for their fellowmen their thoughts were, and through their companionship these originated. Such terms of solitude, then, bear the same relation to companionship as the punctuation-marks to the composition. Separately their values are impaired; together they make a complete and perfect whole.

"How sweet, how passing sweet is solitude! But grant me still a friend in my retreat,

Whom I may whisper, solitude is sweet." Next to our friends we must place our books. Judicious reading is in itself a liberal education. Through books, we may converse with the greatest of thinkers.

Channing tells us that "books are true levellers. They give to all who will faithfully use them, the society, the spiritual presence of the best and greatest of our race. No matter how poor I am, no matter though the prosperous of my own time will not enter my obscure dwelling, if the sacred writers will enter and take up their abode under my roof—I shall not pine for my want of intellectual companionship, and I may become a cultured man, though excluded from what is called the best society in the place where I live."

A book which is to be our sole companion for a whole year, must be more than entertaining; it must be also instructive along some line in which we are interested.

We have been told to beware of the "one-book" man. Here is our chance to prove the saying. But the choosing is difficult. Rows of books rise before us. Books that we have loved and re-read; books that have left us with a better impression of mankind.

Because I have always been interested in economic questions, I would seize this opportunity to take with me, "Progress

and Poverty," by Henry George, and in my island retreat I would study the correct way to abolish poverty as taught by that most wonderful man, who suffered and died for the cause.

That wealth is not properly distributed, and that great injustices are perpetrated because of this, has been a long-known fact. Solutions without number have been introduced for the reduction of this evil, and all, while helping some, have failed to bring about the right result; because, not any of these plans have reached the root of the trouble. One almost wonders if a survival of the fittest means the survival of the crafty and selfish, and the extinction of those who are humane.

Henry George taught that "He who makes should have; he who saves should enjoy. He saw that all wealth had its origin in the land; that all monopolies, the real poverty producers, have their origin in the land. The remedy for poverty, he believed, lay in making all men equal before nature by letting any, who would, hold land, but compelling him to pay its entire rental value in the form of a tax to the public treasury. This would discourage the holding of lands for speculative and other purposes, with the result that enormous quantities of land, now idle, would be thrown open for occupation. Land being the base of all production, all production would receive a fresh impetus.

This, in part, is the theory taught in the book with which I would spend my island sojourn. A book which teaches so eloquently and sincerely the great brotherhood of man, the greatest good to the greatest number, and the earth for all, as surely the Good Giver intended.

A year spent on an island,—the most remote island, with such a book for company, filling our hearts with sublime thoughts, our minds with lofty ideals,—could not but be a year well spent, could not fail to help us, and through us, perhaps, make known the good work to mankind. SHERARD McLEAY. Perth Co., Ont.

**WHAT BOOK?**

All alone on an island, with only one book, for a whole long year! Oh! cruel, cruel fate!

But, the fat has gone forth; we must bow to the inevitable; therefore, what book shall it be?

Listen! someone, is suggesting the Halton Women's Institute Cookbook!! Avaunt, vile wretch, avaunt!

Shall it be that universally admitted second-best book, Bunyan's Pilgrim's Progress, written in prison, translated into many different languages, read and revered the wide world over, stimulating and inspiring humanity in the difficulties and perplexities of everyday life as lived in the companionship of our fellow-beings? But this year is to be unique, away from the fret and worry; let it be a year of forgetting, then. No, not that. Give me, rather, a book of natural history the most inclusive and comprehensive obtainable, treating of the soil, plant, and animal life, mineralogy, chemistry, astronomy, etc.

Such a book, large, and yellow with age, lay for a couple of months, during a very busy season, on our veranda table. It was the property of a most congenial young Englishman. Many of his leisure moments were spent in its perusal, and it absorbed also much of my time, which should, perhaps, have been otherwise employed. But, prestissimo, Charlie and the book were gone! So sudden, so wholly unexpected was the leavestaking, that neither the title of the book nor the name of its author is known to me. Doubtless, however, our libraries contain many such works of later date, and, therefore, even more desirable, as an aid to reading the phenomena of nature.

Given a whole island as territory, free from all responsibility in regard, either to consanguineous or universal brotherhood, with a book such as this as companion, and a long year at my disposal, what a field of delightful study would be opened up before me!

An island full of the wonders and mysteries of nature, each proclaiming, in love, adoration, and obedience, the name of the One Father of all! True it is that the faculties of the human mind are inadequate to comprehend all the mar-



### Diamond Dyes Spell Economy For These Women.



Made over from a tan broadcloth dyed black.

"I am sending you photographs of my sister and myself to show you what we have been able to do with Diamond Dyes.

"The gown that I have on, I made over from material we had in a tan broadcloth Russian Blouse that we never liked. We dyed this black. My sister's suit we made according to a pattern, from a grey homespun suit which we dyed navy blue.

"I think you can see from these photographs of my sister and myself how much (Diamond Dyes mean to us."

Mrs. J. R. Raymond.

Diamond Dyes are the wonder-workers of the home. Rugs, portieres, curtains and feathers, etc., can be made bright and fresh as new.

### Diamond Dyes

There are two classes of Diamond Dyes—one for Wool or Silk, the other for Cotton, Linen, or Mixed Goods. Diamond Dyes for Wool or Silk come in Blue envelopes. Diamond Dyes for Cotton, Linen, or Mixed Goods come in White envelopes.

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Our experience of over thirty years has proven that no one dye will successfully color every fabric.

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Vegetable fibres require one class of dye and animal fibres another and radically different class of dye. As proof we call attention to the fact that manufacturers of woolen goods use one class of dye, while manufacturers of cotton goods use an entirely different class of dye.



Made over from grey homespun dyed navy blue.

### Do Not Be Deceived.

For these reasons we manufacture one class of Diamond Dyes for coloring Cotton, Linen, or Mixed Goods and another class of Diamond Dyes for coloring Wool or Silk, so that you may obtain the very best results on EVERY fabric.

REMEMBER: To get the best possible results in coloring Cotton, Linen, or Mixed Goods, use the Diamond Dyes manufactured especially for Cotton, Linen or, Mixed Goods.

AND REMEMBER: To get the best possible results in coloring Wool or Silk, use the Diamond Dyes manufactured especially for Wool or Silk.

Diamond Dyes are sold at the uniform price of 10 cents per package.

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This book is full of Dress secrets, how to do almost magical things about the home, etc., etc. Send us your dealer's name and address—tell us whether or not he sells Diamond Dyes. We will then send you this famous book of helps, the Diamond Dye Annual, a copy of the Direction Book, and 25 samples of Dyed Cloth Free.

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velous works of nature. Still, by observation, study, and intensity of purpose, much, very much, may be learned, and such an insight gained as should prove, to me, and possibly to others, a lasting source of enjoyment, gratification, and perhaps pecuniary profit.

With such an incentive, aided always by my book, so engrossed should my mind become in the research, that oblivion would cover the fact that human companionship was lacking.

So, quietly but alertly nesting on the bosom of mother-earth, feeling her every heart-beat, new relationships should be formed. That venerable oak, with all the other trees, should stand to me as brothers. Looking back through the vista of years, when an acorn, beechnut, or tiny seed fell into the soil, the history of their growth and nature, as also that of their many attachments, should become my constant study. The different vines that cling to their trunks, and entwine among their branches, the lichens and mosses that spread so beautifully over their bark, would demand most assiduous consideration.

What diligence would be required in learning the life-story of the peculiar parasites that fasten to their branches and roots, as the mistletoe, romantically well-known and loved, the beechdrops, Indian-pipes, etc. Then, the fungi—that large and most interesting family, every member of which has its own little secret to be ferreted out.

As, one by one, the flowers appear, pure and beautiful—my lovely sisters—what constant, close application would be required to understand their varying attributes.

The animals and birds should become my teachers and friends. In the wild abandon of their native haunts, fearing neither gun nor snare, how easy to study and profit by their habits. Mankind, as an enemy being unknown, my presence would cause no alarm or distrust, and their confidence and favorable opinion would soon be gained, thus facilitating my purpose. Much has been, and may still be, taught by the animals. From the wasp, man learned the art of paper-making; the beaver first suggested the building of dams. A king's perseverance was so strengthened by a spider that victory was gained. The great advantages of union are demonstrated, as well as system and order, by the ant,—in short—wisdom. Surely faith is increased by watching the grub—that, as far as human eye can discern, is at the very zenith of a perfect existence—weave himself into a living tomb, to emerge, perhaps in a few months, perhaps not for many years, according to the species, a winged and beautiful creature.

With the whole panorama of nature spread out before me, the wonders of earth and air and sky, what scope, what opportunity for investigation. Where would it end? Oh! for an extension of time. Oh! for a mind to comprehend, even vaguely, dimly, the vastness of the heavens, the wonders of the firmament, the sun, moon and stars. The rocks and minerals open up new lines of thought. The wonderful mysteries of the surrounding waters—plants, shells, fish, await solution. The coming and going of the seasons, the dew and rain, frost and snowfall, are all worthy of the closest observation and most diligent study. But—tempus fugit—the year has gone! Back, to the kitchen and the cookbook. Back—Oh! wonder if poor Mr. Pendick's operation was successful; and—what about the Farmer's Bank? RURA.

Halton Co., Ont.

Dear Puck and Beavers,—As my father has taken this paper for a great number of years, I thought that I would send this picture of a dog and cat, and I will try to tell you about my pets. I have a pair of banties which are black as coal, with feathers all down their legs. I have a dog, and a guinea which yells,

### The Beaver Circle

### OUR SENIOR BEAVERS.

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

### Our Senior Beavers' Letter Box.

Dear Puck and Beavers,—I live on a farm, and have one brother, but no sisters. I have four pets, one old dog, one old mother kitty, and two little kittens. My little black kitty walks up and sits on my shoulder when I'm going around helping to feed the stock. We have about thirty-two cattle, seven horses, and two little colts. We have a gasoline engine to grind the grain and pulp the roots. We live quite near the school; it only takes me about five minutes to go to school. We have a good teacher, and I like going very much. As this is my first attempt to write to the Beaver Circle, I'd better not make it too long. With best wishes to the Circle.

"Buckwheat!" and am going to get another. I have an old pet cat, and every night when I come home from school, she will come out from under the stove and jump up on a chair or the lounge and rub her head around on the cushion or against me if I sit down. ANSON HOOPLE (age 12, Bk. IV.), Newington, Ont.

Your drawing is very good, Anson.

Dear Puck,—Just a line to thank you for the pretty book you sent me. I didn't expect one. I am going to try the garden competition if there is one, and perhaps I will do better next time. I cannot go sleigh-riding just now as it has been raining these last few days, and the snow is nearly all gone. Well, I must close now, wishing the Beaver Circle every success. ELIZABETH F. HUGHES. (Age 12, Jr. IV. Class.) Hanover, Ont.

Dear Puck,—I always read your letters. I am going to school, and have about two miles to walk, but we never walk much. I am in Fourth Grade, and I am going to try the examinations at Lachute this year. I have three sisters and one brother. I hope I will see this in print. I will close with some riddles. Big at the bottom and small at the top, and a thing in the middle goes whippity-whop? Ans.—A churn. As I was going across a London bridge I met a London scholar, and he took off his hat and drew off his glove, and what was the name of the London scholar? Ans.—Andrew. RUBY ELIZABETH MILLAR (age 13). Lachute, Que., R. M. D. No. 1.

Dear Beavers,—This is my first letter to the Circle. We have taken "The Farmer's Advocate" for a long time, and I enjoy reading the letters. I go to school every day. My teacher's name is Miss Somerville. I like her very much. I have three pet colts and a pet dog; his name is Rex. He can catch a ball in his mouth when you throw it to him, and he will roll over for anything to eat, and sit on a chair and shake hands. MANSELL TAYLOR. (Age 12, Class Sr. III.) Nassagaweya, Ont.

Dear Puck and Beavers,—I live on a farm, and have one brother, but no sisters. I have four pets, one old dog, one old mother kitty, and two little kittens. My little black kitty walks up and sits on my shoulder when I'm going around helping to feed the stock. We have about thirty-two cattle, seven horses, and two little colts. We have a gasoline engine to grind the grain and pulp the roots. We live quite near the school; it only takes me about five minutes to go to school. We have a good teacher, and I like going very much. As this is my first attempt to write to the Beaver Circle, I'd better not make it too long. With best wishes to the Circle. HILTON R. CAMERON. (Age 10, Sr. III.) Cataract, Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. I enjoy the letters very much. I like reading, and, being a quick reader, have read many books. Of the stories of animals I have read, I like best, "Beautiful Joe" and "The Red Fox." I should like to tell you of a weasel. One day I heard screams as of something in distress. It was repeated. I ran out just in time to see a small, furry animal, running under some rails. I wondered for a time what this could mean. Suddenly it dawned upon me what was wrong. It was a weasel, who had come around to kill the chicks in the coops and suck their blood. The hen was very much frightened and angry because the intruder was chasing her chickens. She would naturally fly at him, and his attention would be drawn from the chicks to the hen, and she, in her fright, would scream. At the sound of human footsteps the weasel quickly ran under cover. I called my father, who tried to drive the weasel out, but

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And your bread is more porous, more yielding, more appetizing.

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Use this very fine flour—*superfinae*.

FIVE ROSES.

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Not Blended

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likely it crept away in the long grass, for we saw nothing of it again.

LUCILE GLASS (age 11, Bk. IV.).

Dear Puck and Beavers,—I am going to tell you about learning to skate. At Christmas, I got a pair of skates. At first I could not stand up on them, but after a while I could go around a little. When I got on a big pond, I got a few cracks on my head. I got my heels skinned a few times, then I got some batting in my boots. Now I can skate pretty well. My letter is getting long. I will close with some riddles.

As I was going through a gate I saw a little green house; in the green house was a red house, in the red house was a white house, in the white house were a lot of darkies. Ans.—A watermelon.

If a goat swallowed a rabbit, what would it be? Guess the answer.

MURRAY MULVEY (age 10, Sr. III.).  
Belmore, Ont.

Dear Puck and Beavers,—I wrote to your Circle a long time ago, but I did not see my letter in print, so I am writing again. I live on a farm west of Walkerton. My father keeps bees. I think they are very interesting little creatures. Don't you, Puck? They hardly ever sting me.

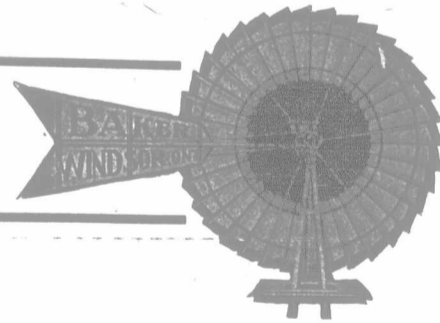
I am a bookworm. I like Ralph Connor's books. A few of the books I have read are, "The Man from Glenora," "With Wolfe in Canada," and "Wide, Wide World."

We have a nice little driver. He is a bronco. His name is Billy. He is wild sometimes. Well, good-bye, wishing all Beavers every success.

ANNIE CONDY (age 14, Bk. IV.).  
Greenock, Ont.

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## Beaver Circle Notes.

Fern Laughlin, Maurice Readhead, and others, wrote on both sides of the paper, so their letters could not be published.

Several others wished pen-names signed instead of their own. These letters could not be published because it is a rule in the Beaver Circle that "really, truly" names shall be used.

## OUR JUNIOR BEAVERS.

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

### What are They?

(By Gertrude W. Fielder.)

Dear little girl, can you tell me  
What the spring calls out to play?  
Something round and soft and furry,  
And the coats they wear are gray.

Dear little boy can you tell me  
Where these furry, round balls play,  
After the sun has kissed them  
And stroked their coats of gray?

Dear little girl, can you tell me  
What these furry, round balls play,  
Frolicking out in the sunshine,  
Dressed in their coats of gray?

Little boy and girl, come quickly  
Down by the brook and see  
The gray little willow pussies  
Waiting for you and me.

## Junior Beavers' Letter Box

Dear Puck and Beavers,—My father just began to take "The Farmer's Advocate" last month, and as I have taken great interest in the Beaver Circle, I thought I would write to you. I go to



school every day that is fit. My teacher's name is Miss Bonsfield. She got up a concert for Christmas, and it was a dandy. I have about one mile and three-quarters, to go to school. I will close with a few riddles.

What was the largest island before Australia was discovered? Ans.—Australia.

Why was Goliath surprised when struck by the stone of David? Ans.—Such a thing never entered his head before.

GLADYS APPLEBY (age 10, Jr. III.).



Ralph McGregor.

The McGregor homestead, Halton, Co., Ont.

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for three years. I live about a mile and a half out of the town of Wallaceburg. Wallaceburg has several large factories—the sugar, brass, glass, and knitting factory. We have one hundred and fifty acres. My father put up two new barns this year. We are going to paint them red. We call our farm "Maple Leaf Dairy." My teacher's name is Miss East. I have no dog, but have a cat and one kitten. My grandpa, who fought in the Crimea, died in November, at the age of eighty-five. Next time I write I will tell you about my trips and the books I like to read.

RICHARD P. COURTIS.  
(Age 9, Book III.)

Dear Puck and Beavers,—Papa has taken "The Farmer's Advocate" for a number of years, and we all like it fine. I have three brothers and no sister. Two of the boys and I go to Maple-grove school. Our teacher's name is Miss Gould, and we all like her fine. For pets, we have one kitten; its name is Flopsy. We had two kittens till last week. One of the cows laid on the other, which we called Mopsy, and killed her. We had three calves; their names are Rosy, Blossom, and Bates' Jack, but papa sold him last week to the butcher. Wishing the Beavers every success.

RUTH ARMSTRONG.  
(Age 8, Book II.)

R. R. No. 3, Bowmanville, Ont.

Dear Puck and Beavers,—I live on a farm in Sarnia township. I have a mile and a half to go to school. I have a goat. I have two brothers and one sister. One of my brothers goes to school. We have five horses. We are keeping twenty-six cattle. I will close with a riddle.

The more you cut off it the longer it grows. Ans.—A ditch.

GEORGE HARDY (age 9, Bk. II.).  
Sarnia, Ont.

Dear Puck and Beavers,—This is my first letter to the Circle. I go to school every day, and carry my dinner. It is too far for me to walk home and get it. I am in the Third Book. I have a quiet horse that I can harness and drive. I have a pet colt and a black kitten. I guess I will close now, wishing your Circle much success.

CARRIE M. MARTIN (age 10).  
Querrier, Ont.

Dear Little Beavers,—As this is my first letter to your Circle I will try to do my best. I am going to tell you how I get along at school. We have about a rod to go to school. We have had great fun on a slide we made in front of the school. We put water on it the night before, and it was as slippery as any ice in the morning. We played on it at dinner-hour, and had great fun.

CLARA CLARK (age 12).  
Inglish Falls, Ont.

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for a number of years, and thinks it a very good paper. I enjoy reading the letters of the Beaver Circle very much. I have one brother and one sister. I am in the Junior Third Class and go to school every day. My teacher's name is Miss Mair, and we like her very much.

We have a little Indian pony. His name is Dannie. We also have eight horses besides him.

Our farm contains one hundred and fifty acres. I live about five miles from a small lake, at Lakeside. It is about one mile around it. There is a bathing-house there. In the winter there is a skating rink. There is a pavilion there, too, where you can get refreshments. I was at the fair there in the summer-time. Well, I will close now, wishing the Beaver Circle every success.

AGNES MCGEE (age 9).  
Kintore, Ont.

This is a very good letter for such a tiny girl, Agnes.

Dear Puck and Beavers,—Ever since I was seven years old I had to carry in the wood, milk the cows, feed the cattle, feed the hens, gather the eggs, and go for the cows in the summer, and so on. Two years ago I undertook to break in my dog. First, I made a harness, then bought a sleigh and shafts. I hitched him up and he went well. I had to run the garden these last two years. I sold about twenty dollars' worth of vegetables last year, besides what we kept for our own use. I tried to get a snap-shot of my garden, but the frost came and froze everything. We live on a large farm, about two hundred acres, and there are no hills on it, but there is a large gravel-pit, and we have a large bush. We are getting the telephone in. We have one dozen horses, and we have a lovely colt. I enjoy reading the Beaver letters. We have a big barn and we have a litter-carrier in it. We built a silo twelve feet four inches inside, and thirty-five feet high, which is a great thing for feeding cattle.

BOULTON MARSHALL.  
Hawkestone, Ont.

You are quite a farmer, Boulton, aren't you?

Dear Puck and Beavers,—We live in Temiskaming. We have lived here five years, and there is a great deal of bush around us yet. One day last summer my brother and I went out to see if there were many blueberries in the blue-berry patch, and we saw a big black bear. He was running away from us. We never had a school here till last summer. We have had to learn our lessons at home. The school only lasted from May to October, on account of muddy roads, but will open in May again.

NANCY STARKE (age 10, Bk. II.).  
Charlton, Ont.

Dear Puck,—As this is my first letter to the Beaver Circle, I will not make it very long. I read your letters very often. I find them so interesting that I thought I would like to join. I go to school; my teacher's name is Miss Sharp. I am in Grade III. I do not have very far to walk to school, so I can go every day.

For pets, I have a kitten, calf, and colt. My little brother has a calf and colt, too. I have a little sister; she is not a year old yet. Donald will soon be three, and I will soon be nine. My papa is a doctor. He has taken "The Farmer's Advocate" for several months. As my letter is getting long, I will close with a verse.

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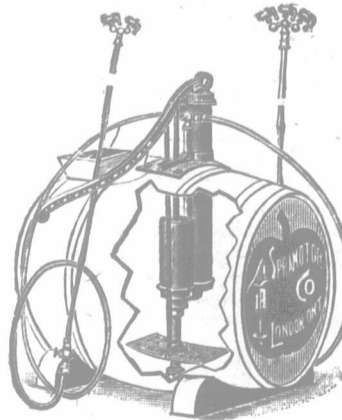
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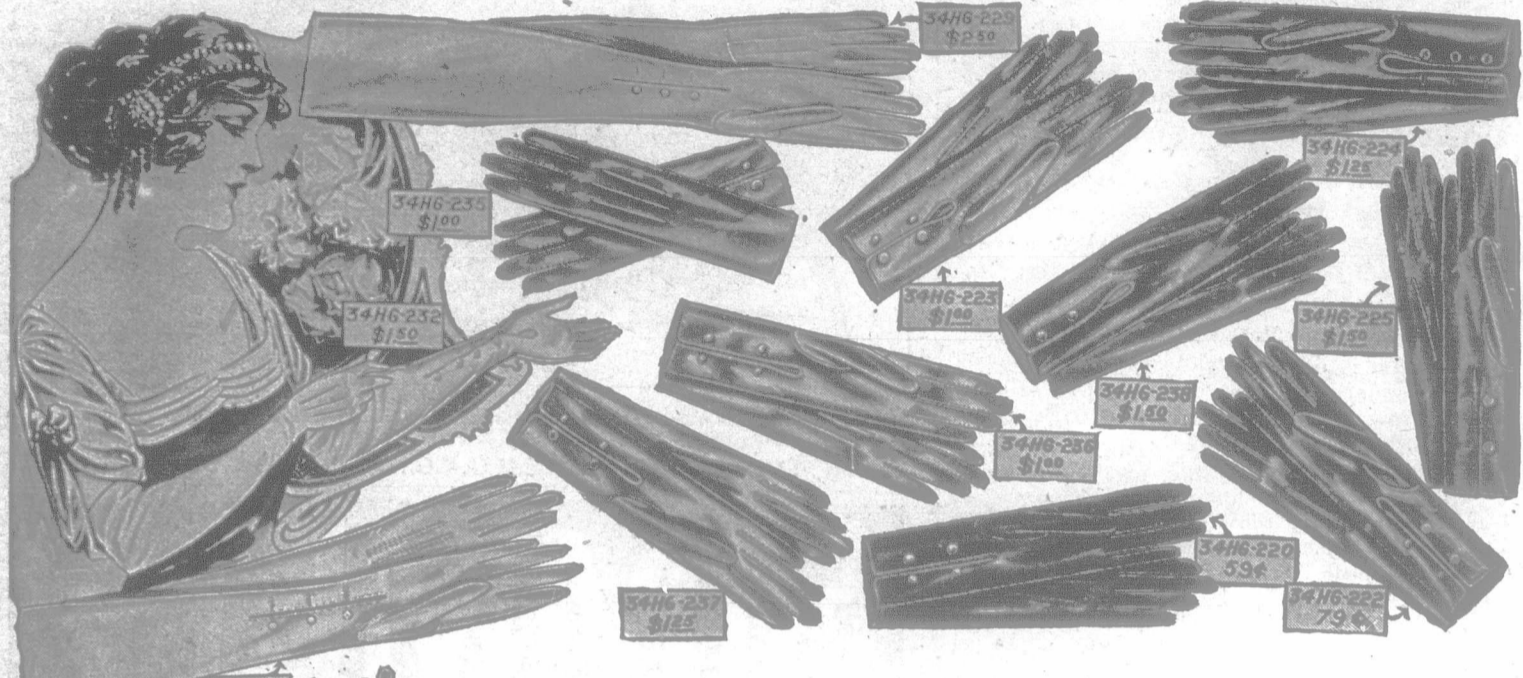
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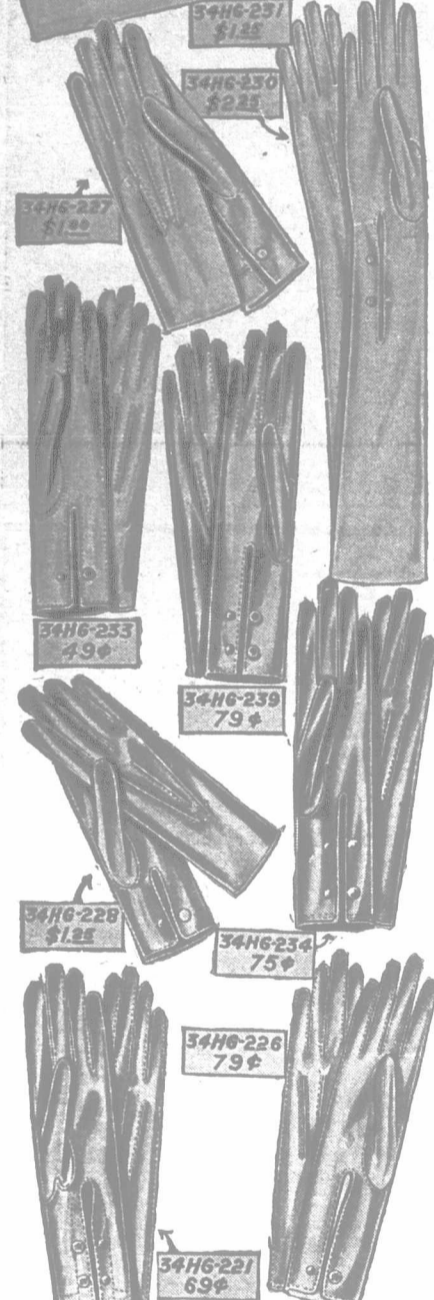
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**EVENING PRAYER.**  
Ere I sleep, O Lord of all,  
On Thy holy name I call,  
Bless me, ere I go to rest,  
Thou, Who's name is dearest, best.  
OLIVE FOLKINS (age 8).  
Norton, Ont.

I enjoy reading the paper. I have three brothers and one sister. My sister and I go to school every day. One day we were in the school and someone saw the floor was on fire. We sent the boys for pails of water, and then sent for men. They got it out and went home.  
MARION McCLEAR (age 7).  
Glencoe, Ont.

