

APRIL 3, 1919

PUBLISHED EVERY WEEK. \$1.50 PER YEAR.

# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

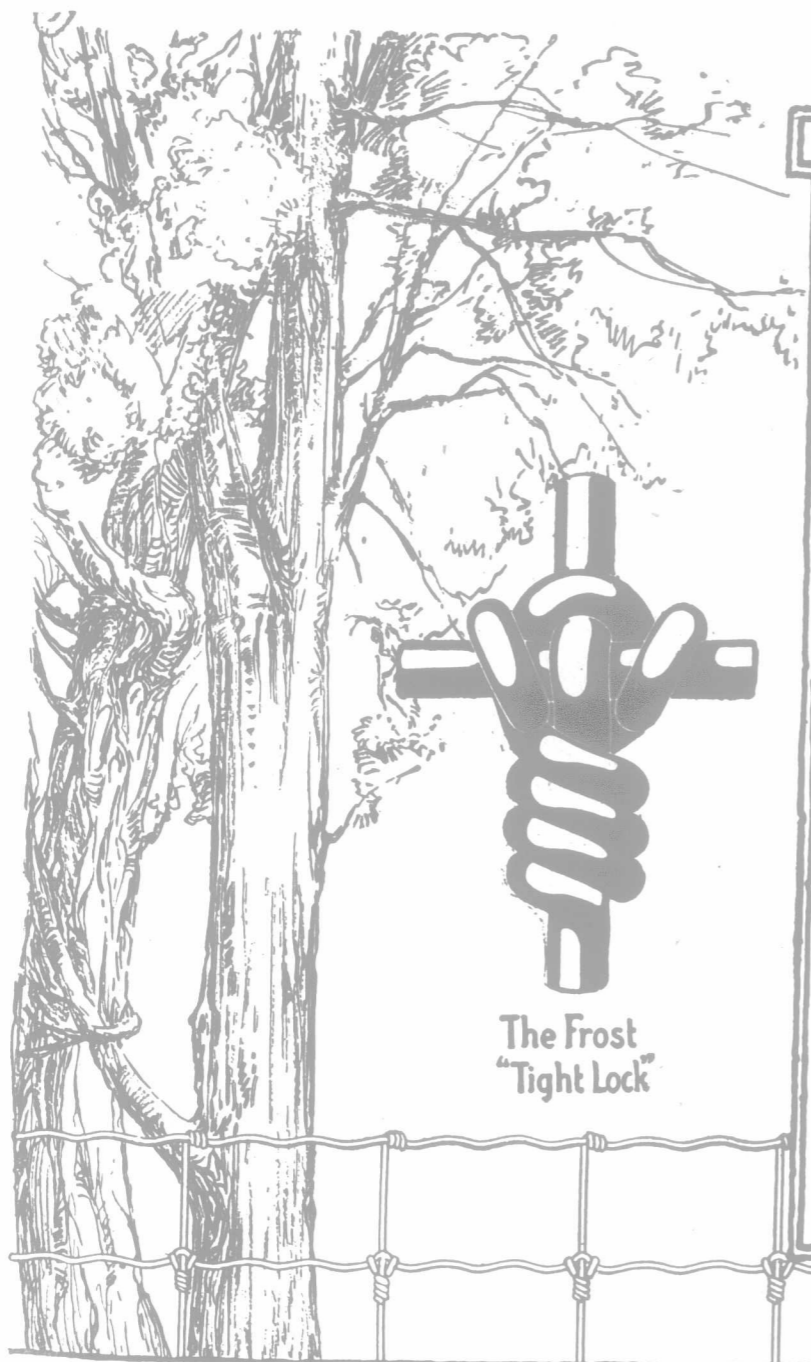
\*AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.\*

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LIV.

LONDON, ONTARIO, APRIL 10, 1919.

No. 1385



## Always First

A study of fences and fence records shows that Frost Fence is justly entitled to first place among woven wire fences.

The exclusive Frost Tight Lock—look at it—is different from all others in design and is one BIG reason why Frost Fence has greater strength. The Frost Lock is the strongest part of the fence, not the weakest as in ordinary fences.

Then there are the Frost Wave Laterals with their wonderful resiliency and reserve power.

And the Frost Fence Wire, every strand of which is drawn and galvanized in our own mills.

Frost Fence has given years of service in Canada and proven its quality, serviceability and value to the complete satisfaction of the owners of millions of miles of this Canadian-made fence.

The policy and reputation of the Frost Company is well-known to the farmers of Canada who have shown their appreciation of Frost Quality, and the Frost system of selling through responsible dealers, by making Frost Fence first in sales.

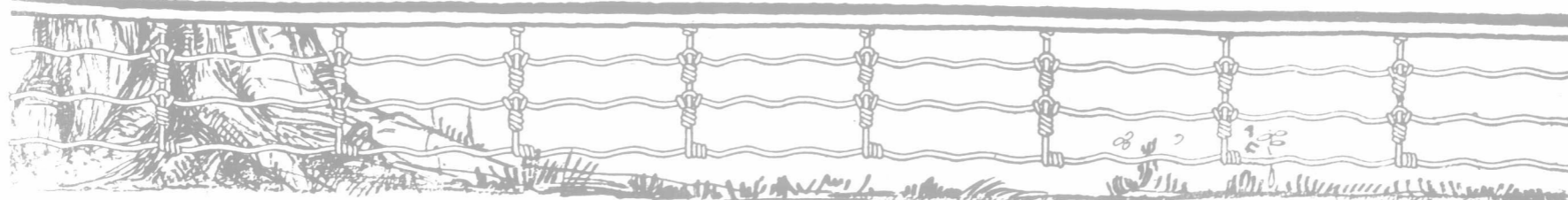
While the price of Frost Fence is higher than before the war our margin of profit is narrower. It is proportionately lower than any other necessity made from steel or iron.

From the farmers' viewpoint a bushel of wheat, oats, potatoes or a hundred weight of live stock will buy more Frost Fence than ever before.

Gates of all kinds; Bale Ties; Fence Supplies; Fancy Fences.

**Frost Steel and Wire Co. Limited**  
HAMILTON, CANADA 119

# Frost Fence First

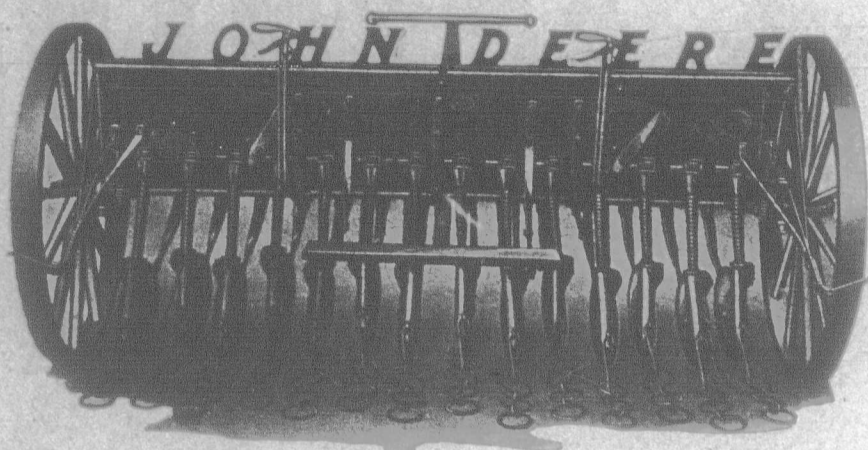


MORE AND  
BETTER CROPS



FROM BETTER  
SEED BEDS

14 x 6 Single Disc



John Deere Spring Tooth Lever Harrows  
THE ORIGINALS OF THIS STYLE

Still unequalled in construction, for working qualities and for durability.

They are Perfect Pulverizers, uncloggable, have direct draft without side motion and the simplest, most positive adjustment of any harrow made.

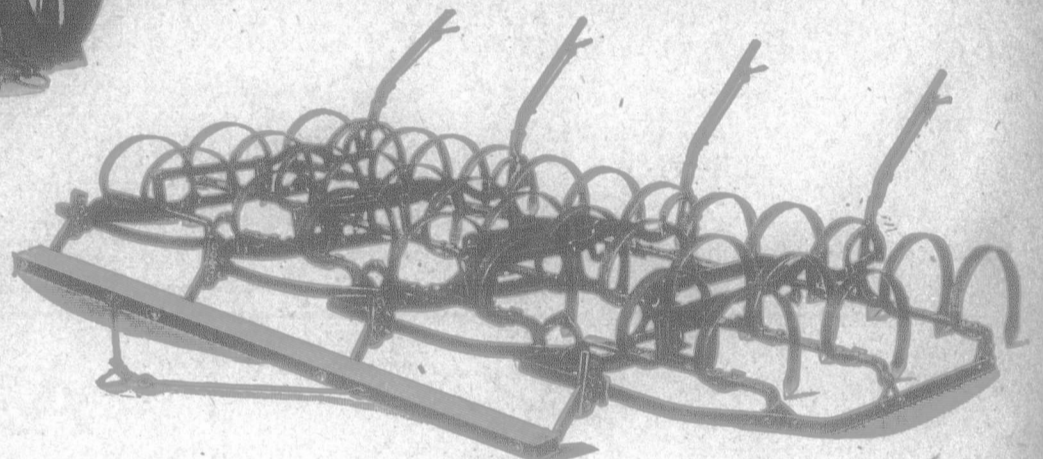
Any number of sections may be combined, plain or reversible point teeth.

FOR HORSES OR FOR TRACTOR

John Deere Van Brunt Grain Drill

The first successful Single Disc Drill made. Guaranteed to work satisfactory in any ground capable of being seeded, and will not choke or become clogged. It has the Van Brunt Adjustable Gate force feed, the most perfect seeding mechanism ever devised. All Disc Bearings are guaranteed for the life of the drill, and will be replaced FREE of CHARGE if they wear out. Tilting Lever makes perfect seeding possible.

Uniform Seeding at Proper Depth



SEE YOUR NEAREST JOHN DEERE DEALER, OR WRITE DIRECT TO US FOR BEAUTIFULLY ILLUSTRATED FOLDERS ON THESE MACHINES

JOHN DEERE MANUFACTURING COMPANY, LIMITED

WELAND

ONTARIO

GILSON  
SILO FILLERS

THE GILSON SILO FILLER is the one blower which can be successfully operated with as little power as 4 h.p. There is a Gilson Silo Filler for every purpose—for the individual farmer, for the syndicate, and our large capacity machine for the custom jobber.

We guarantee every Gilson Silo Filler to cut and elevate more ensilage with the same power than any other blower cutter.

Will Silo Filling Time find you ready?

Write for catalogue to-day.

Gilson Mfg. Co. Ltd.  
399 York St., Guelph  
Ont.



London Concrete  
Mixer No. 6

Equipped with "Novo" Dust Proof Gasoline Engine. Capacity 6 cu. ft. per batch or 60 cu. yds. per day. Mixes any kind of concrete or mortar. Especially suitable for any kind of work requiring a portable machine. Saves the price for itself the first thirty days it is in use. Send for catalogue No. 1-B.

London Concrete Machinery Co., Ltd., Dept. B., London, Ont.  
World's Largest Manufacturers of Concrete Machinery.

Steel Rails

for Reinforcing Bridges and Barn Driveways.

Cut any length.

JNO. J. GARTSHORE

58 Front Street West Toronto

Canada's Opportunity On the Highway of Success—What has that to do with GATES? Everything!  
PEERLESS LONG SPAN GATES

The gate pictured below is a comparison to the Peerless Perfection farm fence. It is strong, durable, with heavy tubular beams, which stiffen it like a steel bridge. Its springs are and third up its post four long by a master mechanic. Lateral and upright wires securely clasped at all intersections and stretched upon a strong rigid frame of tubular steel electrically welded into one solid piece.

For Looks, Wear and Service In appearance a Peerless Gate says: "I am put together to last a lifetime and I'll stand at any point. For service I'll interest in our Gates. Write Today for literature describing all our many styles of Gates, all kinds of Fences and Fencing for farms, ranch, residences, park, etc. It will pay you well to get acquainted with Peerless Perfection standard of construction. Write nearest office today. Do it now."

THE DANWELL-HOXIE WIRE FENCE CO., Limited  
Hamilton, Ont.  
Windsor, Mich.



The Bissell Steel Roller

With Three Drums and Strong Rigid Steel Frame.

Some improvements are: Heavy Steel Axle.

Thick, Heavy Steel Plate, Drums Riveted.

up to stand any strain, Roller Bearings

Runs like a bird. Full particulars free

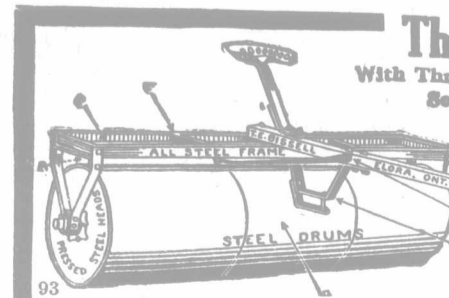
by mail, or ask your dealer. None

genuine without the name "BISELL."

Look out for it. This Roller will

stand hard work and lots of it.

Write Dept. W for free catalogue



T. E. Bissell Co., Limited, Elora, Ont.

We have doubled our factory capacity and are determined to supply our customers far and near. See ad. also on page 734.

HYLO SILO

Sweet Fresh Ensilage down to the last forkful!

THE HYLO SILO is perfectly air-tight. No frozen or spoiled ensilage around the walls. Convenient and perfect fitting doors, adjustable without hammer or wrench. Made of Guaranteed Long Leaf Yellow Pine. Built to last a life-time. Stands rigid when empty.

Write for prices and catalogue. AGENTS WANTED.

Gilson Mfg. Co. Ltd. 49 York St. Guelph



FISH NETS

WE SELL NETS AND NETTING OF ALL KINDS. WRITE FOR PRICES.

GUNS TRAPS SPORTING GOODS  
JOHN HALLAM, Limited  
31 Hallam Building - TORONTO

Learn All About The  
AUTOMOBILE

How to run it, care for it, repair it; how every part works; how it is constructed. Complete practical course by mail. Models of engine, carburetor, etc., supplied. Write the

Canadian Correspondence College, LIMITED.  
Dept. E, Toronto, Canada.

Patent Solicitors—Fetherstonhaugh & Co. The old-established firm. Patents everywhere. Head office: Royal Bank Buildings, Toronto. Ottawa Office: 5 Elgin St. Offices throughout Canada. Booklet Free.

**BETTER  
BEDS**

**Lever Harrows**  
STYLE  
working qualities

able, have direct draft  
st, most positive  
made.

combined, plain or

ACTOR



**LIMITED**  
RIO

**LO SILO**

at Fresh Ensilage  
to the last forkful

HYLO SILO is per-  
air-tight. No frozen  
ensilage around the  
convenient and perfect  
on, adjustable without  
or wrench. Made of  
and Long Leaf Yellow  
it to last a life-time.  
id when empty.

prices and catalogue.  
ENTS WANTED.

Co. Ltd. 49 York St.  
Guelph



**SH NETS**

**SELL NETS AND  
NETTING**  
OF ALL KINDS  
ATE FOR PRICES

**HALLAM, Limited**  
lam Building - TORONTO

**All About The  
AUTOMOBILE**

it, care for it, repair it; how  
works; how it is constructed,  
ctical course by mail. Models of  
retor, etc., supplied. Write the

Correspondence College,  
LIMITED.  
t. E. Toronto, Canada.

icators - Fetherstonhaugh &  
Co. The old-catch-  
agents everywhere. Head office:  
Buildings, Toronto. Ottawa  
St. Offices throughout Canada.

**Mrs. Goodwife says:**

"Just a few cents worth of  
Floglaze made this chair  
look like new".

**Floglaze**

"The Finish that Endures"

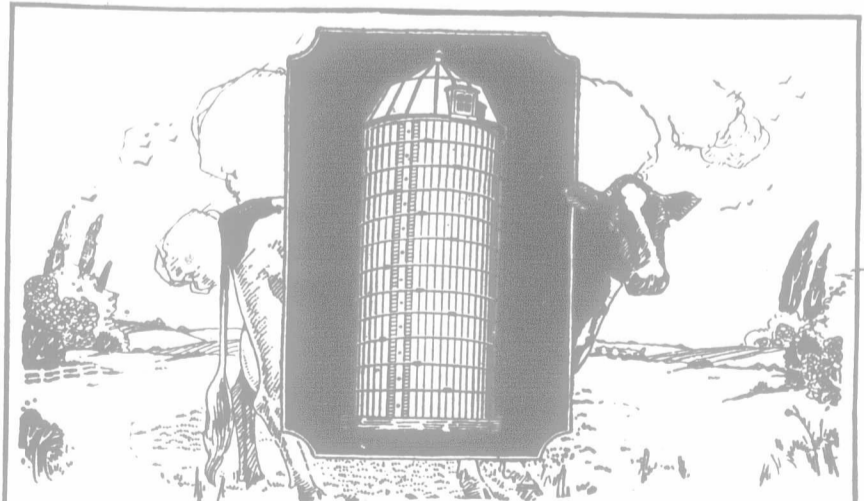
Enamels Lac-Shades

"A touch here or a coat there keeps  
furniture bright and the home looking  
comfortable and cozy.

"Do not sacrifice the comfort of the old  
arm chair when **Floglaze Lac Shades** can  
keep the woodwork looking new."

Renews and Finishes Furniture, Wood-  
work, Floors, Wickerwork. Write us for  
color cards. 10c. in stamps will bring a  
sample of any color Lac Shade.

**THE IMPERIAL VARNISH & COLOR CO. LIMITED**  
WINNIPEG TORONTO VANCOUVER  
CANADA



**Toronto Silo Means Dairy Profits**

The most economical silo is the silo that gives the greatest capacity for the money, while affording complete protection to the ensilage.

These things the Toronto Silo does. The Hip Roof gives you extra capacity. The double tongued and grooved staves of selected spruce give adequate protection against air and frost.

The Toronto Ensilage Cutter will complete your equipment and save you waiting on a hired machine. Gives you that smooth, trouble-free service so necessary to quick, profitable work.

Our booklets on silos and ensilage cutters cover the subject completely and are full of valuable information. Sent free if you request them.

**ONTARIO WIND ENGINE & PUMP CO., Limited**

Atlantic Ave., Toronto

Montreal Winnipeg Regina Calgary

ONTARIO WIND ENGINE & PUMP CO. LIMITED

**TORONTO**

**Partridge  
Tires**

**ON all your trips in case of emergency carry Partridge  
Tires. Partridge Tires never leave you stuck on  
the road--they are DEPENDABLE and finish those  
long trips that other tires fail to make.**

Made by The F.E. Partridge Rubber Company Limited Guelph Ont

**LANDS WANTED FOR... SOLDIER SETTLERS**

**POWERS** have been granted to the Soldier Settlement Board of Canada by Order in Council of the 11th of February, 1919, to purchase land to be re-sold to qualified returned soldiers who desire to make farming their permanent vocation.

To assist soldiers in settling in any suitable district in which they may wish to locate, the Soldier Settlement Board desires to have filed in each of their Provincial Offices a select list of farm lands available for purchase in each district of the Eastern Provinces, with full description and lowest cash prices of the same. Purchases by the Board will be paid for in cash.

The public are informed that this land is for purchase by returned soldiers, and must be of good agricultural quality, and reasonable price, making possible the success of the soldier as a farmer. It should be within seven miles of a railway, open, free from weeds, water supply assured, and of moderate price. In giving particulars, mention nearest market and school. In comparison with the vast supply of vacant lands, the number of farms immediately required will be very limited. Owners, therefore, will kindly assist the Board by offering for the present only land which fills the above requirements.

No commission will be charged or paid. No offers to sell will be binding on the person offering, unless a sale is effected, and no obligation will be on the Board to accept any offer.

If application from a returned soldier be received for the purchase of land, an inspection and valuation of such land may be made by the Board, as soon as free from snow. If approved, negotiations may be entered into for the purchase and sale thereof. An approved list is desired for each suitable district throughout Canada.

All communications concerning land in the Eastern Provinces should be addressed to the Provincial Supervisor of the Soldier Settlement Board for the province in which the land offered for sale is situated, a list of whom is given below:—

|  |  |
|--|--|
| <b>ONTARIO:</b><br>Mr. W. M. Jones, 32 Adelaide St. E.,<br>Toronto.        | <b>NOVA SCOTIA:</b><br>Mr. R. H. Congdon, 529 Barrington St.,<br>Halifax.                |
| <b>QUEBEC:</b><br>Lt.-Col. Bruce F. Campbell,<br>Drummond Bldg., Montreal. | <b>PRINCE EDWARD ISLAND:</b><br>Soldier Settlement Board, Riley Bldg.,<br>Charlottetown. |
| <b>NEW BRUNSWICK:</b><br>Mr. Wm. Kerr, Post Office Bldg.,<br>St. John.     |  |

**SOLDIER SETTLEMENT BOARD, Canada.**

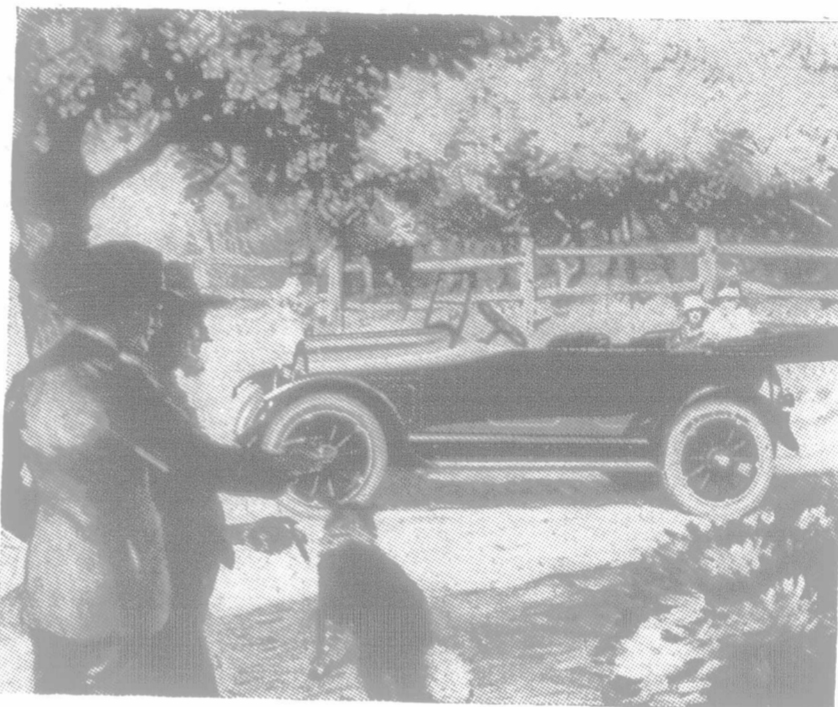
Let Us Know Your Brick Requirements Now  
Once the building season really opens up it is hard  
to meet the demand for a quality product like—

**MILTON BRICK**

We can ship NOW, from full stocks of Red and Buff  
Pressed, or the famous Milton "Rug" in varied shades.  
Let us know your needs.

**MILTON PRESSED BRICK CO., LIMITED**  
Head Office: Milton, Ont. Toronto Office: 50 Adelaide St. W.

**Overland**  
TRADE MARK



*"Apple Blossom Time, In An Overland"*

There is nothing more contagious than enthusiasm. The keen appreciation and deep respect that thousands of Overland owners so freely express, is an Overland asset of priceless value. This enthusiasm of Overland owners is our inspiration and obligation to produce cars that will perpetuate and enhance Overland prestige. The Model 90 Overland is completely fulfilling this obligation to old and new friends. Where road conditions are poor, its easy riding qualities inspire appreciation. Everywhere its operation, sturdiness, low upkeep and dependable performance constantly widen the circle of Overland friends. This enthusiasm of the spreading, contagious, inspiring kind is your safest buying guide.

**WILLYS-OVERLAND LIMITED**

Willys Knight and Overland Motor Cars and Light Commercial Wagons  
Head Office and Works, West Toronto, Ontario  
Branches: Montreal, Winnipeg and Regina

Model 90 Touring, \$1360; Model 85-4 Touring, \$1495; Model 88-4 Touring, \$2575;  
Willys Six, \$2425, f.o.b. West Toronto.

**"Edgegrove" HALLIDAY HOME NO. 18**



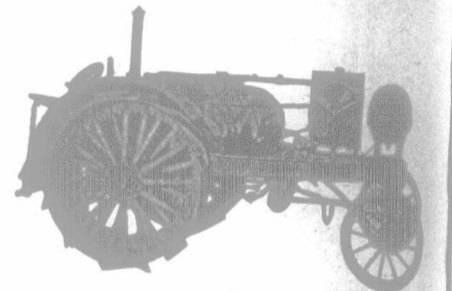
**Build From Free Plans**  
Save \$75.00 to \$150.00 architect's fees. Get complete Plans, Blue Prints, Detailed Drawings, Working Specifications and Bill of Material, absolutely free of charge—our Catalogue tells how.

**Buy Building Material at Factory Distributors Prices**  
Get your Building Materials direct from the source of supply. We are Factory Distributors of dependable Builders' Supplies, Tools, Hardware, etc. If you are planning any new buildings or if you have old buildings that need repairs or alteration, be sure to get our catalogue before going on with the work.

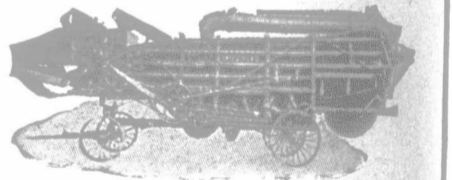
**CATALOGUE FREE**  
Ask for "Catalogue of House Plans and Building Materials." It's free to any interested person. Address—

**THE HALLIDAY COMPANY, Limited**  
Factory Distributors  
Hamilton Canada

**Tractors and Threshers**

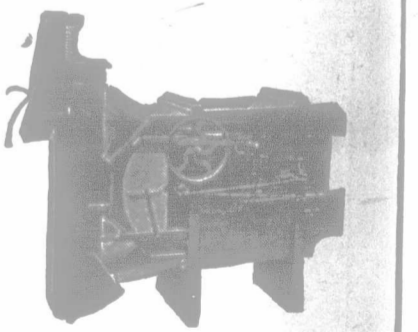


**WATERLOO BOY**  
The Simplest, most Accessible, most Powerful 3-Plow Tractor on the market. Suitable for hauling 3 Plows, Threshing, Silo Filling and General Farm Work.



Individual Farmers' Threshers, suitable size to be driven by small Tractors and Gasoline Engines. Do your own threshing. Keep your farm clean and save expense. Write for free catalogue, prices and any information wanted.

**THE ROBT. BELL ENGINE & THRESHER COMPANY, LIMITED**  
Seaforth, Ont.  
Also Steam Tractors, and large sized Threshers.



**The Kline Mill**

Sold at Auction after Inventor died, when new ones could be got, at Twice the Price of new ones To-day. The Public thought they would not get any more Kline Mills, in the vicinity of Beeton and near towns. It is the only mill that weighs and grades grain. In separating wild oats has no Comparison. Capacity One Hundred bushels an hour; also, power attachment. Easiest mill to turn made. Write for particulars.

**Kline Fanning Mill Co., Beeton, Ontario.**

**Next Year's Crop**

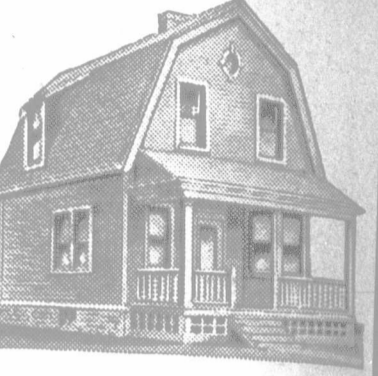
Prepare for a better crop next year by shearing this season with a machine. Work is much easier. You not only get longer, better wool without scorching the sheep, but leave a smooth stubble that will increase next year's growth.

Use a Stewart No. 9 Ball Bearing Shearing Machine. If your dealer can't supply you, send us his name. Write for catalogue.

**CHICAGO FLEXIBLE SHAFT COMPANY**  
Dept. B 161, 12th Street and Central Avenue, Chicago, Ill.

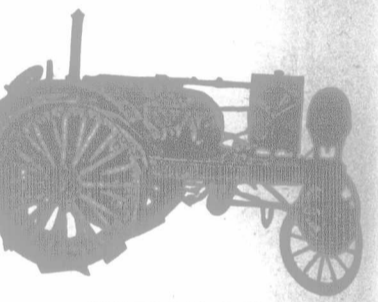
Various small advertisements and logos on the right edge of the page, including 'MOTOR GREASE', 'CANADIAN OIL COMPANIES, LTD.', and 'LONGWELL PUT UP'.

"Edgegrove" HALLIDAY HOME NO. 15

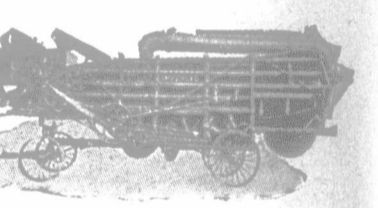


Build From Free Plans Save \$75.00 to \$150.00 architect's fees. Get complete Plans, Blue Prints, Detailed Drawings, Working Specifications and Bill Material, absolutely free of charge—our catalogue tells how. Buy Building Material at Factory Distributors Prices. Get your Building Materials direct from the source of supply. We are Factory Distributors of dependable Builders' Supplies, Pools, Hardware, etc. If you are planning new buildings or if you have old buildings that need repairs or alterations, be sure get our catalogue before going on with the work. CATALOGUE FREE Ask for "Catalogue of House Plans and Building Materials." It's free to any interested person. Address: THE HALLIDAY COMPANY, Limited, 1211 Front Street East, Toronto, Ontario, Canada.

Tractors and Threshers

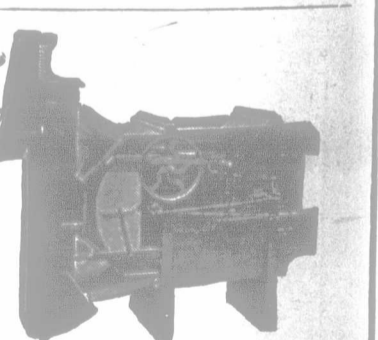


WATERLOO BOY Simplest, most Accessible, most Powerful Tractor on the market. Available for hauling, 3 Plows, Threshing, Silos and General Farm Work.



Individual Farmers' Threshers, suitable size to be used by small Tractors and Gasoline Engines for your own threshing. Keep your farm clean and free of expense. Write for free catalogue, prices and any information wanted.

THE ROBT. BELL ENGINE & MACHINERY COMPANY, LIMITED Seaforth, Ont. Steam Tractors, and large sized Threshers.



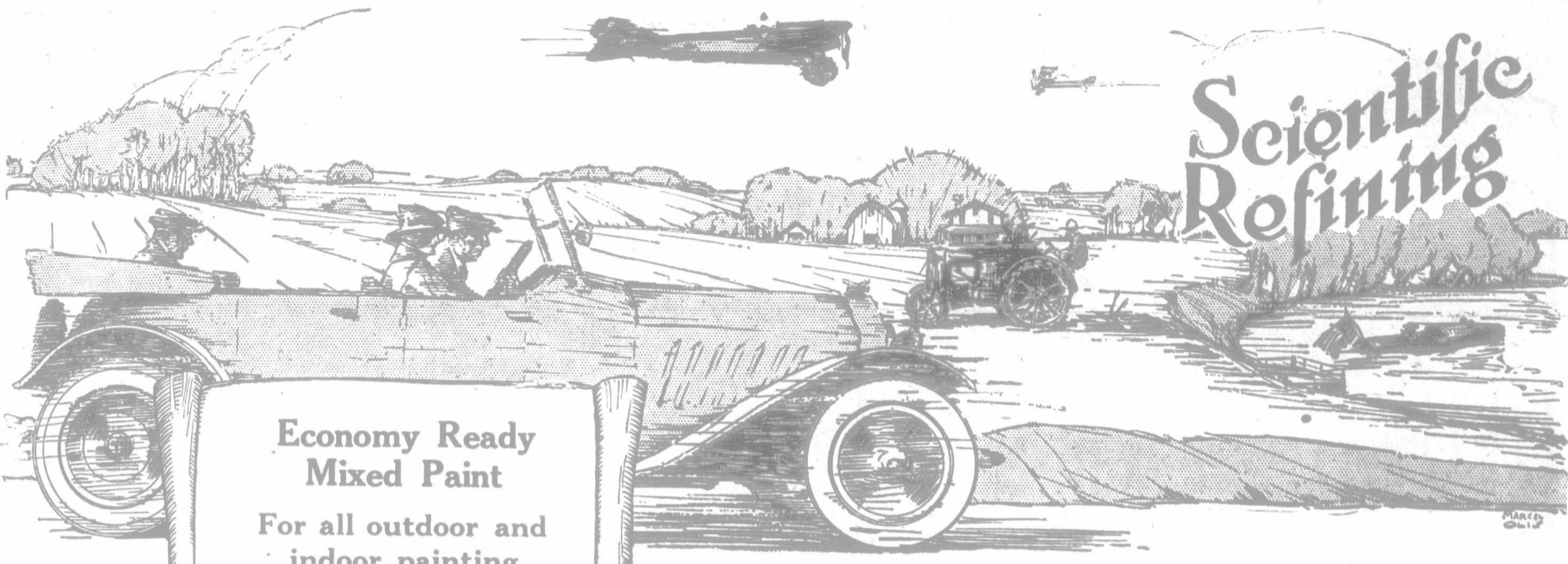
The Kline Mill

Auction after Inventor died, when new mill would be got, at twice the price of new one. The Public thought they would not get the Kline Mills in the vicinity of Beeton, Ont. It is the only mill that weighs grain. In separating wild oats has no equal. Capacity One Hundred bushels an hour. Power attachment. Easiest mill to use. Write for particulars.

Beeton Mill Co., Beeton, Ontario.

Next Year's Crop

For a better crop next year by shearing with a machine. Work is much easier, wool gets longer, better wool without shearing, but leaves a smooth stubble that is next year's growth. Stewart No. 9 Ball Bearing Shearing Machine. If your dealer can't supply you, send for catalogue. CHICAGO FLEXIBLE SHAFT COMPANY, 12th Street and Central Avenue, Chicago, Ill.



Economy Ready Mixed Paint

For all outdoor and indoor painting. Send for color card and prices.

Constant Responsive Power

GREAT rivalry exists among automobile and tractor makers in their efforts to provide maximum power. They work constantly and spend vast sums to improve and increase the power qualities of their motors. Probably your own choice of an automobile or tractor was guided by power records.

Since power, in the last analysis, is what you buy, why not be sure that your motor develops all that it is capable of? Why not use the motor oil that insures this wanted satisfaction?

En-ar-co National Motor Oil

The Scientific Lubricant

En-ar-co products have successfully passed through the crucial tests of nearly forty years of service. They are made as lubricants should be—scientifically refined by processes that eliminate all possibility of the oil carrying residue or coke-like substance.

As En-ar-co National Motor Oil is extra efficient, so are other En-ar-co products. White Rose Gasoline for greater power. National Light Oil for tractor fuel. Also best for lamps, oil stoves and incubators. En-ar-co Motor Grease for every lubrication point around the motor car or tractor. Black Beauty Grease for wagons.

Buy En-ar-co National Motor Oil the Economical Way

- In 50-gal. wood barrels
- In 30-gal. wood half-barrels
- In 50-gal. steel drums
- In 30-gal. steel half-drums

Buy of Your Local Dealer If He Has En-ar-co Products in Stock—If He Cannot Supply You, Mail Us Your Order Direct

Tell your dealer you want to try En-ar-co National Motor Oil and other products bearing the En-ar-co label. If he cannot supply you, write us.



Longwear Barn, Bridge and Roof Paint for lasting satisfaction. Put up in barrels and half-barrels. Write for color card and prices.

Canadian Oil Companies, Limited 1301 Excelsior Life Building Toronto, Ontario



Sent FREE

Canadian Oil Companies, Limited, 1301 Excelsior Life Bldg., Toronto, Ont.

I own..... (Give name above) automobile or tractor, and enclose two 3-cent stamps. Send me Handy Oil Can FREE. Please give nearest shipping point in this Province and quote prices on the items I have marked. I will be in the market about.....

(Give date above)

I use.....gals. gasoline per year

I use.....gals. motor oil per year

I use.....lbs. axle grease per year

I use.....auto grease per year

I use.....gals. kerosene per year

I use.....gals. paint per year

My Name is.....

Address.....

Post Office..... Province.....

Tear or Cut Out—Mail To-day

NOTE: This can will not be sent unless you give make of your auto or tractor.

### A Barrel of Apples from Each Six-Year-Old Tree

—a good crop—yes, but you can do it, by planting your trees with

#### C.X.L. Stumping Powder

Spade-planted trees have cramped and soil-bound roots and their growth is slow and uncertain. Trees planted with C. X. L. reach out with their roots and obtain all the rich fertility and moisture in the sub-soil. C. X. L. not only digs the holes for planting but it breaks up the hard pan.

Fruit trees planted with C. X. L. are healthier, stronger, grow faster and bear quicker than spade-planted trees.

Use C. X. L. for digging tree holes and ditches, for blasting boulders and stumps. Our booklet "Farming with Dynamite" tells how you can use C. X. L. profitably on the farm.

Send for your free copy today.

#### Canadian Explosives Limited

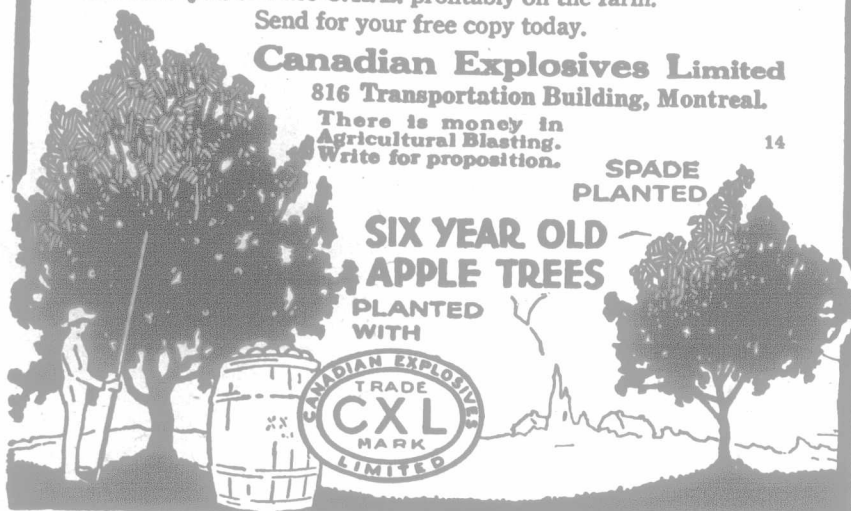
816 Transportation Building, Montreal.

There is money in Agricultural Blasting. Write for proposition.

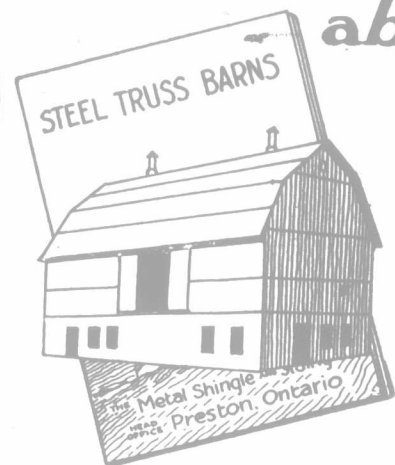
SPADE PLANTED

SIX YEAR OLD APPLE TREES

PLANTED WITH



## A Valuable Book about Barns



MANY a Farmer has told us that he first got the right idea about his barn requirements from a reading of our big Barn Book.

It is full of practical information—and explains our method of supplying Barns ready to erect—at prices which represent a big saving.

We manufacture on a large scale and buy our materials in immense quantities—that's why we are able to deliver you a barn big enough for a 100 acre Farm for the low price of \$1813.00.

Write for our Big Barn Book giving full particulars about Preston Steel Truss Barns. The Book is Free.

The Metal Shingle & Siding Company, Limited,

Preston Toronto Montreal  
120 Guelph St. 40 Abell St. 88 De Lorimer Ave.

**PRESTON STEEL TRUSS BARN**

## Test These Tested Seeds

The only seeds worth anything to you are the seeds that grow good vegetables. We have built up our big business with Farmers and Market gardeners by giving them seeds of proper vitality in

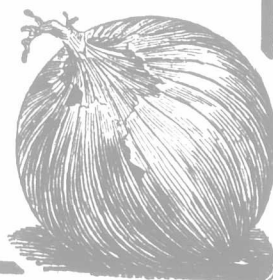


If you want plenty of fine, big, full flavored Onions, Celery & Cucumbers, plant these three McDonald specials:

|                      |      |         |         |        |
|----------------------|------|---------|---------|--------|
| ONION                |      |         |         |        |
| Prijetaker Red Globe | pkt. | oz.     | 1/4 lb. | 1 lb.  |
|                      | 10c. | 40c.    | \$1.40  | \$5.00 |
| CELERY               | pkt. | 1/2 oz. | 1/2 oz. | oz.    |
| Paris Golden Yellow  | 20c. | 60c.    | \$1.00  | \$1.75 |
| CUCUMBER             | pkt. | oz.     | 1/4 lb. | 1 lb.  |
| Perfecta Forcing     |      |         |         |        |
| White Spine          | 10c. | 25c.    | 75c.    | \$2.25 |

All Postpaid.—Write for Catalogue. It's a finely illustrated book replete with hints and helps of greatest value.

**KENNETH McDONALD & SONS LIMITED**  
2 Market Square, Ottawa, Ont. 4



## Sow Sweet Clover

EVERY year adds to its prestige as a fodder and pasture plant. Current prices for other clovers are testimonies not to their popularity, but to their wider and more-persistent failure. Sweet Clover is a surer crop, a bigger producer of splendid feed, and a wonderful soil builder as well. Solve this year's clove problem by sowing it. You will eventually, anyhow.

As a better plant than the others, finer and of better quality, with higher food qualities, we recommend our own strain, known as Canadian Albotrea. To our hundreds of customers of last year we wish to intimate that, while sales have been enormous, we have still a reasonable supply left. Orders given at once will be filled. Three weeks of business at present volume will clean us out of that strain. Send in your order at following quotations:

|   |   |   |                 |
|---|---|---|-----------------|
| Canadian Albotrea, First Grade          | - | - | \$25.00 per bu. |
| " " Second Grade                        | - | - | 20.00 " "       |
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| Size     | Plain   | Non-Skid | Size     | Plain   | Non-Skid |
|----------|---------|----------|----------|---------|----------|
| 28x3     | \$11.00 | \$13.00  | 36x4     | \$26.00 | \$29.50  |
| 30x3 1/2 | 13.45   | 15.45    | 33x4 1/2 | 26.50   | 34.00    |
| 32x3 1/2 | 14.50   | 16.70    | 34x4 1/2 | 27.00   | 35.00    |
| 31x4     | 20.20   | 24.25    | 35x4 1/2 | 28.00   | 36.00    |
| 32x4     | 21.40   | 25.65    | 36x4 1/2 | 29.00   | 39.00    |
| 33x4     | 22.60   | 27.10    | 35x5     | 42.50   |          |
| 34x4     | 23.40   | 28.10    | 37x5     | 35.00   | 45.00    |

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| 36x4 1/2 | 29.00   | 39.00    |
| 35x5     |         | 42.50    |
| 37x5     | 35.00   | 45.00    |

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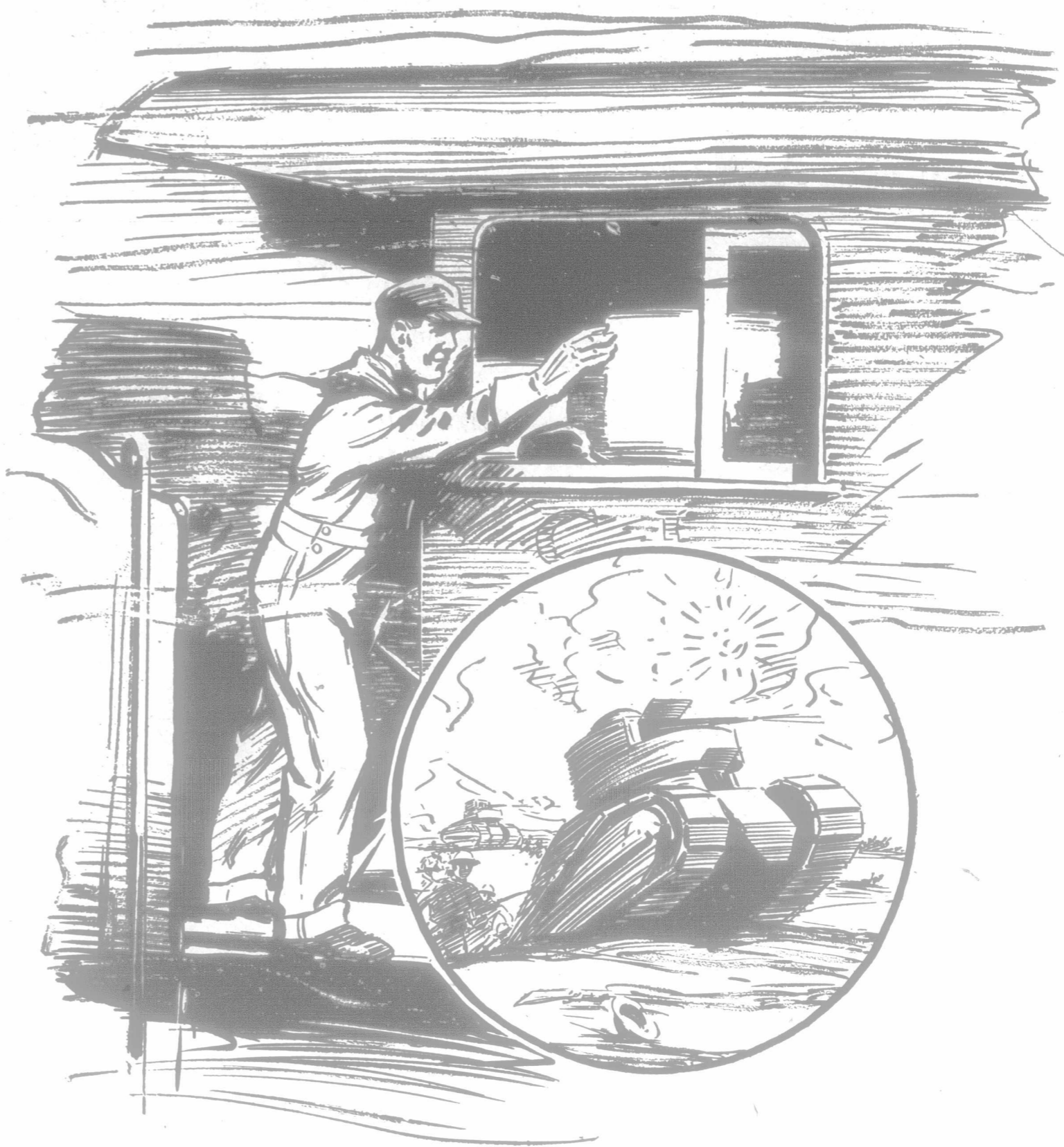
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# The Farmer's Advocate and Home Magazine

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1866

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LONDON, ONTARIO, APRIL 10, 1919.

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## EDITORIAL.

If the seeding is done properly there will not be much left to chance.

Feed the dairy cows well and get production while prices are at their highest.

Give the young chicks plenty of milk; they will respond to it just as will young calves or pigs.

Grass can be utilized, with profit, in pork production. Arrange for a small hog pasture near the buildings.

A pint of formalin will prevent a great deal of smut and increase the yield. Treat the oats and take no chances.

The stockman should produce, at least, a small area of roots. They are a splendid succulent feed and an excellent tonic.

Dairy produce is in splendid demand, and the future looks promising. The dairy industry is indeed on a firm footing.

In a recent interview the ex-Kaiser blames Russia for the war; if it had ended differently he would have taken the credit to himself and Gott.

The live-stock industry of Canada, the sheet anchor of our agriculture, now has an opportunity to expand. Surely we will not pass this opportunity by.

Members of the Peace Conference will not be home in time for seeding, but they will do a good act if they sow the seeds of righteousness and peace in Europe.

Give the land a stroke of the harrows and create a surface mulch. A seed-bed can then be prepared with much less work than though the surface were hard and baked.

Is the sire at the head of your herd good enough to effect some improvement? If he is not he is losing money for you every day you keep him. Breed up, not down.

Don't be in too much hurry about getting the cattle on pasture. Wait until there is some forage for them and the land is dry enough to withstand the evil effects of tramping.

If the towns and cities are to have Daylight Saving this summer they should store up a surplus for next season, when the scheme will, no doubt, be abandoned for good and all.

Prepare early for the spraying work, and have the equipment in condition. There is no profit in producing poor fruit, and a good product cannot be grown without thorough spraying.

Don't neglect the garden till after seeding is all done. Put in the early stuff at any rate and have it coming on. The garden affords many table delicacies at a time when they are most appreciated.

Are you reading the reports of Parliament carried weekly in this paper. The House is being reported by one of our own editors who ignores the political intriguing and attempts to give readers an actual and truthful account of what transpires in the House of Commons and in committee meetings.

## A Taste of Representative Government.

We were given a taste of representative Government when all party restrictions were banished and the House of Commons was permitted to discuss Daylight Saving on its merits, and in accordance with the wishes of the constituencies represented in the Parliament of Canada. Then it was that we got a real expression from the members, and then it was that a vote was taken which put into concrete form the desires of "sovereign voters" of this country. Under certain conditions the Government must take responsibilities peculiar to our methods of law making and ruling, but there is ample room for more full discussions and more freedom in voting than is generally the case at Ottawa. A member cannot always represent his constituency and remain true to his party. In such a case he should not be fettered provided, of course, that his viewpoint is not too provincial. Members too often ignore national questions, or allow their decisions to be influenced by local and petty considerations. In any event the country, as a whole, would profit if more legislation grew out of private members' bills. When the Government introduces a bill and asks all its supporters to vote in favor of it, or take the consequences, the resulting Act differs very slightly from an order-in-council.

## Start Right

This season's harvest will depend, to a very large extent, on our methods and practices adopted at seeding time, and efforts we put forth to make the crops a success. The elements, of course, have a decided influence but by proper cultural methods and the wise selection and treatment of seed we can reduce the evil results of unfavorable weather conditions to a minimum. Land poorly prepared and seed of inferior quality will not yield well under any circumstances, and if the season prove an unfavorable one the consequences may be very disappointing. In the rush of spring seeding do not slight any step in the preparation of the land or seed; if you do you will repent at leisure. Work the soil properly, fertilize where necessary, select only the best seed obtainable and then take the necessary precautions to prevent smut and other diseases in the crop. We can no longer throw the seed at the already hungry soil, and then hold a Divine Providence responsible for a good harvest. Yields are only produced where the seed-bed has been prepared, where the soil is fertile and the seed is full of life and of good quality. We are prone to overlook these things when the land is drying up quickly and, in some cases, baking, because it has not been given a stroke of the harrows. Take time to do the job well and then you will have nothing to regret.

## The Daylight Saving Fiasco.

The expression of opinion voiced by a united rural people was given consideration in the House of Commons when Daylight Saving was defeated by a majority of sixty-four. For once, at least, members of the House and Cabinet Ministers spoke and voted according to the dictates of their consciences and the wishes of their constituents. It was an example of representative Government with a vengeance. Judging by such a vote can anyone doubt for a moment that the masses of Canadian people who toil and spin are absolutely opposed to any perpetuation of the ridiculous measure which is alleged to save daylight. Those whose labors and efforts keep the wheels of industry turning and produce the food required at home and abroad are satisfied with the amount of sunlight which God has been good enough to bequeath us, and they furthermore seem satisfied with man's time-honored adjustment of the clock. Parliament must be given credit for transacting the business of the country in this

regard quite in accordance with the wishes of the Canadian people, but on the other hand we find the railroads, who, like the Kaiser, consider themselves responsible only to the Creator, disregarding the desires of the people they are supposed to serve, and adjusting themselves to the conditions brought about in the United States by parliamentary methods, which, to say the least, are not commendable. This in turn gives the town and city councils, made up largely of heads of firms and those who are not obliged to begin work early in the morning or continue late in the afternoon, an excuse to enact local daylight saving laws which add to the confusion. So far as we can learn the masses of Canadian workmen are not in favor of this so-called daylight saving fad, and if a plebiscite were taken in the urban centres we doubt if it would carry in many instances.

We have always deplored the breach between town and country, but if the urban centres continue to transact business on any time schedule they like, we can see only a wider breach and a deeper chasm to bridge. Such action will encourage more co-operative trading stores, and the farmer will be obliged to develop his own business along purchasing lines. Co-operative trading has wonderful possibilities in country places, and if this feature is given an impetus the urban tradesmen will have themselves only to blame. Agriculture is expressing itself in no uncertain terms and the time is coming when even the railroads, that omnipotent body, will be less indifferent to the rights of the people.

Whatever the outcome may be this summer it is doubtful if Daylight Saving will be tolerated at all in Canada, or the United States, next season, and in time we may get back to normal and reasonable conditions.

## Banish That Scrub Pure-bred.

The pure-bred live-stock business has arrived at a place in its development where the pedigreed scrub, (always an undesirable) is a menace to the whole live-stock industry. The registered sire and dam of good individuality are splendid foundation material, but the average breeder can only effect herd and flock improvement by using sires of superior quality and conformation. Owing to the concentration or intensification of blood, the pure-bred sire stamps his likeness upon the offspring to a marked degree; or, in other words, the pure-bred sire is more prepotent than the average non-pedigreed female because the latter is composed of more units, as it were, and has no definite or well-defined qualifications that have become fixed. Thus it is that a pure-bred bull of the proper type and character can sire offspring that conform to a higher standard than their dams, and this is the reason also that pure-bred sires should always be used at the head of all flocks and herds. Nevertheless, the powers which make the pure-bred sire such a valuable factor in herd improvement when of good quality and conformation, make him quite as productive of evil results when he is an out and out undesirable. The scrub pure-bred carries the same intensified blood in his veins as does his more worthy brother, and when mated with a moderately good herd the off-type, scrubby registered bull will, on account of his prepotent powers, lower the standard of quality in the offspring just as a good sire would have raised it.

This argument holds good with all classes of live stock, but we mention bulls because our cattle stocks stand most in need of improvement, and because almost daily we see pure-bred bulls, that should have been castrated, being sold by public auction and otherwise. Some unsophisticated cattle breeders seem to entertain the opinion that a bull is all right if he is pedigreed or can be called a pure-bred. This is an evil doctrine. The scrubby pure-bred bull is just as bad as a grade, and, in some cases, worse, because of his prepotency. The common practice is to add glory to the

## 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",  
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THE WILLIAM WELD COMPANY (Limited),  
London, Canada.

poor individual by elaborating on his splendid breeding, but no fashionable pedigree or noteworthy parentage can vindicate the scrub pure-bred or justify his use at the head of a herd.

Breeders of pure-bred stock have been too eager to dispose of their increases at remunerative prices. The breeder must make sales and good sales, too, in order to carry on his business but this practice of selling everything, regardless of quality, and without respect for the evil influences of the off-type bulls has been a detriment to the live-stock industry, which it will cost us a great deal to overcome.

We do not wish to imply that all breeders are tarred with the same stick. A great number have used discretion and the knife, and they are now the ones with enviable reputations and good business connections.

For the good of the industry this traffic in weedy pedigreed stock should come to an end. There is now a great deal of good stuff being bred and more can be produced when the demand is created. Breeders generally should discountenance the sale or use of poor bulls, and the breed associations ought to present any members with a knife who are caught trafficking in weedy stock dressed up in pedigrees.

### To Our Subscribers.

Much of the stability and success of the Farmer's Advocate and Home Magazine is due to the support we receive from our readers, and the spirit of co-operation which has always existed between the paper and its subscribers. This is evidenced by the large number of new names annually sent in by our readers, who appreciate "The Farmer's Advocate" and recommend it to their neighbors. If every subscriber would make a point of sending in one or two new subscriptions each year a larger number of farmers would soon be receiving the benefits now enjoyed by readers of this paper. "The Farmer's Advocate" is known far and wide as a farm paper with a high standard and a reputation for fearlessness and honesty. It is sane, clean and has won for itself the undisputed title of being the leading agricultural journal of the Dominion. You need have no hesitation in recommending "The Farmer's Advocate" to your neighbors and friends, because you know it is a suitable publication to have read in the home. By sending in new names you are helping us to serve you better, and you are helping us to carry on our good work in the interest of Canadian agriculture.

### Springtime Reflections.

BY SANDY FRASER.

Spring has come again. I can feel it in my bones. For ye ken I hae a touch o' the rheumatism noo an' again and spring is the time for gettin' yer feet wet in the slush an' water that's under the snaw wherever ye like to step. And unless ye will be "changin' yer feet," as my auld uncle used to say, twa or three times a day, ye're liable to suffer the consequences that follow the absorbing o' ower muckle cauld water. I'm mair or less o' a prohibition man mysel', but the at same time I dinr a believe in gaein' to extremes. Enough's enough, when t' comes tae water and a chap can generally tak' all he nees in the ordinary way.

But I mind the time when a wee thing like gettin' my feet wet 'didna bother me much. In my young days, at this time o' the year, I dinna think my feet were ever dry, unless maybe at night, after I'd been in bed for an' hour or so. And it didna seem tae hurt me ony, although ilka day wad be the same. I never used to think about it, and may be that's why; for they say what ye dinna worry over canna dae ye muckle harm. I wis liable to be too busy gettin' ready to begin sugar-makin', along towards the end o' March, to bethinkin' o' muckle else. I liked the job better than I did later on when I wis auld enough to be o' some help. But even in those days I used to be helpin', or imagined I wis on my way, by drawin' the sap-buckets around to the trees, and sometimes I wad be hangin' them on, after my feyther had tapped the tree an' driven the spile intae its place.

Gosh man, but I'd give a good deal to hae the ambition noo that I had in those auld days. I'd be runnin' for Member of Parliament or Councillor, or Road Commissioner, at the very least. But time tak's the "zip" oot o' ye, as I heard an auld chap say once, and ye find yersel' mair inclined to brag about what ye hae done in the past than to be attempting onything great in the present.

And that's pretty much the way I feel about the sugar-makin'. I'd be unco' slow in startin' in at the auld job to-day. But there's no muckle danger, for I cut doon ilka maple tree I had a good many years back. In fact, just as soon as I had ony say in the matter, the auld bush went. I argued that there wis mair money an' less hardship in growin' corn an' clover on the ground where the trees were than in tryin' to mak' a wee bit o' sweet to put on oor bread, wi' maybe a few gallons to sell to some chap in the toon that wad call ye a Jew because ye asked seventy-five cents a gallon for it. Aye, an' I've seen us have to tak' fifty.

It wisna till the time these improved methods came into vogue that I made mysel' real sick o' the hale business. Up tae that time I used to get mair or less fun oot o' it. I didna hae muckle o' the responsibility and it wis about as guid as campin' oot, to be takin' yer meals in the bush, an' maybe havin' a bunch o' youngsters comin' around, once in a while, for a sort o' a taffy-party. We used to boil the sap doon in big iron kettles in those days, and the quality o' the finished product wasn't what wad pass for number one, accordin' tae the standards o' the present time. But it wis unco' sweet, and for us that didna ken ony better it wis as guid as we wanted. As I mind it noo, it had a flavor that was a wee bit ahead o' onything in that line that I hae come across since. Of course I ken there was naething seriously the matter wi' my appetite around that time o' my life and some allowance may have to be made for that. At ony rate, I took mair interest in the work then than I did later on. I mind tryin' to get my feyther to let me stay in the bush all night, one time, when there wis a lot o' sap on hand and prospects for mair o' it the next day. I wanted to keep the fire going and catch up. But my feyther wis a man o' moderation an' he says to me, "Na na, Sandy, come hame and gang tae yer bed. There'll be sap rinnin' frae the trees lang after you an' I are deid, sae there's na use tryin' tae get it all, so come along hame."

And I went. But just the same the notion o' boiling doon that sap was still in my heid. So, as soon as a' the rest o' the folks had gone tae bed and I wis pretty sure they were asleep, I got up and intae my pants and jacket and headed for the bush. It didna tak lang to get the fire going again and I soon had the auld pots tryin' to rin the sap over their sides intae the fire. By three o'clock I had the last pair o' sap in the kettles and I winsa lang in gettin' back hame and intae my bed, which I managed to dae wi' oot onyone in the hoose bein' ony the wiser.

I slept late that morn', and when I wakened up the first thing I heard wis my feyther tellin' what had happened in the bush. He had gone back first thing to put on a fire and get an early start for the day. "And what dae ye think?" says he. "Some scamp came around last night and pulled the bung oot o' the tank and ilka drap o' the sap has rin awa' intae the ground." "Did ye taste what wis in the pots," says I, comin' oot frae my room. "Gin ye did ye'd hae found it pretty sweet, I'm thinkin', and maybe that's where yer sap has gone." He looked at me for a meenute an' then just kind o' laughed and went off tae the barn to attend to the coos an' horses.

But, as I hae given ye to understand, the time came when I wasn't sae anxious to be puttin' in over-time in the sugar-camp. We bought one o' these evaporators and I wis given full charge o' it. They say that responsibility puts backbone intae a man. In that case I must hae developed some thing along that line that wad hae done credit to an ox.

I heard a preacher say once that machinery had taken maist o' the poetry oot o' life in the country, and when I thought o' that evaporator o' mine I couldna help sayin' "Amen." It took the poetry oot o' me, onyway. And gin I ever, by ony chance, gae back to makin'

maple sugar again, it will be wi' the auld pots an' kettles, hung on a fence-rail between a couple o' trees. The stuff I make will maybe taste o' ashes an' cedar chips an' a few ither things, but it will carry my mind back tae the auld days, if naething else, and that will be the next best thing to gaein' back in reality and startin' oot all over again.

### Nature's Diary.

A. B. KLUGH, M.A.

#### Birds of the Week.

The Chipping Sparrow may be recognized by its chestnut crown, plain, unspotted breast and black bill. The only birds in Ontario which at all resemble it are the Field Sparrow, which has a reddish bill, and the Tree Sparrow, which has a dark spot in the centre of the breast. The Chipping Sparrow, was before the advent of the House Sparrow, a very common dooryard bird, and even yet it is often found occupying a nest in the vines on the house. It is a decidedly beneficial species.

The Savanna Sparrow is an inhabitant of the pastures. It looks a good deal like a Song Sparrow at first glance, but a more careful inspection reveals a yellow line over the eye.

The Vesper Sparrow is a very common bird of the fields and roadsides. It may be distinguished from all the other sparrows by the white outer tail-feathers which show when the bird is in flight. Its name is derived from its habit of singing lustily at dusk, though as a matter of fact it sings quite as lustily early in the morning. The food of the Vesper Sparrow for the year consists of sixty-nine per cent. vegetable matter and thirty-one per cent. animal matter. If we consider the food for the spring, summer and autumn months, that is, during the period which it spends with us, we find the animal food slightly in excess of the vegetable food. The animal food consists entirely of insects, mainly of beetles and grasshoppers. As soon as beetles appear in the spring the Vesper Sparrow is on the alert to capture them, and by May they constitute one-third of the total food. As grasshoppers become more and more abundant with the progress of the season, they increase proportionately in the diet of the Vesper until they become its chief constituent. In July grasshoppers form forty-one per cent. of the food. As soon as seeds begin to ripen they begin to appear in the menu of this species. Of the seeds eaten one-half are those of noxious weeds, about one-quarter consist of grass-seed, mainly of those grasses which are weeds, while some eleven per cent. is grain. The latter is eaten mostly in August, and consists of grain picked up in the fields after harvest.

The Flicker makes its arrival known by its loud and varied, but quite characteristic, calls. This species has a host of common names, being called High-holder, High-hole, Yellow-hammer, Golden-winged Woodpecker, Yucker, Yarrup, Pigeon Woodpecker, Wake-up, Clape, and Yellow-shafted Woodpecker. Its chief identification mark is the white rump which shows very conspicuously when the bird is in flight. The male has black cheek-patches, lacking in the female.

The Flicker is a bird of the open country rather than of the forests, and is the most terrestrial of the Woodpeckers. It rears from six to ten young in each brood. The nest is built in a cavity usually excavated in a partially decayed tree. The young find their voices very early in life, and by the time they are a week old they make a great outcry every time they receive a visit from their parents.

The food of the Flicker consists of 60 per cent. animal food and 40 per cent. vegetable. The favorite food of the Flicker is ants, and they constitute 80 per cent. of the total food in April, 79 per cent. in May, 79 per cent. in June, 70 per cent. in July, 61 per cent. in August, 42 per cent. in September and 21 per cent. in October. A Flicker has been known to eat 5,040 individuals of a small species of ants at one meal. The question then as to whether the Flicker is a beneficial or an injurious species resolves itself into the question as to whether ants are beneficial or injurious. In agricultural areas there is no question but that ants do more harm than good. Their worst sin is that they protect and foster plant-lice in every possible way, because of the sweet excretion which the plant-lice exude from their alimentary tract which is greatly relished by the ants. Since plant-lice are highly injurious to many kinds of cultivated plants, the Flicker is rendering a service to the horticulturist and farmer by the destruction of their protectors.

