

PUBLISHED EVERY WEEK. \$1.50 PER YEAR.

# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE AND SUCCEED  
FOUNDED 1880

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

Best and Col'd Storage Com-  
missioners' Dept. of Agriculture

PRINTED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1917.  
LONDON, ONTARIO, MARCH 4, 1920.

No. 1432

LV.

OWS

One Acre

heaviest yields of this corn in  
ounds or an average of 50  
This is not much over the  
ant your whole farm when  
ter still, two 100-ton silos  
Eureka Corn has not  
commodities, and the best  
m is for good seed. Poor  
ood seed is always worth  
the seed as compared with  
e of corn is so small that it  
lant cheap corn, you must  
e have been selling Eureka  
now before we ship it that  
itions. Many of our cus-  
will grow where all other

a lot of corn being sold  
s common southern white  
hort narrow leaf and white  
ield is not over two-thirds  
uine Eureka which is a  
rows from 14 to 18 ft. tall.  
ll. One of our customers  
one stalk that measured  
rn that measures from 16  
leaves with a lot of good  
rieties 10 to 12 ft. tall, and  
d isn't over 75 cents.  
a is put up in our trade-  
cted ears, butts and tips  
ve any hull or waste ma-  
cannot get better seed at

corn

arden  
es. \$1.00  
ly \$1.00  
Leaf  
den Bantam  
Globe Danvers  
White Globe  
od Stringless  
er Crookneck  
ord  
should be  
g \$1.00,  
r, Mass.

but there  
ited space.  
LE, ONTARIO  
chased from you last spring  
ve seen. It was the biggest  
e most sugar of any variety  
silos, and would recommend  
lage corn. I let my brother  
quiries for about 15 bushels  
that is a fair recommend in  
ours truly, T. A. SMITH.  
ONTARIO  
Eureka corn which I pur-  
I must say it did splendidly.  
r kinds, namely, White Cap,  
t, and it grew from 8 to 4  
feet tall. It was like some  
t spring. It is very hard to  
t, however, it was the corn  
for the silo. The corn grew  
corn advanced. Eureka took  
red what kind of corn it was  
ed the price of it well-spent  
get some more for the fol-  
end me your 1920 catalogue.  
ly, JOHN J. C. QUEEN.

des, etc.  
l over common varieties  
zer. Our 120-page cata-  
ommunications to  
ass., U.S.A.



**FOR**  
**Health and Strength**  
**and Better Meals**

**Meals that the**  
**Children Enjoy**

Use  
**PURITY**  
**OATS**  
for Porridge

and  
**PURITY FLOUR**

**for Bread,**  
**Cake and Pastry**

**Western Canada Flour Mills Company**  
TORONTO—Head Office Limited  
Branches at Winnipeg, Brandon, Calgary, Edmonton, Montreal,  
Ottawa, St. John, Goderich

*Cut out this coupon and send for Purity Flour Cook Book*

**PURITY FLOUR COOK BOOK COUPON**

Please Mail to.....

Your 180 page Cook Book, Postpaid, for which 20 cents is enclosed. ....







### How About Your Oil?

Is your automobile, truck or tractor properly lubricated? Your motor smooth-running quiet and powerful? Each valve, bearing and cylinder cushioned against grinding friction with a protective oil film?

It is—if you use Imperial Polarine. This standard, high grade motor oil insures correct lubrication the year round. Doesn't congeal in cold weather and holds its body at any engine heat.

Imperial Polarine burns clean—leaves no grit or heavy carbon to score cylinder walls—seals in all the power.

In three grades—Imperial Polarine, Imperial Polarine Heavy, Imperial Polarine A. For transmission or differential lubrication use Imperial Polarine Oils and Greases.

For automobile, truck and tractor lubrication use Imperial Polarine.

Buy Imperial Polarine by the Chart of Recommendations which is on display wherever Imperial products are sold.

There are also Imperial Lubricants for every other farm lubricating need.

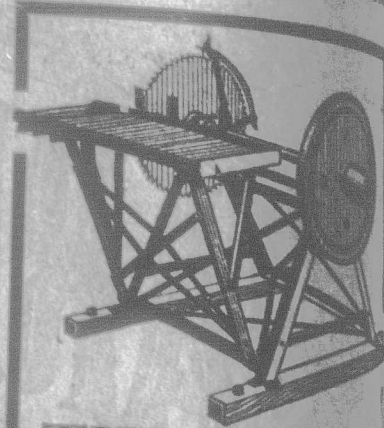
Sold in one gallon and four gallon sealed cans, half-barrels and barrels, also 12½ gallon steel drums.

Let the Imperial Oil man help you with your lubrication problems.

**IMPERIAL OIL LIMITED**

Power - Heat - Light - Lubrication  
Branches in all Cities

IMPERIAL  
POLARINE  
IMPERIAL  
POLARINE HEAVY  
IMPERIAL  
POLARINE A



### THE LUNDY SAW FRAME

is of extra heavy steel, well braced, ensuring rigidity. The 17-inch balance wheel, weighing 80 lbs., gives a smooth, steady running only found in the Lundy.

A feature appreciated by all operators is the guard that is adjustable by all operators to the blade from 20° to 30°. The roller on the tilting table for convenience in handling long poles is something you will find highly useful. There are adjustable, dustproof bearings on the line shaft. These Saw Frames are all Lundy built, and contain the best material that money can buy. Only \$52 L.o.b. Toronto.

Saw Blades may be had from 20° to 30° with any size hole. The following prices are L.o.b. factory, and terms are cash with order.

SAW BLADES:

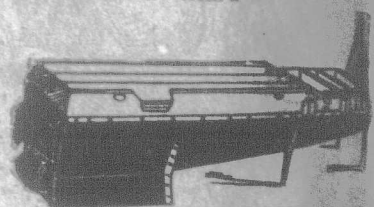
20-in. Saw Blade	\$ 4.00
22-in. "	4.50
24-in. "	5.00
26-in. "	5.50
28-in. "	6.00
30-in. "	6.50

Write if you want further particulars.

A. R. LUNDY  
251 King St. W. TORONTO

### Bill's Sugar and Syrup Wasn't Up To Much

That's what his neighbors said, they were right too, but there were reasons, his was not fresh enough or clean enough, his boiling outfit was out of date and he scolded the whole batch. He did a lot of hard work with poor results. It is all a question of proper outfit. With a



### GRIMM CHAMPION Outfit

In your maple grove you are sure of making the best possible syrup and sugar. Do it cleanly and quickly and get more money out of it. Scrap your old outfit and make something worth while out of your sugar bush. We can help you a lot if you write us.

The Grimm Mfg. Co.  
60 Wellington Street, Montreal, Que.

### Baled Shavings

For insulation and bedding.