Dear Puck and Beavers,—I have been reading the Beaver Circle letters, and have found them so interesting that I thought that I would write, too.  
I live on a farm. There are about one hundred acres in it. I live about one mile and a half from our school. My brother and I go to school. I have

two brothers and one sister. I am the oldest in the family.  
LAURETTA HUTCHISON.  
Sandfield, Ont. (Age 10, Sr. II.)  
Dear Puck and Beavers,—I just thought I would find courage to write to the Circle. I love to read the letters sent by the junior Beavers. We have six horses and two calves. We call them

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for some



Piny and Daisy. We have great fun with Daisy, for she will not kick. We have two kittens, and a dog. We call him Collie. He will draw the hand-sleigh. I have one brother; no sisters. I will close with a few riddles.

Why is a shoemaker always a true lover? Ans.—Because he is faithful to the last.

What is it that ties two people together and touches only one? Ans.—A wedding-ring.

I will close, wishing the Circle every success.

EDNA MAY CRICH.  
(Age 10, Jr. III. Class.)

Dear Puck,—This is my first letter to the Circle. We live on a farm. We have a number of cattle, and six horses. We have a rabbit; we had two, but one ran away. I love reading the letters. Well, I will close.

ERNEST CRICH (age 6, 1st Bk.)

Dear Puck and Beavers,—I like reading the Beaver Circle very much. My pet, the colt, is called King. My teacher's name is Miss Gibson; I like her very much. Santa Claus was very good to me. He brought me a doll.

VERA THOMPSON.  
(Age 6, Sr. Primer.)

Beaverton, Ont.

Dear Puck and Beavers,—I go to school and am in the First Class. My teacher's name is Miss Fraser. We have a dog; his name is Bruce. I guess I will close.

ETHEL MOORE (age 7).  
Pembroke, Ont.

**Riddles.**

As I was walking through a field I found something good to eat. It was neither fish, flesh or bone, and I kept it till it ran about alone. Ans.—An egg. —Sent by John A. Hair, Watford, Ont.

What kind of hair did Moses' dog have? Ans.—Dog hair. Sent by Marjorie Thompson, Beaverton, Ont.

Higher than a house; higher than a tree; oh, what ever can that be? Ans.—A star. Sent by Isabel Smart, Cookstown, Ont.

As soft as silk, as white as milk, as bitter as gall; a thick wall, and a green coat covers me all.—Ans.—A walnut. Sent by Isabel Stewart, Morriston, Ont.

**The Ingle Nook.**

[Rules for correspondents 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.]

**A Trip to Lake Huron.**

Dear Junia,—“Our own best country ever is at home.” I wonder how many of us chatters have realized the truth of that statement. It was brought home with renewed force to the writer, when, some weeks ago, given the privilege of an interesting drive through a portion of Bosaquet Township in the northern part of Lambton County. Although the calendar read January, the day was an ideal one, bright and sunny, with scarcely a reminder of winter's rule in the atmosphere, when mine host, his daughter, and myself, prepared for our drive to one of “Canada's great lakes, Huron.” In the course of the first few miles we passed numerous fields where celery is grown exclusively. The soil is very rich, and is considered to be of very great value. Some of this land is the former bed of Lake Burrell.

Then we entered the region of the sand-hills, Lambton's miniature mountains. They are partially covered with bush, and some quaint little dwelling-houses are to be seen, “climbing,” as it were, to their summits, a very picturesque scene, indeed.

Then, for several miles, our road wound in and out among forest trees. However, this land is becoming, slowly, but surely, cleared, and, it is hoped, will prove valuable for peach-growing. We availed ourselves of the splendid opportunity offered and climbed one of the highest sand-hills in order that we might



**MAKE THE INTERIOR** of your home comfortable, wholesome and cosy. Not everyone knows how much paints and varnishes help to do this. Old furniture can be made to look like new; scarred, worn floors can be made clean and fresh; walls can be decorated in pleasing colors that wear for years, and are absolutely sanitary. Here are a few hints, all can be carried out at small expense:

Use S.-W. FLAT-TONE for your walls. A durable oil paint that dries with a soft, velvety finish. Absolutely sanitary. Can be washed with soap and water. Twenty-four beautiful colors. Use S.-W. MAR-NOT on hardwood and hard pine floors. A durable waterproof floor varnish. Use S.-W. FLOOR-LAG on softwood floors. Gives a hardwood effect on an old floor. Made in light and dark oak, mahogany, etc. Use S.-W. INSIDE FLOOR PAINT for a painted finish. Dries over night with a rich wear-resisting gloss. Use S.-W. FAMILY PAINT for touching up around the house. Just the thing to paint woodwork, doors, cupboards, etc. Use S.-W. ENAMEL for painting and decorating woodwork, doors, furniture, picture frames, etc. Use a Sherwin-Williams Paint, Varnish, Stain or Enamel for every surface that needs finishing around the house. There is a Sherwin-Williams agent in your town. Ask him for color cards.

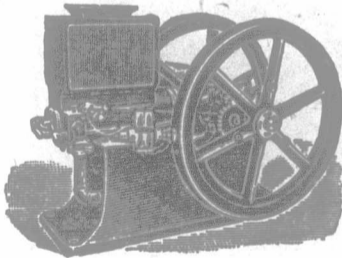
**SHERWIN-WILLIAMS  
PAINTS & VARNISHES**  
A FINISH FOR EVERY PURPOSE

The Sherwin-Williams Co. of Canada, Ltd. : Montreal, Toronto, Winnipeg, Vancouver.



**Why “MONARCHS” are Best**

Our “red circle” folder explains the wonderful “Monarch” farm engine, part by part. This engine will saw, pump, grind, run cream separator, cut silage. Move it from place to place. Every part is made by experts, and made to last. Get our folder.



Send a Post Card to-day for the “red circle” folder and prices and terms on 1½ to 35 horse power sizes.

CANADIAN ENGINES, LIMITED, DUNNVILLE, ONT.

Sole Selling Agents in Eastern Canada

The FROST & WOOD CO., Ltd., Smith's Falls, Ont.  
Montreal, Quebec, St. John, N. B.

We Want  
**SPRING  
RATS  
DEKINS**

HIGHEST PRICES PAID  
for all kinds of  
**Raw Furs**

Ask for Price List  
SHIP EARLY

**E. T. Carter & Co., - 85 Front St. E. Toronto**

**New Telephone Directory**

The Bell Telephone Company of Canada is soon to print a new issue of its Official Telephone Directory for the District of Western Ontario including

**LONDON**

Parties who contemplate becoming Subscribers, or those who wish changes in their present entry should place their orders with the Local Manager at once to insure insertion in this issue.

**Connecting Companies**

Should also report additions and changes in their list of subscribers, either to the Local Manager, or direct to the Special Agent's Department, Montreal.

**The Bell Telephone Company of Canada**

**2 WELL-BRED CLYDESDALE STALLIONS**

Rising three years old, out of imported dam and sire. Apply to:

Manager, Stonecroft Stock Farm,  
St. Anne de Bellevue, Quebec

TIMOTHY NO. 1 Government Standard  
\$2.50 per bush. Bags 25 cents extra.  
F. H. WESTNEY, WHITBY, ONT.



# SEED CORN

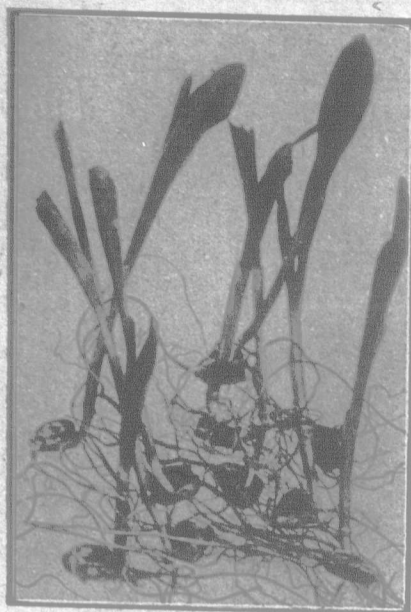


Photo showing strong growth.

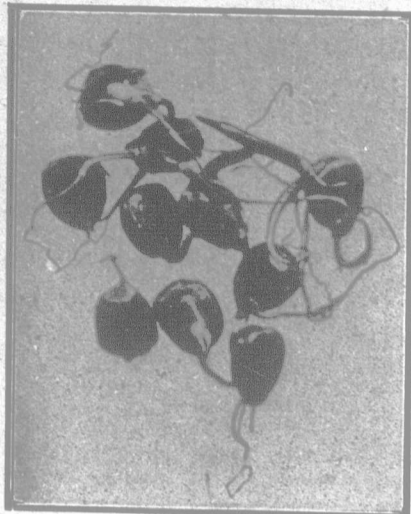


Photo showing weak growth.

This photograph shows the same Corn, harvested and stored in cribs, the ordinary way. You will note that the life in it is very weak and conditions would have to be most favorable to further growth.

These photos are of two germination tests of the same variety of Seed Corn, put in the germinator side by side on the same day and taken out together. You will notice they both germinated 100%, but the one shows very strong vitality. This strong growth is entirely due to the care in harvesting and storing of the Corn. This lot that shows such strong vitality has never been touched by frost. It is fire-dried on the cob. We can supply you with this grand, strong, vigorous Corn.

WISCONSIN, No. 7, on the cob, (70 lbs. to the bushel)  
IMPROVED LEAMING, on the cob, (70 lbs. to the bushel)  
\$3.00 per bushel. Bags free.

## DAUBENEY OATS

Will frequently outyield your home-grown Seed two to one

AN EXTRA EARLY OAT. It has proved by tests over six years to be the best all round Oat at Ontario Agricultural College, and MacDonal College, Que. The hull is very thin. The straw is good and the grain is of excellent quality. The grain has not that particular plump appearance that some other varieties have. The fact is their appearance deceives one, but nevertheless they are beyond doubt the best yielders of all oats grown in Ontario and Quebec. It is a particularly valuable variety to mix with six-rowed Barley, when it is desired to sow these two grains in combination as they will mature practically at the same time. In consequence of this it is hard to get these Oats free from Barley, so we grade our stock on the percentage of Barley contained. Our stock is free from noxious weed seeds. No. 1 samples grown from hand picked seed.

No. 1 Sample at \$1.25 per bushel, bags free.  
No. 2 " " 95c. " " " "  
No. 3 " " 75c. " " " "

For orders of 20 bus. or over we will shade these prices 5c. per bus. Do not delay in ordering. Have them ready when required.

### KEITH'S BEST

Clovers and Timothy

**Gold Brand Alfalfa, No. 1 Gov't Standard,** is the choicest grade of Northern Grown Alfalfa, \$12.00 per bushel. Our seed is obtained from sections where plants have endured the extreme cold of hard winter, and will do well in our country.  
**Sun Brand Red Clover, No. 1 Gov't Standard,** is the best obtainable, regardless of cost. We invite comparison, \$15.50 per bushel.  
**Diamond Brand Timothy, No. 1 Gov't Standard,** choicest grade of strictly fancy Timothy on the market, \$3.40 per bushel.  
**Ocean Brand Alysyke, No. 1 Gov't Standard,** \$18.00 per bushel.  
**Sun Brand Mammoth Clover, No. 1 Gov't Standard,** \$16.00 per bushel.

### KEITH'S NEAR BEST

Clovers and Timothy

**Silver Brand Alfalfa, No. 1 Gov't Standard,** \$11.00 per bushel.  
**Moon Brand Red Clover, No. 2 Gov't Standard,** \$14.25 per bushel. Good colored seed contains odd ragweed.  
**Crescent Brand Timothy, No. 2 Gov't Standard,** grades No. 1 for Purity, \$2.85 per bushel. Clean enough for any farm.  
**Sea Brand Alysyke, No. 2 Gov't Standard,** \$15.00 per bushel.  
Allow 25c. each for cotton bags.  
We pay freight on Ontario orders made up of 180 lbs. or more of clovers and timothy

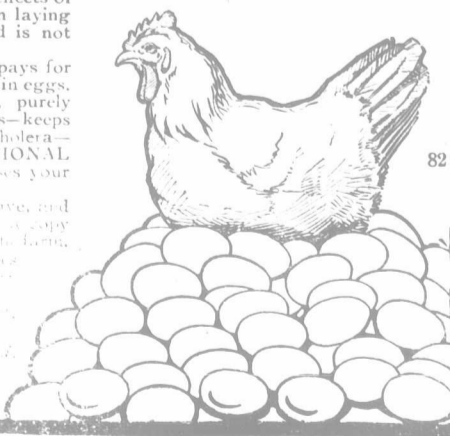
For Prices of other varieties of Oats and Barley, etc., see our Advertisement in this Paper in issue March 20th, page 537

**Geo. Keith & Sons. - 124 King St., E., Toronto**  
SEED MERCHANTS SINCE 1866

## THIS IS THE WAY YOUR HENS WILL LAY WHEN YOU GIVE THEM International Poultry Food

Right now is the time to feed INTERNATIONAL POULTRY FOOD. Hens need the tonic effects of this wonderful egg producer to start them laying and to keep them laying. Ordinary feed is not enough to make hens lay regularly. INTERNATIONAL POULTRY FOOD pays for itself—over and over again—in the increase in eggs. It is not an ordinary food, but a tonic, purely medicinal. It gives an increase in egg production, cures roup, keeps chickens healthy, cures cholera, cures roup, and cures all other ailments. INTERNATIONAL POULTRY FOOD and you know it increases your egg production. Write telling us how many chickens you have, and what other stock, and we will send you a copy of our \$3,000 Stock Book. Also, we will send you a copy of our International Poultry Food, and you will see also International Stock Food. Preparations are for sale by Dealers everywhere. If your Dealer cannot supply you, write us directly. All our goods are sold under a special guarantee of your money back if not satisfied.

International Stock Food Co. Limited  
TORONTO ONTARIO



BEST RESULTS ARE OBTAINED FROM ADVOCATE ADVERTISEMENTS.

have a view of the surrounding country. We were well rewarded for our efforts. Southward, our glance fell over forest and cleared spaces, to the former bed of Lake Burrell, and the northern view faded into the blue waters of "Huron." After partaking of the bounties of a well-filled luncheon-basket, we resumed our journey. The driveway was still bounded by bush-land. An area of perhaps one hundred acres is securely fenced, and, we understand, is used for a deer park.

But presently the forest grew thinner round-about us, and cottages began to appear. Then we crossed the Aux Sable river, and it was with a start we realized that we had left our home county, Lambton, behind, and were now in Huron, and at the famous summer resort, "Grand Bend." Oh, what an ideal spot it must be on a warm summer day! Here the river takes a sudden bend and empties its swiftly-flowing waters onto the broad bosom of the lake. The forest reaches down to the very beach, and in the protecting shadows of the trees are found the summer cottages, each bearing a most appropriate and alluring name. Also, there is hotel accommodation, amusement halls, merry-go-rounds, and other necessities for the summer visitors, are to be found here. Then we drove down to the shore and gazed across the far-flung waters of Huron. We closed our eyes for a moment, and as we listened to the roar of the waves, a mental picture flitted before us of a canoe, with a straight, tall red man as a passenger, slipping silently over the waters. Then we turned reluctantly from the scene before us spread, and resumed our homeward journey. It was with a sense of fatigue, but with pleasant memories, we gathered around the fireside at eventide to discuss the events of a happy day. Wishing your department every success.

WINNIFRED M. AUGUSTINE.  
Lambton Co., Ont.

### BUTTERNUT COOKIES.

Dear Junia,—In return for the nice recipes I use from your department, I am sending one of my own, as I have used butternut meats in cakes for some time, I got the idea to try them in cookies, and like them very much.

Butternut Cookies.—One egg, 1 cup white sugar, ½ cup butter, ½ cup sweet milk, ½ cup crushed-butternut meats, 1 teaspoon of vanilla, 1½ teaspoons cream of tartar, ½ teaspoon soda, and flour enough to roll with the hands into balls of about a tablespoon of the dough each. Dip in sugar, and place two or three whole meats in top of each. Bake in quick oven.

Glen Sutton, P. Q.

### HOUSEWIFE.

### CLEANING A HAT.

Dear Junia,—Could you please tell me how I can clean my last summer's white-straw hat, which has become sunburned? "PERPLEXED."

Waterloo Co., Ont.

The easiest way to clean your straw hat would be to buy a package of hat-cleaner from your druggist and follow directions. I have used these and found them satisfactory. The price is, I think, ten cents per package.

If you like, you may try this plan, given by Scientific American. Put a small quantity of oxalic acid in a pan, and pour on it enough scalding water to cover the hat. Put the hat into this and let it remain covered for five minutes. Rub spots. Dry in bright sunshine.

### KEEPING MAPLE SYRUP.

Dear Junia,—This is not the letter I promised to write; that I have wanted to write ever since we had our little chat after the last meeting of the W. I. Convention—that must come later. This is merely to impart a tiny bit of wisdom that I have gained by experience.

In your issue of January 30th, in reply to "Janet's" enquiry as to whether maple syrup should be sealed hot or cold, your reply was, "according to reason," the right one, namely, that "anything sealed, should be sealed hot," but my experience says that maple syrup is the exception that proves the rule. I assure you, without indulging in self-praise, that I have a name for my maple

## A WELL STOCKED VEGETABLE GARDEN \$1.00

### RENNIE'S "GEM GARDEN" COLLECTION OF VEGETABLE SEEDS

contains just the right quantities of each kind to give a plentiful supply of fresh vegetables every day in the season—early or late.

- Ask for the "GEM GARDEN" Collection when ordering. It contains
- 1 lb. Dwarf Stringless Yellow Pod Beans
  - 1 lb. Dwarf Stringless Green Pod Beans
  - 1 pkt. Dwarf Bush Lima Beans
  - 1 pkt. Round Red Beans
  - 1 pkt. Early Cabbage
  - 1 pkt. Intermediate Red Cabbage
  - 1 lb. Early Sugar Corn
  - 1 pkt. Slicing Cucumber
  - 1 pkt. Cabbage Heading Lettuce
  - 1 pkt. Early Slicing Onion
  - 1 pkt. Large Boiling Parsnip
  - 1 pkt. Long White Peas
  - 1 lb. Earliest Dwarf Peas
  - 1 lb. Medium Early Dwarf Peas
  - 1 pkt. Early Round Red Radish
  - 1 pkt. Marrow Squash
  - 1 pkt. Early Smooth Scarlet Tomato
  - 1 pkt. Round White Table Turnip

\$2.50 worth of Seeds for \$1.00

Address all orders to  
**WM. RENNIE CO., Limited, SEEDS**  
TORONTO

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.

ALL KINDS OF FARMS—Fruit Farms a specialty. W. B. Calder, Grimsby.

FARM FOR SALE—200 acres; grain and stock farm, brick house, frame barn, power mill, modern stabling, 6000ft. cement floor, water throughout; splendid farm for alfalfa and corn. Two spring creeks. For particulars write J. A. Douglas, Mount Forest Ont.

FRUIT FARMS for sale, from 2 to 150 acres, in Grimsby, Beamsville and Winona Districts—Peter Bertram, Grimsby, Ont.

If you wish for an interesting and profitable hobby, breed high-class, Lop-ear Rabbits. Place order with Chas W. Macklin, Grafton, Ont.

SCOTCH COLLIES FOR SALE.—Choice Pedigreed Puppies. Farm raised; good workers. A. B. Armstrong, Codington, Ont.

WE HAVE a few choice farms within sixty miles of Winnipeg, good for grain or mixed farming, cultivated, with fair buildings. Price from Twenty-five to Forty Dollars per acre, according to location and improvements; also choice wild land in Saskatchewan, Eighteen Dollars per acre. Royal Canadian Agencies Limited, Winnipeg, Canada.

WANTED—Reliable experienced farm hands, teamsters and dairymen on modern dairy farm, milking done by machinery. Wages \$30.00 to \$40.00 per month and board. Address Box 47, Government Demonstration Farm, Stoney Plain, Alta.

WANTED—Two good men to work on large stock farm. Only experienced men need apply. Also, a good milker to assist in dairy barn. Highest wages to the right men, and yearly engagement if satisfied.—Farmer's Advocate, Box 40, London, Ont.

WANTED—A good set of second-hand rings for building cement silo, 12 or 14 ft. in diameter. Anyone having same to dispose of will please write and state price and all particulars.—Address Arthur Johnston, Cargill, Ont.

WANTED—Position as farm manager or superintendent of stock or dairy farm. Experienced in all branches of farm management, gasoline engines, steam or electric power, bookkeeping, etc. Married, college graduate, best of references.—Box C., Farmer's Advocate, London, Ont.

WANTED—Experienced farm hand. State wages by month or year.—S. Pelton, Falkland, Ont.

WANTED—Experienced farm hand, single; yearly.—J. B. Pearson, Meadowdale, Ont.

WANTED by May 1st, married couple, no family, to work on grain farm, no cattle.—Apply, H. McKnight, New Liskeard, Ont.

## WANTED

Live representatives to sell high-class nursery stock in best districts of south and western Ontario. Experience not necessary. Take advantage of large demand for fruit trees at present time. Free equipment. Exclusive territory. Pay weekly. Write for terms.

**STONE & WELLINGTON**  
Fonthill Nurseries,  
TORONTO.



# PURE OIL CAKE MEAL

Digestibility is the true test. What the animals digest will produce flesh and milk.

USE

## J. & J. Livingston Brand Oil Cake

MADE BY THE OLD PROCESS.

Fine ground, Coarse Ground and Pea Size. Also Linseed Meal and Flax Seed.

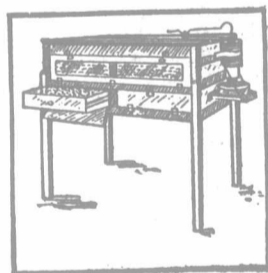
If your dealer cannot supply you, write us for prices.

**THE DOMINION LINSEED OIL CO.**  
LIMITED, MANUFACTURERS  
BADEN, Ontario, and MONTREAL, Quebec.



## \$5,000,000.00 FOR PEERLESS WAY POULTRYMEN

Into the pockets of the users of The Peerless Way last year went five million dollars made from the poultry these people raised. Yet chickens are scarce in Canada and eggs are the scarcest of all food commodities. That is positively the fact.



To-day there are not enough Canadian CHICKENS or EGGS to go around. Thousands of chickens and hundreds of thousands of dozens of eggs are being shipped into Canada from the United States and other countries to help meet the demand.

Yet there is a shortage! Eggs are commanding a tremendous price—chickens are worth dollars.

Now is the time to take advantage of this situation and make money out of it yourself. You can raise and sell 600 chickens this next year, and you will find a quick and sure market for every one of them. You can get the top notch price for all the hundreds of dozens of eggs that your poultry lay.

Let us tell you how!

Poultry raising is the best business for any farmer, any farmer's wife or farmer's child. The poultry crop is the one crop that never fails. It pays better for the time and money invested; the profit is surest; it isn't overcrowded and never will be.

Our book "When Poultry Pays," will show you. Let us send it to you. It is interesting; it is instructive, and it contains the proof.

You need this book. It will be mailed free. A post card will bring it.

**LEE MANUFACTURING CO., LIMITED**  
Head Offices: 13 PEMBROKE ST. **PEMBROKE ONT. CAN.**



**FOR SALE** 3 EXTRA GOOD YOUNG SHORTHORN BULLS including the show bulls Meadow Signet and Orange Signet, also S. C. W. L. and White Wyandotte eggs for hatching \$4.00 per 100, excellent varieties. Correspondence solicited. Inspection invited.  
Geo. Amos & Sons, Moffat, Ont. Moffat stn. 11 miles east of Guelph on C.P.R.

# MASSEY-HARRIS DISC HARROWS

Strong, Durable, Easy-Running.

THESE Disc Harrows are made to do satisfactory work in any soil regardless of hills, hollows, furrows or ridges—satisfactory work not only for two or three seasons, but many, for they are built to last.

THOROUGH CULTIVATION.

Massey-Harris Disc Harrows cultivate thoroughly. The tendency of the inner ends of the Gangs to rise in heavy work is overcome by powerful Pressure Springs which force the Discs into the ground at this point. Although the pressure is controlled by one Lever, the Springs are entirely independent in their action, and if an obstruction is encountered one Gang may rise while the other remains at work.

SCIENTIFIC CONSTRUCTION.

The Arch is of heavy Angle Steel strongly braced, and both the Arch and Braces are re-inforced where they meet, forming an exceptionally strong Frame that is not liable to buckle. Discs are of the very best steel, well hardened, and they are ground to a sharp edge. Disc Bearings are of oil-soaked maple, are more durable than iron and run easier, and they can be easily and cheaply replaced when worn.

The Bearings are fitted with Self-Closing Oil Cups, which afford easy means of oiling and keeps out dust and dirt.

All sizes of Massey-Harris Disc Harrows can be fitted with Forecarriage if desired. It adds greatly to the Harrow's efficiency and saves the horses from whipping of the Pole.

**Massey-Harris Co., Limited.**  
Head Offices - TORONTO, CANADA.



Branches at -  
Montreal, Moncton, Winnipeg,  
Regina, Saskatoon, Yorkton,  
Calgary, Edmonton.  
- Agencies Everywhere -



LOOK FOR  
THIS  
TRADEMARK.

## 5% Debentures

Five per cent. allowed on Debentures.  
Interest payable (by coupons) half-yearly.

Debentures issued in sums of \$100.00 and multiples thereof for terms of three to ten years, or shorter periods if desired.

Security to Debenture Holders

Paid-up Capital and Reserve, nearly \$3,000,000. Total Assets, over \$6,000,000.

To Trustees and Executors

The deposits and debentures of this Company are especially authorized by an Order-in-Council, Province of Ontario, as an investment for trust funds.

## The Great West Permanent Loan Company

(Incorporated by Dominion Charter)

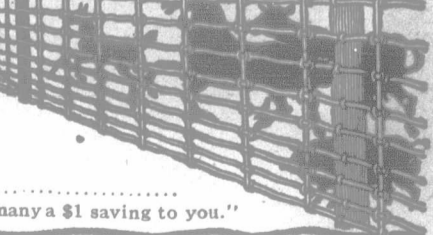
20 King Street West TORONTO, ONT.

Also offices at Winnipeg, Regina, Edmonton, Calgary, Vancouver, Victoria, and Edinburgh, Scotland.

## "STOP! HERE'S A DYER FENCE!"

Do you want a strong, durable fence — one that holds the strongest animal and lasts for years? DYER has it, guaranteed. 17c per rod up, freight paid. Lawn fence 7 1/2c. Cut this ad out and mail to me. DYER, the Fence Man, Dept. C, Toronto. Please send me your April special fence and gate offer. I want to save dollars, and I want the best, but this does not obligate me to buy.

Name and Address.....  
Dyer says: "A 1c postal to me now may mean many a \$1 saving to you."





## 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 advertisement inserted for less than 50 cents.

**ANCONAS and Buttercups**—Unexcelled layers, prize-winners; day-old chicks. Ancona eggs \$1.50 per fifteen; Buttercup eggs \$3.00 per fifteen, and up. Booklet free—write quick. E. C. Apps, Box 224, Vice-President International Ancona Club, Brantford, Ontario.

**BRED TO LAY**. S. C. White Leghorn (Cyphers Stock) eggs, \$1 per 15, \$5 per 100. R. C. Rhode Island Reds (Prize Birds), eggs \$2 per 15. Barred Rock (Prize Birds) eggs \$2 per 15; also baby chicks. Indian runner duck eggs \$2 per 13. C. S. Wilson, Tambling's Corners, London, Ont.

**BEAUTIFUL Buff Leghorns**—All year layers, choice birds, eggs \$1.25 per fifteen. Unfertile eggs replaced free. Charles Watson, Lonsdale, Ont.

**BARRED Plymouth Rock eggs** for hatching from high-grade stock. Write for catalogue Leslie Keran, Freeman, Ont.

**BUFF ORPINGTONS**, Large vigorous stock, good color and type guaranteed, laying strain. Eggs \$1.00 for twelve. M. T. Payne, Belmont, Ontario.