The Cowbird is a species in which there is a very marked difference between the sexes. The male is glossy black with a chocolate-colored head, while the female is a dun-colored bird, without conspicuous markings of any kind, somewhat resembling a dull and over-grown female House Sparrow. This species is the only Canadian bird which shirks the responsibility of building a nest and raising a brood for itself, and in this way it resembles the European Cuckoo. The female Cowbird slips her egg into the nest of smaller birds, such as Warblers, Vireos and Sparrows. When the young Cowbird hatches it is larger and stronger than the rightful heirs and raising its head higher, and opening its mouth wider it gets the greater proportion of the food brought to the nest, with the result that the other nestlings gradually starve to death. The hatching of one young Cowbird then means the loss of a brood of some of our smaller birds. And not only one brood, but often of two or perhaps three broods, for in the case of birds which would normally raise two or three broods in the season they are prevented from doing so by the demands for food of the young Cowbird which, now far larger than its foster-parents, follows them about begging for food until the fall.

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## THE HORSE.

### Foaling Time.

#### Article II.

While in a large percentage of cases the act of parturition in mares is effected in a normal manner without the intervention of man; cases in which this does not occur are so numerous that we think it wise to keep a close watch on all mares about to bring forth young. The task of watching should be entrusted to a reliable man, and if he have some knowledge of the anatomy of both dam and foetus, and also some understanding of obstetrics, and the manner in which parturition takes place, the forces that produce it and the various conditions that tend to prevent and complicate it, and has skill to remove these obstacles, of course, it is all the better. Even though he may have no special as an obstetrician, if he has an intelligent idea of the act when it occurs in a normal manner, he will be able to recognize abnormal conditions, and, if not able to rectify them himself he can promptly send for an obstetrician. A very important point with a veterinary obstetrician is to know when to interfere, as, as much harm is often done by premature or irrational interference as is at other times by too much delay. Some mares, especially those producing their first young, become excited by the presence of man; while rarely the reverse is the case, i. e., the presence of man, especially her groom or master, appears to have a salutary effect upon the mare during labor pains. In most cases it is wise for the watcher to keep as quiet as possible, and practically out of sight of the mare, but at the same time in such a position that he can observe her actions and note the progress being made towards delivery. He should not be too anxious to help; he should be content to allow nature a reasonable length of time to perform her functions, and when the act is making fair progress he should continue an interested but non-interfering spectator. He should see that the surroundings do not interfere with delivery. While in most cases the mare appears to exercise a great degree of intelligence, we sometimes notice that during the excitement caused by the pains she appears to have lost the intelligence or interest usually shown and will lie with her croup so close to the wall that delivery cannot take place, and if left alone the foal will perish and more or less serious complications may be caused in the dam. In such cases the attendant should interfere promptly and cause her to rise, and if he cannot do this he can at least shift her sufficiently by pulling her by the tail or in other ways to allow room for delivery. It is not uncommon in cases of easy and rapid birth, for a foal to be born enclosed in the membranes. So long as the circulation between the mucous membrane of the womb and the foetal membranes continues the blood of the foetus is purified by a supply of oxygen from that of the dam, but so soon as the membranes become disconnected from the womb the foetus must receive oxygen from the air, hence if born with the membranes intact it will perish unless these be promptly ruptured. Instinct is supposed to cause the mare to at once rupture those with her teeth, but experience teaches us that even when birth is easy and not preceded by any considerable pain or distress, she will generally be a few minutes after delivery, and in the meantime the foetus will perish. When this condition exists the attendant should free the foetus with his knife and expose it to the air. In this and in all cases where the navel cord is not severed he should at once disinfect it with the solution of corrosive sublimate or other antiseptic, and, with the cord that has been soaking in the carbolic solution, tie it tightly about an inch from the abdomen and by a scraping motion of the knife sever it about an inch below this. When the cord is severed in this manner, even though the ligature should become severed, bleeding will not be nearly so great as if it had been severed by a straight cut with a sharp knife. Again, instinct is supposed to teach the dam to sever the cord with her teeth, but she frequently fails to do so, and, unless the attendant does it the membranes remain attached to the foetus by the cord, and materially interfere with its actions. The attendant should remove all mucus from the colt's mouth and eyes, and, unless the dam rises and attends to it he should rub it with cloths or wisps of hay until it becomes dry. When it struggles to gain its feet he should assist it, and, if necessary, hold it up to nurse, but if the foal be strong and smart, and the dam is giving it the proper attention, probably the less interference given the better, and this especially applies if the dam be cross or cranky with the attendant, but it must be understood that if the foal be not strong enough to rise and nurse, in at most two hours after birth, it is necessary to assist it, even though it be necessary to secure more help in order to control the dam.

As soon as practicable the attendant should remove the membranes or afterbirth, and all wet and soiled litter and replace with dry straw. In some cases the dam is unnatural and vicious with her foal, and, if not prevented, will injure and probably kill it. In such cases she must be controlled or the foal removed. The application of a twitch will usually control her when the foal can be guided to the mammae and if necessary assisted to nurse. Some claim that sprinkling salt on the foal tends to prevent trouble of this nature. Others claim that spraying or rubbing the body of the foal and the face and nostrils of the dam with brandy has never been known to fail, but we have seen cases where all methods failed. In most cases the dam soon becomes reconciled, but it is often necessary to watch the mare closely, or even remove the foal between nursing periods for a time.

In some cases of parturition labor pains have been

severe and frequent for a considerable time, yet no apparent progress is being made towards delivery. In such cases the attendant must decide that some abnormal condition exists and that there is some cause operating to prevent delivery. It is then his duty to ascertain what the trouble is and remove it if he can. By rolling up his sleeves, oiling hands and arms and inserting hand through the vagina he is able to reach the neck of the womb, and if the opening through this has become dilated the hand will readily enter the womb. After discovering the cause of non-delivery if he has sufficient knowledge and skill to remove it he should do so promptly but should avoid hurry. If he cannot discover the exact cause of trouble or decides that he cannot rectify it he should get skilled assistance as soon as possible, as a skilled obstetrician if promptly called, can, in most cases, succeed in saving the life of the dam, and in many cases that of the foetus also; while if unskilled interference has been carried too far and too long a time has elapsed, complications which cannot be overcome may have arisen, and one or both perish. As soon as possible after birth the attendant should dress the colt's navel with a strong antiseptic, as the solution of corrosive sublimate already mentioned or a 10-per-cent. solution of one of the coal-tar antiseptics or carbolic acid, and should continue to apply it several times daily until the parts become entirely healed. This, in most cases, is an effective preventive for joint-ill.

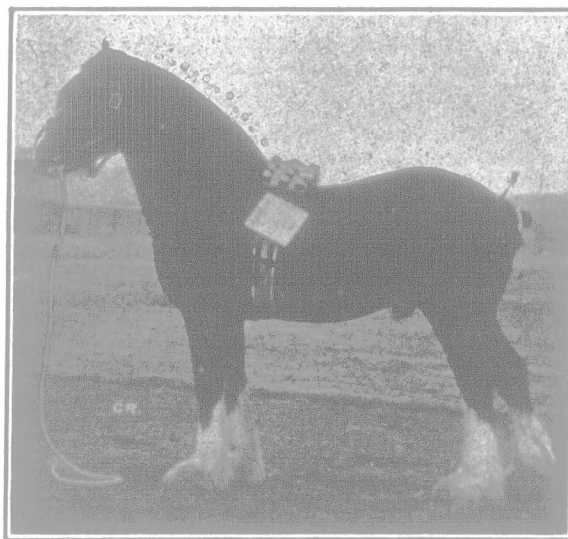
Other reasons why a mare should be watched at this critical period could be mentioned, but space will not permit.

WHIP.

### Light Horse Shows in England.

Newmarket was once more (and for the last time) the venue of the "National" Light Horse Shows, i. e., the exhibitions assisted by the Government who hope to foster the enterprise of hunter, officer's charger, and artillery-horse raising.

For the Thoroughbred Stallion Show the Government gave £20,790, of which £1,500 went to premiums for horses to travel in Scotland. Some £165 were devoted to hunter sires, and £125 to pony and Arab sires. There were no mare classes. "What like"



Ardendale.

Winner of the Cawdor Cup, Glasgow, 1919.

the mares are, that these expensive luxuries are put to, I would not care to venture an opinion. It cannot be said that this venture on the part of the Government is a success; the stock that emanates from the crossing of Thoroughbred, i. e. race-course racing horses, upon mares that are not too good for the purpose—they are cart mares, light-legged mares, Clydesdale crosses, Pony crosses, etc.—do not produce the types sought for. But we are generally short of a constant supply of officers' charges and more will have to be done in the future to blend our blood lines and our manifold types into the channels which spell utility types. Of course, if President Wilson wrangles his League of Nations stunt through in Paris—well, what is the good of breeding army horses? Let's start crossing aeroplanes on dromedaries, or line breeding with commercial tanks and see what we get in the way of farm tractors!

There were 132 stallions entered for the £20,790, and some were tall sprinters, and a few were stout-hearted stayers, but they were very few. The King gave his gold cup for supreme champion Thoroughbred stallion and this fell to an Irish-bred horse, Rathurde, owned by a Yorkshire breeder, Captain Wickham Boynton.

Among the hunters the chief prizes fell to Mrs. R. C. Bainbridge, Messrs. C. J. C. Hill, H. D. Smith, and a syndicate of farmers in Norfolk. In polo ponies C. Howard Taylor, Doucester, won the championship, and the best Arab was a flea-bitten grey exhibited by D. P. McDougal, but the critics—the fans on the fence rail—howled with derision at that decision.

The Hackney Show—which is not financed by the Government—was the last of the 1919 round of spring shows held at Newmarket this year. The classification was kept to stallions from two years old and upwards. Entries fell off to 64, from 86 for the schedule of prizes in 1918. Top of the two-year-old class stood Mrs. Fletcher's (York) Angram Champion, and he was later on declared the junior champion of the show, being placed over H. C. Callaby's Hunston Candidate, a son

of Leopard which was the sire of Miss Vanclair's The Whip, a big winner in U. S. A. Best of the three-year-olds was F. H. Lewis' Creake Commander, and winner in "small" horses four years old and over, (that is horses over 14 hands but under 15.2) was Robert Scott's Flash Mathias, a son of the lately defunct Mathias, and, of course, "all Scotch," hailing from Carluke. This great going son of the modern pillar of the Hackney breed, is a stallion of rare mettle and goes finely in harness, which is a true test. He now beat Sir Lees Knowles' Salford Victor, which defeated him last year but it will always be a near thing between them. In the "big" horses, exceeding 15.2, we found a tough proposition for the judges. The London champion of 1917, Walter Briggs' Adbolton Kingmaker, was faced by the Newmarket champion of 1918, Captain B. Mills' Hopwood King. They were ultimately placed in that order and that also was the result of the senior and the supreme championships.

The champion Hackney pony was W. W. Bourne's Fæsee, a stallion which nearly came to U. S. A. where he was to have been "altered" to a show gelding. Bourne prevailed upon his buyer for the States to let the little gamecock stop at home, and the breed hasn't got a finer getter or a finer goer. He beat a dun pony in Mrs. A. C. King's Harviestown Wattie, Scots bred.

The Hackney can "come back" in Britain if it is bred for utility purposes. A class was set apart for Hackney stallions considered good enough for breeding artillery horses, or other horses suitable for army purposes

The horses which came out for it were flat bones, big ribbed, short backed horses with shoulders denoting strength and with strong hind quarters, i. e. they were not narrow-gutted, slab-sided things which some people call Hackneys. Two horses bred on much the same lines led—first going to A. M. R. Monson's Lovat Shales, and third to H. R. H. the Prince of Wales' Findon Grey Shales, a strapping great horse with the courage of a lion. Dividing them was J. W. Lett's Priory Toreador, a Yorkshire Hackney of size and substance and not too much extravagance about his action. The Prince's horse won in 1918, but he is a temperamental gentleman and only "went" in patches this time.

ALBION.

### Better Farm Horses.

EDITOR "THE FARMER'S ADVOCATE":

The properly-conditioned young horse, with its early training largely completed, is one of the most perfectly finished products of the farm. The ordinary farm with its wide use of horses furnishes ideal conditions for growing, developing and training young horses. The farmer who keeps a few choice mares to do his farm work, and raises a few colts to sell each year, may add substantially to his annual income and at the same time have good matched teams to do his farm work. The actual cost between growing the right kind and a mongrel is so small that a man who has a reasonable knowledge of horses and takes pride in them is not justified in starting with inferior mares and depending upon the good qualities of the stallion to correct the natural defects in the progeny. The most successful breeders are men who have made the advance from grade to pure-bred stock gradually. There is nothing about the breeding and rearing of pure-bred draft horses that anyone is not able to learn; still they need better treatment than most farmers give their horses. Pure-bred horses do not require pampering but they do require good care and enough wholesome feed. If one has been successful with grades, he will find the transition to pure-breds is an easy one, and he will find no difference between the grade and the pure-bred stock. He may safely buy a team of pure-bred mares. If he knows nothing about draft horses, he will do well to grade up his horses for some years before he invests in expensive breeding mares; at least, he should gain necessary experience before he makes the change. After selecting a team of the best mares he can afford to own, he should mate them with a stallion of one of the leading breeds of draft horses. The stallion's weight should not exceed five hundred pounds more than the mare with which he is mated. In all lines of animal breeding we find that nature dislikes a union of widely different types, and that it will usually produce better results to mate the mares with stallions of fair size with good quality and good appearance.

Wellington Co., Ont.

J. G. G.

### The Glasgow Stallion Show.

The fifty-ninth annual show of Clydesdale stallions was held at Glasgow, Scotland, early in March and a very fine showing of the breed was made. The attendance was large and embraced a very considerable percentage of overseas-service men. In the class of aged stallions there were 39 entries, and almost all of these were forward. Many good judges were of the opinion that at least half a dozen of these horses were as good as have ever been seen at Glasgow. The premier place in this class was secured by Dunure Refiner, which was purchased at the Dunure Mains Dispersion on January 14 for 3,500 guineas. He was got by Dunure Footprint, out of a Montrave mare, and is descended from the world-famed Moss Rose. His chief rival was Ardendale, an extremely stylish horse possessing plenty of substance, and a good mover.

The class for three-year-olds had 36 entries. Here, Dunure Obligation, another Dunure Footprint colt, was placed first. Second to him came Birkenwood, got by Dunure Birkenwood, and shown by James Gray. Next came Royal Footprint, still another Dunure

Footprint colt, and out of Queen Baroness, by Baron's Pride. He was first at Aberdeen last year.

The two-year-old class was one of the best of the age ever seen at Glasgow, being made up of 23 entries. First place went to Rising Star, and second place to Passendale, but this decision was arrived at only after the panel of judges had called in an umpire, so close was the contest. Rising Star is a short-legged, very thick colt and representative of the weighty, cart-horse type rather than of the modern, upstanding kind.

In a class of 23 yearling colts, James Gray won premier honors with Risque, a colt got by Apukwa, out of Mollie of Birkenhead, the dam of Birkenwood.

In the finals, Ardendale, Dunure Obligation, Rising Star and Risque competed for the Cawdor Cup. Dunure Refiner which won the aged stallion class, being already a winner of the Cawdor Cup as a two-year-old, could not compete. Finally Ardendale secured the trophy, with Dunure Obligation reserve. However, Dunure Refiner won the Brydon Challenge Shield, which made him the supreme champion of the show; Ardendale stood reserve for this trophy.

**LIVE STOCK.**

- The best advertisement is a pleased customer.
- The value of a good sire can hardly be estimated.
- An auction sale of 48 Angus cattle in Iowa made an average of \$542.62.
- Theo. Martin's Shorthorn annual sale at Bellevue, Ia., made an average of \$754 for 42 head.
- A permanent agriculture depends upon live stock. Plan on having the live stock of the best quality.
- Consider the top crosses on the pedigree rather than lay undue stress on the animals eight or ten generations back.
- If only pure-bred sires with good individuality were used how long would it be before Canada's rating as a live stock country would be doubled?
- At the Milking Shorthorn Congress Show and Sale at Erie, Penn., on March 20 and 21, 106 head averaged \$516 with a top of \$1,850 for a two-year-old heifer.
- It is estimated that there are 126,000 more cattle in the United Kingdom now than in 1914; sheep, however, show a decline in numbers of upwards of 900,000.
- Iowa Shorthorn breeders recently held a show and sale when nearly 400 head went under the hammer. Gainford Stamp a senior yearling was champion in the bull section and sold for \$1,700.
- At several auction sales held recently a number of young bulls passed through the sale which should not be allowed to reproduce their kind. They are a menace to the live-stock industry. When will pure-bred breeders awaken to this fact and castrate the scrub pure bred?
- In response to numerous requests the table on "Common Diseases of Swine" is being published in this issue. It gives causes, symptoms and treatment of the common ailments to which the porcine tribe are subject. Tack this table up in a convenient place for ready reference.

**Basement Plan for Square Barn.**

EDITOR "THE FARMER'S ADVOCATE":

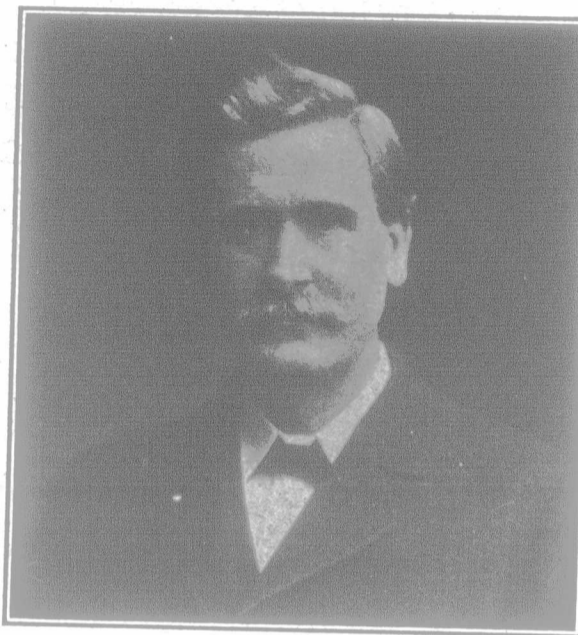
The accompanying barn plan is for a barn 50 feet square, on a 12-inch foundation. A barn of this size is large enough for a 50-acre farm. On the south side are four horse stalls, also a box stall with a fresh-air inlet and a harness room. The hay chute is centrally located for feeding the horses and the oat box is under the stairs. On the east side are two long pens, 11 by 13 feet, with a 5-foot passage between them and the root cellar. The diagram shows a door leading out of one of the hog pens and connecting with a door leading from the stable to the outside. When hogs are to be loaded for shipping, the doors are swung so that the edges meet and are fastened together with a right-angle clasp. On the west side of the basement is the cow stable, with four single stalls and three double stalls. There is also a box stall for sick cows or calves. The root cellar is partially in the basement and partially under the barn approach. The water tank is centrally placed between the pens and stalls. There is an abundance of light in this basement and also a system of ventilation which works satisfactorily. A litter carrier could be installed behind the cows and through the passage to the hog pen, or, as is shown in the diagram, a horse and cart could be used for cleaning out the cattle stable. I would not want a better basement lay-out than this; it suits me for the number of stock which I keep on my farm.

Victoria Co., Ontario. C. M. TOWNSEND.

**A Highly Honored Scotsman,**

BY A SPECIAL CORRESPONDENT.

In the annals of the breed societies of the Old Country no name is more highly honored than that of Archibald MacNeilage, Secretary of the Clydesdale Horse Society of the United Kingdom of Great Britain and Ireland. All through life he has steered a perfectly straight course, and has thus, in the fullest sense of the term, retained the confidence of breeders and exporters in every part of the world. Besides having proved himself a model secretary of a great breed organization, he has gained world-wide fame as the Editor and Manager of The Scottish Farmer, perhaps the most influential agricultural newspaper in the United Kingdom. To these duties he added that of Secretary of the Glasgow and West of Scotland Agricultural Discussion Society where some of the finest minds in the country have



Archibald MacNeilage. Who was recently honored by his fellow countrymen for his invaluable services to agriculture.

unfolded schemes for the betterment of the national industry, and the practical results which have accrued from these lectures and discussions have had an abiding influence not only on the science and practice of agriculture but in the shaping of the more modern legislation. It was, therefore, fitting that Mr. MacNeilage's fellow-countrymen should conceive the idea of marking in some degree their appreciation of his services. Some twelve months ago Mr. MacNeilage came through a serious illness, and it was then that the testimonial took shape. Subscriptions were freely sent in to the committee not only by agriculturists in the home counties, but from the Overseas Dominions and other countries. The presentation ceremony took place on the 5th of March in the large ball-room of the Grosvenor Restaurant, Glasgow, when the immense apartment was crowded with an audience of ladies and gentlemen thoroughly representative of British agriculture. The

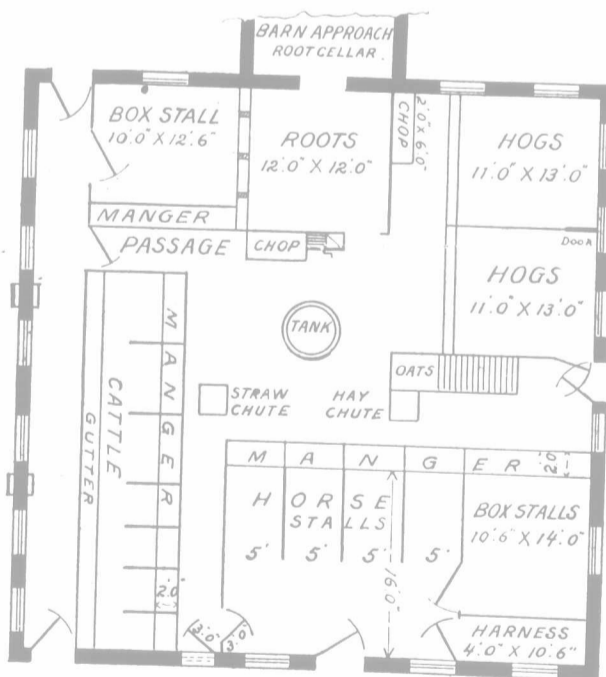
so. Mr. MacNeilage had been connected with the Clydesdale Horse Society for 41 years, and for 38 years he had been Secretary of that body. Mr. Strang then gave a number of details connected with the work of the Society, mentioning that the membership now stood at 3,259. For 30 years Mr. MacNeilage had been Secretary of the West of Scotland Agricultural Discussion Society, an organization which had proved to be of immense importance to the agricultural interests. Their guest had also come prominently before the public as Editor and Manager of The Scottish Farmer, an agricultural journal which was extensively read in every part of the world. One of the most important features of his work in connection with the newspaper was his fearless criticisms of the exhibits at their agricultural exhibitions, but as he was a most excellent judge of stock of all kinds, and particularly of Clydesdale horses, his opinions were received and looked upon as being just and thoroughly honest, and they were invariably accepted as such. It was on account of the good and useful life which Mr. MacNeilage had led, and the appreciation which his friends and well-wishers entertained for him, that the testimonial had been promoted. It was a source of great satisfaction to be able to present to Mr. MacNeilage the silver salver, and with it a cheque for £2,000. The inscription of the salver read as follows: "Presented to Archibald MacNeilage, Esq., along with a cheque for £2,000, in appreciation of his worth as a man, and in recognition of the valuable services he has rendered to agriculture—5th March, 1919."

Mr. MacNeilage's reply was in general of a reminiscent character. He entered the service of the Clydesdale Horse Society in May, 1878. The Society had been founded in June of the previous year. Of the seven who subscribed to the original Memorandum of Association none survived, the last to pass away being Colonel Williamson, of Lawers, who died a few years ago. It was, he said, characteristic of the changed times that while the Council now consisted almost exclusively of tenant farmers, on the first Council there were not more than one-third tenant farmer, the others being landlords, factors, or those engaged in business with whom stock breeding was a hobby. Mr. MacNeilage then went on to refer to his association with journalism, and his work in connection with the Agricultural Discussion Society. The first paragraph he ever wrote for a newspaper was a notice of the death of the Clydesdale stallion Bonnie Breast Knot, which had been awarded the Glasgow premium in 1879, but died at the beginning of the season. He had since acted as the Scottish representative of various newspapers in different parts of the world. From about the year 1890 he had been the Scottish correspondent of the Farmer's Advocate and Home Magazine of Canada, over the signature of "Scotland Yet." This was the only post of the kind he still held. In concluding, he said the agriculturists of Great Britain and Ireland, and especially of Scotland, had been kind indeed to him, and that evening's proceedings surpassed all he had ever experienced or hoped for. His thanks to subscribers in all parts of the world were more than words could express. He was glad to have been of service to the agriculturists of Scotland, and he hoped to have their good opinion until the time came when he too must hand in his checks.

Among those who passed high eulogiums on Mr. MacNeilage were Mrs. Blair, Hoprig Mains, Glesmahmuir; Charles M. Douglas, C.B., of Auchloch, Lesmahagow; and James Cameron of the Glasgow Herald. Tea was served during the evening, and a first-class musical program was contributed by an orchestra and eminent vocalists.

**A High Average for Shorthorns Forty Years Ago.**

Very high averages have been made at pure-bred live-stock sales during the last two or three years, and when considering them we are liable to forget the past and look upon these recent events as unprecedented in the history of Canada. John R. Craig, who farmed near Brampton in the time of the Bates Shorthorn boom, has directed our attention to a sale held by himself in the Crystal Palace, Toronto, on December 3, 1875. It will be remembered that the Bates boom was just about at its zenith at the time of the New York Mills Dispersion, which occurred on September 10, 1873. At Mr. Craig's sale 39 females averaged \$1,166 each, and 5 bulls averaged \$1,268 each. The total of 44 head averaged \$1,200.57. The names of a few active Shorthorn breeders at the present time appear in the list of purchasers, but the most notable among Canadian buyers at that time were Hon. M. H. Cochrane, Compton, Que.; Hon. Geo. Brown, Bow Park Farm; John Snell's Sons; William Miller, Pickering; and F. W. Stone Guelph. It was a sale of Bates and Bell-Bates cattle when their popularity was at its height. Kirklevington Duchess 18th, a 11-months heifer, was purchased by Hon. M. H. Cochrane at \$4,000; Kirklevington Duchess 8th went to F. J. Barbee, Paris, Ky., at \$2,520; Duchess of Raby went to S. Beattie at \$3,050, Grace 4th went to Cleveland, Ohio, in exchange for \$3,300, and Rose of Cambridge was purchased by Col. Simms, of Paris, Ky., at \$2,250. The 17th Duke of Airdrie, 11 years old at the time of sale, was knocked down to the bid of A. McClintock, of Kentucky, and added \$4,800 to the total. The auctioneer was John R. Page, who sold the New York Mills herd in 1873.



Basement Plan of Square Barn.

gifts took the shape of a handsome silver salver and a cheque for £2,000.

William Strang, of The Peel, Busby, Chairman of Directors of the Glasgow Agricultural Society, presided and made the presentation. He mentioned that the subscribers numbered between four and five thousand, and that the following countries were represented: Canada, the United States of America, South America, South Africa, Australia, New Zealand, India, China, the Straits Settlement, and the East Indies. It was, he said, needless to say that the testimonial had been an absolute success, and was quite deservedly

APRIL 1

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## COMMON DISEASES OF SWINE --- CAUSES, SYMPTOMS, TREATMENT.

In all cases, where the patient will consume the drugs to be given, in food or drink, it is wise to give them that way, but in many cases the appetite is so impaired or the drugs have such odor or taste that the patient will not voluntarily consume them, and it is necessary to drench. We have, in other issues, remarked that great care is necessary in drenching any animal; this is particularly marked in swine. In order that the patient may be drenched it is, of course, necessary that the mouth be held on a higher level than the throat. In order to do this (unless the patient be very small) it is necessary to enclose the upper jaw in a slip rope, with the rope above the tusks, and have an attendant hold the rope with the head at the desired angle. Under

these conditions the pig persists in squealing. When he squeals the epiglottis (the little valve that covers the entrance into the wind-pipe) is necessarily open, hence if fluid be poured into the mouth more or less will enter the wind-pipe, pass down the bronchial tubes, and either cause death by suffocation in a few minutes or set up mechanical bronchitis, which frequently causes death in a few days. Many hundred of pigs are killed in this way, and the owner often wonders what causes death, he often thinking that it was poison, and if the medicine were made up or administered by a veterinarian, he will be blamed and in some cases sued for the value of the pig. Hence, we repeat "great care must be taken." Probably the safest method is to put the liquid in a bottle and force over its neck the end of a rubber

hose 6 or 8 inches in length, insert the free end of the hose into the side of the mouth between the molars. The pig will then cease to squeal and devote his attention to the destruction of the hose. While chewing this he will draw the fluid out and swallow it. Another plan is to place an old boot-leg or other contrivance of that nature into the mouth and pour the liquid into this, but the rubber hose gives the most satisfaction.

It will be noticed that a great many of the diseases discussed are due to high feeding and confined quarters, hence, can be prevented by arranging conditions that will ensure regular exercise. In fact, careful and intelligent feeding and general treatment tend to prevent disease, probably in a more marked degree in swine than in other classes of stock.

| Disease and Cause.  | Symptoms.  | Treatment.  |
|---|--|---|
| <b>DIARRHOEA IN YOUNG PIGS.</b><br>Improper feeding of dam, as decomposing or rotten food; close, damp quarters.  | Passage of liquid or semi-liquid faeces, usually of a greyish color and foul odor, followed by loss of appetite and weakness.  | Preventive—consists in keeping dam in healthful quarters, giving regular exercise and food of good quality.<br>Curative—Give a dessert spoonful of raw linseed oil. In 8 to 10 hours ½ dram sub-nitrate of bismuth and 3 drops laudanum in a teaspoonful of new milk every 6 or 7 hours. If animals be weak when treatment is commenced omit the oil. |
| <b>THUMPS.</b><br>Lack of exercise and high feeding. Diseases of the lungs or heart may cause it.   | A jerking movement of the body, accompanied by thumping sounds during contractions; a bulging out of the flanks and drawing in of the ribs.  | Preventive—Give young pigs room for exercise, only moderate quantities of strong food, good ventilation and plenty of sunshine.<br>Curative—Move to proper quarters; give ½ to 2 oz. raw oil or Epsom salts (according to size); light feeding.   |
| <b>INFECTIOUS SORE MOUTH.</b><br>(Usually seen in pigs under 2 months old), caused by filth; dirty quarters, filthy feeding troughs; mud holes and manure in yard; poor ventilation; sleeping in manure heaps or stacks; decomposed food. | Sore mouth, refusal to nurse, dullness, increase in temperature, inflamed patches on mouth and on lips and gums, these become ulcers and refuse to heal, in severe cases the snout and lips swell and interfere with respiration.                              | Curative—Isolate the diseased; irrigate mouth with 1 oz. boracic acid to quart of water 3 times daily. If ulcers form touch once daily with a pencil of the nitrate of silver.  |
| <b>TUBERCULOSIS.</b><br>A specific virus usually taken in faeces of tubercular cattle or milk of diseased cows.   | Diffused tuberculosis may be present without causing clinical derangement. The most common symptom shown is general unthriftiness; capricious appetite, irregular digestion; when the respiratory organs are involved there usually is a cough.                | Preventive—Keeping pigs away from infected fodder and sunder good, sanitary conditions.<br>Curative treatment is ineffective.   |
| <b>CONSTIPATION.</b><br>Improper for and lack of exercise, overfeeding on dry diet; poorly ventilated quarters.   | Frequent and often ineffectual attempts to defecate. The excrement dry and hard and often coated with slimy mucous. Loss of appetite; abdominal pain.  | Preventive—Good, sanitary conditions and laxative food.<br>Curative—Give 1 to 4 oz. raw oil or Epsom salts; rectal injections of soapy water; repeat laxative if necessary in 12 to 18 hours; laxative food and regular exercise.   |
| <b>CRIPPLING.</b><br>High feeding and want of exercise; sleeping in damp, cold quarters, or on cement floors.   | Lameness in one or more legs; patient lies most of the time; dragging hind quarters along; often inability to raise or stand when lifted; loss of appetite.  | Preventive—Allowing or forcing regular exercise; laxative food; grass in summer and raw roots in winter. Providing good quarters and sleeping quarters with wooden floors.<br>Curative—Purge as for constipation; feed lightly on laxative food, give 1 to 3 grains nux vomica 3 times daily; exercise as soon as patient can move.                   |
| <b>BRONCHITIS.</b><br>Damp, dirty, confined quarters; inhalation of steam or smoke. In many cases appears to be contagious.   | Coughing and sneezing, which usually gradually increase in severity, followed by loss of appetite, weakness and later death. Some cases become chronic, and while the patient continues to live it does not thrive.  | Fumigate with the fumes of burning sulphur, as for grub in the head in sheep. Repeat in 10 days and again if necessary. When the disease becomes general it is probably wise to dispose of the herd and thoroughly disinfect the premises before introducing fresh stock.   |
| <b>INVERSION OF RECTUM OR PROLAPSUS ANI.</b><br>Excessive straining, the result of constipation or acute diarrhoea.   | Protrusion of a greater or less portion of the rectum through the anus.  | Often ineffective. Treat for constipation or diarrhoea as indicated. Wash protruded portion with alum solution 1 oz. to pint of warm water; return and apply truss or stitch to prevent re-inversion. Remove truss, etc., occasionally to allow defecation and inject a little of the solution into rectum; re-arrange truss.                         |
| <b>QUINSY.</b><br>Exposure to cold, drafts and dampness.  | Difficulty in swallowing; tongue usually protrudes; saliva flows from mouth; swelling of lower jaw and neck; swelling of the glands in back of mouth.  | Cast animal and secure him, hold mouth open with clevice or other device, scarify the swollen glands until they bleed. As soon as blood flows liberate the patient. Apply mustard to throat and wrap with flannel cloths.   |
| <b>LICE.</b><br>Exposure to infected animals or premises. Poor food and filthy surroundings predispose.   | Uneasiness and itchiness, and the presence of dark-colored insects of considerable size on back, greyish or yellowish on belly and legs.   | Disinfect quarters or remove pigs to non-infected quarters. Boil 2 oz. stavesacre seeds in 1 gallon vinegar for two hours, add vinegar to make a gallon. Dress the animals with this, or use a 5 per cent. solution of one of the coal-tar antiseptics, or oil or grease.   |
| <b>APOPLEXY.</b><br>High feeding and want of exercise.  | While eating, pig stops suddenly, is restless and stupid, eyes bloodshot; foams from mouth, probably falls down, and in a few minutes revives and appears all right, or may die.   | Preventive—Allow plenty of exercise when feeding highly.<br>Curative—Remove about 1 pint of blood by tying a cord tightly above knee and then open the vein on the inside of leg. If necessary operate on both legs; purge and feed lightly and give exercise.  |
| <b>SCALY DISEASES OF SKIN.</b><br>Extreme heat in summer and extreme cold in winter, and other causes which are not understood; not contagious.   | Formation of pimples which dry up, and the scales peel off in flakes; skin may become inflamed, thickened, and interested in all directions with furrows, filled with white, powdery matter; hair falls out.   | If patient be fat purge with 1 to 3 oz. Epsom salts, and follow up with ½-dram doses of acetate of potash 3 times daily. Feed on laxative food. Keep out of the sun, or in comfortable quarters in cold weather. Dress the parts twice daily with 1 part carbolic acid to 30 parts sweet oil.   |
| <b>WORMS.</b><br>Consumption of food that contains the larvæ.   | When in sufficient numbers to cause clinical symptoms, general unthriftiness will be noticed, impaired and often capricious appetite. In many cases worms will be noticed in the excrement. If in sufficient numbers to occlude the passage death soon occurs. | Fast for 12 to 18 hours. Mix 1 part oil of turpentine in 7 parts new milk; give 2 to 6 tablespoonfuls (according to size) of the mixture to each. Fast for 3 or 4 hours longer. Repeat treatment every 10 days as long as necessary. <b>WHP.</b>  |

been connected with the r 41 years, and for 38 years at body. Mr. Strang then nected with the work of the membership now stood at McNeilage had been Secretary Cultural Discussion Society, proved to be of immense ral interests. Their guest before the public as Editor sh Farmer, an agricultural y read in every part of the portant features of his work newspaper was his fearless agricultural exhibitions, judge of stock of all kinds, le horses, his opinions were being just and thoroughly rarily accepted as such. d and useful life which Mr. he appreciation which his ertained for him, that the ted. It was a source of present to Mr. MacNeilage a cheque for £2,000. The as follows: "Presented to along with a cheque for s worth as a man, and in ervices he has rendered to

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high elogiums on Mr. oprig Mains, Gladmuir; uchlochlan, Lesmahagow; agow Herald. Tea was nd a first-class musical n orchestra and eminent

### Short horns Ago.

been made at pure-bred two or three years, and liable to forget the past rents as unprecedented R. Craig, who farmed the Bates Shorthorn ion to a sale held by oronto, on December 3, at the Bates boom was time of the New York ed on September 10, males averaged \$1,166 88 each. The total of e names of a few active nt time appear in the table among Canadian . H. Cochrane, Comp- ow Park Farm; John uring; and F. W. Stone and Bell-Bates cattle height. Kirklevington er, was purchased by Kirklevington Duches y., at \$2,520; Duchess 950, Grace 4th went to \$3,300, and Rose of ol. Simms, of Paris, of Airdrie, 11 years cked down to the bid and added \$4,800 to hn R. Page, who sold

**Curing Meat.**

Several of our subscribers have written in this spring requesting recipes for the curing of pork. A number of different methods have been tried with more or less success. The plan used to be to pack the hams and shoulders in salt. While they would keep for an indefinite period, they also absorbed considerable salt. This was not objected to by some, but the present generation has evidently tired of real salty pork and desires fresh meat. It is quite possible to cure hams, shoulders and bacon so that they will not be over-salty and will have an excellent flavor when cooked. After butchering, the meat must be properly and thoroughly cooled in order to ensure good keeping qualities. Ordinarily, twenty-four to thirty-six hours after slaughtering will allow sufficient time for cooling. To dry salt hams, shoulders and bacon apply three times, at intervals of about a week, a mixture of four pounds of salt, one and a half pounds of brown sugar, and two ounces of pulverized saltpetre for every one hundred pounds of meat. The meat should be rubbed vigorously. Some make a brine of eight pounds of salt, four pounds of brown sugar and two ounces of pulverized saltpetre, dissolved in four gallons of water. The meat is placed in a cask and the liquid poured over it. It is then weighted down and left for six weeks, after which it is allowed to drain for a few days and then is smoked. On our farm this spring we are using four different methods of curing; the dry salting, curing in brine, rubbing the meat at intervals of ten days with salt, and then using a mixture of equal parts salt and raw sugar. This is thoroughly rubbed into the meat. The bacon is only rubbed with plain salt once, and the hams and shoulders twice. This meat is then allowed to drain for a few days, when part of it will be put into the smokehouse and the remainder coated with liquid smoke. The other recipe which we are trying is one pound of brown sugar, one pound of salt, two ounces of saltpetre, and two ounces of sea salt to every twenty pounds of meat. The mixture is rubbed into the meat every other day and forms more or less of a pickle. It will take about three weeks to cure the hams and shoulders, and fourteen days for the bacon. After the meat has been salted it is washed in cold water and then placed near the stove to dry, after which it will be put in cotton bags and stored in a dry place. After the meat is smoked it may be left hanging in the smoke-house, although some put it in cotton bags and bury it in salt, or in a bin of oats; others will wrap it in paper, place it in a cotton bag and hang it in the attic. It keeps nicely when any of these methods are used.

The bacon may be salted for three or four days and then sliced and fried just as it would be for the table, only it is not cooked quite so much. It is then packed in large crocks or lard pails and the fat which fries out of the meat is poured over it. When the receptacle used is filled a plate may be placed on top to keep the meat in the fat until it gets cold, after which lard should be poured over the top to keep the air from entering. The meat is cooked a little more before using.

When cutting up the carcass there is always more or less meat which may be trimmed from the hams, shoulders and along the backbone. This meat may be made into sausage. These pieces of meat may be ground in the meat chopper and pressed into casings, or cooked and put into jars or cans and hot lard poured over it. The following is a recipe for seasoning: Cayenne pepper, one ounce; cassia, one ounce; nutmeg, two ounces; pimento, six ounces; black pepper, eight ounces; and salt eight ounces. From one-half to one ounce of the mixture may be used for ten pounds of meat.

It is well to remove the meat from the brine two or three days before putting it in the smokehouse. Start with a slow fire, warming up the meat gradually. When the fire is kept going steadily thirty-six hours will be required to smoke the meat, or a light fire may be started every second or third day for a couple of weeks. Corn cobs, hickory or maple wood make very good fuel for smoking the meat. A building six by eight

feet will be large enough for a smokehouse. Plenty of ventilation should be provided to carry off the warm air in order to prevent over-heating the meat. The fire may be directly under the meat, with a sheet of metal placed over it, but a better method is to have the fire-pot outside of the house with a flue through which the smoke may enter the meat chamber. There is on the market what is known as liquid smoke. The meat is coated with this and takes on a brown tinge. We have not used this material, but purpose doing so this spring.

**Merner Shorthorns Averaged \$361.**

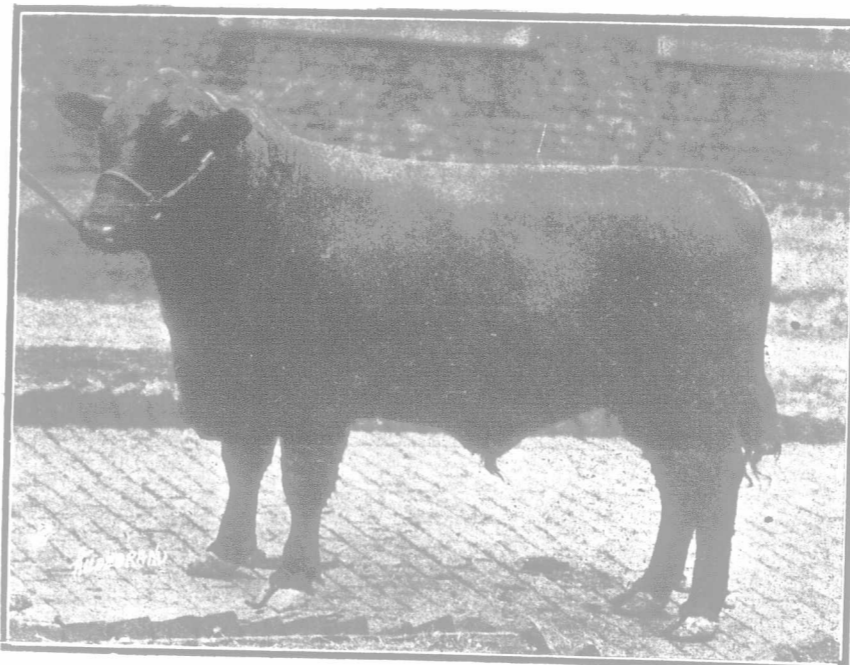
J. J. Merner, M. P., of Seaforth, disposed of upwards of fifty head of Scotch-bred Shorthorns, on Tuesday,



**Milk With Meat**

The Type of Shorthorn that is in demand.

April 1. A large crowd was present but the bidding was none too brisk. It was a particularly cold day, and, although the sale-ring was on the sunny side of the barn the north wind chilled the crowd at the ring-side. The breeding was all that could be desired. There were a number of Rosemarys, Orange Blossoms, Mayflowers, Clementinas, Village Girls, Princess Royals, Duchess of Glosters, etc., in the sale. Most of the individuals were in satisfactory breeding condition and should make good foundation stock. Some of the cows were sold with calves at foot, and others were well on in the gestation period. Practically all the cattle sold were young things which should grow into money. The highest-priced animal of the sale was Orange Bud, a thirteen-months-old Cruickshank Orange Blossom heifer. She is a good, sappy heifer of splendid conformation, and went to the bid of G. Nicholson, of Crediton, at \$1,000. Major Mayflower Imp., a two-year-old Bruce-



**Espoir Marshall 261269**

Second-prize senior Aberdeen-Angus bull calf in a class of 21 at the last International; he is Trojan-Erica bred and was purchased from Escher & Ryan by H. Fraleigh, Forest, Ont.

Mayflower bull, was purchased by A. Etherington at \$960. A number of sales made over \$500. The forty-four head sold averaged \$361. Following is a list of the animals selling, together with the names and addresses of their purchasers:

**Females.**

|   |        |
|---|--------|
| Brandsby's Waterloo, J. Ratcliff, Exeter.....             | \$ 565 |
| Brandy's Waterloo 2nd, Robinson Bros., St. Mary's.....    | 405    |
| Brandsby's Waterloo 3rd, Oestreicher Bros., Crediton..... |        |
| Orange Bud, G. Nicholson, Crediton.....                   | 415    |
| Vesey Viola, G. Nicholson.....                            | 1,000  |
| Vesey's Gift 3rd J. Shea, Dublin.....                     | 360    |
|   | 250    |

|   |        |
|---|--------|
| Collynie Rose, A. Etherington, Exeter.....          | \$ 525 |
| Rosemary 123rd, R. Bell, Hensall.....               | 185    |
| Corelli Beauty, G. Nicholson.....                   | 250    |
| Empress Wedding Gift, R. W. Rustin, Kirkton.....    | 350    |
| Roan Claret, R. D. Hunter, Exeter.....              | 335    |
| Money May, Frank Taylor, Crediton.....              | 180    |
| Jubilee Jilt 3rd, E. Robson, Denfield.....          | 325    |
| Jubilee, D. Rodgers, Kirkton.....                   | 375    |
| Lovely 53rd, J. Norris, Mitchell.....               | 400    |
| Margaret, E. Robson.....                            | 285    |
| Roan Bessie 10th, Wm. Waldie, Stratford.....        | 510    |
| New Year's Gift, Wm. Webster, Lucknow.....          | 510    |
| Doris Buckingham, E. Robson.....                    | 230    |
| Rosemary Blossom, F. Smith, Listowel.....           | 410    |
| Graceful Queen, Wm. Charter, Seaforth.....          | 580    |
| Verbena's Grace, Mr. Keener, Staffa.....            | 285    |
| Clementina 19th, J. Norris.....                     | 325    |
| Duchess of Gloster H. 2nd, R. D. Hunter.....        | 410    |
| Gloster Ruby 2nd, J. Ratcliff.....                  | 400    |
| Raglan May, A. Campbell, Bowmanville.....           | 305    |
| Gloster Lily 2nd, E. Robson.....                    | 400    |
| Castilla Red, J. Brewster, Seaforth.....            | 390    |
| Lady Mac 3rd, T. Case, Seaforth.....                | 250    |
| Carrie of Riverside, E. Robson.....                 | 280    |
| Daisy Lass, E. Lawson.....                          | 280    |
| Princess Royal 16th, J. A. Watt, Elora.....         | 310    |
| Fanny R., J. Norris.....                            | 220    |
| Village Girl 17th, J. Ratcliff.....                 | 350    |
| Village Girl D, E. Robson.....                      | 265    |
| Christine Chesterfield 2nd, E. Skinner, Exeter..... | 240    |
| Secret Sybil, A. Etherington.....                   | 280    |

**Males.**

|   |     |
|---|-----|
| Major Mayflower (imp.), A. Etherington..... | 960 |
| (Imp.) Gold Boy, W. Beatty, Seaforth.....   | 425 |
| Meadowlawn Prince, M. Skinner, Exeter.....  | 250 |
| Winsome Signet, J. B. Rau, Zurich.....      | 250 |
| Bull Calf, A. Campbell.....                 | 130 |
| Juniper, Oestreicher Bros.....              | 110 |
| John Clementina, Mr. Fisher, Mitchell.....  | 365 |

**THE FARM.**

**A Parliamentary Experience.**

EDITOR "THE FARMER'S ADVOCATE"

Appointed by the Provincial Farmer's Association to present some of its resolutions to the local Assembly with a view to improved conditions connected with the production of live stock and general agriculture in the province, I have spent to-day with the Agricultural and Law Amendments Committee of the Provincial Parliament, and I feel like saying at the end, "How long, oh Lord, how long?"

One of the resolutions asked for protection from deer, which, under the protection of a Game Act passed in 1912 have increased to such an extent in some parts of the Province that they are destroying the crops of the farmers; having become sufficiently bold to enter his fields and orchards, eating his young grains, clovers, garden crops and even browsing the young apple trees. In one small district probably over a thousand dollars' worth of damage was done last summer to growing crops by these animals. We were asking that in such cases the law be so amended as to give the farmer liberty to shoot or otherwise kill these deer when found doing damage to his crops, and when upon his own farm, he being controlled by the usual amount of affidavits, reports and other red tape.

I had read before the members some twenty letters from farmers who had suffered damage. The discussion seemed to favor the waiving of the existing two-hundred-dollar penalty in such cases, and giving the farmer the right to protect himself and I was surprised to find the determined opposition put up by one member of the Government who represented the county adjoining the one in which the most destruction had occurred. "Oh!" he said, "This is all bosh. The injury is almost purely imaginary, and doesn't amount to a hill of beans. I know these men, they just want to agitate against the Government. They want a chance to get some meat for nothing, etc., etc." On making enquiries I found that the great concern of this member was based on the fact that a large number of his influential constituents were sportsmen who were looking to him to protect these deer at all odds. Disgusted, I dismissed the matter as far as I was concerned by saying, "Well gentlemen, if you consider that the interests of pleasure of a few sportsmen should be conserved at the expense of the farmers, well and good, but the continued multiplication of such cases as this will some day result in a power behind these demands of your rural vote that you will be glad to recognize."

It is generally understood that the Maritimes will never be in a position to raise grain on as large a scale nor as economically as the West, and, therefore, if Eastern agriculture is to live, it must be through the rearing of live stock and the sale of live stock products, and not only through the increase of quantity in live stock but the very necessary improvement in quality. With this end in view we have been endeavoring for the past three or four years to have a five thousand dollar increase in the Government grant to agricultural societies and the elimination of scrub bulls in cases where they interfere with the rights of territory of pure-breds. Regarding the increased grant to agricultural societies, this was terrible. Five thousand dollars!! The province could never stand it. It would become bankrupt. A few hundred thousand lost, strayed or stolen in connection with road building, crown lands, election expenses or other important necessities is, of course, in the best interests of the Province, but to spend five thousand dollars on such a trivial matter as the im-

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| Watt, Exeter.....       | \$ 525 |
| Hensall.....            | 185    |
| son.....                | 250    |
| W. Rustin, Kirkton..... | 350    |
| r, Exeter.....          | 335    |
| r, Crediton.....        | 180    |
| , Denfield.....         | 325    |
| son.....                | 375    |
| tchell.....             | 400    |
| .....                   | 285    |
| aldie, Stratford.....   | 510    |
| bster, Lucknow.....     | 510    |
| son.....                | 230    |
| ith, Listowel.....      | 410    |
| rter, Seaforth.....     | 580    |
| er, Staffa.....         | 265    |
| .....                   | 325    |
| R. D. Hunter.....       | 410    |
| liffe.....              | 400    |
| Bowmanville.....        | 305    |
| n.....                  | 400    |
| Seaforth.....           | 390    |
| aforth.....             | 250    |
| son.....                | 280    |
| .....                   | 280    |
| Watt, Elora.....        | 310    |
| .....                   | 220    |
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| E. Skinner, Exeter..... | 240    |
| .....                   | 260    |
| les.....                |        |
| Etherington.....        | 960    |
| y, Seaforth.....        | 425    |
| inner, Exeter.....      | 250    |
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| .....                   | 130    |
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| r, Mitchell.....        | 365    |

FARM.

ry Experience.

...FARMER'S ADVOCATE"  
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 ...le of live stock products,  
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 ...rub bulls in cases where  
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provement of agricultural conditions would be the sheerest waste and extravagance. The "scrub-bull" question was "nuts" to these gentlemen. He had been before them for four years, and they hailed his return with acclaim. They had turned him over and examined him from every direction, and had almost decided that his existence almost meant the existence of the Government. There were more solid voters behind these scrub bulls than improved agriculture ever dreamed of. The members could not get along without them. The country could not get along without them, especially at election time. One member positively declared that the scrub bulls were improving the stock of the country. He knew of scores, yes, hundreds of scrub bulls that were of better type than the pure-bred bulls; they made better oxen. He did not hear the *solo voce* remark that that was what we wanted to make of them. Confine these bulls? Never! Why they were an ornament to the country. Some of his constituents would be heartbroken if the Government passed a law compelling them to confine their pets or deprive them of the pleasure of showing off the family "scrub" to the "member" when he called to see if they were still solid for the next election.

And so on. Parliament made up of men dependent on the farmer for their positions as representatives, for their very existence, too short-sighted to realize that the prosperity of the country depends almost absolutely on the prosperity of the agricultural profession and in direct proportion to its prosperity; caring little for the broader questions of provincial development; seeing only the immediate necessity of nursing the popular vote with a view of "getting in again" at the next election; evading progress and utility, and opposing measures of blame to rural development if they promise to antagonize a few voters at the next election; knowing that in the past and trusting that in the future the farmer will obediently follow the dictates of the party heeler.

I have visited the "House" several times before on similar missions, but never have I been more impressed with the evident disregard of the farmers' interests, the indolence and inefficiency of the members, and the general atmosphere of effortless existence. Now I am not a "sore-head," for personally I have received about all that I deserved, nor am I in opposition since I voted for the return of the present Government, but I am simply making concrete conditions that have existed and are existing in general all over our continent, until one is led to ask himself "when will the political party scale drop away from the farmers' eyes sufficiently to see that he is a most easily manipulated tool, and organization only will give him power to demand representatives who will give him agricultural legislation.

Annapolis Co., N.S. R. J. MESSENGER.

Permanent Pastures in Ontario.

BY DR. C. A. ZAVITZ, O.A.C., GUELPH.

The areas used for pasture crops in Ontario are slightly greater than those used for the hay crops. These two together occupy more than one-half of the farm lands of Ontario. The greatest increases of the crops of the province in recent years have been made with the forage and fodder crops such as pasture, hay and corn. While the pastures have been increasing in area it is doubtful if there has been much improvement in the quality of these crops. Now that the labor situation is likely to be improved, and that some of the best grasses will be more easily secured, there should be a decided improvement in the pasture lands of the Province. Undoubtedly, some of the best farmers, especially those having good herds of dairy or beef cattle, will wish to set aside certain sections of their farms for permanent pasture. If this is the case, special pains should be taken to make these pastures the best possible by having them well established under the most suitable conditions and by using those varieties which are very hardy, appetizing to the animals and abundant in growth.

Land which can be spared from the regular rotation of the farm can often be seeded with a permanent pasture mixture to excellent advantage. Fields lying remote from the buildings and which are inconvenient for cultivation or fields which are unsuitable for the cereals or the cultivated crops can frequently be converted into permanent pasture, especially for the use of cattle, sheep or young stock. It is also convenient to have some small sections of permanent pasture near farm buildings which are suitable for turning on the milch cows for short periods of time.

A large amount of experimental work has been done at the Ontario Agricultural College in testing varieties of clover, both singly and in combination within the past thirty years. The grasses and clovers have been carefully seeded and much information has been gleaned regarding their value for permanent pasture. In the earlier days of the College it was found that some of the grasses such as Sweet Scented Vernal, Crested Dog's Tail and Italian Rye grass proved to be unsuited for Ontario conditions. After about twenty grasses had been sown on two or three occasions and their characteristics and hardiness studied a permanent pasture mixture was recommended. After eight years of further experimental work, during which time the writer was closely associated with the work, another mixture was recommended as being superior to the former. A definite experiment was started by sowing a plot of each of these mixtures, and these were left unbroken for a period of eleven years. It was not practicable to pasture these plots but each year the crop was cut in the green condition from two to three times, and it was weighed immediately on being cut. The average number of tons of green pasture crop per acre, per annum, for the eleven-year period, in which there were

twenty-six separate cuttings, was as follows: Mixture No. 1, 12.9 tons; mixture No. 2, 15.7 tons. It will, therefore, be seen that the last mixture recommended gave practically three tons of pasture crop per acre more than the former mixture. The permanent pasture mixture which gave the highest returns of pasture material in the eleven-year period was made up of the following grasses and quantities of seed per acre:

|                            |           |
|----------------------------|-----------|
| Orchard grass.....         | 4 pounds  |
| Meadow fescue grass.....   | 4 "       |
| Tall oat grass.....        | 3 "       |
| Timothy.....               | 2 "       |
| Meadow foxtail.....        | 2 "       |
| Alfalfa.....               | 5 "       |
| Alsike clover.....         | 2 "       |
| White or Dutch clover..... | 1 pound   |
| Yellow trefoil.....        | 1 "       |
| Total.....                 | 24 pounds |

An examination of the crop grown on the plot in the eleventh year after seeding showed that 90 per cent. of the crop consisted of the grasses and clovers originally sown, the other 10 per cent. being blue grasses, etc., which had worked into the land. The two grasses which proved the hardiest and which gave more pasture material than any of the other grasses or clovers sown were the tall oat grass and the orchard grass. Unfortunately, it is exceedingly difficult to purchase at the present time good supplies of seed of either the tall oat grass or the meadow fescue. It is quite possible, however, that orchard grass, meadow fescue and tall oat grass may be grown considerably in this country for seed production.

At the present time we would consider it unwise to use any of the yellow trefoil in a permanent pasture mixture. Instead of the one pound of yellow trefoil the alsike clover might, to advantage, be increased to three pounds per acre.

In England and Scotland from 45 to 50 pounds of grass seed per acre are frequently used. In this country it is quite usual for seedsmen to recommend from 30 to



Sowing Seeds for the 1919 Harvest.

35 pounds or more per acre. Unfortunately, however, certain varieties of grasses are frequently recommended which, according to the results of experiments conducted at Guelph, have not proven satisfactory for use as permanent pastures in this province. In the mixture here referred to, however, only those varieties have been selected which have proven hardy, vigorous in growth and appetizing to the animals, and which tend to give a continuous growth of grass from the early spring to the late autumn.

The seed of a permanent pasture mixture can be sown in the spring either with or without a grain crop. Land which had grown a cultivated crop the year previous and which had been thoroughly cleaned makes an admirable condition on which to establish a permanent pasture. The finer seeds can be mixed and sown from the grass seed box placed in front of the tube drill and the coarser seeds can be sown by hand before the drilling takes place. If a nurse crop is used about one bushel of barley or wheat per acre is recommended. As a rule oats do not form a good nurse crop for a permanent pasture mixture. If, however, they are used they should be sown thinly. If the seed is sown alone, however, the tops of the plants should be cut occasionally during the summer and allowed to lie on the ground as a mulch. In the next year after the seed is sown it is usually recommended that the crop be converted into hay.

The most desirable combination of hardy grasses and clovers, when once well established on suitable land, should produce a good pasture appetizing to the animals, excellent in quality, abundant in growth and permanent in character.

Good wool will command a reasonably high price this year, and it will pay to keep it clean from burs, sticks and chaff. When wool sells on a quality basis the careful shepherd is rewarded for his efforts.

The Progress of Organization.

EDITOR "THE FARMER'S ADVOCATE":

The last few years have witnessed a notable awakening among Ontario farmers, to the need of thorough organization. It is, therefore, not as necessary to plead for organization as it was a few years ago. It may assist in the work, however, if the advantages of organization are concisely stated, and it will serve also to clarify and crystallize rural thought with regard to this matter. I take the liberty, therefore, of setting down here, in as brief a form as possible, the situation as it presents itself to my mind.

1. Organization has been already undertaken by farmers and other citizens with respect to many of our social activities. We are organized in school sections for the purpose of looking after the education of our children. We are organized in townships for the purpose of building and maintaining roads, bridges, etc., and for other kinds of joint enterprises. We are organized in counties for still other purposes, while politically we are organized into provincial and federal electoral districts for the purpose of carrying on the various activities pertaining to Provincial or Federal Governments. Still further, we are organized into churches, for certain purposes, into mutual insurance companies for other purposes, and into creamery associations, etc., for still other purposes. And so on the list could be extended at great length. Originally many of these activities were undertaken by the individual citizen,—for example the education of his children,—but experience has shown that certain undertakings can be better carried on collectively than individually. Hence, as civilization extends, collective action tends more and more to replace individual action.

2. The kind of organization that has come down to us from former generations has been, for the most part, that comprising all citizens, without distinction of occupation. These organizations are of great importance. But during the last century the industrial development of the world has been so rapid, and has produced so many radical social changes, that the

need for newer types of organization has become apparent. In urban industry employers and employees have separated into two large, well-organized and powerful camps, unfortunately too often in a state of suppressed warfare, while village industries of one kind or another have rapidly disappeared. Specialization and centralization have characterized practically all industries but that of agriculture, and the control of urban industry has gradually passed from the many to the few, so that even in Canada, according to an article appearing in a Western farm paper a few years ago, nearly every business but that of farming is controlled by less than 50 men, living for the most part in Toronto and Montreal. The same sort of changes have taken place in all civilized countries, and with them has come rural depopulation and the rapid growth of large cities. The reasons for this accentuation of urban industry are not far to seek. Such type of industry lends itself to centralization, and gives opportunity for the exploitation of the many by the few. The few have, therefore, seized the opportunity, and have, through legislation, established conditions favorable to themselves. Urban employees, in order to protect themselves against exploitation by their employers, have become well organized into various trades unions, while those engaged in agriculture, being the last to organize, have been ground between the upper and the nether millstones, and their industry has languished. Modern civilization has, therefore, become top heavy and threatens to tumble in ruins almost any time.

3. To meet this situation, agriculture is now organizing along entirely new lines, and with marked success. Two kinds of organization are required to meet the need. In the first place, farmers must organize for the co-operative purchase of supplies and the sale of farm produce. Tremendous possibilities lie in this direction, not only in saving waste in the distribution of commodities, but also ultimately in the co-operative manufacture of all kinds of supplies for use and not for

profit, as is done by the co-operative wholesale societies in Great Britain. In the second place, farmers must organize for social, educational and legislative purposes. The domination of government by those who control urban industry must cease, not only in the interest of agriculture, but also in the interest of the whole country, and in order that this domination may be abolished farmers and city employees must both get sound ideas upon economics; must both study the modern industry world, and must thereby protect themselves against fallacies and sophistry. Politically the masses have the power to protect themselves against exploitation, but they cannot avail themselves of this power unless they are mentally protected against falsehood, and the greatest foe of modern democracy is ignorance. It is vitally important, therefore, that farmers get together to discuss economic questions pertaining to their industry, and they cannot do this without venturing into the field of politics. If they cannot throw aside allegiance to political parties and discuss public questions on their own merits they must take the consequences, and remain, as heretofore, a house divided against itself, failing through inherent weakness. But if they set out with courage, with the preliminary conviction that what is good for one farmer must also be good for his neighbor, differences of opinion will become less and less, and farmers will become capable of acting unitedly in respect to public questions. If they "know the truth," the truth shall make them free."

4. Rural organization along commercial and educational (or political) lines may be carried on separately and it is as well that there should be a formal distinction. At the same time the two activities may be of great assistance to each other, and neither will be effective without the other. They are complementary even as is man and woman, and the best results are only obtainable when complete harmony exists between them.

5. For effective work local farmers' organizations must be consolidated so that their influence may be exerted where it will have weight. Local farmers clubs may exercise great influence upon a school section, but it will need several clubs to exert much influence in municipal affairs. And, when it comes to provincial affairs the isolated local association is powerless. Just at present the Provincial Highway Act is getting a good deal of attention from Ontario farmers. If they wish to make their influence felt in this matter they must act in a provincial body; hence the vital need for provincial organization, such as in the U. F. O. So, too, the general policy of the province with respect to rural schools, is one with which isolated farmers' organizations cannot deal; here, too, province-wide organization is absolutely necessary. Similarly with respect to those questions which are under the jurisdiction of the Federal Government—matters of trade and commerce, transportation, banking, etc. Provincial associations are not sufficient to deal with such questions; we must have Dominion-wide organization. The Canadian "manufacturers" have their organization running from coast to coast; so have the city "laboring men," so called. In fact, some of the "labor" organizations are international in their scope. It is folly, then, for farmers to think that they can protect themselves with anything less than Dominion-wide organization.

To sum up: Old types of organization do not meet the situation as it exists to-day; new kinds are necessary. These must be along two lines—commercial and educational. And organization will be effective to the degree that it is both widespread and consolidated.

### Where the Drainage Paid Well.

EDITOR "THE FARMER'S ADVOCATE":

In my experience with tile drainage, I have drained over fifty acres on comparatively flat land, and must say that it pays right from the start if properly laid. What I mean by that is to have an even fall; no ups and downs through the drain, and have it the right depth.

Tiling is something that I am very particular about especially in having an even fall. First of all, I make a cross arm, four feet above the ground and have a square pole with the feet marked on it up to seven or eight feet, and also a spirit level. By setting these instruments, one at each end of the field, where it is the lowest, and by levelling the cross arm and sighting it on the pole, I can detect any rise or fall. There has been as much as three feet of fall across 150 acres which is enough, providing the tile are large enough to carry off any rush of water.

I had a fifteen-acre field that was in pasture for over ten years. It had a large amount of surface water which made it impossible to work early in the spring. I decided to drain it in the spring of 1908. By taking the above-mentioned instruments I found out the fall in two different places across the field; this gave me an idea how the location of the drain should be dug. With a team and plough I arrowed out the first drain, keeping in the low places, but at a big turn. This was done several times and the drain was dug out until it was deep enough to put a chain on the pole so as to loosen the soil and make a good depth. This made the drain from 2 to 2½ feet deep, and by using the regular tile spade it made the drain a good one. I can judge the depth with this spade, and have an even fall, but I always find a good guide following behind me as a guide. After the drain is clean it out, and it is ready for the tile.

That fall the field was plowed, and I sowed to oats the following spring. The 15 acres yielded over 600 bushels of oats. The next spring the field was plowed and sowed to barley, which ran over 1000 bushels

to the acre. The following spring I drew off nearly 2½ tons of clover hay to the acre. Before tiling the field was yielding nothing but pasture and wire grass.