JOHN B. SMITH & SONS, TORONTO  
Lumbermen Doors, Sash, etc.  
Established 1851.

"Goes Like Sixty"

**GILSON**

### This Engine Will Cost You Nothing

You need an engine—get a Gilson on our new easy-payment plan, and it will pay for itself. You have the work for it to do this fall and winter, help is scarce and high priced—save yourself a lot of worry, and enjoy that "Feeling of Security" which is such a definite part of the staunch, reliable Gilson Engine.

Gilson Engines have long enjoyed an indisputable reputation for dependability, power, simplicity and economy. This year finds us with an even more attractive proposition for the discriminating buyer. Prices of everything you have been buying have risen a remarkably low price. Write to-day for catalogue, price and easy-payment plan, stating what size you are interested in.

**Gilson Mfg. Co. Ltd., 259 York St., Guelph, Ont.**

25

## THE WONDERFUL GILSON

**\*SIMPLY CAN'T BE CLOGGED.** The simple, scientific, carefully worked-out filler makes it absolutely impossible to clog the throat of the blower. The Gilson is the lightest running blower cutter made. It has broken all records for high elevation and rapid work with light power. A 4 h.p. operates the small size Gilson is rightly called the

### KING OF SILO FILLERS

because of its remarkable elevating powers, absolute safety, durability, strength and simplicity—it stands supreme. It has convenient and quick knife adjustment; solid steel-bound cutting wheel; patented safety reverse—and is guaranteed to cut and elevate MORE ensilage with the SAME power than ANY other ensilage cutter IN THE WORLD. Write to-day for catalogue and proof. Manufactured and guaranteed by—

**GILSON MANUFACTURING CO. LTD., 509 York St., GUELPH, Ont.**

"GOES LIKE SIXTY"

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





# The Car For All Roads

OVERLAND 4 is a car for all seasons and all roads; attractive in appearance; economical in operation. It glides over the roughest roads with a smooth steadiness that is amazing.

This remarkable car has the two-fold economy advantages of *Triplex* Springs and light weight. *Triplex* Springs give Overland 4, with 100-inch wheelbase, the riding ease usually asso-

ciated with great weight and long wheelbase. They take most of the shock and rebound out of road jolts. They lessen greatly the fatigue of long rides.

By protecting car and motor from the constant racking blows which mean wear, these springs greatly reduce upkeep expense. They make possible riding comfort with light weight; and Overland 4's light weight gives the

further economy of low fuel and oil consumption and greater tire mileage.

Overland 4 is a quality car throughout—in design, finish and riding qualities. Equipped complete from Electric starting and lighting to three speed transmission.

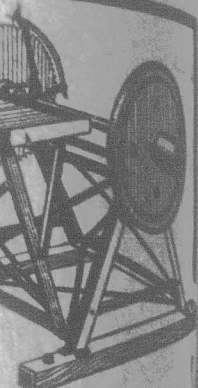
It is completely manufactured for Canadians in a modern Canadian manufacturing establishment.

**WILLYS-OVERLAND LIMITED**

*Sedans, Coupes, Touring Cars and Roadsters*

Head Office and Factories, Toronto, Canada  
Branches: Toronto, Montreal, Winnipeg and Regina

FOUNDED 1884



**LUNDY**  
FRAME

steel, well braced, engine  
17-inch balance wheel  
gives a smooth, steady  
and in the Lundy.  
adjusted by all operators  
adjustable to any angle  
to 30°. The roller on the  
convenience in handling  
anything you will find  
are adjustable, designed  
line shaft. These are  
Lundy built, and contain  
al that money can buy.

by be had from 20° to 30°  
The following prices  
and terms are cash with

BLADES:

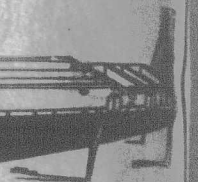
3 0.00
7 2.50
8 3.25
9 4.00
10 4.75
12 5.50

Want further particulars

R. LUNDY  
TORONTO

**Sugar and Syrup**  
Up To Much

Neighbors said, they were  
were reasons, this was  
clean enough, the boiler  
ate and be scolded. He  
did a lot of hard work with  
all a question  
in a



**CHAMPION**  
outfit

you are sure of making  
syrup and sugar. Do it  
and get more money out  
of your outfit and make  
out of your sugar look  
lot if you write us.

Wm Mfg. Co.  
Montreal, Que.

**Shavings**

and bedding.  
& SONS, TORONTO  
Doors, Sash, etc.  
since 1851.

**GILSON**

carefully worked-out  
running Gilson Silo  
blower. The Gilson  
records for high  
the small size



GOES LIKE SIXTY  
steel-bound cutting  
and elevate MORE  
R IN THE WORLD.  
anted by—

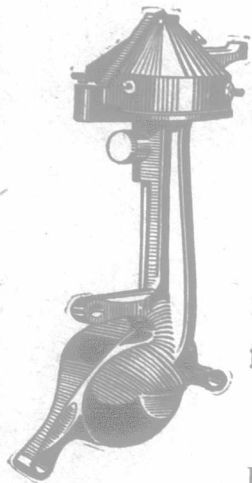
GUELPH, Ont.

Farmer's Advocate.



# The Proof is in the Drawings

—they show the absolute utility of the  
**NORTHERN TIMER ELEVATOR for Fords**



Price each \$7.00

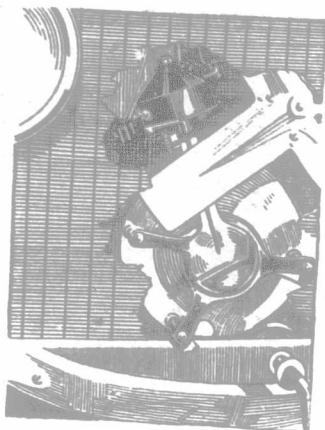
It lifts the Timer at once up to the most accessible position and away from mud, grit, oil and dampness.

Sixty per cent. of all ignition trouble on Ford cars is caused by the timer or wiring. The excessive amount of oil that accumulates in and around the timer very quickly decomposes the rubber insulation on the wiring. The oil will gum and cause poor contact in the timer. Every time oil is put in the motor a certain amount is spilled over the wires and outside of timer shell, just where it is not wanted.

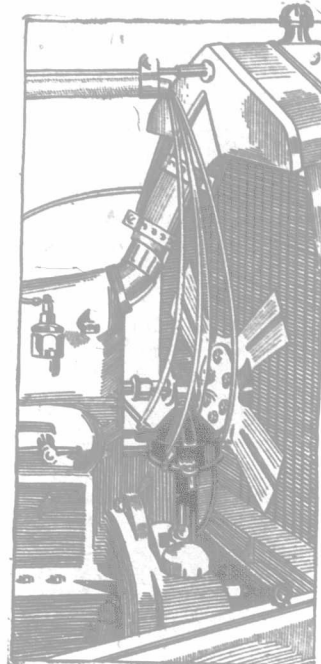
When driving in the rain or mud, the first place to be splashed is the bottom of the radiator and through on to the timer. As mud is an electrical conductor, this is no place for the timer. Every time the car is washed water gets to the timer and its parts, wiring, etc., short-circuiting them, which causes trouble.