**BARRED ROCK EGGS** from good winter layers 15 \$1.00, 100 \$4.50. R. J. Gibb, Box 344, Galt, Ontario.

**BARRED ROCKS (Ringlets)**, Eggs \$1.50 per 15, \$2.50 per 30. T. Padfield, Mt. Forest, Ont.

**BRED-TO-LAY Barred Rocks**, exclusively. Selected Eggs for Hatching, \$1 per 15, or \$4 per 100. W. R. N. Sharpe, Rural Route No. 1, Ida, Ont.

**BUFF ORPINGTONS**—Pure-bred cockerels, \$3; pullets, \$2; large, stout, healthy birds. Satisfaction guaranteed.—Hugh A. Scott, Caledonia, Ont.

**BARRED ROCK eggs** from well-bred, heavy-laying, prizewinning stock; \$1 per 15, \$2 for 40, \$4 per 100.—Chas. Hilliker, Norwich, Ont.

**BUFF ORPINGTONS**—Pure-bred cockerels, large birds, good color, \$3.—Edward Stephan, Bornholm, Ont.

**BRED-TO-LAY WHITE LEGHORNS**. Seven pullets and cockerel, \$10. White Wyandotte cockerel, four pullets, \$8; pure-bred stock.—J. Loucks, Newburgh, Ont.

**CANADIAN Ringlet Barred Plymouth Rocks**—Winners International Laying Contest. Pedigree cockerels, pullets, strong baby chicks. Large hatching eggs. Custom hatching. Alf. B. Wilson, St. Catharines, Ont.

**EGGS**—Ontario Agricultural College Barred Rocks, Indian Runner Ducks, \$1.50 per setting. Tiedelle Bros., Tilbury, Ont.

**EGGS**, Indian Runner ducks 10c. each. Pure Barred Rocks (headed by grand laying strain cockerels) and S. C. R. I. Reds, \$1.00 per fifteen, \$1.75 per thirty. Frank Bainard, Glanworth, Ont.

**EGGS**—\$1 setting, \$5 hundred, "Snowflake" S. C. W. Leghorns. Record layers. E. W. Burt, Paris, Ont.

**EGGS FROM OUR "GREATEST LAYERS"**—Barred Rocks, only one dollar per fifteen; five dollars per hundred. Few birds for sale. Central Ontario Poultry Yards, Colborne, Ontario.

**EXCLUSIVE breeder of Barred Rocks**. Eggs for hatching, \$1 per 15. Pringle and Hall strain. Mating list free.—Jas. E. Metcalfe, Hanover, Ont.

**EGGS** from pure-bred, vigorous stock, White Wyandottes, Barred Plymouth Rocks, Singlecomb White Leghorns, and Silver Campines, all great layers. Birds raised on 40-acre open range and orchard. Prices on application.—W. H. Furber, Dunganon Poultry Farm, Box 436, Cobourg, Ont.

**EGGS** for hatching, \$1.50 per setting, from pure-bred White Rocks, Peapack Farm strain.—Saunders, 358 Concord Ave., Toronto.

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**FOR SALE**—Eggs from Beauty Buttercups and Anconas. Are unexcelled. Write for prices. Herbert Taylor, Wingham, Ont.

**PURE-BRED Brown Chinese goose eggs**, 25 cents each.—Mrs. McLennan, "Lakecroft," Beaverton, Ont.

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**TWENTY large vigorous white Wyandotte cockerels** of heavy laying strain, at \$2.75 each.—Our best birds. Also Barred Rock Cockerels—Canada's champions. Satisfaction guaranteed or money refunded. First comers get the choice ones. Jno. Fringle, London, Ont.

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**WHITE WYANDOTTES**, big, vigorous, stay white Cockerels from heavy laying strain, \$2.83 and \$5 each. Have won 36 out of 43 first prizes at New York State Fair in seven years. Eggs \$3. per 30, \$2 per 100. Free Illustrated catalogue. John S. Martin, Drawer R. Port Dover, Ont.

**WHITE WYANDOTTES**—Bred for utility and show. Excellent layers. Eggs one dollar per fifteen.—Allan McPhail, R. R. No. 4, Galt, Ont.

**WHITE WYANDOTTE COCKERELS** of the best breeding; 20 of them while they last; \$2, \$3 and \$5 each. Send to us and get a bargain. Our mating list will be sent on request.—Marsh II & Marshall, Niagara Falls, Canada.

**WHITE ORPINGTONS**—Eggs from best pens (Moore & Kellerstrass), \$1.50 for 15.—Jacob M. Moyer, Box 47, Campden, Ont.

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and Almanac for 1918 has 224 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c. S. C. SHOEMAKER, Box 290 Freeport, Ill.

syrup, and my practice has been, of late years, to allow the syrup to stand at least twenty-four hours, to cool and "ripen"—and then fill it into jars, filling them quite full, and sealing. I opened a half-gallon sealer this evening, of last year's make, and found it perfect, clear, delicious, with a fresh flavor, as if made yesterday. My one care, after bottling, is to store it in the dark, and I wish, dear Junia, that I could submit a jar of it to your judgment. I have still five or six gallons from last year, and here it is March, the sun shining, the woods taking on the purple tint that says spring is coming, and first thing we know it will be, "Sap's runnin'" again. I'll never put by so much syrup again!

Hoping this will be useful information—(not my last remark; I don't mean that)—I will sign my old pen-name.

SUNGLINT.

Oh, you lucky Sunlight, to be able to revel so in maple syrup—the "pure thing," too!

I suppose the reasoning for the fact that the delicious stuff keeps when sealed cold, is that it is so strongly surcharged with sugar, and sugar, we know, is a preservative when used in sufficient quantity. I have heard of maple syrup "souring." Would this be because it had not been boiled down enough?

RE RAG RUGS.

Dear Junia,—Could you kindly advise me how you would make a rag carpet to represent the Oriental rugs? I enjoy "The Ingle Nook" very much. Thanking you in advance.

Northumberland Co., Ont. ISLA.

I have never heard of rag carpets made to represent Oriental rugs. I have seen small hooked ones that were rather suggestive of them. The designs had been copied from pictures of Oriental rugs, and the rags had been clipped on top to a sort of pile.

CURE FOR CORNS.

The following, sent to Beaver Circle by little Lillian Holtzhauser, has been handed over as more appropriate to this department:

"Bathe the feet in warm water every night with a little borax and baking soda. In a week, the corns can be easily picked out."

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(75% Dried Malt, 25% Pure Cane Molasses)

The wonderful results obtained by the large dairies and dairy-men around Toronto by feeding our Pro-fat dairy feed has led this company after many requests from dairymen to add 25 pounds of pure Cane Molasses to each 75 pounds of Pro-fat. The result being a molasses meal without an equal, as the following guaranteed analysis will show:—Protein 20%, Fat 5%, Fibre 13%. Compare this with other molasses meals offered to the public and it will leave no doubt in your mind as to the truth of our claim. After a test at the T. Eaton Company's Farm, Georgetown and other Dairy Centres, we have decided (in order to introduce this meal) to make the following proposition to Dairymen throughout the province:—

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We will ship on thirty days' trial, freight paid, one ton of Pro-fat Molasses Meal to any responsible dairyman in the Province of Ontario with an absolute guarantee (fed pound for pound in place of other meal or concentrates) to produce more and richer milk for less money. If it fails to do this there will be no charge for the meal. If it is all we claim for it, the charge will be \$1.40 per hundred or \$28.00 for the ton. Dairymen who have recognised the value of Cane Molasses for dairy herds have an opportunity here of trying a genuine molasses meal of real merit without running any risk whatever. It is the only molasses meal endorsed by the authorities of the O. A. College Guelph. Send your orders in or write to us for more particulars if you have any doubt about this offer. This meal is equally good for horses, no dairyman can afford to be without it. Write for list of dairymen who have already used it. We also make this meal for calves and hogs at the same price.

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with robust constitutions, full of vigor, are not secured by careless methods of management. Worth-while chickens are the kind that have developed steadily from the day they tumbled out of the shell.

Grow that kind this season and make bigger profits. Feed to save them and give the vigorous start. Use Pratt's Baby Chick Food to prevent weakening and death from bowel troubles. Give Pratt's White Diarrhea Remedy to keep them well, with hearty appetites and perfect digestion. Dust them frequently with Pratt's Powdered Lice Killer to insure freedom from troublesome vermin. That's the whole story. Easy, isn't it! "Your money back if it fails." Our products are sold by dealers everywhere, or Pratt Food Co. of Canada, Ltd., Toronto.

Prices:  
Chick Food, 25c up  
White Diar. Rem., 25c, 50c  
Regulator, 25c, 50c, \$1  
Lice Killer, 25c, 50c

Pratt's 160-page poultry book 10c by mail

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Rising three years old, out of imported dam and sire. Apply to:

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**Wanted** TO HEAR from owner who has good farm for sale. Send description and price. Northwestern Business Agency, Minneapolis, Minn.

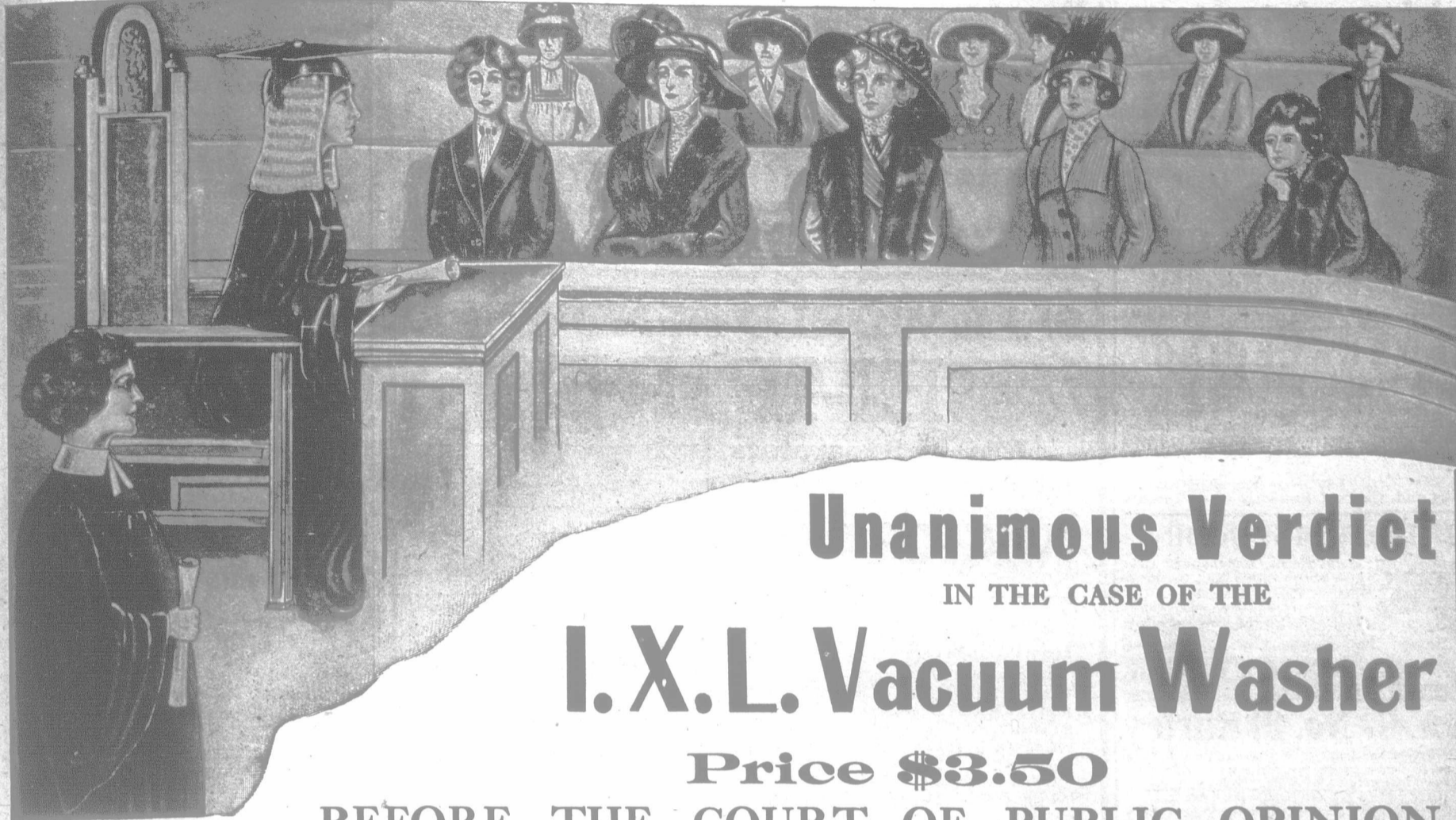
## FREE GUIDE

Book, showing the correct fertilizers for all kinds of crops, and telling quantities to use, will be mailed to you on request by the makers of Harab Fertilizers.

The Harris Abattior Co., Ltd., Toronto, Ontario

For Sale: O.A.C. No. 21 Barley About 200 bushels choice heavy seed, 80c. per bushel, bags 25c. extra. Geo. D. Fletcher, R. R. No. 2, Erin





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 IN THE CASE OF THE  
**I. X. L. Vacuum Washer**  
 Price \$3.50  
 BEFORE THE COURT OF PUBLIC OPINION

Thousands of women who are using them have rendered an unqualified verdict in favor of the I. X. L. VACUUM WASHER, and these women have used every make of Washing Machine, and are fully qualified to judge merit. YOU CAN TEST IT IN YOUR OWN HOME, and if you do, YOU WILL concur in their verdict, as it WILL demonstrate to you that it WILL wash anything and everything from a Horse Blanket and Overalls to the finest Laces without injury, and will wash a full tub of clothes perfectly in THREE MINUTES. Not only washes, but rinses and blues, and

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IT IS SO EASY TO OPERATE A CHILD CAN DO AN ORDINARY WASHING AND HAVE IT READY FOR THE LINE IN ONE HOUR

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BELOW  
SAVES YOU  
\$2.00

**Sent Under a Money Back Guarantee**

IT IS THE MOST POPULAR WASHER ON THE AMERICAN CONTINENT  
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COUPON  
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SEND FOR ONE AND BLUE MONDAY WILL BE ROBBED OF ITS TERRORS FOREVER  
**DO IT NOW!**

YOU WILL NEVER REGRET IT

YOU WILL BE DELIGHTED

JUST A FEW OF THE THOUSANDS OF UNSOLICITED TESTIMONIALS WE RECEIVE

Cap St. Martin, Comte Laval, P. Q.

I beg to acknowledge your letter in which you thank me for the order, to the contrary it should be I who should thank you for your marvelous washer, and for the perfect results that we have from it, and I can do nothing else but recommend the I. X. L. Vacuum Washer to everybody. Yours truly,  
A. LOOD.

Miami, Man.

I have used one of your I. X. L. Vacuum Washers for some time, and find that it beats everything in the washing machine line that I have ever tried. Yours truly,  
MRS. H. F. DUNCALFE.

Lingan Road, Cape Breton, N. S.

I have used the Vacuum Washer at home, and find it to do all you claim and more after giving it a test. Yours truly,  
GEORGE MAHAN.

Taber, Alberta.

The I. X. L. Vacuum Washer which formed part of the prize which I won at the Seventh International Dry-farming Congress at Lethbridge, I find to be a real labor-saver. I have done four washings with it, and it is an unqualified success cutting the time of washing one-half with less labor. Yours truly,  
MRS. R. McALLISTER.

Wapella, Sask.

I enclose a coupon for an I. X. L. Vacuum Washer and \$1.50. Will you send one to the name and address enclosed. I got one for myself a little while ago, and I never used such a handy good little washer in my life. I have recommended it to about a dozen people in Wapella. Yours truly,  
(MRS.) R. R. HUTCHINSON.

2,035 Refallack St., Regina, Sask.

I purchased from your firm an I. X. L. Vacuum Washer; my friends have greatly admired it, and would like to know if they can secure one for \$1.50 if they get a coupon. Yours very truly,  
MRS. WILLIAM BALFOUR

Roland, Man.

Enclosed find coupon and \$1.50 for I. X. L. Vacuum Washer. A neighbor had one and loaned it to me, I liked it so well I am ordering one. Yours very truly,  
MRS. AMOS BOND.

195 Bishop St., Montreal, P. Q.

We have received our I. X. L. Vacuum Washer, and it is so perfect in every way that I am sending an order for two more for a friend and another for myself. Yours sincerely,  
MRS. A. G. OSTELL.

Fl'e Lake P.O., Sask.

A neighbor of mine has one of your I. X. L. Vacuum Washers, his name is Mr. Thell, of Lussila P.O., and he has found the washer to do all that you claim; his daughter prefers it to her new washing machine. Please forward me one immediately. Yours truly,  
A BEGEVRIE.

489 B. toef St., Montreal, P. Q.

I received the I. X. L. Vacuum Washer, and made a trial on a large washing, and I am quite pleased with it; it works like magic. Yours truly,  
JOSEPH DESROSIERS.

*It's so Easy and Simple.  
 Kiddie Can Do It.*

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 & H. M. COUPON**

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Name.....  
 Address.....  
 Province.....

Having purchased one of your Vacuum Washers and the great satisfaction my wife is getting from it prompts me to write you. If you would care to send me one dozen on consignment I believe that they could be disposed of quickly. If you care to do this, please state terms, and oblige,  
PARTRIDGE BROS.

St. Theophile Beauce, P. Q.

We have received our Vacuum Washer in perfect condition, and delighted with the work that it does. I would like the agency, as I know that I would have no difficulty whatever in selling them. Yours truly,  
NAPOLEON BOUTIN.

Bic, Quebec.

We are in receipt of our I. X. L. Vacuum Washer, and must say that we are more than satisfied with the work that it does. Yours truly,  
MR. GEORGE LAVOIE.

Gordon Lake, Ontario.

One of my neighbors got an I. X. L. Vacuum Washer from you, and she is delighted with it, and wanted me to get one too, so I herewith enclose coupon and \$1.50. Yours very truly,  
MRS. MURDOCK WILLIAMS.

Chateauquay Basin, P. Q.

Enclosed find coupon and \$1.50 for I. X. L. Vacuum Washer. I got one a short time ago, and want this for a friend to whom we have recommended it as being a good article and worth the cost price; we are well satisfied with ours. Yours truly,  
ROBERT ORR.





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Hengerveld De Kol and Pontiac Korn-dyke, the two greatest sires the world has ever known were raised and developed by us. If you want a bull calf, why not buy of people who raise and develop the world-beaters?

We have a few sons from daughters of these celebrated sires for sale.

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I am offering some young cows and heifers with A.R.O. records as high as 69,479 lbs. of butter in 30 days at three years old; I also have two yearling bulls with A.R.O. dams. Write or visit the herd for particulars. C. P. R. Belmont. Will meet the train with short notice. Phone connections. H. C. HOLTBY, Belmont, P. O., Ont.

### O. A. C. No. 21 Barley

We increased one pound to nine-hundred bushels in three crops. Our present supply was all grown after corn and roots. Sample beautiful. Price 85c per bush. Bags extra.

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**Canadian Apple Growers' Guide**, authentic and descriptive. Fifty years' experience, ten in Canadian Experiment Stations. One dollar fifty postpaid. Address: Linus Woolverton, M. A., Grimsby, Ont.

**3 High-class Young Shorthorn Bulls** for sale—Some from heavy milk-dams; prices right.

STEUART M. GRAHAM,  
Lindsay, Ontario.

**SORE SHOULDERS** or Harness Abrasions of any kind quickly cured. Send 25 cents for a powder that will do this for you, and save delays with the spring plowing. McLeay, Gravenhurst, Muskoka.

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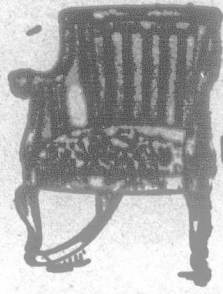
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THE demand for our machines is so great that we must run our factory nights and must establish more local agents to take care of our customers.

If you want money—real money—you can make it selling EMPIRE Cream Separators and STA-RITE Engines. No others sell so easily, or give such good service.

Canada is speedily becoming a great dairy country.

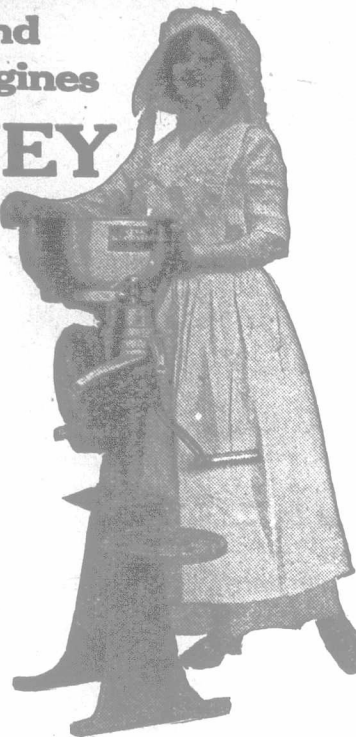
Other things fail but dairying does not. Prices of wheat and other products are uncertain but prices for dairy products are steadily rising.

Dairymen must have separators and engines. No other separator runs so easily or quietly as the EMPIRE. No other needs so little attention or so few repairs. You know these features appeal strongly to farmers.

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Write us for full particulars. Then get out your pencil and figure what you can easily make by taking the agency. Write us quickly. Agencies are going fast. Separators sell fastest and easiest in Spring and early Summer, so ask for agency and Catalog 125 now.

THE EMPIRE CREAM SEPARATOR CO., LTD.  
Toronto Winnipeg



## Rebecca of Sunnybrook Farm.

By Kate Douglas Wiggin.

[Serial rights secured from Houghton Mifflin Publishing Company, New York.]

XXIV.

### ALADDIN RUBS HIS LAMP.

"Your esteemed contribution entitled Wareham Wildflowers has been accepted for the Pilot, Miss Perkins," said Rebecca, entering the room where Emma Jane was darning the firm's stockings. "I stayed to tea with Miss Maxwell, but came home early to tell you."

"You are joking, Becky!" faltered Emma Jane, looking up from her work. "Not a bit; the senior editor read it and thought it highly instructive; it appears in the next issue."

"Not in the same number with your poem about the golden gates that close behind us when we leave school?"—and Emma Jane held her breath as she awaited the reply.

"Even so, Miss Perkins."

"Rebecca," said Emma Jane, with the nearest approach to tragedy that her nature would permit, "I don't know as I shall be able to bear it, and if anything happens to me, I ask you solemnly to bury that number of The Pilot with me."

Rebecca did not seem to think this the expression of an exaggerated state of feeling, inasmuch as she replied, "I know; that's just the way it seemed to me at first, and even now, whenever I'm alone and take out the Pilot back numbers to read over my contributions, I almost burst with pleasure; and it's not that they are good either; for they look worse to me every time I read them."

"If you would only live with me in some little house when we get older," mused Emma Jane, as with her darning needle poised in air she regarded the opposite wall dreamily, "I would do the housework and cooking, and copy all your poems and stories, and take them to the post-office, and you needn't do anything but write. It would be perfectly elegant!"

"I'd like nothing better, if I hadn't promised to keep house for John," replied Rebecca.

"He won't have a house for a good many years, will he?"

"No," sighed Rebecca ruefully, flinging herself down by the table and resting her head on her hand. "Not unless we can contrive to pay off that detestable mortgage. The day grows farther off instead of nearer, now that we haven't paid the interest this year."

She pulled a piece of paper towards her, and scribbling idly on it read aloud in a moment or two:—

"Will you pay a little faster?" said the mortgage to the farm;

"I confess I'm very tired of this place."

"The weariness is mutual," Rebecca Randall cried;

"I would I'd never gazed upon your face!"

"A note has a 'face,'" observed Emma Jane, who was gifted in arithmetic. "I didn't know that a mortgage had."

"Our mortgage has," said Rebecca revengefully. "I should know him if I met him in the dark. Wait and I'll draw him for you. It will be good for you to know how he looks, and then when you have a husband and seven children, you won't allow him to come anywhere within a mile of your farm."

The sketch when completed was of a sort to be shunned by a timid person on the verge of slumber. There was a tiny house on the right, and a weeping family gathered in front of it. The mortgage was depicted as a cross between a fiend and an ogre, and held an axe uplifted in his red right hand. A figure with streaming black locks was staying the blow, and this, Rebecca explained complacently, was intended as a likeness of herself, though she was rather vague as to the method she should use in attaining her end.

"He's terrible," said Emma Jane, "but awfully wizened and small."

"It's only a twelve hundred dollar

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You can make your children, your home and yourself look much more attractive with the same amount of money, if you make wise use of Maypole Soap, the easy home dye.

Blouses, children's frocks, petticoats, ribbons, gloves, stockings, feathers, curtains, cushion-tops, colored table-cloths, couch covers, rugs—these and scores of other things get faded, stained and soiled. With

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at a cost of a few cents, and with very little work, you can make them just as fresh and pretty as new. At one operation Maypole Soap cleanses and dyes to rich, glowing colors, fadeless in sun or rain. No trouble to use—no muss—no stained hands or kettles.

24 colors—will give any shade. Colors 10c—black 15c—at your dealer's or postpaid with free Booklet, "How to Dye," from

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**MAKE THE BEST BARN ROOF**



**Durability**

There is no shingle or roofing in Canada to-day that can show by actual test as long a service against weather and lightning as "EASTLAKE" METALLIC SHINGLES.

We can show you many buildings covered with "EASTLAKE" METALLIC SHINGLES over a quarter of a century ago, that are just as good to-day as the day they were put on. This proof of actual service is surely the best test. We will tell you the cost, if you will send the measurements of the barn, house or building to be roofed.

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 Buy your Ford to-day. Thousands were disappointed last year. Don't take a chance this time. And remember that the more we make the better we make them. Insist on an immediate delivery.

There are more than 220,000 Fords on the world's highways—the best possible testimony to their unexcelled worth. Prices—runabout \$675—touring car \$750—town car \$1,000—with all equipment, f.o.b. Walkerville, Ont. Get particulars from Ford Motor Company of Canada, Limited, Walkerville, Ontario, Can.

mortgage," said Rebecca, "and that's called a small one. John saw a man once that was mortgaged for twelve thousand."

"Shall you be a writer or an editor?" asked Emma Jane presently, as if one had only to choose and the thing were done.

"I shall have to do what turns up first, I suppose."

"Why not go out as a missionary to Syria, as the Burches are always coaxing you to? The Board would pay your expenses."

"I can't take up my mind to be a missionary," Rebecca answered. "I'm not good enough in the first place, and I don't 'feel a call,' as Mr. Burch says you must. I would like to do something for somebody and make things move, somewhere, but I don't want to go thousands of miles away teaching people how to live when I haven't learned myself. It isn't as if the heathen really needs me; I'm sure they'll come out all right in the end."

"I can't see how; if all the people who ought to go out to save them stay at home as we do," argued Emma Jane.

"Why, whatever God is, and wherever He is, He must always be there, ready and waiting. He can't move about and miss people. It may take the heathen a little longer to find him, but God will make allowances, of course. He knows if they live in such hot climates it must make them lazy and slow; and the parrots and tigers and snakes and breadfruit trees distract their minds; and having no books, they can't think as well; but they'll find God somehow, some time."

"What if they die first?" asked Emma Jane.

"Oh, well, they can't be blamed for that; they don't die on purpose," said Rebecca, with a comfortable theology.

In these days Adam Ladd sometimes went to Temperance on business connected with the proposed branch of the railroad familiarly known as the "York and Yank'em," and while there he gained an inkling of Sunnybrook affairs. The building of the new road was not yet a certainty, and there was a difference of opinion as to the best route from Temperance to Plumville. In one event the way would lead directly through Sunnybrook, from corner to corner, and Mrs. Randall would be compensated; in the other, her interests would not be affected either for good or ill, save as all land in the immediate neighborhood might rise a little in value.