I have over fifty acres drained in this way. It paid for itself from the first two crops, not counting our own labor. Drained land allows more air in the soil, therefore, making it looser and easier to cultivate. I believe there is no other investment the farmer can make that will give him greater interest on the money invested than tile drainage, if properly done.

Lennox and Addington Co., Ont. H. L. P.

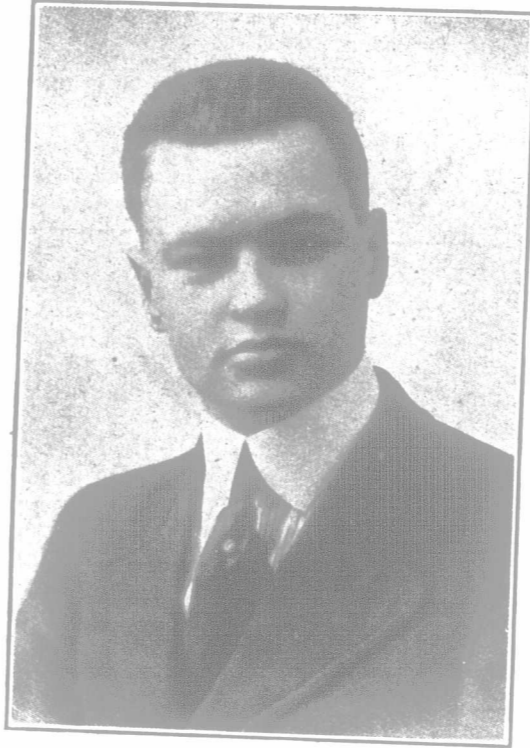
### CANADA'S YOUNG FARMERS AND FUTURE LEADERS.

#### The Bristol Short Course.

EDITOR "THE FARMER'S ADVOCATE":

An agricultural course was held at J. C. Jamieson's farm, Bristol, Que., March 17-22. C. H. Hodge, B. S. A., Agricultural Representative for the County of Pontiac conducted the course, assisted by Mr. MacLaurin of MacDonald College Extension Branch also L. C. McQuat who was present on the last two days.

Exceptional interest was shown in the Live Stock Judging Competition, over forty being in attendance the day on which draft horses and dairy cattle were judged.



S. Wyman MacKechnie.

Highest scoring competitor in Bristol Short Course, Pontiac County, Quebec.

There were three contests; viz, the Judging Competition, Winter Examination on Live Stock and Winter Examination on Cereals; S. Wyman MacKechnie of Wyman, Que., was highest in every class winning the free trip to Ormstown Spring Show and to Chazy, N. Y. Some of the highest scoring competitors were: 1, Wyman MacKechnie; 2, W. McCorrison; 3, Milton Russell; 4, Harold Smith; 5, Neilson Drummond, 6, H. Nicholson; 7, S. Nicholson.

PONTIAC BOY.

### Why Young People Leave the Farm.

EDITOR "THE FARMER'S ADVOCATE":

What can be done to make the boys and girls more satisfied with their occupation is a problem which has bothered farmers, and as yet they have been unsuccessful in keeping the young folk on the farm. Young people seem to prefer city life, but why one of the reasons is the home. The farmhouse should be more than a place in which to sleep and eat. It should be a real "Home," where everyone is happy and contented; it should not be a building surrounded by weeds with a mud path leading to the door, such is not the place where any real live boys and girls would want to spend their lives.

In travelling through the country we see too many farms with both house and barns in a tumble-down condition. On quite a number of farms we find a large up-to-date barn but the house, alas, is not a very promising home; it is usually an old house which in some cases, would only require a little time and money to change it into a nice little home. The surroundings of the house play a large part in converting it into a home. A few ornamental shrubs, some flowers. A few coats of paint, some conveniences, a nice path leading up to it, and we have a nice attractive home where the young folk would be pleased to have their friends spend an evening with them. The average farm house seems to be the last place to receive any attention in the line of improvements and conveniences. The majority of barns have labor saving devices, water system and everything handy, but the house remains the same; and yet they wonder why the boys and girls leave the farm.

Farming methods and live stock could be improved and these would help to keep the boys on the farm. The young men of to-day are awaking to the new era in agriculture. When they pick up a farm paper and read the report of some pure-bred stock bringing record prices; when they take the short course in agriculture and see some of the fine pure-bred herds, it would be hard for them to be satisfied with their own grade herds, especially when they compare the prices of pure-breds and a grades. It is no wonder they go to town to earn some money so they can have a few improvements on the farm, but the chances are they will never return.

The chief reason for the young people leaving the farms is a lack of interest. They think the city fellow has a better time, and they lose interest in their work. If the young man were to share some of the responsibilities of the farm, if the profits were divided the chances are he would see to it that the farm was put on a paying basis. If the above plan would not work out he could be given a few sheep for himself, the profits to be for himself, and in that way he would be interested in his work. Another reason is the lack of amusement in the country, but there is no reason why there is not more amusement in rural districts. Even in the farm home there is an opportunity for a change; music is one of the chief forms of amusement, and that should be found in every home. If the young people have a talent for music a piano or organ would be the source of much pleasure. In the absence of musicians, a gramophone would fill a long-felt want. The young people could form an orchestra which would brighten some of the longer winter evenings.

The motor car would solve the problem in some cases as then the young folk would enjoy trips through the country. There is usually a little envy on the part of the boy when his chum gets a "car" and he has to still use a horse and buggy. The automobile is getting to be a necessity on the farm, aside from the pleasure it affords. It is useful when the young folk want a trip to town and in many cases it has been the means of keeping the boys at home.

With the farm house made attractive and the live stock improved, conveniences in both house and barn, a "car," and some amusement, the young folk would not be so anxious to live in town.

YORK COUNTY. HERBERT KANE.

### All Work and no Play One Reason for Boys Leaving Home.

EDITOR "THE FARMER'S ADVOCATE":

In a topic you have named for discussion you ask, "Would more attractive surroundings, better live stock, improved methods of farming, or more conveniences in the home help to make farm boys and girls contented with their occupation?" In answer to these questions I would say yes and no, but yes in the majority of cases. There are some boys and girls who are suited for other occupations for which nature has specially equipped them. One boy is able to do skillful work in carpentering after very little training, another likes to be forever working on machinery, another wants to study medicine and so on.

There is a certain work for every person, and if they do not follow it, they are very apt to become failures, and at the best attain but indifferent success. This shows that a boy who has a special liking for other work will not be contented on the farm no matter how attractive the surroundings, how good cattle are kept, or how close the most modern farming methods are followed. On the other hand, there are boys and girls who leave the farm for these very reasons. They get discouraged because everything is just as their grandfather used to have it. Old, unhandy buildings, dark stables, poor stock, no conveniences in the home, not much labor-saving machinery, etc. Most always with this goes fields which are gradually losing their fertility, because when the land was new it did not require the care to make it produce large crops as it does now.

A young man of ambition likes to see things improving, instead of standing still or going back, and if he cannot do it himself he is very apt to go somewhere where he can do it himself. His father says, "My father always did get along all right and so have I, so as far as I can see there is no need of changing anything." He does not realize how other things have changed, and also the enormous difference in the times. The boy sees that there are occupations where energetic men have a chance to rise to responsible positions, hence they are anxious to be one of them.

Another reason for the exodus to the cities is the short hours, higher wages, more going on, and more opportunity of associating with other young people. This is the chief attraction for some young people, especially those who are only thinking of the present. The boy who has a "car" to run or a horse to drive, some spending money, and after he is twenty-one years of age will not leave the farm, if he is the right kind providing he does not have to work too hard. No boy will work from 15 to 17 hours per day the year round without looking for a chance to get out of it, and especially when he gets no good out of it, as is the case in altogether too many instances.

I was talking with a returned soldier not long ago about farming. He had hired out to a farmer soon after coming home. He said farming was all right as an occupation, and if he had sufficient capital to buy a farm even in a few years he would stick to farming, but at hired man's wages it would take the best part of his life before he could purchase one. He said where he was working now it was work from five o'clock in the morning to seven or eight at night and sometimes later,

whereas an eight-hour sleeping time him that who works that we c He agreed

Now, too long hours. The farmer not account only a fair man.

I am farmer's son Compton

### Why M

EDITOR "T

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live stock could be improved. Keep the boys on the farm. They are awaking to the new era. Pick up a farm paper and read the short course in agriculture. Pure-bred herds, it would be better with their own grade herds. Compare the prices of pure-breds. Der they go to town to earn. Give a few improvements on the farm. They will never return.

The young people leaving the farm think the city fellow has more interest in their work. If they were divided the chances are the farm was put on a paying basis. The farmer could not work out he could himself, the profits to be for himself. He would be interested in his own lack of amusement in the city. Even in the farm home, change; music is one of the things that should be found in the city. People have a talent for music. It would be the source of much amusement for musicians, a gramophone. The young people could brighten some of the

live the problem in some way. They would enjoy trips through the country a little. Even in the farm home, change; music is one of the things that should be found in the city. People have a talent for music. It would be the source of much amusement for musicians, a gramophone. The young people could brighten some of the

attractive and the live in both house and barn. At, the young folk would

HERBERT KANE.

## Why One Reason for Leaving Home.

For every person, and if they are very apt to become indifferent. Success is not a special liking for the farm. No matter how good cattle are, modern farming methods and, there are boys and girls who are suited for other things. They have specially equipped themselves for carpentering. They like to be forever learning. They want to study medicine

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soldier not long ago ut to a farmer soon ing was all right as ient capital to buy a ld stick to farming, take the best part of e. He said where he m five o'clock in the and sometimes later,

whereas in other work, especially in the U. S., it was an eight-hour day. He also said that when he was not sleeping it was working, with only time to eat. I told him that the successful men in this world were the ones who worked hard and long to attain prominence, and that we do not get much in this world for nothing. He agreed with me.

Now, that is the main reason for leaving the farm; too long hours with very little opportunity for recreation. The farmer who puts in long hours the year round does not accomplish any more than the one who works only a fair length of day. There is only so much in a man.

I am writing partly from experience, as I am a farmer's son, and hope to be a farmer some day. **SUBSCRIBER.**

## Why Mr. Rural Loses His Children.

EDITOR "THE FARMER'S ADVOCATE":

Just because a boy is born on a farm is no proof that he is or will be a farmer. On the contrary, he's likely to be almost everything else. Many a farm boy leaves his home for no other reason than that his father's calling does not in any way appeal to him; this, however, is not the only factor that sets the farm boy trudging bravely along some back concession with all his worldly goods slung over his shoulder, bound he doesn't exactly know where, but perfectly content to be on his way—perhaps to fame! Who knows?

Speaking of fame, who has not known of a mother who knew right well that her boy was destined to be famous. You may have run across her on some old farm homestead, and listened with a proper degree of awe as she imparted to you the knowledge that her Willie was certainly born to be a bishop, or something like that. You may have even gone so far as to agree that it would be a crying shame to keep a future bishop milking cows, feeding pigs, and such like common jobs. In addition, you may have ventured the opinion that it was a poor farm that could not stand the strain of losing one promising young farmer to the church. Of course, Willie's opinion on the subject is not asked for, and he's bundled off to school and college, where he's expected to shine.—And the result? Probably a drifting misfit in the city, who, for various reasons pride amongst them, finds it impossible to revert to where his heart tells him he really belongs.

Now, take the case of Johnnie, a clean, bright, ordinary sort of lad, who likes horses, bears a friendly feeling towards the cows because they were once calves, and tolerates the greedy porkers because as dad says, "there's money in 'em." You'll find this boy farmer trooping at his father's heels begging to be allowed to do this or that, to drive the team, to hold the plow, to hitch old Dobbin to the buggy and go a-driving, and a thousand and one other things. Taking him all in all he's a likable lad, giving promise of some day shouldering his father's job.

Of course, Johnnie must go to school, about which the only part he likes is recess, noon hour, and going home time. The rest of it, as a rule, he sincerely detests because he feels that his position bears too great a resemblance to a rooster in a coop; but, on the whole, he submits to discipline with a fairly good grace, and in time learns from his books that many great men, statesmen, distinguished soldiers, high dignitaries of the church, brilliant lawyers, millionaires and such like things mostly live in cities. It never occurs to him to ask why cities are so favored. If he did probably his teacher would evade the question, and advise him that if he wished to be a great man he must study diligently. Again, it never occurs to him to ask why he can't attain greatness on a farm?—"Foolish question," you say. Oh well, in a material sense, I suppose it is. But it doesn't matter. His mind has already responded to the lure of greatness in a city.

At odd times in Johnnie's young life he is taken to one of those cities where greatness dwells. He may go by means of train, trolley car, or old Dobbin and buggy. What matter, so long as he gets there. It is an event in his life. He is dressed and all "fussed up" for the occasion. The old folk "fuss up" too. It is a gala day. When he arrives in the city why everybody there appears to be "fussed up." He sees the beautiful home of the rich man; the imposing public building; the massive church with tapering spire reaching to the skies. His eye dwells lingeringly on the showy store windows where everything is bright and new.—Maybe there is music to entrance him while he eats his dinner in a beautiful room; and maybe, if times have been good, dad, by way of a treat, takes him to a "show." Altogether it is a wonderful day.

When he gets home he lives that day of days over, and over, and over again; and when he and his bosom friend or friends foregather in the hay mow, or high up on some beam, why there's wonderful tales to relate and, if Johnnie travelled to the city by train it's possible you'll overhear how fast things would move if he were a man and driving one of those big engines.

Well, those boyhood days are the halcyon days if he but knew it, but all good things end. There comes a time when some smiling girl addresses him as Mister. His stature immediately increases a couple of feet or so, and lo and behold! he's grown up. Ambitions stir, home ties begin to stretch. He's full of dreams; dreams that finally, by contrast, bring him up sharp against some pretty hard facts.

To use his father's words he has got to be "pretty handy round the place." Being a willing, besides handy worker, his father sees to it that there are few idle moments, until, some day, the boy awakens to the hard fact that he's being robbed of a time to play; His play time is supposed to be when his work is done

but so very often the end of his day's work is so perilously near bed time that he must needs borrow an hour or two from his sleeping time to indulge in his own private adventures. At odd times he borrows too heavily, with the result that his high, sensitive spirit is subjected to heated censure. He rebels. One thing leads to another, and sooner or later you'll see him "hiking" for where the smoke hangs low in the sky.—Will he come back? Generally speaking, no.

In the city the clock governs his hours of work. He receives good wages paid regularly. Unless he is foolish he doesn't have to borrow from sleeping hours time in which to play. In addition, if he captures some nice girl, the rural obstacle, no kind of cage anywhere in which to have and to hold her, is not nearly so great. In frank comparison then, What is there in rural life to attract or hold.—"Well, and what are you going to do about it?" you query.

I might answer by asking, What is the general rural public doing about it? And you'd get your answer.—Nothing.

When you come to think of it, it is really pathetic the way Mr. Rural Public sits and twiddles his thumb while his bright-eyed children hurry away, seeking, some for freedom from a slavish atmosphere, others for the antidote to loneliness or mental stagnation; and yet, strange to relate, he displays a decidedly belligerent attitude towards Mr. Urban Public touching financial profits made at his expense.

The leaven of change, however, works but slowly in Mr. Rural's mind, and doubtless the seasons will pass, many of them, before he actually realizes that his young people need a little more time for recreation than he is allowing them; need the better schools which, with his eye on taxes, he doesn't attempt to secure for them; need the houses that he never thinks of building for them to nest in; need some place, other than the village store, where in comfort they could read or play, or argue to their heart's content. In all this there is room for the church to take a more conspicuous part not in an arbitrary way, but in a friendly way with Mr. Rural, in some manner, to eliminate the causes of some of his trouble, so long shall the robin each spring-time plaintively and questioningly pipe to his financial hearing.—"Where's Bill, where's Lillie—Gone?"

York Co., Ont.

THE HIRED MAN.

## Why the Boys Leave the Farm.

EDITOR "THE FARMER'S ADVOCATE":

Why the boys leave the farm is a problem which has caused much difficulty among the rural dwellers, and the remedy seems to be hard to find. No doubt prevention would be better than cure. Truly, not every boy will take an interest in farming. Some of the cities greatest business men were brought up on the farm. But many boys have left the farm simply because they thought it was nothing but drudgery and hard labor, and could see no bright side to it. The result is they left for the city, worked under the management of a boss all their life time, and often remarked that they made a mistake when they left the farm. The most trying-time for the boys is after they have left school until they are twenty-one—the time they do a man's work and generally get no pay. In those years many a promising young lad has left the farm for the city, where pay is regular and also the working hours and holidays, and there are no chores on the Sabbath.

The boys should be taught in their youth to take an interest in farming. There is no better way than to give them a pet when they are quite young; let them have it for their very own and see how they will appreciate it. When they get older and have some education, then give them a calf, a colt, or a litter of pigs. Let them keep accurate account of the feed they consume, and leave the profit to the boy so he may run a bank account. He can then buy his own clothing and everything he needs. In this way he will learn the value of money and how to economize. Some farmers may think this is a loss of time to have the boy feed his stock separately, but let him have the chance and see how he will hustle home from school and how soon the chores will be done. Then there are many jobs that seem disagreeable, especially if one has to work at them alone, such as stone picking, cutting thistles, hoeing, etc. If possible, help with such work, or at least encourage with kind words something that has been done well, rather than scold the boy for making a mistake. Improvement in the barn or in new implements will always be great joy. Some say get them an "auto", then they'll stay on the farm, but I think most boys will be satisfied if they have a good driver and a fine buggy for themselves.

There may be many other reasons why boys dislike the farm, such as chores on Sundays or on holidays. Of course, chores have to be done, but it can be arranged so one can have every other Sunday without doing many chores; while about holidays, every boy should have a few days for recreation, for the lost time will always be repaid if the boy is just satisfied. I believe it is often the father's fault if the boys leave the farm. Some men have habits of always worrying about the work, or grumbling when something goes wrong, while with many it seems they were just trying to see how much money they can get together, instead of spending a few dollars for improvements that would encourage the boy to take more interest in the farm. Then after all if one cannot afford to buy a farm for the boy, or does not want to give up farming himself, why not start share-farming? Everybody knows that it is poor satisfaction to work for a boss half of the lifetime. Give the boy a chance and in nine cases out of ten he will become a farmer.

Waterloo Co., Ontario.

FARMER'S SON.

## AUTOMOBILES, FARM MOTORS AND FARM MACHINERY.

### Ditching Machine Troubles.

The following is a paper read by J. W. Sands, of Chatham, at the Short Course in Farm Drainage, held at the O. A. C. in January. Mr. Sands deals with several troubles which are common on all gas engines. Loose crank-shafts, connecting rods or boxings cause considerable trouble with power engines. The operator should go over the machine regularly and keep the parts properly adjusted. Lubrication is also an important matter which some machine operators neglect:

"Having been called out a good many times during the past year on various engine and machine troubles also having heard of many other troubles of various kinds, I will endeavor to give you an idea of the cause of some of these troubles. I believe the most common trouble to-day is the breaking of crank-shafts. It is generally a break that can only be repaired by supplying a new crank-shaft. I believe that in about 60 or 70 per cent. of the cases of broken shafts, the break shows that at least a portion of the shaft diameter had been broken for some time. In other words, the rusted and separated points indicate an old break of from one-half to two-third of the cross section. The parts showing an old break often have the appearance of never having been united. With this condition of affairs, an owner of a shaft is apparently justified in laying claim to a defective crank-shaft. His claim should receive every consideration that justice and fairness demands, but the real condition that leads up to and causes the break should not be lost sight of. In the large majority of cases, broken shafts are the result of loose journal boxes. It is not an uncommon thing to find an engine in operation that shows the crank-shaft jumping on one or both journal boxes at each impulse of the piston. It is a matter that may have been noticed by the operator and lightly regarded. In his opinion it is only a trivial matter. Oftentimes the loose condition of the boxes entirely escapes the notice of the operator.

"The sudden force applied to the piston of a gas engine and through it and the connecting rod to the crank-shaft, tends to lift the shaft out of the journal box bed at each impulse. This is possible even with the weight of the heavy balance wheels crowding the crank-shaft constantly downward into its bed. As soon as the force of the impulse subsides, the weight of the wheels and shaft come down into the bed again with a thump. There is an unnecessary strain on the shaft every time it jumps in the boxes. This continual heavy strain at regular intervals soon causes what has been called a crystallized condition of the metal in that part of the shaft where the greatest strain occurs. At this fragile point in the crank-shaft a crack is started and this crack grows gradually deeper, until finally the good metal remaining is no longer able to withstand the strain and a break occurs.

"To avoid unnecessary trouble too much stress cannot be laid on the importance of correct bearing and proper lubrication. Great care and watchfulness are needed to avoid allowing journal boxes to remain loose, thereby causing not only crank-shafts, but all shafts to jump and pound in their beds with bad effect. We have also had lately, connecting rods which have given us considerable trouble, more especially since the use of cast steel rods came into effect. Quite a few upon examination have shown defects caused by air bubbles in the casting of the material. The owner of such a rod has a just right in having it made good, and here is where I wish to make a few explanations re troubles and disputes between ditching machine companies and machine owners. It is the duty of the owner of a defective rod when it goes wrong (if it is quite evident to him that there was a defect in the manufacturing) to have same shipped back to the company or have one of their authorized agents inspect and examine it and report the true findings. In the majority of cases the manufacturer buys these connecting rods in bulk from another concern, and this will give the ditching-machine manufacturer a chance to have the report or the broken article sent on for adjustment by the original manufacturer and save unnecessary expense. Often times the ditcher owner repairs the break temporarily himself and then orders a new repair and expects there will be no expense attached to it. This action only causes disputes, whereas if the owner were more considerate and would think of the manufacturer too, a lot of unnecessary trouble could be avoided, for it is a good policy to work co-operatively with all manufacturing and other companies. However, do not overlook the fact that loose bearings have a lot to do with these breakages. If a bearing is too tight it soon becomes dry and heats from friction until it grips the crank-shaft so tightly that something must give way which invariably is the weakest point. A similar thing happens a loose bearing, owing to the excessive strain placed upon it by the takeup in the play of the journal, when the piston receives the explosive impulse. A loose bearing not only is detrimental to weak parts but causes a continual loss and waste of power, again emphasizing the need of correct lubrication and bearing adjustment.

"Another vital point so essential to successful operation that I wish to dwell on briefly is the digging wheel. When I see the condition of the digging wheel of a machine I judge the qualifications of the operator at first glance. It is the best indicator of how careful or careless an operator is, that I know of. Upon the digging wheel depends the life of the machine as a whole.

When I say a digging wheel is in poor or bad condition, I mean cutters dulled off and cutting narrower than the segments. This causes excessive wear and tear on the whole machine, consumes unnecessary power, is, therefore, very expensive. It also reflects on the ability of the operator in not thoroughly understanding the principle of the cutting wheel. I will liken the digging wheel to a saw, and all who are familiar with the saw know what it works like when it lacks set to clear its sides, causing it to bind in the cut, entailing more labor for the work than it would require if it were cutting clear. Also if a tooth is longer than the others you all know how it impedes the work. In other words, you know how much work you can do with the same labor when the saw is properly fitted. Each and every bucket should elevate every bit of earth that its cutters cut, and not allow any earth to pass through to overload the next bucket. For you can only cut as fast as a bucket can elevate the earth. Every finger should be kept in its proper place. The side and centre cutters should be kept sharp and true to form, so that each and every one will do the share of digging required of it. The sharpening, and keeping to proper form is of very great importance. All blacksmiths cannot sharpen cutters properly. In fact very few can. Cutters should be drawn out and the point kept in straight alignment with the back of cutter and not lipped over. Some have the best success by slightly hardening the cutting edge, but that should be left to the judgment of the operator, for a lot depends on the kind of soil that he is working in. A side cutter should cut fully three-quarters of an inch outside of the segments on the digging wheel rim. Centre cutters should have one-half inch clearance over top of back of buckets to prevent them from rubbing against the soil. Try and have free running of digging wheel without any hindrance from extra friction or binding in the trench. Possibly you have noticed a wheel leaning toward one side. This again is like the saw which lacked set on one side, it will not cut straight, and the leaning of the wheels can be remedied in nearly all cases by putting on a sharp set of cutters which are true to form. A wheel that is kept up to form with the cutters always sharp will prolong the life of the machine as a whole. More especially does this apply to the No. 1 sprocket and segments that give so much trouble to the operator. Therefore, it is essential to watch the digging wheel closely at all times and keep all cutters tight, sharp and true to form, and have each and every bucket do its allotted work as it was designed and intended to do.

The throat space where the soil is forced out of the digging wheel is also a very important part of the wheel. Direct force in a direction opposite to the running of the wheel in order to force out the earth is a waste of power and causes excessive wear on sprockets and chains, i. e., the sabre cleaners that are now used, are not as properly constructed as they should be to allow proper clearance of the earth. They should be so formed as to allow the earth to be started from one side (preferably the side opposite the conveyor) then permit it to be gradually forced out toward the conveyor side, and where throat space can be enlarged it is advisable to do so. If the arc plate will permit of 4 or 5 inches to be turned down or cut off, this will materially aid in cleaning the wheel. There is one more improvement of invaluable aid that can be cheaply installed on any machine. It is a self-balancing, centre swinging sight rod without which I think it impossible for an operator to do correct work in all conditions of soil. All stationary rods that come attached to side of digging frame, are very inadequate and unreliable. It is impossible for an operator, be he ever so expert, to do accurate work with the rigid sight-rod, especially when cutting curves or digging rough ground, when the machine is not always level. A rod fastened on the side of frame with a balancing arm is not quite proper either. It allows quite an error without being noticed by the operator, but is to be preferred over the old type of a stationary one. The most efficient sighting arm is one that hangs from centre of digging wheel, and is self-balancing. It is the only proper means of digging a line of trench always true to grade. This device can be cheaply made and easily attached, but great care must be taken to have all parts working freely. When properly made the vibration of the machine has no noticeable effect on this type of sighting arm. There are a great many more troubles which arise. Troubles such as proper lubrication of all parts; care of No. 1 sprockets and segments to prevent such rapid wear as they exhibit in some marked cases; chains not running smoothly or evenly; gas engine troubles and remedies; and operations which denote good operators, etc. But each of these is a broad subject in itself, and it would be too lengthy to try and give justice to each at this time."

### Determining the Freezing Point.

1. How do you determine experimentally the position of the freezing point on the stem of a thermometer?

2. What is meant by Boyle's Law, and Pascal's Law?

Ans.—1. Put the bulb in a dish of water with plenty of finely-broken ice and wait until the position of the mercury becomes constant, mark this point on glass stem with a sharp file.

2. Boyle's Law.—Under constant temperature the volume of a gas varies inversely as the pressure, i. e., if a gas has a volume of 10 cubic feet under a pressure of 15 lb., the volume would become 5 cubic feet under a pressure of 30 lb.

Pascal's Law.—Pressure exerted anywhere upon a mass of liquid is transmitted undiminished in all direc-

tions, and acts with the same force on all equal surfaces, and in a direction at right angles to those surfaces.

R. R. G.

## THE DAIRY.

Do not sacrifice the proven sire. Exchange him with another breeder rather than send him to the block.

Start weighing the milk daily or at least at regular intervals this spring, so as to have an idea of what the cows are doing.

Plan on sending your cheese factory milk of the highest quality this summer. No cheesemaker can make good cheese from poor milk.

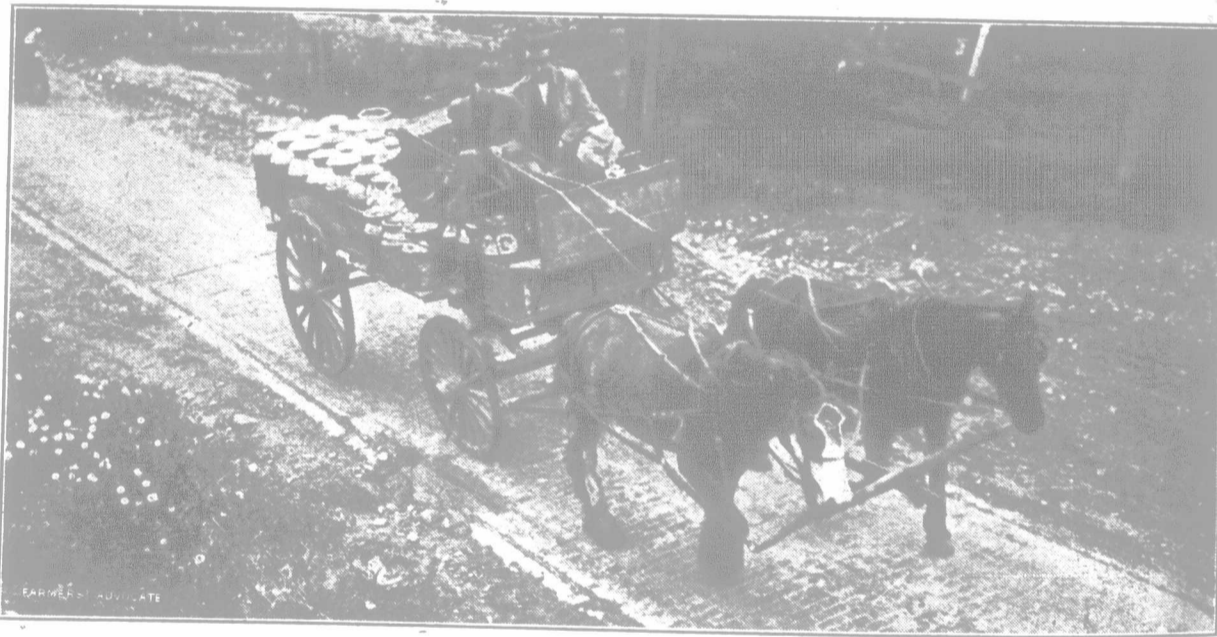
If building up a herd one cannot afford to dispose of the best females. The scales and tester insist in picking out the most profitable cows.

Breeders of all classes of stock look for size and capacity in the mature stock. To get size in the mature animal the calf and yearling must be well fed.

Cross-breeding is not constructive breeding. Select the breed that best meets your conditions and improve the herd by use of the best sire of that breed that is available.

Have you thought of co-operating with your neighbor in hauling milk or cream to the factory or shipping point? Why two men and two teams take two hours on a trip when one man and team can haul the two lots of milk or cream?

Selling whole milk possibly gives larger gross returns than marketing the lactic fluid through cheese factory or creamery. However, the by-product from the latter two markets must be considered when making a comparison of markets for milk.



One Method of Delivering a Valuable Food Product.

The herdsman should watch both ends of the animal under his care; this is especially essential with cows that are pushed for high records. The successful feeder is one who can feed all an animal will take without upsetting the digestive system.

A number of Ayrshire cows and heifers have recently qualified in the Record of Performance. Scotland Princess leads the mature class with 10,206 lbs. of milk, testing 4.06 per cent. In the three-year-old class, Nellie Burns 5th, a British Columbia cow, is first with 8,466 lbs. milk. Wakesiah Violet 3rd, also from the Pacific Province, leads the two-year-old class with 8,864 lbs. milk and 358 lbs. of fat. There were twelve two-year-olds qualifying.

Between March 1 and March 15 fifty-six Holstein cows and heifers qualified in the Record of Merit. Two new 30-lb. cows are found in the mature class. Miss Johanna Pontiac Korndyke leads the mature class with 32.59 lbs. butter. In the thirty-day test she gave 2,597.6 lbs. milk. Beulah Echo Spofford, in the senior four-year-old class gave 477.7 lbs. milk in seven days. Duchess Colantha Korndyke, as a junior four-year-old, produced 506.7 lbs. North Star Cassie Korndyke heads the senior three-year-old class with 472.8 lbs. milk. In junior three-year-olds, Olive Posch Schuiling is first. Duchess Echo Alcartra has 157.9 lbs. milk to her credit as a senior two-year-old, and made 1,885.7 lbs. milk in thirty days. Segis Burke Alcartra, as a junior two-year-old, gave 396 lbs. milk yielding 18.03 lbs. fat.

Daylight Saving has as many lives as a cat. Parliament killed it and the Railroad War Board allowed it; the country drowned it and the cities brought it to life. It is to be hoped that by the fall we shall have it absolutely extinguished.

### Don't Neglect the Calves.

In many sections it is customary to have the cows freshen in the spring so that there will be a heavy milk flow during the summer months when the cows are on grass. The spring calves require more attention and care than do fall calves, in order that they may have no setback. It very often happens that with the rush of spring work the calves are not given as much attention as they require, and consequently are more subject to ailments, especially the scours, than are calves dropped in the fall. The young calf should be kept in a clean, dry pen and care taken that the milk is fed at about blood heat and given in clean pails. Varying the temperature of the milk from day to day, and feeding in dirty pails, very often starts the calf scouring, or results in indigestion. It is discouraging to go to the stable some morning and find a valuable calf either dead or beyond hope of recovery, due to a disease which in many instances could have been avoided. Scours may be caused by a germ but might also result from indigestion. The latter is brought about by causes which set up inflammation in the stomach. It may result from overfeeding, irregular feeding, giving milk that is too cold, or using dirty pails. It may be difficult to pay attention to all the details of feeding during the spring months, but it does not pay to neglect the calves or the young stock. Better far to take a little more time and prevent any disorders which might result in death, or at least stunt the growth of the youngsters which are to make up the future herd. At the first symptoms of ailment reduce the ration and then if the calf appears normal gradually increase it. In some cases it is advisable to give two or three ounces of castor oil in the milk, and then feed lightly for a few days. Adding a little lime-water to the milk helps to correct the trouble. It is not bad practice, especially in the spring of the year, to add a teaspoonful of lime-water to the milk night and morning.

One big mistake which some feeders are guilty of is the varying of the amount of milk fed the calf from day to day. Instead of giving the calf so much, the too-frequent custom is to divide the milk supply between the calves, regardless of the amount. Eight or nine pounds of skim-milk twice a day is sufficient for a calf up to three months of age. When one person is feeding the calves continually, it is quite possible for him to feed a regular amount, but when the feeding is left to different persons the scales should be used and so many pounds fed regularly. At this time of year the calf pails soon sour, consequently should be scalded frequently.

White scours, or calf cholera, is an infectious disease and has caused serious loss in many herds. Once it enters the stable it is sometimes difficult to eradicate it, with the result that few calves are raised. It is believed that the germ of the disease enters the blood of the calf through the freshly-severed navel cord. The disease almost always attacks calves within a few days after birth, and often proves fatal. As little can be done for the trouble after the calf has become infected it is advisable to take precaution to prevent infection. Have the surroundings in a sanitary condition and disinfect the navel cord as soon as the calf is dropped. A three-per-cent. carbolic acid solution is commonly used for this. One teaspoonful of a mixture of one-half ounce of formalin to fifteen ounces of distilled water added to each pint of milk fed sometimes serves as a preventive, and is also administered to calves that are infected. This calf cholera sometimes occurs in herds where the utmost care is given regarding feeding and sanitary conditions. The common scours, or indigestion however, is very largely the result of carelessness. One cannot be too careful in the feeding of calves. If the calf flesh is lost it is difficult to get it back; consequently the aim should be to feed so that the calf will keep on gaining from the time it is dropped. A large-framed, heavy-producing cow is seldom developed from a poorly-fed, stunted calf.

Laurie thirty-five Toronto, Ontario b out of the purchased won a cor herd was a number secured go would tence had succe the Provin an opportu selection a animal of year-old co type. She Ness, of H number of both Toron don, Que., his herd. since the fir \$6,650. TH \$100 and o of their pur

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**the Calves.**

It is customary to have the cows milked there will be a heavy milk yield when the cows are on pasture and they may have no need for concentrates. It is important that they may have no concentrates that with the rush of spring they are more subject to disease than are calves dropped in the winter. The milk should be kept in a clean pail and the calf fed at about 10 o'clock. Varying the ration day to day, and feeding in the morning, or results in a weak calf either dead or diseased. Scours may be avoided. Scours may also result from a change in the ration by causes in the stomach. It may be difficult to pay to neglect the calves to take a little more of the ration which might result in a growth of the youngsters. At the first sign of scours, the ration and then if necessary increase it. In some cases three ounces of castor oil for a few days, the milk helps to correct the practice, especially in the case of a calf.

**Gladden Hill Ayrshire Herd Brings \$6,650.**

Laurie Bros., of Agincourt, dispersed their herd of thirty-five Ayrshire cattle at the Exhibition Grounds, Toronto, on April 2. It was a good sale but Western Ontario breeders permitted the choicest stuff to go out of the Province. Breeders in Quebec and Alberta purchased some right good individuals. This herd won a considerable number of the main prizes. The herd was also prominent in R.O.P. work, and produced a number of females with high records. Laurie Bros. secured good foundation stock and used such sires as would tend to improve the quality of the herd. They had succeeded in building up one of the best herds in the Province, and their dispersion sale gave breeders an opportunity of reaping the benefit of their wise selection and careful breeding. The highest-priced animal of the sale was Annie of Meadowvale, a six-year-old cow with a splendid udder and true Ayrshire type. She is due to freshen and went to the bid of R. R. Ness, of Howick, Que., at \$500. Mr. Ness secured a number of good things, among which were winners at both Toronto and London. G. McMillan, of Huntingdon, Que., also added several excellent individuals to his herd. In the sale were a number of calves dropped since the first of January. The entire offering brought \$6,650. The following is a list of the animals sold for \$100 and over, together with the names and addresses of their purchasers:

**Females.**

|   |       |
|---|-------|
| Pet of Gladden Hill, G. McMillan, Huntingdon, Que.      | \$375 |
| Annie of Meadowvale, R. R. Ness, Howick, Que.           | 500   |
| Topsy of Gladden Hill, R. R. Ness                       | 270   |
| White Beauty, M. Shaver, Millgrove                      | 205   |
| Violet of Gladden Hill, J. Weir, Agincourt              | 295   |
| Fanny of Gladden Hill, R. R. Ness                       | 300   |
| Ella of Shannon Bank, Hunter Bros., Freeman             | 300   |
| White Lady of Craigelea, G. Sellers, Agincourt          | 175   |
| Dewdrop of Menie 2nd, R. R. Ness                        | 240   |
| Shannon Bank Alice, Hunter Bros.                        | 200   |
| Amelia 2nd, J. Fowler, Downsview                        | 230   |
| Shannon Bank Beauty 3rd, W. Stein, Erin                 | 190   |
| Sunnybrook Lady Jaer, R. R. Ness                        | 225   |
| Gladden Hill Topsy 2nd, A. R. Gillis, Clover Bar, Alta. | 180   |
| Brownie 4th, T. Weir, Agincourt                         | 210   |
| Gladden Hill Pet 4th, A. R. Gillis                      | 220   |
| Gladden Hill Snowflake 2nd, A. R. Gillis                | 165   |
| Gladden Hill Lady May, D. Ashworth, Denfield            | 235   |
| Gladden Hill Violet, H. C. Hammel, Markham              | 245   |
| Gladden Hill Lucy, E. Carr, Allandale                   | 115   |
| Gladden Hill Duchess, T. Weir                           | 155   |
| Gladden Hill White Lady 2nd, H. C. Hammel               | 170   |
| Gladden Hill Topsy 3rd, Mr. Wornock, Allandale          | 155   |
| Gladden Hill Violet 2nd, T. Weir                        | 240   |
| Gladden Hill Annie, F. T. Chapman, Agincourt            | 105   |
| Gladden Hill White Lady 3rd, T. Weir                    | 155   |

**Males.**

|  |     |
|--|-----|
| Redpath King, T. Weir                      | 170 |
| Gladden Hill Ivanhoe, Mr. Green, Brantford | 175 |

**Holsteins at Mt. Elgin Realize \$6,344.**

On March 14, Bruce Taylor, of Mt. Elgin, disposed of thirty-three head of Holsteins for the sum of \$6,344. In the offering were a number of tested cows with creditable records, and the individuals carry the blood of some of the best sires of the breed. The herd was founded some seven years ago, and the mature cows sold give well over 50 lbs. of milk per day. Mr. Taylor retained all the heifer calves as a foundation for his new herd. A. E. Hulet, of Norwich, exchanged \$500 for Annie Shadelawn Favorit, a four-year-old heifer. This was the highest priced animal of the sale. Following is a list of the animals sold for \$100 and over, together with the names and addresses of their purchasers:

|   |          |
|---|----------|
| King Segis Alcartra Bakker, Thos. Stroud, Mt. Elgin             | \$177.50 |
| Bertha Shadeland, Wilbur Prouse, Tillsonburg                    | 255.00   |
| Bessie Teake Spink, F. A. Ficht & Son, Curries                  | 195.00   |
| Princess Lou Favorit, John Duffy, Mt. Elgin                     | 245.00   |
| Jean Bewande, Wilbur Prouse                                     | 185.00   |
| Calamity Iosco's Mercedes Teake, Soldiers Civil Service, Guelph | 210.00   |
| Sallie R. of Avondale, Wilbur Prouse                            | 220.00   |
| Helen De Kol Avon, Soldiers Civil Service                       | 200.00   |
| Catharine Pontiac Netherland, Soldiers Civil Service            | 195.00   |
| Annie Shadeland Favorit, A. E. Hulet, Norwich                   | 500.00   |
| Florence Shadeland Favorit, Soldiers Civil Service              | 310.00   |
| Pauline Sylvia Posch, F. A. Ficht & Son                         | 200.00   |
| Calamity Teake Iosco, G. Wright, Harrietsville                  | 245.00   |
| Mona Aaggie De Kol, Albert Tattersall, Mt. Elgin                | 225.00   |
| Max De Kol Favorit, G. Wright                                   | 190.00   |
| Nell Posch Korndyke, F. Strobbridge, Ingersoll                  | 195.00   |
| Nell Pontiac De Kol, Frank Duffy                                | 160.00   |
| Floss Akkrum, A. MacDonald, Mt. Elgin                           | 170.00   |
| Winnie Rooker Mercena, Frank Duffy                              | 155.00   |

|   |        |
|---|--------|
| Elite Pontiac Rue, Soldiers Civil Service | 140.00 |
| Bessie Korndyke Clothilde, Frank Duffy    | 175.00 |
| Cornelia Pauline Abbekerk, Frank Duffy    | 230.00 |
| Daisy Johanna Posch, Frank Duffy          | 170.00 |
| Florence Akkrum, A. MacDonald             | 185.00 |
| Calamity Iosco Korndyke, Elmer Harris     | 210.00 |
| Bertha Pontiac Pet, Geo. House, Mt. Elgin | 210.00 |
| Helen Pontiac Aaggie, Wilbur Prouse       | 180.00 |

**Norfolk County Holstein Sale.**

The attendance at the Norfolk County Holstein-Friesian Breeders' Club sale was not large, but the bidding was brisk throughout, and the average for the animals sold was on a par with the best consignment sales of the season. Some of the cattle would have sold better had they been in a little higher condition. However, on the whole it was an exceptionally choice offering and brought a total of \$10,585. A number of the cows were fresh and their calves sold separately at from \$30 to \$75, so that in many instances this should be added to the prices. Colantha Snowflake, a four-year-old cow consigned by W. J. Bailey, of Jarvis, sold at \$700 to W. W. Bromby. Since the catalogue was issued this heifer had made a seven-day official record of 31.47 lbs. of butter and 610.9 lbs. of milk. Elmerest Abbekerk Posch, consigned by W. H. Cherry, sold at \$525 to H. Huffman. This is only a two-year-old heifer due to freshen about the 10th of April. She was bred to King Segis Alcartra Joseph, and her six nearest dams averaged 27.25 lbs. butter in seven days. Following is a list of the animals selling for \$100 and over, together with the names and addresses of their purchasers:

|   |       |
|---|-------|
| Pet Mercedes of Riverside, Allied Stock Farm, Wilsonville | \$305 |
| Johanna Korndyke Luraine, Allied Stock Farm               | 250   |
| Bessie De Kol Beauty, Geo. H. Eisenbach, Elmira           | 385   |
| Calamity Abbekerk Blossom, L. Bartlett, Nanticoke         | 255   |
| King Alcartra Posch, W. H. Cherry, Hagersville            | 200   |
| Duchess Colantha Korndyke, Geo. H. Eisenbach              | 375   |
| Segis Abbekerk Diotime, Beswetherick Bros., Hagersville   | 135   |
| Helbon Posch Sylvia, Geo. H. Eisenbach                    | 355   |
| Pontiac Helbon Wayne, W. E. Hambly, Waterford             | 200   |
| Clay Wayne, R. Gundry, Pt. Dover                          | 175   |
| Lena Fayne, Beswetherick Bros.                            | 265   |
| Gano Tensen Bonheur, Geo. H. Eisenbach                    | 155   |
| Bonnie Bessie, W. D. Lindsay, Hagersville                 | 275   |
| Idaline Ladoga of Campbelltown, S. A. Best                | 225   |
| Estelle Belle Plaine, A. Butler, Scotland                 | 235   |
| Pontiac Eunice Clay, W. E. Hambly                         | 140   |
| Pilgrim Cora, B. Conner                                   | 225   |
| Laura Bonheur, J. O. Slack, Hagersville                   | 185   |
| Sir Tensen Posch Konigen, Geo. H. Eisenbach               | 190   |
| Segis M. Posch, Roy Misner, Pt. Dover                     | 235   |
| Lucile Grace Fayne, A. Mittleheldt, Wellandport           | 300   |
| Aaggie Texal De Kol, J. J. Smith, Jarvis                  | 180   |
| Lydenwood Hilda, A. Haller, Hagersville                   | 235   |
| Lydenwood Duchess Posch, A. Haller                        | 205   |
| Sir FINDERNE Colanthus, A. D. Freese, Penobsquis, N.B.    | 250   |
| Grace Fayne Lulu 2nd, H. Huffman, Hagersville             | 230   |
| Gano Lulu Posch, W. W. Bromby, East Farnham, Que.         | 375   |
| Johanna Netherland Lass, Geo. H. Smith                    | 200   |
| Eunice Crena Clay, J. M. McCarthy, Jarvis                 | 125   |
| Elmerest Abbekerk Posch, H. Huffman                       | 525   |
| Modest Jane Aaggie DeBoer, Thos. Bilton, Jr., Hagersville | 150   |
| Mercena Keyes, R. Gundry                                  | 175   |
| Abbekerk Rose, A. Haller                                  | 405   |
| Colantha Snowflake, W. W. Bromby                          | 700   |
| Duchess Ormsby, B. V. Bailey, Hagersville                 | 255   |
| Sir FINDERNE Ormsby, A. E. Pearce, Jarvis                 | 150   |
| Irene Colantha De Kol, W. W. Bromby                       | 250   |
| Vera B. Tensen, W. E. Winger, Hagersville                 | 245   |
| Daisy Calamity Princess, W. Jackson, Jarvis               | 160   |
| Maybelle Favorit Abbekerk, W. E. Hambly                   | 185   |
| Toitilla Schuiling, Geo. H. Eisenbach                     | 205   |
| Dolly Hartog Staple, W. E. Hambly                         | 150   |
| Abbekerk Bonheur Lass 2nd, Harry Elliott, Hagersville     | 165   |

**Elgin County Holstein Sale.**

A sudden lowering of the temperature at St. Thomas on Thursday of last week seemed to dampen the enthusiasm of Holstein purchasers at the Elgin County Annual Spring Sale. Compared with other club sales held in Ontario during the past month, the average was not quite on a par. The animals listed were up to the average, and were brought forward in fair condition, but at no time during the sale was bidding brisk. It proved a good place to buy, however, and those who were fortunate in getting well-bred individuals at little more than grade prices should be satisfied. Bonnie Mercedes, a non-tested four-year-old daughter of Sir Colantha Wayne, and consigned by D. Caughill, made the top price of the day and went to C. Lawson, of Wilton Grove, at \$425. There were fifty-two cattle sold, a large number of which were calves and yearlings. The total receipts of the day were \$8,175. The following is a list of the animals selling for \$100 and over, together with the names and addresses of their purchasers:

|  |       |
|--|-------|
| Sir Segis Butterbank, Fred Taylor, Belmont           | \$140 |
| Glenwood Beauty Colantha, Frank Atkinson, Mossley    | 205   |
| Lady Winona Abbekerk, Wm. Dufty, Union               | 210   |
| Malvine De Kol Pietertje, C. Watson, St. Thomas      | 140   |
| Dixie Queen of Lorne, Angus Turner, Shedden          | 230   |
| Jennie Gano, D. Kennedy, Belmont                     | 155   |
| Bonnie Mercedes, C. Lawson, Wilton Grove             | 425   |
| Viola Colantha, H. Miller & Son, Bridgeburg          | 200   |
| Fergy Korndyke, Pollard & Duncan, St. Thomas         | 100   |
| Malvina Calamity Ormsby, F. Hamilton, Stamford       | 170   |
| June Fayne, M. Claus, St. Thomas                     | 170   |
| Josephine Abbekerk De Kol, H. Miller                 | 210   |
| Jessie Abbekerk Posch, Fred Bodkin, Aylmer           | 160   |
| Mercedes De Kol Veeman, Frank Bainard, Glanworth     | 175   |
| Kathleen Queen De Kol, Frank Atkinson                | 145   |
| Celicia Beets De Kol, Wm. Lewis, Mossley             | 130   |
| Bessie Korndyke Wayne, Gordon Lindsay, St. Thomas    | 110   |
| Thistleton Kate, E. E. Burrows, Lambeth              | 160   |
| Sprucedale Lenora, E. Siple, St. Thomas              | 186   |
| Princess Dorliska, M. Claus                          | 235   |
| Leone Abbekerk Aaggie, F. L. Cloes, New Sarum        | 130   |
| Dora Ormsby, C. Millson, Glanworth                   | 175   |
| Thistleton Jean Pietertje, Gordon Lindsay            | 125   |
| Pearl Colantha Ormsby, Angus Turner                  | 245   |
| Polly Colantha Ormsby, F. Hamilton                   | 250   |
| Susanna Maples, Peter O'Shea, Restigouche Co., N. B. | 105   |
| Idaline Canary Veeman, Angus Turner                  | 130   |
| Canary Veeman Posch, House of Refuge, Leamington     | 290   |
| Dora Hengerveld Maplecroft, F. Hamilton              | 195   |
| Pauline Calamity Posch, Norman Watson, St. Thomas    | 215   |
| Flossie Hartog, H. Shipley, Union                    | 100   |
| Lilly Ormsby De Kol, Pack Bros., Byron               | 320   |
| Lady Nora Korndyke, Duncan Taylor, St. Thomas        | 145   |
| Korndyke Butter Girl Wayne, H. Miller & Son          | 155   |
| Pride Cotton Blossom, E. Siple                       | 205   |
| Daisy Pride Inka, F. Hamilton                        | 225   |
| FINDERNE Fayne Korndyke, F. Hamilton                 | 250   |
| De Kol of Rosarden, H. Miller & Son                  | 145   |
| Segis Southern Lady, E. Winter, Lambeth              | 160   |
| Lady Segis of Orchard Nook, E. Lawson                | 150   |
| Kathleen Prilly Hartog, Pack Bros.                   | 175   |

**THE APIARY.**

**Bee Diseases.**

There are three brood diseases that are of importance to the beekeeper, and two of them are responsible for very heavy losses every year.

Sacbrood is an infectious disease but transient in character. It may be serious enough at times to weaken a colony considerably, but seldom destroys it completely. It appears in the apiary mostly during the spring and early part of the summer, but cases may be found at any time during the season. The symptoms are irregular brood and punctured cappings; the affected larvae are usually dark grey to almost black in color and are found lying stretched out on the lower wall of the cell with the head turned up pointing to the upper wall of the cell at the entrance. The body wall of the diseased larvae becomes toughened while the contents of the body are somewhat watery and granular; the whole can be lifted from the cell intact. There is no definite treatment for this disease, but the beekeeper who keeps his colonies at the maximum strength and uses only young vigorous queens need not fear it.

European foul-brood is a highly infectious disease and spreads very rapidly through an apiary, causing very heavy losses especially among black bees and hybrids. The larvae usually die before being capped over, while still curled in the cell. The color of the affected larvae changes from a glistening white to a light yellowish or greyish tint, later turning darker and the larvae settles to the base of the cell in a shapeless mass, finally drying to a dark detachable scale, which is removed by the bees. This disease may appear at any time during the season but is mostly prevalent during the spring and early summer. European foul-brood is essentially a "weak colony" disease and the beekeeper who uses only young vigorous Italian queens and keeps his colonies strong need not fear it.

American foul-brood does not spread through an apiary as quickly as does European foul-brood, but it is harder to combat. The larvae usually die after being capped over and the first sign the beekeeper usually has of its presence is a number of dark, sunken cappings scattered about among the healthy brood. Sometimes these cappings may be perforated. If the capping is removed, a dark chocolate-colored mass will be found lying on the lower side of the cell. If a wooden toothpick or something similar is inserted into the diseased larva and given one or two turns and then withdrawn, the mass will be found to "rope out" to one or more inches before breaking. This is the chief characteristic of this disease. The only treatment advocated for American foul-brood is to shake the bees on to starters in a clean hive and three days later to remove the starters and give full sheets of foundation. The old hives should be disinfected, the combs rendered to wax for foundation and the frames destroyed. The honey is safe for human consumption but must not be placed where bees have access to it. This treatment should be given during a honey flow, if not the bees will need daily feeding.—Experimental Farms Note.

## HORTICULTURE.

### The Nova Scotia Spray Calendar.

In this issue we are reproducing the Spray Calendar recommended for Nova Scotia apple orchards. This differs very materially from that recommended for Ontario, which appeared in the issue of March 27, and we would caution readers in the various provinces to use the Calendar recommended by their respective Departments of Agriculture. We are publishing the Nova Scotia Calendar in this issue for our Nova Scotia readers, and if Ontario orchardists care to follow it in any respects they should do so in an experimental way only. Conditions vary widely in the different provinces, and what is a safe practice in one province is not necessarily so in another. In fact, conditions are quite

different in Nova Scotia from what they are in Ontario, hence this note of warning. If you care to experiment, well and good, but don't confuse the two calendars.

### Use of Eleven- and Six-Quart Baskets.

BY C. W. BAXTER, FRUIT COMMISSIONER.

During the past few months there has been considerable difficulty in reaching an agreement as to the specifications of the new standard six- and eleven-quart veneer fruit baskets. This has meant an unavoidable delay in commencing their manufacture, and has made it necessary to allow the use of baskets of the old sizes during the coming season. Manufacturers have, therefore, been advised that they may continue to make these until September 1 next, after which date only baskets

of the new dimensions, which have been finally agreed upon, may be manufactured.

So far as the use of the old baskets by growers and shippers is concerned, there are no restrictions. They may be used until the supply now in stock, or which may be manufactured up to September 1 next, is completely used up.

The necessity of arranging at an early date for a reasonable supply of fruit packages will be quite obvious to all fruit growers, as it will permit the manufacturer to meet the increased demand should the crop be above the average of the past few years. In past years, when the crop has been large, difficulty has been experienced in obtaining sufficient packages to market it to advantage. This difficulty will be removed if growers will place their orders well in advance of the harvesting season.

A circular letter has been sent to all fruit growers, dealers and manufacturers on the mailing list of the Dominion Fruit Branch, embodying the foregoing information.

## Spray Calendar for Nova Scotia Apple Orchards for 1919.

Prepared by G. E. Sanders, Dominion Entomological Laboratory, Annapolis Royal, N. S., and W. H. Brittain, Provincial Entomologist, Agricultural College, Truro, N. S.



First Spray.



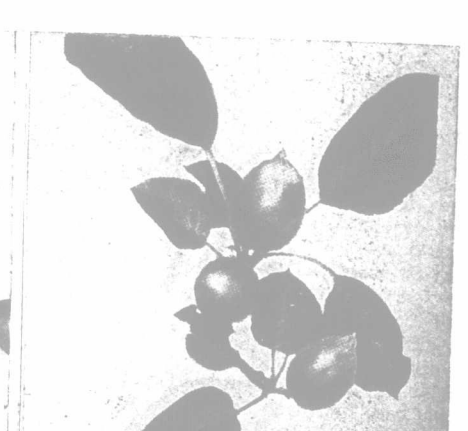
Second Spray.



Third Spray.



Fourth Spray.



Fifth Spray.

| Time            | FIRST SPRAY  | SECOND SPRAY.   | THIRD SPRAY.  | FOURTH SPRAY  |
|-----------------|--|---|---|---|
|                 | When leaves are about one-quarter of an inch in diameter. For cankerworm defer this spray for a few days.                  | When the blossom buds are showing pink at the tip. If Green Apple Bug is present, postpone until just before blossoms open.       | When blossom petals have fallen.  | Two weeks after the third spray.  |
| Material        | 3-10-40 Bordeaux and one pound arsenate of lime to 40 gallons. (3 lbs. copper sulphate, 10 lbs. lime to 40 gallons water.) | 2-10-40 Bordeaux and one pound arsenate of lime to 40 gallons. (The third spray formula may be used here if desired.)             | Sodium polysulphide, (1 qt. sulfocide or 1 lb. soluble sulphur,) 1/2 lb. arsenate of lime, 5 lbs. hydrated lime, to 40 gallons water.             | 2-10-40 Bordeaux and one pound arsenate of lime of 40 gallons.  |
| Application     | Drench thoroughly with spray gun at 225 pounds pressure.   | Drench thoroughly with a spray gun at 225 pounds pressure, holding the instrument further from the trees than in the first spray. | Apply as a mist with the spray gun, holding it well off from the trees, directing the spray downward excepting when spraying for Green Apple Bug. | Drench thoroughly with a spray gun.   |
| Pests Destroyed | Apple Scab, Budmoth, Brown-tail Moth, Canker Worm, Tent Caterpillars.  | Apple Scab, Budmoth, Canker-Worm, Fruit Worms, Green Apple Bug, Brown-tail Moth.  | Apple Scab, Budmoth, Green Apple Bug, Codling Moth Fruit Worms, Tussock Moth, "Pit Rot."  | Apple Scab, Tussock Moth, Fall Webworm, Red Humped Caterpillar, Yellow Necked Caterpillar, "Pit Rot," Ink Spot, Storage Rots. |

### MODIFICATIONS FOR SPECIAL INSECTS.

**Green Apple Bug.** Where this pest is present substitute for the SECOND SPRAY the following formula: Two pounds sodium polysulphide, one pint nicotine sulphate to 100 gallons of water, omitting the arsenical poison. The addition of 4 pounds of fish oil soap to each 100 gallons improves this spray. If green apple bug is serious, use this formula for the third spray also, instead of the regular one, drenching thoroughly.

**Cankerworm.** Where this pest is present use 5 pounds of paste lead arsenate, 2 pounds of lime to 40 gallons of water, instead of the regular formula for the SECOND SPRAY. Do not use any fungicide with this quantity of lead arsenate.

**Aphids.** If aphids appear in the orchard add three-quarters of a pint of nicotine sulphate to each 100 gallons of the formula recommended for the period, and spray thoroughly

### PREPARATION OF A QUICKLY-MADE BORDEAUX MIXTURE.

To make Bordeaux rapidly put the required amount of powdered or dissolved copper sulphate into the spray tank. Start the engine, and with the agitator running, fill the tank. While the agitator is still running add the hydrated lime and finally the insecticide. The Bordeaux is then ready to apply.

### WARNINGS.

1. Do not use arsenate of lime alone on apple foliage. 2. Do not use arsenate of lead with sodium polysulphide. 3. Do not use Bordeaux for the third spray, i. e., immediately after the blossoms fall. 4. In making Bordeaux for apple spraying do not use less than three parts of lime to one of copper sulphate. 5. Do not leave the common insecticides safe when used with Bordeaux. 6. Be sure to add the lime to the Sodium polysulphide arsenate of lime combination. 7. Most of

**Note:** If weather conditions and the prevalence of pests make it desirable, a fifth spray may be applied two weeks after the fourth and may be similar to the fourth in materials and application.

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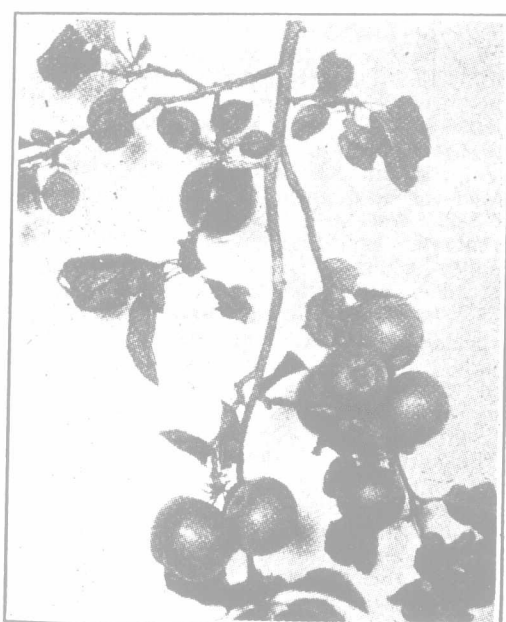
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**Various Types of Fruit Bearing.**

It is not unusual to meet persons who have been caring for orchards of one kind or another for years, but who fail to appreciate the importance and significance of the bud in the development of leaf and fruit. The little short crooked twigs or branches so common to apples and pears, particularly the Duchess apple and the Bartlett pear, fulfil for them no special purpose, or if so, this purpose is ignored in the pruning that is given these varieties. These little "fruit spurs," as they are very properly called, might very well be dispensed with and thus permit more convenient climbing about the tree, for all many apple raisers know about them, and, as a matter of practice, it has not been unknown for some zealous advocate of the saw and pruners to carefully cut them all off as a method of economizing plant food for the remainder of the tree. Needless to say the question as to whether fruit is borne on one, two- or three-year-old branches is a matter that has never seemed at all important to these men who believe that "horse-sense" is all that is needed in successful pruning and that a liberal use of the saw in June will reap its own reward. So it will, but very often this reward is of a kind entirely unexpected and enquiries flow into the offices of our fruit experts as to why "my orchard has not borne a crop worth speaking of for three years." It probably never occurred to staunch advocates of the "heading in" process, who so assiduously apply it to any and all varieties upon every occasion, that certain fruits or varieties might bear fruit from "terminal" buds, that is, buds found on the end of branches or twigs instead of lateral or "axillary" buds, those found in the axils of leaves along the side of a branch.

Why is a fruit spur so crooked? Why are some varieties of apples, like Wealthy, Duchess, Tolman Sweet, etc., so lacking in fine wood, and other varieties, such as Northern Spy so abundantly supplied? How many bunches of grapes are usually found on a cane and are they at the base, near the centre or at the tip of the cane? Do peaches come on last year's wood or on that which is two or more years old? Are there fruit spurs on currants and gooseberries? These and many more questions are very pertinent to the problem of pruning for fruit production and can all be answered by close observation.



**Baldwin Apple in Fruit.**

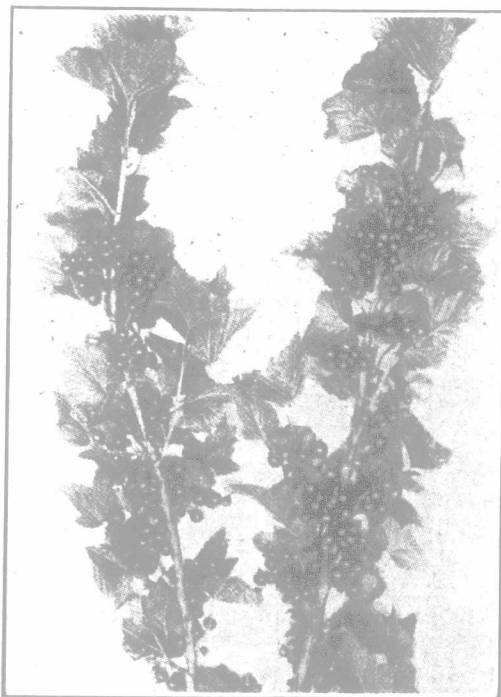
But such matters all relate to details of knowledge which can be gained merely through extended observation and answers to them leave untouched the major part of the pruning problem. Little is known for instance about questions of tree physiology and the relation of root to branches in fruit bearing. Still less, perhaps, is known of the expert manner in which fruit buds are formed and the influence that determine whether or not a bud will yield leaves or fruit. The average wielder of saw and knife usually forgets that fruit buds are formed for one year's crop at the same time that the crop of the previous year is being matured. To know this much is merely to observe, but to apply it presupposes a knowledge of pruning principles; and here information of a reliable character is wanting.

The purpose of this article is not to bemoan our ignorance of proper fruit practices, but to outline briefly various types of fruit bearing as represented by fruits of different kinds. It must be remembered, however, that while a general habit may hold true for all varieties of apples for instance, each variety will likely show peculiarities of its own and then must be sought for and considered when pruning.

**Apples.**

Apples, generally speaking, bear their fruit on terminal buds from short spurs. Sometimes, but not often, fruit is produced from the terminal buds on new wood. Each fruit bud may produce from one to five or more flowers and as many leaves. The fruit spurs of apples are quite crooked, for the simple reason that the fruit bud is always terminal, but the bud that is to continue the growth of the spur arises from just below the fruit so that growth must be continued in a different direction. It is worthy of note also that the central blossom from each bud opens a little in advance of the other blossoms in the cluster. The rate of growth of each spur depends largely upon

its situation, and pruning, in order to admit sun and air, is an important factor in spur development. A lack of vigor in the tree may force the terminal bud to remain a leaf bud, and if heavy pruning is given the spur may develop into a twig and finally a branch. Too much shade will prevent the development of either spur or fruit. The former effect is often seen in the form of long, slender



**Black Currant in Fruit.**

new growths starting from below the fruit and continuing upward. If this happens apples may be produced along this new branch but it will have been changed from its original character as a fruit spur. Small branches of this type are frequently found on the interior of trees where they will produce fruit regularly if the top of the tree is sufficiently open to admit sunshine. Many apple trees bear biennially and, from a consideration of fruiting habit, the reason might be given as follows: The best effort of the tree seems to be devoted to the ripening of the apple seed, and the terminal bud on the new growth is a reserve force to be called on the following season if the fruit of the previous season does not mature. If the fruit is ripened successfully more fruit buds may be developed from the remaining food supply, and this actually happens, but it cannot be done before the following year. The whole of this next season, therefore, is required to provide additional fruit buds which with to produce fruit the second year from the last crop.