The Timer, when elevated, is inverted, thereby shedding all water or oil that may be accidentally spilled upon it. Contacts remain perfectly clean, and timer functions properly.

Any Ford replacement part will fit the Northern Timer Elevator. No holes to drill or changes to be made. The whole job can be done in one-half hour.



The Northern Timer Elevator in position behind radiator.



Showing accessibility of Timer when Elevator is used. Note that water and oil from the motor cannot reach it.

Order from your nearest dealer.

**Northern Electric Company**  
LIMITED

Montreal Halifax Quebec Ottawa Toronto London Winnipeg Regina Calgary Vancouver Edmonton

## SEEDS

We sell high-grade Ontario Grown Seed Corn, on cob and shelled. Also, Home Grown Alfalfa, Red Clover, Alsike, Timothy Seed, Marquis Wheat, Oats, Barley, Peas, Buckwheat. All kinds of field and garden Seeds in packets and bulk.

## FEEDS

Linseed Oil Cake Meal, Cotton Seed Meal, Gluten Feed (23% Protein) Shorts, Feeding Cane Molasses (in barrels) Feed Corn and Corn Meal, Distillers Grains, Dairy Feeds, Hog Feeds, Poultry Feeds and supplies.

Ask for prices.

**Kelley Feed and Seed Co.**  
776 Dovercourt Rd. TORONTO

**Choice Marquis Seed Wheat**  
This wheat won first prize in the Standing Field Competition, first at Toronto Exhibition and first at Guelph. Price \$3 per bus. f.o.b. Bags 100 lbs.  
ROBT. WATSON, Waukegan, Ont.

## A Planet Jr. garden tool

helps the best seeds to produce more abundantly because it cultivates carefully, accurately and properly. It makes your work more profitable because it saves time, labor and money. Strongly and carefully made to last a lifetime. Fully guaranteed.

**No. 4 Planet Jr. Combined Hill and Drill Seeder, Wheel-Hoe, Cultivator and Plow** sows all garden seeds (in hills or drills), plows, opens furrows and covers them, hoes and cultivates them all through the season. A hand machine that does work so thoroughly, quickly and easily that it pays for itself in a single season.

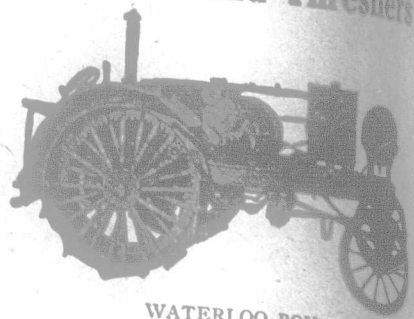
**No. 8 Planet Jr. Horse-Hoe** is stronger, better made and finished than any other one horse cultivator. Because it does a greater variety of work in corn, potatoes and other crops in rows, and does it more thoroughly, it enables you to increase your yield. Cultivates deep or shallow in different width rows. Its depth regulator and extra long frame make it steady running.

**Planet Jr.**

FREE 72-page Catalog. Illustrates tools doing actual farm and garden work and describes over 55 Planet Jr.s, including Seeders, Wheel-Hoes, Horse-Hoes, Harrows, Orchard, Beet and Pivot-Wheel Riding Cultivators.  
Write for it today also name of nearest agent.  
**S. L. ALLEN & CO., Inc.**  
Box 1108F Philadelphia

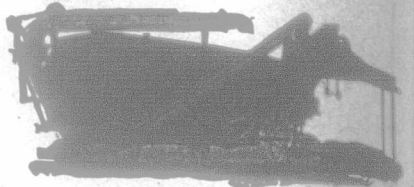


## Tractors and Threshers



WATERLOO BOY

The Simplest, most Accessible, most Powerful 3-plov Tractor on the market. Suitable for hauling 3 plows, Threshing, Filling and General Farm Work.



Individual Farmers' Threshers, suitable also 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, Sarnia, Ont.**  
Also Steam Tractors and large size Threshers.

## Protect Your Dairy Profits

No farmer can afford to be without a good cream separator—  
Buy the Viking and not only save in the first cost, but save time and labor in operation.  
Do your skimming faster and better.

**GUARANTEED FOR FIVE YEARS**

The Viking is made with the Straight Line skimming device which has proven to be the best. It is easy to wash—insures long life.

It's a proved profit maker for the farmer.  
Write for illustrated catalog and further particulars.

**SWEDISH SEPARATOR COMPANY**  
422 Power Bldg., (Dept. S) MONTREAL

## GRAND TRUNK RAILWAY SYSTEM

### The Double Track Route

BETWEEN MONTREAL, TORONTO, DETROIT AND CHICAGO

Unexcelled dining car service

Sleeping Cars on Night Trains and Parlor Cars on principal Day Trains.

Full information from any Grand Trunk Ticket Agents or C. E. Horning, District Passenger Agent, Toronto.

**RAW** WRITE FOR PRICE LIST AND TAGS

**FURS**  
E. T. CARTER & Co.  
77 Front St., E., Toronto, Can.

## STAMMERING

or stuttering overcome positively. Our natural methods permanently restore natural speech. Graduate pupils everywhere. Free advice and literature.  
**THE ARNOTT INSTITUTE**  
KITCHENER, CANADA



# "I Am Going To Buy This Spreader This Spring!"



Say this to yourself  
—and then do it. Decide to pay up your debt to your soil. Decide now to spread with the NISCO—*this year—this spring!*

**MAKE** this statement—and *plan now* to carry it out. At least, get all the facts at once. Not next year, but *this year—this spring!* For now is the time to prepare for heavier crops this year. And regular, even spreading with the NISCO will do this. It will put new blood—new life—into your land. It will ripen your soil for this spring's seed.

### Why the NISCO?

Not simply because the NISCO is the original wide-spreading spreader do we urge you to buy it *now*. Yet that leadership does mean much to you. It gives you valuable patented features that can be had *only in this machine*.

And not because it is the best known and the largest-selling spreader in the world to-day. Though this fact protects you. It confirms your judgement—backs it with the approval of thousands.

The real big reason is this: *You want the NISCO Spreader because it spreads manure, lime, and straw most quickly, most thoroughly, and most profitably.*

You want it because of the labor it saves—because of the extra years it lasts—and because of the light haul it gives with a heaped up load.