Coming from Temperance to Wareham one day, Adam had a long walk and talk with Rebecca, whom he thought looking pale and thin, though she was holding bravely to her self-imposed hours of work. She was wearing a black cashmere dress that had been her aunt Jane's second best. We are familiar with the heroine of romance whose foot is so exquisitely shaped that the coarsest shoe cannot conceal its perfections, and one always cherishes a doubt of the statement; yet it is true that Rebecca's peculiar and individual charm seemed wholly independent of accessories. The lines of her figure, the rare coloring of skin and hair and eyes, triumphed over shabby clothing, though, had the advantage of artistic apparel been given her, the little world of Wareham would probably at once have dubbed her a beauty. The long black braids were now disposed after a quaint fashion of her own. They were crossed behind, carried up to the front, and crossed again, the tapering ends finally brought down and hidden in the thicker part at the neck. Then a purely feminine touch was given to the hair that waved back from the face—a touch that rescued little crests and wavelets from bondage and set them free to take a new color in the sun.

Adam Ladd looked at her in a way that made her put her hands over her face and laugh through them shyly as she said: "I know what you are thinking, Mr. Aladdin,—that my dress is an inch longer than last year, and my hair different; but I'm not nearly a young lady yet; truly I'm not. Sixteen is a month off still, and you promised not to give me up till my dress trails. If you don't like me to grow old, why don't you grow young? Then we can meet in the halfway house and have nice times. Now that I think about it,"

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**RENNIE'S SEED CATALOGUE FOR 1913**

Full of interesting and instructive information for the Farmer and Gardener. Tells what and how to plant. A bright book—profusely illustrated. Shall we send you a copy? If so, write to-day.

**WM. RENNIE CO. LIMITED**  
 TORONTO MONTREAL WINNIPEG VANCOUVER 108

**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 wasn'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' 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 50 cents a week, send me 50 cents a week 'till paid for. I'll make that cheerfully, and I'll wait for my money until the machine itself earns the balance.

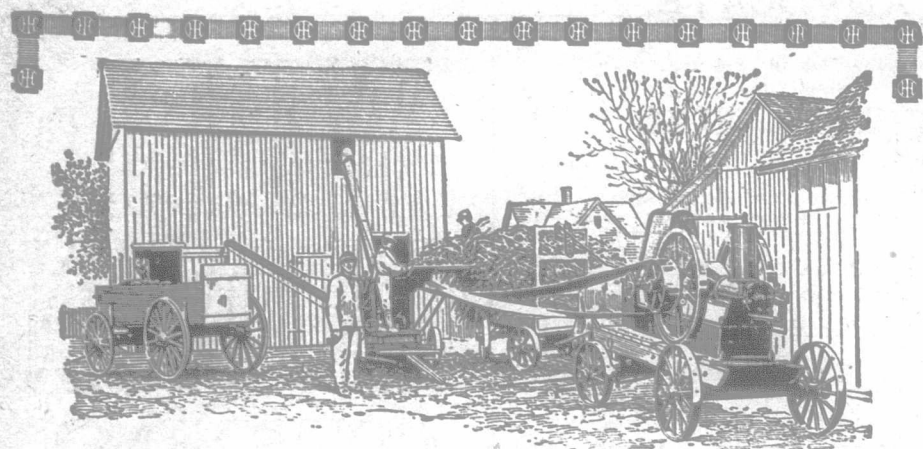
Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer, that washes clothes in six minutes.

Address me personally:  
 M. T. MORRIS, Manager 1900 Washer Co., 357 Yonge St., Toronto, Can.

Write for our new Instructive Illustrated Catalogue on Spraying and Apple Evaporating  
 It's free. Fruit Machinery Co., Ingersoll, Ont.







### The Best Bargain You Ever Made

**S**UPPOSE you bought an engine that did practically all of your hardest work for you—sawing, pumping, grinding, etc.—and that paid for itself in a short time. Would you call that a good bargain? An I H C engine will do all that, and more. Having paid for itself, it will continue to earn its way by working steadily year after year until you will say, "My I H C engine is the best bargain I ever made."

### I H C Oil and Gas Engines

are thoroughly dependable, and unusually durable. The fine-grained, grey cast-iron cylinders and pistons are worked together to a perfect fit. The ground piston rings insure maximum power from the explosion. The ignition apparatus can be understood at a glance. The fuel mixer is the most effective and simplest known. Moving parts are perfectly balanced. Bearings are large and carefully fitted.

I H C engines are made in all styles—vertical and horizontal, portable and stationary, air and water-cooled; in sizes from 1 to 50-horse power, to operate on gas, gasoline, naphtha, distillate, kerosene or alcohol. Kerosene-gasoline tractors, 12 to 60-horse power.

The I H C local agent will show you the good points of the I H C engine. Get catalogue from him, or, write the nearest branch house.

**International Harvester Company of Canada, Ltd**  
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**Free Silo Book**

A 50-page illustrated treatise on how to prepare and preserve silage, how to select a silo, how to feed. A book worth money to farmers

**NATCO EVERLASTING SILO**

The one silo that is absolutely permanent—whose construction is such that it cannot burn, cannot be blown down, will never shrink, crack or swell and that never needs repairs. Built of hollow vitrified clay blocks that keep silage sweet and palatable. The most attractive silo made. Can be built by any mason. The most economical silo in the end.

**Professor Van Pelt**

The famous cow judge, has an article in our Silo Book. So has Valancey E. Fuller and other authorities on feeding stock. Every stock owner should get this book and read it. Send for copy to-day, asking for Catalogue 6.

**NATIONAL FIRE PROOFING COMPANY OF CANADA, Limited**  
Traders' Bank Building  
TORONTO, ONT.

she continued, "that's just what you've been doing all along. When you bought the soap, I thought you were grandfather Sawyer's age; when you danced with me at the flag-raising, you seemed like my father; but when you showed me your mother's picture, I felt as if you were my John, because I was so sorry for you."

"That will do very well," smiled Adam; "unless you go so swiftly that you become my grandfather before I really need one. You are stalling too hard, Miss Rebecca Rowena!"

"Just a little," she confessed. "But vacation comes soon, you know."

"And are you going to have a good rest and try to recover your dimples? They are really worth preserving."

A shadow crept over Rebecca's face and her eyes suffused. "Don't be kind, Mr. Aladdin, I can't bear it;—it's—it's not one of my dimply days!" and she ran in at the seminary gate, and disappeared with a farewell wave of her hand.

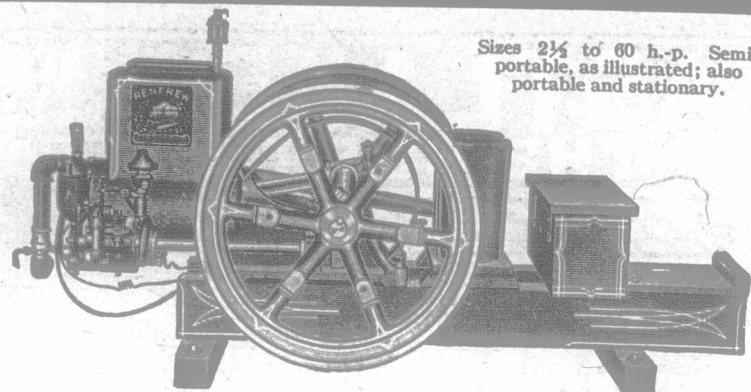
## APPLE TREES

We offer, subject to sale, the following stock, which we guarantee to be true to name. No. 1 stock in every respect; 5 to 7 feet high. Price, f.o.b. Pointe Claire, Que., \$27.00 per 100.

200 ALEXANDER	500 BEN DAVIS	600 STARKE
200 BALDWIN	500 DUCHESS	600 SPY
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200 YELLOW TRANSPARENT		

Also complete list of ornamental shrubs and trees of all kinds.  
WRITE TO-DAY

**THE CANADIAN NURSERIES COMPANY, LIMITED**  
10 Phillips Square, MONTREAL, QUE.  
Nurseries: POINTE CLAIRE, QUE.



Sizes 2 1/2 to 60 h.p. Semi-portable, as illustrated; also portable and stationary.

### Note Its Compactness

Look at the above illustration. It gives you a fair idea of the clean-cut, well-balanced, compact design of the **Renfrew-Standard Gasoline Engine**. But what we would like you to do would be to go to our agent's in your locality and see the

## Renfrew-Standard

It will speak for itself. This engine has, we firmly believe, no equal in Canada. In fact, we are very sure of it.

Where, for instance, will you find another engine that starts easily without cranking in zero weather?

Where will you find another gasoline engine with a governor equal to the **Renfrew-Standard** fly-

ball steam engine type? Where, too, will you find another engine that requires so little water for cooling, or that has no pipes, fittings, cooling pumps or fans to freeze up or get out of order?

We've no space for further particulars, so be sure to go and see the engine, or write for catalogue if not convenient to call on agents right away.

### The Renfrew Machinery Company, Limited

Head Office and Works: **RENFREW, ONT.**  
AGENCIES EVERYWHERE IN CANADA

**Don't Buy Fence, Posts or Gates Until**

you have seen our catalogue. It is the most useful fence catalogue ever sent to farmers. It tells how to build fence, how to measure up what you require, and how to save money when ordering.

You can't afford to be without it. Write for a copy now before you forget it. A post card will do. Address

**Standard Tube & Fence Company, Limited**  
Dept. A **WOODSTOCK, ONT.**  
Live Agents wanted for Standard Fence, Posts and Gates.  
Write for Special terms to-day.

S

**STANDARD FENCE**

Adam Ladd wended his way to the principal's office in a thoughtful mood. He had come to Wareham to unfold a plan that he had been considering for several days. This year was the fiftieth anniversary of the founding of the Wareham schools, and he meant to tell Mr. Morrison that in addition to his gift of a hundred volumes to the reference library, he intended to celebrate it by offering prizes in English composition, a subject in which he was much interested. He wished the boys and girls of the two upper classes to compete; the award to be made to the writers of the two best essays. As to the nature of the prizes he had not quite made up his mind, but they would be substantial ones, either of money or of books.

This interview accomplished, he called upon Miss Maxwell, thinking as he took the path through the woods, "Rose-Red-Snow-White needs the help, and since there is no way of my giving it to her without causing remark, she must earn it, poor little soul! I wonder if my



money is always to be useless where most I wish to spend it!"

He had scarcely greeted his hostess when he said: "Miss Maxwell, doesn't it strike you that our friend Rebecca looks wretchedly tired?"

"She does indeed, and I am considering whether I can take her away with me. I always go South for the spring vacation, travelling by sea to old Point Comfort, and rustivating in some quiet spot near by. I should like nothing better than to have Rebecca for a companion."

"The very thing!" assented Adam heartily; "but why should you take the whole responsibility? Why not let me help? I am greatly interested in the child, and have been for some years."

"You needn't pretend you discovered her," interrupted Miss Maxwell warmly, "for I did that myself."

"She was an intimate friend of mine long before you ever came to Wareham," laughed Adam, and he told Miss Maxwell the circumstances of his first meeting with Rebecca. "From the beginning I've tried to think of a way I could be useful in her development, but no reasonable solution seemed to offer itself."

"Lucky she attends to her own development," answered Miss Maxwell. "In a sense she is independent of everything and everybody; she follows her saint without being conscious of it. But she needs a hundred practical things that money would buy for her, and alas! I have a slender purse."

"Take mine, I beg, and let me act through you," pleaded Adam. "I could not bear to see even a young tree trying its best to grow without light or air,—how much less a gifted child! I interviewed her aunts a year ago, hoping I might be permitted to give her a musical education. I assured them it was a most ordinary occurrence, and that I was willing to be repaid later on if they insisted, but it was no use. The elder Miss Sawyer remarked that no member of her family ever lived on charity, and she guessed they wouldn't begin at this late day."

"I rather like that uncompromising New England grit," exclaimed Miss Maxwell, "and so far, I don't regret one burden that Rebecca has borne or one sorrow that she has shared. Necessity has only made her brave; poverty has only made her daring and self-reliant. As to her present needs, there are certain things only a woman ought to do for a girl, and I would not like to have you do them for Rebecca; I should feel that I was wounding her pride and self-respect, even though she were ignorant; but there is no reason why I may not do them if necessary and let you pay her traveling expenses. I would accept those for her without the slightest embarrassment, but I agree that the matter would better be kept private between us."

"You are a real fairy godmother!" exclaimed Adam, shaking her hand warmly. "Would it be less trouble for you to invite her room-mate too,—the pink-and-white inseparable?"

"No, thank you, I prefer to have Rebecca all to myself," said Miss Maxwell.

"I can understand that," replied Adam absent-mindedly; "I mean, of course, that one child is less trouble than two. There she is now."

Here Rebecca appeared in sight, walking down the quiet street with a lad of sixteen. They were in animated conversation, and were apparently reading something aloud to each other, for the black head and the curly brown one were bent over a sheet of letter paper. Rebecca kept glancing up at her companion, her eyes sparkling with appreciation.

"Miss Maxwell," said Adam, "I am a trustee of this institution, but upon my word I don't believe in co-education!"

"I have my own occasional hours of doubt," she answered, "but surely its disadvantages are reduced to a minimum with children! That is a very impressive sight which you are privileged to witness, Mr. Ladd. The folk in Cambridge often gloat on the spectacle of Tom-fellow and Lowell arm in arm. The little school world of Wareham palpitates with excitement when it sees the senior and the junior editors of the Pilot walking together!"

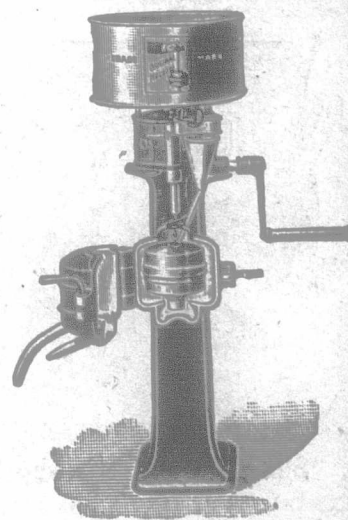
(To be continued.)

The Machine that is different from all others.

# THE "MELOTTE" CREAM SEPARATOR

Has a larger sale than any other Cream Separator in the British Empire.

IS always purchased by those who know its value.



## THE REASON WHY

- It lasts
- It skims clean.
- It turns easy.
- It gives genuine satisfaction.

Therefore, the "MELOTTE" is the cheapest Cream Separator to buy. Upkeep is so small that we shall be pleased to mail you book of testimonials from satisfied users in your district. Write to-day.

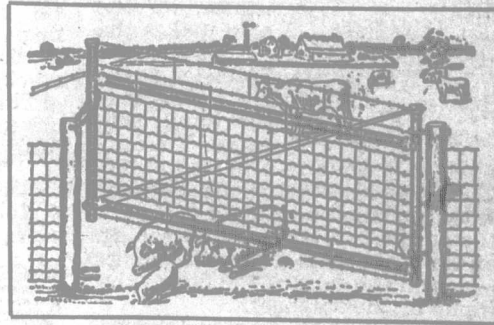
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**R. A. LISTER & CO., LIMITED, 58-60 Stewart Street, TORONTO, ONT.**  
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82 Water Street, ST. JOHN, N.B.



**I GUARANTEE every Clay Gate to be free from defects in material or workmanship. I will replace free any parts, or the entire gate, giving out for such reasons.**  
H. Ralph Steele, Manager

## Canada's Best Stockmen Buy This Gate

ASK any prominent stockman in Eastern Canada which is the best Farm Gate made, and it's almost certain that he will reply, "The Clay Gate". The chances are that he has "Clay" Gates on his own farm, and so knows from experience how good they are.

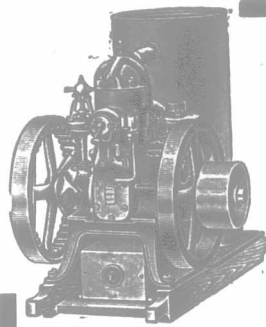


## Clay Steel Farm Gates

are liked by every farmer who has used them, because they: 1. Positively keep back breachy cattle. 2. Raise, as shown, to let small stock through, yet keep back large stock. 3. Won't sag, bend, break, burn, blow down or rot. 4. Last a lifetime. 5. Are positively and fully guaranteed. 6. Solve every Gate problem and every Gate worry. CLAY GATES are made of tubular steel of large diameter (for stronger than gas pipe or tee or angle iron) and heavy wire mesh fabric. Five men can stand on a Clay Gate without injury to the "hang" of the gate or to the gate itself. CLAY GATES are made in a great variety of sizes—a gate for every purpose. Send to-day for illustrated Price List. Read our guarantee and the terms of our free trial offer.

One or a dozen Clay Gates sent without expense or obligation for 60 days' free trial, in order that you may try them before buying them. 30,000 Clay Gates sold in 1912.

THE CANADIAN GATE CO.'Y. LIMITED., 34 MORRIS STREET, GUELPH, ONTARIO



## This Engine Runs on Coal Oil

Every farmer can afford an Ellis Coal Oil Engine. They give far more power from coal oil than other engines do from gasoline. They are safe, as well as cheap; no danger of explosion or fire.

The strongest and simplest farm engine made; only three moving parts: nothing to get out of repair. Anyone can run it without experience. Thousands of satisfied customers use these engines to grind feed, fill silos, saw wood, pump, thresh, run cream separators, and do dozens of other jobs. Cheaper than horses or hired men. Fill up the tanks and start it running, and no further attention is necessary; it will run till you stop it.

**FREE TRIAL FOR 30 DAYS.** You don't have to take our word for it. We'll send an engine anywhere in Canada on Thirty Days' Free Trial. We furnish full instructions for testing on your work. If it does not suit you send it back at our expense. We pay freight and duty to get it to you and we'll pay to get it back if you don't want it.

Absolutely guaranteed for 10 years. Write for free catalog and opinions of satisfied users. Special offer in new territory.

3 to 15 horse-power We Pay Duty and Freight. **Ellis Engine Co., 94 Mullett Street, DETROIT, MICH.**

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**BABY CHICK FEED** makes strong, healthy birds. A sure PROFIT-MAKER.  
**SCRATCH FEED** The great EGG PRODUCER. Write us for free samples and prove the astonishing results.

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WHERE one man hatches eggs for everybody, cheaper and better. Start the Hatchery this spring and your customers will raise

More Poultry and Eggs to supply the Market, instead of Importing them.

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**INCUBATORS AND BROODERS COMBINED**  
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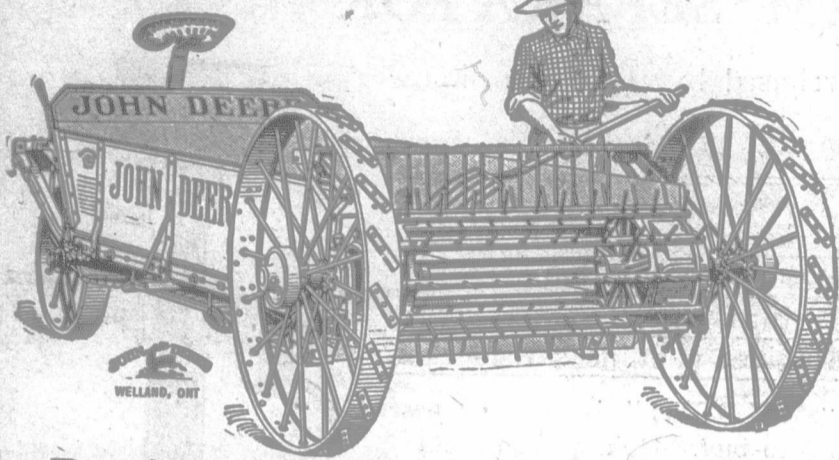
We promise you the largest percentage of hatch and stronger chickens than any other machine on the market. The hen is not in it with this machine. Free catalogue. Address

**THE CYCLE HATCHER COMPANY**  
G. M. COLLINS, Canadian Manager  
Dept. 4. 415 Symington Ave., Toronto, Ont.



## John Deere Spreader

The Spreader with the Beater on the Axle



Revolutionizing the Spreader Business  
Simplest and Strongest Spreader

On the John Deere Spreader, the Spreader with the Beater on the Axle, two hundred working parts that continually give trouble, are done away with. This spreader is so simple and strong that it does not get out of order. It has no clutches, no chains, no adjustments.

The John Deere Spreader is the greatest improvement in spreaders since their invention. It is as much an advance of ordinary spreaders as the self-binder was over the old reaper.

### The Beater on the Axle

Mounting the beater on the axle makes the John Deere Spreader possible. This feature is fully patented. You cannot get it on any other spreader. The beater on the axle does away with all chains and clutches. It puts the strain and stress of spreading on the main axle—where it belongs—not on the sides of the box or the frame of the spreader.

Mounting the beater on the axle makes the John Deere Spreader easy to load—low down.

### Only "Hip-High"

Sides of the John Deere Spreaders are only "hip-high." The first three feet you lift a fork of manure are easiest of all. From there on to the top of the ordinary spreader is hard work.

You lift manure only three feet with the John Deere Spreader. You always see into the spreader, just

Valuable Spreader Data Free—Get this at once. It contains reasons for using manure—how to apply it to the land, how to store it, and a description of the John Deere Spreader, the Spreader with the Beater on the Axle. Ask for this Data as Package No. Y 119

where each forkful is needed. Wheels do not interfere with loading.

### Few Parts

There are no clutches to get out of order, no chains to give trouble, and no adjustments to be made on the John Deere Spreader. On old style spreaders, ten to twenty adjustments are necessary before they will work at all. Any one of these, wrongly made, might put the spreader out of business.

To start spreading with a John Deere Spreader, move the lever at the driver's right back until the finger or dog meets the large stop at the rear of the machine—there is no clutch.

The John Deere Spreader does not get out of order. It is always ready for use.

### Roller Bearings

Roller bearings, few working parts, the center of the load comparatively near the team and the weight distributed over four wheels, make the Roller Bearing John Deere Spreader light draft. There are four sets of roller bearings, two between the main axle and the beater, and two in the front wheels.

### Bridge-Like Construction

The substantial steel frame on John Deere Spreaders has high-carbon structural steel side sills. Like modern railway bridges it is built on the best known principles of steel construction.

It is securely bolted, insuring rigidity and perfect alignment, even after years of use.



Out of Gear



Built Like a Steel Bridge

## Gossip.

The visit to Canada of Court Councillor Horst Weber, of the "Illustrirte Zeitung," of Leipsic, Germany, is still fresh in the memory of our people. The Court Councillor was most pleasantly and deeply impressed with the country, and everything that he saw. The results of his three-months' stay are: Firstly, a special edition of his famous journal, devoted to Canada; and secondly, the arrangement of a businessmen's trip to Canada of leading German personages of every field of activity. Such trips should be productive of much good in allaying international prejudices and promoting mutual understanding. Incidentally, the advertising advantage to Canada should be considerable.

James Begg & Son, breeders of Ayrshire cattle, St. Thomas, Ont., in ordering a change of advertisement in this issue, report sales as follows: Two heifer calves to Thomas Dennis, Stratfordville; six cows to Detchem Farm, Davidson, Sask.; one cow to A. Edwards, Chatham; a heifer to M. M. Robson, Ayr; a yearling bull to Geo. Gardner, Seeley's Bay. Young bulls are now offered, all from R. O. P. cows, and sired by bulls from R. O. P. dams. Mr. Begg reports the demand for females unprecedented. Eggs for hatching, of pure-bred Rose-comb and Single-comb Rhode Island Reds, are also advertised by this firm. See the advertisement.

D. Brown & Sons, breeders of Short-horn cattle, Iona, Ont., report their stock wintering well and in good condition. A red bull, from heavy-milking dam, has recently been sold to Philip Ashton, Cashmere. Other bulls have been taken by Duncan Campbell, St. Thomas; J. J. Black, Fingal; W. W. Scott, Highgate, the latter named getting a bull from Imp. Sea Weed, to replace his old stock bull, Lord Lieutenant. E. Brien & Son, Ridgetown, and Charles Munro, of Fingal, also took two good bulls. Five choice bulls, none older than May calves, are still on hand for sale. These calves are sired by Trout Creek Wonder. A number of heifers are also for sale at reasonable prices. A Standard-bred mare, Sadie Melrose, is also offered. See the advertisement.

Robert Miller, of Stouffville, Ont., writes: Since writing you last, have been doing business in Shorthorns, Clydesdales, and sheep. Have sold to go to many of the counties in Ontario, and to several of the other Provinces. Have had many visitors, and scarcely missed selling to any of them, but the greater part of my sales were made to customers who had not seen the animals, and I have not had a single complaint when they were received. On the other hand, have had the most flattering letters from many of the buyers. To-day I received orders from two men; one of them I have sold to once before, the other is one of my oldest and largest customers, and he has never seen anything before buying, and he has never had anything sent that did not please him. We have to deal honorably with our customers to keep doing business, and I am going to continue breeding, and selling, too. I have never had a sire of any kind that was as valuable as the bull I now have, a cut of which appears in my advertisement. His bull calves have topped the three last Toronto sales, and he never gets anything but a good one.

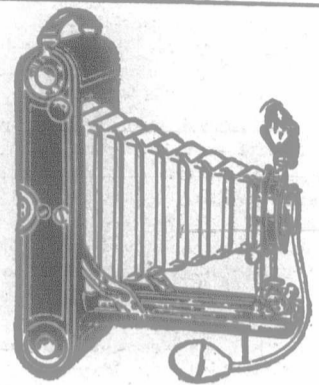
## Questions and Answers.

### Miscellaneous.

#### German Alfalfa Seed.

Would you inform me in your next week's issue if you think alfalfa clover seed grown in Germany would do well in this country. I am going to sow about twelve acres. How much seed would I require? S. C.

Ans.—The best varieties of alfalfa for Ontario are the Ontario variegated and Grimm alfalfa, but last year's production of the former was very small, and little, if any, is now available. German seed has given only fair to low results in experiments at the Ontario Agricultural College. Sow twenty pounds to the acre.



## KODAK on the Farm

There's a practical, common-sense use for the Kodak on every well-regulated farm. It's rapidly becoming a necessity to the business farmer. Pictures of stock and poultry to be sent to prospective customers, pictures of crops at certain stages of their growth as a matter of valuable record, pictures of fat or lean cattle and hogs and horses as a record of certain methods of feeding, pictures of buildings that are to be remodelled, pictures of desirable features in other peoples buildings—you can use all these to advantage in your business.

And you can make good pictures with a Kodak, or with a Brownie, and can successfully do the developing and printing. No dark-room, no fragile glass plates. Nothing complicated.

Ask your dealer to show you the goods and give you a catalogue, or write us, and we will mail catalogue without charge and give you the address of your nearest Kodak dealer.

CANADIAN KODAK CO., Ltd.  
TORONTO

"My butter is always just right"



## What's The Matter With Your Butter?

Does it lose its flavor quickly? Does it acquire a bitter taste in a few days?

Are you receiving any complaints about the butter not keeping well?

Use the salt that does make good butter every time and all the time—

## WINDSOR DAIRY SALT

It is always the same in purity and strength. It won't cake—dissolves evenly—and makes the most delicious butter you ever tasted.

The prize-winners at all the fairs, used Windsor Dairy Salt—that's why they won all the prizes.

72D

Seed Corn—Every ear carefully selected by hand. Always a prize winner at O. C. G. A. S. E. OAKLEY, Edgar's Mills, Essex County, Ont.