**Pears.**

Like the apple, and unlike stone fruits, pears bear their fruit from terminal buds on short spurs. These spurs are found on wood two years old and more, although occasionally, as in the apple, fruit buds may be found on the end of one-year-old wood. These buds, however, are of a little importance since they seldom set fruit. Like the apple, these spurs do not die out after two or three years of fruiting, but may get to be ten or even twenty years old. Pruning, therefore, means keeping these spurs in a healthy and vigorous condition with plenty of sunlight and air, with provision to prevent over-bearing. On young trees the long, one-year-old growths may be shortened back and thinned out so as to provide opportunity for the spurs to develop. Too heavy pruning, however, produces wood at the expense of spur development. Growth is less rapid on



**Red Currant in Fruit.**

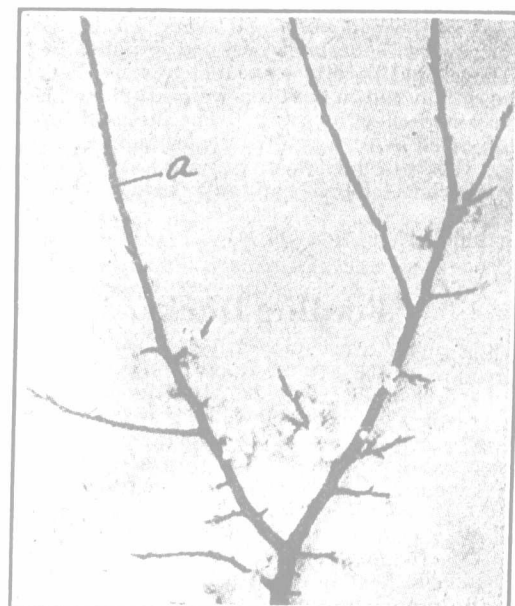
more mature trees and branches which are from twelve to fourteen years old may bear a mass of spurs, which, if kept healthy and vigorous, will produce fruit and leaves every year or every two years. The history of a pear fruit spur is exactly the same as that of an apple fruit spur.

**Cherries and Plums.**

Cherries develop most of their fruit buds in the axils of leaves on short spurs, borne on wood that is either two or three years old. This is true also of plums, particularly the Japanese and European varieties, which are also like sour cherries in producing some fruit buds on one-year-old wood. The fruit spurs of cherries usually die after bearing two or three crops, but they may, on well-pruned trees, continue to bear for several years although most of the fruit is borne on the newer spurs. Japanese plums are borne somewhat like the peach, many of the buds being borne singly on one-year-old wood. European plums bear mostly on short spurs with very few fruit buds on one-year-old wood. It is important to remember in pruning that most of the fruit comes on wood that is from one to four years old. Sour cherries bear more fruit on one-year-old than either the Duke or Sweet varieties; in such cases heading-in is likely to remove a large number of fruit buds. The best plum spurs are one year old, and to keep an annual supply many new twigs must be grown each year from twelve to eighteen inches in length. Nearly every cluster of buds will have a branch or leaf bud which may be depended upon to continue the growth of the tree. On cherries the most vigorous and dependable spurs grow about three-quarters of an inch in length, but the tree should be pruned each year so as to secure some new growth, which will bear a few lateral fruit buds near the base. These will produce, the next year, vigorous and productive young fruit-spurs. The more the trees are open to the sunlight the longer the old spurs will survive and the more numerous they will be on main limbs and stronger branches.

**Grapes.**

Grapes are produced on wood that is grown the same season that the crop is harvested. The fruit is usually found in the same position on the vine, no matter what the variety. The cane of a grapevine will usually produce from two to four bunches of grapes near its base, while



**Reine Claude Plum in Bloom.**

opposite each bunch will be a leaf. These bunches are not always produced next to each other, but the bunches are always produced near the base of the cane. Sometimes a side shoot is produced, although at most of the nodes, except where fruit is produced, the product of the bud will be a tendril and a leaf. There may, however, be as many as two or three side shoots on a very strong cane and these will produce fruit, leaves and tendrils just the same as the main cane, but the fruit is usually small, the clusters loose and late in ripening. From the fact that almost every bud produced in the axil of the leaf will in its turn produce fruiting canes the following year, it naturally follows that the number of canes the second will be very large, and because the vine is not strong enough to produce fruit of good quality from all of these canes it is usual to concentrate the fruit on a very few; usually four on a two-wire system of trellising.

**Raspberries.**

Red raspberries and blacks bear fruit in loose clusters as well as singly on the end of short laterals produced the same year that the fruit is borne. These laterals are always grown on canes produced the year before. After one crop is harvested these canes are of no further use, and are cut out to make room for others which come up every year, throughout the season.

**Currants and Gooseberries.**

The black currant bears most of its fruit on new growth, on two-year-old fruit, and on wood that is one year old. The red currant, on the other hand, bears the largest quantity of fruit on spurs, which develop on wood two or more years old. Very poor fruit is produced, however, from wood that is more than three years old, so that in red currants as well as in black a supply of young wood must be kept coming along to replace the old, which is removed after having borne two crops,

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The old baskets by growers and there are no restrictions. They apply now in stock, or which to September 1 next, is com-

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or when it is three years old. Each bud will produce from one to four bunches of fruit and as many leaves, while the fruit spur is usually terminated by a leaf bud which is provided to continue the growth of the spur. Gooseberries fruit in practically the same manner as red currants, producing the most and best of its fruit on short spurs located on wood that is two or three years old. After the wood becomes three years old it is not so productive, and long, one-year-old shoots growing from the centre of the bush should be allowed to develop in order to replace the old cane. Fruit buds of almost any kind of fruit are larger and plumper than the leaf buds and can be distinguished for this reason.

## POULTRY.

### Buying Birds at Sales.

EDITOR "THE FARMER'S ADVOCATE":

At auction sales bargains are sometimes secured, but in many cases a man pays all the articles are worth. Sometimes fowls are bought at a sale to increase the flocks, to introduce new blood, or just because they go cheap. At many sales the birds are cooped into small crates and it is next to impossible to ascertain their color, size, number, or whether they are healthy or afflicted with one or more contagious diseases, such as roup, cholera, tuberculosis, etc. Then, too, the birds may contract colds or roup on the day of sale when they are placed outside their warm pen in an open crate. Rather than put these birds with the main flock, it is advisable to place them in a separate pen for a week or ten days until one is satisfied that they are healthy. At a recent sale of farm stock, an auctioneer was selling poultry. The bidding stopped at seventy-four cents per bird. The auctioneer was about to knock the birds down to the bidder, when "Uncle Eli" bid seventy-five cents because he was sure he had found a real bargain. He got the hens—sixty of them—and when he got them home he found that they averaged five pounds per bird, which at market price would figure at one dollar or a little more per bird. This convinced him that he had secured a real bargain. However, when he had placed the hens in the pen, each and every one had legs and toes nearly twice ordinary size; so crippled were they that they could hardly walk, due to scaly leg. If the purchaser had known the birds were so afflicted he would not have had them as a gift. The diseased birds were soon disposed of to a poultry dealer and the purchaser learned the lesson that it was advisable to examine future purchases more carefully before closing the bargain.

Northumberland Co., Ontario.

EARL BEDAL.

### Feeding Ducks.

While ducks are comparatively easy fowl to raise they require a little attention at the right time in order that the best results may be obtained. A substantial house or pen is not required, so long as it is dry. They are comparatively free from disease and are seldom troubled with vermin. If fed properly, young ducks will grow more rapidly than chickens and will weigh around four pounds when nine or ten weeks old. When a duck is kept longer than this it is usually done so at a loss. The Indian Runners compete successfully with some flocks of hens in egg production; the other breeds are not quite such heavy layers. However, they produce a fairly large number of eggs in a season. As the ducks lay during the night, or in the early morning, it is advisable to keep them housed until between nine and ten o'clock in the morning during the laying season. The eggs should be gathered as soon as possible after they are laid to prevent them becoming chilled. A mixture of cornmeal, bran, shorts, beef scrap, green feed and oyster shell, moistened with skim-milk or water is a very good ration for ducks. Better results are obtained from this ration than from feeding whole grain. As the duck does not possess a distinct crop, like the hen, it cannot digest the whole grains so successfully.

Some breeds of ducks are good sitters, but as a rule hens or artificial incubators are used for incubating the eggs. If the hen is used the eggs should be moistened occasionally with lukewarm water. Do not feed the ducklings for about thirty-six hours after being hatched, then give a mixture of bread crumbs, cornmeal and bran, moistened with milk. A little grit is necessary. After a few days shorts will take the place of the bread crumbs. When skim-milk is not available, it is advisable to add from ten to fifteen per cent. of beef scrap to the ration. Contrary to the opinions of many, a stream or pond of water is not necessary for the successful raising of ducks. While they need water to drink, it is not necessary that they have it to swim in. Ducks on free range search for feed of a soft nature, and poultrymen have found that with ducks in confinement it is best to feed a mash in preference to whole grain. If possible the young ducks should be furnished with fresh grass runs occasionally, and at all times the pen should be kept clean. For growing ducks the above mentioned mash, with clean water, animal food and green feed gives results. When the ducks are varied, alfalfa, peas, clover, etc., can be cut and thrown in the pen. Ducks require shade. As they near eight to ten weeks of age the corn in the ration may be increased. The aim should be to have them ready for market when ten weeks of age. Up to that age there is money in duck raising, but the profits disappear if the ducks are kept much over this period.

## FARM BULLETIN.

### Dominion House Discusses Expedition to Siberia.

*The reports of Parliament which appear weekly in this paper are prepared by a "Farmer's Advocate" editor who occupies a seat in the Press Gallery, while the House is in session, for the express purpose of giving this service to our readers. An effort is being made to separate the gold from the dross, and reproduce only those remarks and addresses that have any real significance. In other words, the chaff, which constitutes a regrettably large percentage, is being blown out and the wheat preserved.*

SINCE the defeat of the resolution favoring the re-enactment of Daylight Saving, practically no questions of major importance to agriculture as an industry have been discussed in the House of Commons. The occasion for the greatest amount of excitement was created by a speech from Hon. N. W. Rowell, President of the Privy Council when the House was in Supply on the estimates of the Department of External Affairs. The Minister took this opportunity to make a rather lengthy statement in reference to the work in 1918 of the Imperial War Cabinet and the Imperial War Conference. Explaining the functions of these two organizations, Hon. Mr. Rowell said:—

"The meeting of the Imperial War Cabinet and the Imperial War Conference in 1918 was summoned by the Prime Minister of Great Britain, in order that matters relating to the prosecution of the war and problems of reconstruction that affected all the Dominions of the Empire as well as Great Britain should be taken into consideration in common council in London. These two bodies exercised different functions. The Imperial War Cabinet dealt with all matters relating to the war and the terms of peace. The Imperial War Conference dealt with problems that might be described as those of reconstruction, and matters of common Imperial concern that were not related to the war or to the terms of peace. That was the broad, general division of work between the two bodies. They met on alternate days, and there were committees of both bodies in session more or less constantly all the time during the whole period that both bodies were meeting."

Continuing, the Minister said that many matters, including Empire citizenship, ocean and telegraphic communication, soldiers graves in Europe, Imperial organization, Imperial Court of Appeal, Imperial mineral resources, petroleum, and immigration matters relating to various parts of the British Commonwealth, were dealt with. Respecting the work of the Imperial War Cabinet, something like excitement was created by a reference to military intervention in Russia. Opposition members, particularly, Messrs. Lapointe, (Kamouraska); Vien, (Lotbiniere), and Powers, (Quebec, South), who endeavored to corner the Minister into an admission that Canadian soldiers had been sent to Russia to fight when Canada was not at war with Russia in any sense. Mr. Vien criticized the Government very strongly for not insisting that the United States contribute more men to the expedition. He claimed that Canada had done much more proportionately. Hon. Mr. Rowell, replying to these criticisms, said:—

"After the overseas ministers had been put into possession of full information covering the military and diplomatic situation as it existed in June last, practical and urgent problems were taken up for consideration, and one of the first and most important was the question of Allied assistance in Russia. That question was thoroughly canvassed. The Imperial War Cabinet gave us the benefit of the views not only of the Imperial staff, but of General Foch and the leaders of the Allied forces on the front. After giving the matter the fullest consideration, the Imperial War Cabinet came to the conclusion that there should be Allied intervention."

In June, 1918, the War Office had asked the Canadian Minister to put a fifth division in the field, but this was considered inadvisable because "we would not have sufficient reinforcements available to make up the wastage." Then, said Mr. Rowell: "When it was decided to send forces to Siberia, the War Office asked the representatives of Canada if we would take part in that expedition. That information was communicated to the Government at Ottawa, and the decision reached by the Cabinet in session here at Ottawa. That decision was concurred in by the Canadian Ministers who were overseas at that time. The state just the opportunity for the organizing genius of Germany. The Allied Council were unanimous in the view that they could not, if they were to succeed in the trouble, permit Germany's influence to continue unchecked in the east; that they would have to lend the great light, and that they would have to endeavor to establish the eastern front so as to compel Germany to fight on that front as well as on the West. Canada

sent men for a valid reason. It was agreed that all the Allies should be represented in this expedition. It was understood that Japan, because she had the men and was nearest to that theatre of war, should supply the principal part of the troops. Everyone recognized that as an expedient necessity of the situation. The other Allies were to send contingents according to their ability. The question arose as to how the contingent that would represent the British Empire should be composed. Great Britain herself had thrown every man she could spare into the line on the Western front. Australia, New Zealand, South Africa and Great Britain had each, in proportion to population, put more men into the battle line than Canada; and when it came to a question of how the British Commonwealth contingent should be made up we felt that it was only right that, as we could not comply with the request of the War Office to send another contingent to France, we should at least be prepared to provide a brigade for Siberia. The United States sent her quota. The British Empire had to send hers. She agreed to send hers. Canada provided the rest of the men. Great Britain had more than ten per cent. of her population in her army, but in addition to the men that were sent from England, New Zealand sent ten per cent., and Australia sent a larger percentage than Canada. Canada was doing nothing more than her fair share in bearing any burdens that fell to her in sending an expedition to Siberia."

Bill number 24, respecting advances for the purchase of seed grain was read the second time and discussed in Committee of the whole on Tuesday, April 1. Respecting the amounts loaned for seed grain purposes and relief, Hon. Arthur Meighen said:

"I estimated, on the occasion of the last discussion of the resolution, that of the \$12,000,000 which we advanced that year (1915) for the relief of seed grain, we had collected between \$8,000,000 and \$8,500,000. The actual figures are these. The total amount actually loaned by way of relief in seed grain was \$12,309,607.36, of which \$7,560,760 was for seed grain and \$4,748,846 was for relief. The committee will remember that that was both in respect of unpatented and patented lands, because that year, owing to the tremendous and widespread hardships, we were compelled to extend our operations, and we went into patented lands and we loaned all the money that year that we had to loan to take care of the seed situation. Of the \$12,309,000 there has been collected to date, including interest, \$9,095,753.13. That is up to the 28th February last, a month ago. Exclusive of interest, we have collected \$8,415,226.83. The balance to be collected is \$3,894,380, and of that balance \$2,007,998 is for relief and not for seed grain at all. Of the whole \$7,500,000 that was advanced for seed grain all has been repaid except \$1,386,382. We expect the great body of that to be paid this fall. In 1916, following the big crop of 1915, no money whatever was advanced to unpatented homesteaders. In 1917 the amount advanced was \$72,757. In 1918 the amount advanced was \$370,000."

Considerable discussion arose over the one per cent. commission allowed the banks when they collect the loans but the Minister said this was a much cheaper way of making the collections than for the Government to do it by establishing special officers and that he had had some difficulty in persuading the Bankers' Association to enter into the agreement. Much criticism was voiced because of the extreme penalty of \$1,000 fine or 12 months imprisonment for failure on the part of the farmer to exactly represent his need. The Minister consented to amend certain clauses making it less easy for a farmer to be punished because of a combination of circumstances over which he has no control, and adding, also, the provision: "That there shall not be a prosecution except with the consent of the Minister of Justice, who, of course, would never give that consent except on application of the Minister of the Interior."

W. D. Euler, North Waterloo, moved on Monday, March 31: "That, in the opinion of this House, all Ministers of the Crown should be Members of the House of Commons, or become such within a period of three months after their appointment to the Cabinet." At the present time three Cabinet ministers are senators and have no seats in the House of Commons; they are, Sir James Loughheed, Leader of the Senate and Minister of the Department of Soldiers' Civil Re-establishment, Hon. C. D. Robertson, Minister of Labor and Hon. P. E. Blondin, Postmaster-General. Regarding the latter, Mr. Euler said:

"We have as Postmaster-General, Hon. P. E. Blondin, a member of the Senate, a gentleman who in the elections of 1917 offered himself for election in two constituencies and was overwhelmingly defeated in both; in one by a majority of about 1,200 votes and in the other by a majority of no less than 6,500 votes, receiving himself only 500 votes in the constituency of Champlain. This gentleman is in charge of a department which employs about 10,000 persons, which has in its control the expenditure of something like \$18,000,000 a year."

Mr. Euler, in introducing the resolution said that it "has for its object the debarring from the Cabinet of members of the Senate, for what I consider to be the sufficient reason, that members of the Senate, not being elected, are not representative of, and not responsible to, the people." Sir Thomas White, replying, pointed to many instances in most of the Governments since Confederation where senators ranked as cabinet ministers. The Acting Prime Minister took his only safe ground and held up constitutionality and precedent, but presented no reasons, nor, in fact, attempted to do so, why Canada should maintain an official home, at a good salary for residing therein, for political "has been."

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Grand Trunk

The bill respecting the receivership for the Grand Trunk Pacific System was given its second reading on Thursday, April 3, after nearly the whole afternoon and evening were practically wasted. The opposition contended that the Government could have had a receiver appointed just as quickly under the Winding-up Act and that by taking over the road now a hold had been given to the Grand Trunk Railway Company which they would be sure to avail themselves of in order to shake off all obligations in respect of the G. T. P. It was claimed that the company had not defaulted but Sir Thomas White answered as follows:

"The only reason why there has been no default is that the Government of Canada has been voting seven and a half or eight million dollars a year to pay not only the deficit on operations of the Grand Trunk Pacific, but also the interest upon the guaranteed bonds of the Grand Trunk Pacific, including those guaranteed by the Grand Trunk Railway Company itself. In other words, the Government has borne the entire burden. To give my hon. friend an idea of what the situation would have been this coming year, I may say that the interest which would have been payable upon all the securities this year is estimated at \$8,000,000, to which must be added \$4,000,000, estimated deficit in operating expenses, or a shortage of about \$12,000,000 on the Grand Trunk Pacific Railway system for the year 1919-20."

G. B. Nicholson, Algoma East, severely attacked the Grand Trunk for inefficient management and practically stated that the financiers behind it were mining the company and the Canadian Government for dividends of which they had paid \$36,000,000 during the past ten years. Continuing, the speaker said, "I have made some calculation of the obligations of the Grand Trunk Railway Company, based on the figures given by the chief solicitor of the company, Mr. Biggar. The outstanding bonded indebtedness is \$200,000,000. Then add to that for betterments, rolling stock, etc., as per page 28 of the Drayton-Acworth report, the sum of \$51,000,000. The liability of the Grand Trunk for the Grand Trunk Pacific is \$97,310,252, and the sum required to take care of betterments and rolling stock for 1916-17, 1918 and 1919 is \$27,529,438; or a total of \$375,839,690. Now the Grand Trunk liability, taking the figures of the bonded indebtedness as given by Mr. Biggar, is \$278,529,438. The Grand Trunk Pacific liability exclusive of provincial guaranteed and cash advances by the Grand Trunk Railway is \$255,404,318; or a total of \$533,933,756, or \$103,837 per mile.

Regarding the equipment of the Grand Trunk Mr. Nicholson said that at a very low calculation based on the amount of freight moved by the G. T. R. in 1916 the road suffered a waste of nearly \$3,000,000 due to defective or inefficient rolling stock. Regarding locomotives the speaker said: "50 per cent. of the locomotives of the Grand Trunk were of such a type that by the expenditure of \$3,000 to \$3,500 each, to standardize them, they could be made modern and up-to-date; 50 per cent. at an expenditure of \$10,000 each, could be re-modelled and brought up to a standard of efficiency that would enable them to be used for all purposes for which locomotives are required; the remainder, which I take to be in the neighborhood of 250 or 300—I may be wrong in the exact figures—should be absolutely scrapped as utterly obsolete and worse as far as operation is concerned, and 200 modern ones built."

Hon. Arthur Meighen, replying to F. S. Cahill, Pontiac who asked why the Grand Trunk could not be compelled to take over the National Transcontinental explained the situation as follows:

The Grand Trunk Pacific issues certain bonds which the Grand Trunk guarantee. They issue certain others which the Grand Trunk do not guarantee. The Grand Trunk Pacific makes a covenant to take over the Transcontinental upon completion of construction. That covenant the Grand Trunk never guaranteed. For the fulfilment of that obligation we have the Grand Trunk Pacific and nothing else. What condition did we face? We faced capitalization of approximately \$200,000,000 and an annual charge approximately \$6,000,000. We are faced with a road that showed no reasonable chance of paying operating expenses, to say nothing at all of fixed charges. There was a deficit, as a result of operation, of \$2,000,000 a year. How could the Grand Trunk Pacific undertake an obligation which entailed an expenditure for rental of \$6,000,000 and a loss in operation of \$2,000,000—\$8,000,000 altogether—when to operate its own line it had to borrow \$7,500,000 every year?"

Referring to the fact that the Grand Trunk Railway Company have again asked for a resumption of negotiations, the Minister of the Interior said: "This Government has taken no step which in any way impairs or reduces the liability of the Grand Trunk Railway as originally entered into. The Grand Trunk says to us: Consider the Grand Trunk on one hand and the Grand Trunk Pacific on the other; take our earnings and pay us our average of what we have made for ten years and then consider the Grand Trunk Pacific, and we will talk to you about that. We say, however, that the two are one and inseparable. We say further: It is true you paid dividends for ten years averaging perhaps \$3,600,000 a year, but while you did that we were taking care of your obligations; we were lending money to a company which you owned, in order to discharge obligations in respect of which you were liable; had you been taking care of all the obligations you would not have been paying \$3,600,000 a year; indeed, were you to-day to take care of all your obligations it is doubtful whether you would pay your shareholders anything at all. That is the language we used to the directors of the Grand Trunk Railway Company. At the same time the

people of Canada, and this Government as representing the people, are anxious that no impression shall be justifiably created among British people or others that we seek to confiscate or to take any step that favors of confiscation. We intend to see that the just rights of the shareholders are protected as much as the rights of anybody else. But we say to them: In estimating the value of your shares there must be taken into account all the obligations of that road, not merely the obligations you yourselves have recognized in days gone by."

On Wednesday, March 26, J. W. Edwards, Frontenac, presented a resolution asking that Sir Charles Fitzpatrick, formerly Chief Justice of the Supreme Court of Canada and now Lieutenant Governor of Quebec return to the Dominion Government the sum of \$5,000 received over the period of two years for services to cover the expenses of the Chief Justice of Canada in connection with attending meetings of the Judicial Committee of the Privy Council in London. During the two years in question Sir Charles did not go to London to attend these meetings but drew the money nevertheless. It was argued that due to a change in the wording of that part of the estimates this amount of \$2,500 per year was voted as a special allowance, really as an addition to salary. However, many members of the House apparently did not understand it and the introduction of the resolution was the occasion for a very animated discussion which lasted all afternoon until the House adjourned for the day. These were many plain speeches and for a considerable time a perfect example of a lawyer's seventh Heaven, when the legal talent of the Commons argued the matter from "A" to "Z" and split hairs in a way that would do credit to a Philadelphia lawyer. A resumption of the debate or another occasion would have been interesting, if wasteful, but this was prevented by the fact that Sir Charles Fitzpatrick returned the money by cheque to the finance Minister before the matter could come up on the order paper again. The resolution was therefore withdrawn, its purpose having been served.

Some question arose in the House a short time ago as to a dispatch from London attributing to Sir Robert Borden the statement that no indemnities should be sought from Germany. A cable was received from the Prime Minister and read in the House as follows: "Report alluded to is absolutely unfounded and indeed absurd. You are authorized to give absolute and explicit denial to any such statement. We are making every effort to procure from Germany the fullest indemnity that she is able to pay." Another matter that is particularly interesting to the people of Western Canada has to do with the Shale Oil Company who made application to the Government to acquire a monopoly of oil-bearing hands in Western Canada. Hon. Rodolph Lemieux referred to this matter and drew from Hon. Arthur Meighen, Minister of the Interior, the statement that such an application had been received but that it has not been favorably received. Sir Clifford Sifton is generally understood to have a primary interest in this project. Such monopolies are directly contrary to the spirit of the Farmer's Platform and the West should see that no such monopolies of valuable natural resources are granted.

At the time of writing (Friday, April 4,) Daylight Saving is still in the air. The Board of Railway Commissioners held sittings early in the week to hear evidence as to why the railroads should advance their time independent of any action by parliament. Up to the present no decision has been handed down and it is somewhat difficult to discover the reason why. A bill has been introduced into the Senate favoring Daylight Saving and it has been given its second reading. Rumor has it that the Government want the Senate to pass it, in which case the country would surely be in turmoil. If this rumor bears the stamp of truth it is difficult to see what the object is. Nearly every Cabinet Minister declared against Daylight Saving and surely we have not yet reached the stage where members of the Government sitting in the House will cast their votes as their constituents desire while at the same time they destroy the effect of responsible Government by using an irresponsible body to nullify the wishes of the electors. That surely would be the worst form of treachery and hypocrisy. However, there is evidence that Daylight Saving will not so easily go through the Senate since following the second reading of the bill, the Senate went into committee upon it and failed to do more than report progress during the course of a whole afternoon. It will come up again on Tuesday. Possibly the decision of the Board of Railway Commissioners is being withheld until the final decision of the Senate becomes known. Even then, however, there promises to be a regular "time" in the Commons if the Senate pronounces in favor of the measure.

#### Questions Answered.

Interesting information gleaned from answers given by the Ministers to questions asked by members is briefly given herewith. Much information is made available in this manner that would not otherwise reach the general public. The estimated value of property held in Canada by alien enemies and reported to be Custodian is \$38,000,000. The printing expenses of the Government for the fiscal year ending March 31, 1918, were \$2,569,559.73. Land grants to railway companies in lieu of subsidies, made by the Government of Canada from August 1, 1896 to October 1, 1911, were as follows: Alberta Railway and Coal Co., 898,665 acres; Calgary and Edmonton Railway Co., 1,441,282 acres; Canadian Northern Railway Co., 2,885,563 acres; Canadian Pacific Railway Co., 18,154,904 acres; Great Northwest Central Railway Co., 320,000 acres; Manitoba and Northwestern Railway Co., 1,283,663 acres; Manitoba and Southeastern Railway Co., 679,000 acres; Manitoba Southwestern Colonization Railway Co.,

1,352,558 acres; Qu' Appelle, Long Lake and Saskatchewan Railway and Steamboat Co., 1,144,957 acres; and the Saskatchewan and Western Railway Co. The British Remount Commission purchased 31,402 horses in Canada for the British army. From November, 1916, 3,142 horses were purchased in Canada. Offers were made by the Government to provide credits for the purchase of horses in Canada and the Government has been informed that whenever possible the Commission gave Canada the preference when buying horses but that buying in Canada was interrupted at intervals for various reasons when purchasing was being done by the Canadian Government; because of lack of horse-ships; because of financial reasons and because of large reserves of horses on hand by the War Office.

The amount levied under the Excess War Profits tax was \$73,167,443. The amount of money secured by the sale of Government Bonds in 1917 and 1918 was as follows: 1916/31 Loan, \$97,789,580; 1917/37 Loan \$18,100,482 (fiscal year 1916-17) and \$123,807,158 (fiscal year 1917-18); 1917 Victory Loan \$393,623,697. During the fiscal years 1916-17 and 1917-18 the Government advanced from General Cash Account to the Imperial Munitions Board for purchase of munitions, supplies and foodstuffs, the sums of 125 millions and 271 millions respectively. It is understood that the money for financing at least a part of the Western wheat crop in 1917 and 1918 was procured by Great Britain from other sources than the above loans. There are 854 totally disabled soldiers now on the pension list 39 have lost both eyes; 16 are bedridden and drawing pensions; and 5,730 have received treatment for pulmonary tuberculosis and have been discharged or died, while 1,712 are now receiving treatment.

#### Record Board Holds Annual Meeting.

The annual meeting of the Record Board, which oversees the registration of Canada's pure-bred live stock (Holsteins excepted), was held at the Carls-Rite Hotel, Toronto, on Friday, April 4. The various breeds were fairly well represented by delegates from the Provinces of Ontario and Quebec, and no objections were taken or complaints voiced regarding the conduct of the Record Committee which is the cabinet, so to speak, of the Record Board. William Smith, M.P., Columbus, Ont., Chairman of the Record Committee, presided, and in a brief address discussed several phases of the business transacted during the past year. He mentioned particularly the remarkable growth in registrations which indicated a healthy increase in Canada's herds and flocks of pure-bred stock. During the first three months of 1919 the Record Office reported business to the extent of \$46,000; \$16,000 of this is credited to Shorthorns, \$3,600 to swine, and \$2,200 to sheep. Some light is thrown on the activities and on the growth of the live-stock industry by reproducing here the total business done during the first three months of the five past years. The years and totals for the first quarter follow: 1915, \$21,000; 1916, \$27,000; 1917, \$36,000; 1918, \$42,000; 1919, \$46,000. On top of all this increase the war demands on man power and clerical help reduced the staff of trained employees at the office, making it difficult to render the same prompt service as usual. The Record Office staff require a great deal of training in order that mistakes may be avoided. Over-crowded offices, a shortage of hands, and a great number of sales has made it difficult for the Record Committee and the Office to meet the demands this spring. However, Mr. Smith said that if breeders themselves would keep recorded up to date they would get far better service. He cited one instance where a breeder had not recorded since 1915, and then sent in a request for certificates and demanded immediate attention. Requests for certificates and transfers must be handled in the order of their arrival.

The Chairman referred to the activities of the Canadian National Live Stock Council, but no discussion arose in regard to it. The motion was carried to the effect that the Live Stock Commissioner be memorialized and asked to see that grants to the larger exhibitions be raised to where they were prior to last year. Another motion was carried which authorized the Chairman to name a committee to look into the matter of railway rates on live stock, and to take the matter up with the proper authorities. The financial statement printed in the report of the Canadian National Live Stock Records showed an overdraft of \$1,795.22. William Smith was re-elected Chairman of the Committee, and on motion by Harry Robinson, seconded by Dr. T. H. Hassard, the Record Committee was re-elected in its entirety. The Committee thus consists of William Smith, M.P., Chairman; Peter White, K.C., Toronto; W. F. Stephen Huntingdon, Que.; Robt. Miller, Stouffville, Ont.; Robt. Ness, Howick, Que.; J. M. Gardhouse, Weston, Ont.; J. E. Brethour, Burford, Ont.; and John W. Brant, Ottawa, Secretary-Treasurer.

Although farmers and laboring men protest vigorously against changing the time and members of parliament voted two to one in favor of abiding by standard time, the Railroads advanced their clocks one hour so as to be in accord with United States time and towns and cities did likewise. Consequently the situation is in a greater muddle than it was last year. Was the vote in parliament merely to hoodwink the rural people or has parliament no control over the railroads, towns and cities of this country? It seems as if it does not matter how much the producers of wealth are inconvenienced and handicapped so long as the wishes and pleasures of the privileged few are gratified.

# Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending April 3.

Receipts and Market Tops

Dominion Department of Agriculture Live Stock Branch, Markets Intelligence, Division

| CATTLE                      |           |             |                                     |           |             |             | CALVES    |             |             |                       |             |             |           |             |
|-----------------------------|-----------|-------------|-------------------------------------|-----------|-------------|-------------|-----------|-------------|-------------|-----------------------|-------------|-------------|-----------|-------------|
| Receipts                    |           |             | Top Price Good Steers (1,000-1,200) |           |             |             | Receipts  |             |             | Top Price Good Calves |             |             |           |             |
| Week Ending                 | Same Week | Week Ending | Week Ending                         | Same Week | Week Ending | Week Ending | Same Week | Week Ending | Week Ending | Same Week             | Week Ending | Week Ending | Same Week | Week Ending |
| Apr. 3                      | 1918      | Mar. 27     | Apr. 3                              | 1918      | Mar. 27     | Apr. 3      | 1918      | Mar. 27     | Apr. 3      | 1918                  | Mar. 27     | Apr. 3      | 1918      | Mar. 27     |
| Toronto (Union Stock Yards) | 5,552     | 4,973       | 5,808                               | \$15.50   | \$12.75     | \$15.50     | 1,157     | 2,082       | 1,200       | \$17.00               | \$17.25     | \$17.50     | \$17.25   | \$17.50     |
| Montreal (Pt. St. Charles)  | 408       | 232         | 491                                 |           | 12.70       | 13.50       | 2,511     | 1,432       | 1,920       | 14.50                 | 12.50       | 13.00       | 12.50     | 13.00       |
| Montreal (East End)         | 513       | 156         | 633                                 |           | 12.70       | 13.50       | 1,058     | 1,206       | 1,161       | 14.50                 | 12.50       | 13.00       | 12.50     | 13.00       |
| Winnipeg                    | 3,101     | 1,921       | 1,365                               | 15.25     | 12.00       | 15.00       | 113       | 65          | 141         | 14.50                 | 15.00       | 14.50       | 15.00     | 14.50       |
| Calgary                     | 1,926     | 1,196       | 1,619                               | 14.00     | 11.50       | 14.00       |           |             |             |                       |             |             |           |             |
| Edmonton                    | 442       | 549         | 521                                 | 13.50     | 11.75       | 14.25       |           |             |             |                       |             |             |           |             |

| HOGS                        |           |             |                   |           |             |             | SHEEP     |             |             |                      |             |             |           |             |
|-----------------------------|-----------|-------------|-------------------|-----------|-------------|-------------|-----------|-------------|-------------|----------------------|-------------|-------------|-----------|-------------|
| Receipts                    |           |             | Top Price Selects |           |             |             | Receipts  |             |             | Top Price Good Lambs |             |             |           |             |
| Week Ending                 | Same Week | Week Ending | Week Ending       | Same Week | Week Ending | Week Ending | Same Week | Week Ending | Week Ending | Same Week            | Week Ending | Week Ending | Same Week | Week Ending |
| Apr. 3                      | 1918      | Mar. 27     | Apr. 3            | 1918      | Mar. 27     | Apr. 3      | 1918      | Mar. 27     | Apr. 3      | 1918                 | Mar. 27     | Apr. 3      | 1918      | Mar. 27     |
| Toronto (Union Stock Yards) | 5,379     | 8,866       | 8,857             | \$20.50   | \$12.25     | \$20.00     | 287       | 169         | 502         | \$20.00              | \$20.75     | \$20.00     | \$20.00   | \$20.00     |
| Montreal (Pt. St. Charles)  | 1,178     | 1,629       | 999               | 20.25     | 21.75       | 19.75       | 95        | 8           | 41          | 16.00                |             | 15.00       |           | 15.00       |
| Montreal (East End)         | 630       | 355         | 647               | 19.75     | 21.00       | 19.25       | 61        | 24          | 58          | 16.00                |             | 15.00       |           | 15.00       |
| Winnipeg                    | 8,282     | 7,623       | 5,981             | 20.25     | 21.75       | 19.75       | 156       | 70          | 55          | 15.50                | 20.00       |             |           |             |
| Calgary                     | 2,012     | 2,384       | 2,572             | 19.50     | 19.25       | 18.75       | 601       | 82          | 375         | 13.00                |             | 13.00       |           | 13.00       |
| Edmonton                    | 431       | 354         | 515               | 19.50     | 19.25       | 18.50       | 14        |             | 14          | 13.00                |             | 13.00       |           | 13.00       |

## Market Comments.

### Toronto (Union Stock Yards).

There was little change in quotations on cattle compared with prices of the previous week. A total of fifty-five hundred head were on sale, and these appeared to be sufficient to meet the requirements of the trade. With the exception of about eight hundred cattle that were shipped to the United States, the receipts were absorbed by the local trade. On Monday and Tuesday, quotations were possibly a trifle easier on some grades but the weak spots were strengthened on Wednesday, and during the following day the market continued firm and closed with a steady undertone to trading. Very few heavy cattle were on sale. Quotations for choice quality heavy steers ranged from \$15.50 to \$16 per hundred. Of steers weighing between ten hundred and twelve hundred pounds, those of choice quality realized \$15.50 per hundred, three head of eleven hundred and fifty pounds each being sold at this figure. Numerous sales of steers of eleven hundred pounds weight were made at \$15 per hundred; one load changed hands at \$14.85 and several loads at \$14.50 per hundred. Good quality steers within these weights realized from \$13.75 to \$14.50 per hundred. The offering of steers and heifers under ten hundred pounds included a few baby beef cattle for which fancy prices were paid. Of this class of stock, four head of six hundred and eighty pounds, were weighed up at \$17; ten head of seven hundred pounds at \$16.10, and a number of sales were made from \$15.50 to \$16 per hundred. Other good sales included twelve head of nine hundred and ninety pounds at \$14.50 per hundred; a load weighing nine hundred and twenty pounds at \$14, twenty-six head of nine hundred and eighty pounds at \$14.80, and numerous sales from \$13.75 to \$14.50 per hundred. Cows and bulls were in steady demand; a few choice cows sold up to \$12.50 per hundred, some cows of good quality were sold from \$11 to \$12, and cows of medium quality changed hands from \$9.50 to \$10.50. Grass cows sold from \$8 to \$9 per hundred. Good bulls realized up to \$11.75, and those of medium quality from \$10 to \$11. Stockers and feeders were in fair demand at prices ranging from \$11 to \$13 per hundred, according to weight and quality. The calf market was about steady; choice veal if available would bring \$17 per hundred, but most of the best offered during the week sold from \$15.50 to \$16.50 per hundred.

The lamb market was about steady. Lamb receipts are very light at the present time, and top lambs are realizing from \$18 to \$19.50 per hundred.

The hog market was very unsettled and accurate quotations were hard to obtain. Hogs are in keen demand, and most of them are being bought f.o.b. country points at prices ranging from \$19.25 to \$19.75 per hundred, which is about equal to \$20.25 to \$20.75, fed and watered.

Of the disposition from the Yards for the week ending March 27, Canadian packing houses purchased 456 calves, 3,405 butcher cattle, 9,532 hogs and 286 lambs. Local butchers purchased 647 calves, 556 butcher cattle, 305 hogs and 251 lambs. Canadian shipments were made up of 86 calves, 54 milch cows, 307

| TORONTO (Union Stock Yards) |       |            |                 |           | MONTREAL (Pt. St. Charles) |            |             |           |  |
|-----------------------------|-------|------------|-----------------|-----------|----------------------------|------------|-------------|-----------|--|
| CLASSIFICATION              | No.   | Avg. Price | Price Range     | Top Price | No.                        | Avg. Price | Price Range | Top Price |  |
| STEERS                      |       |            |                 |           |                            |            |             |           |  |
| heavy finished              | 149   | \$14.80    | \$14.00-\$15.50 | \$16.00   |                            |            |             |           |  |
| STEERS                      |       |            |                 |           |                            |            |             |           |  |
| 1,000-1,200 good            | 422   | 14.31      | 13.75-15.25     | 15.50     |                            |            |             |           |  |
| common                      | 63    | 12.25      | 12.00-13.00     | 13.50     |                            |            |             |           |  |
| STEERS                      |       |            |                 |           |                            |            |             |           |  |
| 700-1,000 good              | 1,302 | 13.43      | 13.00-14.25     | 14.50     | 33                         | 13.00      | 12.50-14.50 | 14.50     |  |
| common                      | 375   | 11.50      | 11.00-12.50     | 12.50     | 38                         | 10.75      | 9.00-11.50  | 12.00     |  |
| HEIFERS                     |       |            |                 |           |                            |            |             |           |  |
| good                        | 962   | 13.28      | 12.75-14.50     | 15.00     | 2                          |            |             |           |  |
| fair                        | 261   | 11.34      | 10.75-12.50     | 12.50     | 15                         | 10.50      | 9.00-11.00  | 11.00     |  |
| common                      | 38    | 9.50       | 9.00-10.50      | 10.50     | 43                         | 8.00       | 7.00-9.00   | 9.00      |  |
| COWS                        |       |            |                 |           |                            |            |             |           |  |
| good                        | 536   | 10.75      | 10.25-11.50     | 12.50     | 26                         | 10.50      | 10.00-11.00 | 12.00     |  |
| common                      | 727   | 8.55       | 8.00-9.25       | 10.00     | 82                         | 8.25       | 7.50-9.00   | 9.50      |  |
| BULLS                       |       |            |                 |           |                            |            |             |           |  |
| good                        | 69    | 10.53      | 10.00-11.50     | 11.75     | 13                         | 10.50      | 10.00-11.00 | 12.00     |  |
| common                      | 69    | 8.79       | 8.50-9.50       | 10.50     | 58                         | 8.50       | 7.75-9.00   | 9.50      |  |
| CANNERS & CUTTERS           | 135   | 6.25       | 6.00-6.75       | 7.00      | 56                         | 6.00       | 5.00-6.50   | 6.50      |  |
| OXEN                        |       |            |                 |           | 5                          | 10.75      | 10.00-12.00 | 12.00     |  |
| CALVES                      |       |            |                 |           | 2,457                      | 12.00      | 19.50-13.50 | 14.50     |  |
| veal                        | 1,132 | 15.00      | 14.00-16.50     | 17.00     | 54                         | 6.25       | 6.00-7.00   | 7.00      |  |
| grass                       | 25    | 7.00       | 6.00-8.00       | 8.00      |                            |            |             |           |  |
| STOCKERS                    |       |            |                 |           |                            |            |             |           |  |
| 450-800 good                | 191   | 11.50      | 10.25-11.75     | 11.75     |                            |            |             |           |  |
| fair                        | 147   | 10.25      | 9.75-10.50      | 10.75     |                            |            |             |           |  |
| FEEDERS                     |       |            |                 |           |                            |            |             |           |  |
| 800-1,000 good              | 94    | 12.75      | 12.00-13.00     | 13.00     |                            |            |             |           |  |
| fair                        | 14    | 11.75      | 11.50-12.00     | 12.25     |                            |            |             |           |  |
| HOGS                        |       |            |                 |           |                            |            |             |           |  |
| (fed and watered)           |       |            |                 |           | 990                        | 20.10      | 20.00-20.25 | 20.25     |  |
| selects                     | 5,104 | 19.98      | 19.50-20.50     | 20.50     | 18                         | 19.10      | 19.00-19.25 | 19.25     |  |
| heavies                     | 13    | 19.75      | 19.50-20.50     | 20.50     | 144                        | 18.10      | 18.00-18.25 | 18.25     |  |
| lights                      | 114   | 17.51      | 15.00-18.25     | 18.25     | 20                         | 17.10      | 17.00-17.25 | 17.25     |  |
| sows                        | 141   | 17.17      | 16.50-18.00     | 18.25     | 6                          | 15.10      | 15.00-15.25 | 15.25     |  |
| stags                       | 7     | 15.21      | 14.50-16.00     | 16.25     |                            |            |             |           |  |
| LAMBS                       |       |            |                 |           | 20                         | 16.00      | 16.00-      | 16.00     |  |
| good                        | 194   | 18.76      | 18.00-20.00     | 20.00     | 32                         | 14.75      | 14.00-15.00 | 15.00     |  |
| common                      | 32    | 16.00      | 15.00-17.00     | 17.00     |                            |            |             |           |  |
| SHEEP                       |       |            |                 |           | 14                         | 13.00      | 13.00       | 13.00     |  |
| heavy                       | 31    | 10.50      | 9.50-11.00      | 11.00     | 29                         | 10.50      | 10.00-11.00 | 11.00     |  |
| light                       | 25    | 12.00      | 11.00-13.00     | 13.00     |                            |            |             |           |  |
| common                      | 5     | 8.00       | 6.00-9.00       | 9.00      |                            |            |             |           |  |

stockers, 388 feeders and 53 hogs. Shipments to United States points consisted of 15 calves, 967 butcher cattle and 70 stockers.

The total receipts from January 1 to March 27, inclusive, were 80,087 cattle, 9,377 calves, 88,878 hogs and 25,167 sheep; compared with 58,142 cattle, 8,910 calves, 99,948 hogs and 9,957 sheep, received during the corresponding period of 1918.

### Montreal.

Monday's market developed considerable activity and prices, particularly for fat bulls and medium cows, were firmer than during the previous week. Trading was brisk during the remainder of the week. Two lots of steers averaging slightly over ten hundred pounds per head were sold at \$14.50 per hundred, and a few steers averaging eight hundred pounds were sold at \$12.50. A number of light steers were weighed up between \$10.50 and \$11. The fat-test oxen offered sold at \$12. One bull weighing twelve hundred and fifty pounds sold for \$11.50 per hundred, and one weighing thirteen hundred and seventy-five pounds, for \$12.00. A few heavy fat bulls sold at \$11, and very poor animals at \$7.75. Some fair cows, held over from the previous market, sold at an advance of 25 cents per hundred. Heavy cows in fair flesh sold up to \$10. Cows with more fat sold in most cases from \$10.50

to \$11, and in one or two instances up to \$12. There were very few heifers marketed, and those offered were mostly very common; a small lot of young heifers averaging six hundred and fifty pounds, was sold for \$10.50 per hundred. Veal calves were being offered in straight car lots, and sold from \$10 to \$14 per hundred, according to age and weight. Calves in lots running up to one hundred and sixty head or more and averaging ninety pounds, sold at \$12 per hundred; some lots averaging ninety-eight to one hundred pounds, sold at \$12.25, and a small lot of selected calves averaging one hundred and ten pounds sold at \$14.

A few spring lambs were being offered and sold for \$12 each or around 30 cents per pound. Some good sheep sold at \$13 and the best yearlings at \$16.

PT. ST. CHARLES.—Of the disposition from the Yards for the week ending March 27, Canadian packing houses and local butchers purchased 1,920 calves, 42 canners and cutters, 51 bulls, 383 butcher cattle, 999 hogs and 41 lambs. Canadian shipments were made up of 12 milch cows. There were no shipments to United States points during the week.

The total receipts from January 1 to March 27, inclusive, were 8,985 cattle, 8,797 calves, 14,893 hogs and 5,013 sheep; compared with 8,092 cattle, 6,779 calves, 15,659 hogs and 5,039 sheep, received

during the corresponding period of 1918. EAST END.—Of the disposition from the Yards for the week ending March 27, Canadian packing houses and local butchers purchased 1,161 calves, 633 butcher cattle, 647 hogs and 58 lambs. There were no shipments to United States points during the week.

The total receipts from January 1 to March 27, inclusive, were 10,895 cattle, 5,266 calves, 8,196 hogs and 5,509 sheep; compared with 7,909 cattle, 6,213 calves, 9,851 hogs and 4,768 sheep, received during the corresponding period of 1918.

### Montreal.

Horses.—Horse dealers state that they are still receiving enquiries from farmers and have shipped quite a few animals to the country. Farmers are evidently ready to buy good mares somewhere around \$150 to \$200 each. Carters are also making provisions for the spring business. The range of prices was about steady with heavy draft horses, weighing from 1,500 to 1,700 lbs., quoted at \$250 to \$300 each; light draft, weighing from 1,400 to 1,500 lbs., \$200 to \$250 each; light horses, \$125 to \$175 each; culls, \$50 to \$75 each, and fine carriage and saddle animals, \$175 to \$250 each.

Dressed Hogs and Provisions.—Dressed hogs were bringing higher prices in sym-

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moderate deman

Poultry.—The  
steady under a g  
outside account  
steady at 43 to  
36 to 42 cents a  
ducks, 36 to 40  
28 to 30 cents.

Potatoes.—V  
place in the ma  
the past week  
Mountains were  
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to \$1.25 per bag  
smaller way 25 c  
prices. Onions  
Quebec turnips \$  
ex-store.

Eggs.—Pract  
place in the mar  
past week. Con  
demand active at

Butter.—Prices  
were a week ago  
selling at 60 to 6  
to 59 cents, and c  
lb.

Cheese.—The  
cents for No. 1, 2  
24 cents for No. 3

Grain.—No. 2  
were 84 cents p  
extra No. 1 feed  
75 cents; and O  
78 cents per bu  
Canadian Wester  
\$1.18; No. 4, \$1.0  
\$1.14; No. 3, \$1.  
\$1.04.

Flour.—Govern  
wheat was quoted  
bags, ex-track, M  
city bakers, with  
cash. Ontario  
changed at \$10.20  
bags, ex-store, to  
to \$9. Rye flour  
bags delivered.

Milled.—Car l  
at \$42.25 per ton  
including bags, ex  
in smaller quant  
mouille, \$68 to \$  
Dairy feed, \$46.

Baled Hay.—Ca  
\$27.50 to \$28 per  
mixed, \$26.50 to  
to \$26; No. 3 timo  
track.

### Ch

Hog.—Heavywe  
medium weight, \$  
weight, \$19.75 to  
\$18.40 to \$20.10;  
pigs, \$17.50 to \$18

Cattle.—In-bet  
lower; choice cow  
canners and cutte  
she-stock, 25c. to 5  
bulls, 50c. higher  
bolognas, steady;  
er; fleshy feeders,  
sirable stockers, 25

Sheep.—Compar  
fat woolled sheep



Markets

Department of Agriculture Live Intelligence, Division

Price Good Calves

| Same Week | Week Ending |
|-----------|-------------|
| 1918      | Mar. 27     |
| \$17.25   | \$17.50     |
| 12.50     | 13.00       |
| 12.50     | 13.00       |
| 15.00     | 14.50       |

Price Good Lambs

| Same Week | Week Ending |
|-----------|-------------|
| 1918      | Mar. 27     |
| \$20.75   | \$20.00     |
| 15.00     | 15.00       |
| 20.00     | 13.00       |
|           | 13.00       |

Price Range Top Sales

| Top Sales | Top Price |
|-----------|-----------|
| 14.50     | 14.50     |
| 11.50     | 12.00     |
| 11.00     | 11.00     |
| 9.00      | 9.00      |
| 11.00     | 12.00     |
| 9.00      | 9.50      |
| 11.00     | 12.00     |
| 9.00      | 9.50      |
| 6.50      | 6.50      |
| 12.00     | 12.00     |
| 13.50     | 14.50     |
| 7.00      | 7.00      |

|       |       |
|-------|-------|
| 20.25 | 20.25 |
| 19.25 | 19.25 |
| 18.25 | 18.25 |
| 17.25 | 17.25 |
| 15.25 | 15.25 |
|       | 16.00 |
| 15.00 | 15.00 |

|       |       |
|-------|-------|
| 13.00 | 13.00 |
| 11.00 | 11.00 |

period of 1918. disposition from ending March 27, houses and local 161 calves, 633 pigs and 58 lambs. to United States

from January 1 to are 10,895 cattle, and 5,509 sheep; 6,213 calves, sheep, received period of 1918.

state that they from farmers few animals to are evidently are somewhere ch. Carters are for the spring prices was about horses, weighing quoted at \$250, weighing from \$250 each; each; culls, \$50 and saddle ch.

isions.—Dressed er prices in sym-

The Molsons Bank

IS ALWAYS GLAD TO ASSIST FARMERS

in any legitimate financial way to make their farms more productive.



State your requirements to our local manager, and he will be glad to advise and assist you.

pathy with the strength in the market for live stock, and prices were marked up during the week about 1/2 cent, and sales of city abattoir fresh-killed stock were being made in a jobbing way at 27 to 27 1/2 c., while light weight, country-dressed hogs sold at about 2 cents below these prices. Smoked and cured meats showed practically no change and were in moderate demand.

Poultry.—The market for poultry was steady under a good demand for local and outside account. Choice turkeys were steady at 43 to 45 cents a lb.; chickens, 36 to 42 cents a lb.; fowls, 30 to 34 cents; ducks, 36 to 40 cents a lb.; and geese, 28 to 30 cents.

Potatoes.—Very little change took place in the market for potatoes during the past week. Car lots of Green Mountains were quoted at \$1.40 to \$1.50, and Quebec White potatoes at \$1.20 to \$1.25 per bag of 90 lbs., ex-track. In a smaller way 25 cents was added to these prices. Onions were \$3; carrots, \$2; and Quebec turnips \$1.50 per bag of 70 lbs., ex-store.

Eggs.—Practically no change took place in the market for eggs during the past week. Consumption is large and demand active at around 45 cents per doz.

Butter.—Prices were higher than they were a week ago. Finest creamery was selling at 60 to 61 cents, with fine at 58 to 59 cents, and dairies 46 to 47 cents per lb.

Cheese.—The commission quoted 25 cents for No. 1, 24 1/2 cents for No. 2, and 24 cents for No. 3.

Grain.—No. 2 Canadian Western oats were 84 cents per bushel; No. 3, 80 c.; extra No. 1 feed, 80 cents; No. 2 feed 75 cents; and Ontario No. 3 white, at 78 cents per bushel, ex-store. No. 3 Canadian Western barley was quoted at \$1.18; No. 4, \$1.08; extra No. 3 Ontario, \$1.14; No. 3, \$1.13, and sample grades \$1.04.

Flour.—Government standard spring wheat was quoted at \$11 per bbl. in jute bags, ex-track, Montreal freights and to city bakers, with 10 cents off for spot cash. Ontario winter wheat flour unchanged at \$10.20 to \$10.30, in new cotton bags, ex-store. White corn flour, \$8.50 to \$9. Rye flour, \$8.50 per barrel in bags delivered.

Millfeed.—Car lots of bran were quoted at \$42.25 per ton, and shorts at \$44.25, including bags, ex-track. Feed cornmeal in smaller quantities, \$64. Mixed grain mouille, \$58 to \$60. Ground oats, \$58. Dairy feed, \$46.

Baled Hay.—Car lots of No. 1 hay are \$27.50 to \$28 per ton. No. 1 light clover mixed, \$26.50 to \$27; No. 2 timothy, \$26.50 to \$27; No. 2 clover mixed, \$25.50 to \$26; No. 3 timothy, \$24.50 to \$25, ex-track.

Chicago.

Hog.—Heavyweight, \$20.25 to \$20.35; medium weight, \$20.10 to \$20.30; light weight, \$19.75 to \$20.30; light lights, \$18.40 to \$20.10; sows, \$18 to \$19.75; pigs, \$17.50 to \$18.75.

Cattle.—In-between grades mostly 50c. lower; choice cows and heifers, steady; canners and cutters and medium grade she-stock, 25c. to 50c. higher; best butcher bulls, 50c. higher; medium grades and bolognas, steady; calves, 25c. to 50c. higher; fleshy feeders, steady; others and desirable stockers, 25c. to 40c. higher.

Sheep.—Compared with a week ago fat woolled sheep and lambs, 25c. to

50c. higher; shorn lambs, steady to 50c. lower; light thin feeding lambs, mostly 25c. to 50c. lower; fleshy feeding and shearing lambs, steady to higher.

Toronto Produce.

Receipts of live stock at the Union Stock Yards, West Toronto, on Monday, April 7, consisted of 221 cars, 4,142 cattle, 333 calves, 2,293 hogs, 168 sheep and lambs. Slow market. Butcher steers and heifers sold at steady prices; top for loads being \$16.10 for 22 head averaging 1,048 pounds. Odd lots of one to six head sold at \$16.50 to \$17. Fat cows and bulls strong, other classes steady. Sheep, steady; lambs \$1 higher, top being \$22 per hundred. Calves, strong; choice veals \$16.50 to \$17.50. Hogs \$20 to \$20.25, f. o. b.

Breadstuffs.

Wheat—Ontario f. o. b. shipping points (according to freights). No. 1 winter, per car lot, \$2.14 to \$2.20; No. 2 winter, per car lot, \$2.11 to \$2.19; No. 3 winter, per car lot, \$2.07 to \$2.15; No. 1 spring, per car lot, \$2.09 to \$2.17; No. 2 spring, per car lot, \$2.06 to \$2.14; No. 3 spring, per car lot, \$2.02 to \$2.10. Manitoba wheat, (in store, Fort William, not including war tax)—No. 1 northern, \$2.24 1/2; No. 2 northern, \$2.21 1/2; No. 3 northern, \$2.17 1/2; No. 4 wheat, \$2.11 1/2.

Oats.—Manitoba (in store, Fort William), No. 2 C. W., 72 1/2 c.; No. 3 C. W., 69 1/2 c.; extra No. 1 feed, 69 1/2 c.; No. 1 feed 67 1/2 c.; No. 2 feed, 64 1/2 c.

Oats.—Ontario, according to freights outside; No. 2 white, 70c. to 72c.; No. 3 white, 68c. to 70c.

Corn.—American, (track, Toronto, prompt shipment), No. 3 yellow, \$1.80, nominal; No. 4 yellow, \$1.77, nominal.

Barley (according to freights outside)—malting, 93c. to 98c.

Rye (according to freights outside)—No. 2, \$1.65.

Peas (according to freights outside)—No. 2, \$1.70, nominal.

Buckwheat (according to freights outside)—No. 2, 95c.

Flour.—Ontario (prompt shipment) Government Standard, \$9.65 to \$9.75; Montreal and Toronto. Manitoba, Government Standard, \$10.75 to \$11 (Toronto).

Hay and Millfeed.

Hay.—No. 1 per ton, car lots, \$24 to \$26; mixed, per ton, \$22 to \$23.

Straw.—Car lots, per ton, \$10 to \$11.

Bran.—Per ton, \$42 to \$47; shorts, per ton, \$44 to \$47; good feed flour, per bag, \$2.70 to \$2.90.

Country Produce.

Butter.—Prices kept firm at last week's advance, selling as follows on the wholesales: Creamery, fresh-made lb. squares, 62c. to 63c. per lb.; creamery cut solids, 59c. to 61c. per lb.; dairy 53c. to 55c. per lb.

Oleomargarine.—Kept stationary in price selling at 33c. to 34c. per lb.

Eggs.—New-laid eggs advanced slightly on the wholesales, selling at 45c. to 46c. per doz., with selects in cartons bringing 50c. per dozen.

Cheese.—Cheese kept quite firm, selling as follows: wholesale, year-old Stiltons, per lb., 35c.; September at 30c. per lb.

Honey.—There is no demand for honey, even at reduced prices, 5, 10 and 60-lb. pails being quoted at 23c. to 25c. per lb.

Maple Syrup.—Shipments are coming in fairly freely, but there is little demand—selling at \$2.75 per gal. and \$17 per case of ten tins (8 1/2 lbs.).

Poultry.—Poultry kept stationary in price but quite firm to light receipts. The following being quoted for live weight to the producer: chickens, crate fed, 34c. per lb.; chickens, ordinary fed, 27c. per lb.; hens under 4 1/2 lbs., 25 cents per lb.; hens, 4 1/2 to 6 lbs., 30c. per lb.; hens, over 6 lbs., 33c. per lb.; roosters, 22c. per lb.; ducks, 35c. per lb.

Wholesale Fruits and Vegetables.

Receipts have been fairly heavy but trade continued to be rather dull and drabby.

Apples.—Prices on all varieties continued to be very high, with a slight advance on some: The Ontarios selling at \$6 to \$12 per bbl., according to variety and quality; and 85c. to \$1.25 per 11-qt. basket; the latter price being for choice No. 1 Spy.—Western Winesaps selling at \$5.25 to \$5.50 per box.

Do Your Banking by R. F. D.

Make the mail your messenger; and save yourself the long rides to town.

Deposits may be made—butter and cheese cheques cashed—money withdrawn—just as easily and safely by mail as in person.

Write the manager to tell you all about this convenient plan of Banking By Mail—or call in and have it explained, the next time you are town.



THE MERCHANTS BANK

Head Office: Montreal OF CANADA Established 1864

With its 107 Branches in Ontario, 34 Branches in Quebec, 1 Branch in New Brunswick, 2 Branches in Nova Scotia, 25 Branches in Manitoba, 34 Branches in Saskatchewan, 65 Branches in Alberta and 8 Branches in British Columbia serves Rural Canada most effectively.

WRITE OR CALL AT NEAREST BRANCH

ESTABLISHED 1875

IMPERIAL BANK OF CANADA

CAPITAL PAID UP, \$7,000,000. RESERVE FUND, \$7,000,000

RAISE MORE HOGS

To produce more hogs is the national demand to-day. If you require a loan to finance increased production, our local manager will discuss the matter with you.

126 Branches in Dominion of Canada.

Buffalo.

Cattle.—Prices on steers generally went off from a dime to a full half dollar at Buffalo last week, natives showing a general decline of a dime to fifteen cents while the class of Canadians offered—not a very good killing class, showed a decline of a big quarter to in some instances as much as half a dollar. Best natives reached \$18, while about the best in the Canadian offerings sold around \$15, excepting a load of fancy baby heaves—steers and heifers—averaging around 700 pounds, which reached \$16, out-selling anything offered in this line. Females of all classes, with the possible exception of canners, sold strong and the demand was good. Heavy bulls were easy, other rades moving readily at strong prices. Stocker and feeder market was weak, by reason of a snow fall the past week, milk cows and springers generally bringing previous week's prices. Offerings for the week totaled 5,725 head, as against 5,425 head last week and as against 3,675 head for the previous week a year ago. Quotations:

Shipping Steers—Natives—Choice to prime wightv. \$17.50 to \$18.50; fair to good, \$16.50 to \$17.00; plain and medium, \$13 to \$15; coarse and common, \$10.50 to \$11.

Shipping Steers—Canadians—Best heavy, \$15 to \$16; fair to good, \$13.50 to \$14.75; medium weight, \$12 to \$15; common and plain, \$10.75 to \$11.

Butchering Steers—Yearlings, choice to prime, \$15.50 to \$16.50; choice heavy, \$16 to \$16.50; best handy, \$14.50 to \$15; fair to good, \$12.50 to \$14; light and common, \$10 to \$11.

Cows and Heifers—Best heavy heifers, \$13 to \$13.75; good butchering heifers, \$12 to \$13.35; fair butchering heifers, \$10.50 to \$11; light common, \$8 to \$9; very fancy fat cows, \$11.50 to \$12; best heavy fat cows, \$10.50 to \$11; good butchering cows, \$9 to \$10; medium to fair \$7.75 to \$8.50; cutters, \$6 to \$6.50; canners, \$5.25 to \$5.50.

Bulls.—Best heavy, \$11 to \$12; good butchering, \$10 to \$10.25.

Stockers and Feeders—Best feeders, \$11.50 to \$12.50; common to fair, \$10 to \$11; best stockers, \$11 to \$12; fair to good, \$9.25 to \$9.75; common, \$8.75 to \$9.

Milchers and Springers—Good to best,

(small lots) \$100 to \$135; in carloads, \$90 to \$100; medium to fair, (small lots), \$80 to \$85; in carloads, \$70 to \$75; common, \$50 to \$55.

Hogs—Sharp advances were noted in hog prices last week. On the opening day the extreme top was \$20.35 but the bulk of the good hogs moved at \$20.10 and pigs sold largely at \$19. Tuesday there was no market on account of the return soldiers' parade and Wednesday prices were up 50c. to 65c. Thursday values were still higher, best grades being landed mostly at \$21, with pigs selling at \$20 and Friday the top was \$21, bulk sold at \$20.85 and pigs were steady, selling at \$20. Good roughs brought up around \$17.50 and \$18 and stags ranged from \$15 down. Last week's receipts totalled 24,000 head, as against 23,503 head for the week before and 21,400 head for the same week a year ago.

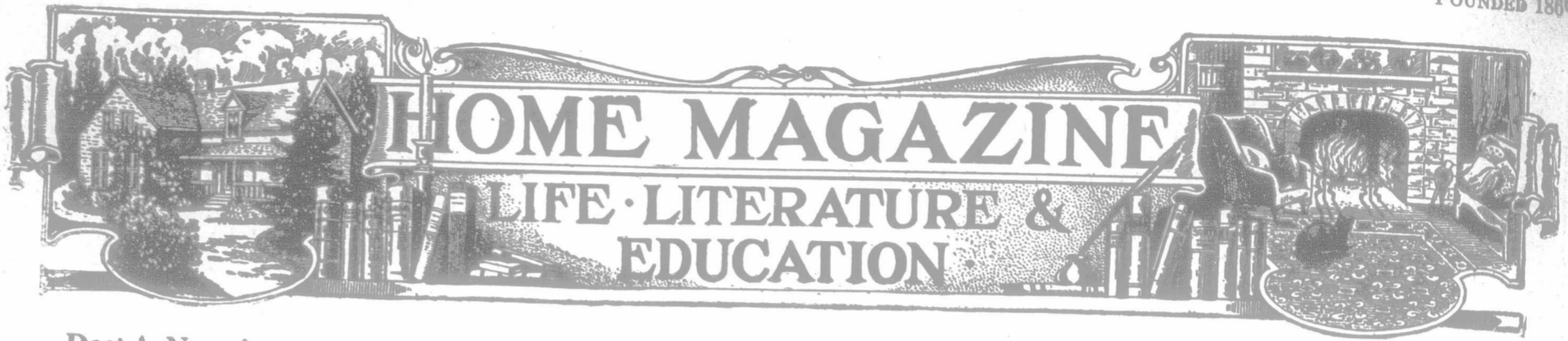
Sheep and Lambs.—Trade on lambs the first four days of last week was slow and prices were little changed from day to day. Monday the bulk of the choice wool lambs sold at \$20.35 and the next three days few reached above \$20.25. Friday the market was quite active and stronger, best desirable lots bringing from \$20.25 to \$20.50, with one load up to \$20.60. Choice lambs weighing around 95 pounds undersold the more desirable kinds by from a quarter to fifty cents and shorn lambs ranged about \$3 per cwt., under the wools. Cull lambs with wool sold up to \$18 and \$18.50 and the shorn culls ranged from \$15 down. Sheep were scarce and they sold strong all week. Unshorn wethers brought up to \$16.50, top for wool ewes was \$15, best clipped wether sheep moved at \$13.75 and \$14 and ewes without fleece went from \$12.50 down. Receipts for last week totaled 16,000 head, being against 19,960 head for the week preceding and 14,300 head for the same week a year ago.