## NISCO

The Original Wide Spreading Spreader

(Known as the NEW IDEA in the East)

### Built by Spreader Specialists

**THE** NISCO Spreader was not built on the spur of the moment to meet competition. It is the result of 20 years constant improvements by Spreader Specialists. Untiring effort on the part of the men who have specialized on this one vitally important farm implement for a business lifetime—accounts for the present prestige of the NISCO.

*Be sure to ask your dealer for a free copy of our valuable book, "Feeding the Farm." It is filled with vital facts on fertilizing that you will want to know.*

### Spread Straw, Lime, Manure With One Machine

The NISCO is strongly built. It has no gears to break. No complicated parts to get out of order. A simple, low-cost attachment makes it a big-capacity straw spreader. This and its wide spread, its perfect shredding and its adaptability to every type of farm everywhere, mark it *the spreader for you—this spring.*

A network of NISCO branches covers the country. If needed, spare parts service is given quickly. And in every community there is a progressive dealer who handles NISCO Spreaders and has machines on hand for early spring delivery.

**To make certain of bigger crops through better soil fertility, order a NISCO. To make certain of getting your NISCO this spring, order it now—today.**

## THE GILSON MFG. CO. LTD., GUELPH, ONTARIO

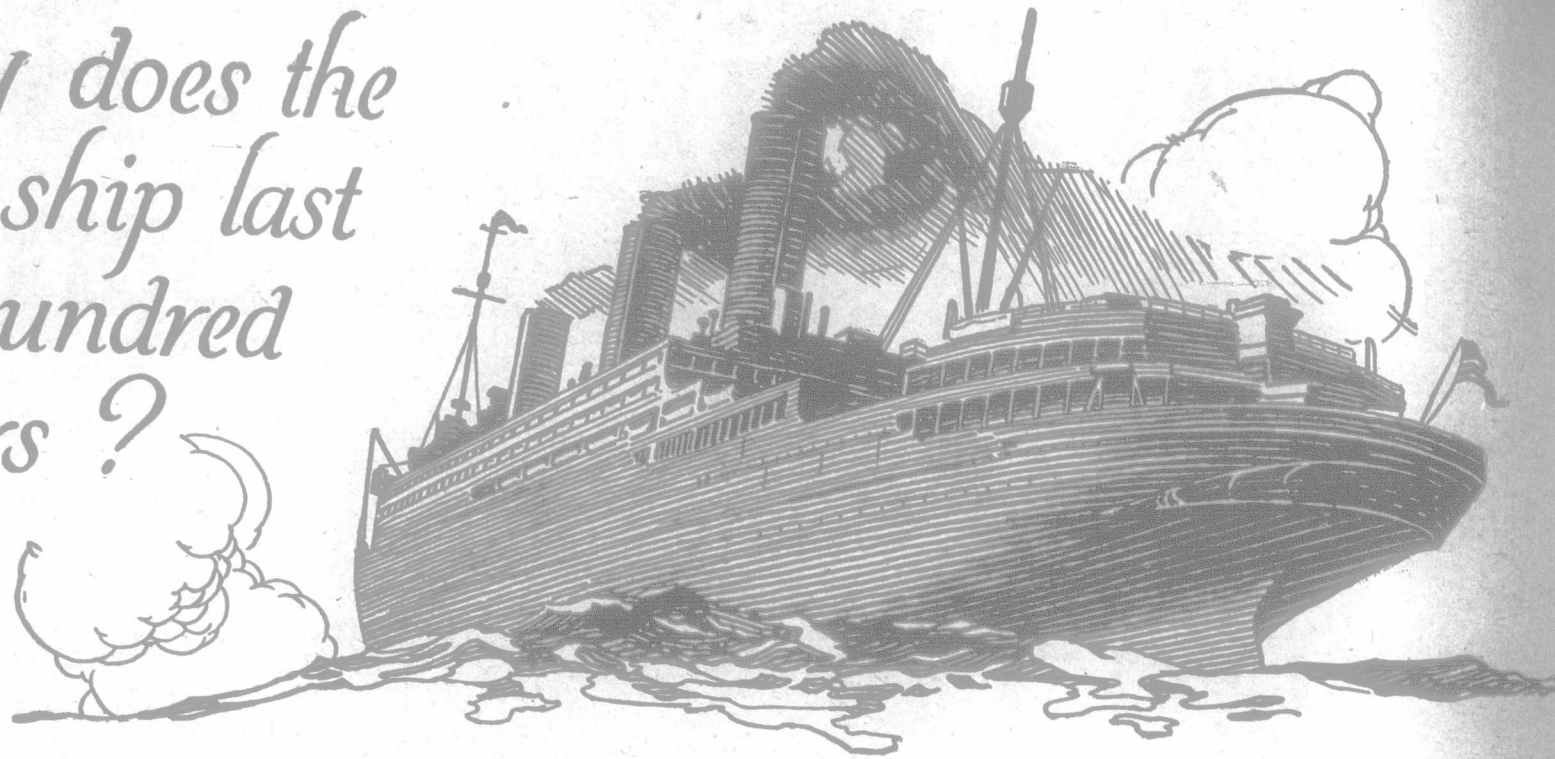
Western Branch :: 325 Elgin Avenue, Winnipeg



tractors and Threshers  
WATERLOO BOY  
simplest, most "Accessible, most Powerful" tractor on the market.  
for hauling 3 plows, Threshing, etc. and General Farm Work.  
al Farmers' Threshers, suitable also for small Tractors and Gasoline Engines for own threshing. Keep your farm clear of expense.  
free catalogue, prices and any information.  
T. BELL ENGINE & THRESHER COMPANY, LIMITED, Seaforth, Ont.  
Tractors and large size Threshers.  
et Your Dairy Profits  
No farmer can afford to be without a good cream separator—  
Buy the Viking and not only save in the first cost, but save time and labor in operation.  
Do your skimming faster and better.  
GUARANTEED FOR FIVE YEARS  
The Viking is made with the Straight Disc skimming device which has proven to be the best. It is easier to wash—insures longer life.  
It's a proved profit maker for the farmer.  
Write for illustrated catalog and further particulars.  
SEPARATOR COMPANY  
Bldgs., (Dept. S) MONTREAL  
ND TRUNK RAILWAY SYSTEM  
he Double Back Route  
EEN MONTREAL, ONTO, DETROIT ND CHICAGO  
lled dining car service  
g Cars on Night Trains  
or Cars on principal Day  
ormation from any Grand Ticket Agents or C. E. District Passenger Agent.  
WRITE FOR PRICE LIST AND TAGS  
FURS  
MMERING  
ng overcome positively. Our methods permanently restore each. Graduate pupils everywhere receive advice and literature.  
BROTT INSTITUTE  
ENER, CANADA



Why does the big ship last a hundred years?