# BIBBYS CALF MEAL

CREAM EQUIVALENT FOR RAISING CALVES AND YOUNG PIGS  
CONTAINS A MUCH HIGHER PERCENTAGE OF REAL VALUE THAN OTHERS  
SOLD BY LEADING MERCHANTS, OR DIRECT FROM W. M. FENNIE CO. LIMITED  
TORONTO - MONTREAL - WINNIPEG - VANCOUVER



**Gossip.**

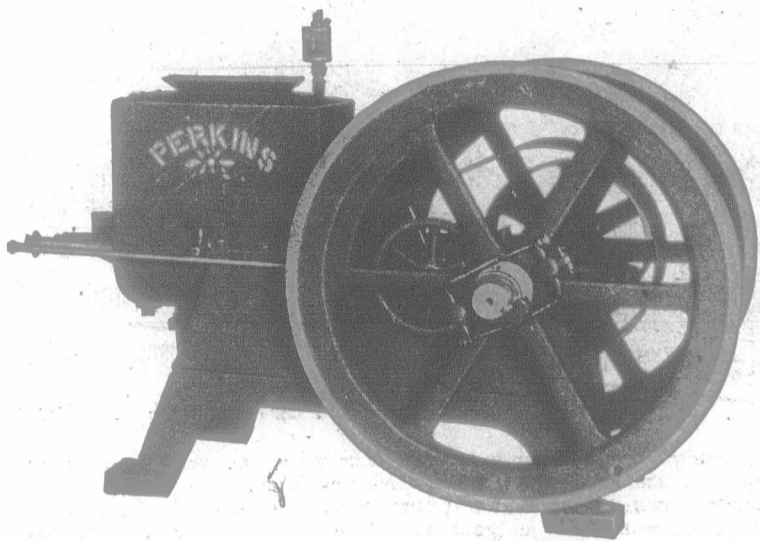
**PURE-BREDS AT GREENGROVE.**

Geo. D. Fletcher, owner of Greengrove Stock Farm, near Hillsburg, Ont., is a typical Canadian farmer. Filled with the energy, business ability and zeal that is so freely generated in this vigorous Canadian climate, he has made the most of his opportunities as a Canadian-bred farmer, and achieved success as a breeder of pure-bred stock. Convinced as a young man that the feed assimilative power's and consequently good doing qualities of the pure-bred were vastly superior to the cull or grade, and therefore decidedly more profitable and economical to produce, he replaced all lines of stock on his farm with those carrying a certificate of registration. To-day his horses are imported Clydesdales and their progeny, his cattle all registered Shorthorns, his sheep Oxford Downs, his swine Yorkshires, and his poultry S. C. White Leghorns. In Clydesdales he is offering for sale two stallions rising two years of age. One a typical, upstanding bay, on the nicest kind of underpinning, sired by the H. & A. S. first-prize horse, Imp. Moncrieffe Marquis, Dam Marina (Imp.), by Baron Romeo. This colt weighs 1,300 pounds in moderate condition and will surely make a right good horse, the other is a brown, of the very thick, close coupled, cart-horse type, with quality to spare, got by the same sire and out of Sally McNaughton (Imp.) by Dunure Freeman. The Shorthorns are too well known to need comment, the immense thickness of flesh and superb type and quality of the herd has not many equals in Canada, while their breeding is unsurpassed in any herd. Several are Cruickshank Orange Blossoms, several Marr Misses, several C. Mysies, Jealousys and Clementinas, imported and Canadian-bred, the latter daughters of such noted bulls as the Toronto and London winner, Spicy Robin =28259=, Imp. Joy of Morning =32070=, Imp. Benachie =69954=, a Cruickshank Butterfly, and the present stock bull, Imp. Royal Bruce, a Bruce Mayflower. In the

**The Perkins Family**

Best value ever offered the gasoline public. It will pay you to investigate before placing your order elsewhere.

ESTABLISHED 1860



This is the simplest engine on the market, only 12 working parts. You know what that means to you.

We manufacture a full line of Gasoline Engines, Windmills, Feed Grinders, Buzzsaws, Galvanized Steel Tanks, Pumps and Pump Jacks, and handle all kinds of fittings. Write us to-day for our proposition, or call on

**PERKINS WINDMILL & ENGINE COMPANY, London, Ont.**  
Full stock of repairs carried in London. Office and wareroom, 90 King St., London, Ont.

**THE NATIONAL SILO**  
A Necessity for the Dairy Farmer

For Particulars, Write Us

**NATIONAL PIPE AND FOUNDRY CO'Y., LIMITED**  
135 Board of Trade Building, Montreal, Quebec

stables for sale are some remarkably choice big, thick, mellow heifers, the kind hard to get. In young bulls there is only one left, a seven months old roan, a C. Jealousy sired by a Clementina-bred bull and dam by Imp. Benachie, g. d. imported. He looks like developing into something good. In Oxford Downs for sale are a bunch of last year's lambs that were bred to a son of E. Barbours (Imp.) Toronto and Ottawa first-prize ram. In Yorkshires there are several choice Young sows of breeding age, and younger, also one particularly nice young boar of breeding age. Write your wants to Mr. Fletcher, R. R. No. 2, Erin, Ont.

**Trade Topics.**

Attention is called to a change in the advertisement of the Folding Bath Tub Co., Ltd., Gananoque, Ont. Their folding bathtubs are guaranteed for five years. See the advertisement.

The time to install hay carriers is at hand. Unloading hay and grain by hand is too expensive. See the advertisement elsewhere in this issue of M. T. Buchanan & Co., Ingersoll, Ont., who manufacture the famous "Swivel Carrier" for all kinds of track.

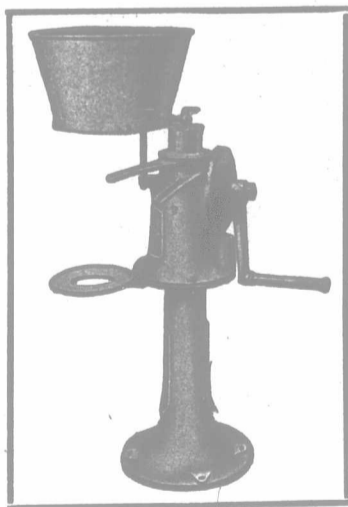
Every building needs a roof, and the best is what everybody wants. A large proportion of the roofings now sold have a mineral surface, requiring no painting. Amalite Roofing was one of the first. The surface consists of fine mineral particles, embodied in a matrix of tough adhesive pitch. The face of the roofing is a mosaic, consisting almost entirely of stone, with the pitch exposed only in microscopic lines, so the weather has little effect on it. Back of this is felt. No paint is required. See the advertisement in another column, and write the Paterson Mfg. Co., Ltd., Montreal, Toronto, Winnipeg, Vancouver, St. John, or Halifax, for a free sample and full particulars.

**Make More Profit**

out of the most valuable product of the farm by purchasing a Cream Separator which gets all the cream.

**"THE PREMIER"**

**Cream Separator**

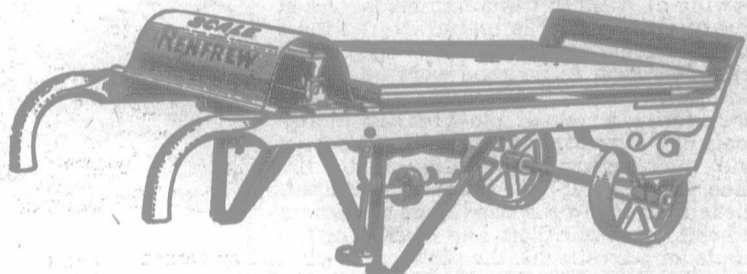


**Will Get all the Cream**

Trade in your old separator which is losing you the price of an up-to-date "PREMIER" every year. Ask our agents for full particulars or write us direct.

**The Premier Cream Separator Co.,**  
Winnipeg, Man. Toronto, Ont. St. John, N. B.

**THE FARM SCALE THAT SAVES MONEY FOR FARMERS**



**The Renfrew Handy Two-Wheel Truck Scale**

- ☞ The RENFREW saves every cent of profit for the farmer on everything he sells by weight, because of its absolute accuracy.
- ☞ It saves for him time and labor—simply wheel the RENFREW to what you want to weigh.
- ☞ It saves for him because it is built to last, and weighs anything from one pound to 2,000 pounds.
- ☞ Does your scale do these things? If not, it is time to buy a RENFREW—the farm scale built to meet your requirements.

Mail Coupon Now for this Free Booklet, "The Profit on the Last Ounce." It tells interestingly about the business side of farming—and how money is saved with a "RENFREW" Handy Two Wheel Truck Scale.

**THE RENFREW SCALE CO.**  
RENFREW, ONTARIO.

AGENTS:  
SASKATOON—Western Distributing Agency  
CALGARY—Renolds & Jackson  
EDMONTON—Race, Hunt & Giddy  
MANITOBA—Clare & Brockest, Winnipeg.

Mail Now Coupon  
Please send me free of charge the booklet "The Profit on the Last Ounce."  
Name.....  
Address.....  
**THE RENFREW SCALE CO.**  
Renfrew, Ont.



# HAVE SOLID COMFORT- AND SAVE ON YOUR COAL BILL

## PEASE "ECONOMY" FURNACE



PAYS FOR ITSELF BY THE COAL IT SAVES AND ITS LONG LIFE

### The Proof of the Furnace is in the Heating



They were both young, very much in love with each other and were to be married shortly. At present they were considering the plans of their new home. "Well dear," said the man, "what kind of a furnace shall we have?" Said the girl, "Oh, it doesn't matter much, I suppose, one is as good as another." "But they are not," said the man. "Look at Jack and Mary. They have been nearly frozen all winter—on the other hand, Bill and Mildred have a PEASE "ECONOMY" FURNACE, and their house is as warm as toast all winter and his coal bill is about one-half of Jack's."

The man continued "Bill showed me a number of exclusive, money-saving, heat-extracting features embodied in the PEASE FURNACES, such as a large combustion chamber that burns all gases and allows no wasted coal, an air blast device over the fire pot that actually burns air, with a vertical shaker that does away with the back-breaking stoop when shaking—and a lot of other devices that enable the PEASE to extract the last bit of heat out of the coal."

"Well dear," said the girl, "it looks as though we ought to get a PEASE FURNACE". So they did and the PEASE "ECONOMY" FURNACE "Pays for itself by the coal it saves." Write to-day for free booklet.

PEASE FOUNDRY COMPANY.  
722 TORONTO

BRANCHES  
Montreal Hamilton Winnipeg Vancouver  
Factories—Brampton, Ontario

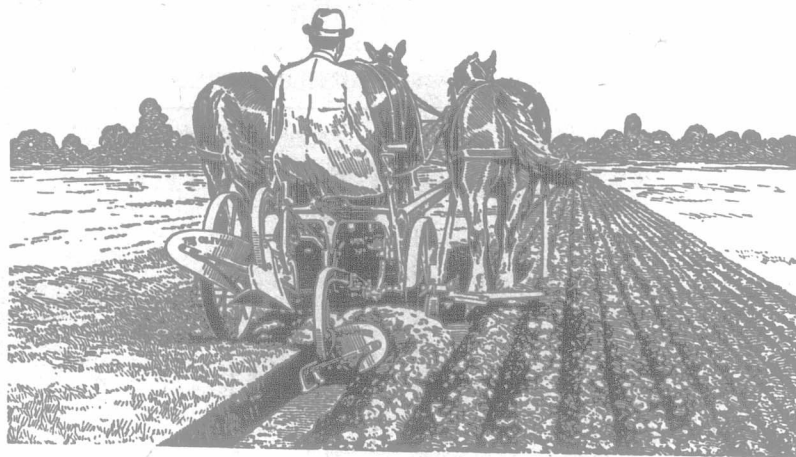
## The Basis of Oliver Success

THERE is one point about Oliver plows which gives them peculiar value in the plowing of Eastern Canadian fields. Each type of Oliver plow is manufactured for a certain section of the country, and can be depended upon to do good work under the conditions obtaining in that section. Before offering a type of plow for sale in any locality, Oliver plow manufacturers always send their expert plow designers to the place where the plows are to be used. These men study the conditions of climate and soil, learn the likes and dislikes of the people who are to use the plows, and when they return to the factory, they are able to superintend the manufacture of a plow which meets all the required conditions in the place where it is to be used.

### Oliver Plows for Eastern Canada

The group of Oliver plows built for Eastern Canada includes walking plows of the famous Oliver No. 40 series, sulky plows, gang plows, and walking gang plows. Each of these is built for a certain purpose, and is the best plow obtainable for that particular purpose.

Back of the whole group is the fifty-seven



years of successful plow experience of the Oliver Plow Works. This experience eliminates everything in the way of chance. You do not have to experiment with Oliver plows. Go to the I H C local agent and tell him what kind of plowing you have to do, and he will show you a plow built to do that kind of work and do it in the best possible manner. You can get catalogues and full information of the entire Oliver line from him, or, if you prefer, write the nearest branch house.

International Harvester Company of Canada, Ltd  
EASTERN BRANCH HOUSES

At Hamilton, Ont.; London, Ont.; Montreal, P. Q.;  
Ottawa, Ont.; St. John, N. B.; Quebec, P. Q.  
These machines are built at Hamilton, Ont.



# EWING'S RELIABLE SEEDS

## The Germs of Life are Vigorous

In Ewing's Reliable Seeds—and so are the Vegetables, Field Crops and Flowers grown from them.

This is not merely a claim—it is a proven fact, which has been demonstrated annually, for

for over forty years, by thousands of Canadians.

Don't stake your time, trouble, expense, and the season's use of your land, on an uncertainty. Get Ewing's Reliable Seeds and be sure of good crops.

WM. EWING & CO., Seedsmen

MCGILL ST., MONTREAL.

27



## Gossip.

CLYDESDALES, SHORTHORNS AND TAMWORTHS, AT NEWCASTLE.

In the quarter of a century that A. A. Colwill, of Newcastle, Ont., has been breeding and exhibiting Tamworth swine he has made a reputation for excellence in type and quality of his Tamworths that extends from the eastern to the western Provinces of Canada and to many of the States to the south, and, with the writer's intimate knowledge of his herd for many years, we feel safe in saying that in his pens to-day are more young things of both sexes of high-class show calibre than we ever saw in those pens before at one time—this is particularly true of the young sows of breeding age, daughters of the present stock boar, Springbrook Model King, sired by Imp. Knowle King David, and out of Imp. Knowle Sultana 3rd. He is a hog put up on true bacon lines, even quartered and having great strength of bone. Properly fitted, he would be capable of winning anywhere. He is now three years of age, and is a proven sire of sterling worth, and as his daughters are of so high a standard of excellence, several of them are being kept for breeding purposes; consequently he is for sale. His daughters that are for sale are being bred to a son of Imp. Cholderton Golden Star, and their dams are daughters of Imp. Cholderton Golden Secret, and their dams again were daughters of the famous champion, Colwill's Choice. This is breeding that cannot be excelled in this country, and of this line of breeding for sale are both sexes of any desired age. In Clydesdales, Mr. Colwill is offering a pair of full sisters—Newcastle Irwinnie 28511, a brown two-year-old, and Jenny of Newcastle, 28512, a bay yearling, sired by Imp. Lucky Ronald, and out of Mollie of Springvale, 4993, by Imp. Abbot of Berwick. These fillies are very well matched, and will make a choice pair of mares. Their dam is also for sale. She is a bay, 11 years old, a mare of nice quality, a regular breeder and supposed to be in foal. Another mare for sale is the brown three-year-old, Fanny of Newcastle, 28510; also got by Imp. Lucky Ronald, dam by Imp. Eastfield Laddie. She is safe in foal—a thick, smooth mare. In Shorthorns there are for sale a pair of yearling heifers out of hand-milked Bates-bred dams that will fill their 10-quart pail at a milking. They are a nice level pair of heifers and right good buying. Write Mr. Colwill your wants.

## Questions and Answers.

### Miscellaneous.

#### Weights of Poultry—Feeding Sow.

- 1.—What is the standard weight of the following breeds of poultry—Black Minorcas, Banded Plymouth Rocks and Buff Orpingtons?
  - 2.—Can I get hatching eggs of the above breeds from the O. A. C., Guelph? If so, whom should I write to for same?
  - 3.—I have a sow in pig which is due about April 16th. I am feeding in the following way—shorts and bran one day with 6 lbs. of oats every day at noon, another day scalded corn meal and charcoal with 1 oz. of salt in all feeds. I also feed 2 lbs. meal 3 times a week. All food is fed warm, am I feeding right? If not please advise. J. H. M.
- Ans.—1.—Minorcas, cock 9 lbs.; hen, 7½ lbs. Plymouth Rocks, cock, 9½ lbs.; hen, 7½ lbs. Buff Orpingtons, cock 10 lbs.; hen, 8 lbs.
- 2.—Write Prof. W. R. Graham. A number of eggs are sold each year for hatching purposes.
  - 3.—Mix the shorts and oats and corn meal together, and feed of this each day. Give the charcoal in separate box, to be eaten as the sow wishes. Bran may be mixed with the shorts and oats, but is not urgently needed. It is not necessary to warm her feed, but since she is accustomed to it make the change to cold feed gradually.



# \$370 REWARD WANTED—The Ideas of Every Mother in Canada

We Will Give Prizes for Them as Follows:

We have built an entirely new line of "Ideal" Cribs.

Every model has two new features, features that we know will be appreciated by every mother in Canada.

The first is the *Ideal Sure-Grip Safety Catch*, which provides for sliding sides without the old disadvantages of the hook catch. See illustration.

The second is the *Ideal Ball-Bearing Caster*, which enables you to push or slide the crib in any direction and over any surface, rough floor or carpet, almost without effort, without noise and without causing a rattle or strain anywhere.

We want your opinion of these features, and we want you to tell us, if you will, whether you think there is any further way in which these cribs can be improved.

### HOW TO COMPETE

Go to your furniture dealer. Say: "Please show me your line of 'Ideal' Cribs." Ask him to demonstrate the working of the "Ideal" Sure-Grip Safety Catch. Ask him to show you how easily the crib can be moved on the "Ideal Ball-Bearing Casters." Note the strength of the Spring. See the well-made mattresses we provide. See how smooth and white the enamel is. Then ask the dealer to give you the number and dimensions of the crib you looked at, and write us your opinion of it.

- Tell us: 1. What you think are its good points.  
2. Whether you think it has any bad points, and—  
3. How you think such bad points might be improved.

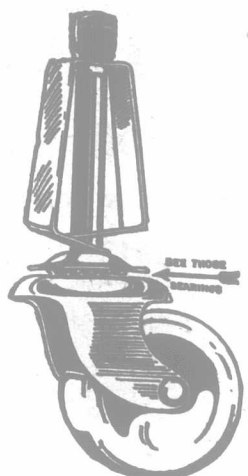
The judges will be Mr. W. P. Bennett, Managing Director of the Ideal Bedding Company; Mr. J. J. Gibbons, of J. J. Gibbons Limited, and Mr. W. G. Rook, of the Canadian Home Journal.

Their awards and decisions must be accepted as final.

All replies must be received at these offices not later than May 1st; prizes will be awarded on May 15th, and awards will be announced in the June number of the Canadian Home Journal.

Make up your mind to use your eyes with a little good judgment, and there is no reason why you should not win a prize.

**THE IDEAL BEDDING CO., LIMITED**  
29 JEFFERSON AVE., TORONTO

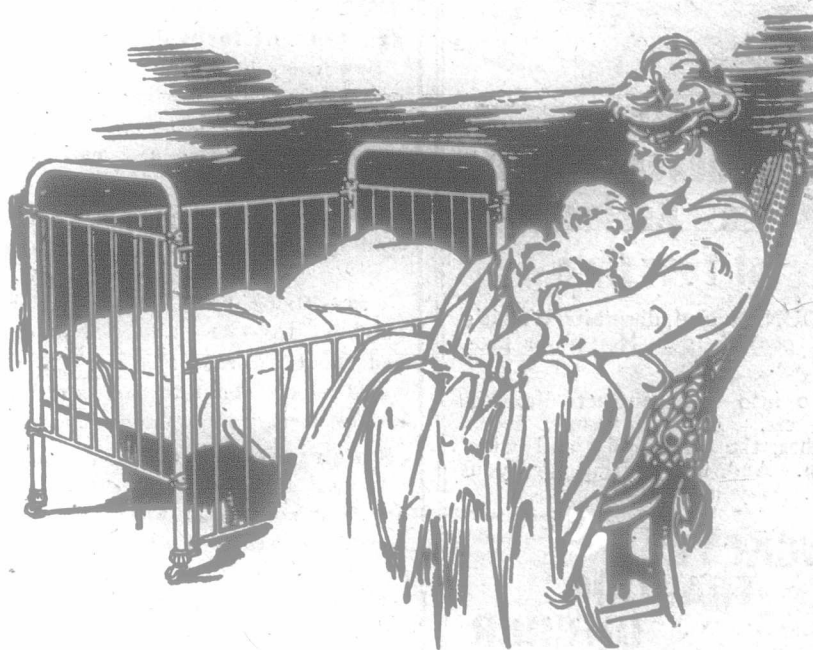


The Famous "Ideal" Ball Bearing Caster used on our new line of "Ideal" Cribs.

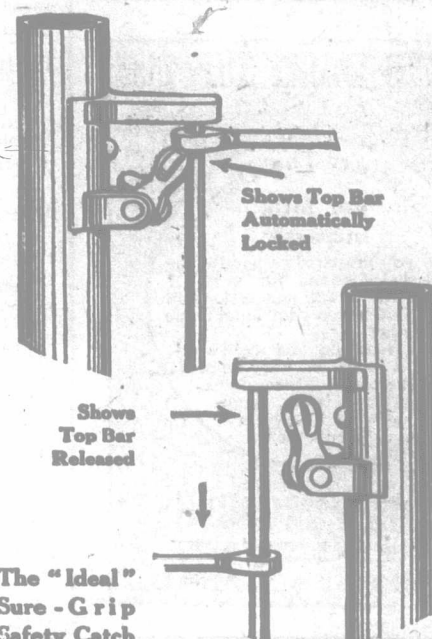
Special Notice



Every new "Ideal" Crib has a tag attached. When you purchase an "Ideal" Crib, send the tag to us and we'll mail you a handsome souvenir book entitled, "Baby's Childhood Days." This book is worth 50c., and will be a delight to every mother.



- Write your three answers in consecutive order and, altogether, use not more than three hundred words.
  - Send your reply, mentioning name of furniture dealer who showed you the crib.
  - Mention the name of this paper, and address it to our office.
- For the best thirty answers received we will award prizes, divided as follows:
- For the best ten answers, 10 prizes of Ideal Crib and Mattress, No. 81, value \$15.00 each. Total value \$150.00.
  - For the second best ten answers, 10 prizes of Ideal Crib and Mattress, No. 40, value \$12.00 each. Total value \$120.00.
  - For the third best ten answers, 10 prizes of Ideal Crib and Mattress, No. C, value \$10.00 each. Total value \$100.00.
- Grand total \$370. You can share in it if you will.



The "Ideal" Sure-Grip Safety Catch used on our new line of "Ideal" Cribs.

### Gossip.

#### THE BIG CLYDESDALE SALE AT ORANGEVILLE.

The character, breeding and quality of the Clydesdale stallions and fillies to be sold at J. E. Thompson's sale at Orangeville, on Thursday, April 10th, will be much appreciated by visitors to the sale who are familiar with the popular characteristics of the great Scotch draft horses. This lot has only been in the country a few weeks, consequently they are not in show fit, but they have the form and quality popular with Canadians, while their breeding is the best in the Scotch Studbook. The three stallions to be sold are all two-year-olds, rising three. Maythorn is a dark brown, got by the famous son of Everlasting, Royal Abundance, dam by Gold Found. He has four numbered dams. Dunure Bryan is a bay, got by the great Baron of Buchlyvie, dam by Crown Derby. He, too, has four numbered dams. Albion is a bay, got by the Kirkcudbright first-

### Bruce's Big Four Field Root Specialties

**BRUCE'S GIANT FEEDING BEET**—The most valuable Field Root on the market; combines the rich qualities of the Sugar Beet with the long-keeping, large size and heavy cropping qualities of the Mangel. We offer two colors, **WHITE** and **ROSE**. ¼ lb. 18c, ½ lb. 29c, 1 lb. 50c, postpaid.

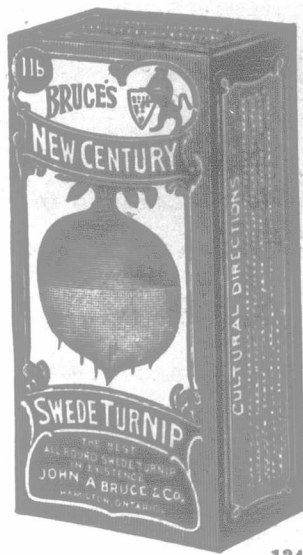
**BRUCE'S MAMMOTH INTERMEDIATE SMOOTH WHITE CARROT**—The Best of all field Carrots. ¼ lb. 53c, ½ lb. 94c, 1 lb. \$1.80, postpaid.

**BRUCE'S GIANT YELLOW INTERMEDIATE MANGEL**—A very close second to our Giant Feeding Beet, and equally easy to harvest. ¼ lb. 18c, ½ lb. 29c, 1 lb. 50c, postpaid.

**BRUCE'S NEW CENTURY SWEDE TURNIP**—The best shipping variety, as well as the best for cooking; handsome shape, uniform growth, purple top. ¼ lb. 18c, ½ lb. 24c, 1 lb. 40c, postpaid.

**FREE**—Our handsomely illustrated 112-page Catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc., for 1913. Send for it.

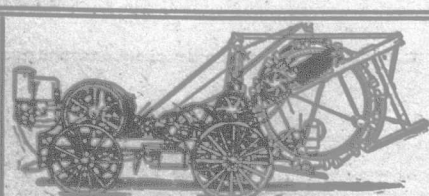
**JOHN A. BRUCE & CO., Ltd. Hamilton, Ontario**  
Established Sixty-three years



prize horse, Iron Duke, dam by the great Macgregor, and grandam by Monkland Farmer. Of the twelve imported fillies, nine are rising three years, and three rising two years of age. Two of them are by the famous sire, Up-to-Time; two are by the Royal first-prize horse, Rye-croft; one is by the great Everlasting; one by the Cawdor Cup champion, Marcellus; one by the noted breeding and show horse, Baron Mitchell. Their pedigrees all through show a continuation of such illustrious breeding, and with it are four, five and six numbered dams. Among them is much high-class show material when put in condition. The Canadian-bred fillies to be sold are a pair rising two years of age, and another rising one year. All are registered. The quality all through the offering is essentially high-class.

Clydesdales for Canada, shipped from Glasgow the second week in March, were consigned to John Clark, Moose Jaw, Sask.; Joseph Bean, Alemada, Sask., and J. M. McFarlane, Sonya, Ont. In the same week several shipments were consigned to importers in South America.





**A Permanent Profitable Business of Your Own**

SOUNDS good, doesn't it? Well it's possible too. Here's our proposition.

Go into the contract ditching business. Every farmer needs ditches, the field is big and wide open. And it's waiting for you now. All you need is a

**BUCKEYE TRACTION DITCHER**

You won't have to hustle for work. It will actually come to you. For the Buckeye is known every where. The farmers right in your neighborhood know what it can do—how clean, fast and true it digs drainage ditches. They'll readily let you dig their ditches rather than employ slow hand labor.

With the Buckeye you can cut 100 to 180 rods a day depending upon the soil. At regular rates this will net you between \$15 and \$18 a day.

Now if you are interested so far you'll be even more interested in knowing about the hundreds of men who have made big money with the Buckeye Traction Ditcher. Write for catalog T to-day.