Sale Dates.

April 10 and 11, 1919.—Canadian National Holstein Sale, Toronto.

April 11, 1919.—C. F. Jackson, St. Thomas.—Dairy cattle, horses, etc.

May 14, 1919.—Jos. Dorrance & Son, R.5, Seaforth.—Dual-purpose Shorthorns.



### Des' A-Nappin'.

BY EMMA KENYON PARRISH.

Des' a-nappin', Honey,  
List'nin' at de rain;  
Des' a-roamin', kin' o',  
To'ds de Good-by Lane:  
"Tippy, tappy," droppin',  
Lonesome soun', dat's so.  
Des' a-honin', Honey,  
Fer de night to go.

Mebbe, sometime, Honey,  
Patter-roller cry,  
"Lights out in de cabin!"  
Den my night gone by.  
Des' a-nappin', Honey,  
List'nin' at de rain,  
Honin' fer de sunup,  
Pas' de Good-by Lane!  
—From Contemporary Verse.

### Reconstruction.

#### The Returned Men.

(Continued.)

PERHAPS the first thought that occurs to us, and rightly so, when Reconstruction in Canada is mentioned, is of the returned soldiers, the men who went out—as was proclaimed over and over during the four years of the War—"to fight for Democracy, in the war to kill War,"—the men who did their bit, patiently, doggedly, and splendidly, and who are now coming back to us apparently the same cheerful "every-day" sort of men who went away. Time alone will tell how they have "grown," and those who know best say that some of them have grown wonderfully, and that they will soon be as instrumental in raising our ideals and bettering our conditions here as they were in winning the battles in the War. There will be about 350,000 of them back in our country when the last ship-load has arrived, and right glad and proud Canada is to welcome them all home again.

Many of these men are as fit, mentally and physically—even more so—than when they went away and are ready and anxious to take their part once more in civil life, and to carry out, in time of peace, the Vision that has come to them during their great experience. Of these some will take up their old occupations, while others, more unsettled, will desire a life of more freedom than that afforded by the old routine;—it is said that comparatively few wish to go back to office work.

It goes without saying that such men require no special "reconstruction" measures to be taken in their behalf. They have made good at the front and they will make good at home.—But there are others, so many of them, who will not be able, for some time to come, to stand alone upon their own feet,—the blind, the maimed, the nervous, the shell-shocked. It is not sufficient, as someone has said, "to give these men a cup of tea and take them to the movies." Something definite must be done for them, and right away. Even the best of human beings are likely to deteriorate if long idle; useful work is absolutely essential to high character. A real man wants to feel that he is independent and doing his bit in the world always; only in so doing can he be happy, and satisfied, and wholly sane.

Now surely the world owes a chance for all this to every man who found his way, with a righteous motive, to the trenches.

But "the world" means *Us*,—you, we, everybody.

What can we do, then?

IN the first place, we can give all the support in our power to the Government in the work for the soldiers that it has in hand. In a recent issue of this paper (see report of the Horticultur-

al Societies' Convention, Feb. 27th issue) an epitome was given of an address by Hon. W. D. McPherson, Provincial Secretary and Chairman of the Soldiers' Aid Commission, on what the Ontario Government alone is doing in this matter. The other provinces are doing like work,—affording educational facilities, both academic and technical, to the returned men, endeavoring to get them suitable positions at the close of the courses, etc. There has been more difficulty in getting men on to farms, as the land at first available proved to be too remote to prove very attractive. Better schemes, however, are being devised, which will no doubt make it possible very soon to organize satisfactorily community farm settlements along the railroads in the older parts of the provinces.

Eventually, also, it is likely that new industries will be organized, and it has been suggested that plants be established out in the smaller towns and villages, where the men can have gardens, and trees, and fruits, and the healing touch of the land. . . . Apropos of this may we throw out a personal suggestion: viz., that we encourage the production of *hand-work*, wherever it is honestly and beautifully made. Long ago Ruskin fought for this. He argued that a man must make an article from start to finish in order that he keep alive the true creative impulse and live the happiest sort of life. He argued that hand-work so done stands the best chance of being honest and artistic. He argued that too much running of machines makes machines of men.—But we thought we were wiser than he and so pinned our faith to, and spent our money upon machine-made goods, not perceiving that by so doing, to the exclusion of all other, we were condemning countless numbers of men and women and even children to a slavery little less soul-deadening than that of the

There were no smiles. It was a sight.  
And some slipped in between the looms  
And curled up at their bite.  
The machinery was still for an hour in  
the mill.

I left; they stayed.  
There was work to be done,  
It was not much fun.

It is only sufficient to visit any large, modern manufacturing plant to perceive the deadly monotony of much of the work;—there are men to-day who are spending the greater part of their lives in performing, over and over, mechanical motions that demand no more brain-power than that needed by a dog on a tread-power. True, there is a certain percentage of people who are by nature contented to put in their working hours at such routine, and there are many others who, through years of such work, become at last resigned and accept their lot with patience. But there are always the others to whom such treadmill labor means a life of dull misery, and it is simply unthinkable that any of the soldiers who faced shell and death, for the sake of a principle, and who feel thus about such absolutely mechanical work, should ever be condemned to it. Not one of these should ever have to feel as the father in Rowland Thirlmere's poem, *Factory Life*:

My little son, one day you'll go  
And live with poplars in a row—  
With limes and sycamores.  
And you shall hear the throstle sing  
When primroses come forth in spring  
And boys live out-of-doors.

Here there are chimney-stacks for trees,  
That sway when some untainted breeze  
Comes whooping from the west;



The Girl He Left Behind Him Welcomes Him Home.

galley-slaves of old. As Margaret K. Strong says, in a little free-verse poem published some time ago in *Woman's Century*:

Have you ever been  
Inside a mill,  
A cotton mill, you know?  
With spinners, spoolers, winders, weavers,  
All at work from dawn to night?

I saw inside the other day.  
Do you remember the witch who was  
picking the pattern?  
I saw them when the noon hour came,  
Drop work and run,  
But not for fun.

Gaunt in the sun and moon they stand.  
The landmarks of a barren land  
Where life has little zest.

Now put your cheek to mine, my dear:—  
You shall escape, lad, never fear,  
To range the moors and wealds;  
The time is coming, late or soon,  
When you shall know how sweet is June  
In unpolluted fields.

Indeed, my son, I cannot tell  
Why we are prisoned in this hell  
Whose grass is mostly black;  
None knows what unseen masters make  
Men linger where their hearts must ache  
For lovely things they lack.

I, too, am keen to leave this grime  
For some more spirit-stirring clime:  
Perhaps this cannot be;  
But you, at least, your wings shall try,  
And as I'm you and you are I  
You'll laugh and play for me.

The point is this: that a general tendency upon our part to buy hand-made goods, whenever available and satisfactory, in preference, to machine-made goods, should provide an open way to interesting, creative, individual work for many thousands of men.

Surely this is one thing that each one of us can do. There are homespun for clothes—the product of hand-loom, rugs made in similar fashion, linens, laces, wicker work, hand-made furniture of all kinds, pottery, basketry, shoes, toys, many other things that can be made almost entirely by hand, and most of which provide all sorts of scope for inventiveness if not positive exercise of the artistic faculties. Many of these are being taught to soldiers in the vocational training schools, primarily for the sake of their curative influence (an interested and happy mind tends to make a well body); why not encourage their development into positive industries?

"But," it may be objected, "this handicrafts work is so expensive."

Yes, it is expensive, at the time of buying, but, if absolutely honest in workmanship and artistic enough to satisfy the aesthetic sense, is it not, almost invariably, a real investment, and, perhaps, less expensive in the long run than cheaper, machine-made products?—If honest it should guarantee strength, and durability as well as distinctiveness of design. And it is likely to be honest. What workman who has to stand entirely on his own personal reputation would care—even though he were influenced by no higher motive—to turn out inferior work?

Moreover, might we not make a distinct gain, financially as well as artistically, by having fewer—but better—things in our homes? As a rule we clutter our homes up too much, scattering our money over a great many insignificant, characterless articles instead of concentrating it upon a few really good things which would last and be an unending pleasure because of their grade. Truly, as Keats has said,

"A thing of beauty is a joy forever."  
And so in this way we might, while pleasing ourselves, assure also the happy living of many returned soldiers who are lame or otherwise unfitted for heavy work.

Again, a certain percentage of the soldiers, become used to the outdoor life, will probably choose to work upon the land, especially if they can secure farms of their own. Many of these will be men who have had no previous experience, and who, therefore, will be likely at first to do things clumsily and even disastrously to their pocket-books. Here, then, is a fine chance to show their gratitude for what the soldier has done. It will be possible to give him assistance in many ways,—but it must be given tactfully. As a speaker at a recent convention said, "Don't give the soldier your 'sympathy,' but give him the personal touch. He needs your help."

In short, it is up to us to make even the maimed and physically-lowered returned man realize that he is, and help him to really be, in the main current of life, not leave him to feel that, now that his great work in the War is finished, he is laid on the shelf. . . . Some of these men, it is true, may not be quite normal for a time. But how could we expect them to be? Let us keep this in mind, and, while they are recovering their equilibrium, let us be patient, remember-

ing always the tension through which they have passed.

"A. N."

(To be continued.)

**Travel Notes.**

Miss Bennett Discourses on Jam and other Things.

MISS Bennett had not appeared for a week or more, and interrogations were rife concerning her absence. "I wonder if she has the Grippe?" asked one.

"Very likely she has," said another. "I'm sure of it," said a third.

So the word went forth that Miss B. was down with the *Grippe Espagnole*, and hotel guests who were obliged to pass her room rushed by with their noses buried in their pocket handkerchiefs, hoping thus to escape contagion.

Yesterday, however, when I was skidding past her room the door happened to be ajar. She caught a glimpse of me and called to me to come in.

"You needn't be afraid, to come in Miss Russell," she shrieked, "I haven't the Grippe. It's perfectly safe."

Thus reassured I went in and found her stretched out on the sofa gorgeously arrayed in an embroidered purple silk kimona and looking in the very best of health.

"No, I'm not sick," she said again, "although I suppose they have me at the brink of the grave. Dead and buried perhaps, by this time. What are the latest reports about me? Yes, I thought so. I knew they would say it was the Grippe. But it isn't. I'm just taking a rest. Some of those women downstairs get so on my nerves with their eternal cackling that I can't endure even the sight of them. So I'm travelling—in my room. I've been going over my notebooks and looking at my photographs, and have had really a most delightful little trip—in Italy.

"To be perfectly candid I was ill for a couple of days. But it was nothing more or less than indigestion caused by that awful jam they are giving us now—that horrible purple stuff that looks like dyed sago. Heaven only knows what Swiss jams are made of. They are as bafflingly mysterious as hotel hash. One may guess, but one is never sure. Have you noticed that all those Swiss jams range from vivid red to deep purple? Camouflaged of course. The label doesn't count for anything. That is just put on to deceive the public. I've tried them all and found nearly everything in the jar except what the label declared was there. Yes, I've found bits of glass, bits of solder, and stems and leaves, and even buttons. You look incredulous. But it's a fact. Yesterday I found a button. I thought at first it was a cherry-stone, but when I came to examine it, I discovered it had a shank.

"Fine subject for a mystery story, isn't it?"

"Title: How did the Button get into the jam?"

"But let me tell you something curious. A few weeks ago a Belgian lady gave me a jar of genuine American plum jam made in Rochester, N.Y. Real plums, sweetened with real sugar. So saccharine; no dye. My dear, it was delicious, simply delicious. It filled me with patriotism just to eat it. I scoured the town to get some more. None to be had. So I asked my friend where she bought it. She said she didn't buy it, that it was given to her by a Belgian intern who had been repatriated. And it had been sent to him from Belgium by his mother. Think what it must have cost in starving Belgium! And think of me in Switzerland, eating American jam from Belgium! Well, I assure you the Swiss have a lot of things to learn. They are clever in some ways. They know how to get your money. They know how to build wonderful bridges. But they can't make jam, and they can't make shoes.

"At least, that's my opinion, after five years' experience.

"But what I called you in for particularly was to tell you about this passport business. I've been investigating, you know. I've written to Berne, and I've gone to Lausanne and I've interviewed the French Consul—my dear! its perfectly hopeless! Gone are all my visions of springtime in the Riviera. Gone are all my dreams of getting out of Switzerland for months to come. It's far worse than it was before the Armistice. It's too disgusting! The questions they ask,



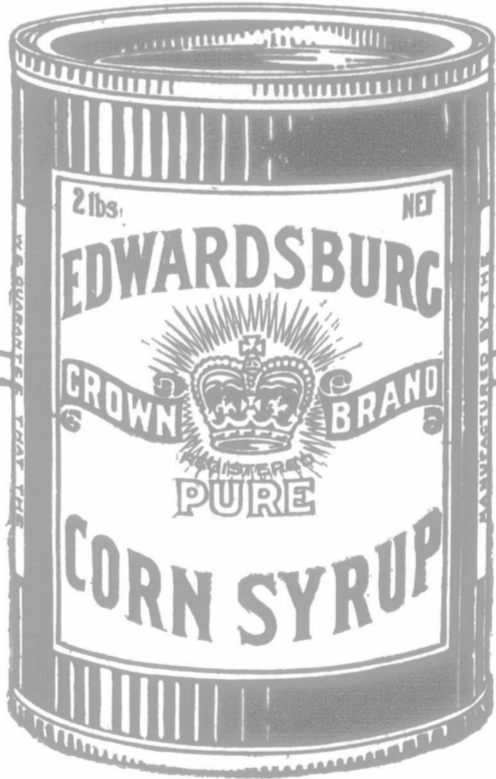
**HOT PANCAKES!**

Yes, But -- What are pancakes worth without syrup? It is the syrup that gives the flavour; and there is no other syrup that tastes just as good as

**CROWN BRAND CORN SYRUP**

For hot pancakes, hot biscuits and muffins, and a dozen other Table and Kitchen uses, housewives with the widest experience use Crown Brand, every time—the golden syrup with the cane flavor.

For Marmalade and other preserves, we recommend our LILY WHITE Corn Syrup.



Sold by Grocers everywhere in 2, 5, 10 and 20 pound tins.

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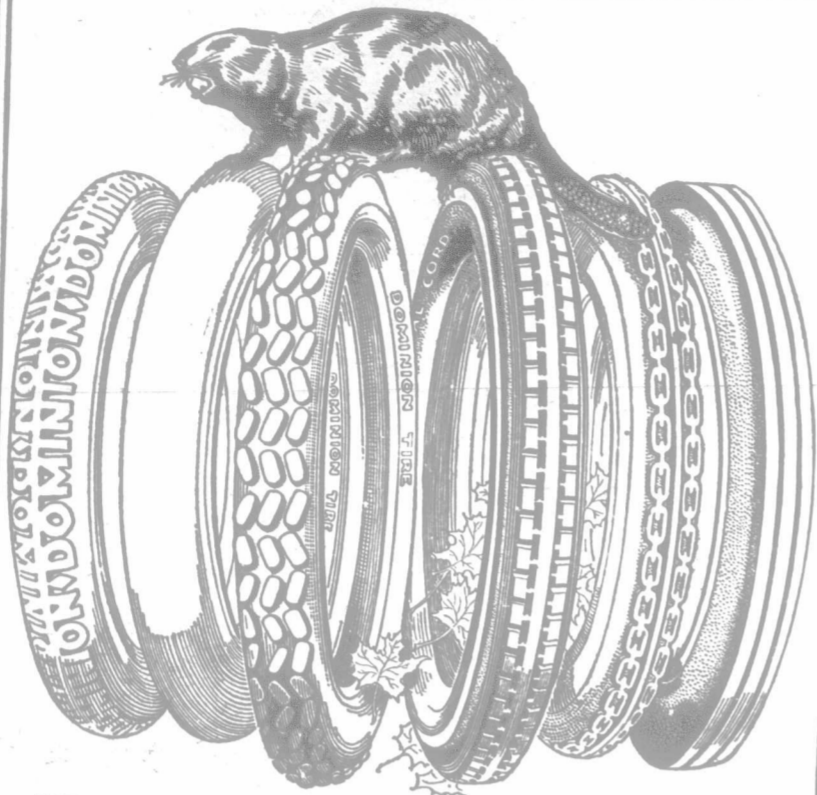
The Canada Starch Co. Limited - Montreal

and the things they want to know! The fact is they don't want any travellers in France, and they make it just as hard as possible for any one to get there. Of course, if you are going right through to America, it is much easier, but you are not allowed to linger on the way. You must go direct to the port from which you take the steamer home. And it's a very hard trip. Not so far, of course, but so many delays, such crowded cars, and so much discomfort. I wouldn't get over it for a year. Oh! It's quite out of the question at present.

"I have the application form here. I'll read it to you."

She drew a large printed sheet from an envelope lying on the table beside her.

**COWAN'S PERFECTION COCOA**  
MAKES DELICIOUS CAKES, PUDDINGS & PIES.



## DOMINION TIRES ARE GOOD TIRES

A single season of motoring will prove the worth of any tire.

Dominion Tires have the prestige of unequalled success to recommend them.

They have rolled the roads of every section of Canada, in every extreme of heat and cold.

They have proved their superiority in comfort, economy and mileage—and through sheer superiority, have built up a demand for these purely Canadian-made Tires that has made "Dominion Tires" household words with car owners.

"DOMINION" Tires give you a choice of six distinct treads:

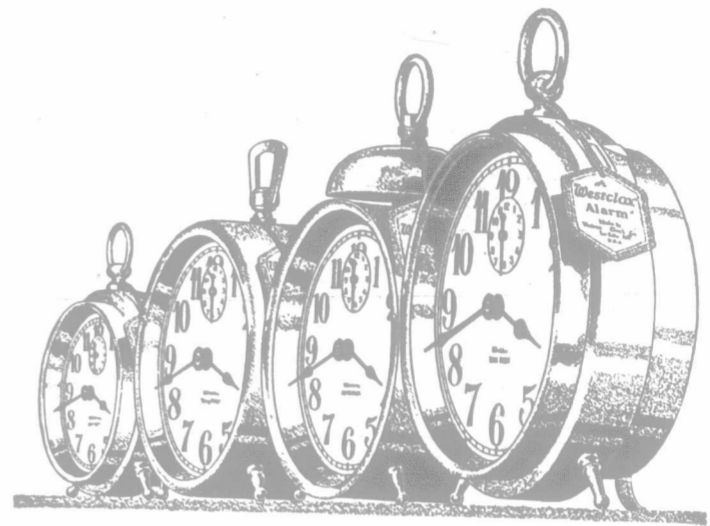
"Royal Cord" "Nobby" "Chain"  
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DOMINION Inner Tubes are built with the same care as DOMINION Tires. So when you choose a DOMINION Tire with a DOMINION Inner Tube, you have a tire perfectly balanced and a warranty for perfect satisfaction and service. DOMINION Inner Tubes cost no more than ordinary tubes.

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## Westclox

HERE they are; the four top-notchers in the Westclox line. Big Ben heads the family. He's a good, substantial timekeeper and a loyal call-clock.

At his right, America: trim, alert, competent. Then Sleep-Meter, a close second to Big Ben; refined, neighborly, watchful.

Last but not least only in size comes little brother, Baby Ben, who tucks cozily into places where Big Ben might feel out of place.

They're all faithful timekeepers and punctual alarms. They all have that same good Westclox construction. They all wear our quality-pledge, Westclox.

Western Clock Co. - makers of Westclox

La Salle & Peru, Illinois, U. S. A.

## LOSSES BY LIGHTNING

The Ontario Fire Marshall's Report shows that in May 1918, 151 Unrodged Buildings were damaged by Lightning to the extent of \$121,012.00. There were NO Losses on Rodded Buildings during that month.

May will soon be here.

Will you rod your Buildings this year?

Write for Printed Matter.

The Universal Lightning Rod Co'y.

HESPELER

Made in Canada

ONTARIO

When writing advertisers will you kindly mention The Farmer's Advocate.

"I'll take the questions in the order in which they come," she said. "The first ones are easy enough to answer."

1. Name.
2. Christian names.
3. Date and place of birth.
4. Present nationality.
5. Original nationality.
6. Nationality and nationalization, if it has taken place of father and mother.
7. (Here's the first snag). Give reasons for journey.

(My chief reason is that I want to get out of this fog-drenched country, but, of course, that reason won't pass.)

8. (Another snag.) Duration of journey. (How do I know how long I will be in France? I might want to leave

in a week or a month, or a year. There's no telling).

9. Places where the applicant wishes to go. Indicate in their order.

(*don't know* the place I want to visit second or third or fourth. So how can I say. It depends on so many things).

10. Give two references in France.

(That's hard to do. People are moving around all the time. The mails are uncertain. It might take months to get references.)

11. Give reference in the place to which you are going.

(I want to go to Cannes. But there's no person there to whom I can apply for a reference.)

12. Place of entrance into France. Place of exit from France.

13. Places where you have previously stayed in France.

14. Addresses, dates and duration of these visits.

(Now, that caps everything. I have been in France probably eight times. How can I remember all the places I have been, all the addresses, all the hotels and pensions at which I have stayed, and the length of time I have stayed at each place. Ridiculous! Really this sort of thing encourages lying. And I never could remember a date anyway.)

She folded up the form and replaced it in the envelope.

"But that's not all," she continued. "One must have a doctor's certificate of good health. One must have a vaccination certificate. Formerly one

could go to the Riviera in search of health, but now things are changed. They won't let any invalids into the country. They have too many already.

"But some people manage to sneak in just the same. About a year ago an American family went from Lausanne to Nice. A mother, two daughters and a dog. My dear, they were all sick, even the wretched little Pomeranian. But they had money, and they were able to procure certificates of health from Swiss doctors. Even the dog had a certificate of health. And three days before they left that pampered canine had fits on the street and had to be carried into a drug-store and given some dope to quiet his poor nerves. And, perhaps you won't believe me, but it's a positive fact, that



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Farmer's Advocate.

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**Genuine Ford Parts  
For Sale Here**



## Now Staple Articles of Trade

**T**HE parts of a Ford car—*every* part—can be bought *anywhere* in Canada. They need not be “ordered from the factory.”

—nor from a Ford Branch.

—nor even from one of the 750 Ford dealers.

They can be delivered “on the spot” by over 2000 garage and repair men.

Although highly specialized pieces of engineering and machining, Ford parts have become *staple articles of merchandise*. They are as easy to obtain as a hatchet or a saw.

This is a most unusual service to the owner of a car.

Its value is incalculable.

The Ford car need never be “tied up” while repair parts are being “brought on from the factory.”

There need be no annoying delays while touring because Ford Service Stations are located everywhere.

The owner of a Ford (barring serious breakdown through accident) may enjoy uninterrupted use of his car.

**Caution to Ford Owners**

Never allow “spurious” or imitation parts to be used in repairing your Ford. Your repair man—if he is earnest in his desire to serve you well—can get genuine Ford parts and sell them to you at a reasonable profit.

You need never accept “spurious” repair parts. In any locality, in any emergency, there is sure to be close at hand, a Ford Service Station.

**Demand genuine Ford parts. Be firm.**

Keep your Ford running at full Ford efficiency.

FORD MOTOR COMPANY OF CANADA, LIMITED, FORD, ONT.

**DEMAND**

# Genuine Ford Parts

# WALTHAM

THE WORLD'S WATCH OVER TIME



**Accuracy with Appearance**

ACCURACY is the dominant idea behind the Waltham Watch.

In the factory at Waltham, and in the Montreal branch, the working staff from general manager down to the newest apprentice, is imbued with the spirit of "accuracy first."

This is the motive that led to the invention of many wonderful automatic machines which perform intricate operations in the shaping, drilling, polishing and finishing of watch mechanism, with an accuracy and speed that no human hand could equal.

At the same time, appearance is important, and the Waltham is as pleasing in form as it is perfect in workmanship.

For the man who desires to carry a watch of a quality which adequately meets modern business demands, both as to accuracy and appearance, the Colonial "A" and the Riverside models are great favorites.

Ask your jeweler to show you these Waltham models.

**Waltham Watch Company, Limited, Montreal**  
Makers and Distributors of Waltham Products in Canada  
*Factories: Montreal, Canada; Waltham, U.S.A.*

# KEITH'S

THE FARMER'S SEEDSMAN SEEDS FIFTY-THREE YEARS SERVICE

1866 1919

We pay freight on orders of \$25.00 or more in Ontario and Quebec

**SEED CORN—OUR GUARANTEE:**  
You are given 10 days after arrival at your station in which to test any corn purchased from us. If you find it unsatisfactory, return it to us within the above limit, and we will refund purchase price. The reason for this guarantee is that we know that the seed will germinate 90% or better—we have tested it.

Our Prices on Cob—Bags Free.

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|------------------|-------------------------|-----------------------|-------------------------|
| Longfellow.....  | Per Bus. 70 lbs. \$4.25 | Wisconsin No. 7.....  | Per Bus. 70 lbs. \$3.75 |
| White Cap.....   | 3.25                    | Bailey.....           | 3.75                    |
| Golden Glow..... | 3.75                    | Improved Leaming..... | 3.75                    |

If you order 25 bushels of corn, or more, we will allow a reduction of 25c. per bushel.

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| <b>GLOVER and TIMOTHY</b>   |              | <b>MANGEL SEEDS</b>  |  |
| Government Standard.....  | Bus. \$32.00 | Prizetaker, Giant Half Sugar, Yellow Intermediate, Yellow Leviathan, Mammoth Long Red. All seed, Germination, 112 to 160 per cent. Price, 60c per lb. Postpaid, 65c. per lb. 25 lbs. or more at 50c. per lb. |  |
| No. 1 Red Clover "Sun".....   | 7.75         |  |  |
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| (Extra No. 1 for purity)  |              |  |  |
| No. 2 Timothy.....  | 6.50         |  |  |
| (Extra No. 1 for purity)  |              |  |  |
| No. 2 Timothy (Special).....  | 22.00        |  |  |
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| No. 3 Alsike & Timothy Mixed (No. 1 for purity).....                          | 27.00        |  |  |
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| No. 2 Alfalfa—Ontario Variegated.....   | 22.00        |  |  |
| No. 3 Alfalfa—Ontario Sweet Clover, White Blossom (Biennial) hulled seed..... | 15.00        |  |  |
| Alfalfa and Sweet Clover, Scarified \$1 bushel extra                          |              |  |  |

**Cotton Bags**  
For Clover and Timothy, 65c. each.

**SWEDEN TURNIPS**  
Prizetaker, Canadian Gem, Lord Derby. Price \$1.00 lb., Postpaid, \$1.10 lb.  
25 lbs. or more at 80c. per lb.

**OATS—Bags Free Per Bus.**  
O.A.C. No. 3.....\$1.50  
O.A.C. No. 72, Registered.....1.65  
O.A.C. No. 72, Good Sample.....1.30

**BUCKWHEAT**  
Rye.....2.30  
Silver Hull.....1.80

**RAPE**  
Dwarf Essex, per lb.....16c

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**GARDEN SEEDS**  
Get your wife to make out your garden seed order from our catalogue. Liberal packages, strong, vigorous seed (tested for germination) and the most reasonable on the market. We buy direct from the grower and sell direct to you. No middleman's profit.

**GEO. KEITH & SONS SEEDS 124 KING ST. E. TORONTO**

When writing advertisers will you kindly mention The Farmer's Advocate.

that dog had a first-class railway ticket, and a passport. That sort of thing makes me ashamed of my country women.

"Then in addition to all this one must apply to the French Consulate at Berne, in person, furnished with all these certificates, and a passport and papers of identity, and four recent photographs, full face, without a hat, against a light background. And if by good luck, you get permission to leave, you must go on the exact date set. And if anything happens to prevent you, then all your trouble goes for naught, and you have to start all over again.

"Then the baggage business! That's another trouble. One is only allowed to take 30 kilos (60 lbs.) and 10 kilos in the hand. What is 40 kilos to a traveller? Hardly enough to keep warm. And the Swiss, the dear, benevolent Swiss—they won't allow a traveller to take more than three pairs of shoes out of Switzerland—on account of the leather, you know. And if you take any food with you, you must eat it before you cross the frontier! And one doesn't want to gulp down hard-boiled eggs at eleven p.m. It would be courting sudden death for some people. And then, from various sources I hear that the cars are cold, that half of them have no windows—that is, no glass.

"It seems that glass is not procurable, the Germans having destroyed the factories. Fancy travelling this time of year in a car without windows, or what amounts to the same thing! Yesterday I had a letter from an English friend who has just gone home. Such a tale of woe! Had a terrible journey. Five hours at the station in Geneva, before starting! Another five hours at Bellegarde on the frontier. The cars were packed, people standing in the aisles. She had reserved a seat weeks in advance, but she couldn't get it because the place had been sold twice and the other person was there first. Not a wink of sleep did she have all



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Imitation is the sincerest form of flattery. Our product is imitated but not equalled—Refuse all Substituted Imitations.

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Head Office and Plant: LONDON, ONT.

night, and had to stand up most of the time.

"Then the prices in Paris! Perfectly fabulous. She had to share a small room there with three ladies she had never seen before, and paid five dollars for the bed—for one night—and a very uncomfortable bed it was too. Many people couldn't get rooms and had to roam the streets all night. Some slept in cabs on the streets. Others remained

in the railway station waiting room. The reports are certainly not encouraging. Then, if you are on the way to America, and manage to get to the port from which you expect to sail, it may be weeks and weeks before you can secure a berth. Even now, everything is booked to the end of March.

"Oh, it's perfectly hopeless. I've just about given it up, but it takes me some time to become resigned. I'll just have

to jog along in the same old way, accumulating rust and moss."

She sighed despairingly, and fixed her eyes on a row of shoes ranged along the wall next an open trunk.

"I must apologize for the disorderly appearance of my room," she said, "but I'm sort of packing and unpacking. I think I'll go to Sienne next week for a change. I suppose the hotel there will be another nest of freaks and octogenarians, same as this one. About the only difference in Swiss hotels now is that some serve butter and some don't. This is one of the 'don'ts.' And I am going to Sienne because they give the guests butter there. You better join me. You look rather peaky and pasty. In fact, we all do. It's the lack of fat in the food you know. We're all drying up. Why my face looks like a railway map. Some day I'll go to pieces suddenly, like the wonderful One-hoss Shay, that went for a hundred years and a day."

"But, talking about freaks, did I ever tell you about the trousers?"

"No. Oh, do sit down again a minute and I'll tell you."

(To be continued.)

## Among the Books

### Books From the Home Library.

(Concluded.)  
The Drama.

OSTENSIBLY "the drama" is intended to be seen and heard rather than read; yet the number of people who like to read plays increases yearly.

In this class, it goes without saying, Shakespeare's works hold first place.

**FIFTY-THREE YEARS SERVICE**  
1919  
Ontario and Quebec

Per Bus. 70 lbs.  
.....\$3.75  
.....3.75  
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**CEL SEEDS**  
ant Half Sugar, Yellow  
Yellow Leviathan,  
Red. All seed, Ger-  
100 per cent. Price,  
paid, 65c. per lb.  
at 50c. per lb.

**TURNIPS**  
Canadian Gem, Lord  
\$1.00 lb., Postpaid,  
at 80c. per lb.

**Bags Free Per Bus.**  
.....\$1.50  
Registered..... 1.65  
Food Sample..... 1.30

**KWHEAT**  
..... 2.30  
..... 1.80

**RAPE**  
lb..... 16c

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tested for ger-  
We buy direct  
man's profit.

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Farmer's Advocate.

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**Drama.**  
"the drama" is in-  
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Following his inimitable dramas come the plays of Ben Johnson, Goethe, Browning, Corneille, Goldsmith and Sheridan, and those of the modern writers, J. M. Barrie, J. M. Synge, Rann Kennedy and Maurice Maeterlinck. Barrie's latest work of this kind, by the way, is *Echoes of the War*, which consists of four one-act plays. Two new plays, *Abraham Lincoln*, by John Drinkwater, and *Philip of Spain*, by John Masefield, are also receiving great praise from the reviewers. For the present George Bernard Shaw has been somewhat eclipsed, but possibly when the last echo of the War has passed, he may return to popularity with those who find pleasure in his caustic fun-making.

**Dr. Elliot's Five-Foot Shelf.**

And now we close with the "shelf" list for which Mr. McPhaden, of Cresswell, Ont., asked, in the first place, and which has already been sent to him privately—the request that led to the publishing of these catalogues of books. The "five-foot shelf" consists of 50 volumes, published in library form as *The Harvard Classics*, by P. F. Collier & Son, New York,—large volumes which contain information upon a great many subjects and selections from the works of a great many authors. Some of the subjects and authors included have been already mentioned in foregoing lists. Others, not yet mentioned are the following, which will give some hint in regard to further selection even to those who may desire to buy books separately, not being prepared to invest at once in this five-foot shelf:

Izaak Walton's *Lives*; *Life of Cellini*; Franklin's *Autobiography*; Letters of Cicero and Pliny; Philosophy of Rousseau, Descartes, Kant, Hume, Hobbes, and Locke; works in science of Lester, Geikie, Huxley, Faraday and Helmholtz; travels of Raleigh, Drake, Gilbert, Darwin, and Dana; essays of Montaigne, Burke, Taine, Mazzini, Addison, Shelley, Sydney Smith, Arnold and Stevenson; poems of Dante, Milton, Byron, Coleridge, James Thomson, Gray, Kingsley, Fitzgerald, Rossetti, Bryant, Henley and Morris; and, in prose fiction, Manzoni's *I Promessi Sposi*, and Malory's *Morte d'Arthur*.

**Hope's Quiet Hour.**

**His Witness.**

Ye shall be witnesses unto Me.—Acts 1:8.  
This Jesus hath God raised up, whereof we all are witnesses.—Acts 2:32.

Come along early and get in the game  
Of making life beautiful for awhile;  
Come along early with cheeks aflame  
And your eyes all lit with that morning  
smile.

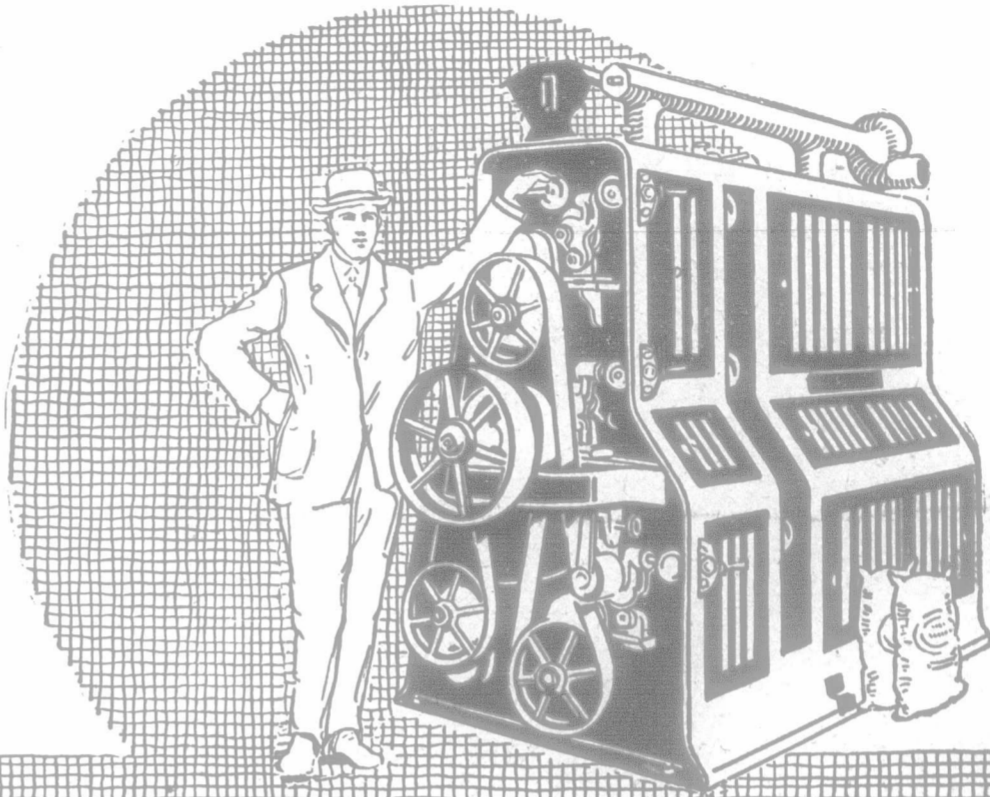
Come along early—through struggle and  
sin—

To help make living a better thing,  
And to be considered, and counted in,  
On the muster roll of the Infinite King.  
—FOLGER MCKINSEY.

When the apostles chose one to take the place of the traitor Judas, it was especially stated that his great business was to bear witness to the Resurrection of Christ. Our Lord sent out His little army to conquer the world for Him, telling them they should be witnesses unto Him in their own city and country and unto the uttermost part of the earth.

The Christian vocation has not changed. Our business—from Sunday morning (the Resurrection Day) to Saturday night—is to let the Light of the world shine out through our lives. If He is reigning as King in our hearts we shall be His witnesses to others. Too often we speak as if our Lord's Life on earth ended on Good Friday. Of course we should "glory in the Cross of Christ": but we are able to glory in that sign of shame because it was powerless to conquer the Lord of Life. Unless He had risen triumphant from the dead we could not have named the day of His death "Good" Friday, for it was "the darkest hour that ever dawned on sinful earth."

The two men who walked along the road to Emmaus on Easter Day were almost hopeless, because the One in whom they had trusted to redeem Israel was crucified. They did not glory in the Cross—far from it. They were, however, not quite



**Own This Paying Business**

Localize the flour milling business in your district and earn from \$500 to \$1000 a month in profits. You can do it—and, no experience—either mechanical or technical—is required if you operate a

**MARVEL MILL**

This is the mill that has put the small milling industry back in the field as a competitor of the big flour mills. Over 1500 Marvel Mills are making money for enterprising men or companies today.

The Marvel Mill is a single unit, self-contained, one man mill that grinds, bolts and purifies—all in one operation. It requires no previous experience because each process is perfectly done by the one mill unit. It requires but half the power of the ordinary flour mill of the same capacity and produces the complete flour and by-products in 45 seconds after introducing the grain.

Made in seven sizes—15 to 100 barrels capacity.

Fill out the coupon attached—either for yourself, your firm or your co-operative society. Full information will be given upon its receipt.

**The Canadian Fairbanks-Morse Co., Limited**



Montreal St. John, N.B. Toronto.

**The Canadian Fairbanks-Morse Co., Limited**

Montreal, St. John, N.B., Toronto.

Without obligation to me please tell me more about Marvel Mills as a money-making proposition.

# Nitrate of Soda

## The Best of Fertilizers, Now Available

**T**HIS valuable fertilizer, which was used in the manufacture of Explosives, was either unavailable during the War or commanded such a high price that its use was out of the question for the average farmer.

The Imperial Munitions Board are now in a position to offer a quantity of this fertilizer at greatly reduced prices and farmers should take advantage of this great opportunity and send in their orders early.

Plants must get food to make their growth just as animals require food. If the food is abundant, the growth will be vigorous, other conditions being favorable. If the food is scarce, the growth will be stunted. If the soil does not naturally furnish the necessary plant food then the food must be specially supplied. Many soils are deficient in Nitrogen, and this element should be supplied by the use of Nitrate of Soda.

It is this element that gives growth and luxuriance and the deep green color to foliage. It is essential to the well-being of the life-holding substance of the plant. Pale, sickly, slow growing plants probably lack Nitrogen. Nitrogen gives young plants the quick, vigorous start so necessary for the best crop production. Plants, like animals, if stunted in youth, cannot attain their best in maturity.

Of all substances used as plant foods and containing Nitrogen, the Nitrate of Soda stands supreme for its quick action. It is quite soluble in water and so can pass directly into the plant just as quickly as the root hairs can absorb it in the soil moisture. The dews are sufficient to bring it to the roots. Moreover, it needs no making-over. It is ready-made food suitable for the plant's digestion.

### Nitrate of Soda the Basic Fertilizer

The average yield of wheat in Europe was 33 bushels to the acre while that in America has been

only 14 bushels. The use of fertilizers explains the difference.

And Nitrate of Soda is the basis of practically all Fertilizer mixtures.

It will be used more and more as the years develop and as Agriculture advances.

A comprehensive report on "Nitrate of Soda, its nature and use in agriculture" has been prepared by the Dominion Department and is printed on another page of

this paper. It has been prepared by Frank T. Shutt, M.A.D.Sc., Dominion Chemist, and B. Leslie Emslie, F.C.S., Supervisor of Investigational Work with Fertilizers.

Because Nitrate of Soda is readily soluble in water it is most economically employed as a top dressing to the growing crop. Some may be used at the time of seeding and the remainder in a few weeks after the young plants are a few inches high. For garden crops, smaller and repeated application are recommended. Applications should be made on a dry day. In the garden it may be sprinkled between the rows. For the lawn it may be dissolved in a barrel of water and sprinkled on with a watering can.

### Nitrate of Soda Greatly Increases Yields

The Ontario Experimental Union reports an increase of about 6 tons of mangels an acre from the use of 160 lbs. of Nitrate alone, this based on experiments in different parts covering several years. With the use of 80 lbs. of Nitrate to the acre, the yield of rape was increased over 2 tons. Such increases are profitable to all farmers.

### Advantages of Nitrate of Soda

*Remember that in buying 100 lbs. of Nitrate of Soda you are getting 15.7 lbs. of Nitrogen, the most necessary of plant foods, and in unadulterated form. One knows what he is buying just as he does when he buys 100 lbs. of flour or sugar.*

The Nitrogen contained in the Nitrate of Soda is immediately available for the plant's use.

It leaves the soil sweet. Many fertilizers have a tendency to make the soil sour. Plants cannot thrive in sour soils.

It has an especially high value for crops such as peas, corn, clover, alfalfa, etc.

It produces a vigorous growth in the young plants which gives them the necessary vitality to resist disease, attacks of parasites, drought or sudden changes in temperature. Weak plants succumb. Young plants are weak because of an insufficient supply of Nitrogen, which Nitrate of Soda will supply.

It is the most economical source of Nitrogen. Much of the Nitrogen in other forms of fertilizers, as tankage, cotton seed meal, dried blood, etc., is frequently lost while being transformed for use by the plant. In the Nitrate it is immediately used.

### Price and Instructions for Ordering.

The Price is \$82.00 per net ton in carload lots, f.o.b. cars at shipping point. The Board reserves the option of selecting the shipping point.

In less than car lots the price will be \$9.00 per bag weighing approximately 200 lbs. each, f.o.b. shipping point. Minimum shipment five bags.

All orders must be sent to Imperial Munitions Board, 56 Church St., Toronto, and each order must be accompanied by a marked cheque or money order for full amount of the purchase. Cheques and money orders should be made out in favor of Imperial Munitions Board, and must be payable at par in Toronto. In ordering please give full shipping directions including your Post Office address, name of railway and of your nearest railway station. All shipments will be made promptly. Freight charges will be collected on delivery.

Imperial Munitions Board, 56 Church Street, Toronto, Ont.



# Frost Fence Prices Have Been Reduced

This revision in the raw material was made by the producers of steel in the hope that the prices could now be kept stable for several months, at least, and give the assurance to buyers that they could purchase what they were requiring without feeling that there would be any further reduction that they might benefit from by waiting.

For your own protection, therefore, you should get in touch with a Frost Fence dealer and get prices before you make any purchase of fence. If you are not acquainted with the dealer, write us direct and we shall be glad to see that you are taken care of.

It will be our earnest endeavor to keep up the high standard of Frost Fences and other products and to see that you get the very best. You will find in almost every community a responsible hardware man, implement dealer, or a dealer in other lines, who is handling Frost products. These men look after you by having a stock on hand which you can see so that you know just what it is like, take it home and stretch it up before you have to pay for it. Your interests are best protected in this manner, much more so than they are when you have to send your money away, possibly wait for a considerable while and then take a chance on what you get.

Owning and operating our own wire mills here, enables us to draw our wire to exact gauge, and this is just wherein you are protected; because we are a reputable firm of manufacturers of a product in which you are vitally interested. The Government, therefore, has not found it necessary to legalize our sizes and regulate our activities for the prevention of deception that has been practiced in the importation of under-sized wire, as used in cheap fences.

Frost Fence is full gauge No 9 and the best quality fencing that you can buy at any price. The record that it has made and the fact that the better dealers in practically every territory are always endeavoring to get the agency is the best proof that it is the fence which thrifty farmers want. You can buy it at quite as reasonable a price as any other and get quality for good measure and it is also well for you to consider the reputation of the Company behind Frost Fence and compare with their policy adopted by some other manufacturers whose goods many dealers do not care to market.

We manufacture all kinds of fence supplies, plain and fancy gates, bale ties, chain link fence, O. & A. Wire and Telephone Wire.

All of our products are made in our own Mills. We know they are right because we made them right. We would not guarantee like some do, that the wire, over the making of which they have no control, is the best that can be bought.

**FROST STEEL and WIRE CO., LTD.**

**HAMILTON  
CANADA**

hopeless, for already there was a rumor of the Resurrection, though they were slow of heart to believe the wonderful news. It seemed too good to be true. As if anything could be "too good to be true" in God's world! If the Crucifixion had been the end, if hate had proved itself stronger than love, if darkness had blotted out the Light of the World, we should have had good reason to despair.

We must not remain always by the Cross and the empty tomb. He is not there—He is forever The Living One. The Sun of Righteousness has Risen, and flooded with sunshine our earthly road. Our belief in the Resurrection must be something more than a belief with the understanding. We must believe with the heart also. It is not enough to believe that Christ rose from the dead many years ago; we should be care-free to-day, because He is alive and is Master of the world. Every time we allow our peace to be shaken by anxiety, every time we murmur or complain about troubles and disappointments, we are proving that our faith in His love and power is very weak. Instead of being His witnesses—convincing the world that He is here in our midst—we are practically saying that He is dead and helpless.

We, who profess to be the disciples of Christ, must show that we have confidence in His love and power. We must show our faith by glad faces and cheerful words. If we can trust Him to save our souls—which are worth infinitely more than all the treasures of earth—then surely we can trust our bodies to Him.

I heard an army chaplain tell of a soldier who said to him: "You know, sir, I couldn't go through with this if I didn't feel God's arm supporting me."

If our witness is to be warm and convincing, we must know by personal experience the power of the Living JESUS, and we should constantly practice the habit of realizing His Presence. Of course, if we rush through life at express speed, without stopping to take breath, we shall think it waste of time to go into our secret sanctuary, shut the door on the world, and sit like Mary at the feet of our Lord. Yet it is in quiet waiting upon God that we can renew our strength and gain power for work. It is when our secret life is hidden with Christ in God that we gain power. It is folly to go on powerlessly when God is ready to supply all our need. He always has time for quiet communion with us.

As I walked along the street yesterday I saw a notice-board outside a church,

with this inscription: "God's Leisure Hours." God, our Father—King, has always leisure to talk to His children. It is not His fault if we drift apart.

Those who want to bear witness to the Living Christ need not be very learned. Even little children may be faithful witnesses. A friend of mine told me that her little grandchild (four years old) was helping her mother to dust one day. The child asked: "Does God see me?" and her mother answered: "Yes, He sees you always." The little hands were very busy as the little girl said happily: "I hope He thinks I am dusting nicely." Young as she was, she was working for The Master's eyes to see.

St. Paul was eager to know the power of Christ's Resurrection. That power is as mighty as ever, and as ready to work through the lives of men. Perhaps we imagine it is a sign of humility when we take it for granted that God cannot do any great thing through our instrumentality. There was a village where our Lord could do no mighty works but it was, we are told, because of the unbelief of the villagers. If He is not able to do any mighty works through us it is not because of our humility, but because we have little faith in His Power, or because we have not really offered ourselves as

## 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 alright."

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

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

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

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

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

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

It just drives soapy water clear through the fibres of the clothes like a force pump might. So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

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

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

Drop me a line today, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes. Please state whether you prefer a washer to operate by hand, engine, water or electric motor. Our "1900" line is very complete and cannot be fully described in a single booklet. Better address me personally, D.W. Morris, "1900" Washer Company, 357 Yonge Street, TORONTO.

## Fairview Holstein-Friesians

Owing to lack of help, I offer my entire herd of thirty head, or part of it, mostly two and three-year-olds (milkling), sired by bull with 90 lbs. a day on both sides.

**FRED. ABBOTT**  
R. D. No. 1 Mossley, Ontario

**Registered Seed Barley**  
O.A.C. No. 21, in two-bushel sealed bags, \$1.75 per bus., bags included. Government germination test, 100%. Yield last year, 48 bus. per acre.  
H. H. HOWELL, R.R. 1, Cainsville, Ontario

His instruments. We may well echo the prayer of a Quaker, who said: "Take my hands and use them; take my lips and speak with them; take my heart and use it as a lamp of love by which Thy light may shine in this dark world of selfishness."

John Newton—the saintly writer of that lovely hymn, beginning: "How sweet the Name of JESUS sounds—" was very wild in early life, and was called "a wild, unbelieving blasphemer." He went to sea and was captured by an African slave dealer. Later on he became a slave trader himself. He was converted during a terrible storm, when death seemed very near ("was driven to Christ by the violence of his sin") and became a clergyman of the Church of England. When he was over eighty years old, and had preached the Gospel for more than forty years, a friend advised him to give up his work. "What!" he exclaimed, "shall the old African blasphemer stop while he can speak?" His epitaph—written by himself and placed on the wall of a church where he had preached for nearly thirty years—declared him to be "an infidel and libertine. . . by the rich mercy of our Lord and Saviour, Jesus Christ, preserved, restored, pardoned, and appointed to



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The wide variety of the Rennie line assures you of obtaining just what you want in either flowers or vegetables.

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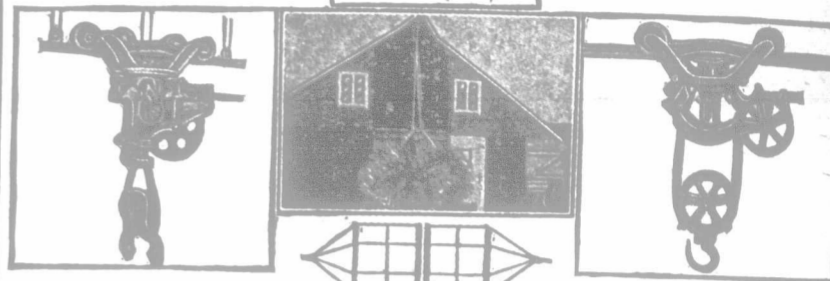
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You will be surprised how little really high grade equipment costs. Send us lengths of your mow, whether centre drive or end unloading and width space between rafters. Can furnish slings, grapple, or harpoon fork at your option.

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The Louden Machinery Co. of Canada, Ltd.  
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My barn is.....ft. long, rafters are spaced.....ft.....inches apart, we unload from..... I prefer to use..... (state whether Grapple or Harpoon Fork or Slings.

Please send me free, postpaid, your large illustrated books, marked below:

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I expect to build new barns size.....in month of.....

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.....Cows.....Horses.....Calves. I prefer to deal through

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My Name.....P.O.....Prov.....

When writing advertisers will you kindly mention The Farmer's Advocate.

preach the Faith he had long laboured to destroy."

If God could use such a man to do splendid work for Him and to write very beautiful hymns, we have no right to sit placidly with folded hands and say: "He can't do any great work through me."

Have we earnestly asked Him to make us His witnesses in the place where we live and unto the uttermost part of the earth? "

Haydn, the composer, was nearly seventy when he wrote his great Oratorio, "The Creation." Each day he knelt down and asked God to strengthen him for his work. When he heard the Oratorio sung before a great audience he cried out: "Not mine, not mine! It all came to me from above."

It is the secret life—the life hidden with Christ in God—which is of vital consequence. A man who wanted to give practical help to others, said: "I like to walk down Fleet Street where everyone seems so bent on business that he may need my prayers to help him." If the hidden life, which only God can see, is strong and beautiful, the outward witness will not fail. Lift up your eyes and seek the face of God, then you can reach out to help those who are still in the dark.

"Thrice blest is he to whom is given  
The instinct that can tell  
That God is on the field when He  
Is most invisible."

DORA FARNCOMB,

**Gifts for the Needy.**

The Q.H.P. filled up rapidly this week. First came two dollars from M. Jones (in memory of mother) for "some old person"—this will go to a poor old widow. She also sent two coats for

**SHIP US YOUR CREAM**

**WE** Supply Cans and Pay All Express Charges. within a radius of 100 miles of Kitchener. Send a Statement with every Check. Pay Every Two Weeks.

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Serbiens—which were forwarded at once to the Serbian Relief Headquarters. Then came five dollars (for some soldiers' dependents) from a Branch of the Red Cross Society. This was followed by a gift of five dollars for sick and needy (in memory of J. & D. McL.) from "a Moose Creek reader." Part of this money has gone out to help the needy, and the rest is waiting for some special call. Thank you!

DORA FARNCOMB,  
6 West Ave., Toronto.

**The Fashions.**

**A Mistake About Patterns.**

Last week, by a mistake in the printing room an old heading was placed beneath "The Fashions."—The prices of patterns are as given beneath the short description of each number. Unless otherwise requested the extra money from those who have sent 15 cents will be

held to their credit on another pattern, which will be forwarded on instructions as to number, size, etc.

**The Dollar Chain**

Exclusively—unless otherwise requested—for blind and maimed Canadian soldiers. Contributions from March 21st to April 4: "Toronto," \$2; "Jewess" (for Jewish Relief Fund), \$1.

Previously acknowledged, \$5,849.50

Total to April 4th \$5,852.50

Kindly address contributions to The Farmer's Advocate and Home Magazine London, Ont.

When acknowledging with thanks the receipt of \$90.00 from the "Dollar Chain," Mr. E. F. Lambert, Toronto, of the Canadian National Institute for the Blind, enclosed a certificate enrolling "The Farmer's Advocate Dollar Chain" as a

member of the Institute. The Farmer's Advocate and Home Magazine acknowledges the courtesy in behalf of the many readers who have so generously contributed to "The Dollar Chain," and who must be very glad that some of their dollars have gone to help the gallant boys for whom, during the Great War, the light of the sun was blotted out. At the various branches of the Institute for the Blind, various trades are taught, as well as raised-letter, or "Braille" reading, music, etc., so that the pupils are enabled to go out into the world, not only provided to some extent with resources against weary, unoccupied days, but also equipped with the ability to do work which may help to earn them a living.—Surely no greater work of helpfulness is being done in Canada to-day by any institution.

**Current Events.**

Hon. Mr. Henry introduced into the Ontario Legislature a Bill to provide for the sale of cream on the basis of butter-fat content.

On advice of Premier Hearst the Assessment Committee for Ontario will report in favor of giving municipalities the right to grant limited exemptions on improvements if the ratepayers so desire.

The Women's Institute of Markham on April 2nd decided to forward a resolution to the Minister of Education, recommending that dental inspection be rendered compulsory in the schools throughout Ontario.

It has been announced that the 4,000

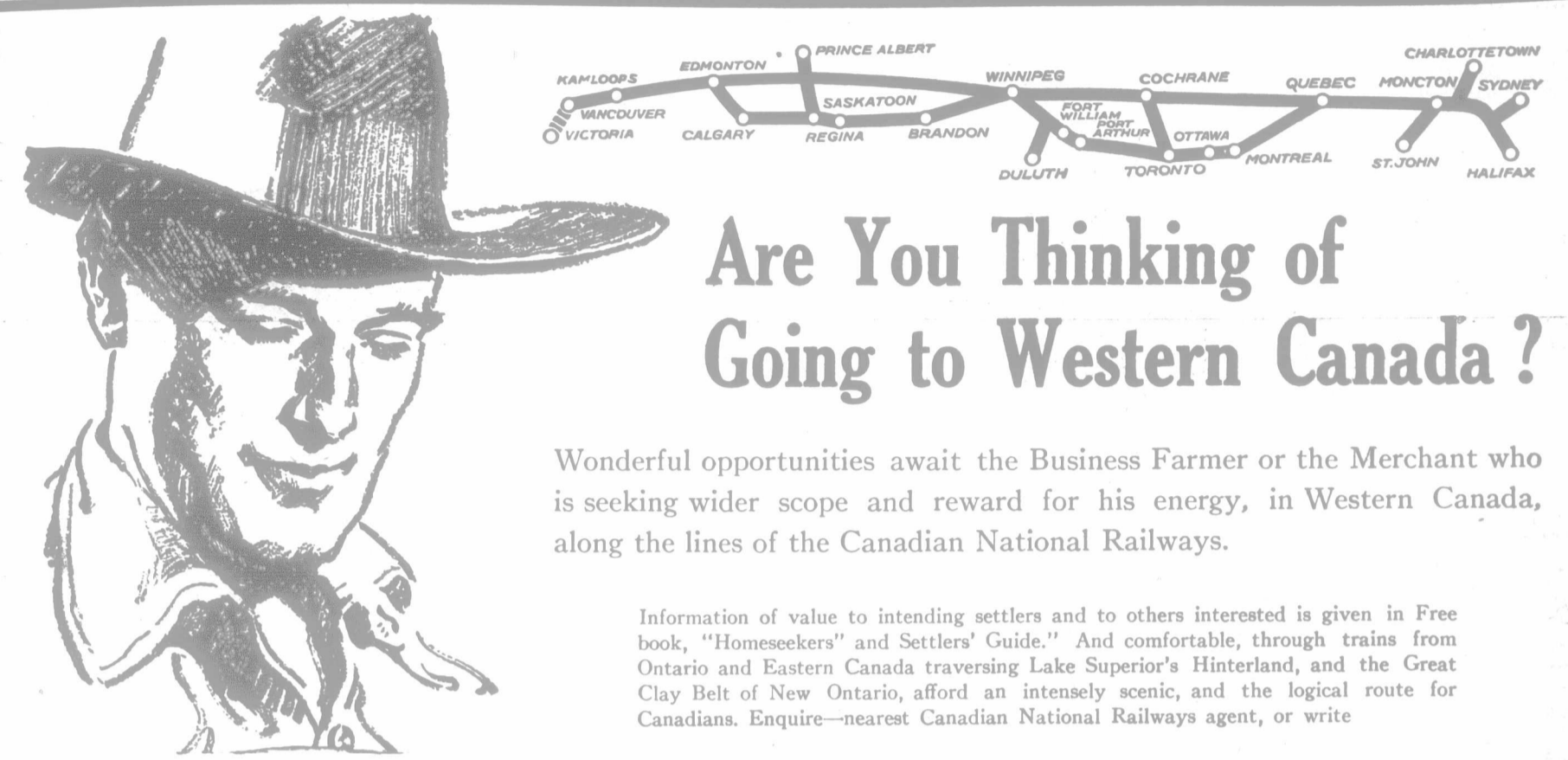
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Farmer's Advocate.



**Are You Thinking of Going to Western Canada?**

Wonderful opportunities await the Business Farmer or the Merchant who is seeking wider scope and reward for his energy, in Western Canada, along the lines of the Canadian National Railways.

Information of value to intending settlers and to others interested is given in Free book, "Homeseekers" and Settlers' Guide." And comfortable, through trains from Ontario and Eastern Canada traversing Lake Superior's Hinterland, and the Great Clay Belt of New Ontario, afford an intensely scenic, and the logical route for Canadians. Enquire—nearest Canadian National Railways agent, or write

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Canadian troops in Siberia are to be returned home. \* \* \*

Canada is to have a Department of Public Health, with a Cabinet Minister at its head. Hon. J. A. Calder, Minister of Immigration and Colonization, is named for the position. \* \* \*

Dr. H. I. Strang, of Goderich, one of the foremost educationists in Canada, died in his 78th year. \* \* \*

Acting Premier Sir Thomas White, on April 3rd told Parliament he expected that the whole Grand Trunk system would be bought by the Dominion Government. \* \* \*

It has been definitely stated by Premier Lloyd-George that the Peace Treaty will be completed by Easter. An event of the week at the Conference has been the decision that the German payments are to extend over 30 years, the first payment to be \$5,000,000,000, of which \$1,000,000,000 is to be expended for raw materials to insure the resumption of German industries. Also the Dantzig dispute has been settled upon guarantee of the Allies that Haller's troops will go through to Poland without taking possession of the city. Besides troops are to be permitted to pass through to Poland by German railways. Gen. Smuts is now in Budapest investigating the problems there. In the meantime the Law Courts in Hungary have been supplanted by Tribunals; all titles and ranks have been abolished, and other socialistic measures established. The revolution there, it is stated, was due to indignation against the dismemberment of Hungary by the action of the Conference in detaching Bohemia, and the country occupied by the Slovaks and Ruthenians, which recommendations were justified by the Conference on the basis of nationality and the self-determination of peoples. The Hungarians state, however, that they are anxious for peace with all, that they do not intend to follow the Russian program, and that their army is to be maintained only for police purposes. Karolyi, by the way, only held power a few days, when he was deposed by a

second revolution. That republicanism at least is firmly established in Austria may be judged from the fact that the National Assembly has definitely banished the Hapsburg family from Austrian territory. . . . In Germany another outbreak has occurred in Bavaria. . . . It is stated, also that the Communists of Bulgaria are prepared for a revolt against the Government of that country, and French troops have been sent up the Danube to interpose a barrier between them and the Hungarians. . . . In north Russia the Allied forces under Gen. Maynard, chiefly British and Russian, on April 5 defeated a Bolshevik attack near Archangel. In the south the Ukraine is anxious to ally itself with the Entente forces as opposed to the Bolsheviks, who are now in military possession of the country, having taken Kiev with the help of Chinese troops. The Russian peasants, also, to the number of 100,000,000, have begun a practical strike against the Soviet Government and city workmen, declaring they will not grow an ounce of food more than what they themselves will consume. The want to own their land and resent the failure of the Bolshevik Government to keep its promise of giving them land, peace and freedom. Lenin, meanwhile has addressed a letter to the Peace Conference asking for a fair trial of Bolshevism before the world, and offering to suspend all Bolshevik propaganda outside of Russia on condition that Allied troops are withdrawn from every part of Russia. . . . Relations between Japan and China are still strained. China wants to appeal to the Conference to release her from the obligation to turn over to Japan the concessions formerly held by Germany in China.

**To Prevent Shrinking.**  
It is safe to shrink all goods, before making it up. Cotton goods may be thoroughly soaked with water then ironed out. Doing this will not only prevent undue shortening later, but will also prevent ugly dips in a skirt. When making a skirt in which one gore has a selvaige which joins a bias, notch the selvaige edge to prevent its shrinking; this will prevent the seam from drawing up.

**Our Serial Story.**

**The Forging of the Pikes.**  
A Romance Based on the Rebellion of 1837.  
Serial Rights secured by The Farmer's Advocate and Home Magazine.  
CHAPTER XIX.  
At St. James's.  
November 12th, 1837.

WELL, don't you want to come and hear the Devil preach?"

This was the missile that Uncle Joe hurled at me through the usual hilarity of the breakfast-table this morning.

For a moment I stared at him, and then I burst out laughing.

"Oh, is he as bad as that?" I said, while Uncle Joe sat looking at me, his eyes twinkling, both elbows on the table, his knife in one hand and his fork in the other, so that his round bald head and beaming face shone out between them like a sunflower through the pickets of a palisade.

"Joe!" exclaimed my aunt, reproachfully, but smiling at the same time, for Uncle Joe entertains her mightily. "What a way to speak of dear Dr. Strachan!—And do take your elbows off the table and put down your knife and fork!"

My uncle immediately assumed a decorous position, but expostulated.

"Good Lord, my dear! Can't a man do as he likes even in his own house, and in his morning jacket? Tear and ages, it's time enough to be starched when a fellow gets on a board front and evening clothes!—Now confess, Octavia, I was the pink of perfection at my Lord Chief Justice's dinner party. Wasn't I, now?"—immediately proceeding to rub his bald pate with both hands, and beaming upon her through his spectacles.

"Very much so," returned my aunt, smiling, as she arranged the teacups, for she herself always pours the tea, and very prettily too. "But Joe dear, don't rub your head in the very middle of breakfast, please! What's got into you this morning?"

"A surfeit of dignity, my—" he began,

upon which the girls burst out in a peal of laughter.

"—I mean the result of a surfeit of dignity," he added, correcting himself. "A sort of alter-the-banquet letting down, my dear.—Ocavia, when a man's been at high-falutin' dinners on end for a week he's ready to stand on his head let alone polish it."

"But what an example for the children!" persisted Aunt Octavia, glancing proudly at the two little girls, Mollie and Dora, with their pink cheeks and curly hair tied up with blue ribbons, who were enjoying the fun as much as anyone.

Uncle Joe wagged a finger at them.

"Now remember, you chickabiddies, when you're as old as you daddy, with your heads like two billiard-balls, you must by no means polish 'em at the breakfast table.—By no means!—When they need polish you must do it in your own rooms, my dears! Do you hear what I say?"

—Whereupon the two little mischiefs burbled out into laughter like bobolinks.