IT IS not at all uncommon for a big ocean ship to stay in service for a century. Even though buffeted by storms without number, it rides the waves as on a cushion. Hassler Shock Absorbers are to your Ford Car what the great cushion of water is to the ship. They take up every jolt and jar and prevent vibration.

You actually can add a third to the life of your Ford Car by equipping it with Hassler Shock Absorbers.

Your running expense, including tires, repairs, gasoline, is decreased very considerably. In fact, in tires and repairs there is at least a thirty per cent saving!

And not only is your Ford made a better investment, but a more satisfactory one. It is made comfortable; it steers easier; it is safer; and you can get greater service from it because you will feel inclined to drive it farther.

Regular Hasslers are for the Touring Car, Roadster and the Coupe. There are special Hasslers for the Ford Sedan. Also for the Ford Commercial Car and the Ford One-Ton Truck.

Hasslers do not necessitate the mutilation of the car in any way. They are quickly and easily installed by your garageman. You are privileged to use them for ten days and if you are not pleased they are removed without cost to you.

There should be a Hassler dealer near you. If you don't know him, write us and we'll tell you about our 10-day Trial Offer and see that you are supplied promptly.

Opportunities now for exclusive distributors in many foreign countries.

ROBERT H. HASSLER, Ltd., 851 Sherman Ave., Hamilton, Ont.

Hassler Sales & Service Station 2-4-6 and 8 Wood Street, Toronto, Ont.

W. L. Renton & Company, 16 Jarvis St., Hamilton, Ont.

The Hassler Guarantee: "Absolute Satisfaction or Your Money Back"

A Standardized Quality Product—Worth the Price



For Ford Passenger Cars.



This Twin Type for Front and Rear of Ford Sedans.



This Twin Type for Front and Rear of Ford Commercial Cars.



This Twin Type for Front and Rear of Ford One-Ton Trucks.

# HASSLER

TRADE MARK REGISTERED

## Shock Absorbers

PATENTED

### for Ford Cars and Trucks

The conical springs set at the angle shown prevent sidesway and allow for the most resilient downward action. The springs compress on either upward or downward movements—do not stretch out of shape—do not allow up-throw. Hasslers last as long as the Ford and make it last.



# The Farmer's Advocate and Home Magazine

PERSEVERE  
AND  
SUCCEED

ESTABLISHED  
1866

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875

LV.

LONDON ONTARIO MARCH 4, 1920.

1432

## EDITORIAL.

With March here spring cannot be far away.

No breeder ever built up a good herd of cattle by using poor sires.

Some shrubs and perennial flowers about the dwelling will make it more homelike and attractive.

Some oats and bran will condition the pregnant ewes and increase the strength and vitality of the lamb crop.

Those of long experience always look for a season of luxuriant growth after such a heavy carpet of snow as we have had this winter.

Food played a large part in the winning of the war, and a plenty of it will have no small influence in bringing a troubled, fevered world back to normal.

The British Internal Revenue Officer has testified that 340,000 persons in that country made fortunes out of the war. It would be interesting to know just how we fared in Canada, and how large a crop of war profiteers we actually produced.

The Labor Party of the Provincial Legislature have acted wisely in not pressing their claims for the eight-hour day. Farmers could not conscientiously subscribe to any such principle for when applied to agriculture it is ridiculous and altogether unworkable.

The clothiers are urging for higher profits, and claim they will have to go out of business if a greater margin is not allowed. To the buyer of clothes the results will be practically the same, whatever happens. We shall have to resurrect the loom and the spinning wheel.

If considering whether it will pay to buy clover seed at current prices, give some thought to the requirements of the soil and to the nature of the rations you will want to feed the live stock during the winter of 1921-'22. One has to look ahead in farming; no clover sown this spring will mean no clover in the hay crop in 1921 and necessitate the purchase of protein-rich concentrates during the following winter if a suitable ration is to be fed.

At the annual meeting of the Eastern Canada Live-Stock Union, held at Toronto during the first week in February, almost an hour was devoted to a discussion of the proper time to begin the meeting, and then the meeting was adjourned before the business was concluded. To our knowledge no other meeting has been held to conclude the business. The Eastern Canada Live-Stock Union has never been a healthy child, but its chances of growing up seem to be getting slimmer.

There is no question but what artificial fertilizers will play an increasingly important part in the agriculture of this country, yet farmers as a rule do not understand their properties or peculiarities to the extent they should in order to get the most value for money expended on them. In this issue appears the first of a series of articles written by B. Leslie Emslie, who was formerly supervisor of the investigational work in fertilizers conducted by the Dominion Department of Agriculture; from this series farmers will be able to glean a great deal of information that can be put to practical use in the selection and application of fertilizers.

## Size up Your Seed Requirements!

Those who have not already done so ought soon to take stock of their seed supply and plan the cropping system for 1920. Where a satisfactory rotation of crops has characterized the farm operations in years past, the different fields will present certain claims that cannot be overlooked, and where no well-laid plan has been followed it is time that a rotation was adopted and followed. Good farming now means more than plowing, harrowing and sowing the seed. On a well-managed farm, corn or hoe crops, grain and grass all follow one another in natural order, provided the elements do not combine to frustrate the plans of the husbandman. This requires planning not days or weeks, but years in advance.

When one takes a paper and pencil nowadays to figure up his requirements in the way of seeds, the total cost may be somewhat staggering; nevertheless, there is only one way to make a success of mixed farming, and that is to grow an abundance of grain and roughage, or, in other words, to produce good crops. It would be penny wise and pound foolish to skimp in the quantity or quality of seed used; the best is none too good at any time. Clover is scarce and dear, but one cannot afford to do without it. Clover is an important factor in the crop rotation, and anyone who contemplates omitting it this spring should first sit down and count the cost by estimating how much the returns of future years will be reduced by the absence of clover from the rotation when it should be there. Farming requires foresight to a marked degree, and in no regard is a lack of it more manifest than in the habit of sowing seed of poor quality or in insufficient quantities. Size up your seed requirements now and place your order; seeding will soon be here.

## The Coming Session.

The long suspense is ended and the people of Ontario may join with the present Ontario Government in a deep, soul-satisfying sigh of relief that the members are all duly elected and commissioned to lead the U. F. O. and Labor battalions into the fray of the coming session. The Premier would have escaped considerable worry, perhaps, had seats been provided for himself and colleagues at an earlier date, but the very fact that no one representing any element of public opinion decided to oppose the two Ministers or the Premier after three months in office is a good indication that Ontario is pretty well satisfied with the sample of Government provided by the Coalition, and willing that the present administration should be allowed to carry on. True, Honorable Mr. Drury was opposed in Halton, but what issues were at stake or what element of thought or opinion Mr. Stephenson represented we have yet failed to comprehend.