**THE BUCKEYE TRACTION DITCHER CO.**  
Findlay, Ohio.

**BEAVER DAIRY SUPPLY**

**WA DRUMMOND & CO.**  
214 KING STREET  
TORONTO - CANADA

In Summer The Demand For Milk Increases

Are you prepared to handle the increased demand for milk? Would not a few suggestions on coping with this additional trade help you? Write us to-day and we'll send you a book of very helpful suggestions. Our long experience is at your service. Address Dept. "E"

**BRIGHTEN UP**

your home with the wonderful White Flame Burner. Makes your old lamps and lanterns give a brilliant soft white light better than electricity or gas. Saves eyesight and makes reading or sewing a pleasure. No Waste to Break. Reliable and economical. Satisfaction guaranteed. Delights every user. Complete Sample Mailed to any address for 25 cts. or 3 for \$1.00. Money back if not Satisfactory. Mail orders promptly filled.

Bright Light Co., Merrickville, Ont.

**— TILE —**

For Sale Cement, Sewer Pipe & Drains TILE, all sizes. Counties and Townships send in your orders to JOY & SON, Napanee, Ontario Agents for Acme Tile Machines and Silo Block Machines.

**Jersey Bull for Sale**

Brilliant's Golden Lad —1033—, C. J. C. C., son of Brilliant's Golden Fern —610—, 3½ years old; quiet and gentle to handle, but a good worker and sure stock-getter. My only reason for selling being that I have too many of his heifers coming of breeding age. Price \$50 f.o.b. St. Mary's Stn., Ont.

**WM. CADE, Rannock, Ont.**  
Improved Early Ohio White heavy cropper; quality extra; choice seed \$2 per bushel. P. N. Haight, Box 124, St Thomas, Ont.

**Questions and Answers.**  
Miscellaneous

**■ Cement for Wall and Floor. ■**  
How many barrels of cement and cords of gravel are required for a wall 40 x 60 ft. x 8 ft. high, and 10 inches thick, mixed 1 to 7 or 8. This is for a foundation for a new barn. Also state the amount of cement that should be used for the floor, four inches thick.

W. O.  
Ans.—Mixing 1 to 8, it would require between 15 and 16 barrels of cement, and about 4 cords of gravel. The floor would require about 25 barrels of cement, and between 6 and 7 cords of gravel.

**Ration for Cows—Cloves for Scours.**  
Having silage and oat chop, but not any hay nor roots, what grains would I need to use for a satisfactory flow of milk?

N. F.  
Having read about remedies for scours in calves, I will give you my cure, which has proven successful. Give calf a teaspoonful of ground cloves. One dose is enough.

Ans.—It would likely pay you to buy a little clover or alfalfa hay to feed with the silage. Then give each cow a daily ration of one pound of oat chop for each three or four pounds of milk that she yields per day. If you cannot well procure hay, but must use straw as the only dry roughage, we would recommend purchasing some nitrogenous concentrate, such as oil cake or gluten meal, and mixing with the oats in proportion of about one to four. Use this mixture in the same ratio as prescribed for the clear oats. Do not think of compelling your cattle to get along with no roughage but silage. Always include some dry and non-acid forage in the ration.

**White Diarrhoea—Chicken Feathers—Absence of Oestrus.**

1. Would you kindly give a remedy, through your valuable paper, for white diarrhea in baby chicks?  
2. Can you inform me of any firm in Toronto that buys chicken feathers?  
3. Cow fails to breed. Is there any cure for it?  
SUBSCRIBER.

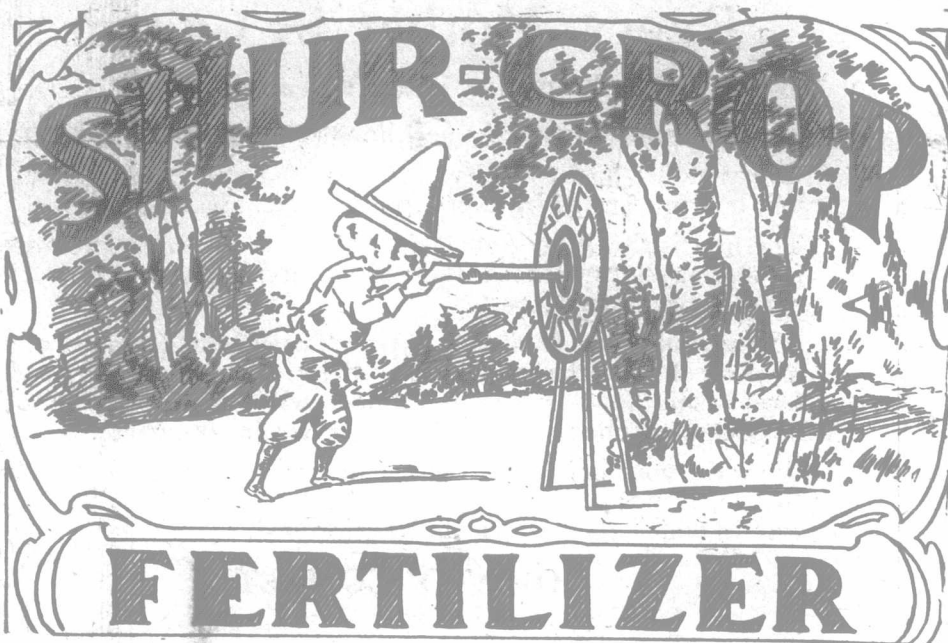
Ans.—1. The only cure is prevention. Feed cracked wheat or wheat screenings, and corn, shorts and bran, wet with skim milk or buttermilk. Give plenty of green feed.  
2. We do not know any.

3. There are many causes of sterility. If it is due to a disease of the ovaries, nothing can be done. The most common removable cause is closure of the opening of the neck of the womb. It is also claimed that bacteria in the vagina is a common cause, and that the "yeast" treatment will effect a cure. This consists in pouring a little warm water on an ordinary yeast cake, allowing it to stand for about 24 hours, and then adding water to make a quart, allowing this to stand another 24 hours, and injecting this into the vagina about an hour before service. When the cow shows oestrus, have the neck of the womb examined. If the neck of the womb be closed, the operator should open it. After opening this, inject the solution and breed in about an hour.

**Trade Topic.**

The association of the Cunard Line with the Dominion of Canada, dates from the inauguration of the line in 1840. Samuel Cunard, the founder of the Line, was a Nova Scotian. When the Line first started, Halifax was a port of call, but after nineteen years, it was abandoned for fifty-two years, until, in 1911, Cunard liners again commenced to call at Halifax. To meet the needs of immigration, a new liner has just been completed, and was launched at Greenock, Glasgow, Saturday, March 27th. She is the latest example of a one-cabin type of steamer—second-cabin—and third class, and is called the Andania. She has accommodation for 2,140 passengers—520 second cabin, and 1,620 third class. The new ship in the Cunard Canadian service will add to the prestige of the line.

**GUNNS**



- |                                       |  |                                 |  |
|---------------------------------------|--|---------------------------------|--|
| 1 Tobacco Producer.....               | Full strength standard analysis. Particulars on request. | 9 General Garden.....           | Full strength standard analysis. Particulars on request. |
| 2 Sugar Beet Special.....             |  | 10 Early Vegetables.....        |  |
| 3 Bowling Green and Lawn Special..... |  | 11 Young Orchards.....          |  |
| 4 Corn Manure.....                    |  | 12 Berry Special.....           |  |
| 5 Potatoes and Celery Special.....    |  | 13 Fine Steam Bone.....         |  |
| 6 Bean Grower.....                    |  | 14 Pulverized Steam Bone.....   |  |
| 7 Forcing Growth.....                 |  | 15 Blood and Bone Compound..... |  |
| 8 Wheat Special.....                  |  |                                 |  |

Write for Price List and Booklet  
40 Years' Reputation Behind Them  
**GUNNS LIMITED, West Toronto**

IMPORTED  
**Clydesdale Stallions and Fillies by Auction**

At the Commercial Hotel Stables, ORANGEVILLE, ONT., on  
**Thursday, April 10th, 1913**

Mr. J. E. THOMPSON will sell three imported Clydesdale stallions, rising 3 years of age, sired by Baron of Buchlyvie, Iron Duke and Royal Abundance. Twelve imported Clyde fillies, nine rising 3 years and three rising 2 years, by such great sires as Everlasting, Marcellus, Rycroft, Up-to-Time, High Degree, Baron Gartley, etc. In individuality, quality and breeding, they are toppers every one.

TERMS: Cash, or 8 months with 6%. Stallions, one-half cash, balance arranged with 6%. Write for catalogue.  
**J. E. THOMPSON Orangeville, Ont.**

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For All Crops On All Soils

FARMERS who may now be considering the purchase of fertilizer materials for this season's use are invited to communicate with us, and we shall send, FREE of any charge or obligation, a selection from the following instructive, illustrated bulletins:

- FARMER'S COMPANION.
- A FARMER'S FIELD TESTS.
- FERTILIZING FODDER CROPS.
- THE POTATO CROP IN CANADA.
- FERTILIZING ORCHARD AND GARDEN.
- POTASH IN THE PRAIRIE PROVINCES.
- THE PRINCIPAL POTASH CROPS OF CANADA.
- ARTIFICIAL FERTILIZERS, THEIR NATURE AND USE.

Valuable pamphlets containing expert up-to-date information on this important subject.

Send us five or more names and addresses of your neighbor farmers, and we shall send you a colored wall placard.

**German Potash Syndicate**  
1106 Temple Building, Toronto, Canada



**C**ONCRETE roads save the public money, their cost of maintenance is so low.

Concrete roads are within the reach of every community—the first cost is very little more than that of a good macadam road; the ultimate cost is infinitely less.



**T**HE cost of maintaining 33 miles of concrete road in Wayne County, Michigan, does not exceed \$6.00 per mile per year.

It costs Peel County, Ontario, \$900.00 per mile to maintain macadam roads for the same period.

**S**  
**P**  
Full strength standard analysis, Particulars on request.

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## GLUTEN FEED

FOR  
**Dairy Cows**

Guaranteed Percentage  
of Protein and Fat  
**25%**

PRICE  
per ton **\$20.00**

**Canada Starch Co., Ltd**  
BRANTFORD ONTARIO

**WATER PRESSURE DOES MOST OF THE WORK**



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The New Century Washer solves the washing problem. It eliminates slavish, arduous toil and reduces manual labor to the minimum. The city water pressure furnishes the power that is transmitted by the New Century water motor.

There are some exclusive and patented features in the New Century that make it unique. One prevents warping of the tub, another gives great strength and rigidity. See the New Century at your dealers or write to us for full information.

103  
Commer-Dowdell Ltd., Hamilton, Ont.

**Pure Wholesome Nutritious Meal**

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CALVES LAMBS COLTS PIGS

GUARANTEED ANALYSIS:

PROTEIN	20 per cent.
FAT	8 " "
FIBRE	4 " "

Save \$15.00 to \$20.00 per ton on your calf feed. Write for booklet and prices.

**Canadian Cereal & Flour Mills, LIMITED,**  
TORONTO, ONTARIO.

## NEW TERM

now open. Students may enter any time. If you are interested in "Education That Pays" you should write to-day for a copy of our latest catalogue.

**BRITISH AMERICAN BUSINESS COLLEGE**  
Y.M.C.A. Building, Toronto.  
T. M. WATSON, Principal

## Government Standard Seeds

Alsike, Red Clover, and Timothy; write for samples; prices moderate.

**SHIPMAN & DAWSON, Cannington.**

### Questions and Answers. Miscellaneous.

**Soft-shelled Goose Eggs.**  
Will you tell me what to do for a goose that lays eggs without shells?

J. D.

Ans.—Probably your goose is too fat. Let her out, with access to earth and water. She will soon pick up shell-forming material if this has been lacking in her diet.

**Post-hole Digger Wanted.**  
Would you kindly tell me whether you know of any machine suitable for farm use that would dig fence-post holes? The railway companies, of course, have such machines, but they are too large and expensive for the average farmer. In this neighborhood it is nearly impossible to get men to dig post holes—they do not like the work. In fact, efficient farm help of any kind is exceedingly hard to get, and we are constantly told of the high cost of living. The fences put up are chiefly of wire, but getting the posts in is a problem. If you can give any help in the matter, you will much oblige.

(MISS) J. D. T.

Ans.—Any reader who may have seen such a contrivance working satisfactorily and satisfactory in cost, would confer a favor by writing us full particulars.

**Killing Grass—White Grubs.**

1. I have a piece of ground very thickly rooted with watergrass. Is there any way to kill it? Would a good coat of salt kill it, leaving the land without crop for one season? Will thorough underdrainage cause it to die out? Is it a sign of coldness or sourness in the land? Is lime a good thing to put on such land?

2. Have a piece of newly-seeded land which I find it necessary to break up this season. Would like to plant with potatoes and strawberries. Is it likely to be infested with white grubs?

INQUIRER.

Ans.—1. We are at a loss to know just what species of grass is meant by watergrass. If it is a coarse grass or sedge growing in very wet places, underdrainage would certainly aid in its extermination. If enough salt is sown, it will kill all vegetation, but will not leave the land in a very good condition for a crop the following year. Lime is valuable to apply to a sour soil. Undoubtedly this land is cold, and likely sour. Underdrainage would aid in warming it up. Underdrain, cultivate thoroughly, and if necessary add a little lime.

2. If newly seeded last year, and had not been down to grass for a few years previous to this seeding, it is not very likely to be infested.

**Cow Leaks Milk—House Plans.**

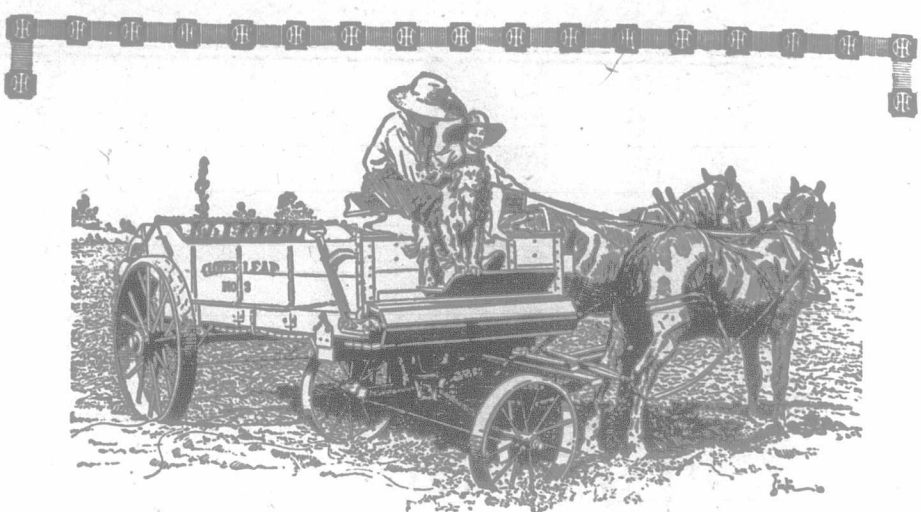
1. We have a valuable cow that leaks her milk. Would like to know what to put on her teats to help her hold it?

2. We intend building a new house this summer. We thought of making it about 30 feet square. It faces two roads, north and east. Thought we would have it facing east, and have the veranda across the east side. Would like to see a few nice plans for country houses published soon, as I cannot decide on an inside plan. Hoping some person who has a nice, comfortable and convenient, square house, will not mind passing on their plan for the benefit of another.

D. A. L.

Ans.—1. Get a 5-cent bottle of collodion and touch it to the teat just after milking. It will, on drying, form a scale, which may be picked off before commencing to milk. This is not always effectual, but is simple, cheap, and worth trying. Were it not for the fact that this seems to be a particularly valuable cow, we would suggest vealing or raising calves on her. One cow will raise two calves nicely, and if the calves are well-bred, and of the right stamp, this is rather a profitable way of utilizing a cow that leaks milk or is hard-milking. Vealing calves is sometimes even more profitable than raising them, when a supply of calves can be got as wanted.

2. Persons with houses answering, approximately, to the style and dimensions of this one, would confer a favor by submitting description and plans.



## Land Value Almost Doubled

IT is no longer an unusual thing for us to get reports from farmers who have been using manure spreaders properly and consistently for periods ranging from three to five years, to the effect that the land on which the manure spreaders have been used is regularly raising so much more produce that the value of the land is almost doubled.

"The beauty of it is," writes one Ontario farmer, "that the increased fertility seems to be permanent. Dry weather has less bad effect on our crops now than it used to, the soil is much more easily worked, making the day's work easier both for the horses and for the men, it is less trouble to raise better crops, and we are a good deal surer of good returns since our soil was built up by the use of an

## IHC Manure Spreader

IHC manure spreaders, **Corn King** or **Cloverleaf**, are made in various styles and sizes to meet any and all conditions. There are wide, medium and narrow machines, all of guaranteed capacity; return and endless aprons; in short, a spreader built to meet your conditions and made to spread manure, straw, lime, or ashes as required.

IHC spreaders will spread manure evenly on the level, going up hill or down. The wheel rims are wide and are equipped with Z-shaped lugs, which provide ample tractive power without jarring the machines excessively. The apron moves on large rollers. The beater drive is positive, but the chain wears only one side. The IHC agent will show you the most effective machine for your work. Ask to see an IHC manure spreader. You can get catalogues from him, or, if you prefer, write the nearest branch house.

**International Harvester Company of Canada, Ltd**  
BRANCH HOUSES

At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton




To Buyers Looking for a Good Stallion  
I am the oldest importer of Percheron Stallions in Canada. I have on hand CHOICE

## Percheron Stallions

Four to six years old, weighing 1,800 to 2,100 lbs.; no better in Canada. All good, sound horses, clean, hard, flinty bone, sure breeders; horses that will make you money; and a few extra good Clydes, 4 to 7 years old, weighing 1,750 to 1,900 lbs.

\*Come and see them; it won't take long or cost much. I can save you \$200 to \$500 on a stallion.

JOHN HAWTHORNE, SIMCOE, ONTARIO



## Percherons

Imp. and Canadian Bred

### Stallions and Mares

We still have on hand a very select bunch to pick from, ranging from 3 to 5 years old, and weighing from 1,850 to 2,100 pounds, blacks and greys in color. Our horses are all for sale at prices that will save you money. Our insurance policy will protect you from loss and make your investment safe. We give a GUARANTEE that is different from any offered in Canada and stand behind our horses. If you are interested in securing the BEST at a reasonable price, it will be to your advantage to see our stock. Our motto is "A Square Deal to All". We invite correspondence from all interested parties that wish to SAVE MONEY on a stallion or mare.

R. Hamilton & Son, "The Home of the Champions", Simcoe, Ont.



## Bickmore's Gall Cure

The old-time remedy for keeping horses free from sores. Don't lose the services of your high-priced horses. Bickmore's Gall Cure cures Galls and Sore Shoulders while the horse works. Approved remedy for Cuts, Wounds, Scratches, etc. Money back if it fails. Be sure to ask at the store for Bickmore's Gall Cure. Gray Horse trade mark on every box. Sample and 84-page horse book sent on receipt of a stamp for postage.

WINGATE CHEMICAL CO., Canadian Distr's., 8890 Notre Dame St. W., Montreal, Can.



IMPORTED CLYDESDALES.


A few choice young stallions always on hand and for sale. Frequent importations maintain a high standard. Prices and terms to suit.

BARBER BROS., Gatineau Pt., Que., near Ottawa.

## Clydesdales and Percherons


Stallions and fillies of either breed. Over forty head to select from. Draft horses in reality as well as in name. Highest types of the breeds. Come and see them. Terms and prices to suit.

T. D. ELLIOTT & SON, BOLTON, ONTARIO.





**HORSE OWNERS! USE**  
**GOMBAULT'S**  
**CAUSTIC**  
**BALSAM.**  
 A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all bunches from Horses. Impossible to produce scurf or blemish. Sent for circulation. Special advice free.  
 THE LAWRENCE-WILLIAMS CO., Toronto, Canada



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Best wash ever used for horses. All winter no scratches, no snow poisoning. All summer no sores, no flies on sores. Not a patent medicine—an all-round skin healer. Bolls, sores, abscesses, galls, cracks, corns—all amenable to

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Wonderful curative and healing powers. The veterinarian's friend first, last and all the time—and the foe of any sore on any living animal. Our words are the expression of veterinarians the world over. It is a healer—it is a salve—it is a poultice—it is a cleaner—and it does the work.

Put up in 50c. size tins, sent on receipt of price by mail any part of the Dominion. Sole agent for Canada:

**DR. T. E. WATSON, V. S.**  
 90 Peer Street, Niagara Falls, Ontario

You Can't Cut Out A BOG SPAVIN, PUFF OR THOROUGHPIN, BUT

**ABSORBINE**  
 will clean them off permanently, and you work the horse same time. Does not blister or remove the hair. \$2.00 per bottle delivered. Book 4 free.  
 ABSORBINE, J.R., liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Gout, Wens, Cysts, Allays pain quickly. Price \$1.00 and \$2.00 a bottle at druggists or delivered. Will tell you more if you write. Manufactured only by W. F. YOUNG, P.O. 87, Mans Bldg., Montreal, Can.

### Notice to Importers

**C. CHABOUDEZ & SON**  
 205 rue La Fayette, PARIS, FRANCE.

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.

**DUNHAMS' PERCHERONS**  
 are today as for the past forty-seven years the  
**-B-E-S-T-**  
 Fresh importation. Catalogue FREE.  
**DUNHAMS, Wayne, Du Page County, Ill.**

### NOTICE TO HORSE IMPORTERS

**GERALD POWELL,**  
 Commission Agent and Interpreter,  
 NOGENT LE RETROU, FRANCE  
 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.

**DR. BELL'S** Veterinary Medical Wonder. 10,000 \$1.00 bottles FREE to horsemen who will give The Wonder a fair trial. Guaranteed to cure Inflammation, Colic, Coughs, Colde, Distemper, Fevers, etc. Agents wanted. **DR. BELL, V.S., Kingston, Ont.**

**Clydesdales, Standard-breds, and Short-horns**, about 40 head. Headed by the great stock bull, Trout Creek Wonder. Ten bulls for sale, from 6 to 14 months old; all good colors and good individuals. **DUNCAN BROWN & SONS, Walnut Grove Stock Farm, Iona, Ont.**

When writing mention Advocate

### Questions and Answers. Veterinary.

#### Temporary Swellings.

I have been driving a colt since last fall. A few weeks ago, two swellings appeared on back, where the back-pad rests. I applied liniment, and they disappeared. One then formed on his withers, but it also yielded to treatment. Now, another has appeared at the seat of the first.

V. S.

Ans.—These are caused by friction of the harness, or bruises from some cause. Treat this one as you did the others, and arrange the harness so as to avoid friction. As he appears predisposed to this trouble, give him a purgative of 8 drams aloes and 2 drams ginger, and follow up with 3 drams nitrate of potassium twice daily for two days. V.

#### Rupture.

Aged horse fell on small stump. When he got up there was a lump half the size of a man's head on his flank.

H. A. S.

Ans.—This is called ventral hernia, or rupture. He fell with such force that the stump forced the skin through the abdominal walls, and allowed the escape of a portion of the intestines. Treatment is often unsuccessful. It consists in casting the patient, cutting through the skin, returning the intestine, stitching the opening in the abdominal wall, then stitching the wound in skin, applying a bandage around the body, and dressing twice daily with an antiseptic. It requires a veterinarian to operate. The horse may live for years and work well as he is, while at any time, due to severe muscular exertion, the opening may enlarge and make matters worse. V.

#### Miscellaneous.

##### Species of Sweet Clover.

- In your issue of February 20th, we noticed an article relating to "Sweet" or "Bokhara" clover, written by C. Witts. We have been inquiring from our seedsman, and he tells us there are two kinds, the white and yellow blossom. Could you give us any information as to which kind would be the better?
- Do you think this would be a profitable kind of clover to sow?
- Where could we get reliable seed?

D. C.

Ans.—1. There are two species of sweet clover, viz., *Melilotus alba* (white-flowered sweet clover), and *Melilotus officinalis* (the yellow-flowered). *Melilotus alba* is also called Bokhara clover, and is, we believe, the species favored for cropping purposes.

2. We are not much enamored of sweet clover as a crop, except as a means of soil improvement. If, for instance, we had a washy, clay hillside, which we wished to put under a leguminous crop, or a poor field on which it was difficult to get a stand of ordinary clover, we would try sweet clover. There is no doubt but that cattle can be taught to eat it, and do fairly well upon it, but as a feed crop, we prefer red clover or alfalfa.

3. Seed may usually be obtained from one or more of the seedsman regularly advertising in these columns. Write them.

#### Veterinary Books.

Could you give me the name of a good, reliable, moderate-priced book, on diseases of domestic animals, the horse in particular, with remedies?

R. T. W.

Ans.—"The Farmer's Veterinarian," by C. W. Burkett, may be had through this office at \$1.50, postpaid; or "Veterinary Notes for Horse Owners," by Capt. M. H. Hayes, at \$4.

**GET WOOL** Longer Better & More  
 that will net you from 15c to 20c more on every sheep you shear with a Stewart No. 9 Machine. Don't labor with hand shears, in the old, hard, sweaty way. Don't have aching, swollen wrists. Don't wear and disfigure your sheep with uneven shearing and spoil the wool with second cuts. Take off the fleece smoothly and quickly in one unbroken blanket with a  
**Stewart No. 9 Shearing Machine**  
 and get a length and quality of wool that will bring the highest price. The Stewart runs so easily a child can turn the handle while you shear. Extra profits soon pay for it. It's the most perfect hand operated shearing machine ever devised. Has ball bearings in PRICE every part where friction or wear occurs. Has a ball bearing shearing head of the latest improved Stewart pattern. Price complete, including 4 combs and 4 cutters of the celebrated Stewart pattern, only \$15.75  
 Get one from your dealer, or send us \$2.00 and we will ship C.O.D. for the balance. Money and transportation charges back if you are not pleased with it.  
**CHICAGO FLEXIBLE SHAFT COMPANY,**  
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 Write for FREE catalogue showing most complete line of Sheep Shearing and Horse Clipping Machines.




### COLUMBUS CLYDESDALES AT HOME

To our past customers and intending purchasers, we wish to say that we can show you something really worth while in Canadian-bred and imported Clydesdale stallions and mares. Our aim is to please you.

**SMITH & RICHARDSON,** Columbus, Ontario  
 Phone connections. Stations: Oshawa G.T.R. and C.N.R., Brooklin G.T.R., Myrtle C.P.R.

## Clydesdales and Percherons

Thirty stallions of the above-mentioned breeds to choose from. All are government-inspected and approved. A large number of them have won high honors at the leading shows of Scotland, France and Canada. All are for sale at reasonable prices and the best of terms.

**T. H. HASSARD, Markham, Ont.** Stations: Markham G. T. R., Locust Hill C.P.R. Long-distance phone in connection.

## Clydesdales in Quantity and Quality

**ORMSBY GRANGE STOCK FARM, Ormstown, P. Que.**

As I am feeding no steers this winter I have filled my stables with imported fillies, selected personally in Scotland; many in foal to such sires as Hiawatha, Sir Hugo, King's Champion, Sir Rudolph, etc. Fourteen have been sold, eighteen of the best are still on hand—the selections being made more on account of price than superiority. There are no culls in the lot. Send for pedigrees and particulars before buying elsewhere. Inspection invited.  
**D. McEACHRAN.**

### CLYDESDALES OF CANADA'S STANDARD

They have arrived—my third importation for 1912, stallions and fillies. I have now the biggest selection in Canada, and a few toppers in stallions. High-class breeding and high-class quality and low prices.  
**G. A. BRODIE, Newmarket P.O.**

### Stallions — GLYDESDALES — Fillies

I have a big importation of Clyde stallions and fillies just landed; a lot that cannot be duplicated to-day in Scotland and never was in Canada. Let me know your wants.  
**ROBT. BEITH, Bowmanville, Ont.**

**Rosedale Stock Farm**—Breeder and importer of Clydesdale and Shire horses, Shetland and Welsh ponies, Shorthorn cattle, Leicester sheep. Established over 40 years. Always on hand, a big selection of highest quality. Write your wants.  
**G.T.R. and C.P.R., Electric cars. J. M. GARDHOUSE, Weston, Ont.**

### IMP. CLYDESDALE STALLIONS AND FILLIES

just landed. Size and quality and breeding unsurpassed. Come and see them. Prices away down. Terms to suit buyer. **W. B. ANNETT, ALVINSTON, ONT.** Farm situated five miles from Watford, Ont., G. T. R. station, and four miles from Alvinston, G. T. R. and M. C. R.