"Now that *that's* settled," remarked Nora, smiling at her father, "perhaps Alan will have time to say whether he wishes to hear the Devil preach."

"Nora!" exclaimed my aunt; but Nora blew a kiss at her and turned to me.

"I shall be delighted to take any risk," I said, "provided I may accompany my fair cousin."

She sprang up and made me a low curtsy, drawing out her crinolined skirt and dropping on one knee until her curls fell all over her face, then resumed her place, at the table.

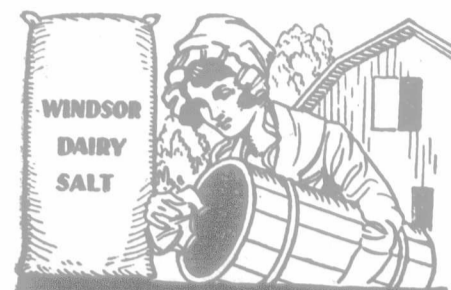
"What are you going to do, Kate?" she asked.

"Oh," said Kate, elevating her head very high in mock of being offended, and looking down at her plate as she daintily cut off a bit of comb honey, "Since I'm not included, I'm going to church by myself, and then home to dinner with Anne, and then out riding."

"Oh, with Pinky, I suppose," returned Nora.

"Yes," assented Kate—"but I do wish you wouldn't call him 'Pinky,' Nora. It sounds so, so—"

"So eminently *unsuitable* to a young



**WINDSOR DAIRY SALT**

**A Clean Churn and -**

**Windsor Dairy Salt**

Made in Canada

THE CANADIAN SALT CO. LIMITED

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

**TERMS**—Four 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 60 cents.

**"DAIRYMEN WANTED MUST BE GOOD MILKERS** at Speedwell Hospital, Speedwell, Guelph Ontario."

**EXPERIENCED GENERAL FARM HAND** wanted—highest wages to right man—half-yearly or yearly engagement. Fairfield Stock Farm, Ilberton.

**FOR SALE**—200-ACRE FARM, FIRST-CLASS condition, buildings included. Apply F. H. Orris, Box 142, Springfield, Ont.

**MAN TO OPERATE TRUCK OR FURNISH** team to collect cream and produce. State rate expected and references. Box 27, Farmer's Advocate, London, Ont.

**SINGLE MAN FOR GENERAL FARM** work. Apply, stating experience, age and wage expected, to Frank Strong, Gorrie, No. 1, Ont.

**WANTED SINGLE OR MARRIED MAN** must be good farmer and accustomed to milking (small herd.) State wages expected. H. I. Wallace Homewood Farm, Whitby, Ont.

## BABY CHICKS

Barred Rocks, White Wyandottes, 10,000 White Leghorns 10,000. Bred-to-lay from Parks, Poorman's, Barron's strains. These strains are known as America's best, 25 cents each, \$25.00 per 100. Special prices to Farmers' Clubs and others in lots of 300 and over.

**Lucknow Hatchery**  
Lucknow Ontario

## Shorthorn Bulls

Two young bulls of serviceable age. Sired by a son of Roan Chief 60865. He is also for sale.

**J. W. McPHERSON**  
CROTON ONTARIO

**The Farmer's Combined Foster Mother and Colony Coop.**

Will solve your rearing problem. Chicks from hatching to laying age under one roof. The most convenient brooder advertised. Particulars **MOORE BROS.** 61 Nelson St., Toronto

Baby chicks, eggs or ducks' eggs. W. Wyandottes' W. Leghorns and Pekin Varieties. High egg laying strains, at 25c, \$1.50 and \$3.00.  
**WICK** 338 Windermere Ave., Swansea

officer with a rosebud for a mouth and perfume in his hair," cut in Uncle Joe. "Upon which little Mollie bubbled out again—"Oh daddy, how funny! He must be a moss rose."

And then Kate pretended to pout a little, and Aunt Octavia found herself called upon to say that Percival was a "very nice-mannered young man," and my uncle to remark that he was "all right as an ornament."

"Kate doesn't really care about him," Nora said to me, aside, "and Daddy knows it."

So the merry talk went on, as it always does in this house.

Very decorous, however, was the family that arrayed in Sunday best, issued from the door a little later and went along King street to the sound of the bell of St. James, the little girls ahead, Kate, my aunt and I next, with Uncle Joe bringing up the rear with Nora.

"I like to walk with Nora," said he. "She never hangs on like a morning-glory, but walks along like a grenadier, by gad!—with her head up, and on her own two feet."

In perhaps fifteen minutes we had arrived at the church, which I had before seen but have not hitherto noted in my journal. It is still called "the new church" although erected seven years ago, and is a stone edifice, over one hundred feet in outside length, I judge, and perhaps seventy-five in width, and appears to me very imposing although the tower is not yet completed. Inside, too, it appears to me quite magnificent, with its pillars and high pews, of which a special one, marked out by a canopy, is reserved for the Lieutenant-Governor and his suite—this, I remember, being the occasion for a criticism from The Schoolmaster once when he returned from a visit to the capital:—"A reserved seat in the House of God!" he had exclaimed.

When we reached the church the people were arriving in crowds, some in very fine coaches with footmen, drawn by the most beautiful horses I have ever seen in harness. When I remarked on this splendor, however, Kate prepared me for still greater by saying "Wait until you see the Governor's and Dr. Strachan's!"

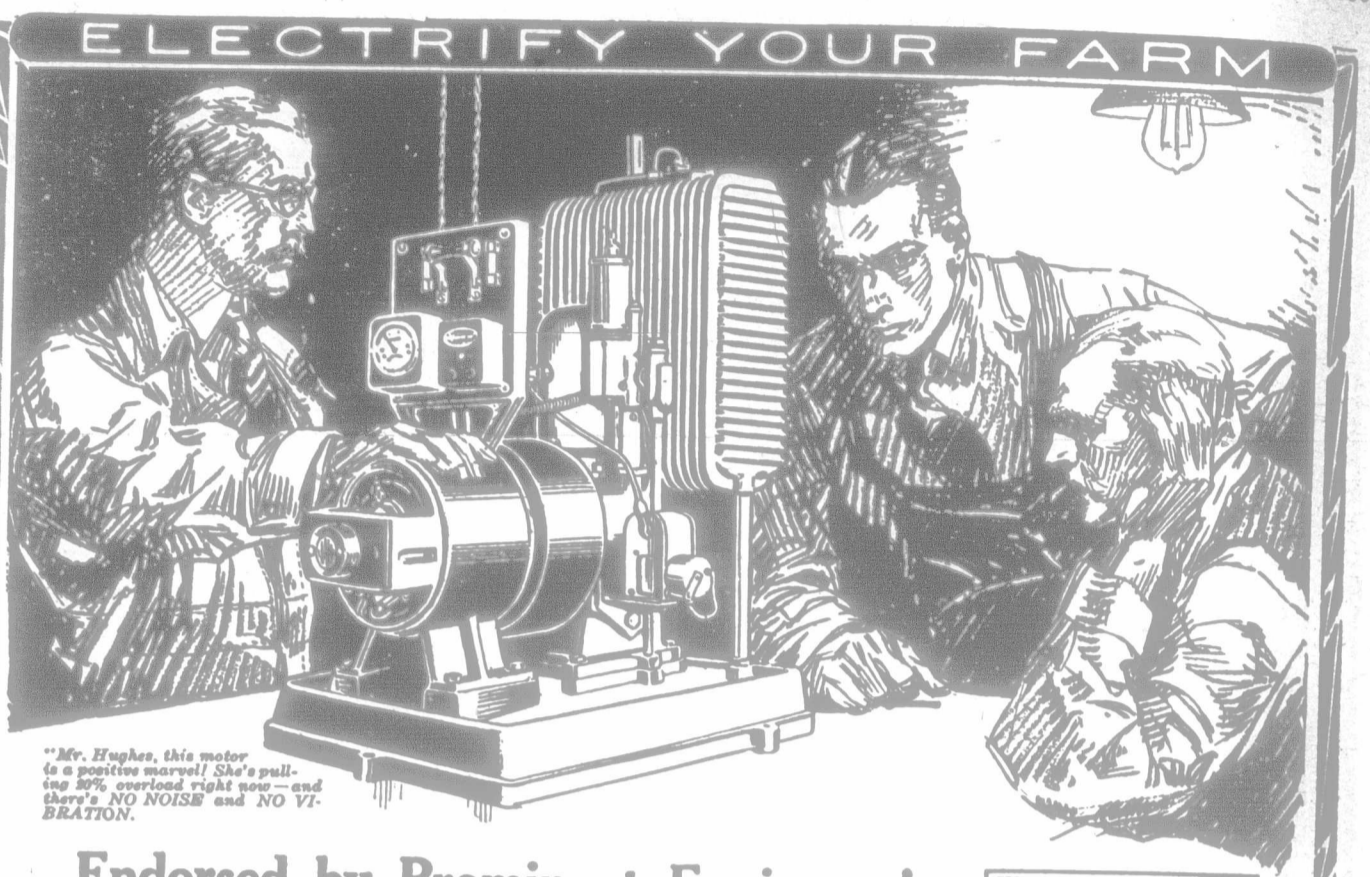
It was very diverting to me, too, to look at the garb of the people, and it was not difficult to point out the very rich, although, it seemed to me, the majority of the women were quite fine enough, with their silk gowns and Paisley shawls and gay bonnets. The men, for the most part, wore long black coats that flapped out loose at the bottom, and very high collars with cravats of black or white, the whole being completed very well indeed by tall hats of silk or castor, which, I noted give great dignity, even short and thick. When I remarked this to Nora she said it was "a great pity some ever had to take them off," but laughed so good-humouredly that there was no unkindness in the remark, as appeared the more evident when she gave her father a sly poke saying: "Isn't that so, Daddy?" Indeed there is never a sting to anything that Nora says although she dearly loves to have a joke at the expense of anyone at all, including herself. I do not in the least mind making remarks to her that reveal my backwardness, or asking her advice when I am in doubt as to what I should

do or wear, for I know her common sense is great enough to let her see that ignorance in regard to these things is no real ignorance at all, but comes only from lack of opportunity for seeing. It seems to me that this quality of understanding is a great thing in a woman.

It was a great comfort to me this morning to feel that, because of my new clothes, in regard to which she advised me, I felt quite well at ease among these people, and I have this afternoon written a letter to my mother describing my new outfit as well as I could, even to the colour of the breeches and the twist of the cravat. Last Sunday I would not go to church because they were not then home from the tailor's, and now I am glad I would not, for I perceive that when one is dressed as well as his neighbours he does not think of himself at all, whereas, if he is at all shabby, or so odd as to be noticed, he becomes self-conscious and is likely to make mistakes and appear less worthy than he is.

At the door of the church we spent some moments in hand shakings, and I was introduced by my aunt to two or three

## ELECTRIFY YOUR FARM



"Mr. Hughes, this motor is a positive marvel! She's pulling 30% overload right now—and there's NO NOISE and NO VIBRATION."

## Endorsed by Prominent Engineers!

**EXPERIENCE** will quickly teach you that the most vital part of an electric light and power plant is the motor and that **VIBRATION** is the cause of most motor troubles.

After years of phenomenal service the wonderful, rotating, sleeve-valve motor of the Silent Alamo is conceded by highest engineering authorities to be one of the outstanding feats in modern engineering.

Due to this noiseless sleeve-valve motor and to scientific balancing of weight, severe vibration, which causes probably 90% of all electric plant troubles, is eliminated. The Silent Alamo will not disturb you with unbearable noise, and because it is free from the ruinous effects of vibration it will furnish an abundance of electricity for lighting and power work for many years without exasperating interruptions and delays.



Clean, safe, dependable LIGHT for house and barn, etc. POWER—to operate pumps, churns, separator and like equipment—also all household electrical conveniences.

# Silent ALAMO

Electric Light and Power Plant

The Silent Alamo is a complete unit. Generator, motor, switchboard and cooling radiator are combined on one base. It is a complete, compact, sturdy outfit. Every moving part is enclosed.

### Noiseless, Rotating Sleeve-Valve Motor

The Super-silent Idle motor with which the Silent Alamo is equipped is one of the greatest developments of the day. Noiseless, rotating sleeve-valve type. An exclusive Silent Alamo feature. Eliminates all troubles common to poppet-valve type engines and insures utmost quietness and efficiency.

### Motor Positively Protected from Harm

The Silent Alamo starts with a mere press of a button. Automatic governor controls motor speed. When batteries are fully charged the engine stops.

### THE ALAMO FARM LIGHT CO.

Factory at Hillsdale, Mich.

Lubricating oil is pumped to every bearing surface under pressure. Temperatures are absolutely controlled. When the oil drops to a danger point the motor automatically stops. When the water in the cooling radiator reaches a "low" point the motor stops. It will not start until sufficient oil and water are supplied. Thus you are assured against burning out a bearing or overheating.

**Easy to Install.** Because there is no vibration the installation of the Silent Alamo becomes a simple matter. No special concrete foundation is necessary. The plant is so perfectly balanced that it will operate quietly any place.

### Write for the Silent Alamo Book

You realize what a great convenience electric light and power will mean in your home. The important thing is to select the plant that will give you the best service. Write for the Silent Alamo Book today. Fully inform yourself regarding the unusual advantages offered by this scientifically perfected plant. Write for our book today. We will send you a copy at once and tell you where you can see the Silent Alamo in operation.

Offices: 717 Tower Bldg., Chicago, Ill., U.S.A.

Write for name of nearest Canadian Distributor.

**POULTRY AND EGGS**

Condensed advertisements will be inserted under this heading at four 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 60 cents.

**ANCONAS SINGLE-COMB STRONG AND VIGOROUS.** Two year hens mated to cockerels from trap-nested stock. Eggs \$1.50 per 15, \$7.00 per hundred. W. E. Williams, Clandeboye, Ont.

**AFRICAN GEESSE, INDIAN RUNNER, Muscovy Ducks, Guineas, Barred Rocks, Spanish, R. I. Reds, Langshans, Anconas, Campines, Eggs only.** John Annesser, Tilbury, Ont.

**BARRED ROCK EGGS—FROM POSITIVE** pedigree trap-nested stock, wonderful producers, trapped by myself. For a change of blood you need my stock; \$3.00 per setting. B. Linscott, Brantford.

**BARRED ROCKS—O. A. C. BRED-TO-LAY** strain; eggs one-fifty for fifteen. J. Acres, Thornbury, Ont.

**BRED-TO-SHOW LAYING STRAIN BARRED** Rock eggs for hatching. Write for catalogue. Chas. Barnard, Leamington, Ont.

**BRED-TO-LAY SINGLE-COMB WHITE** Leghorn eggs for hatching, fifteen \$1.50, hundred \$7.00, carefully packed. Broken eggs replaced. Addison H. Baird, Route 1, New Hamburg, Ontario.

**BARRED ROCK EGGS; FIFTEEN, TWO** dollars; thirty, three fifty; ten dollars, one hundred; from hens that are bred and barred right and grand layers. Order from this advertisement. Satisfaction guaranteed. W. Bennett, Box 43, Kingsville, Ont.

**BARRED ROCKS—PARKE'S AND O. A.** College bred-to-lay strains. Can supply cockerels. Write your wants. Eggs, \$2 for 15. M. A. Gee, Selkirk, Ont.

**BABY CHICKS AND HATCHING EGGS.** Barred Rocks, White Rocks, White Wyandottes, Golden Wyandottes, Rhode Island Reds and White Leghorns. Pure-bred utility stock. Incubator capacity, 9,000. Satisfaction guaranteed or money refunded. Write for prices. Tay Poultry Farm, Perth, Ontario.

**BARRED PLYMOUTH ROCKS—CHAMPION** Guelph winners; heavy egg production; eggs, \$3.00 per 15. Jno. Fenn, Plattsville, Ont.

**BOTH COMBS—RHODE ISLAND WHITES,** Eggs, Meat, Rapid Growth. Send for free booklet on origin. Dominion Poultry Yards, London, Ont.

**BABY CHICKS—BEST LAYING STRAINS.** S.-C. White Leghorns, 18c each. Barred Plymouth Rocks, 22c each. Hatching eggs, \$1.25 per setting, \$6.50 per hundred. G. W. Grieve, Parkhill, Ont.

**BARRED ROCK COCKERELS FOR SALE AT** reduced prices. Satisfaction guaranteed. Write John Pringle, London, Ont.

**BRED-TO-LAY TOM BARRON WHITE** Leghorns and Barred Rocks; one-fifty per setting. Henry Hooper, 83 Nottingham St., Guelph, Ont.

**CYPHERS WYCKOFF BRED-TO-LAY S.-C.** White Leghorns, baby chicks and hatching eggs. Catalogue free, giving description and prices. Cooksville Poultry Farm, Cooksville, Ont.

**CANADIAN RINGLET BARRED ROCKS—** Trapped daily for 5 years. Send for records. F. J. Coldham, Box 12, Kingston, Ont.

**EGGS—\$2.50 FOR 13—S.-C. BUFF LEGHORN,** Ancona, Blue Andalusian, Dark Cornish. Hugh McKay, 33 Curry Ave., Windsor, Ont.

**EGGS FOR HATCHING—BRONZE TURKEYS** Barred and White Rocks, Pekin, Rouen and Indian Runner ducks, White Wyandottes, White Leghorns and Rose-comb Brown Leghorns. Write for prices. J. H. Rutherford, Albion, Ont.

**EGGS AND DAY-OLD CHICKS—FROM** extra heavy laying strains of Barred Rocks, White Rocks, Reds, Wyandottes, Orpingtons, Minorcas, White Leghorns, Brown Leghorns, Anconas, Spanish, Silver Hamburgs, Cornish, etc. Also duck eggs, Pekin, Ailsbury, Rouen, Runners, Fawn, pencilled and Pure White. Write for our free mating list. M. Shantz, Ayr, Ont.

**EGGS—SINGLE-COMB WHITE LEGHORNS,** Barron's strain; lay year round. S.-C. Rhode Island Reds, selected winter layers, \$3.00 per fifteen. E. Willson, Aurora, Ont.

**CHOICE SINGLE-COMB WHITE LEGHORN** eggs for hatching, \$1.50 for 15. Wm. Charlton, Ilderton, Ont.

**FERTILE HATCHING EGGS—TEN YEARS** selective breeding—Rose-comb Rhode Island Reds; bred for size, vigor and production of bred-to-lay strains; fifteen, \$2.00; thirty, \$3.50; fifty dollars per hundred. Robert J. Brown, R.R. 2, Cornwall, Ont.

**FAIRVIEW S.-C. BROWN LEGHORNS,** Becker strain. Eggs, \$1.00 per 15. Wm. Bunn, Denfield, Ont.

**ROSE-COMB RHODE ISLAND REDS,** Martin's White Wyandottes, Barron's White Leghorns, 220-egg strains; fifteen eggs, dollar; special pens, three dollars setting. Wesley Shanklin, Ilderton, Ont.

**PURE-BRED SINGLE-COMB WHITE LEG-** horns, Rose-comb White Wyandottes, bred-to-lay and prizewinning stock. Eggs, \$2.00 per fifteen. Ezra Stock, Woodstock, Ont.

**PLYMOUTH ROCK LAYING STRAIN, FROM** Agricultural College—\$1.50 per setting. Mrs. Bery, 52 Queen St., Guelph.

**REGAL DORCAS WHITE WYANDOTTES,** America's Finest Strain, winners at New York and Boston, splendid layers of dark brown eggs. Official records, 200 to 255 in North American laying contests. Vigorous, matured cockerels, setting, \$3.00 and \$5.00 each. Eggs \$3.00 and \$5.00 per Martin, Port Dover, Ont.

**S.-C. WHITE LEGHORNS—HEALTHY, VIG-** orous stock; proven laying strain. Results will please. Fifteen eggs, \$1.50. James Row, R. 1, Belmont.

# Northern Timer Elevator for Ford Cars



Examine for yourself this illustration. Note its simplicity and sturdy construction.

is a valuable but inexpensive accessory that will save you time, trouble and money.

Northern Timer Elevator attachment is a boon to all Ford owners because it is the solution to 90% ignition troubles traceable to the Timer, and because it can be

installed in less than 30 minutes—no holes to drill or any alterations to make.

## EASILY ACCESSIBLE —Away from Mud and Oil

A trifle more than 2 feet above the road between the engine and the radiator in an awkward get-at-able position is the Timer, —a device upon which the entire motive power system depends, one that is so easy to get out of order and so difficult to fix in its present oil-soaked and muddy location.

The Northern Elevator brings the Timer well up to a more convenient and easily accessible position—away from exposure to dampness, mud, grit and oil.

**Price Only \$7.50**

Sold throughout Canada by auto accessory dealers, garages and hardware stores. If your dealer is unable to supply you, write our nearest house giving his name and address, and we will see you are promptly served.

**Northern Electric Company**

LIMITED  
Montreal Toronto Regina  
Halifax London Calgary  
Ottawa Winnipeg Vancouver



The indicator shows how the Northern Elevator and Timer looks when installed

**SINGLE-COMB WHITE LEGHORNS—EGGS** from choicest matings. Exhibition, \$10, \$5, \$3 per setting. Utility, \$3, \$2 per setting. S. W. Wilton, Mt. Brydges, Ont.

**S.-C. WHITE LEGHORNS—230-264-EGG** strain, or O.A.C. Barred Rock eggs, \$1.50 setting; \$8 hundred. Selected egg-producers that cannot be beaten. A. B. C. Dickinson, Port Hope, Ont.

**SINGLE-COMB WHITE LEGHORN BABY** chicks from our celebrated laying strain, for sale. Utility Poultry Farm, G. O. Aldridge, Mgr., Lt. Col. T. G. Delamere, Port, Stratford, Ont.

**SPECIALISTS IN BARRED ROCKS SEVEN-** TEEN years. Eggs for hatching, Guilds and Ringlet strains bred-to-lay, hens have free range; fifteen, two dollars, fifty for five. J. F. Werden and Son, R. 8, Picton Ont.

**S.-C. RHODE ISLAND RED—EGGS FOR** hatching from two choice standard-bred pens at \$5 per fifteen. Also eggs from two pens of select layers at \$2 per fifteen, \$10 per hundred. Guarantee nine chicks to a setting. H. W. Pringle, Napanee, Ont.

**TURKEYS AND GEESSE—WE HAVE THIS** spring 40 healthy Bronze turkey hens, mated to husky young toms. Eggs in season, \$5.00 per 10. 30 choice Toulouse geese, also well mated; eggs now ready, \$4.50 per 9. Few toms and ganders on sale. Everything in pure-bred land and water fowels. Write us first. Stamps for early reply. Yamaska Poultry Farms, St. Hyacinthe, Que.

**WHITE WYANDOTTES, BRED FOR TYPE,** size, vigor, and production. Eggs for hatching \$2.00 per 15. Frank Morrison, Jordan, Ont.

**WHITE LEGHORN COCKERELS (PEDI-** GREED), from trap-nested stock, trapped by myself, from heavy producers. To improve your flock nothing else would do you. Baby chicks and egg orders booked. Write to-day. Bradley W. Linecott, Brantford.

**WHITE WYANDOTTES—A VERY CHOICE,** lot; health, quality and size. Eggs \$1.50 per 15. Herbert German, R.R. 1, Paris, Ont.

**WHITE WYANDOTTE EGGS FOR HATCH-** ING, heavy layers and prize winners. Two to five dollars per setting. Stock for sale. J. McCaffrey, Newmarket, Ont.

**WHITE WYANDOTTES EGGS FROM** winners of silver cups, with egg record. \$2.50 per setting. A. F. Waddell, Stratford, Ont.

### Prevent Dead Chicks in The Shell

You can prevent it. Right methods as outlined in a new 16-page bulletin issued by Prof. T. E. Quisenberry, Box 7010, Leavenworth, Kansas, tells you how to avoid this great loss. Also how to successfully raise baby chicks and what to feed them. This bulletin will be sent free to our readers who ask for it. Suggest you write to-day before supply of bulletins are all gone.

### Eggs and Poultry Wanted

We have a big demand for eggs. Also for good poultry, either alive or dressed. We prefer to receive heavy hens alive, and young cockerels either alive or dressed. It will pay you to sell to

C. A. MANN & CO.  
78 King Street London, Ontario

### SEED CORN

Cut out the middleman and buy direct from grower. We will get more, you will pay less and we will guarantee all corn sold under our name. Write for prices and particulars.

Cottam Farmer's Limited Cottam, Ont.

people whose names I did not catch, and by my uncle to two or three more whose names he forgot entirely to give me, or mine to them, his mode of procedure being somewhat on this wise: "How are you, Barnabas?—Nice day! This is my nephew from down the country. Poor frail looking little rat, isn't he? Fine day, Jerry! How's the wife?—Better? Oh that's good, that's good! Keep her in bed a day or so yet. By the way this young buck is my sister's son.—Mary, you know. You remember Mary."—All of which did not enlighten me very much as to what I should call my new acquaintances, should necessity arise.

To be continued.

### Silk Stockings.

Wash silk stockings immediately after each wearing and they will last much longer. Perspiration is ruination on silk of any kind.

**ARM**

safe, dependable for house and barn, W.E.R. to operate churn, separator equipment—also household electrical needs.

bearing surface fully controlled, the motor auto-cooling radiator. It will not start. Thus you are or overheating.

the installation of No special concrete is required. It is balanced that it

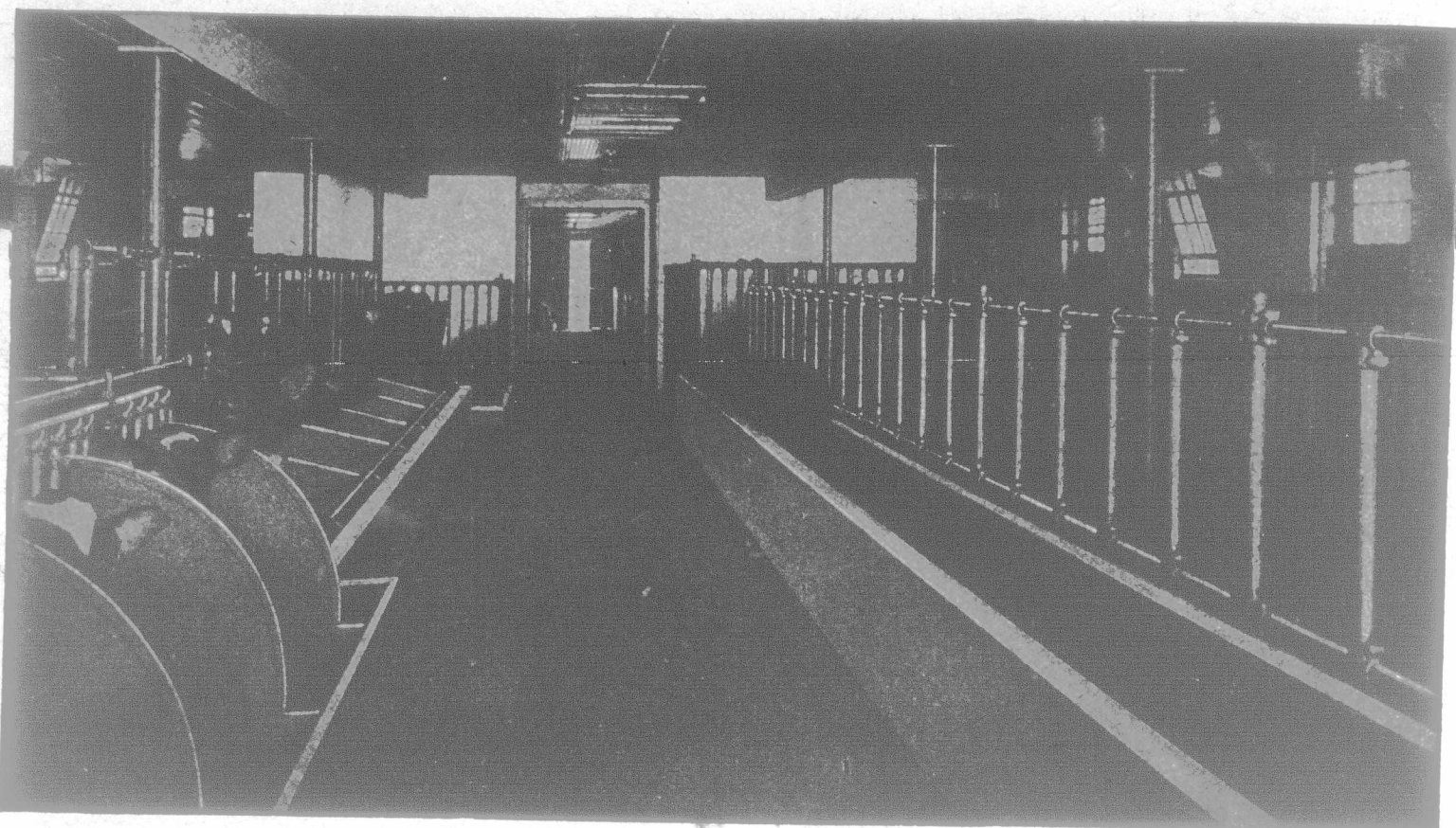
**Book**

light and power will select the plant that Silent Alamo Book has all the advantages of—write for our book to you where you can

, Ill., U.S.A.

I know her common high to let her see that high to these things is no all, but comes only opportunity for seeing. . . at this quality of understanding in a woman. . . comfort to me this at, because of my new to which she advised all at ease among these this afternoon written another describing my as I could, even to the ches and the twist of Sunday I would not go they were not then lor's, and now I am r I perceive that when well as his neighbours of himself at all, all sha'by, or so odd he becomes self-cony to make mistakes thy than he is.

church we spent some shakings, and I was unt to two or three



## Nowhere on the farm is the use of Concrete more vital than in the Cow-barn

**I**N concrete you will find your greatest aid to successful dairying. Warm, dry and sanitary surroundings are essential to the health of the cows—and healthy cows are the first requisite in a dairy farm—for on the health of the animals must depend the flow of milk.

So it is not remarkable to find our Canadian farmers rapidly replacing such wooden barn interiors as still exist, with concrete floors and mangers and modern stalls.

Concrete—now rightly given first place among available materials for all sorts of farm construction—is absolutely essential to a barn interior.



Get this Free Book. It contains nearly a hundred pages—every page of real interest, every chapter of practical help to the farmer.

**C**ONCRETE is the *only* material affording proper sanitation and cleanliness—the only one that can be easily and thoroughly cleaned.

In the book entitled "What the Farmer can do with Concrete," a section is devoted to *floors and mangers*.

Get the book—and, if you still have wooden floors in your cow barn, make that your first test of the wonderful things concrete will do to improve your farm. Lay a concrete floor, and have your dairy premises as neat, clean and odorless as you know they ought to be—premises so easily kept clean, that much labor will be saved and greater profit thereby ensured.

**A**LMOST anything you wish to build of concrete can be built by yourself, in your spare time. The directions given in our Free Book are simple and easy to follow. The materials it calls for are handy—sand and gravel which you have at hand, and "Canada Cement" which is sold by dealers everywhere.

Begin now to replace your temporary buildings with concrete buildings. Such improvements as you can easily make of concrete will add materially to the value of your property. Moreover, you will be able to *work* your farm with less effort, and with greater profits when your temporary buildings have given place to buildings and utilities of the finer concrete type.

## CANADA CEMENT COMPANY LIMITED

801 Herald Building Montreal  
Sales Offices at MONTREAL TORONTO WINNIPEG CALGARY

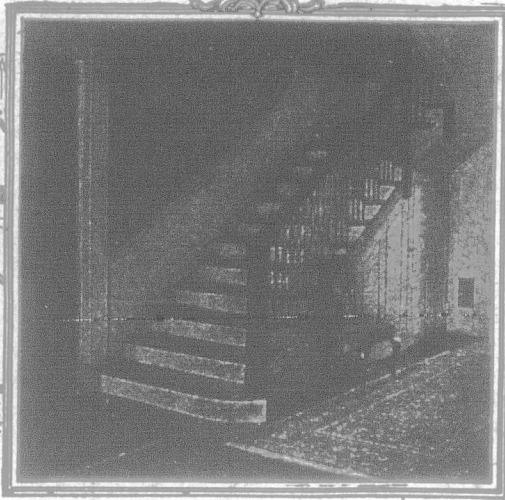
"Canada" Cement can be secured from over 2900 dealers in nearly every city, town and village in Canada.

**CANADA CEMENT  
CONCRETE**  
FOR PERMANENCE

If you cannot locate a convenient Dealer, write our nearest Sales Office.

Send me your Literature

Name \_\_\_\_\_  
Address \_\_\_\_\_



# VERNICOL

For Old Floors — Woodwork — Furniture

VERNICOL is a varnish stain. It makes old furniture look like new. It gives a beautiful finish to old floors and woodwork.

It is easy to use—any woman can apply it. Just open the can and brush it on. It stains and varnishes at one operation. Its colors are light-fast and sun-fast.

Go over the old furniture that is marred a bit or is losing its beauty of finish.

Put Vernicol on the floors. It stands wear and tear.

At all Lowe Brothers dealers. Ask for color card, or write for further information.

Lowe Brothers, Limited, Toronto

Dayton Boston New York Chicago  
Kansas City Minneapolis

## You don't have to die to win

An advertisement to men in their "twenties" and "thirties"

\$5,000 or \$10,000 would come in mighty handy to you to-day, wouldn't it?

Think, then, how much more valuable it will be to you at forty-five or fifty.

Of course, you'll say, I'll have been successful and won't need it then. But stop! You may—and if you do, you'll need it more than you do to-day.

Your producing years will be waning and \$10,000 will mean all the difference between a dependent and an independent old age.

Man, there's a big idea back of Imperial Old Age Insurance—one that's mighty interesting to you. Let us send you particulars. Write for them now. A postal will do. Address:

## THE IMPERIAL LIFE Assurance Company of Canada

HEAD OFFICE - TORONTO

Branches and Agents in all important centres

The Imperial has paid, in profits to policyholders, almost ten times as much as the total paid by all other Canadian companies established in the last twenty years.

### Dull Children.

EDITOR "THE FARMER'S ADVOCATE":

Children who appear to be dull in school do not necessarily lack brains, nor are they destined to prove failures in after life. Their backwardness may be due to other circumstances or a combination of causes rather than lack of ability to do the things asked of them by their teachers, or to absorb the knowledge needed for examination tests. The trained teacher is superior to the inexperienced one, not necessarily always in scholastic attainments, but in his ability to understand boys and girls. The teacher who will make a success of his or her profession is one who has abundant knowledge of what is expected to be taught, ability to make it clear and easily understood, and power to plan work to suit the age and attainments of his pupils. He will not forget that all pupils are not alike, do not develop the same way and do not reach a particular point of development in a subject at the same time, nor necessarily along the same lines of unfoldment. A wide and sympathetic knowledge of the psychology of childhood and youth, with a sensible mind behind it, practically eliminates the so-called "dunce" from our schools.

Many of us distinctly remember the old regime when the backward ones were stood upon the floor as terrible object lessons, were kept in during recesses, were whipped abundantly, and had indignities of name heaped upon them because they were slow to learn all the intricacies of our senseless spelling or failed to read intelligently lessons they did not understand, or could not grasp square root, or were slow to remember "dates." The writer once stood the greater part of a forenoon on the old-fashioned school platform with a huge cap on his head inscribed with the word "dunce," because he could not spell a long list of words, not a quarter of which were in his vocabulary, and many of which he was never called upon in after life to use.

But as teachers began to study child nature more, and to take a sensible view of the school programme, and as parents began to have deeper interest in how their children were being used at school, these monstrosities of discipline, these crimes against children, in a large measure passed away, and it is rare now that a child is called a "dunce."

## Five out of Seven American Housewives

now use what are known as combination or double-acting baking powders. This style of baking powder has two actions. It acts first when cold water or milk is added in the mixing bowl. Its second action requires the heat of the oven. This strong, double leavening power is what is needed for the heavy Government Standard flour in use today.

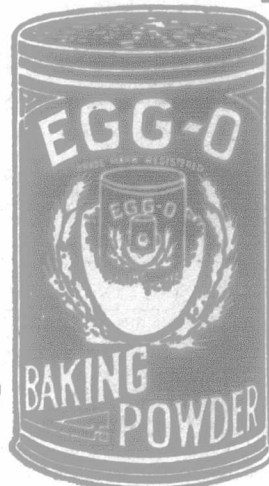
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is a pure, strong, double-acting baking powder that Canadian housewives are finding just right for their baking. It bakes light, easily-digested, deliciously flavored bread, cakes and tea biscuits.

If you are having trouble with your baking, try Egg-O instead of the ordinary baking powders. You'll be delighted with the results.

Egg-O Baking Powder Co.

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Hamilton, Canada

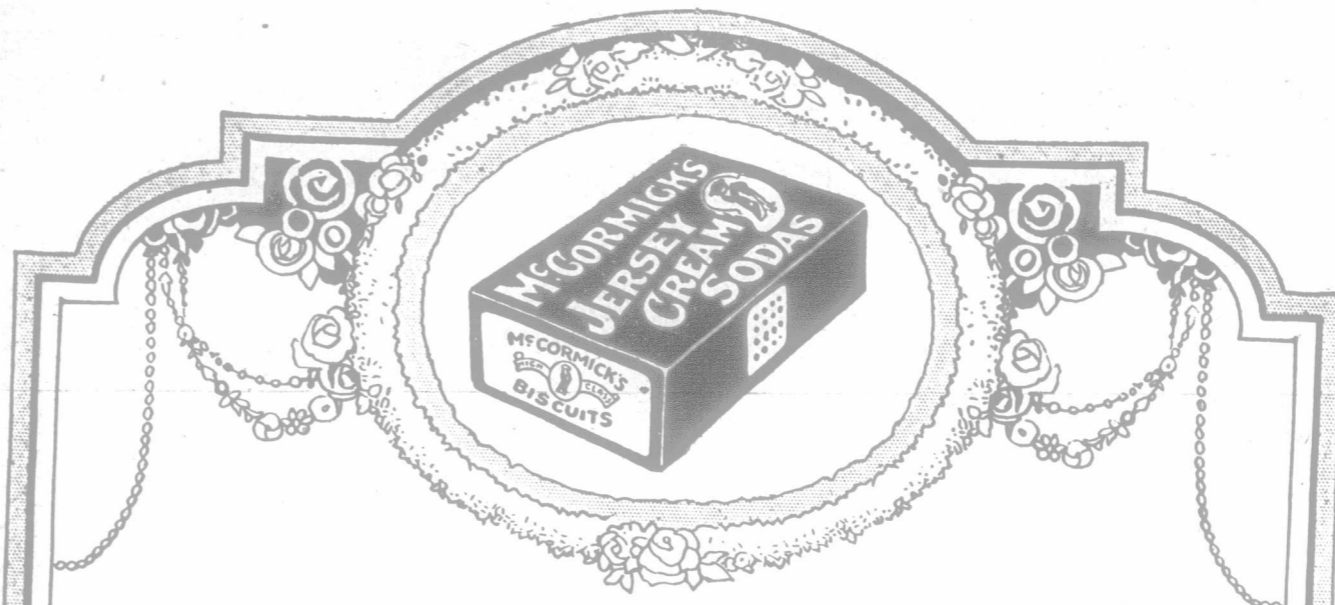


They may now be termed, more politely, it is true, "slow" or "backward." But what's the odds? We still have the dunce in many of our schools, and this boy or girl, because we do not or will not understand him, is finally crowded out and does not get that training to which he is entitled. Sympathetic, sane treatment, patience, and a little extra time and attention will rescue almost any backward child from the indignities of such a condition.

People differ from one another in body, mind and character. God intends that there shall be variety among men, and we cannot without violating His laws seek to force all into one common mould. Yet frequently the child who happens to belong to the class of human beings who find it difficult to learn rapidly in school, memorize slowly, and cannot see through things easily, is considered a dunce by his parents and teachers. His condition is not improved by sharp criticism nor by these choice names hurled at him. He is usually a super-sensitive child and easily discouraged, and so goes from bad to worse finally dropping out of school at about the fifth or sixth grade—just when he should be starting a valuable three years' training.

A careful census was once made of those who thus early left school, and the most common reasons given were "lack of interest" and "did not like to go to school." Not one per cent. left because of economic pressure at home. The "dunce"—pardon me, the "backward" one—was really and truly pushed out of school.

I must confess that my sympathies are with the "dunce." Really, he may in many things be just as bright as the other children—in fact, usually is—and apart from the regular school programme is as likeable. But up until recently, and still in too many of our schools, the average class is organized along lines so hard and fast that little chance is offered for what may be his particular kind of ability. The introduction of a more flexible programme, the duplex class period, hand-work and manual training, have done much to remove the disabilities under which the "slow" ones hitherto labored. The boy or girl who may be a dunce in the ordinary book subjects of the school, may prove superior in things calling for executive ability, and



COME and take a glance inside McCormick's Biscuit Palace, the finest in America. See the snow-white interior and the spic-and-span white uniforms of the employees. Look at the immense windows through which the sunshine streams in. Note the perfect ventilation—how pure and fresh the air. See the white-enameled ovens—the wonderful mixing machines, and so on. The more you look around the greater your admiration—and you certainly will enjoy McCormick's Jersey Cream Sodas after seeing where and how they are made.

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the brilliant fellow in book learning may be found to be very deficient in practical ability. Until within the last fifteen years or so, the former type of boy or girl had a hard time of it, and this peculiar ability was not at all recognized, and backward schools and teachers are still at this period. But the introduction of the manual arts and the teaching of the general school arts in a dynamic way helped the case of the "slow" pupil. We can and ought to do more for this kind of pupil than we do. He usually has native ability of a high order, and it should be developed so that the boy finds himself as it were, and the work for which he is best fitted, and gets the general training which his parents mean him to have. We developed during the past the other type too far, and lost a balance in practical activities. We are now getting to a sane balance.

Medical inspection of pupils promises much for the backward ones. Quite often minor physical defects pass unnoticed but are serious enough to handicap students. Regular visits of the nurse or doctor will discover these, and treatment will place the pupil in the class to which he belongs. Only last week a case in the Portage schools was told me. A boy in grade six was having a hard time of it to keep up; he was already a year or more behind. He had been punished for inattention, laziness and what not, and his parents said he was always "slow." An examination revealed defective hearing and minor throat trouble. That is about ten days ago. A week's attention by the doctor is already bearing fruit in school; the teacher is quite satisfied that the cause has been found; and the boy's life is in all probability increased in value. How many boys and girls have been ill-treated because of defects we might have easily removed!

Again, a pupil's backwardness in particular subjects will sometimes disappear as the years go by. He may, in fact, develop marked powers along these lines. His facilities may have been slow to reveal themselves he is slow to mature. It is here where the teacher with a wide experience and a keen vision becomes most valuable.

I can cite a case of a boy who was particularly backward in the language arts and in history during most of his public school life and part of his collegiate life, and was a typical dunce in this respect, as dense a one as could be desired; but judicious teaching, care and encouragement, and his own good sense and patience got him over this handicap, and later on he pursued a brilliant university course, winning many prizes, among them being the first prizes in history and political economy. He is now a talented lawyer in a Western city. The only people who had any hope for him during his "duncehood" were his teacher and his mother and father, who all through his studies had faith in him. And I believe there are many whose lives have been ruined because they were taught to believe that they were dunces and were kept so. If they had been properly trained, encouraged and helped, they undoubtedly would have become more valuable members of society. Instead, they go through life with a handicap and realize as the years go by that the school might have afforded them the training and the inspiration they needed. The school is for the dunce as well as for the boy with the brilliant talents.

E. K. MARSHALL.

### Cement Wash.

T. W. Knight, one of our subscribers who has had experience with cement paint, writes as follows: "Cement paint is not in reality a paint, but a wash. It can be mixed with sour milk or buttermilk and is all right for rough work, but I have found it advisable to use it without any coloring matter, as it settles quickly and the difficulty is to prevent making a streaky job. Cement can be mixed with oil and makes a very durable paint for outside work. A lot of different shades can be made with it and a very little white lead goes a long way to give it a covering body. Use no benzoin of turpentine. Old cement which is quite useless for concrete work will be just as good mixed with oil for painting as will the best cement. Any coloring matter used in ordinary paint will do. Personally, I do not think that farmers use enough paint on their buildings or farm implements. The woodwork of many good houses, particularly the sashes, go to ruin for want of it."



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No man of good judgment is looking for a cheap fence.

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You want to get it at the right price.

We have never sold Standard Fence on any other basis but the basis of quality.

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Standard Fence is, we honestly believe, the best fence that is made—at any price. Mile after mile of it in every province—erected in the past fourteen years—stands to prove this claim.

Today, it is, we believe, the lowest priced fence on the market.

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STANDARD TUBE AND FENCE CO., LIMITED, WOODSTOCK

# STANDARD FENCE

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# Columbia Records



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'TIS wholesome laughter that banishes the glooms and keeps us sane. 'Tis snappy, crackling mirth in the home that keeps the family circle united and makes home a good place to stay in of a night. 'Tis the wonderful range of Columbia humor that enables you to have endless nights of fun—as good as, though far from the big Broadway shows.

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### Nitrate of Soda as a Fertilizer.

Now that nitrate of soda is again on the market, the time is opportune for a full discussion of its properties and usefulness. It is not a complete fertilizer in that it does not carry potash or phosphoric acid in appreciable amounts; its function is to supply nitrogen, which it provides in abundance. Dr. Frank T. Shutt, Dominion Chemist, and B. Leslie Emslie, F.C.S., Supervisor Investigational Work with Fertilizers, have prepared the article on nitrate of soda which appears in the following paragraphs:

#### Source and Composition.

Nitrate of soda, also known as Chile saltpetre, as found on the fertilizer markets of the world, is the crystallized and purified product from extensive deposits of the crude nitrate, (caliche), occurring in Chile, South America, whence it is shipped in 200-pound bags. This product is about 95 per cent. pure and contains between 15 and 16 per cent. of nitrogen, the element to which this material owes its fertilizing value.

Nitrate of soda is the most important and the most widely used of all nitrogenous fertilizers, chiefly for the reason that its nitrogen is directly and immediately available to growing crops. Since it has not to undergo any preliminary or preparatory changes in the soil, it is in a class by itself as regards efficiency and quickness of action; all other nitrogenous fertilizers, with the exception of nitrate of lime, (which is not on the market), must pass through some process of conversion in the soil before they are utilizable by crops.

Nitrogen as plant food is instrumental chiefly in promoting the growth of the vegetative parts, (stem and leaf) of crops and hence is more particularly valuable during the earlier stages of development. The nitrogen so stored in the tissues forms a reserve to be used later in the formation of seed and fruit.

From this property of available nitrogen, it will be evident that an excess of nitrate of soda or any similar source of readily assimilable nitrogen would tend to unduly prolong growth and possibly delay maturing of the crops. Some crops are more particularly susceptible in this regard than others, and the effect is more marked when there is a lack of phosphoric acid.

Experiments have shown that nitrate of soda exerts an indirect fertilizing influence, in causing the liberation for crop use of potash from its inert stores in the soil.

#### Application.

From the fact that nitrate of soda is readily soluble and its nitrogen immediately available, this fertilizer, as a rule, is most economically employed as a top dressing to the growing crop during the earlier weeks of growth. A portion of the application may, however, be given at the time of seeding without danger of any appreciable loss through leaching, the remainder being subsequently applied in one or more top dressings to the crop. In dressing the growing crop, broadcasting the nitrate should be done on a dry day, to avoid scorching the foliage. The application per acre per annum may be from 100 to 400 pounds, the heavier dressing being used in market gardening and other intensive forms of farming, as in potato growing. For the ordinary farm crop on soils of average fertility, 100 to 250 pounds per acre probably represents the limits of profitable application.

If one-half of the application, say 75 pounds per acre, is broadcasted and harrowed in at the time of seeding, the remaining half may be given as a top-dressing about two weeks after the crop appears above the soil. Or the first application may be made as soon as growth appears, and a second some two or three weeks later. A single application should not exceed 100 pounds per acre. As far as may be practicable, it is well to conform to the practice of small and frequent dressings during the earlier weeks of growth, according to the crop's ability to utilize nitrogen. By this means loss through leaching will be reduced to a minimum rate suggested for various crops.

|  | Lbs. per acre. |
|--|----------------|
| For grain crops.....                     | 75 to 150      |
| For hay and pastures.....                | 100 to 200     |
| For corn (fodder) and turnips.....       | 100 to 200     |
| For mangels, sugar beets, etc.....       | 150 to 300     |
| For potatoes.....                        | 200 to 300     |
| For cabbage and similar leafy crops..... | 200 to 400     |

**ate of Soda as a Fertilizer.**

Nitrate of soda is again on the time is opportune for a study of its properties and usefulness. It is not a complete fertilizer in that it does not carry potash or phosphorus in appreciable amounts; its only deficiency is nitrogen, which it supplies in abundance. Dr. Frank T. Howland, Chemist, and B. Leslie Howland, Supervisor Investigational Fertilizers, have prepared the following paragraphs:

**and Composition.**

Soda, also known as Chile soda, is the crystallized and purified product from extensive deposits of nitrate (caliche), occurring in North America, whence it is obtained in 50-pound bags. This product is 92 per cent. pure and contains 16 per cent. of nitrogen, to which this material owes its value.

Soda is the most important fertilizer widely used of all nitrate fertilizers, chiefly for the reason that nitrogen is directly and immediately available to growing crops. It does not undergo any preparatory changes in the soil, and is in the class by itself as regards quickness of action; all other fertilizers, with the exception of lime, (which is not a fertilizer), must pass through some preparatory change in the soil before they are available to crops.

Soda is instrumental in promoting the growth of the stems, (stem and leaf) of crops, and is more particularly valuable in the earlier stages of development. It is stored in the tissues of plants and is used later in the formation

of property of available nitrogen. It is evident that an excess of soda or any similar source of available nitrogen would tend to retard the growth and possibly delay the maturity of the crops. Some crops are particularly susceptible in this respect, and the effect is more pronounced where there is a lack of phosphoric

acid. Experiments have shown that nitrate of soda is an indirect fertilizing agent, causing the liberation of phosphorus from its inert stores in the soil.

**Application.**

It is found that nitrate of soda is not so immediately available as its nitrogenous compounds, and this fertilizer, as a result of its economical employment as a fertilizer on the growing crop during the early stages of growth. A portion of the nitrogen may, however, be made available by broadcasting the nitrate on a dry day, to avoid loss through evaporation. The application of nitrate may be from 100 to 250 pounds per acre, depending on the heavier dressing being used in the garden and other small crops. In potato farming, as in potato farming, an ordinary farm crop on which the fertilizer, 100 to 250 pounds probably represents the best application.

In the application, say 75 pounds, is broadcasted and the time of seeding, the fertilizer may be given as a top-dressing two or three weeks after the crop is in the soil. Or the first application may be as soon as growth is well advanced and some two or three applications should be made per acre. As far as possible, it is well to combine the use of small and frequent applications of the fertilizer to the crop's ability to absorb it. By this means the loss of fertilizer will be reduced to a minimum and suggested for various crops.

- Lbs. per acre.
- 75 to 150
- 100 to 200
- 100 to 200
- 150 to 300
- 200 to 300
- 200 to 400



**Buy New Machines**

FOR years you have been cheerfully complying with Government request to save materials by repairing your old machines rather than making replacements. Now that the need for this has passed, would it not be real economy to buy new machines and be assured of uninterrupted service at a time when a break-down would mean serious embarrassment and loss.

**Deering and McCormick Mowers, Rakes and Tedders and International Side Delivery Rakes and Loaders**

are designed to remove all elements of chance from hay making. The mower lays the hay in even swaths down meadow and hayfield. The left-hand side delivery rake follows the mower closely, touching the heads first (not the stems), piling two swaths at once on the clean stubble. This insures proper and speedy curing. Every hay grower should become familiar with the combined side delivery rake and tedder, which has become one of the most popular haying tools. It can be instantly adjusted for raking or tedding.

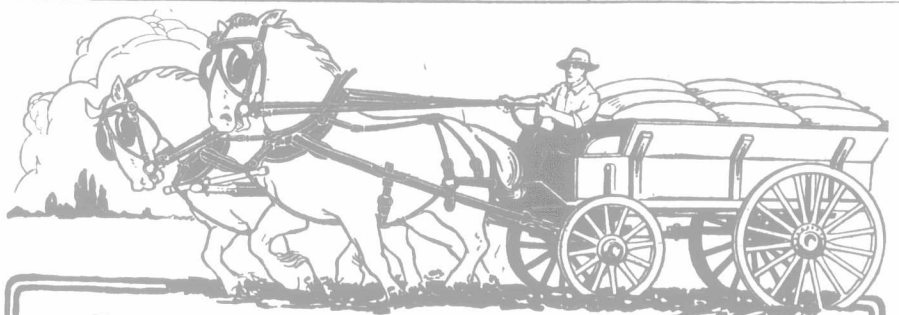
International loaders leave the field clean, lift hay over 10 feet and do not thresh off blossoms and leaves. Sold with or without forecarriage.

You will find that the local agent has just the size and style of International Harvester haying machines your work requires. See him, or write for catalogues. Order early.

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Our Imperial Brand Harness is made just as fine and strong and well finished to-day as it has always been made in the past. Ask your dealer to show you Imperial Brand Harness, so you can see it before you buy it. If he does not carry our line he can get it for you, or you can write us and we will supply you promptly on receipt of price. Our Booklet—"How Harness is Made," mailed FREE on request.

**No. 464** Superior Quality Farm Harness Chain End Trace with Back Pads, Bridles, Blinds, with side check. Lines 1 in. High top hames. Pads with terretts and hook. Back strap with trace carrier on top. Traces 1 1/2 in. Balance in proportion. XC or Jap. mounted. (Less Collars)..... **\$52.50**

**No. 446** Superior Quality Farm Harness Chain End Trace with Breaching. Bridles, Blind with side check. Lines 1 in. Hames high top. Traces 1 1/2 in. three ply with chain end. Breaching has folded seat with side straps to martingale. XC or Jap. mounted. (Less Collars)..... **\$67.00**

**SAMUEL TREES & CO., LIMITED**

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Clover, alfalfa, peas and beans though "nitrogen gatherers" when well established frequently respond profitably to a small quantity of nitrate of soda applied during the initial stages of growth.

The amount that can profitably be employed will naturally be determined in a large measure by the character of the soil, the smaller dressings sufficing on liberally manured land.

As a supplement to low-grade mixed fertilizers, containing only say one per cent. of nitrogen, as well as to purely phosphatic fertilizers, such as superphosphate and basic slag, the use of nitrate of soda will usually be found profitable.

**Symptoms of Nitrogen-hunger.**

When soil and weather conditions are unfavorable to the production of nitrogenous crop food (nitric acid), early spring sown crops may suffer from a lack of assimilable nitrogen. If the young crop assumes a sickly-looking yellowish appearance, it stands in need of nitrogen.

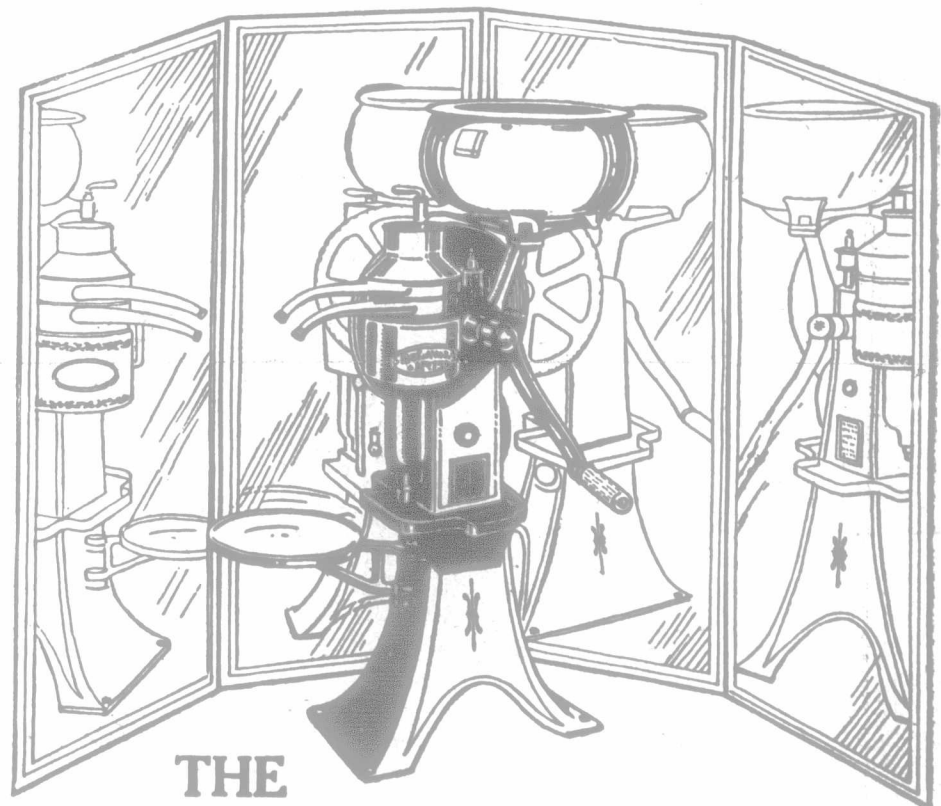
An application of nitrate to such a stunted, starved crop will, in a few days, with a warm rain, change its color to a deep green, a sure indication that the crop has obtained its required food and is again making healthy, vigorous growth. One of the chief advantages in using nitrate of soda is that it supports a continuous and vigorous early growth, and that it will help the young crop to safely tide over a critical period arising from unfavorable weather conditions.

**Storage and Preparation.**

Nitrate of soda, as already pointed out, is extremely soluble and hence to avoid wastage should be stored in a dry, rain-proof building.

As received, it will in all probability be caked into hard lumps and masses. These should be broken down, by pounding to a fairly fine powder, in order that the nitrate may be uniformly applied.

To facilitate distribution, especially when the application is of the order of 50 to 75 pounds per acre, the powdered



**THE DE LAVAL CREAM SEPARATOR**  
Every Reflection Shows Perfection

VIEWED from every angle, the De Laval is distinctly in a class by itself. It has a business-like appearance. It looks as if it were well made, and it is. It looks sturdy, and it is. There is no make-believe about it anywhere, from the wide-spreading substantial base to the solid, seamless, symmetrical supply can.

It's no wonder that big dairymen and creamerymen who have for years made a careful study of dairy methods and machinery refuse to consider any other separator but the De Laval. They know that from every angle—clean skimming, ease of operation, freedom from repairs, durability—there is no other cream separator that can compare with the De Laval.

They know that it has a record of 40 years of service behind it. They know that it can be depended upon. They know that they can't afford to take chances with any other cream separator—

And neither can you.

Order your De Laval now and let it begin saving cream for you right away. Remember that a De Laval may be bought for cash or on such liberal terms as to save its own cost. See the local De Laval agent, or, if you don't know him, write to the nearest De Laval office as below.

**THE DE LAVAL COMPANY, Limited**

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA. Sole manufacturers in Canada of the famous De Laval Cream Separators and Ideal Green Feed Silos. Alpha Gas Engines, Alpha Churns and Buttermakers. Catalogues of any of our lines mailed upon request.

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nitrate may be mixed with any desired quantity of dry loam or sand.

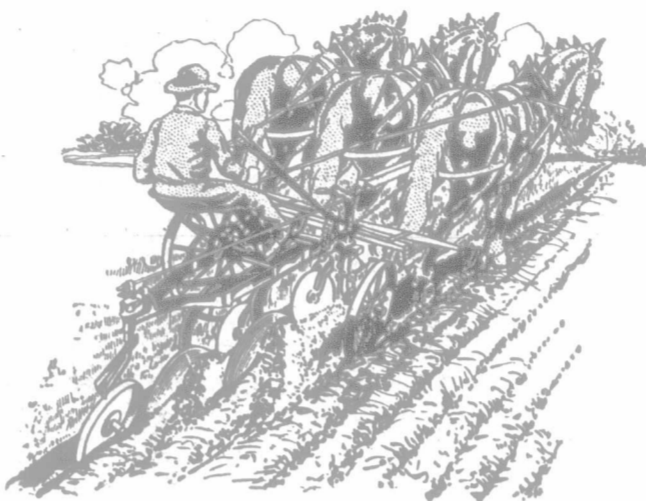
Though the principal function of the nitrogen in this material is to promote growth of the vegetable parts and its effects are frequently very quickly observable, nitrate of soda is not to be regarded as a mere stimulant; it offers plant food in the most acceptable form. Used rationally as indicated, it is an excellent and effective fertilizer. It is not a "lasting" fertilizer, but it is one that, other factors being favorable, yields a quick return on the investment.

**Pearl Bros.' Milking Shorthorns.**

Shorthorn breeders who follow the live stock advertising columns of this paper have no doubt noticed the offering advertised weekly for the past two months by Pearl Bros., of Caledonia, Ont. Pearl Bros.' Shorthorns represent practically three herds, and all three combine breed—type and milk production in the strongest degree. The herds are headed by the good breeding five-year-old sire,

Nonpareil Counsel, a thick, well-proportioned roan bull of splendid individuality. He is sired by Roan Chief (imp.); On his dam's side he is a straight Nonpareil. His dam was sired by Joy of Morning (imp.). The present offering of young bulls and females are all sired by Nonpareil Counsel and need only to be seen to be appreciated. All are from the good milking females which make up the Pearl herds. Here is an opportunity to secure milking Short-horn herd-header material of the best quality. Several of the dams are running in the R. O. P. and making very creditable records, which should increase the value of the offspring considerably where milking qualifications as well as beef are considered. Breeders wish to purchase either males or females should keep this offering in mind. Visitors are welcome at any one of the three farms at all times, and will be met at Caledonia or Hagersville Stations by appointment. Mention The Farmer's Advocate when writing.

# Massey-Harris



## For Your Spring Plowing

There are many reasons why you should use a MASSEY-HARRIS PLOW—reasons which it is worth your while to consider, because they mean much to you in the way of making your farming operations yield the best possible returns.

In the first place, owing to their excellent scouring qualities, you can often get on the land and start plowing several days earlier than with other Plows. This is an important matter, especially in the North-West, where a few days' delay may mean the loss of a crop.

The Shape of a Plow is a point which must be carefully considered. MASSEY-HARRIS PLOWS have given satisfaction to three generations in this respect. They turn perfect furrows, putting the

ground in the best possible condition for the work which follows.

MASSEY-HARRIS PLOWS are light draft and easy to handle—they are popular with both man and beast.

Durability is a strong point in connection with these Plows—the improved methods of tempering the Steel Mouldboards and Shares, and of hardening Cast Shares, together with careful erecting and rigid inspection of all Plows, combine to produce a line of Plows which look well, work well and wear well.

*Walking Plows, Riding Plows, Disc Plows, Engine Gang Plows, etc., in many styles and sizes.*

## MASSEY-HARRIS CO., LIMITED

Head Offices—Toronto, Ont.

Branches at

Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Yorkton, Calgary, Edmonton. Transfer Houses—Vancouver and Kamloops.

Agencies Everywhere

### An Adventure in Sheep.

EDITOR "THE FARMER'S ADVOCATE":  
"Initiative, yes initiative is what the farmer wants," says the man of business as he discusses the premier industry of the country. Perhaps there is enough truth in the remark to make the farmer sensitive. He feels hurt at the criticism because it is in part true and he knows it. There are many excuses for the farmer not changing his methods except gradually with changing conditions. He may see a means of larger production but money is required, and he has, as a rule, little ready money. He can, of course, borrow, but if the result of his experiment should be unsatisfactory he has burdened himself with a load of debt, himself and those dependent upon him. Sometimes new and enterprising farmers come to his neighborhood, and being without local knowledge, though they may have a great quantity of general information, they gain their experience at some cost. At times their experiments bear within themselves the germs of failure. Frequently, however, they fail from causes quite external to themselves and which no amount of foresight could have avoided. We fear

**Snowflake**  
THE FULL STRENGTH  
**Ammonia**

**Softens the Water—  
Makes the Bath More Refreshing!**

Lawson's  
**Snowflake**  
Ammonia  
Saves 90 Per Cent Soap  
For Household and  
Disinfecting Purposes  
S.F. Lawson & Co.  
LONDON, ENGL.

THIS \$22.75 Equipment Will Raise Over 350 Chicks in Three Months



THE COLLINS MFG. CO.

411 Symington Avenue, TORONTO

Fresh eggs hatch better. Start a machine as soon as you gather 50. One gal. oil runs our machine three weeks. Each machine equipped with Tycos thermometer and 40 lbs. sensitive thermostat. Weight, Hover, 16 lbs.; Cycles, 11 lbs. Write for free catalogue. Orders shipped same day as received. Copy of the makers.

that the old-fashioned country dweller has an unholy joy when the newcomer does not succeed, and thinks he is well served in having his new-fangled notions wrecking him. This is not the right attitude. We may learn much by other people's failures and a great deal more cheaply, though not so effectually as by our own. Perhaps we ourselves may possess the very little knowledge that was wanting, it might be only a trifle that set the whole thing back. What we have to do is to be on the watch constantly and to lose no opportunity which presents itself. Our management must indeed be perfect if it cannot be improved.

A farmer in the State of Washington which we all know borders upon Canada, is evidently one who is on the lookout for such opportunities and can take advantage of them. His name is Mansfield and he has 3,000 acres of wheat land. Owing to the high cost of labor and also to the fact that his fields had become so foul with the Russian thistle that cultivation was difficult, he found that he could not go on unless he got some kind of live stock on his land. Sheep are well known to be good scavengers. They eat up weeds and thrive on them and recent experiments show that they are so organized that they can digest even the seeds of weeds which no other animal will eat. Mr. Mansfield, therefore, bought a flock of sheep, breed not mentioned, but it is probable that they were of no breed in particular. While he was driving them home he saw that they fed greedily on the Australian salt bush, one of the most persistent nuisances to the farmers of that part of the world. He had in the past years spent much labor and money in trying to eradicate this weed, which he now suspected to be a valuable food plant for sheep.