The same spirit of open-mindedness which has characterized the electorate will, no doubt, prevail while the Legislature is in session, and the people of Ontario will expect honest, business-like and unbiased legislation to receive the support of every element and party represented in the House. Politics, as we used to understand them, have been subordinated to the wholesome desire for clean, upright administration, and the fact that this Government happens to be largely U. F. O. will not shield them from the storm of public indignation if, through any fault of their own, they fail to provide it. Farmers withdrew their allegiance to their favorite parties for no other reason than to get fair representation and better government, and they will not be backward in manifesting their disappointment should they have any occasion to entertain serious differences of opinion with the Coalition.

We understand from the public utterances of elected U. F. O. members of the Legislature that any action on the part of the Ministers that savors of favoritism toward their own or other ridings will not meet with

approval, and we presume their opinions on any questions that affect the public generally will be based on the same worthy principle.

The announcements already made indicate a comprehensive program of progressive legislation for the coming session which convenes on March 9, and it has been evidenced by the results of the recent by-elections that the Province of Ontario has confidence in the present Government to guide the ship of state through the troubled waters and bring her safely into harbor.

## Wide Sleighs and Wider Roads.

The perennial agitation for wider sleighs has broken out again this winter with renewed vigor owing to the exceptional depth of snow, and the consequent inconvenience to those using teams on country roads. There have been desultory attempts made in the past to excite interest in this matter but at no time, in our remembrance, has a concerted effort, on the part of those chiefly concerned, been made to have the matter given the consideration it deserves. A team of mules or ponies may get along fairly well on the narrow-gauge roads such as we have this winter, but it is exasperating to drive a good team of draft horses over these narrow paths where they are obliged to balance themselves, or else flounder off into four or five feet of snow. Often it is a struggle between the two horses to see which will tread the path and which will plow along beside it. Even a lively span of drivers cannot move away with any degree of confidence for a mis-step may throw them off the track.

The obstacles in the way of wider sleighs and a more sensible width of roads in winter are not insurmountable. Farmers could, with little expense, adapt their sleighs to any width, and by setting a date in advance when wider sleighs would come into vogue the manufacturers would be subjected to the minimum of loss. The committee appointed last spring by the Agricultural Committee of the House of Commons to consider the standardization of implement parts might well devote some attention to this matter, and we believe they would do so if the people of country districts exhibited some degree of unity in urging this much-needed transformation.

## The Quality of Ontario Butter.

If the dairy officials of the Ontario Department of Agriculture needed any further evidence of Ontario's position with regard to butter manufacture, they certainly found it in the recent show of dairy products in Manitoba. According to reports, Ontario enjoyed the notable distinction of failing to get within fifty places of the top in a list of two hundred and twenty-five entries. We are reminded by this occurrence of the difference between the words "reputation" and "notoriety." In this instance Ontario may fairly claim the notoriety, while if some system of developing a graded product is not soon evolved she will be forced to leave the reputation for good butter to the other provinces. In the solution of this problem the party fundamentally concerned is the producer, but the parties immediately concerned are the creamerymen and the produce merchants. They take the raw material of the dairy off the hands of the farmer, and in the manufacture and distribution of it either encourage or retard the development of the great dairy industry. In the matter of butter grading, a distinctly progressive step, these two factors in dairying are now standing off and looking at each other, like the two boys, one of whom was afraid and the other daren't. The butter trade during the war was characterized mainly by a heavy demand, so heavy in fact that creameries would take any kind of cream because they could sell any kind of butter.



# The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

Published weekly by THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

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

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers of any publication in Canada.
  2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries, 12s. in advance.
  3. ADVERTISING RATES.—25 cents per line, agate, flat. Live-stock advertising rates given on application.
  4. THE FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payment of arrears must be made as required by law.
  5. THE LAW IS, that all subscribers to newspapers are held responsible until all arrears are paid, and their paper ordered to be discontinued.
  6. REMITTANCES should be made direct to us, either by Money Order, Postal Note, Express Order or Registered Letter, which will be at our risk. When made otherwise we will not be responsible.
  7. THE DATE ON YOUR LABEL shows to what time your subscription is paid.
  8. ANONYMOUS communications will receive no attention. In every case the "Full Name and Post Office Address Must be Given."
  9. WHEN A REPLY BY MAIL IS REQUIRED to Urgent, Veterinary or Legal Enquiries, \$1.00 must be enclosed.
  10. LETTERS intended for publication should be written on one side of the paper only.
  11. CHANGE OF ADDRESS.—Subscribers when ordering a change of address should give the old as well as the new P. O. address.
  12. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
  13. ADDRESSES OF CORRESPONDENTS ARE CONSIDERED AS CONFIDENTIAL and will not be forwarded.
  14. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.
- ADDRESS—THE FARMER'S ADVOCATE, or THE WILLIAM WELD COMPANY (Limited), London, Canada.

and the produce merchant could pay alike for all grades because he needed more butter than he could get.

The Ontario Department of Agriculture stands on neutral but very interested ground in this matter. The Minister and his officials are the guardians of the industry so to speak, and it would seem fair to say that when the best of those immediately concerned are anxious for improvement but afraid of each other, the need for action rests upon the neutral but interested guardian. The present Government is, to quite an extent, a producer's Government. Moreover, the present Minister of Agriculture is a well-known supporter of dairying. We believe that he will be ready to take the responsibility that comes to him by the virtue of his office and his calling and force an immediate improvement. We have no desire to minimize the difficulty of working out a satisfactory solution and do not anticipate that any solution will be entirely satisfactory from the first. However, as we view it the responsibility now rests on the Department, and whether it will be deemed necessary to enact a compulsory grading law is for the Minister and his advisers to decide.

## An Injustice to School Children.

Dr. Sinclair, a well-informed educationalist now connected with the Department of Education for the Province of Ontario, recently stated publicly that there are one thousand schools in the Province of Ontario with an attendance of less than ten pupils each. This is a situation that requires careful consideration, by both the Department of Education and by the inspectors, trustees and ratepayers in the country. Teachers are demanding and deserving of higher salaries, yet the expenses in connection with one of these poorly-attended schools will appear rather high. Consolidation in the country districts will not get around or lessen the expense of educating a few children in sparsely-settled districts, but it may do it better. It appears that some changes will have to be made, for sections with only ten pupils attending school will not purchase the necessary equipment or employ the best teachers; under these circumstances the pupils in poorly-attended schools are suffering under a disadvantage which constitutes an injustice.

## Duncan McGreggor's Views on Spiritualism.

By SANDY FRASER.