### CLYDESDALES—A NEW IMPORTATION

We have lately landed a shipment of Clyde stallions and fillies, several Scotch winners among them. Their breeding is unsurpassed. Comparison with any others in the country will make you a buyer from us. Our prices are as low as the lowest. L.D. Phone. **GOODFELLOW BROS., R.R. No. 3, Bolton, Ont. Bolton Stn., C.P.R.**

### Mount Victoria Clydes & Hackneys

When in want of a high-class Clydesdale stallion or filly, or something that has won and can win again in Hackney stallions or fillies, visit our barns at Hudson Heights, Que. **T. B. MACAULAY, Proprietor, E. WATSON, Manager, Hudson Heights, Que.**

Prize-winning **Clydesdales, Imported** Stallions and Fillies. Our record one or more winners in every class. We have now prize-winning Stallions and Fillies with breeding and quality unsurpassed—All are for sale.  
**JOHN A. BOAG & SON, QUEENSVILLE, ONT.**

# TRANSIT Insurance

**H**ORSES and cattle shipped to the Western Provinces or elsewhere can be insured under short term Policies of 5, 10, 15, 20, 25, 30 days to cover the Railroad transit and a few days after arrival. These policies cover the Owner against loss by Accident or Disease and only cost a few dollars per carload.

Losses are heavy on Live Stock shipments on account of injuries sustained in cars through rough shunting, trampling, ear fever, etc. not to mention numerous other causes resulting fatally a day or two after landing at destination. We cover both on board car and after arrival, some other companies do not cover after arrival. Insure with us and get the most for an equal premium. Do not take any chances with others.

All kinds of live stock insurance transacted. Write us for particulars and name and address of nearest agent.

**THE GENERAL ANIMALS INSURANCE CO. OF CANADA,** 71a ST. JAMES STREET, MONTREAL, Que.



**The Manor Shorthorns**  
Bulls sold, up to May bull calves. Have two good ones of that age for sale. Also heifers got by, and cows in calf to, one of the good bulls of the breed. Inspection solicited.  
J. T. GIBSON, Denfield, Ont

**SHORTHORNS and SWINE**—Have some choice young bulls for sale, also cows and heifers of young material, some with calves at foot. Also choice Yorkshire and Berkshire sows. ISRAEL GROFF, Elmira, Ontario.

Warning.—Beware of the man who knows too much, especially if it happens to be yourself.—Life.

**Questions and Answers.**

**Miscellaneous.**

**Sweet Clover Seed.**

Where can I get one bushel of sweet-clover seed, or more? W. M. F.

Ans.—Write firms of seedsmen advertising in these columns. At least one Montreal firm used to stock it, and doubtless still does.

**Parrots.**

Could you inform me where there are any parrot-breeders having stock for sale? G. A.

Ans.—Dealers in poultry and pet stock of all kinds should use our advertising columns.

**Cow Leaks Milk.**

I have a cow that leaks her milk very badly. Is there anything can be done to stop it? A. H.

Ans.—Put a calf on her. We can suggest no other reliable way of stopping the leak, except, of course, drying off the cow.

**Cow Misrepresented.**

A bought a cow from B in November last. B said the cow would freshen in January. She has not calved yet. Can A claim damages from B, or can he return the cow and compel B to refund the purchase money?

**INTERESTED READER.**

Ans.—We think A is entitled to some remuneration in the way of damages.

**Sprayers.**

1. What is the best sprayer for a ten-acre orchard?  
2. Please give names of the different sprayer companies. W. E. B.

Ans.—1. A power sprayer of some good make advertised in "The Farmer's Advocate."  
2. If we commenced this kind of thing, where would our advertising revenue come from?

**Veterinary.**

**Fatalities in Sheep.**

1. Some of my sheep are fed on alfalfa and blue-grass hay and grass pasture, and some on silage, blue-grass hay and grass pasture. They have comfortable quarters. There is some disease among them. Two have died, and the indications are that more will soon die. They are in splendid flesh. The first symptom noticed is loss of appetite, and they get a little mopy. The symptoms gradually increase until the patient will eat nothing, gets weak, and dies. Some die after a few days' sickness, while others last a month.

2. Give details for disinfecting a stable. E. T. S.

Ans.—1. It would require a careful post-mortem examination to determine the cause of death. The symptoms indicate constipation. I would recommend a change of food to clover hay, if possible, but well-saved alfalfa should give good results. Feed no more blue-grass hay, and we cannot see how you can get grass now. Feed a few raw roots and a few whole oats daily. Feed no more silage. Purge the affected ones with 6 to 8 ounces Epsom salts and 2 drams ginger, and follow up next day with 6 ounces raw linseed oil. To improve appetite, give a teaspoonful of equal parts sulphate of iron, gentian, ginger, and nux vomica, three times daily.

2. Sweep out thoroughly and wash well with a hot five-per-cent solution of crude carbolic acid. In two or three days, give a thorough coat of hot-lime wash, with a five-per-cent. crude carbolic acid. We do not think the trouble is contagious. V.

At the York, England, Spring Show and Sale of Shorthorns, on March 12th, the highest price realized was 150 guineas, for the yearling heifer, Rosetta 28th, by Schoolmaster, consigned by T. A. Buttar, Coupar-Angus, and purchased by Mr. Latilla, of Kent. The Earl of Rosebery's Lothian Baroness, which took the premier honor among the younger heifers, sold for 100 guineas, to W. M. Cazalat, Kent. The average for 167 animals sold, was \$125. Mr. Buttar's ten heifers and nine bulls, made an average of \$195.

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on every bag

**Cost of Living Reduced**

that is as far as your livestock is concerned, in fact you cannot only actually reduce the cost of feeding, but in addition, **increase** the butter fat in the milk from your cows—**increase** the growth and weight of your cattle, sheep and pigs—and get better work and efficiency out of your horses.

All this can be accomplished by simply feeding regularly **GENUINE**

**MOLASSINE MEAL**

Remember there are dozens of molasses meal preparations on the market but only **one MOLASSINE MEAL** which is the original and **genuine**. Scientifically prepared and protected by patents.

**THE MOLASSINE CO., LTD.**  
LONDON, ENGLAND

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402 Board of Trade Bldg., Montreal  
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Fill in the following Coupon and Mail To-day

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Please send me your Free Booklet telling me all about MOLASSINE MEAL.

Name.....  
Address.....  
Name of Feed Dealer.....  
Address.....

**SAVE-THE-HORSE**  
Registered Trade-Mark.

**THE TIME IS NOW**

All the winter long, the troubled owner of a lame horse reads our advertisements. Then, day after day slips away, while he talks, laments, listens, takes advice and **hesitating,—FAILS TO ACT,—till the Springtime is on him** and his horse is not yet able to work. Meantime, the thrifty, prosperous, resolute man, reads, considers the evidence carefully — **Decides Promptly** — and his horse is working in, say, ten days to two weeks. That's exactly what happens every winter.

**We Originated** the treatment of horses by mail — Under Signed Contract to Return Money if Remedy Fails — and every minute of every day for **seventeen years** our advice and treatments have been on the way wherever mails go and horses are. **Our charges are moderate.** Spring work is near; Write at once.

Our Latest **Save-The-Horse BOOK** is a Mind Settler—Tells How to Test for Spavin—What to Do for a Lame Horse—Covers 57 Forms of Lameness—Illustrated. But write describing your case and we will send you—**BOOK—Sample Contract and Advice—ALL FREE** to (Horse Owners and Managers—Only).  
Address—**TROY CHEMICAL CO., 148 Van Horn Street, Toronto, Ont.; also Binghamton, N. Y.**

Druggists everywhere sell **Save-The-Horse** with contract, or sent by us Express Paid.

**Percheron, Belgian, Shire and French Coach Stallions**  
New importation arrived March 12. 1 to 6 years old. Percheron mares 1 to 9 years old. Blacks and grays, many prize-winners and champions in each sex; most of the mares safe in foal. Will sell for less money than any of my competitors. Terms to suit. Come and see and be convinced. C. P. R. Ottawa to Montreal line. **J. E. ARNOLD, Grenville, Que.**



**Questions and Answers.**  
Miscellaneous.

**Geese.**

Would you kindly inform me, through your paper, as to the proper care of Toulouse geese, how many eggs it is customary for them to lay, and the proper way to feed young goslings?

F. P.

Ans.—Toulouse geese are very good layers, laying sometimes from 18 to 36 eggs. This is the largest breed of geese. Geese should not be kept in close confinement. Give the goslings a grass run, and this, with plenty of water, is about all they require. From one to four-females to one male, is the rule.

**Hernia in Colts.**

I have been very successful in raising colts, having raised twenty-four, and every one a strong, healthy colt, but several have had umbilical hernia, or rupture. I usually feed the mares a little wheat once a day for a while before foaling-time. I also treat the navel of the colt until it drops off, with some kind of antiseptic, three or four times a day, carbolic acid or formalin, and have never had a case of joint ill. Do you consider my treatment is in any way responsible for the rupture?

G. T. W.

Ans.—The treatment mentioned should not in any way be conducive to hernia. Use the carbolic in a ten-per-cent. solution. Feed the wheat in small quantities.

**Tanning Hide.**

I have a colt skin which I wish to tan. Could you give me instructions, through the columns of "The Farmer's Advocate," by which I may remove hair before or after tanning same?

J. A. B.

Ans.—It would likely pay you to send the hide to a tannery, but in case you decide to do it at home, soak it thoroughly until completely softened, and scrape off carefully all flesh. Make a tan liquor of equal quantities of alum and salt dissolved in hot water, using twelve pounds of water to every seven pounds of alum and salt. Leave hide in the tan about ten days, then stretch by tacking on barn, and scrape with a dull knife. Put into tan again for a day or two, then stretch until dry and again scrape. Now, give a heavy dressing of tanners' oil, and fold, and lay in damp sawdust until dry. Scrape again, and work by pulling over a pole to soften.

**Mammitis.**

Have a cow five years old, and when dried up milked well in all teats, with no obstruction. When she calved a short time ago, out of one teat could not get a drop of milk. Teat perfectly empty, and quarter seemed to be well filled with milk, but could not get any; did not seem sore, and do not know of her ever having been hurt. Does not seem to be anything wrong with it more than other quarters, and they milk all right, and quite easy. Would like to know what is cause, and if in danger of affecting other teats.

L. P. H.

Ans.—Likely this is a case of garget. In this disease the inflammation of the udder causes the milk to coagulate, separating into curds and whey. The curdled milk sometimes stops up the orifice of the teat, and allows nothing to pass through it. This is a bad complication, often destroying part or the whole of the udder. Give this cow a dose of 1 1/2 lbs. Epsom salts and 1 ounce pulverized ginger in 1 1/2 quarts of cold water, and after the physic has operated, give half an ounce nitrate of potassium twice daily in the water the cow drinks, continuing for three or four days. Massage the quarter gently three or four times a day for an hour at a time with hot water, and after each bathing, rub in well a little of the following: sulphate of zinc and acetate of lead, of each half an ounce; soft water, one and a half pints. Shake well before using. Continue till the inflammation is gone. Each time while, or after rubbing, try by gentle manipulation to start the milk.

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In his laboratory work of a lifetime and selling his various scientific products Dr. Hess (M.D., D.V.S.) has always taken our farmers into his fullest confidence. He believes that the farmer should know exactly what he buys. It is his belief that the more people that know what Dr. Hess Stock Tonic is made of the better. Then there is no mystery, no exaggeration—all claims that Dr. Hess Stock Tonic will increase growth and milk and relieve stock ailments can be verified by referring to the medical writings of the U. S. Dispensatory. The formula for

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Dr. Hess Stock Tonic contains:  
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 Sulphate of Iron, Blood Builder and General Tonic.  
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 Common Salt, Appetizer, Cleanser.  
 Epsom Salts, Laxative.  
 Nitrate of Potash, Stimulates kidneys.  
 Charcoal, Prevents Noxious Gases.  
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 The above is carefully compounded by Dr. Hess (M.D., D.V.S.), with just enough cereal meal to make a perfect mixture.

is printed in the left-hand panel here with extracts from the U. S. Dispensatory. Dr. Hess even goes further and makes this proposition: Our Proposition—Feed Dr. Hess Stock Tonic to your horses, your cattle, your hogs and your sheep; especially when you are preparing for market. If you are not convinced beyond the shadow of a doubt that it has proven a paying investment by increasing digestion, improving the general condition and appearance, keeping your animals free from disease and free from worms, go to your dealer and he is under contract with us to refund your money.

Dr. Hess Stock Tonic in 25-lb. pail \$2.25; 100 lbs. \$7.00 (duty paid). Only costs 6 cts. per month for the average hog. Furthermore, for any condition which Dr. Hess Stock Tonic does not remedy, write us care of the Information Bureau and special prescription will be furnished you free of charge.

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If in need of a bull these that we are offering should interest you. They range from 8 to 14 months old, and are nearly all bred direct from imported stock. We also have females of all ages. Bell 'phone. Burlington Junction, G. T. R. **W. G. PETTIT & SONS,** Freeman, Ontario.

**Springhurst Shorthorns** Four of the first-prize Shorthorns at the late Grand show, including the champion and grand champion for heifer, were all bred by bulls of my breeding. I have now for sale ten young herd leaders of this champion-producing breeding. **HARRY SMITH, HAY P.O., ONT** Brester Station. Long-distance 'phone.

**Shorthorns**—Records show that cattle bought from the Salem herd won numerous ribbons the past season. We have others. Several young bulls are priced reasonably. **Elora G. T. R. and C. P. R. J. A. WATT, Salem, Ont**

**SCOTCH SHORTHORNS** One High-class Imported yearling bull. 10 bull calves, from 7 to 16 months old. 40 heifers and young cows, all by imported sires. Also some Imp. yearling heifers. **MITCHELL BROS., BURLINGTON, ONT.** Farm 1/2-mile from Burlington Junction.

**5 Shorthorn Bulls 5**—We have for sale at moderate prices five Scotch Shorthorn bulls, including one of our herd bulls. Also a number of high-class heifers and heifer calves. **A. J. HOWDEN & CO., Columbus, Ont.** Myrtle G. T. R. & C. P. R. Long-distance 'phone

**SHORTHORNS** of breeding and quality. Our present offering: One grand young cow with calf at foot; also heifers, old enough to breed, got by Mildred's Royal. No bull to breed to. Will sell cheap. **Geo. Gier & Son, Waldemar P. O., Ontario.**

**Shorthorns!**

Have now a choice lot of young bulls to offer; also with something nice in heifers. Catalogue of herd and list of young animals on application. **H. CARGILL & SON, PROPS.,** Cargill, Ont., Bruce Co. John Clancy, Manager.

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Our present offering in Shorthorn heifers and young bulls are modern in type and of richest Scotch breeding, and the prices are low; Cotswold Ewe and Ram lambs of high quality. **WM. SMITH & SON, COLUMBUS, ONT.** L. D. Flann

**Woodholme Shorthorns**

I have for sale a number of choice young bulls, from 8 to 14 months old (pure Scotch); also a number of heifers, 1 to 2 years old, of this level type, and richest breeding. **G. M. FORSYTH,** North Claremont, Ont.

**Shorthorn Bulls and Heifers**—I have a choice lot of young bulls and heifers in calf now to offer. Former sires, Jay of Morning (Imp.) - 23070 - and Rosabelle (Imp.) - 52822 - (28908) 27265.

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**Oakland—50 Shorthorns.**

Offering for winter and spring trade, is six excellent bulls from ten months to two years old. Out of fine dual purpose dams and sired by our noted Scotch Grey Bull 72092. He is a beautiful roan and all quality, he is also for sale or exchange. **John Eider & Sons, Hensall, Ont.** Station and P. O.

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Am offering a very fine lot of young Shorthorn bulls just now. Excellent breeding and meat from splendid milking dams. The kind that is needed.

House is one mile from Lucan Crossing, G. T. R. **A. W. SMITH, Maple Lodge P.O., Ont.**

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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., AYR, ONT.**

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For sale: Five choice young bulls, sired by Roan Chief (Imp.) - 00886 -. They are a choicely-bred lot, and will be priced right; also a few heifers. They are of good milking dams. **WM. WALDIE, R. R. No. 2, Stratford, L.-D., 'phone.**

**Shorthorns**—Six choice young bulls fit for service, at reasonable prices, from good milking strain.

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**Ayrshires** Last chance. No females for sale, but still have a few bulls, sired by Woodroffe Comrade whose first heifer in milk gave 11,392 lbs. milk, 480 lbs. butterfat in year; prices right. H. G. HAMILL, Box Grove, Ont. Locust Hill, C.P.R. Markham, G.T.R. and L.D. Phone.

**Questions and Answers.**

**Miscellaneous.**

**Married Woman's Property.**

1. Can a married woman, owning a house and lot, which she has paid for by working in a factory, sell it and give a deed without her husband's signature?  
2. Can he register a claim against it for carpenter repairs which he did on the house ten or twelve years ago?  
Ontario. INQUIRER.

Ans.—1. Yes.  
2. He is not legally entitled to do so.

**Surplus Corn Stalks.**

I have more cornstalks than I need to feed this season. They are husked, well cured, and in the barn. Would they be worth keeping over for another winter, or would they lose their feeding value?  
W. F. C.

Ans.—You would pretty nearly have to starve your cattle to make them eat those stalks next winter. Most of the leaves would break off, and the stalks would be pretty nearly like elderberry canes. The thought occurs to us that you might try mixing a few of them in with green corn next fall when filling a silo, if you have one, but we do not know that this would be advisable, except in a small way, as an experiment. Bedding, or covering the bottom of a barnyard, is about the best use to make of the surplus stalks. If used for bedding now, they should be cut, if convenient, else they will give trouble in the manure unless it is well rotted before applying.

**Poultry House for 50 Birds—Tying Cows Tails.**

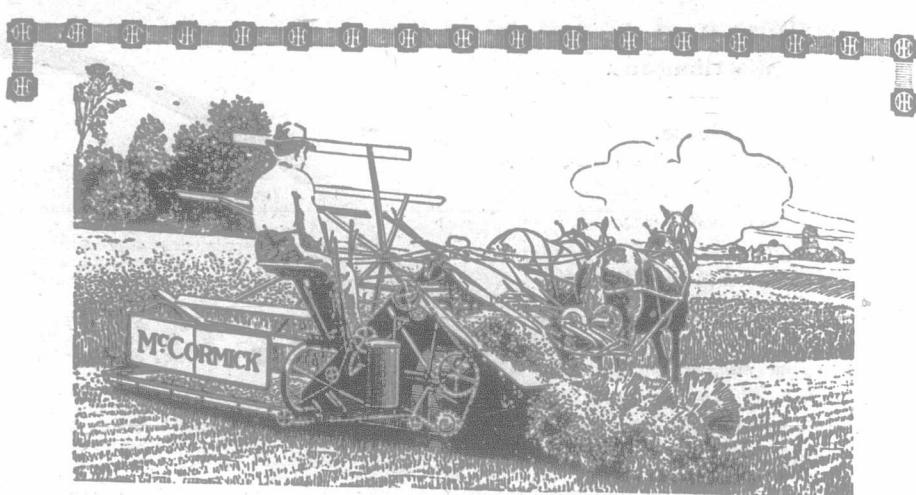
1. Will a 20 x 10-foot house, shed roof, 7-ft. front, 5-ft. rear, accommodate 50 hens properly? If not, how much would have to be added to it in length, the same width and height? What would be best way to arrange interior? If possible, would like to have roosts at end. It faces the south-east, and is glass and cotton front. Was thinking of partitioning off about ten feet for a roosting-room (or, rather, building on ten feet at end for that purpose), and having it more warmly built. Could nests be arranged in same part?  
2. Have you ever tried tying the cows tails to keep them out of the gutter? Tie about one foot from the end of switch, and suspend from ceiling directly above tail. They can then switch all the want to, and are kept perfectly clean.  
H. C.

Ans.—1. This house will give a fair amount of room for fifty birds. Arrange perches in the north-east end, and if you use dropping-boards, the nests may be under them. Would not advise partitioning off the roosting portion of the house.  
2. Have never tried this, but might experiment if short of bedding and gutter absorbents.

**Butter-Worker—Ferns.**

1. Could you kindly show, through the columns of your paper, a design of a butter-worker of 25-lb. capacity, for farm use?  
2. How should a sword fern be grown? Do they need much water, or a very warm temperature? Mine is often covered with little white lice. The older leaves have little brown scales underneath. After a leaf, or spear, has been in this condition a few times, they turn brown and die. I gave water and sun baths. Would root also need treatment?  
F. F.

Ans.—1. See answer to a similar question in the issue of March 27, page 609.  
2. Ferns require that the roots shall never get dry, but there should be plenty of drainage material at the bottom of each pot. The soil should be light and spongy, a mixture of leaf-mould and sand, and the atmosphere should be rather moist. This condition may be secured by keeping water constantly evaporating on stoves or radiators. Keep the plants out of the sun. To destroy the white lice, dip the plants in a solution of Ivory soap and water, 1 lb. soap (melted) to the pail. For the scales, use lemon or fir-tree oil, which may be secured from any dealer in greenhouse supplies. Directions for preparing the wash are sent with the oil.



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**BRAMPTON JERSEYS** The spring trade is on; we are doing the largest business we ever did, chiefly with our old customers; young bulls and heifers from sires with tested daughters.  
Several imported cows and bulls for sale. Canada's Greatest Jersey Herd. **B. H. Bull & Son, Brampton, Ont.**

**Ayrshires and Yorkshires**—We now offer at bargains bull calves dropped in July, 1912. All bred from (imp.) sire and from either dams with good records, or their daughters either imported or home-bred. Some choice February pigs; also young pigs. **Alex Hume & Co., Menie, Ont.**

**GLENHURST AYRSHIRES** ESTABLISHED OVER 50 YEARS high standard. We can supply females of all ages and young bulls, the result of a life time's intelligent breeding; 45 head to select from. Let me know your wants. **JAMES BENNING, WILLIAMSTOWN P. O. Summerstown Sta., Glengarry**

**STOCKWOOD AYRSHIRES** This herd is now headed by White Hill Free Trader (imp.) No. 33273, champion bull at Sherbrooke; also headed the 1st-prize aged herd. All ages for sale. Satisfaction guaranteed. **D. M. WATT, St. Louis Sta., Que. Telephone in house.**

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Two young bulls and one of Jan., 1913. All from R. O. P. cows and sired by bulls from R. O. P. dams. Will buy young cows that are capable of making good. Eggs for setting. R. C. and S. C. Rhode Isl. Reds, selected for laying qualities; \$1.50 per 15. **Jas. Begg & Son, R.R. 1, St. Thomas.**

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**Lawthorne Glen Holstein Herd** Offers young bulls ready for service, one from Calamity Hourje, winner of 1st prize in cow class at Guelph, 1912; also a half-brother to Pontiac Jessie, sweepstakes heifer under 36 months; also a few females. Prices reasonable. Write for particulars, or come and make your choice. MARTIN McDOWELL Eastwood Sta., G. T. R. Oxford Centre, Ont.



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**Holsteins and Tamworths** I am over-stocked and will sell a lot of young cows and heifers, winners and bred from winners; officially backed and right good ones. Also Tamworths of all ages. R. O. MORROW & SON, Hilton P.O., Ont. Brighton Station. Phone.

**HOLSTEINS and YORKSHIRES** Minster Farm offers a grandson of Snowflake. She gave 2,054 1/2 lbs. milk in 30 days, and of Count Hengerveld Fayne De Kol; his dam and sire's dam average 24.075. A sister made 35.55 lbs. butter in 7 days. For extended pedigree and price, write: R. Honey & Sons, Brickley, Ont.

**Maple Holstein-Friesians** Special offering: Bulls from 1 to 15 months old. The growthy kind that will give good service. One from a son of Evergreen March, and all from Record of Merit dams. Write for particulars. G. W. CLEMONS, St. George, Ont. Bell telephone.

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**Holstein Bulls** \$25.00 buys pure-bred Holstein bulls, two to six mos. old. Will ship C.O.D. Money returned if not satisfied. MOUNT DAIRY STOCK FARM, Milton, Ont.

## Questions and Answers. Miscellaneous.

### Goose Wheat.

Do you know who has seed Goose wheat for sale? Must be free from all wild seeds. I don't see any advertised in "The Farmer's Advocate."

A McF.

Note.—Readers with Goose wheat for sale should advertise it in our Wants and For Sale column, but please let no one have the presumption to send us a private letter, asking that it be forwarded to the enquirer. Unless accompanied by the price of an advertisement, it will be forwarded to the w.p. b.

### Using Barbed Wire.

Is it legal for a settler to put a barbed wire fence along a public or Government road?

LEX.

Marter, Ont.

Ans.—We are not aware of anything expressly making it illegal to do so. There may be local municipal by-law, or other regulation against it, and it would be well for you to consult your local municipal authorities about it, accordingly. But unless such fencing is expressly permitted by such by-law or other municipal regulation, we think that the party erecting a barbed-wire fence along a public highway would be taking a considerable risk.

### School Teachers.

1. I am Secretary-Treasurer for a Union-school section of two townships. One township will pay the full amount of the teacher's salary, quarterly, and the Treasurer of the other township refuses to pay more than fifty dollars at a quarter. Teacher's salary is five hundred dollars a year. Can they be made pay full amount, and how?

Ontario.

W. W.

2. Can a teacher leave a school at Easter-time, being hired for the full term, till summer holidays, and take up another school in the same district, just for the reason of getting more salary?

Ontario.

Ans.—1. Yes—by certain legal proceedings. If such steps should become really necessary, a solicitor should be instructed for same.

2. No.

### Seeking to Cancel Orders.

A gives order to Nursery Company for goods. On the order is printed, "Not subject to countermand." He (A) writes company to cancel order. Receives no reply. He registers letter then, telling them to cancel order. They refuse, saying that the order is not subject to countermand.

1. Can Nursery Company force A to take goods?

2. If they send same, and he returns them, is it probable they will sue him? The amount of order is less than \$5.

3. A gives order to Farm Machinery Company for piece of farm machinery. Later, he buys this piece at a sale. Can the machine man force his piece of farm machinery on this man?

Ontario.

Ans.—1 and 3. They are legally entitled to insist upon his receiving and accepting the goods.

2. We would think so.

### Leathery Cream.

This winter the milk appears very good, but when it stands for a day, a crust forms on milk, and instead of skimming like milk should be skimmed, the crust can be lifted right off the milk in one piece. I thought of comparing cream to a piece of leather.

S. D.

Ans.—In all probability, this "leathery" condition of the cream is caused by exposing the milk in an open vessel in a warm, dry room, which causes evaporation of the moisture from the surface, leaving the cream in a leathery condition. It might also be caused by improper pasteurization of the milk, and improper cooling afterwards, which sometimes gives a thin cream on the surface, and which is somewhat leathery in condition, but I would judge the trouble in this case is caused by exposing the milk in a dry atmosphere of the house. All milk should be kept in a tightly-closed vessel, and never be allowed to stand in an open pitcher in an ordinary room, pantry, or refrigerator.