Salt bush is related to the Russian thistle. It belongs to the genus *Atriplex* and the chenopod or goose-foot family, and, in some of the Western States, so great a plague has it become that laws have been framed against allowing it to run to seed. It covers acres of ground and is about two feet high, and has hitherto been considered absolutely worthless. Mr. Mansfield had a plentiful supply of it on his own land and on the waste places adjoining, and he fed some of his sheep entirely on salt bush, others on the usual grass. He found the mutton of the salt-bush-fed sheep better and their fleeces more luxuriant than those of the sheep fed in the ordinary way. He also made hay of the weed for winter fodder, and removed great heaps of it to a stubble field where there was plenty of pasture, but the sheep always preferred the salt-bush hay. Mr. Mansfield has now increased his flock to 1,000 sheep, and being quite convinced that his discovery is of practical value he has begun to tell his neighbors of his experience, and other farmers are following his example.

It is asserted that salt bush would grow on the great stretches of black alkali land which is of no use whatever for anything else. It is undesirable to introduce any new weed into a community, but could this plant, which seems to be good sheep feed for both summer and winter, be of use in Canada? We have surely waste places here also.

Sheep are easily kept, and both wool and mutton are needed. The necessity is, perhaps, not so urgent as it was a year ago and less. It was calculated that each soldier required for blankets, uniform and necessary underwear 160 lbs. wool, roughly speaking the fleeces of 20 sheep. The suspension of hostilities has made the call for wool less urgent, but there is still a very promising prospect for the grower of mutton and wool.

Middlesex Co., Ont. MARGARET RAIN.

Strict discipline is excellent, it is essential, but the martinet carries discipline too far.

A martinet colonel gathered his officers about him last month and issued orders for the regiment's forthcoming train journey to their homes.

"I don't object to an innocent good time on the men's part during this train journey," he said, "but you will, of course, see to it that there's no cursing or profanity, no skylarking, no card playing, and as little cigarette-smoking as possible."

"Pardon me colonel," said a timid voice.

"Yes, captain. Speak up. What is it?"

"Pardon me colonel, but would you object if I took along a little plain sewing to occupy my company and myself?"

Questions

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**Questions and Answers.**

1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.  
 2nd—Questions should be clearly stated and plainly written on one side of the paper only, and must be accompanied by the full name and address of the writer.  
 3rd—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.  
 4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

**Miscellaneous.**

**Clipping Horses—Seeding Down.**

1. Is there any way to cut the top off an earthen Jar?  
 2. Would you advise clipping horses in the spring? When is the proper time to clip?  
 3. Do you have to sow any more grass seed per acre on spring-plowed land than on land plowed in the fall when the soil is of clay nature?  
 4. What is the price of a Ford touring car?  
 M. J. M.

Ans.—The top may be cut off with a hack-saw.  
 2. If the horses have a heavy coating of hair they will work with greater ease by being clipped. This will also make less work for the attendant in cleaning. The horses may be clipped as soon as the weather gets warm.  
 3. If the soil is in good tilth the same rate of seeding should give a good catch. However, there is a tendency for the spring-plowed land to dry out a little more than the fall-plowed land.  
 4. We understand that the price is \$690 f. o. b. Ford Ontario, plus \$56.93 war tax plus freight to any point.

**Summer Pasture.**

I have a field which I cut for hay last season. It is thin in places and somewhat heaved. I want to use it for pasture for a couple of years. I was thinking of sowing sweet clover on the heaved places. Would this help the pasture this season? How much seed should I use?  
 2. I have a plot of about one acre on which I wish to sow something for calf pasture for late summer and early fall use. What would you advise?  
 3. I have a clay loam field, plowed out of sod last fall. It has been under pasture for several years. I want to sow it to grain this year for pasture. What pasture crop would you advise for fattening steers?  
 H. L.

Ans.—1. On in the summer the sweet clover would give a certain amount of pasture and should come on very good for the following year. The places may also be thickened up by sowing orchard grass or timothy and clover.  
 2. Sweet clover might be sown without a nurse crop. This would give very good picking in July and August. If feed was wanted earlier than this oats would give very good pasture. Red clover also gives very good results for late pasture.  
 3. For an annual pasture oats alone, sown at from 2½ to 3 bushels per acre, give very good results. Oats and barley have been sown but there is danger of the smut of barley injuring the stock. If you wish to seed the field down, red clover may be sown along with the oats.

**Veterinary.**

**Fatality in Heifer—Enlarged Knee.**

1. Heifer ate her breakfast all right. Soon afterwards she began to shiver and get weak. Her eyes became bloodshot and ran fluid. She had a nasal discharge of blood and matter, breathing became difficult and she seemed constipated. She became delirious, fell down and died in about 10 hours. I treated her with purgatives without results. A post mortem revealed nothing wrong except for red blotches on the lining of the stomach.  
 2. Three-year-old colt fell and hurt his knee last fall. Now there is an enlargement on the inside of the leg, but it is not sore.  
 C. A. G.

Ans.—1. She had acute inflammation of the stomach. In such an acute attack it is not probable any treatment would have been effective. The administration of 2 drams of opium in a pint of lime water every 5 or 6 hours might have been effective.  
 2. Get a liniment made of 4 drams each of iodine and iodide of potassium and 4 oz. each of alcohol and glycerine, and rub some well in once daily. Have patience and continue treatment as quick results will not be noticed.  
 V.

**The Big Leak Is In The Roof**

Leaky roofs cost a lot of money. Each year time and dollars are spent to repair the damage done by frost, snow, ice, rain, sun and wind.

Figure the amounts paid for repairing materials alone and you will find it runs into big figures.

Save yourself future roofing troubles and expenses by putting on a real roof, now.

**PAROID**  
 A  
**NEPONSET ROOF**

pays—because it lasts and protects.

Every building on the farm should be roofed with Neponset Paroid Roofing, from the big barn to the smallest cribs. It defies snow, rain, sleet or sun. It is fire-resisting and proves its economy by giving perfect satisfaction and years of wear.

Roof with Neponset Paroid and save money.

Neponset Paroid Roofing is made in three colors, red, green, and slate grey.

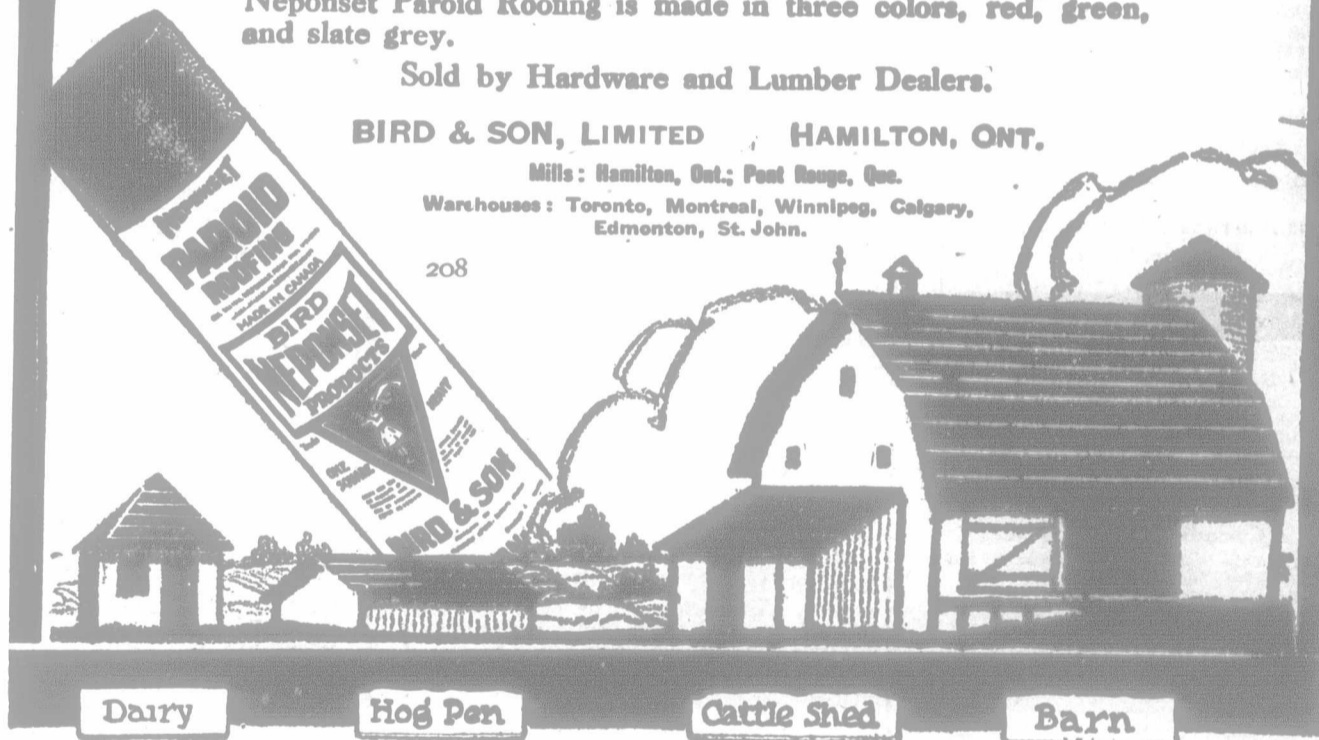
Sold by Hardware and Lumber Dealers.

**BIRD & SON, LIMITED HAMILTON, ONT.**

Mills: Hamilton, Ont.; Port Hope, Que.

Warehouses: Toronto, Montreal, Winnipeg, Calgary, Edmonton, St. John.

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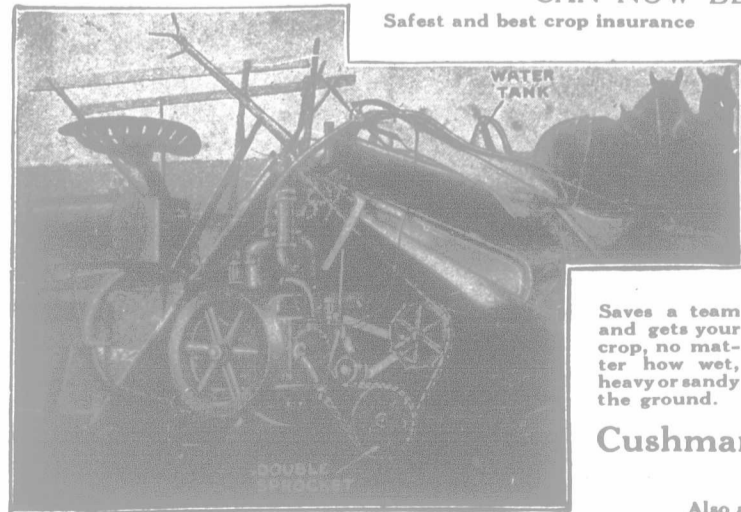
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**WORLD FAMED GENERAL PURPOSE**

**Light Weight Cushman Engines**

CAN NOW BE OBTAINED IN ONTARIO

Safest and best crop insurance



Saves a team and gets your crop, no matter how wet, heavy or sandy the ground.

These lightest weight engines give absolutely steady, quiet and dependable power, owing to their perfect balance, construction and workmanship. Four-horse engine can be used on Binder (see illustration), Potato Digger and for all general work that any 4-horse engine can be used for.

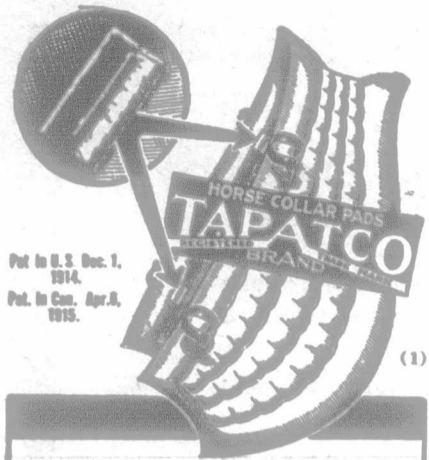
|                       |          |
|-----------------------|----------|
| 4 h. p. Engine weighs | 190 lbs. |
| 8 " " "               | 320 "    |
| 15 " " "              | 780 "    |
| 20 " " "              | 1200 "   |

Tell us what you need an engine for, and we'll send you full particulars.

Ask us also for descriptive literature on the Western Packer, Pulverizer and Mulcher.

**Cushman Motor Works of Canada, Limited**  
 36 Colborne St., TORONTO.

Head Office: Winnipeg, Man.  
 Also at Saskatoon, Moose Jaw, Edmonton, Calgary



### FOOD PRODUCTION MUST BE INCREASED

The horse is a vital factor in such accomplishment. His efficiency is measured by the degree of fitness for constant use.

#### Stuffed Collar Pads

Are the only guarantee against bruised, galled and chafed shoulders. They are better than other kinds, being soft, springy and absorbent. They make possible the continued use of a horse collar long after its worn condition would otherwise compel its discontinuance.

#### New Patented Hook Attachment

(Found only on pads made by us)

Consists of wire staple with felt washer. It gives hook a firmer hold and prevents pulling off, even though fabric is weakened by long usage. This is the greatest improvement since we invented the hook.

Thirty-Seven Years Making Pads  
Look For the Felt Washer

SOLD BY DEALERS EVERYWHERE

The American Pad & Textile Co.,  
Chatham, Ontario



### FOR SALE

#### Canadian Root Seed

Raised from the best stock by Dominion Experimental Farms.

#### SUPPLY LIMITED

Prices as follows:

| Mangels—              |      |     |
|-----------------------|------|-----|
| 50 lbs. and over..... | 55c. | lb. |
| 200 " " " " " " " "   | 50c. | "   |
| 1000 " " " " " " " "  | 45c. | "   |
| 2000 " " " " " " " "  | 43c. | "   |
| Swede Turnips—        |      |     |
| 50 lbs. and over..... | 85c. | lb. |
| 100 " " " " " " " "   | 80c. | "   |
| 500 " " " " " " " "   | 75c. | "   |
| 1000 " " " " " " " "  | 73c. | "   |
| Field Carrots—        |      |     |
| 5 lbs. and over.....  | 90c. | lb. |
| 25 " " " " " " " "    | 85c. | "   |
| 100 " " " " " " " "   | 80c. | "   |
| 200 " " " " " " " "   | 78c. | "   |

Freight paid and sacks free.

Net payment bank draft 60 days from date of invoice and 5% allowed for cash 10 days from date of invoice.

Particulars about varieties on application.

DR. M. O. MALTE,  
Central Experimental Farm  
Ottawa, Ont.

#### One Registered Shorthorn Bull

For sale, 13 months old; a good red in color. Bred right and priced right.

W. G. POWELL & SON, Kemptville, Ontario

**Choice Seed Corn**—White Cap and Bailey, equal to any we have ever offered. Also the best in Poland China swine. Prices moderate.

GEO. G. GOULD, Essex, Ontario

#### Kiln Dried Seed Corn

That will grow. Government test 100%. Your money back if not satisfied.

D. E. BONDY, R. R. No. 1, Arner, Ont.

#### For Sale: Seed Potatoes

Variety Dooley. Heavy yielders. Price, \$1.60 per bag; bags free; f.o.b. Thornbury.

J. J. BUCHANAN, Ravenna, Ontario

### Experiments With Farm Crops.

EDITOR "THE FARMER'S ADVOCATE":

The members of the Ontario Agricultural and Experimental Union are pleased to state that for 1919 they are prepared to distribute into every Township of Ontario material of high quality for experiments with grains, fodder crops, roots, grasses, clovers and alfalfas, as follows:

#### Lists of Experiments for 1919.

| No.                                   | Grain Crops.  | Plots |
|---------------------------------------|---|-------|
| 1                                     | Testing two varieties of oats.....                            | 2     |
| 2                                     | Testing O. A. C. No. 21 barley and emmer.....                 | 2     |
| 3                                     | Testing two varieties of hulless barley.....                  | 2     |
| 4                                     | Testing two varieties of spring wheat.....                    | 2     |
| 5                                     | Testing two varieties of buckwheat.....                       | 2     |
| 6                                     | Testing three varieties of field peas.....                    | 3     |
| 7                                     | Testing two varieties of spring rye.....                      | 2     |
| 8                                     | Testing three varieties of soy, soja, or Japanese beans.....  | 3     |
| 9                                     | Testing seven varieties of Flint and Dent husking corn.....   | 7     |
| Root Crops.                           |   |       |
| 10                                    | Testing three varieties of mangels.....                       | 3     |
| 11                                    | Testing two varieties of sugar mangels.....                   | 2     |
| 12                                    | Testing three varieties of Swedish turnips.....               | 3     |
| 13                                    | Testing two varieties of fall turnips.....                    | 2     |
| 14                                    | Testing two varieties of carrots.....                         | 2     |
| Forage, Fodder, Silage and Hay Crops. |   |       |
| 15                                    | Testing the planting of corn at six distances in the row..... | 6     |
| 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     |
| Culinary Crops.                       |   |       |
| 23                                    | Testing three varieties of field beans.....                   | 3     |
| 24                                    | Testing two varieties of sweet corn.....                      | 2     |
| Fertilizer Experiments.               |   |       |
| 25                                    | Testing Fertilizers with rape.....                            | 5     |
| Miscellaneous Experiments.            |   |       |
| 29                                    | Testing three grain mixtures for grain production.....        | 3     |
| 30                                    | Testing three grain mixtures for fodder production.....       | 3     |

The size of each plot is to be two rods long by one rod wide.

Any persons in Ontario may choose any one of the experiments for 1919 and apply for the same. The material will be furnished in the order in which the applications are received, while the supply lasts. Each applicant should make a second choice, as the material for the experiment selected as first choice might be exhausted before his application is received. All material will be furnished 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.

O. A. C. Guelph. C. A. ZAVITZ,  
Director.

### Questions and Answers.

#### Miscellaneous.

#### Patents.

Where would I apply to get a patent on an article which I have invented?

L. S.

Ans.—Write the Patents Branch, Ottawa.

#### Chicks Die in Shell

Last year we used an incubator and followed directions to the letter. The chicks developed until just ready to chip the shell, then about half of them died. What was the cause?

S. R. C.

Ans.—Evidently the shell was too hard for the chicks to break through. This might be caused by lack of sufficient moisture in the incubator. Overheating the eggs towards the last night so weaken the chicks that they were unable to break through the shell; again, it is advisable not to open up the incubator after the nineteenth day until the chicks are hatched.

**4.30 P.M.**

**Use This**

**DON'T STOP THE TEAM OR TRACTOR**

SAVE AN HOUR AND A HALF. A LITTLE FIGURING WILL SURPRISE YOU. OUR MILKER BOOK SHOWS HOW THE HINMAN WILL PAY FOR ITSELF IN A SEASON.

A COPY MAILED TO YOU FREE. WRITE TO-NIGHT.

**H. F. BAILEY & SON**  
THE MILKING MACHINE SPECIALISTS  
GALT, ONT.

### 'Nowadays It's Rope Harness'

TIMES have changed! Leather prices are beyond reach for rough, tough, hard pulling on the farm or in the lumber woods. Don't throw away good money—save three-quarters the price by using

### Griffith Rope Trace Harness

Rope stands up like iron. It defies wear, doesn't break or rip, no stitches to come out; it is flexible and easier to handle. The outfit consists of Giant Rope Traces, horse power Hame Straps, Back Pads, Belly Bands, Billets, Yoke Ropes, Rope Lines, Open Bridles and Canvas Cellars. The whole outfit costs only \$25. (West of Fort William, \$27). Traces alone are \$6.00 the set of four. (\$6.50 West of Fort William).



Griffith's Giant Yoke Ropes to replace leather pole straps, price complete with snaps and slides: Per pair \$1.40 (West of Fort William \$1.60).

Ask your dealer for them. If he cannot supply you please write us direct giving us dealer's name.

G. L. Griffith & Son  
68 Waterloo Street  
Stratford, Ontario

### THE "Elmhurst" Oat

Guaranteed 99% Pure

This oat is the product of a selection made at "Elmhurst Stock Farm," Brantford, Ont., in 1914. The oat is a white main oat with a very stiff straw, free from rust, and having an exceedingly long, well-filled head, averaging close to 100 grains. The average of the ordinary oat is about 40 grains.

We have a limited supply for sale. Price, \$5.00 per bushel. Orders will be filled in the order received. Bags extra, 60c.

H. M. VANDERLIP  
"Elmhurst Stock Farm"  
Brantford, R. R. No. 1, Ont.

When writing advertisers will you kindly mention "The Farmer's Advocate."

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### Clydes

'Huron's Hiawatha' Star and one him Sire, Lord Carleton Craighend 15696 horse of his kind J. W. Duntroon

### CLYDESDALE

'Pride of Warwick' (Imp.) 13109 (103) This horse weighs 1400 lbs. disposition. Also good foals. Ins.

BERT C. MOORETOWN.

### PERCHERON

Three young American serviceable age and and right every way named inspection and legs—black and quick sale. Will H. C. SOL



### Messrs. A.

Halse Grange,

Exporters of all cattle and show animals. You can buy any horse than in any other enquiry at once, so this country is skilful will be now the w

### HEAVY

Carriage horses, under 1000 lbs. send receipt 250 C

### Imported C

Viscount Humphreys May 4, 1919, by V Hugo (10921), H Sir Humphreys (11 getter, No. 1 stock Stock may be seen.

### ANGUS BUIE,

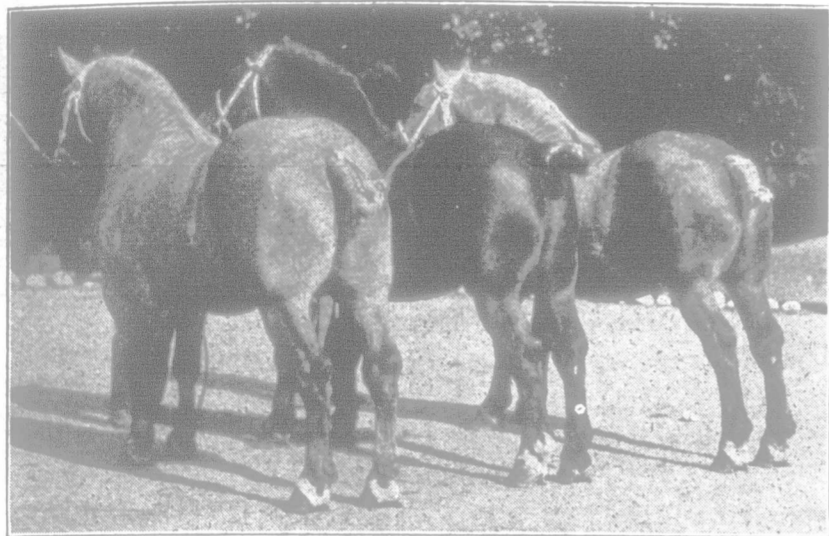
Itch a

Long, heavy coats place for parasites, irritate the horses a work. Prevent the clipping with a Machine. If dealer name. Write for ca CHICAGO FLE Dept. A 161, 12th Str

# The La Fayette Stock Farm Co. of Canada Limited

IS BRINGING INTO CANADA A SELECT LOT OF

## Imported and American-bred Percheron and Belgian Stallions and Mares



for the purpose of improving the quality of the draft horse stock of this country. Breeders will find this importation a valuable acquisition to the horse industry of the Dominion. It has been conceded that the get of Percheron and Belgian stallions are in great demand on account of their weight, finish, quality and early maturity. There never was a better time than at present to breed and raise good draft geldings and mares, and the kind to raise are horses weighing 1,600 lbs. and over. If you raise that kind you will always find a ready market for same at prices ranging from \$225 to \$300 and up. As soon as things are settled in Europe there is no question but what there will be a great demand there for draft geldings and mares, especially in Germany, France, Belgium and Denmark, and there are no other countries which can supply these horses except Canada and United States.

An important fact we wish to impress on the public is that each and every animal is sold with a guarantee of the exact condition and lived up to in every particular. It is also worthy of note that this Company has grown out of the firm of J. CROUCH & SON, LA FAYETTE STOCK FARM, La Fayette, Indiana, who have been importers and breeders for almost half a century.

These horses are on exhibition at the FAIR GROUNDS, LONDON, ONT., where the stables and office are located, and we will be pleased to show them to you whether you purchase or not.

ADDRESS ALL CORRESPONDENCE TO

G. R. Crouch, Vice-President La Fayette Stock Farm London, Ontario  
Company of Canada Limited,

The Company is composed of J. Crouch, President; G. R. Crouch, Vice-President and Treasurer; R. G. Ivey, Secretary. Directors: Wm. Bernard and Jas. McCartney.

## Clydesdale Stallion FOR SALE

'Huron's Hiawatha' No. 12947; Dark Bay Star and one hind Fetlock white. Foaled 1911. Sire, Lord Carbrook (Imp.) 6991; Dam, Kate Craighend 15696. Will be sold cheap for a horse of his kind. For particulars, write.

J. W. MANAREY  
Duntroon P. O. and Station.

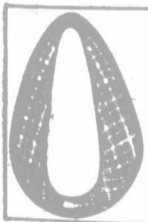
## CLYDESDALE STALLION For Sale

'Pride of Warwick' [12119] Sire—Milton Hill (Imp.) [3199] (10381). Dam—Bonnie Bess [25507] This horse weighs 2,000 lbs. and has a very gentle disposition. Also been very successful in getting good foals. Inspection Form 1. Address—

BERT CRUICKSHANK  
MOORETOWN, ONT., R. R. NO. 1

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Three young American bred Percheron Stallions of serviceable age and out of imported stock, sound and right every way—the big drafty kind—have passed inspection in form 1—quality—good feet and legs—black and greys. Are priced right for quick sale. Will sale also a few young mares H. C. SOLDAN, Hensall, Ont.



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Lowest prices, every article guaranteed to stand the work test. Write for catalogue. We sell direct.  
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Halse Grange, Brackley, England (late of Egerton, Kent)  
Exporters of all breeds of stock, draft horses, beef cattle and show and field sheep are specialties. You can buy imported stock through us cheaper than in any other way, and we hope to get your enquiry at once, so that we can fit you out before this country is skinned of good stock, as it soon will be now the war is over.

## HEAVES CURED

Capital Heaves Remedy is the real cure proved by 24 years of success under money back guarantee. Will send a full week's treatment free on receipt of 5c. to cover mailing. 6 Veterinary Supply House, Ottawa, Ont. 750 Cooper Street

## Imported Clydesdale Stallion FOR SALE

Viscount Humphrey (Imp.) (17552) [15929], foaled May 4, 1910, by Viscount Seton (14421), by Sir Hugo (10924). His dam, Lady Eva (24345), by Sir Humphrey (11942). Bright bay, sure foal-getter, No. 1 stock; 5 years on present route. Stock may be seen.

ANGUS BUIE, Phone 14 r. 4, Stayner, Ont.

## Itch and Mange

Long, heavy coats of hair on horses are a nesting place for parasites, causing itch and mange, which irritate the horses and keep them from doing best work. Prevent these troubles by spring and fall clipping with a Stewart No. 1 Ball Bearing Machine. If dealer can't supply you send us his name. Write for catalogue.

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For Quick Growth and Early Maturity, Feed

## GARDINER'S CALF MEAL

It replaces perfectly the cream in skim milk, and provides the nourishment necessary for quick, vigorous growth. It is rich in protein, and several points higher in fat than any other meal on the market.

Feed Gardiner's Calf Meal first with skim milk, then with milk-and-water, and finally with water only, and your breeding calves will mature earlier and your young steers will be ready for market sooner. It is equally good for colts, lambs and little pigs.

Put up in 25, 50 and 100-lb. bags. If your dealer doesn't handle it, write us for prices, and for information about Gardiner's other products—Ovatum, Pig Meal, Sae-a-fat and Cotton Seed Meal.

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### WHITE SCOURS BLACKLEG

Your Veterinarian can stamp them out with Cutter's Anti-Calf Scour Serum and Cutter's Germ Free Blackleg Filtrate and Aggressin, or Cutter's Blackleg Pills.

Ask him about them. If he hasn't our literature, write to us for information on these products.

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A wonderful fattening ingredient containing all the elements necessary to finish your stock. Used by the most scientific stock feeders in Canada. Don't delay—write for particulars immediately.

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## Clydesdales and Percherons

I have 15 Clyde Stallions, 10 Percheron Stallions and 10 Clydesdales Fillies. The best collection I have ever had at any one time of prize winners and champions, all for sale at prices second to none. A visit to my stables will convince you.

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Hartington (Imp.) 19655 a four-year-old by "Signet" winner of the Highland Society's prize and one of the best breeding sires in Scotland to-day. Hartington was first at the Provincial Winter Fair, Guelph, 1917. First, Canadian National Exhibition, Toronto, 1918. Second at the Provincial Winter Fair, Guelph, 1918. He has both size and quality.

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## SUNNY ACRES ABERDEEN-ANGUS

The present string of young bulls for sale includes some classy herd bull prospects, winners themselves and sired by champions. If interested in Angus, write your wants. Visitors welcome.

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Angus—Southdowns—Collies  
Choice heifers bred to Queen's Edward, 1st prize Indiana State Fair. Bulls winners at Western Fair and Guelph.

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Meadowdale Farm  
Forest, Ontario.

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I have six bulls from 8 to 15 months. All sired by Middlebrook Prince 5th, a son of Jock of Glencairn. Four of these are show calves. Also have other calves younger, and could spare a few heifers safely bred to same sire.

KENNETH C. QUARRIE  
Bellwood Ontario  
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The strongest offering we ever had, all are sired by Victor of Glencairn and a number are ready for service. Prices reasonable.

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Aberdeen-Angus—Several young bulls and heifers for sale. Sired by "Middlebrook Abbot 2nd" (1st prize in class at Toronto and Ottawa, 1915). Apply to A. DINSMORE, Manager, "Grape Grange" Farm, Clarksburg, Ont. 1 1/4 miles from Thornbury, G.T.R.

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will reduce inflamed, swollen joints, sprains, bruises, soft bunches; heals boils, poll evil, quittor, fistula and infected sores quickly as it is a positive antiseptic and germicide. Pleasant to use; does not blister or remove the hair, and you can work the horse. \$2.50 per bottle, delivered. Book 7 R. free.

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### HEREFORD SALE

Prices reduced 25%. 43 Head Registered bulls and heifers about a year old. Bred from Toronto champions, and imported stock. Testimonials mailed free from customers throughout Canada.

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**Sunnyside Herefords**

Females all ages, choice bull calves, one full brother to sire of 1st prize bulls at Toronto, London and Guelph 1918, 1 year-old bull at Farmer's prices, car of bulls 2 and 3 years old; one 4-year-old bull would exchange for one of equal merit or younger bull. See them, they are priced to sell. Arthur F. O'Neil & Sons, Denfield, Ont., R. No. 2. Phone Granton

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Our stock is rich in "May Rose" "Governor of the Chene" and "Mashers Sequel"—blood. Choice animals for sale, from imported stock.

B. P. Hill & A. N. Faulkner  
Great Village, Nova Scotia.

### Sunnyside Herefords

We have a choice offering in young bulls, some fit for service, also a few females. For fuller particulars and prices write or come and see

Mrs. M. H. O'Neil & Sons  
Denfield, P.O. - R.R. No. 4, Ontario  
Phone connections, Ilderton

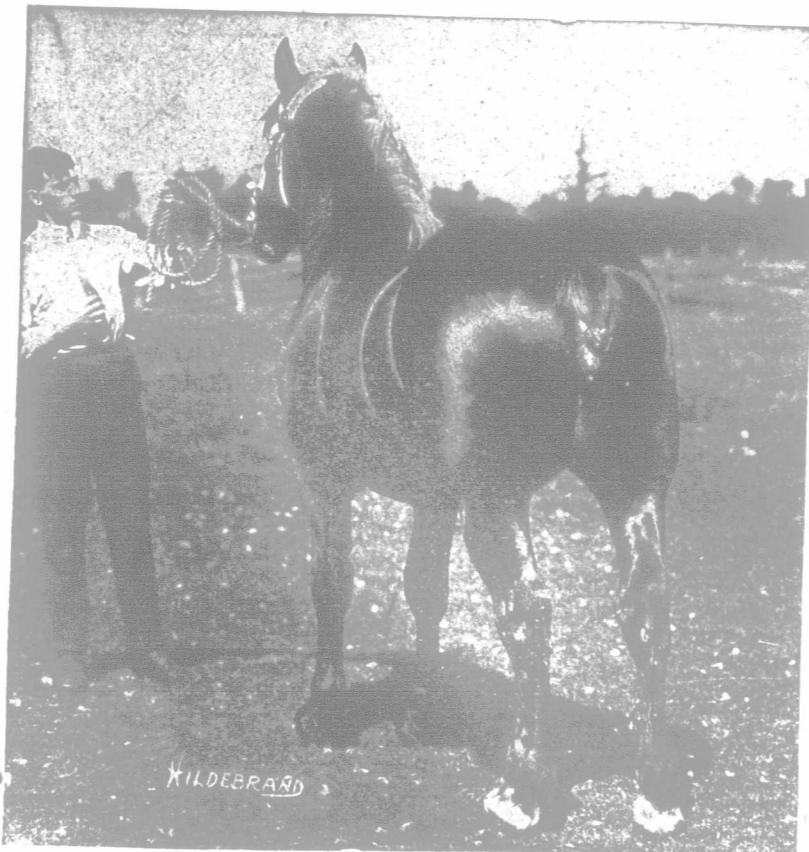
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Now is the season to insure your In Foal Mares, Stallions and Cattle.

For rates and particulars

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**Maple Leaf Farm** Shorthorns—A high quality Miss Ramsden bull calf and Scotch bred females for sale. Shropshires—Some good ewe lambs. JOHN BAKER, R. No. 1, Hampton, Ont. Bell phone, Solina, C. N. R. Bowmanville, G. T. R. and C. P. R.



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## Two Cents Per Cow Per Day

"The annual cost of operation for a 25 to 35 cow outfit, including repairs, power, labour in caring for engine, and washing machines, interest on investment, and ten per cent depreciation on machine, would amount to approximately \$225.00.

The the above is approximately one-third of what the farmer is now paying the hired man, where board is not taken into account.

Divided between 30 cows this brings the running expenses down to two cents per cow per day."

### Special Circular "The Milking Machine"

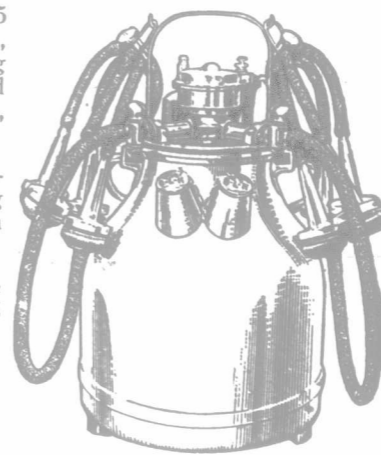
Dominion Experimental Farms

The average man will not milk more than seven cows per hour, which at 25c. per hour costs 7.2 cents per cow per day for handmilking. One man with the

## BURRELL (B-L-K) MILKER

can milk 20 to 25 cows per hour, which tell all about the Mod-which brings the total cost

**D. DERBYSHIRE CO. LIMITED**  
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Branches: Peterboro, Ont.; Montreal, P. Q.; Quebec, P. Q.



of machine milking including daily running expenses to 4.5 cents per cow per day.

The Burrell Milker also enables one man to milk many more cows than it is physically possible for him to milk by hand.

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## Cairnbrogie Clydesdales STILL TO THE FORE

Imported and home-bred stallions and mares of the highest quality and individuality. Our record at the leading shows of America surpass all competitors, and we are offering for sale males and females of all ages, and should be pleased to hear from prospective buyers of quality Clydesdales at any time.

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Long-distance phone. Station, C. P. R.

### JUST ARRIVED

Hodgkinson & Tisdale's latest importation of Percherons.

All in the pink of condition. Stallions weighing from 1,900 to 2,000 lbs., three four and five years of age.

These horses are right in every way and we furnish our famous guarantee with every animal.

Mares weighing from 1,600 to 1,750 lbs. all safe in foal.

We are going to sell the entire lot and have them priced to do it.

Wire, write, phone, better still come and see them.

**Hodgkinson & Tisdale**  
BEAVERTON - ONTARIO

C. N. R. and G. T. R. railways.  
Bell phone, Long Distance No. 18.

### Questions and Answers. Veterinary.

#### Blind Mare.

Five-year-old mare recently went blind. There is no evidence of soreness except that the eyes water slightly, but not enough to be noticeable. Are such weaknesses hereditary?

J. T.

Ans.—As she is blind nothing can be done to restore sight. There is often an hereditary predisposition to different affections of the eye.

#### Inversion of Uterus—Exciting Veneral Appetite.

1. Can a cow that inverted her womb after last calving be got in calf again? Would she be likely to repeat the act?

2. Will cantharides invigorate a service stallion, and how much is it safe to give at a dose?

F. L. M.

Ans.—1. She will conceive again. She will probably be more liable to the accident than one in whom it never occurred, but it is seldom noticed the second time.

2. Cantharides will excite veneral appetite but will not cause the sire to reproduce. The administration of cantharides for this purpose cannot be too highly condemned. It is not safe to give in any doses.

#### Fatality in Calf.

Calf 2 months old was fed on 1 teaspoonful of linseed meal, mixed with 1 part each of corn, wheat and barley finely ground, and 4 parts oat chop twice daily in skimmed milk. The meal was thoroughly cooked and a small handful stirred in uncooked. It also got a handful of whole oats after drinking the mixture. It was apparently all right at night and was found dead the next morning. A post mortem revealed the first stomach full of chop the lining was grayish in color and easily picked off. One cavity of the heart was full of clotted blood and the other free. The lungs also contained blood.

J. C.

Ans.—The calf died of acute indigestion. It had eaten too much of the chop, which was not digesting properly and the last meal caused an attack of acute indigestion which caused death. A little linseed meal and chopped oats with the hulls sifted out in addition to milk gives fair results for calves of this age, but the amount and varieties of meal given this calf cannot, in many cases, be digested by such young animals.

#### Sheep Cough—Feed for Calves.

1. My sheep have coughed all winter. Now some of the ewes at lambing have no milk. They are in good condition. They are fed on good mixed hay, pulped turnips and bran.

2. Would 2 parts coarse ground Graham flour to 3 parts calf meal mixed with skimmed milk make a good food for spring calves and young pigs?

A. E. W.

1. The absence of milk is called "agalactia." It is occasionally noticed in the different species of mammals. Its cause is not understood. The cough without other clinical symptoms or loss of condition indicates tuberculosis, but it would require a careful post mortem to definitely determine what causes the cough. The addition of a few whole oats to the ration named would probably give good results. Nothing more than good care, good food, comfortable quarters and seeing that they take considerable daily exercise will have any effect upon the activity of the lacteal organs.

2. If the Graham flour is not fed in too large quantities it is probable that it will produce fair results. We would suggest chopped oats with the hulls sifted out instead of the flour; of course, whole milk would be better than skimmed, but many feeders get good results from the latter.

A most remarkable case of malformation in the foetus of a young cow, first calf, occurred recently in the practice of Dr. Wm. A. Gill, V.S., Dorchester Township, Ont. Birth came on at the normal time, but, owing to inverted presentation, an operation was required. The rear legs were abnormally short, but the front pair each had an extra single bone, well formed and with extra joints which were quite flexible, to match.

W. T.



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# Roderick Lean

## Automatic Engine Disc Harrow

Specially Built  
for  
**"FORDSON"**  
Tractors

### DON'T HANDICAP YOUR TRACTOR

with horse implements. They are not made to stand the strain of tractor use. Suit your equipment to your power and get all the benefit available. This

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works the ground twice with one operation, cutting deep and fine. Discs automatically angled or straightened by the draft of the engine to suit conditions. Its flexible rear section permits quick, short turns. Rear gangs cannot track with front. Heavy enough to cut soil under practically all conditions, but light enough not to overtax your motor. Adjustable scrapers keep your discs clean and free from rubbish. Made in 6 and 7 ft. sizes, with 16 and 18 inch round or cutaway discs, as preferred. This is the disc equipment that is being recommended by "Fordson" dealers everywhere.

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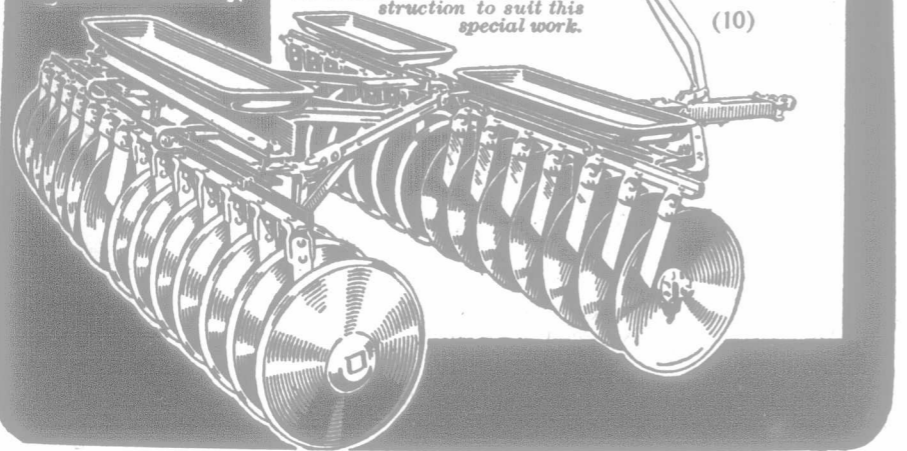
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AMERICAN ABERDEEN-ANGUS BREEDERS' ASSOCIATION  
817 FA Exchange Ave., Chicago

If you want a good breeding and show bull for the three-year-old class. I am offering the sire of the majority of our seven calves which we exhibited at 1918 shows. Or if you want one for the two-year-old class, can sell the junior champion at Toronto also 1st prize at Winter Fair, 1917. We also have useful bulls and females in good breeding condition for sale.

Jas. Bowman

Elm Park, Guelph, Ontario

## Brookdale Herefords

A few choice bulls of Bonnie Ingleside 7th, Dock Publshbr & Beau Albany, breeding from seven to eight months of age. No females to spare at present. W. READHEAD, Milton.

### KNIGHTON LODGE STOCK FARM

Offers for sale two pure-bred Aberdeen-Angus cows, with calves at side, Middlebrook Beauty and Victoria of Larkin 2nd. L. E. & N. cars stop within a few minutes' walk of farm.

C. G. KETTLE, Prop., Wilsonville, Ont., R.R. No. 1. Phone 2930, Waterford. W. A. Woolley, Manager

SCOTCH FEMALES FOR SALE FROM WALNUT GROVE STOCK FARM  
We are offering seven high-class Scotch females and two bulls from our herd sires Trout Creek Wonder and Gairford Eclipse. These cattle are around a year old, colors red and roan and in the best of condition, fit either for show or foundation stock. See these, if in the market for high-class stock. D. Brown & Sons, Shedden, Ont., P.M., M.C.R. Twelve miles west of St. Thomas. Long distance Phone.

Beach Ridge Shorthorns and Yorkshires—Shorthorn herd headed by Sylvan Power 95871, a junior champion on Canadian circuit in 1915, and sire of the G. Champion bullock at Guelph Winter Fair, 1918. Young stock of all ages, both sex, for sale; also young cows with calf at foot or in calf to Sylvan Power. We can supply any want in Yorkshires.

R. D. HUNTER, EXETER, ONTARIO

## Glengow Shorthorns

—We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding, and are thick, mellow fellows, bred in the purple.

WM. SMITH, COLUMBUS, ONT.

Myrtle, C.P.R.; Brooklin, G.T.R.; Oshawa, C.N.R.

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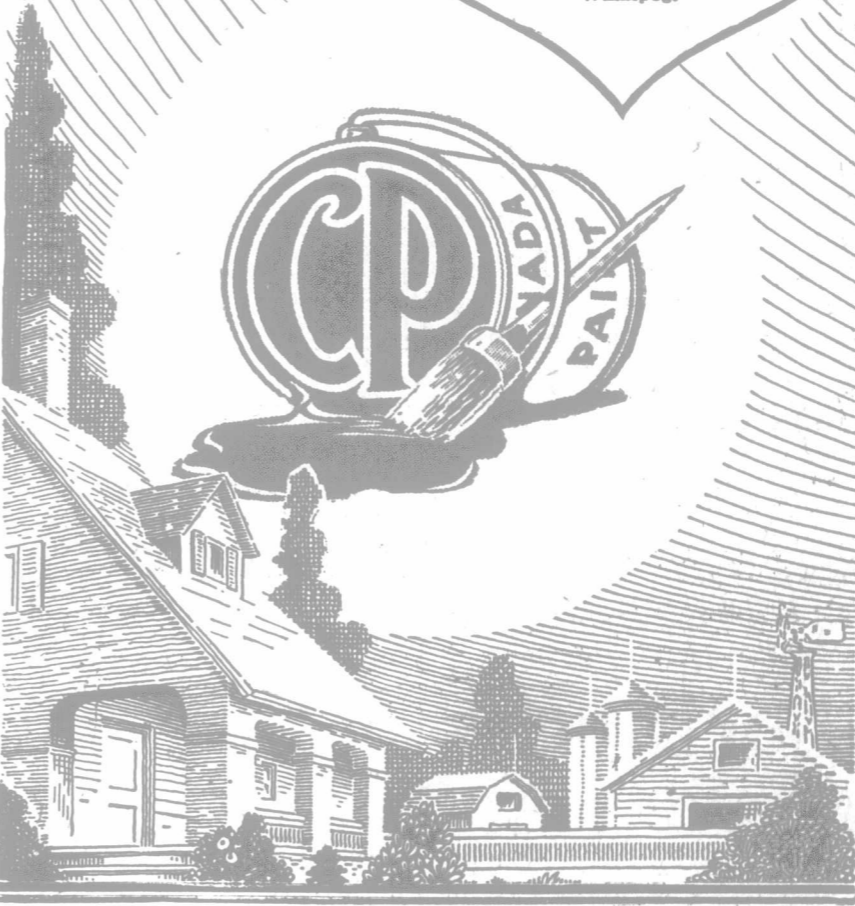
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### Robert Miller, Stouffville, Ontario

Has EIGHT of the best young bulls that he had owned at one time, good ages and beautifully bred. Also several cows and heifers, some of them with calves at foot, others in calf to Rosemary Sultan, the Grand Champion bull at head of the herd. Everything of Scotch breeding. The prices are very reasonable, and though the freight is high, it will be paid.

### Pure Scotch and Scotch-Topped Shorthorns

We have several choice young bulls of the best of breeding and ready for service. Two are by Raphael (imp.), one by Right Sort (imp.), one by Sittyrton Selection, and several by our present herd sire, Newton Cedric (imp.). Prices right.

R. M. MITCHELL

R. R. No.

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Shorthorn Bulls and Females—Herd headed by Ruby Marquis, a son of the great Gairford Marquis (imp.). Our calves now coming are all by this sire. We are also offering a few females in calf to him. Get our prices before buying elsewhere.

PRITCHARD BROS., R.R. No. 1, Elera, Ont.

## Choice Shorthorn Females

Mysie, Rosemary, Clementina, Missie, Miss Ramadens, Cruickshank, Fragrance, etc., all good pedigrees and all good breeding cattle in calf to good bulls. Prices right. Also a few bull calves. Correspondence solicited.

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—Herd headed by Sea Gem Pride = 90865 =. Present offering includes two real herd leaders. One imported in dam, the other by Sea Gem's Pride and from a show cow. A number of other good bulls and a few females. Write for particulars.

Telephone and telegraph by A77.

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Herd headed by "Burnfoot Champion" = 100945 =, whose dam holds the two year old record of Canada, and his dam on sire's side has an R.O.P. record of 13,535 lbs. of milk and 540 lbs. of fat. "Buttercup" = 11906 = has just completed her test in 4 year old form with 16,566 lbs. of milk in twelve months. Could spare a couple of females. Visitors welcome to the farm at any time.

C. W. CARTER, Pinehurst Farm, Ilderton, Ont.

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SHORTHORN CATTLE and LEICESTER SHEEP. HERD ESTABLISHED 1855—FLOCK 1848. The great show and breeding bull, Browndale = 80112 =, by Avondale, heads the herd. Extra choice bulls and heifers to offer. Also a particularly good lot of rams and ewes all ages. Imported and home bred. JAMES DOUGLAS, CALEDONIA, ONTARIO.

## Dual-Purpose Shorthorns

Herd headed by Dominator 106224 whose two nearest dams average 12,112 pounds of milk in a year. Cows in the herd with records up to 13,891 pounds of milk. Cows in calf to Dominator priced to sell.

WELLDWOOD FARM, Farmer's Advocate

London, Ontario

### SOUTHVIEW FARM SHORTHORNS

Herd headed by Victor Bruce, a Miss Syme by Victor. Present offering—two bulls of serviceable age by former herd sire Secret Champion, a few heifers by this sire and bred to Victor Bruce; also Yorkshire pigs either sex.

C. J. STOCK,

(R. R. Station, Tavistock 1 mile)

Woodstock, Ont., R.R. No. 6



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D. W. SHEA,  
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This Liniment will also stop bleeding at once and prevent blood poisoning

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DOUGLAS & CO., Manufacturers, NAPANEE

### ANTICIPATION will be greater than REALIZATION

if you are not using a

### Good Shorthorn Bull

I have a few imported ones ready for service, as well as several of my own breeding. The price is not high.

WILL A. DRYDEN  
Maple Shade Farm  
Brooklin, Ont.

English Dual-Purpose

## Shorthorns

For sale: Bull calves and young bulls. English bred for milk and beef. The right kind to head Canadian herds to increase profits. From very moderate prices and up. English Large, Black Pigs. A great bacon type, long and deep, thrifty. Come or write.

### LYNNORE STOCK FARM

F. Wallace Cockshutt  
Brantford - Ontario

### Mardella Shorthorns

Herd headed by The Duke, the great, massive 4-year-old sire, whose dam has 13,599 lbs. of milk and 474 lbs. of butter-fat in the R. O. P. test. I have at present two exceptionally good, young bulls ready for service, and others younger, as well as females all ages. Some are full of Scotch breeding, and all are priced to sell. Write or call.

THOS. GRAHAM - PORT PERRY, ONT.  
R. R. No. 5

### GRAHAM'S SHORTHORNS

Present offering 2 choice bulls sired by the Duke whose dam gave 13,599 lbs. of milk and 474 lbs. of butter-fat. R. O. P. test: One dark Red 8 months. The other Roan 13 months. Can also spare a number of females.

CHARLES GRAHAM, Port Perry Ont.

### The Hawthorn Shorthorns

Just one extra good red bull left, 11 months, by our herd sire. Priced to move. Females all ages, Clydesdale fillies and Leicester Sheep.

ALLAN B. MANN, The "Hawthornes,"  
Peterboro, Ont., R.R. 4.

EVERGREEN HILL FARM

### R. O. P. SHORTHORNS

Yearling bulls all sold. Could spare a few calves of either sex, two to four months old.

S. W. JACKSON Woodstock, Ont.

Shorthorn Bulls for Sale—Eight young bulls of serviceable age. Sired by the imp. bull Dundas Prince 101809.

WM. GRAINGER & SON, Auburn, Ont.  
Shorthorns and Clydesdales—We have a number of Shorthorn bulls which are pure Scotch and Scotch-topped; extra good quality, out of high-record cows; also a few females, and one extra good yearling Clyde Stallion; also a good two-year-old mare. P. CHRISTIE & SON, Port Perry, Ont.

Shorthorns—Present offering: 6 choice young bulls and a few females, their dams are good milkers and best of breeding. Prices moderate.

STEWART M. GRAHAM, Lindsay, Ontario

### Questions and Answers. Miscellaneous.

#### Soot Stains.

Is there anything that will take soot stains out of a woolen carpet? The snow came down the chimney and melted, and a black liquid ran down on the carpet.

J. S.

Ans.—We have been unable to find any recipe that will remove soot stains. If any of our readers have had experience in removing stains of a similar nature we would be pleased to hear from them.

#### Holidays—Bull Running at Large.

1. What are the holidays which a hired man, working by the year, can claim when nothing is said about holidays at the time of hiring?

2. A has a pasture lot on which he runs pure-bred cattle. Adjoining this field B keeps grades and turns his herd sire into the field. Can A prevent B from turning his bull in the field? A. S.

Ans.—1. When nothing is said to the contrary at the time of hiring, a man engaged by the year is expected to assist with the chores each and every day, but, outside of the chores, may claim New Year's Day, Good Friday, Easter Monday, Victoria Day, Dominion Day, Labor Day, Thanksgiving Day and Christmas Day, or any other day or days proclaimed to be a public holiday by the Lieutenant-Governor or Governor General.

2. According to law, a male animal is not allowed to run at large. A should notify B that he would be liable should any damage occur from his herd sire breaking into A's lot.

#### Fixing a Lawn.

How is it best to fix a lawn? What time of the year should it be done? We are raising our lawn this spring and were wondering if it would be advisable to cut the old sod off or to fill it up with earth and sow new seed.

A. S.

Ans.—You will find it a good deal of work to cut the old sod and get it laid evenly. We believe that you would find it easier and possibly more satisfactory to raise your lawn with rich loam soil and then seed it. There are good lawn mixtures on the market which are for sale by the seed firms, or you might sow timothy, White Dutch clover and Kentucky Blue Grass quite thickly. It is well to keep the lawn watered. If you are terracing the lawn it might be best to sod up over the terrace, as there is sometimes difficulty in getting the seed to catch on the slope where it very often dries out.

#### Septic Tank.

How is a septic tank built? How far from the house should it be? How far from the well should it be? Should the water from the bath go into it? What will the material cost?

J. D.

Ans.—Septic tanks are built with two or three compartments. In a two-compartment tank, the receiving tank should be about 4 feet square and 4 feet deep. The second compartment should be 2 or 3 feet wide and the same length and depth. The material is siphoned from one tank to the other, and a valve is placed in the second tank which opens and allows the liquid to escape when the tank is filled. In a three-compartment tank the valve is not used. The material is siphoned from one compartment to the other and gives good satisfaction. The tank may be built right alongside the house but the bottom of it which connects with the tile should be deep enough in the ground so that the tile will not be over 15 to 18 inches deep. These tile should be laid pretty much on the level, and it will require two or three hundred feet of them for a tank of the size mentioned. The liquid is absorbed into the ground through the joints of the tile. The tank may be built of concrete. Five-inch walls will do and it should be covered on the top. It is well to keep as far away from the well as possible, and if it is necessary to have it within a couple of hundred feet of the well it is best to use glazed tile and cement the joints. After you get this distance from the well, ordinary field tile should be used. The water from the bath may be run into the septic tank. The cost will not be high, but it will depend on the cost of cement and gravel in your locality. Three loads of gravel and two barrels of cement would build a tank large enough.

## Raise Calves But Sell Your Milk

Demands for milk and more milk continually increase, yet there is such a shortage of cattle in the world, you must raise your calves—

This is not impossible to a man who uses

## CALDWELL'S CALF MEAL

This is the best "vealing-up" ration you can feed your calves. Mix it with separator milk or water. Your calves will thrive on it just as rapidly as on new milk, yet you save money because this feed costs you less than the price you get for your milk.

Your dealer most likely carries this feed, if not we will send you the address of the nearest dealer who does, or ship direct.

## The Caldwell Feed and Cereal Co., LIMITED.

DUNDAS

ONTARIO

We operate the largest exclusive feed mills in Canada—and make all kinds of stock and poultry feeds. We can send you prices and information on any rations you require.

## Imported Shorthorns

SIRES IN SERVICE;

Imp. Collynie Ringleader  
(Bred by Wm. Duthie)

Imp. Clipper Prince  
(Bred by Geo. Campbell)

Imp. Orange Lord  
(Bred by Geo. Anderson)

We are offering a large selection in imported females with calves at foot or in calf. A few home-bred females, 19 imported bulls and 8 home-bred bulls, all of serviceable age. If interested, write us, or come and see the herd.

J. A. & H. M. PETTIT - Freeman, Ontario

Burlington Jct., G.T.R., half mile from farm. 'Phone Burlington.

## The Salem Herd of Scotch Shorthorns

HERD HEADED BY GAINFORD MARQUIS, CANADA'S PREMIER SIRE

Write us about the get of Gainford Marquis. They have won more at Toronto and other large exhibitions than those of any other sire. We still have a few sons to offer, as well as females bred to Canada's greatest sire.

J. A. WATT

Elora, Ontario

### PEART BROTHERS SHORTHORNS

We are offering our Scotch Bred herd sire Nonpareil Counsel 96931, also ten young bulls of his get practically all ready for service, from cows of both beet type and dual-purpose, one of which has qualified in R.O.P. Prices reasonable. Inspection invited. Pleased to meet trains at Hagersville, M.C.R., Caledonia, G.T.R.

PEART BROS., Phone 70-16, Caledonia, Ont., R.R. No. 3.

### SPRUCE GLEN FARM SHORTHORNS

We have for sale a number of young bulls fit for service and a few choice heifers.

JAMES McPHERSON & SONS

DUNDALK, ONTARIO

### 6 BULLS BY ESCANNA FAVORITE

A son of the famous Right Sort (imp.). All are ready for service and priced to sell. We have others younger and could spare a number of young cows calving early to the service of the same sire. Write, don't delay.

W. G. GERRIE,

C.P.R. Station on farm, Bell 'Phone

Bellwood, Ontario.

Shorthorns Landed Home—My last importation of 60 head landed at my farm on June the 20th, and includes representatives of the most popular families of the breed. There are 12 yearling bulls, 7 cows with calves at foot, 24 heifers, Whimble, etc. Make your selection early.

GEO. ISAAC,

(All railroads, Bell 'phone)

Cobourg, Ontario

## SHORTHORNS, CLYDES

Have a few choice bull calves left. See these before buying elsewhere. Also six Clyde Mares and fillies rising one to 6 years of age. Each by imported sire and dam. WM. D. DYER, R. No. 3 Oshawa, 2 1/2 miles from Brooklin, G.T.R., 4 miles from Brooklin, C.N.R. or Mvrtle, C.P.R.

SHORTHORNS—Herd headed by Victor Stamford 95959, and Master Marquis 123326, a great son of Gainford Marquis. I now offer for sale my stock bull, young Shorthorns of either sex, Oxford Down ewes and ewe lambs, a 3-year-old Clydesdale stallion, and Scotch Collie pups.

GEO. D. FLETCHER, R.R. 1, Erin, Ontario

Erin Station, C.P.R. Long distance 'Phone

# But Milk

Continually increase, in the world, you

Who uses

# LL'S

ration you can for milk or water. rapidly as on new feed costs you

feed, if not we best dealer who

# Cereal Co.,

ONTARIO

Canada—and make all prices and information

# horns

Imp. Orange Lord (Bred by Geo. Anderson)

females with females, 19 serviceable the herd.

man, Ontario

Burlington.

# Shorthorns

PREMIER SIRE

ave won more of any well

Elora, Ontario

# HORNS

ten young bulls of his get purpose, one of which has set trains at Hagersville, M. Caledonia, Ont., R.R. No. 5

# ORTHORNS

few choice heifers.

DUNDALK, ONTARIO

# ORITE

priced to sell. We have the service of the same

Bellwood, Ontario.

60 head landed at my farm includes representatives of the with calves at foot, 24 heifers, Augusta, Miss Rame-

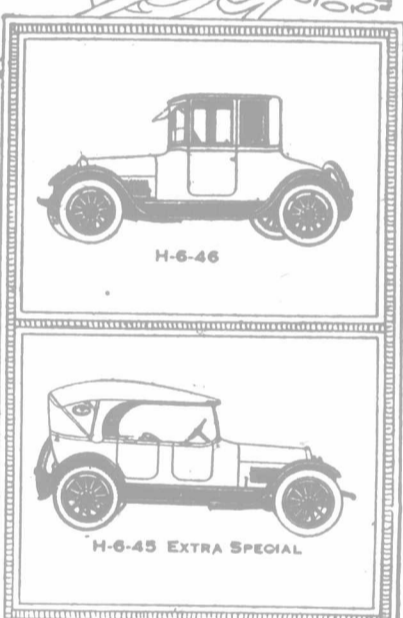
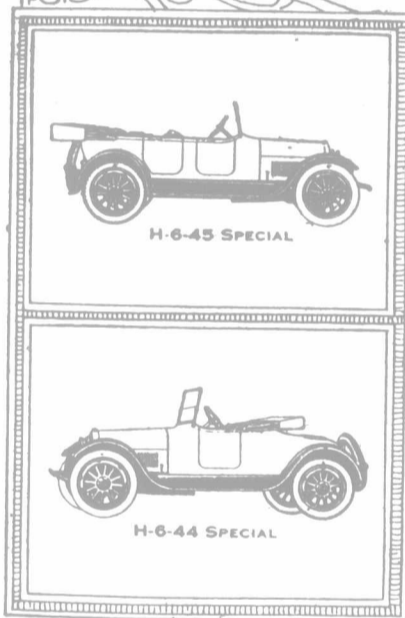
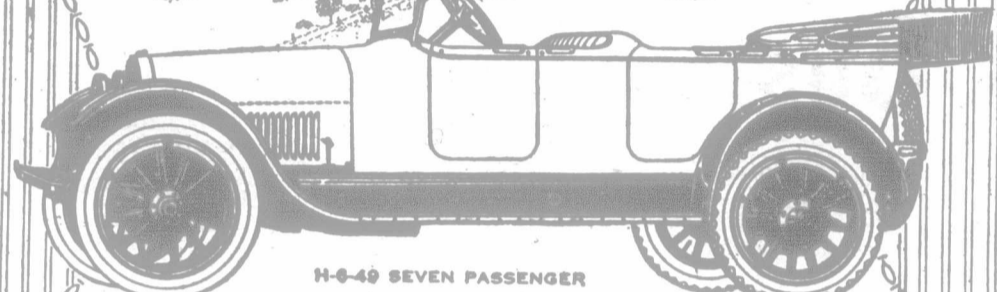
Cobourg, Ontario

# YDES

Also six Clyde Mares and Dyer, R. No. 3 Oshawa, C.P.R.

nd Master Marquis 123396, offer for sale my stock bull, Childred's Royal 45353. Also year-old Clydesdale stallion, P.R. Long distance 'Phone

# McLAUGHLIN Master Sixes



Master engineers combined their efforts with master artists to produce the McLaughlin Master Six. The result is a car worthy of the highest manufacturing ideals—a car appropriately called the Master Six. CANADA'S STANDARD CAR The McLAUGHLIN MOTOR CAR CO., Limited OSHAWA, ONTARIO

"See the McLaughlin Models at the nearest McLaughlin Show Rooms"

## Raymondale Holstein-Friesians

A herd sire of our breeding will improve your herd. We have sons of our present sire, Pontiac Korndyke of Het Loo (sire of \$12,750 Het Loo Pieterje) and also sons of our former sire, Avondale Pontiac Echo. Several of these are of serviceable age, and all are from good record dams. Quality considered, our prices are lower than anywhere else on the continent. These youngsters should not remain long.

RAYMONDALE FARM Vaudreuil, Que.

Write to-day.

D. RAYMOND, Owner, Queen's Hotel, Montreal

## 33-LB. GRANDSONS OF LULU KEYES

I have at present ten young bulls all sired by my own herd sire, King Korndyke Sadie Keyes, a son of Lulu Keyes, 36.05 lbs. of butter and 785 lbs. of milk in 7 days. These youngsters are all first-class individuals, and their dams' records run as high as 33.28 lbs. of butter in 7 days. Several of them must go quick to make room.

D. B. TRACY (Hamilton House Farms) COBOURG, ONT.

## Sunnybrook Holsteins!

The Bull is the first consideration!

We have a few for sale highly strained in the blood of the World's Record cows, all sons of Sir Lyons Hengerveld Segis (one of Canada's greatest bulls). Nothing offered that is not from high testing dams. Inspection invited. Write for particulars.

Jos. Kilgour, Eglinton P.O., North Toronto

Young Bulls for Sale from R.O.P. champions and dams and sisters of R.O.P. champions, the dam of two champions in 7-and-30-day tests. We invite inspection, and will meet prospective buyers at C.T.R. or C.P.R. stations—Woodstock or Ingersoll. Walburn Rivers & Sons (Phone 343 L, Ingersoll, Independent Line), R.R. 5, Ingersoll, Ont.

I Have Holstein Bulls and Females at right prices. The bulls are from good record daughters of Louis Prilly Rouble Hartog, and sired by Baron Colantha Fayne, a son of Canada's first 33-lb. cow. The females are of much the same breeding. If you want Holsteins, get my prices.

T. W. McQUEEN, Oxford County, Bell 'Phone, Tillsonburg, Ont.

## RIVERSIDE HOLSTEINS—CHOICE BULLS

We have several 10 months old, from dams with official records up to 100 lbs. of milk per day and 32.32 lbs. of butter in 7 days. These are well marked and straight individuals. Inspection invited.

J. W. Richardson, Caledonia, Ontario

## Holstein Bulls

15 ready for service, 1 younger. From dams with 32.7 lbs. butter in 7 days to those priced for the most conservative buyer. Females also.

R. M. HOLTBY

R.R. NO. 4, PORT PERRY, ONTARIO

## Orchard Leigh Holsteins

1 choice yearling bull, dark color. His dam at 2 yrs. old made 18.36 lbs butter, average test 4.3% fat. Her dam made 20.20 lbs. butter in 7 days, 100 lbs. milk in 1 day. Sire's dam 25.15 lbs. butter in 7 days, 19,350 lbs. milk in one year, average test 3.6% fat. Price \$140. Write for pedigree.

JAS. G. CURRIE & SON, (Oxford County) INGERSOLL, ONTARIO.