I had Duncan McGreggor over yesterday, helping me kill a couple o' pigs. It's a cauld job for this time o' the year but ye have to be doing something when the prok-barrel rins dry.

It's quite a few weeks since I had a chance for a chat wi' Duncan and he had plenty to say, ye may be sure o' that. He could always do two things at a time if one o' them was talking. The wark he would be at never interfered wi' the conversation.

Duncan had been readin' the papers about Sir Oliver Lodge an' the lectures he has been delivering in New York an' ither places an' he was ready for an argument on the subject o' spiritualism as soon as he kened whether I was for or against auld Sir Oliver. Duncan was always fond enough o' a debate to be willing to tak' either the affirmative or the negative side.

"What do ye think o' this idea o' communication wi' the speerits o' the dead," he says to me, after we had got the first pig oot o' the barrel o' hot water an' were startin' to scrape it doon. "Dae ye think it's possible?" says he.

"Oh, I dinna ken," I replied. "It's easier tae believe it than tae look for proof. Besides, it's no' the fashion to be denyin' the possibility o' anything these days. Ye can hardly dream about a thing noo but what somebody will be inventin' it an' gettin' oot a patent. Have ye seen the latest about the wireless telephone? Ye can talk to yer friends in the Auld Country noo, gin ye want to—and hae the price. Nobody's surprised at anything any mair. We tak' it all as a matter o' course. An' it's a reasonable attitude too, in a way. I've always said that when ye admit the fact that such creatures as we are exist on a world such as this, ye have admitted something that is as wonderful an' as much past oor understanding as anything can be. If we could get at the bottom o' that secret the solution o' all these ither problems wad be easy. So why may it no' be possible to talk wi' the departed?" I concluded.

"It's against Nature's law, I'm thinkin'," returned Duncan, "That's why I dinna believe in it. Of course there's no tellin' what powers mankind may develop in the next couple o' hundred thousand years, or so, but at present there doesna' seem to be reason to believe that his brain is capable o' recording any messages that may be coming frae the land o' the speerits. What hae they got in this line, so far? Juist nonsense, mostly. Nothing but what the mind o' man has already imagined a thousand times. Gin we ever get tae the point where we can carry on a conversation wi' those that hae gone across we'll be gettin' some information, believe me you. It wina be the gossip that ye might be gettin' frae yer neighbor across the line fence."

"Weel, I dima ken," I said, when Duncan came to a stop. "Maybe ye are right, but I'll be wonderin' sometimes if it wouldna be a guid thing for the world if the next life was to become a wee bit mair real like tae them. It might hae the effect o' giving them an interest in a future existence. Sort o' divide their time an' attention wi' the present one, as ye might say. The future life was pretty real tae the auld folk, dae ye mind, Duncan," says I.

"It was that," replied Duncan. "I mind o' an auld neighbor o' mine, before I cam' oot tae this country, that lived in Inverness wi' his wife an' a couple o' sons. He was a blacksmith, but, some way or ither he never could mak' the twa ends meet. There was a mortgage on the house they lived in an' it was the aim o' his life to get it paid off. But it was too much for him an' he died when there was still mair than fifty pounds owing on the hoose. The boys kept on wi' the business and wi' better luck than the auld man. At last their mother fook sick an' tauld them she was dying, as she was, wi'oot a doot. Then the oldest son says to her; 'noo mither, ye'll soon be with my father. Na doot ye will hae much to tell him. But dinna forget this mither, mind ye, tell him the hoose is freed. He'll be glad to hear that.'"

"And there was anither story I used to hear them tell," went on Duncan. "In some places in Scotland the people used to wear these wooden clogs that ye've maybe seen in yer time. If ye did ye'll ken the clanking kind o' a noise they wad be makin' on the sidewalks. Onyway there was an auld woman at Hawick that was says to her, 'Weel, Jenny, ye are gaun to Heeven, an' weel.' 'Weel, Jenny replied, 'Gin I shud see them I'll tell clanking through Heeven lookin' for your folk.'"

"Good for her," says I, when Duncan had finished. "The next world an' this were all one to her. Like his father was going to go to heaven when he died. 'Yes,' says the teacher, 'I guess he will.' 'Weel then,' says the boy, 'I'll no' gang.'"

Duncan sat doon for a meenute on the edge o' the barrel that we were scaldin' the pigs in. "Sandy," says he, "We can laugh at these people for their auld-fashioned ideas, but, when ye come to think about it they are mair logical than some o' the rest o' us. We say actions seem tae indicate that this world is the only one that we tak' much stock in. We're a bunch o' extremists. Those o' us that are not clean oot o' breath chasin' the dollar are rinnin' after this spiritualism idea till we're weel on the way to the lunatic asylum. Half way betwixt two extremes is where ye are going to find the truth. It's all right to work hard for a living an' to put a wee bit past for the rainy day. But the point

is that we should keep in mind the fact that in the course o' this life-time o' work, and worry, maybe, we are getting an education that, in the very nature o' things, must be a preparation for anither existence a little different, na doot, tae the one we're sae familiar wi' here. Juist a case o' passing frae the common school tae the high school, gin ye like to put it that way. An' it's hard to tell how many college an' university courses may be coming after that."

"Ye're pretty ambitious for an auld chap, Duncan," I remarked. "I dinna ken how ye mak' oot that I'm auld, Sandy," returned Duncan. "As I see it I'm only a bairn begginnin' to learn his A B C's oot o' that wee First Reader that aye gives us mair trouble than a' the ither big books that come after it."

"Go to it, Duncan," says I. "It's going to tak' some time for ye to get yer schoolin, I can see that, but ye'll be among the college graduates some day. A couple or three milleniums frae noo, I suppose."

## Nature's Diary.

By A. BROOKER KLUGH, M. A.

The migration of the Bohemian Waxwing into Ontario this winter seems to have been fairly wide-spread, as is shown by the data received from several correspondents who have been kind enough to respond to my request for information on this point in a recent "Nature's Diary."

From Orillia W. T. R. writes as follows:—"These birds attracted our attention first about January 1. Yesterday while driving along the Muskoka Road I noticed two of them in a hawthorn tree quite close to me, close enough to identify them from your description. There was still some fruit on the trees, also on a bitter-sweet vine which was entwining the thorn. I did not see which fruit they were eating, as they flew to a nearby maple."

W. K. W. B., Toronto, says: "I saw a flock of fifteen near Upper Canada College. They were eating the old frozen fruit of a hawthorn."