H. H. DEAN.

## Wood or Concrete Silos, which are best?

Over in the U. S. many experiments made by the various agricultural experiment stations have conclusively shown that silage does not keep as well in cement, stone or brick silos as in silos constructed of wood.

Furthermore, the advantage of the wood silo over cement, stone or brick is greatest in a cold climate.

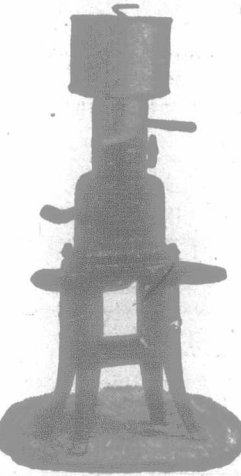
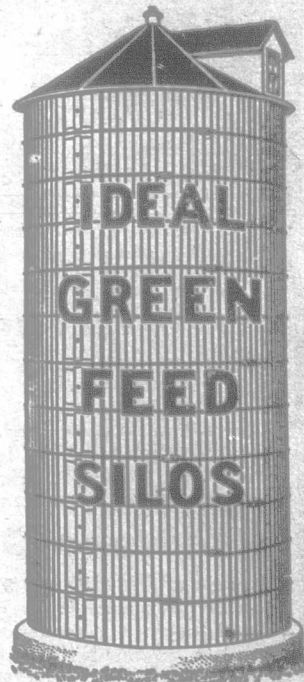
The vital question is, "Which silo will keep the silage in the best condition?"

If you are interested in reading the unbiased opinion of scientific investigators who have given this question careful investigation we shall be glad to send you, upon request, reprints of some of the experiment station bulletins giving in detail the reasons why wood silos make the best silage and keep it in the best condition.

We shall also be pleased to send you our silo catalog and give you any other silo information desired.

We are exclusive distributors in Canada of the World's Standard De Laval Cream Separators, and also carry a complete line of creamery and dairy machinery and supplies. If interested write for separate Catalogs.

**De Laval Dairy Supply Co., Ltd.** LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA Montreal Peterboro Winnipeg Vancouver



## We give a FREE TRIAL of the Domo Cream Separator

Think of it! We send this high-grade, easy-turning machine on approval, freight prepaid, to test at our expense. We take all the risk. Prices from \$15 and upwards, about half what you pay for others, and you can be the judge of its merit. Write to-day for circular "A," which gives full particulars of our trial offer, with prices and easy terms of payment. It's FREE.

DOMO SEPARATOR CO.

Brighton, Ont.

St. Hyacinthe, Que.

### AVONDALE STOCK FARM

Herd bulls: Prince Hengerveld Pietje \$230 (50582). Sire, Pietje 22nd Woodcrest Lad, out a Pietje 22nd, 31.00 lbs. butter 7 days; greatest imported cow, and one of the greatest young sires of the herd, having already sired a 35-lb. 4-year-old daughter. Dam, Princess Hengerveld De Kol, 33.62 lbs. butter 7 days, highest record daughter of Hengerveld De Kol, with 116 tested daughters. King Pontiac Artie Canada 10042 (72294). Sire, King of the Pontiacs, greatest living sire of the herd, and sired by the greatest sire of the breed, Pontiac Korndyke. Dam, Pontiac Artie, daughter of Hengerveld De Kol. Record, 31.8 lbs. butter 7 days, 128 lbs. 30 days, 1,076 lbs. 365 days Young bulls from these two great sires for sale, from cows with records up to 29 lbs. Write us, or better come and see them. Visitors always welcome. Address all correspondence to:

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H. LORNE LOGAN, Mgr., Brockville, Ont.

**SERVICE BULLS AND BULL CALVES FROM A. R. O. DAMS.** Sons of Johanna Concordia Champion, No. 60575, one of the richest bred and best individual bulls of the breed. His granddams, Colantha 4th's Johanna 35.22 lbs. butter in 7 days; fat 4.32 per cent., and Johanna Colantha 2nd 32.90 lbs. butter in 7 days; fat 5.02 per cent. Average butter in 7 days 30.06 lbs.; average fat 4.67 per cent. If you want to increase the butter-fat in your herd, let me sell you one of these bulls. I can spare a few good cows and heifers bred to the "Champion." Write me your wants and I will try and please you. MAPLE AVENUE STOCK FARM, L. E. CONNELL, Prop., FAYETTE, FULTON CO., OHIO, U.S.A.

### HOLSTEINS

I can supply a limited number of high-producing and highly-bred females; also young bulls, bred on both sides from high official backing. Let me know your wants. W. E. THOMPSON, R. R. No. 7, Woodstock, Ont.

### Summer Hill Holsteins

Would you like your next bull to be from the same sire as the heifer that holds the world's record for yearly work, and the same sire as the Champion Cow of Canada in the seven day work, and the same sire as the Champion four-year-old of Canada in the thirty day work? We have bulls of this breeding to offer whose dams have records of over 27 lbs. We have also some extra choice heifers bred to our junior herd bull whose dam has a record of 34.60 lbs. butter in seven days and 111 lbs. milk a day. Yorkshires of all ages. D. C. FLATT & SON, R. R. No. 2, Hamiltown, Ont.

**\$150.00** buys a 2-year-old HOLSTEIN heifer just freshened. Have also for sale some Yorkshire pigs just weaned.

A. WATSON & SONS R.R. No. 1. St. Thomas, Ont



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### THE PEERLESS

#### Braced Like a Steel Bridge

JUST as the engineer strengthens the points of strain in a big, mighty bridge, so we have designed braces, stronger than was necessary, to make our gates stiff and rigid. They can't sag—they can't twist—they are a great improvement over gates made the old way.

#### Peerless Gates

are made of first-class material. Frame work of 1 1/2 inch steel tubing electrically welded together. Peerless pipe braced gates are all filled with heavy No. 9 Open Hearth galvanized steel wire—built for strength and durability—weather proof and stock proof.

Send for free catalog. Ask about our farm and poultry fencing, also our ornamental fence and gates. Agents wanted in open territory.



**BANWELL-HOXIE WIRE FENCE CO. Ltd.**

Winnipeg, Man. Hamilton, Ont.

## Lump Jaw

The first remedy to cure Lump Jaw was

### Fleming's Lump Jaw Cure

and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed cure. Don't experiment with substitutes or imitations. See it, no matter how old or new the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in

Fleming's Vets. Pocket Veterinary Advisor

Send complete veterinary book over returned to be given away. Durable bound, indexed and illustrated. Write us for a free copy.

**FLEMING BROS.,** Chemists,  
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and keeps SHEEP free from fresh attacks. Used on 250 million sheep annually. Increases quantity and quality of wool. Improves appearance and condition of flock. If dealer can't supply you send \$1.75 for \$2 packet. Specially illustrated booklet on "Ticks" sent free for asking. A post card brings it. Address Dept 17 Wm. COOPER & SONS, Toronto, Ont., 122 Wellington St., W.

### ALLOWAY LODGE STOCK FARM

#### SOUTHDOWNS ANGUS COLLIES

The best in their respective breeds Write for information to:

**ROBT. McKWEEN,** Byron, Ont.  
Phone. R.R. Stn. and Tel. Office, London.

**Tamworths**—Have some choice young boars and sows, from three to five months old; also one yearling bear at a bargain. Bell phone.

**HERBERT GERMAN,** St. George, Ont.

**Poland-Chinas and Shorthorns**—Am offering now 20 good young sows for spring farrow. This herd contains more Toronto winners than all other herds of the breed combined. Also choice young Shorthorns of either sex. Prices easy. **GEORGE G. GOULD,** Edgar's Mills, Essex Co., Ont.

#### MORRISTON TAMWORTHS AND SHORTHORNS

Bred from the Prize-winning herds of England, have a choice lot of young pigs, both sexes, pairs not akin; and also the dual-purpose Shorthorns. Satisfaction guaranteed. **C. Currie,** Morriston.

## Questions and Answers.

### Miscellaneous.

#### Purchase of Stallion.

I purpose buying a registered Clydesdale stallion already inspected and enrolled. He will be the only such in a radius of fifty miles or more. Does the Government, or any society, contribute to his support, and to what extent? To whom, and in what form, should application be made? What conditions obtain to receiving any such aid?

D. N.

Ans.—The Government does not contribute to the support of Clydesdale horses. The only breed subsidized is the Thoroughbred.

#### Right to Fowls.

A and B have been living on a farm, together. Some years ago their father died, leaving A the chattels, B getting cash. Previous to their father's death, he allowed B what the fowls made for spending money, to sell any or all of them, when necessary, but always keeping up the stock. They now wish to make a settlement.

1. Can A claim the fowls when he has allowed B undisputed possession for over six years?

2. Can A stop B from selling the fowls?

Ontario. A CONSTANT READER.

Ans.—1 and 2. We do not think so. It appears to us that A must, at this late date, be taken to have abandoned any claim he might have had in respect of the fowls.

#### Assessment—Right to Vote.

1. What would be the proper way to enter a man's son on the assessment roll when the father owns the property and pays all taxes, the son working it on shares?

2. Could he be assessed for a day's statute labor if assessed as tenant?

3. Can a man have his sons assessed as joint owners if the property is all in his name?

4. Has a man a right to vote at municipal elections who is assessed as tenant (of a house), the owner paying the taxes?

X. Y. Z.

Ontario.

Ans.—1. As tenant.

2. Subject to township by-law, he would be liable to at least two days' statute labor.

3. No.

4. Yes.

#### Landlord and Tenant.

If tenant is to have the place for three years at a rental of \$200 and taxes, he to do any fencing and repairs that are needed, and to clean up the fields to the best of his ability, doing a certain amount each year, to clean up the swamp this fall, to keep horse this winter, landlord to have the privilege of selling the place providing he gives tenant proper notice, and, of course, allows him for any work which would not be of any benefit,—I mean such as fall plowing if tenant were to leave in the spring—and that landlord would wish to do whatever was gain for both.

1. There being no writing except this, will it hold the place for one year, as the tenant has the plowing done, and landlord wanted him to give the place up after he got the plowing done? He said he would pay for the plowing, and tenant made him an offer, but was never offered anything, but was just asked for an itemized statement of work done.

2. Will plowing hold a farm for one year if landlord allows tenant, by word of mouth, to go on and plow?

3. Can landlord put tenant off after he has moved on, or would landlord have to pay tenant damages first?

4. Would tenant have to go by the letter? As he did not agree to pay taxes, could landlord make tenant pay them or not?

Ontario.

Ans.—1. We think so.

2. Not necessarily. Other circumstances, as well, would have to be taken into consideration.

3. It depends upon the terms of the agreement between them—whether verbal or written; and these questions cannot be satisfactorily answered without very full information as to such terms.

4. It is probable that the tenant is liable to pay taxes.

## There's a right way

to protect your barn and its valuable contents—and a wrong way!

Perhaps you have the right kind of a roof; possibly you have put a metal roof on your barn.

But if you haven't, let us explain why you should; how you can save money by doing so; and just how you ought to go about it in order to ensure the best results.

We have important information for every farmer on this important subject of barns. If you will write us, we'll send this information free—together with samples, catalogues and plans, showing in the simplest possible form the process of roofing your barn with Galt Steel Shingles.

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Don't believe that until you know it's so. It will only cost you the price of a post card to find out definitely what it will cost, and to gain an accurate idea of the ultimate saving to you of putting on the right kind of a roof right now.

So send that post card to-day to

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## Planet Jr. No. 41

### Orchard and Universal Cultivator.

is the ideal tool for cultivating all kinds of fruit, such as apples, peaches, pears, oranges; also vineyards, hopyards and walnut groves.

It is equipped with fruit tree shield, and side hitch for low trees. Carries teeth, sweeps, furrowers, plows, etc. Works deep or shallow, and cuts from 4 to 6 1/2 feet wide. Convertible into disc harrow and alfalfa cultivator, and special weeder attachment. Can be fitted with two-wheel fore-carriage—new this year.

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at greatly reduced prices. They are all registered and is a lamb to good rams. Are going to be sold; whoever gets order in first will get the choice.

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Only Shropshire Association recognized by U. S. Government Largest membership of any live-stock association in the world. Life membership \$5.00. No yearly dues. Write for information. **J. M. WADE, SECRETARY, LAKEVILLE, INDIANA**



### Large White Yorkshires

Have a choice lot of sows in pls. 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 on **G. T. R. Long-distance phone, H. J. DAVIS, Woodstock, Ont. C.P.R. and**



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I am now offering young sows, bred, and young boars of breeding age, chuck full of imp. blood and show ring quality; I think the best lot I ever bred. Also younger ones of both sexes.

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Grand stock, either sex, constantly for sale. Price reasonable. **MAC CAMPBELL & SONS,** Northwood, Ontario.

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**C. J. LANG, Hampton, Ont. Durham Co.**



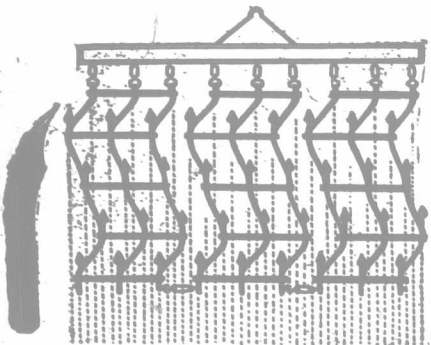
## Government Standard SEEDS

Sold under the guarantee that if they do not entirely satisfy you on arrival you may ship them back at our expense. We buy most of our seeds directly from the farmers here in Haldimand County.

ALFALFA or LUCERNE.—\$11 per bush.  
 RED CLOVER.—\$15 per bush.  
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 O. A. C., No. 21 BARLEY.—80c. per bush.  
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 GOLDEN VINE PEAS.—\$1.75 per bush.

We will pay freight in Ontario on three bushels of Clover Seed.  
 Bags extra, cotton 25c., jute 10c.  
 Cash with order. Ask for samples.

The Caledonia Milling Co.  
 Limited  
 Caledonia Ontario



### Erie Lance Tooth Harrow

Is the finest and most useful article that can be placed on a farm. The teeth are so shaped that they tear rough ground, and cultivate and make the finest seed bed possible. Once used on a farm, it will be the last implement parted with. Made strong and adapted to the roughest usage. 2-section set, \$10.00; 3-section set, \$15.00; 4-section set, \$20.00. Each section covers 3 feet of ground in width.

### Erie Iron Works, Limited MAKERS St. Thomas, Ont.

Unreserved Dispersal Sale of the most renowned Long-wool Flock in the world, at RIBY, LINCOLNSHIRE, ENGLAND.

In consequence of the death of Henry Dudding, Esq., the whole of the famous, old established Riby

Flock of pure pedigree Lincoln  
**LONG-WOOL SHEEP**  
 and Herd of  
**Shorthorn Cattle**

will be sold by auction on  
**WEDNESDAY & THURSDAY**  
 JULY 9th and 10th, 1913

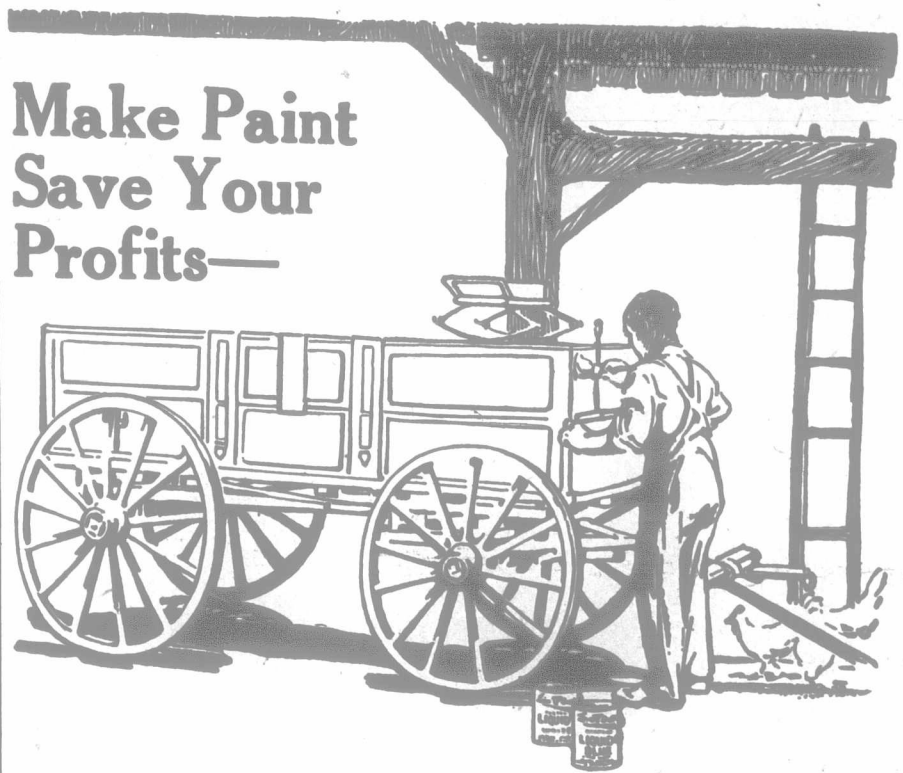
Owners and breeders abroad are asked to note the date of sale, and desired, if unable to be present personally, to at once instruct their British Agents. Home breeders will please book the date of this final sale. The sale will be held at Riby and comprise about:—

- 50 Shorthorns
- 200 Yearling Rams
- 1,500 Ewes and Yearling Ewes
- 300 Ram Lambs
- 700 Ewe Lambs
- 20 Famous Stud Rams

It is intended that representatives of the Flock and Herd will be exhibited in the different classes at the Royal Agricultural Show to be held at Bristol on Tuesday to Friday, the 1st to the 4th of July.

For all particulars apply to Mr. C. W. Tindall, Wainfleet, Lincolnshire; or Mr. E. J. Turton, Horkstow, Hull (the trustees of the late owner); to Messrs. John Thornton & Co., Auctioneers, 7 Princes St., Hanover Square, London, W.; or to Dickinson, Riggall & Davey, Auctioneers, Louth, Grimsby & Briggs, England.

Don't Blame the Engine  
 Buy your Batteries right. See they have the Black Cat Trade, Mark and its "NINE LIVES."  
**X-CELL**  
**DRY BATTERIES**



## Make Paint Save Your Profits—

Some farmers' profits are drained away year after year in the purchase of new waggons, implements and equipment. Save this expense by taking care of your present equipment. Make paint save your profits by protecting your property against decay and the need for replacement.

### Low Brothers HIGH STANDARD WAGGON PAINTS

are what you should use on waggons, implements and everything else around the farm that weather can rust or rot. With its sturdy protection your equipment will last three times as long as it will if unpainted.

#### OTHER "HIGH STANDARD" PRODUCTS

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AT LOW RATES.  
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To Manitoba, Saskatchewan and Alberta  
 Each Tuesday March to October inclusive via Chicago and St. Paul.  
 Through coaches and Pullman Tourist Sleeping Cars will leave Toronto 11 p.m. on above dates for WINNIPEG.

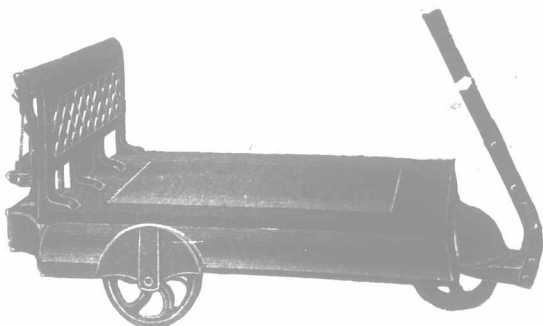
No Change of Cars.  
**WINNIPEG AND RETURN \$35.00**  
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 Tickets good for 60 days. Proportionate low rates to other points.

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So often you lose money because you are not quite sure of the weight of the article that is changing hands, and by just putting it on the scales your eyes are opened, and you are in a position to judge very accurately as to what this or that particular thing is worth.

Write to-day for our illustrated catalogue, telling you about the Three-wheeled Wagon and Stock Scale. Capacity, 2,000 lbs. All material and workmanship first-class and guaranteed.

Address:  
 The Aylmer Pump & Scale Co., Limited  
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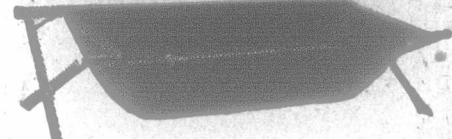
THAT WORN-OUT LANDS MAY BE MADE PRODUCTIVE AND PROFITABLE BY THE JUDICIOUS USE OF THE RIGHT KIND OF FERTILIZER?

NOW IF YOU HAVE A PIECE OF LAND THAT WONT GROW ANYTHING BUT WEEDS, TALK WITH US ABOUT IT AND LET US SUGGEST THE RIGHT FERTILIZER

WE FEEL VERY SURE THAT WE CAN SHOW YOU HOW TO USE FERTILIZERS WITHOUT GREAT EXPENSE SO YOUR LAND WILL PAY

CONSULT US FREELY IT IS OUR BUSINESS TO KNOW ENQUIRIES FREELY ANSWERED AGENTS WANTED FOR TERRITORY NOT TAKEN UP

THE W.A. FREEMAN CO. LIMITED  
 HAMILTON ONTARIO



### "A Godsend to Humanity"

On a Saturday evening when you pull out that old wash tub to take your bath, and the only part of your body which you can get in it is your feet, have you not thought of that nice bath of your friends in the city and wished you had it in your home, where you could sit right down and splash the water around you? BUY ONE OF OUR FOLDING BATH TUBS and you have it for \$7.50, delivered to any part of Ontario. Each tub carries a guarantee for five years.

Inside measurements of our bath tub are 4ft. long, 2ft. wide, 18 inches deep and weighing 15 lbs. Two pails of water are all that are required to give one a proper bath, as the bottom rests on the floor, permitting the water to come to the body. This bath tub can be taken to the kitchen range for your bath and when finished with it, rolled up and set away in a corner.

FOLDING BATH TUB CO., LIMITED  
 Gananoque, Ontario.

TRADE MARK  
**Ploughs—Wilkinson**  
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U. S. S. Soft Centre Steel Moldboards, highly tempered and guaranteed to clean in any soil. Steel beams, steel landsides and high carbon steel coulters. Clevises can be used either stiff or swing. Each plough is fitted especially with its own pair of handles—rock elm long and heavy and thoroughly braced. The long body makes it a very steady running plough. Shares of all widths—specials for stony or clay land. The plough shows turns a beautiful furrow, with minimum draft and narrow furrow at finish. Ask for catalogue.

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No. 3  
 Soil or  
 General  
 Purpose  
 Plough,  
 25 styles  
 to choose  
 from.

**TWO HOURS OF YOUR SPARE TIME**  
 and 25c. will get you the best \$4.00 pair of shoes for man or women ever made. Write for particulars to the Brantford Shoe Company - Brantford, Ontario

## Farm Help

Weekly parties of young men now arriving. Apply:  
**BOYS' FARMER LEAGUE**  
 Drawer 126 Winona, Ontario

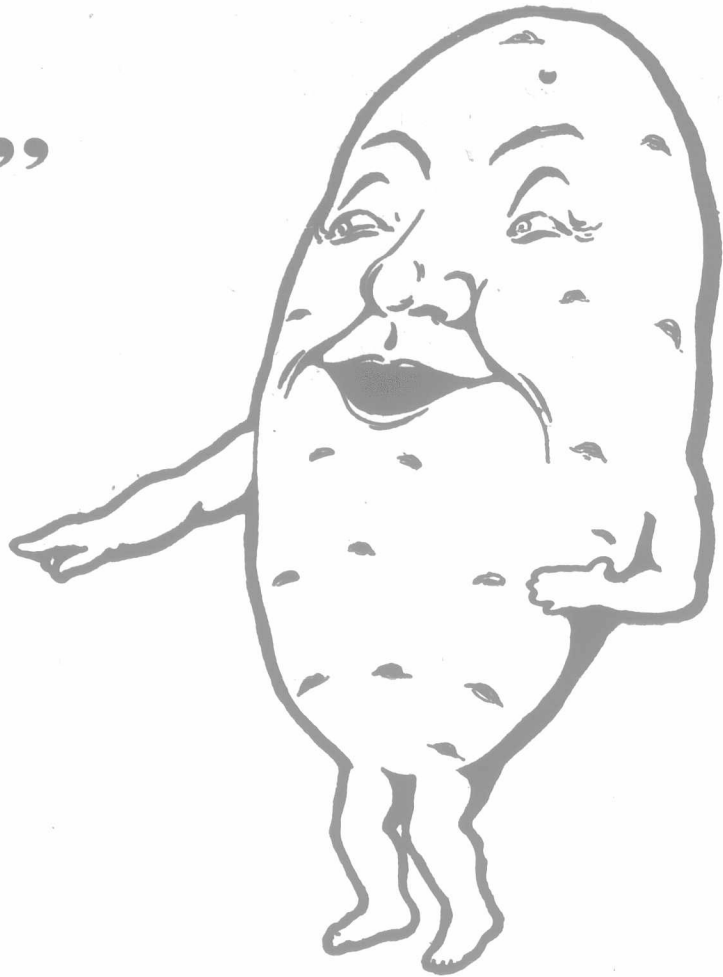
### Mallory's Seed Corn

Highly productive prizewinning strains of the best standard varieties at moderate prices. Well cared for. Strong growing seed. Shipped on ten-day approval. Returnable at our expense. Send for samples and circular.

M. E. Mallory, Blenheim, Ont.  
**PATENTS** procured everywhere  
 EGERTON R. CASE  
 Registered Attorney Dept. E, Temple Building,  
 Toronto. Booklets on request, 20 yrs. experience



**"Potash  
Pays"**



## The Wail of the Starved Potato

Look at that poor, shriveled up, good-for-nothing potato!

He is wailing because he is starved to death, and the man that grew him is wailing because he is not making the money he should out of his farm.

What is the reason? Simply because this potato IS starved. Look at Mr. Potash-Raised Potato. See how jolly and fat he is! He and hundreds of his fellows are growing fat and clean and shapely to bring his grower a good profit, and all because of POTASH. The poor, skinny

potato is starved to death because his grower uses a low-grade fertilizer. This grower does not understand that every crop, say of 300 bushels of potatoes, eats from the soil approximately 60 lbs. Nitrogen, 40 lbs. Phosphoric Acid and 105 lbs. of POTASH. Note that this is three times as much POTASH as Phosphoric Acid.

The low-grade fertilizer contains but 2% POTASH and 6 to 8% Phosphoric Acid. Surely this is not three times as much POTASH. Any agricultural expert in the country will tell you that it is far better to use a 10% POTASH Fertilizer.

### This Applies to All Crops Grown in Canada

The ordinary fertilizer does not contain the amount of POTASH necessary to secure the largest possible crops from the farm lands.

Here is what you, Mr. Farmer, should do if you wish to make more money from your crops:

When buying fertilizers, insist that your dealer give you a 10% POTASH Fertilizer. If he has not got it, and you have to use a low-grade fertilizer, use enough POTASH to increase the amount to 10% of POTASH. Our agricultural experts will tell you just how to do this free. It is simply, easily and quickly done, and will bring you many, many

times the first cost in a larger harvest. Ask the Agricultural Department at Ottawa if this is not so. Or, if you so desire, you can mix your own fertilizer at your own home. Our experts will tell you how, free.

You can buy POTASH from your dealer. If your dealer has not got it, give us his name, and we will sell to you direct, as we have POTASH ready for immediate delivery stored in storehouses in Montreal, St. John, N. B., and Toronto. Write to-day for free booklet and prices.

Don't starve your crops. Feed them, and they will feed you and your pocketbook. "POTASH PAYS." Write us to-day for free booklets.

**GERMAN KALI WORKS, INC.**  
Temple Building  
TORONTO, ONTARIO