## Manor Farm Holstein-Friesians

If it's a herd sire you want, write me. I have sons of both my senior and junior sires, King Segis Pontiac Posch and King Korndyke Sadie Keyes. All from good record dams. Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter to seven days. Correspondence solicited. Visitors welcome.

GORDON S. GOODERHAM, Clarkson, Ont.

Stations: Clarkson and Oakville. Farm on Toronto and Hamilton Highway.

## HOSPITAL FOR INSANE

HAMILTON - ONTARIO

Present herd sire is one of the best sons of King Segis Alcartra Spofford. We have three of his sons born during May and June last, and also a grandson of Lakeview Lestrangle. Apply to Superintendent.

## AVERAGE 114.1 LBS. OF MILK

Premier Middleton Keyes, No. 38052; born Nov. 12, 1918, and about 75% white; a perfect individual and great size. His two near dams and sire's sister average 30.97 lbs. butter and 766.4 lbs. of milk in 7 days and 114.1 lbs. of milk in a day. Sire: King Sylvia Keyes—6 sisters and dam average 115 lbs. of milk in 1 day, a brother to May Echo Sylvia, world's greatest cow. Dam: Princess Julian of Middleton, with 611 lbs. of milk and 23.71 lbs. of butter in 7 days, with 91 lbs. on her best day. He is priced to sell. Write at once, so that I may tell you more about him.

H. H. BAILEY, Mgr., Oak Park Stock Farm Paris, Ontario, Canada

Silver Stream Holsteins—Special offering: One bull fit for service, a fine individual. Dam a daughter of King Lyons Hengerveld, whose five nearest dams average 31.31 lbs. butter in 7 days. Sire a son of King Lyons Colantha, his six nearest dams average 30.10 lbs. butter. We also have others younger. Write at once for prices or better come and see them. Priced to sell.

JACOB MOGK & SON, R.R. 1, Tavistock, Ont.

## Lump Jaw

The only reliable treatment for Lump Jaw in Cattle. Fleming's Lump Jaw Cure Price \$2.50 a bottle. Sold under a positive guarantee since 1896. Your money back if it fails. Write for Fleming's Vest-Pocket Veterinary Adviser 96 pages and illustrated. It is Free. Fleming's Chemical Horn Stop. A small quantity applied when calves are young will prevent growth of Horns. A 50c tube sent postpaid is enough for 25 calves.

FLEMING BROS., Chemists, 75 Church St., Toronto, Ont.

## Cream Wanted

Ship your cream to us. We pay all express charges. We supply cans. We remit daily. We guarantee highest market price.

## Ontario Creameries

LCNDON LIMITED ONTARIO

## Cream Wanted

Ship yours to us, as we must have it to supply our well-established trade with good quality butter. Therefore, we are prepared to pay you highest market price paid. We furnish cans and pay express charges. References any bank.

## Mutual Dairy & Creamery

743 King Street West Toronto - Ontario

## Europe Wants HOLSTEINS

Little Belgium alone requires 20,000 pure-bred and 100,000 grade Holsteins. Other European countries are in similar condition. BREED WHAT THE WORLD WANTS. IF YOU CAN'T BUY A HERD, BUY A HEIFER.

Information from the HOLSTEIN-FRIESIAN ASSOCIATION President, Dr. S. F. Tolmie, M. P., Victoria, B. C. Secretary, W.A. Clemons, St. George, Ont.

# Fresh Running Water

For Farm and Country Homes

Just turn a faucet, and the water gushes out in a fresh, pure, abundant stream.

Think of it! No more water to carry by hand for drinking, cooking, washing, scrubbing or for watering the stock. Isn't that a convenience that appeals to you?

In no other way can you invest the same amount of money to eliminate as much hard work as by the purchase of an

## Empire WATER SUPPLY System

Empire Systems are simple in design, compact, powerful. Never freeze. Always ready for instant use—day or night. There is an Empire System suited to the needs of every home, and priced so reasonably that no home need go without it.

### Write For Free Booklet

We want to tell you about the many advantages of the Empire System. Our free booklet gives descriptions and illustrations. We will also send you an Information Blank, which, when filled out, will enable us to send you full particulars and the cost of a system adapted to your particular needs. Get posted—write to-day.

**Empire Manufacturing Co., Limited.** HEAD OFFICE AND FACTORY: London, Ont.  
Branch Office and Warehouse: 119 Adelaide St. W., TORONTO, ONT.

### JUST JERSEYS

## Baldwin's

REGISTERED  
COATICOOK, QUE.

**Will Sell Few Fresh Jersey Cows**  
Jersey Bull one year, dam Mabel's Poet Snowdrop, 1st prize as calf, 1st Junior Champion as yearling.  
2nd prize two-year-old Toronto, four times 1st Woodstock, four times shown. Bull six months, dam Oxford's Silver Bell, milked 38 lbs. day, score 172 points at Guelph, 140 days in milk. First calf 1916. I developed and was breeder of Beauty Maid Champion four-year-old butter cow of all breeds in Canada, also Woodstock Pat, Champion Berkshire Boar Eastern Prov. 1916-17.  
TRA NICHOLS, R.R. No. 2, Burgessville, Ont.

### Twenty-five Years Breeding Registered

## Jerseys and Berkshires

We have bred over one-half the world's Jersey champions for large yearly production at the pail. We bred, and have in service, the two grand champion Berkshire boars. If you need a sire for improvement, write us for literature, description and prices.

HOOD FARM - LOWELL, MASS.

## Selwood R. O. P. Ayrshires

Prize winners that are producers. Two choice young bulls ready for service, and a few heifers. Write for description and prices.

**J. L. Stansell, Straffordville, Ont.**  
Our policy: Satisfaction or money refunded.

**Choice Offering in Ayrshires**  
AT SPECIAL PRICES. Several young bulls of serviceable ages. All from R.O.P. sires and dam. Come and see them.  
JOHN A. MORRISON, Mount Elgin, Ontario

**Glencairn Ayrshires**—Herd established 40 years. Producing ability from 8,600 to 11,022 lbs. If that sort of production appeals to you, we have heifers all ages and young bulls for sale. Thos. J. McCormick, Rockton, Ont. Copetown Station, G.T.R.

**CITY VIEW AYRSHIRES**  
Bulls ready for service. Bull calves, some have 7 crosses of R.O.P. blood. Heifers just freshened. Two-year-olds bred for early fall. Nothing reserved at present. James Begg & Son, St. Thomas, Ont.

The Advocate Advs. Pay.

## THE GENERAL ANIMALS INS. CO. OF CANADA

71 A ST. JAMES, MONTREAL.

### LIVE STOCK INSURANCE

AGAINST LOSS THROUGH DEATH BY ACCIDENT OR DISEASES

SPECIAL RATES for Register d Cattle and Horses. Short term insurance at low rates for Show Animals, Feeding Cattle, Animals shipped by rail or water. In-foal mares, In-calf cows, Stallions, etc.

WRITE US FOR FREE PROSPECTUSES

Address: THE GENERAL ANIMALS INS. CO.  
71 A St. James Street, Montreal.

JOHN H. HARRIS, 87 Golfview Ave., Toronto, Ontario.

## PROSPECT FARM JERSEYS

We have a large herd, and for over 30 years we have used only first-class sires, and are now in a better position than ever before to offer some choice young cows and heifers, "both registered and high grades," due to calve in March and April. They are all in the pink of condition, and the high grades will make ideal family cows. Choice young bulls six months and younger.

**R. & A. H. BAIRD, New Hamburg, Ontario. Bell 'Phone**  
**Brampton Jerseys at National Dairy Show**

At the National Dairy Show at Columbus, Ohio, in October, Brampton Jerseys won among other major awards first for the best five females of the breed, which is, perhaps, the greatest award which can be won at this, the World's Greatest Dairy Show. Among these was Beauty Maid, the champion four-year-old R.O.P. butter cow for Canada. We also bred and owned the dam and imported the sire of the mature champion R.O.P. butter cow for Canada. Why not make your selections from the Brampton herd?

**B. H. BULL & SONS** BRAMPTON, ONTARIO

**The Woodview Farm JERSEYS**  
London, Ontario  
JNO. PRINGLE, Prop.  
CANADA'S MOST BEAUTIFUL JERSEY HERD  
Herd headed by imported Champion Ronwer, winner of first prize with five of his daughters on the Island of Jersey, 1914, second in 1916, and again first in 1917. We are now offering for sale some very choice bull calves, ready for service, sired by imported bulls and from Record of Performance imported prize-winning cows. Also some cows and heifers. Prices right. We work our show cows and show our work cows.

**The Edgeley Champion Herd of Jerseys**—Present offering: Two young bulls dropped June 1918, one sired by Brampton Prince Stephen, dam Rhoda of Pine Ridge Farm, 10,801 lbs. milk, 593 lbs. fat in one year. Others sired by Edgeley Bright Prince, son of Sunbeam of Edgeley, champion butter cow of Canada.  
JAMES BAGG & SON (Woodbridge, C.P.R.; Concord, G.T.R.), Edgeley, Ont.

**SPRINGBANK R.O.P. AYRSHIRES**  
We still have a few select young heifers for sale from our excellent herd sires, Netherton King Theodore (imp.) and Humeshaugh Invincible Peter. All from R.O.P. dams. We also have four choice young bulls under 9 months of age. Inspection solicited.  
A. S. TURNER & SON, Ryckman's Corners, Ontario.

## Westside Ayrshire Herd

I can price females with records up to 12,000 lbs milk, and have two young bulls aged 12 and 16 months, with rich breeding at attractive prices for quick delivery. Correspondence and Inspection invited. DAVID A. ASHWORTH, Denfield, R. 2, Middlesex Co., Ont.

## Homestead Farm R. O. P. Ayrshires

At the head of our herd at present we have a grandson of the great Jean Armour. He is being used on the daughters of our former sire Garlaugh Prince Fortune (imp.). We can spare a few R. O. P. females of this breeding and also have young bulls. MacVicar Bros. Phone 2253, Harrietsville, Belmont, R.R. No. 1 Ont.

## Questions and Answers.

Miscellaneous.

### Destroying Weeds.

One of our subscribers from Northumberland County writes that he has found the frequent use of the plow the best method of eradicating twitch grass from a field. Keeping the ground stirred with the plow will kill the weed quicker than by using the cultivator. While we realize the benefit of the plow, we have found the broad-toothed cultivator to be a valuable implement for the eradication of weeds of all kinds.

### The Cream Can.

Should cream be kept covered while being gathered or left to the free circulation of air?

M. F.

Ans.—Cream should be cooled before being put in the storage receptacle, and it is advisable not to cover it tightly. Of course, a cotton screen could be placed over the top of the can to keep any dirt out of the cream. If the cream is kept in a can and the lid is not put on tightly there should be air enough get into the can to keep the cream properly. However, a screen or covering would be preferable.

### Tenant and Manure—Executor's Deed

1. Can a tenant, on leaving a place, draw away the manure?

2. Does manure come under the heading of chattels?

3. A sold his farm to B. A died before the papers were drawn up. Can A's executors issue a proper deed?

4. Would it be legal for B to pay said executors within one year after A's death?

D. S.

Ontario.

Ans.—1. No.

2. No.

3. Yes.

4. Yes.

### Holidays.

When a man is hired by the year what holidays can he claim? Has he a right to every Sunday away from the milking and chores?

A. T. M.

Ans.—Unless otherwise arranged, a man hired by the year is supposed to assist with the chores and milking every Sunday, and also on holidays. Outside of the chores and milking he is entitled to New Year's Day, Good Friday, Easter Monday, Victoria Day, Dominion Day, Labor Day, Thanksgiving Day and Christmas Day, and any day or days proclaimed as a public holiday by the Lieutenant-Governor.

### Wire-worms.

How can one destroy wire-worms in new sod? My neighbor has twenty acres in which the wire-worm is cleaning out the grass.

A. M.

Ans.—The wire-worm is practically indestructible; that is, when in the worm stage of its development. By a short rotation of crops this pest may be prevented from gaining a hold in the field. Its life cycle runs about three years. We know of no crop that is really immune from the attacks of this pest. When the wire-worm is working in spring grain crops we have seen it apparently checked by an application of salt to the land. One must be careful, however, not to apply too heavy a coating in order to avoid injuring the crop.

### Shrinkage on Cattle.

A farmer in selling fat cattle by live weight is docked a certain percentage by the buyers for shrinkage. Should the cattle be fasted before being weighed, or has the purchaser a right to deduct for shrinkage?

2. A five-year-old horse has two wolf teeth. Could they be removed?

R. M.

Ans.—1. It is customary with some feeders to feed the cattle heavily before taking them to market. However, it is not good practice to over-feed them, especially if they have to be driven very far. Some cattle-buyers hold the cattle for an hour or two before weighing. As to whether the buyer should deduct for shrinkage is a matter of custom; some do while others do not. When making the bargain it is well to consider this.

2. If these teeth are present when the animal is five years old it is well to have them removed.

Questions and Answers. Miscellaneous.

Destroying Weeds. Our subscribers from Northumbria County writes that he has found the best use of the plow the best for eradicating twitch grass from a field. The ground stirred with the plow will kill the weed quicker than the cultivator. While we are in the benefit of the plow, we have a broad-toothed cultivator to be used for the eradication of all kinds.

The Cream Can. Cream should be kept covered while in the storage receptacle. It is advisable not to cover it tightly with a cotton screen could be placed over the can to keep any dirt from the cream. If the cream is kept in the can and the lid is not put on tightly it will be air enough get into the cream and spoil it. However, covering or covering would be preferable.

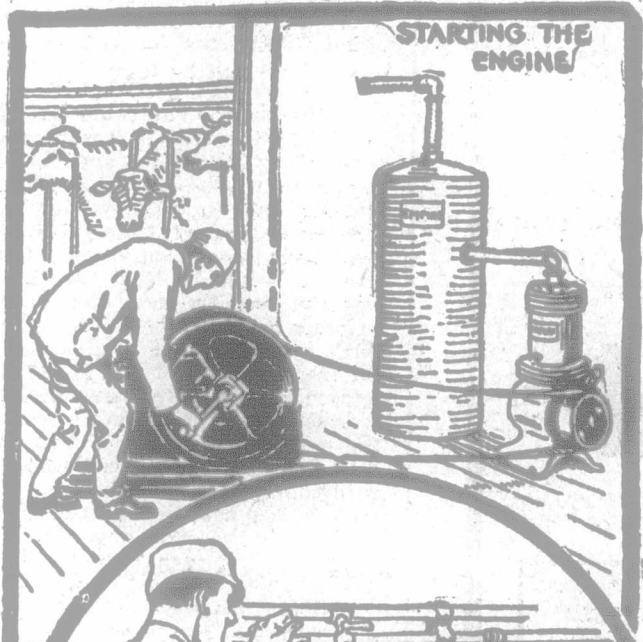
Manure—Executor's Deed. A tenant, on leaving a place, is to remove the manure? The manure come under the chattels? A man died before his farm to B. A died before he was drawn up. Can A's estate sue a proper deed? It would be legal for B to pay said manure within one year after A's death. D. S.

No. Holidays. A man is hired by the year what is his claim? Has he a right to be paid away from the milking on A. T. M. Unless otherwise arranged, a man by the year is supposed to do the chores and milking every day and also on holidays. Out-chores and milking he is to do on New Year's Day, Good Friday, Victoria Day, Dominion Day, Thanksgiving Day and Christmas Day, and any day or days as a public holiday by the Governor.

Wire-worms. Wire-worms in a field destroy wire-worms in a field. A neighbor has twenty acres of wire-worm is cleaning out A. M. Wire-worm is practically in its last stage, when in the worm development. By a short crop this pest may be pre-empting a hold in the field. It runs about three years. A crop that is really immune to this pest. When the wire-worm is working in spring grain it is seen it apparently checked by the application of salt to the land. One should, however, not to apply too much in order to avoid injuring the crop.

Weight on Cattle. A man selling fat cattle by live weight should check a certain percentage for shrinkage. Should the shrinkage be deducted before being weighed, or should the purchaser a right to deduct? A year-old horse has two wolf teeth removed? R. M. It is customary with some breeders to check the cattle heavily before they go to market. However, it is not practice to over-feed them. They have to be driven very fast to the buyers hold the cattle for two or three days before weighing. The buyer should deduct for shrinkage. It is a matter of custom; some do not. When making a purchase well to consider this. If wolf teeth are present when the horse is old it is well to have

# How the Empire Does its Work



STARTING THE ENGINE

THESE illustrations show the ease and simplicity of operation of the Empire Milking Machine. Anyone can milk a herd with an Empire because there is so little to do—the machine does the work. You start the engine, attach the milker by hose to the pipe line, apply the teat cups to the cow and carry away the milk after the machine has done the work. The teat cups stay on perfectly, regardless of the size of the teats. No surcingle or harness is required.

The Empire's action is always uniform, no matter who does the milking. The cows like it better than hand milking. They become accustomed to its regular, gentle and soothing action and "let down" their milk freely. It is especially successful with the hard milkers and nervous cows in the herd. It increases the flow of milk and lengthens the period of lactation.

you to materially increase your herd with the help you now have or to release your help for important field work. Even your young son or daughter can do the milking as well as you. Thousands of boys and girls are successfully conducting this work on many farms.

Learn all there is to know about the Empire and what it can do in making your herd more profitable. Write for Catalogue No. 11 and let us arrange with our local dealer for a demonstration.

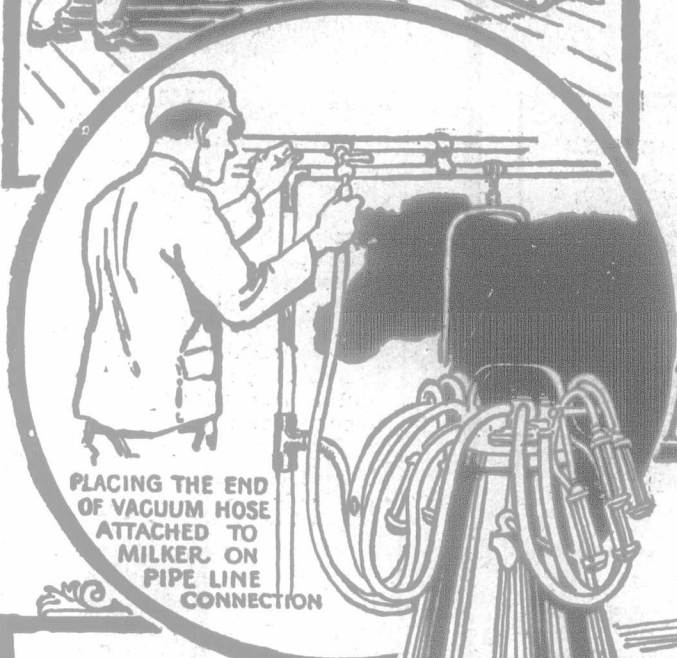
An Empire Milking Machine cuts dairy costs. With it one man can milk more cows than three men working by hand. It enables

The Empire Cream Separator Co. of Canada, Limited

146 Craig Street West, Montreal

Branches: Toronto and Winnipeg

Also Manufacturers of Empire Cream Separators and Gasoline Engines.



PLACING THE END OF VACUUM HOSE ATTACHED TO MILKER, ON PIPE LINE CONNECTION



SEE THE MILK FLOW

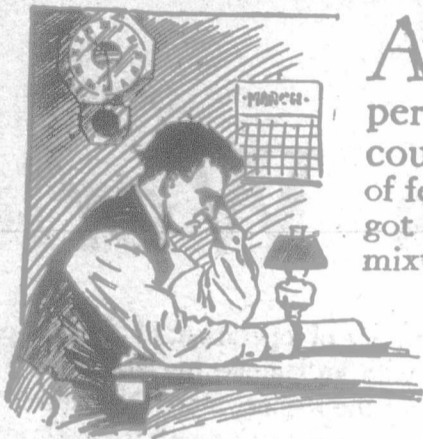


MILKER DOING THE WORK WHILE MAN CARRIES AWAY THE MILK FROM THE LAST TWO COWS MILKED

READY FOR THE NEXT TWO COWS

# EMPIRE MILKING MACHINES

## Let Experts Figure the Rations



Don't Waste Your Time

ANYBODY can feed a hog—but only experts can feed for *tip-top results*. Who but an expert with years of study and special experience could properly make available the odds and ends of feed materials about your farm. Certainly you haven't got time either to study scientific feeding or to figure out mixtures changing with the feed materials that happen to be available to you.

Let the experts figure your rations.

Our experts—Canadian experts with closest knowledge of Canadian needs—have the time, the scientific training and the facilities for proper selection and mixing of feeds. The result is

# Monarch Hog Feed

the cheapest feed available because it means good, firm, hard bacon, commanding best prices. It means quality bacon at minimum cost of production when feeds are high-priced. In short, it means extra profits put into your pocket.

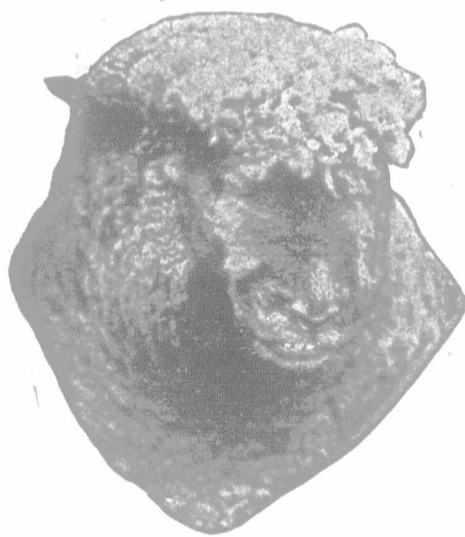
*Monarch Hog Feed* is not only calculated to a nicety as a ration, but it is properly mixed. And it is handy. No trouble collecting feeds to mix—just one feed to handle. You just ought to see how hogs go for it. It is both highly palatable and digestible.

*Monarch Hog Feed* is composed of shorts, corn products and digester tannage. It is unequalled for bone and muscle forming, and supplies the right amount of fat for shortening the hogs' stay on the farm and for sending them to market in A1 condition. Guaranteed analysis: protein 15%, fat 4%.

Decidedly you should feed not only for results but for MAXIMUM profits. With *Monarch* you can do it. Give it a trial. Order a ton from your dealer. If he can't supply *Monarch* write us direct, giving dealer's name.

The Campbell Flour Mills Co., Ltd., West Toronto 13

## Summer Hill Oxfords Grand Valley Yorkshires Yorkshires



The Sheep for the Producer, Butcher and Consumer.  
Our Oxfords Hold an Unbeaten Record for America.

We have at present a choice offering of yearling ewes and rams, as well as a lot of good ram and ewe lambs—the choicest selection of flock-heads and breeding stock we have ever offered.

**PETER ARKELL & SONS**  
R. R. No. 1 Teeswater, Ontario  
H. C. Arkell W. J. Arkell F. S. Arkell

### FOR SALE

Shropshire ewe lambs and young ewes, two Clydesdale Stallions, four Shorthorn bulls.  
**W. H. Pugh - Myrtle Station, Ont.**

Shropshires and Cotswolds—A lot of young ewes in lamb to imp. ram, and ewe lambs, good size and quality, at reasonable prices.  
**JOHN MILLER, Claremont, Ont.**

### SHROPSHIRE SHEEP

Breeding ewes of Kellock and Campbell breeding; bred to lamb in March and April, also ram and ewe lambs. **C. H. SCOTT, Hampton, P. O. Oshawa, Station, all Railways. Bell Phone.**

## Grand Valley Yorkshires

A number of choice boars from six to ten weeks old. Dams—selected by the Department of Agriculture from Featherston's and Dick's prize running stock. These boars were raised by the Grand Valley Pure-Bred Yorkshire Pig Club. Write for prices.

**WILL BOURN**  
R. R. No. 3, Grand Valley, Ont.

## Yorkshires

We are now booking orders for our spring pigs. Write for prices.

**WELWOOD FARM**  
Farmer's Advocate, London, Ontario

## BERKSHIRES

Large stock; all ages; two imported herd sires; English, American and Canadian strains. Send for breeding list.  
**CREDIT GRANGE FARM, MEADOWVALE, ONTARIO**

**Champion Duroc Jersys**—Herd headed by two champion boars: Campbell 46 3941, Toronto and London champion, 1916, 1917; Brookwater Ontario Principal 9735 (imported), champion Toronto and London, 1918. Write, or come and see my herd. Satisfaction guaranteed.  
**CULBERT MALOTT, R. R. 3, Wheatley, Ont.**

**Big Type Chester Whites**—Three importations in 1918. 25 bred sows and gilts for sale, some imported, others by imported sires. All bred to imported boars.  
**JOHN G. ANNESSER, Tilbury, Ont.**

**Sunnyside Chester Whites and Dorsets.** In Chester Whites both sexes, any age, bred from our champions. In Dorsets ram and ewe lambs by our Toronto and Ottawa champions, and out of Toronto, London and Guelph winners.  
**W. E. WRIGHT & Son, Glanworth, Ont.**

### Lakeview Yorkshires

If you want a brood sow or a stock boar of the greatest strain of the breed (Cinderella), bred from prize-winners for generations back, write me.  
**JOHN DUCK - PORT CREDIT, ONT.**

## Oak Lodge Yorkshires, Shorthorns

Write us also regarding your next herd sire. We have them from great milking dams—all good families.  
**J. E. BRETHOUR & NEPHEWS, Burford, Ont.**

### Prospect Hill Berkshires

Young stock, either sex, for sale, from our imported sows and boars; also some from our show herd, headed by our stock boar, Ringleader. Terms and prices right.  
**JOHN WEIR & SON - Paris, Ont. R. R. 1**

### BERKSHIRE PIGS

Boars ready for service, sows bred and ready to breed. Also some young things bred from winning stock. Prices reasonable. **JAMES CLARKE & SONS, Puslinch, R. R. No. 1, Ontario.**



## ELMHURST LARGE ENGLISH BERKSHIRES

From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock all ages. Satisfaction and safe delivery guaranteed.  
**H. M. VANDERLIP, Breeder and Importer, R. R. 1, BRANTFORD, ONTARIO. Langford Station on Brantford and Hamilton Radial.**

### Invergie Tamworths

Still to the fore, with a bonny bunch of gilts, bred and ready to breed; a few weaned laddies, 'Ca' in as ye're passin' or write me a bit note.  
**Leslie Hadden, Pefferlaw, Ont., R. R. No. 2.**

### FOR SALE

Litter of Pure-bred YORKSHIRE PIGS. Apply  
**E. GOFF PENNY**  
P. O. Box 1635 Montreal

## Questions and Answers

### Miscellaneous.

#### Vendor and Purchaser.

1. A purchased a farm from B in the fall of 1917 by agreement. A was to get possession in the spring of 1918. A engaged a lawyer to search the title before signing agreement, and the lawyer reported the title good and the property clear of all encumbrances. After the transfer A became suspicious that the lawyer had not made a thorough search of title, and he secured another lawyer to make a search with the result that there was about one hundred and eight dollars of unpaid ditch tax, but said that nothing could be done or no action taken against B as the transfer had been made. Is such the case? The conditions of this purchase were that A was to pay one thousand dollars down and balance on mortgage, which was done. When the transfer was made the vendor was unable to be present, through illness, and the lawyer in question, her agent, agreed that it would be legal to have her sign the deed the next day, which presumably he did. He was to record the deed for A and keep it in his vault. On the date interest was due the lawyer refused to allow A to even read the deed. But after some threatening demands by A the lawyer read the deed over and the deed has not been drawn in accordance with the agreement. The consideration, according to agreement, was \$5,000, and he made it but one dollar. It does not mention the mortgage or the one thousand dollars which was paid down.

2. Has A a legal right to demand a deed according to the agreement? or has he got to abide by it as it is, or has he any recourse at all? Has A a right to demand deed or can the vendor legally retain possession of it?  
**J. S. G.**

Ontario.

Ans.—1. No.

2. The deed of conveyance is effective notwithstanding that a nominal sum is stated as the consideration and not the full price actually paid. It is quite common practice to put it that way. And it was not necessary to mention in it the mortgage or the \$1,000. The vendor is legally entitled to retain the deed until the mortgage has been paid.

#### Sheep Barn.

I have a frame building 26' by 40 feet. How many sheep would this accommodate over winter? Would a stone cattle stable be all right for sheep? How many tons of hay would it require for 50 sheep over winter? Would you advise buying lambs, or older ewes? What breed of sheep would you advise me getting? I have a 100-acre farm pretty well drained and with good pasture. I have a field of muck land which is rough. Would it be all right for sheep? What book would you advise me to read on the care of sheep?  
**J. L.**

Ans.—Your frame building would be very good for sheep provided it is dry overhead and underfoot. Ewes require at least 10 square feet of floor space per head; thus the building mentioned would accommodate nearly 100 sheep. Unless the building were dry and well ventilated we would not care about putting the sheep in the cattle stable. The amount of hay which a sheep will consume will depend on what other feeds are used in the ration. By purchasing ewes you would get a start a little quicker than by purchasing the lambs. You can sometimes buy up ewes which are good breeding propositions, although a little up in years, for considerably less than you can purchase young stock. The breed of sheep which we might prefer might not suit you. There is really no best breed; all give good satisfaction. There is the short-wooled, medium-wooled and long-wooled sheep. The Southdown and Shropshire are short-wooled sheep and are highly recommended for mutton purposes; the Leicesters and Lincolns are rangier and larger sheep with long wool; Cotswolds and Oxfords are medium-wooled breeds, and are favored by many breeders. The Hampshires, Suffolks, Merinos and Romneys are not quite so common in this country, but what flocks there are appear to give good satisfaction. Sheep require high, dry land for pasture. We doubt the advisability of putting them on muck land, although they may do very well there provided they have higher land to run on. 'Sheep Farming,' by Craig, is a very good book which may be secured through this office at \$1.60.

**Questions and Answers.**  
**Miscellaneous.**

**Buyer and Purchaser.**

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**THE Martin**  
O. D. & G. CO. REGISTERED

**Ditcher Makes the Farm Produce Better**

Better crops from better soil conditions are the result obtained by the man who farms the Martin way. Correct drainage and proper grading mean earlier cultivation, fuller germination and the elimination of loss from rot.

Keep your soil right and make your farm produce more by using a Martin Ditcher. It will ditch and grade in half the time required by the old fashioned methods and return its cost many-fold in one season.

The Martin Ditcher and Grader is the handiest of all farm implements. It is wheel-less, cogless and leverless—strong and simple as a plough.

Ask our nearest office about the Martin Ditcher and Grader for your farm.

8

**The Canadian Fairbanks-Morse CO., LIMITED**

St. John, Quebec, Montreal, Ottawa, Toronto, Hamilton, Windsor.

**FEEDS**

We handle Linseed Oil Cake Meal, Cotton Seed Meal, Feeding Molasses (in barrels), Gluten Feed, Sugar Beet Meal, Hominy Feed, Dairy and Hog Feeds, Mill Feeds, etc.

We can quote inducing prices on a full line of Poultry Feeds and supplies.

Ask for prices.

**CRAMPSEY & KELLEY**  
DOVERCOURT ROAD, - TORONTO

**SEEDS**

We pay the freight on all orders of \$25.00 or over east of Manitoba. GOVERNMENT STANDARD

|                                 | Per bus.   |
|---------------------------------|------------|
| No. 1 Red Clover                | at \$32.00 |
| No. 2 Red Clover                | at 30.00   |
| No. 1 Alsike                    | at 22.00   |
| No. 1 Alsike (Special)          | at 21.00   |
| No. 2 Timothy, No. 1 for purity | at 6.50    |
| No. 3 Timothy                   | at 6.00    |
| No. 1 Alfalfa (Northern Crown)  | at 17.00   |
| No. 1 Alfalfa Ontario           |            |
| Variegated                      | at 27.00   |
| White Blossom Sweet Clover      | at 14.50   |
| Mixed Timothy & Alsike          | at 10.50   |
| Mixed Timothy & Red Clover      | at 13.00   |

Per bus. of 60 lbs.  
Terms: Cash with order. Bags extra, at 95c. each. Ask for samples if necessary. We guarantee seeds satisfactory or return at our expense. All prices are subject to goods being unsold.

**TODD & COOK**  
Seed Merchants  
Stouffville Ontario

**Nursery Stock at Wholesale Prices**

First class and true to name. Send for Catalogue. No Agents.

**The Imperial Nurseries**  
RIDGEVILLE - ONTARIO

Rural New Yorker seed potatoes, free from disease. Two dollars per bag. Bags free.  
Edward Littlejohns, R.R. 5, Markdale, Ont.

**Seed for Sale**

Ontario's Variegated Alfalfa No. 1; Gov't inspected; \$25 per bus. Also a few bus. Red Clover, \$25 per bus.

WM. G. SCHELL R. R. 3, Port Elgin, Ontario

**FOR SALE**

A quantity of good, clean ALFALFA SEED \$25.00 per bushel. O. A. C. Oats 72 at 90c. per bushel.

ROBT. POLLOCK, R. R. 3, Port Elgin, Ont.

**For Sale**—A quantity of Variegated Alfalfa Seed, Haldimand Grown. For samples and prices write

R. R. 1 E. W. GOWAN Jarvis, Ontario

**Seed Corn**—A quantity of Select Early Leaming, Longfellow, Wisconsin No. 7 and White Cap Yellow Dent. A card will bring full particulars.  
GEO. B. LANGFORD  
Kent Bridge, Kent Co.

FIELD SEEDS  
PINE TREE BRAND  
TIMOTHY CLOVERS  
IT STANDS ALONE  
**THE ALBERT DICKINSON CO.**  
CHICAGO ILL.  
DETROIT — BUFFALO — BOSTON — MINNEAPOLIS

USE  
**RAMSAY'S PAINT**  
"The right Paint to paint right"  
A. RAMSAY & SON COMPANY  
Makers of Paints and Varnish since 1842  
Toronto MONTREAL Vancouver

## PROTECTION is today the keynote of international trade preparations.

**GREAT BRITAIN** is restricting imports and PROTECTING home industries.

**Acting Premier Watt of AUSTRALIA** announces the introduction of a measure for higher PROTECTIVE duties.

**FRANCE** is exercising Government control of imports to build up home manufactures and home markets.

**ITALY'S** after-war programme calls for a higher PROTECTIVE tariff.

**A higher tariff for the UNITED STATES** is forecast by Chairman Fordney of the Ways and Means Committee of the next United States Congress, who will be the author of the new tariff bill. Congressman Gillett, of Massachusetts, who will be the Speaker of the House of Representatives in the new Congress, says, "at the earliest opportunity there should be passed by the Republicans of the House a protective tariff measure which will provide more abundant revenue and prevent an inundation of foreign goods produced by cheaper labor."

**GERMANY** depends on PROTECTION to recover its commercial position.

Under PROTECTION, **CANADA** has successfully borne the burden of four and a half years of war. Wages have been high and agriculture and industry have prospered. The present is no time for economic experiments.



Under Free Trade—where  
will the Revenue  
come from ?



## Canadian Reconstruction Association

WESTERN OFFICE  
510-11 Electric Railway Chambers, Winnipeg

HEAD OFFICE  
Royal Bank Bldg., Toronto

EASTERN OFFICE  
603-4 Drummond Bldg., Montreal

### Questions and Answers. Miscellaneous.

#### Pasture Mixture.

I have a field that has a cold bottom, and I have not time to tile drain it at the present. What kind of seeds would make the best permanent pasture on such land?

A. H.

Ans.—Orchard grass, 4 lbs.; tall oat grass, 3 lbs.; meadow foxtail, 2 lbs.; White Dutch clover, 3 lbs.; alsike, 2 lbs.; red top, 2 lbs.; Kentucky Blue grass, 4 lbs., and timothy 2 lbs. should do fairly well on the kind of field you mention.

#### Mare With Lump on Leg.

I have a three-year-old mare with a lump just a little above the knee. It came on her about a month ago. I have used liniment but the lump does not go down any. The mare is not lame but the lump is sore. What treatment would you advise?

J. M.

Ans.—Bathe the lump frequently with hot water and apply with smart friction a liniment made of 4 drams each of iodine and iodide of potassium and 4 ounces each of alcohol and glycerine. If the lump is soft lance it at the lowest point and keep it washed out with a one-per-cent. carbolic acid solution.

#### Making a Ball for a Horse.

How do you make a ball for a horse? Where can I get books on judging live stock and poultry?

O. C.

Ans.—The powders to be administered are dampened and made into a cylindrical mass and rolled in tissue paper. This is then administered by the use of a balling-gun, or by the hand. "Live Stock Judging," by Craig, is a very good book on live stock, and can be secured through this office at \$2.10. "The American Standard of Perfection" describes each breed of poultry and gives their points of excellence as well as their disqualifications. It will cost about \$2.00.

#### Sweet Clover.

Would it be advisable to sow sweet clover with oats to use for hay for one cutting, then broken up and sowed to fall wheat? Is white-blossom preferable to yellow-blossom sweet clover? How many pounds of seed should be sown per acre?

F. E. T.

Ans.—If the intention is to cut the crop for hay this year, there would not be much feed off the sweet clover. However, plowing under the growth which it would make would considerably enrich the soil for fall wheat. Sweet clover makes a little more rapid growth than the other clovers. The white-blossom is preferable and from 15 to 18 lbs. of seed per acre is good seeding.

#### Cistern.

I wish to build a cement water cistern under my kitchen. The ground is almost solid sandstone. My plan is to excavate a basin-shaped cistern and plaster the same with cement. Will this be satisfactory?

J. H.

Ans.—If the sandstone is quite firm you might make a very satisfactory cistern by plastering it with cement. It might necessitate going over it two or three times. There is just the danger, however, that unless the concrete were thick enough to prevent the water seeping through, it would soak away. If you thought there was any danger from this, you might put up a form on the inside and make the concrete wall about 4 inches thick.

#### Dogs Kill Fowl.

A strange hound came to my yard and killed some hens. I sent him away but he came back three days later, accompanied by another hound, and killed a turkey. I shot both dogs. Can the owner make me pay for them?

R. D.

Ans.—You were possibly out of order in shooting the dogs. It would have been better to have found the owner of the dogs and put in a claim for damages. The recent Act for the protection of sheep states that A. "Any person may kill any dog which is found pursuing, worrying or wounding any sheep. B. Any person may kill any dog which is found straying between sunset and sunrise from the premises on which such dog is habitually kept." From the wording of your question we presume that you killed the dogs during the daytime; consequently you would not in any way come under the protection of this Act.



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days later, accom-
ound, and killed a
th dogs. Can the
or them? R. D.

ossibly out of order
It would have been
d the owner of the
claim for damages.
e protection of sheep
person may kill any
ursuing, worrying or
p. B. Any person
ch is found straying
sunrise from the
ch dog is habitually
wording of your
that you killed the
time; consequently
ny way come under
Act.

# Special Offer To Our Subscribers

We have a very large stock of SANITARY KITCHEN SETS, and COMPLETE KITCHEN EQUIPMENT. These sets have been given to our subscribers for sending in the names of two New Subscribers, and were splendid value.

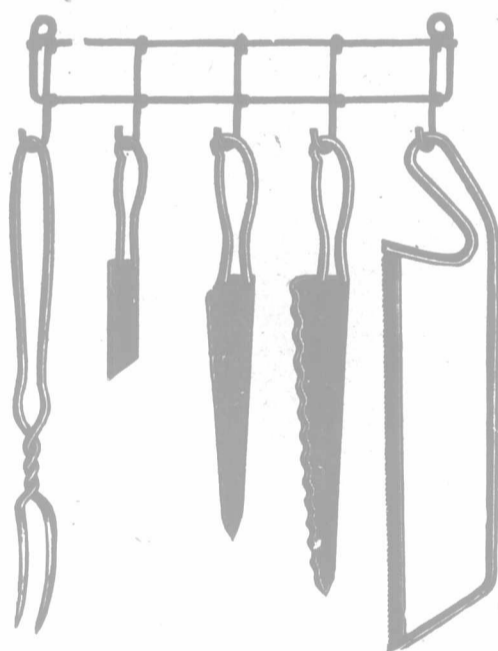
## FROM THIS DATE

Until the stock is exhausted, we will send one of these sets, as shown and described in this advertisement, to any of our regular subscribers who send us the names of

## ONE NEW SUBSCRIBER

With the sum of \$1.50 paying for the new subscription for one year.

REMEMBER—We do not give premiums to New Subscribers at any time, but we do appreciate the assistance of our regular subscribers, who do a great deal to help the work of the Farmer's Advocate and Home Magazine by increasing the number of its readers, and we send these premiums to them as a return for their interest and help. We do not give premiums for sending in renewal subscriptions.



Sanitary Kitchen Set FOR ONE NEW SUBSCRIPTION

Consists of all metal Roasting Fork, Paring Knife, waved edge Bread Knife, Meat Saw, Butcher Knife with metal rack to hold them all, made to hang on the wall.

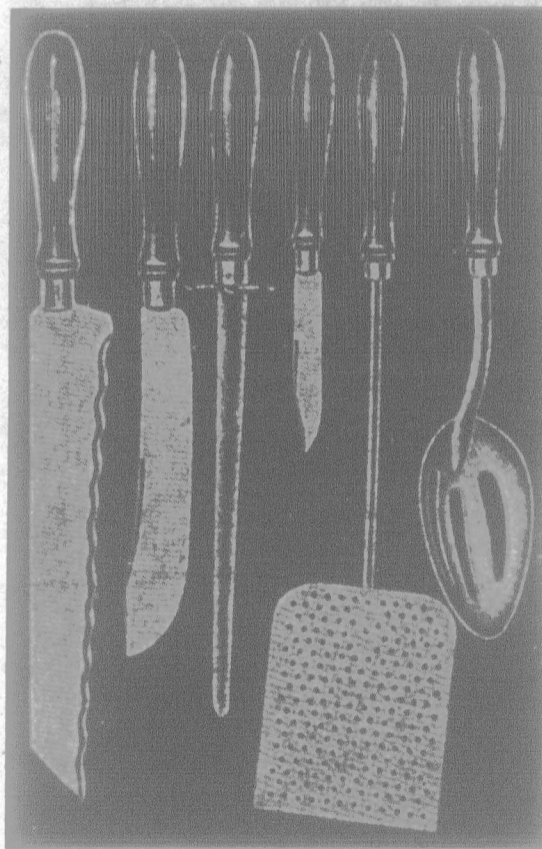
## Take Your Choice

### IMPORTANT

When writing, be careful to specify which of these sets you wish, and we will fill your request AS LONG AS THE SUPPLY LASTS.

DON'T DELAY, as these sets will go out very rapidly, and we cannot guarantee delivery indefinitely.

When remitting, use the coupon, and send money by Postal Note or Money Order, as we cannot be responsible for currency sent through the mails.



Complete Kitchen Equipment FOR ONE NEW SUBSCRIPTION

Pancake Turner, Basting Spoon, Large Butcher Knife with Steel for sharpening, Paring Knife and waved-edge Bread Knife: all of best steel, and fitted with rubberoid finish handles of hardwood.

## Coupon

THE WILLIAM WELD CO., LIMITED LONDON, ONTARIO

GENTLEMEN:—

In accordance with your advertisement, please send me the..... in return for the Name of a New Subscriber to The Farmer's Advocate and Home Magazine, with.....for \$1.50 paying for his subscription for one year. (Postal note or money order.)

Name of sender.....Address.....

Name of New Subscriber.....

Address.....R. R. No.....

The  
Longest  
Lasting  
Sweet meat  
in the World!



**WRIGLEY'S**  
All three kinds sealed  
in air-tight, impurity-  
proof packages.

"AFTER  
EVERY  
MEAL"

MADE  
IN  
CANADA

WRIGLEY'S  
JUICY FRUIT  
CHEWING GUM  
THE FLAVOUR LASTS

WRIGLEY'S  
SPEARMINT  
THE PERFECT GUM  
MINT LEAF FLAVOUR

WRIGLEY'S  
DOUBLEMINT  
CHEWING GUM  
PEPPERMINT

50

## OTHERS DO— WHY NOT YOU?

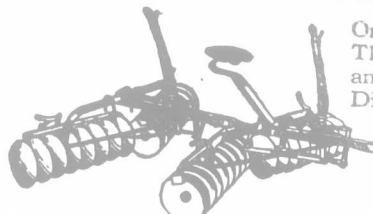
Make your **CREAM** produce the very best results.

We can do it for you. We want  
**YOUR CREAM.**

It will pay you to ship to

**Lindsay Creamery Limited**  
Lindsay, Ontario

**BISSELL Double Action Harrows** will thoroughly cultivate and pulverize any soil. One Harrow is Out Throw; the other is In Throw. They are simply constructed, rigid and durable. The Gangs are flexible and the Disk Plates are so designed that they "hang" right into the soil. Bissell Harrows are built in sizes and weights suitable for horse or tractor use. Write Dept. W for free catalogue. 98



**T. E. BISSELL CO., LTD., Elora, Ont.**

We have doubled our factory capacity and are determined to supply our customers far and near. See ad. also on page 678.

## Our School Department.

### Planning the School Garden.

J. G. ADAMS, B. A., UNIVERSITY OF TORONTO SCHOOLS.

Waste of time and space may be greatly reduced by making a definite plan for the garden. The plan will be changed many times before it is satisfactorily completed because of the different ideas presenting themselves from time to time. Hence an early start should be made to embody all the plans suitably. The final plan should be accurately and neatly drawn on heavy, tough paper or cardboard which will stand a good deal of rough use. Copies may be made by each pupil. These will afford exercises in drawing to scale. If the garden be small a convenient scale is one-half inch to the foot, if it is longer, the scale may be reduced to one-quarter inch to the foot. All names and directions should be neatly lettered.

The main points to be kept in mind in drawing up the plan are the size and shape of the garden, the arrangement of the crops, including companion and succession cropping and relation and the kinds of vegetables with relative amounts of each.

Unless the size of the garden be rigidly limited, it may be modified by the amount of available labor and by the method of cultivation. As the number of pupils increases the size of the plot will be increased. And if the cultivation is to be done by horse-drawn tools, the plot may be larger since cultivation will be easier. Do not attempt to make the garden so large that it cannot be well cared for. Better make it small the first year and increase it as experience justifies.

Generally speaking the shape of the garden will depend chiefly on the method of cultivation. If the cultivating is to be done by hand-tools only, the garden may be more compact and perhaps irregular, if necessary. But when horse-drawn tools are available, they should be used to eliminate as much drudgery as possible and the garden should then be longer and narrower.

The vegetables should be arranged in rows running lengthwise of the garden rather than in beds. This makes cultivation easier and thus tends to prevent loss of moisture by evaporation and prevents weed growth. The rows should run north and south rather than east and west, so the plants may receive sunlight on both sides. If the latter arrangement be found necessary, the crops should be arranged from north to south in order of their height so the taller plants will not shade those which are lower growing. When hand-tools are used the rows may be closer together than when horse drawn tools are used.

Perennial crops which remain in the soil should be arranged along the border to be out of the way in general cultivation. As far as possible the smaller growing crops, such as lettuce, beets, radishes, etc., should be planted together while the larger topped plants such as potatoes and tomatoes should also be grouped. Early crops, which mature at the same time, should be planted together to allow for succession planting.

### Summer Courses In Agriculture

Owing to the fact that accommodation for teachers attending the summer courses at the Ontario Agricultural College has been exhausted, Dr. J. B. Dandeno, Inspector of Elementary Agricultural Classes, announces that provision has been made by the Department of Education for a summer course in 1919 leading to Part I of an elementary certificate in agriculture at the Ontario Ladies' College, Whitby, in addition to, and running concurrently with, that provided at Guelph, which will be held as usual.

The Ontario Agricultural College will provide for two hundred in Part I Elementary, all who are qualified for Part II Elementary, and all those who wish to enter the course leading to any Part of an Intermediate Certificate.

All the summer courses in Agriculture open on July 8th, 1919. This date is later than formerly owing to the late date of commencements of the departmental examinations.

### Agriculture in Public Schools.

BY J. A. SHORT, SWANSEA, ONT.

At this season of the year the enthusiasm for gardening is at its height. Every thoughtful boy and girl has visions of something for the spring and summer. Every teacher who has the best interest of the boy or girl at heart, as well as the best interest of the community will agree that there is no more pleasant and profitable enjoyment than producing something that we can call our own, as the direct result of our own effort. Every parent who knows the value of encouraging his child to do something will be willing to co-operate with the teacher who is spending his time and energy for the welfare of the boys and girls. Now there is, to my mind, no better way of bringing teacher, pupil and parent together than the common place of interest—the vegetable or flower garden.

The teacher who has had the advantage of a special training in agriculture has a splendid opportunity of using his experience here which will get him better acquainted in the community and add greatly to his popularity. I would therefore strongly recommend and advise every teacher to encourage each pupil to secure a small plot of ground which he may call his own for the summer and direct him in the planting of it. If it is no more than a bed of beets or carrots or a few hills of potatoes, the very fact that the pupil can call it his or her own will develop the idea of thrift. It is not always necessary to have an elaborate school garden, but where such can be had so much the better. If you cannot have such a school garden get some boy to dig up or spade a small plot in some corner of the yard and do the best you can with it. It will create enthusiasm and perhaps the next year the trustees will be willing to spend a little money on a school garden more creditable; being assured that all their expenses, to a certain amount, will be returned to them by the Government the following year. It pays to carry out the Regulations along these lines as the Government grants, in most cases, are sufficient to warrant good results.

I have had good success each year for the last three years in gardening by having a school garden to illustrate the planting and caring of vegetables and flowers and at the same time superintending home gardens to see that the work was carried out in a similar manner.

We have also had a School Fair of our own which proved of great interest as well as a great incentive to the children by way of competition. Fuller details of plans of school and home gardens will be given in an early issue.

### Pointers for Pupils.

The story books all dwell on the remarkable successes made by boys and men who work hard and constantly. They seldom encourage recreation or play. The fact of the matter is that college graduates who are all-round men, not mere book worms, are in greatest demand. By all-round men we mean those who have taken an active part in sports, the literary society, the Y. M. C. A., and other college organizations. Whatever you do, do it well. Work hard while you work and play hard while you play. Take an interest in the things and people around you and you will be a better and more useful citizen when you grow up.

Make a practice of heading your class, or at least attempting to. When on the play ground take a leading part and assume any little responsibilities there are to shoulder. This will help you to grow up better men or women and train you for leadership.

While in the school room, work; while outside, play.

Department.

Culture in Public Schools.

A. SHORT, SWANSEA, ONT.

Reason of the year the enthusiasm of gardening is at its height. A thoughtful boy and girl has something for the spring and Every teacher who has the heart of the boy or girl at heart, the best interest of the community agree that there is no more profitable enjoyment than something that we can call the direct result of our own parent who knows the encouraging his child to do will be willing to co-operate with a teacher who is spending his time for the welfare of the boys and there is, to my mind, no bringing teacher, pupil and her than the common place—the vegetable or flower

er who has had the advantage of special training in agriculture and opportunity of using his experience which will get him better acquainted in the community and add to his popularity. I would strongly recommend and advise a teacher to encourage each child to have a small plot of ground to call his own for the summer. More than a bed of beets or a row of hills of potatoes, the child the pupil can call it his own and develop the idea of thrift. It is necessary to have an open garden, but where such a school garden get dig up or spade a small corner of the yard and do the work with it. It will create interest and perhaps the next year will be willing to spend money on a school garden more being assured that all their efforts a certain amount, will be them by the Government next year. It pays to carry out these lines as the grants, in most cases, are arranged in good results. Good success each year for years in gardening by a school garden to illustrate and caring of vegetables and at the same time super-e gardens to see that the school in a similar manner. Also had a School Fair of proved of great interest that incentive to the children competition. Fuller details school and home gardens will be early issue.

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ce of heading your class, up to. When on the ke a leading part and le responsibilities there This will help you to men or women and train P. ne school room, work; ay.

Made in Canada

# Ideal Fence

## Freight-Paid Prices

Direct from Factory to Farm

### Our Guarantee:

IDEAL FENCE is guaranteed to be exactly as represented. If you are not satisfied with "IDEAL," send it back at our expense, and we will return your money. This guarantee covers everything—no conditions, no loopholes.

REFERENCE: ANY BANK OR BANKER.

## Fence, Farm Gates, Brace Wire, Barb Wire, Etc.

Freight paid to your nearest railway station (except electric) on all orders of \$15 or over. Remit by Bank Draft, Post Office Order or Express Order.

### Heavy "IDEAL" Fence

Made throughout of Full Gauge No. 9 evenly Galvanized Hard Steel Wire. Carried in stock in 20, 30 and 40-rod rolls.

- No. 4330 4 line wires, 33 inches high, uprights 22 inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 11, 11, 11. Per Rod..... **30c.**
- No. 5400 5 line wires, 40 inches high, uprights 22 inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 10, 10, 10, 10. Per Rod..... **37½c.**
- No. 6300 6 line wires, 30 inches high, uprights 22 inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 4, 5, 6, 7, 8. Per Rod..... **42c.**
- No. 6400 6 line wires, 40 inches high, uprights 22 inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 7, 7, 8, 9. Per Rod..... **43c.**
- No. 7400 7 line wires, 40 inches high, uprights 22 inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 5, 6, 7, 7½, 8½. Per Rod..... **49c.**
- No. 7480 7 line wires, 48 inches high, uprights 22 inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 5, 6½, 7½, 9, 10, 10. Per Rod..... **51c.**
- No. 8420 8 line wires, 42 inches high, uprights 22 inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 6, 6, 6, 6, 6, 6. Per Rod..... **56c.**
- No. 842 8 line wires, 42 inches high, uprights 10½ inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 6, 6, 6, 6, 6, 6. Per Rod..... **61c.**
- No. 8470 8 line wires, 47 inches high, uprights 22 inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 4, 5, 6, 7, 8, 8. Per Rod..... **58c.**
- No. 847 8 line wires, 47 inches high, uprights 18½ inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 4, 5, 6, 7, 8, 8. Per Rod..... **63c.**
- No. 935 9 line wires, 35 inches high, uprights 16½ inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 3, 3, 3, 4, 5, 5, 6, 6. Per Rod..... **70c.**
- No. 948 9 line wires, 48 inches high, uprights 16½ inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 6, 6, 6, 6, 6, 6, 6. Per Rod..... **69c.**
- No. 9481 9 line wires, 48 inches high, uprights 18 inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 3, 4, 5, 6, 7, 7, 8, 8. Per Rod..... **77c.**
- No. 9500 9 line wires, 50 inches high, uprights 22 inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 4, 4, 5, 6, 7, 8, 8. Per Rod..... **63c.**
- No. 950 9 line wires, 50 inches high, uprights 16½ inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 4, 4, 5, 6, 7, 8, 8. Per Rod..... **69c.**
- No. 1050 10 line wires, 50 inches high, uprights 16½ inches apart. All No. 9 Hard Steel Wire, evenly galvanized. Spacing 3, 3, 3½, 4½, 5½, 6½, 8, 8, 8. Per Rod..... **75c.**

### MEDIUM HEAVY "IDEAL" FENCE

Made throughout of Hard Steel Wire, evenly Galvanized. Carried in stock in 20, 30 and 40-rod rolls.

- No. 630 6 line wires, 30 inches high, uprights 16½ inches apart. All Hard Steel Wire, evenly galvanized. Spacing 4, 5, 6, 7, 8. Per Rod..... **30c.**
  - No. 641 6 line wires, 41 inches high, uprights 16½ inches apart. All Hard Steel Wire, evenly galvanized. Spacing 7, 7, 8, 9, 10. Per Rod..... **31c.**
  - No. 6410 Same as Style No. 641 with uprights 22 inches apart. Per Rod..... **29c.**
  - No. 726 7 line wires, 26 inches high, uprights 13 inches apart. All Hard Steel Wire, evenly galvanized. Spacing 3, 3½, 4, 4½, 5, 6. Per Rod..... **34c.**
  - No. 7261 Same as Style No. 726, but with uprights 8 inches apart. Per Rod..... **40c.**
  - No. 7266 Same as Style No. 726, but with uprights 6 inches apart. Per Rod..... **45c.**
  - No. 834 8 line wires, 34 inches high, uprights 13 inches apart. All Hard Steel Wire, evenly galvanized. Spacing 3, 3½, 4, 4, 5, 6½, 8. Per Rod..... **42c.**
  - No. 936 9 line wires, 36 inches high, uprights 13 inches apart. All Hard Steel Wire, evenly galvanized. Spacing 3, 3½, 4, 4½, 5, 5½, 6. Per Rod..... **43c.**
  - No. 949 9 line wires, 49 inches high, uprights 13 inches apart. All Hard Steel Wire, evenly galvanized. Spacing 4, 4, 5, 6, 7, 7, 8, 8. Per Rod..... **48c.**
  - No. 1150 11 line wires, 50 inches high, uprights 13 inches apart. All Hard Steel Wire, evenly galvanized. Spacing 3, 3, 3, 4, 4, 5, 6, 7, 7, 8. Per Rod..... **54c.**
  - No. 1448 14 line wires, 48 inches high, uprights 13 inches apart. All Hard Steel Wire, evenly galvanized. Spacing 2½, 2½, 2½, 2½, 2½, 3, 3½, 4, 5, 5½, 5½, 6. Per Rod..... **64c.**
- ### "IDEAL" Poultry Fence
- Top and bottom wires No. 9, all others No. 13. Carried in stock in 10 and 20-rod rolls.
- No. 1848 18 bar, 48 inches high, cross-bars 8 inches apart. All Hard Steel Wire, evenly galvanized. Spacing, from bottom up, 1½, 1½, 1½, 1½, 1½, 1½, 1½, 2½, 2½, 2½, 2½, 2½, 2½, 3, 3, 3½, 3½, 4, 4½, 5. Per Rod..... **80c.**
  - No. 2060 20 bar, 60 inches high, cross-bars 8 inches apart. All Hard Steel Wire, evenly galvanized. Spacing, from bottom up, 1½, 1½, 1½, 1½, 1½, 1½, 1½, 2½, 2½, 2½, 2½, 2½, 2½, 3, 3, 3½, 3½, 4, 4½, 5, 6, 6. Per Rod..... **88c.**

### "IDEAL" Lawn Fence and Lawn Gates

Write for Price List and Catalogue.

### Improved "IDEAL" Farm Gates

Horizontal wires all No. 9, only 6 inches apart. Uprights No. 12 wire, 6 inches apart. Diagonals No. 13, furnish a strong, close mesh chicken-proof and pig-proof. New patented brace tightener and latch—the biggest gate improvements in years.

| Length, feet | Height, inches | Price  |
|--------------|----------------|--------|
| 3            | 36             | \$3.15 |
| 3            | 42             | 3.30   |
| 3            | 48             | 3.40   |
| 3½           | 42             | 3.30   |
| 3½           | 48             | 3.40   |
| 4            | 48             | 3.75   |
| 4            | 48             | 4.00   |
| 10           | 36             | 6.75   |
| 10           | 42             | 7.00   |
| 10           | 48             | 7.25   |
| 12           | 42             | 7.25   |
| 12           | 48             | 7.75   |
| 13           | 48             | 8.00   |
| 14           | 48             | 8.25   |
| 16           | 48             | 8.75   |

### Improved "IDEAL" Stock Gates

Wire filling No. 9 throughout, same as Heavy "IDEAL" Fence. No fence filling used. Each wire put in by hand.

Carried in stock in following sizes only:

|                                    |        |
|------------------------------------|--------|
| 12 feet long, 51 inches high, each | \$7.25 |
| 13 feet long, 51 inches high, each | 7.50   |
| 14 feet long, 51 inches high, each | 7.75   |

### Fence Supplies, Brace Wire and Barb Wire

|  |        |
|--|--------|
| Ideal Steel Posts, 1½ x 1½ x 7' long   | \$0.55 |
| Ideal Fence Stretcher, each            | 9.00   |
| Hand Stretcher, each                   | 7.75   |
| Universal Post Hole Digger, each       | 2.75   |
| Galv. Staples in 25-lb. boxes          | 1.75   |
| Galv. Staples in 100-lb. boxes         | 6.75   |
| No. 9 Brace Wire, per 25 lbs.          | 1.50   |
| No. 9 Coiled Spring Wire, per 100 lbs. | 5.75   |

### Barb Wire

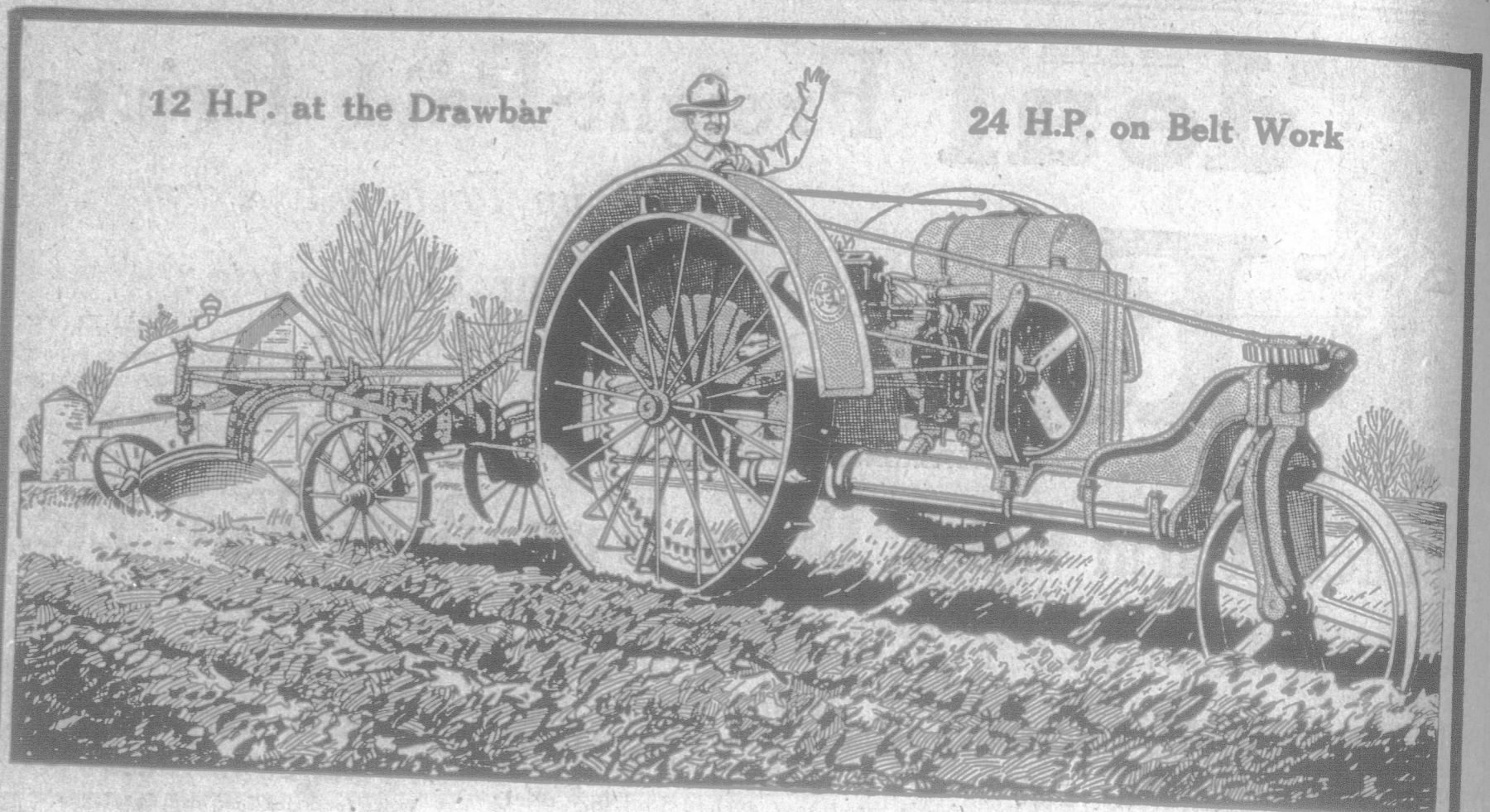
|   |        |
|---|--------|
| 4-pt. 47 Galv. Cabled, per 100 lbs.     | \$6.00 |
| 4-pt. 67 Galv. Cabled, per 80-rod spool | 5.10   |
| 2-pt. 87 Galv. Cabled, per 80-rod spool | 4.85   |

N.B.—Prices quoted above apply to Old Ontario only, stations south of North Bay. Freight-paid prices to points in New Ontario and elsewhere quoted on application.

**IDEAL FENCE AND SPRING COMPANY OF CANADA, LIMITED**

1050 McDougall Street WINDSOR, ONTARIO

(Formerly The McGregor-Banwell Fence Co., Limited, Walkerville, Ont.)



## More Horsepower for your money both in first cost and up-keep cost

THE price of the Happy Farmer Tractor is less than that of any other standard machine of 12-24 horse-power. This is due to light

weight and simple construction. But at the same time, it delivers *more power on the drawbar* than other tractors with a similar sized motor and speed. The

# Happy Farmer Tractor

does all the work any other machine can do with greater ease, and less attention is needed to keep it in order. That is the beauty of having the light weight, powerful and scientifically designed Happy Farmer Tractor.

**Kerosene Motor**—The Happy Farmer motor is designed not only specially for kerosene, but to get the last ounce of power. Our short intake manifold permits not a bit of condensation. So perfectly is the engine designed that, after starting, it runs like a watch without smoke or carbon.

Gears and transmission run in a bath of oil, thus wasting least power between the motor and

the final drive, and giving more power at the drawbar. The up-keep for parts is economical. As there are fewer wearing parts there are fewer parts to replace.

Can you afford to go on sowing five acres of horse feed per horse for your animal power when the Happy Farmer will save you this expense, and do your work quicker, better, easier and cheaper? Write for free literature.

**The Renfrew Machinery Co., Limited**  
Head Office and Works, Renfrew, Ontario

*Agencies Almost Everywhere in Canada*