W. A., writing from Waterdown, says: "We kept a sharp lookout for waxwings as I noted that you wished to be informed of their visits, and to our intense delight on the morning of January 28, a flock appeared and on the 29th their numbers were augmented until we counted fifty. They would perch on trees not over fifteen feet from our back window and we could thus see them distinctly. Their crest or topnot was quite prominent and they could raise or depress it at will. At times we thought the crest had disappeared, but if we raised our hand it immediately re-appeared. They seemed to be able to fly straight up from the ground and would congregate close together on the branches of the trees. During the night, we are sure, they remained in a clump of Spruce trees west of our house. They lived on a black-berry, a little larger than a black currant, which was on a bush originally planted for a hedge."

Some other winter visitors besides the Bohemian Waxwings, Tree Sparrows, Snowflakes, Redpolls and Pine Siskins which have appeared this winter are the Pine Grosbeaks and the Whitewinged Crossbills.

The Pine Grosbeak is a bird of the Finch Family, as are most of our winter visitors, and has, as its name would indicate, an even heavier bill than most members of that family. This species is about eight and a half inches in length. The adult male is carmine red, paler or whitish on the abdomen, darker and streaked with dusky on the back, with the wings and tail dusky, the former having two white wing-bars. Towards spring the plumage of the adult male becomes brighter and glistening, this being due to the fact that the minute barbules of the feathers, particularly those of the feathers of the head and neck, in which regions the greatest brightening occurs, have been worn away, leaving the glistening carmine bars exposed. The young males of this species are pale olive-brown above and smoky gray beneath, with deep yellow or orange on the head, uppertail coverts and rump. The wings and tail are dusky and the former has two white bars. The yellow of the head and rump assumes a golden sheen towards spring in the same manner that the plumage of the adult male becomes brighter.

The Pine Grosbeak breeds in the Spruce forests of Labrador, in Newfoundland, in the Mackenzie River district, in the Rocky Mountains and in Alaska. Writing of this species in the Kowak Valley, Alaska, Grinnell says: "One morning, the 18th of February, found me across the river skirting the willows in search of Ptarmigan. Although it was nearly 50 degrees below zero, a Pine Grosbeak, from the depths of a nearby thicket, suddenly burst forth into a rich melodious strain. Again one day in March, during a heavy snowstorm, a bright red male sang at intervals for nearly an hour, as summer approached their song was heard more frequently. Not until May 25 did I discover a nest. This was barely commenced, but on June 3, when I visited the locality again, the nest was completed and contained four eggs. The female was incubating and remained on the nest until nearly touched. The nest was 8 feet from the ground on the lower horizontal branches of a small Spruce. It was a shallow affair, and consisted of a loosely-laid platform of slender Spruce twigs, on which rested a symmetrically-molded saucer of fine dry grass. The eggs were pale Nile blue, dotted and speckled with pale lavender, drab and sepia, the larger ends being most heavily marked."

The Pine Grosbeak is a fairly regular winter visitor to southern Canada, though like all our winter visitors it is irregular in its abundance, and may not even put in an appearance in a given locality for several consecutive winters. While here it feeds on berries and fruits of various kinds, as well as on the buds of the Spruce and other trees.



## THE HORSE.

### Diseases of the Respiratory Organs.—VIII.

#### NASAL GLEET.

The skull of the horse contains air cavities which communicate with the nasal chambers by small openings. These cavities are called "sinuses." Under normal conditions they are filled with air which is admitted from the nasal chambers through the openings mentioned. On each side of the face are four sinuses, two quite small and two quite large cavities, the latter are known as the frontal and maxillary sinuses. The former is situated above the eye and by a small opening communicates with the maxillary sinus, which is situated below the eyes and communicates by an opening with the nasal chamber. The sinuses of each side communicate with each other, but there is no communication of the sinuses of one side with those of the other.

In catarrhal affections the lining membrane of these sinuses, by extension of the inflammation of the mucous or lining membrane of the nasal chambers may become diseased and pour out a quantity of pus, which, lodging in the various sinuses, becomes a source of irritation constituting a disease known as "nasal gleet." A collection of pus or other material in the sinuses, if exit be not allowed, may cause absorption of the bony walls by reason of pressure. While catarrh is the usual cause of nasal gleet, it may arise from other causes, as external injuries, decay of one or more of the fangs of the upper molar teeth, abscesses or enlargement of the fangs of the teeth, disease of the bones of the face, etc.

Symptoms.—In most cases there is an irregular discharge of pus from one or both nostrils, usually but one, indicating that the sinuses of that side of the head only, are affected. From some cause, not understood, the affection is more often noticed on the left side than in the right. As stated, "the discharge is usually irregular." A variable length of time may elapse, during which no discharge is noticed, followed by a copious discharge for a variable period, and this is repeated. The discharge also varies in quantity, according to the nature of the cause, the duration of the disease, and the structures that are involved. The glands on the inside of the arms of the lower jaw (called the submaxillary glands) are usually enlarged and hardened but loose, but in rare cases adhered to the bone. The patient, in most cases, especially in the early stages, does not appear to suffer much inconvenience, while in other cases he appears to lack his usual spirit or vitality; the eye of the affected side may look dim, the upper lid may droop a little, and the hair over the affected parts may look rough. The breath from the affected side, also the discharge, may be offensive, indicating that the disease is due to a decaying tooth or disease of bone. Mastication may be imperfect and painful, which of course is practically direct evidence that one or more of the teeth are diseased. If the malady is of long standing, and the sinuses full of matter, there will, in most cases, be noticed a more or less well-marked enlargement of the face over the affected parts. In any case where the sinuses, or a division of them is filled with pus, whether or not there be a bulging of the walls, tapping upon the surface will cause a dull sound to be emitted, and by comparing the sound of the side affected with that of the healthy side, or, if both sides be diseased, with that of a healthy horse, a distinction can be drawn that will be of material assistance in making a correct diagnosis.

Treatment.—If the breath or discharge be foetid, the cause (which is usually a decaying tooth) should be carefully looked for, and, if possible, removed. If a tooth it must be extracted. If the root be largely decayed it may be extracted by the use of an ordinary large tooth forceps, or a pair of large pincers, but the extraction of a molar tooth, except when in the condition noted, is usually an operation that cannot be performed except by an expert with instruments especially designed for the purpose. Where the cause of the trouble is a tooth, its extraction is practically all the treatment that is required, unless the patient has become weak and poor as a result of inability to masticate properly, in which case it is well to give tonics, as 1 dram each of powdered sulphate of iron, gentian, ginger and nuxvomica 3 times daily, and feed well. It is also well to examine the mouth every day or two and remove any masticated food that may have become insinuated in the cavity from which the tooth has been extracted. This cavity will soon fill, and as the cause of the trouble has been removed, the animal will soon recover his normal condition. If there be a bulging of the bones of the face, a dull sound on percussion (tapping), or a foetid odor when the teeth are not diseased, an operation called "trephining" will have to be performed. This consists in boring a hole through the outer wall of the sinus and removing the pus. This should not be attempted except by a veterinarian.

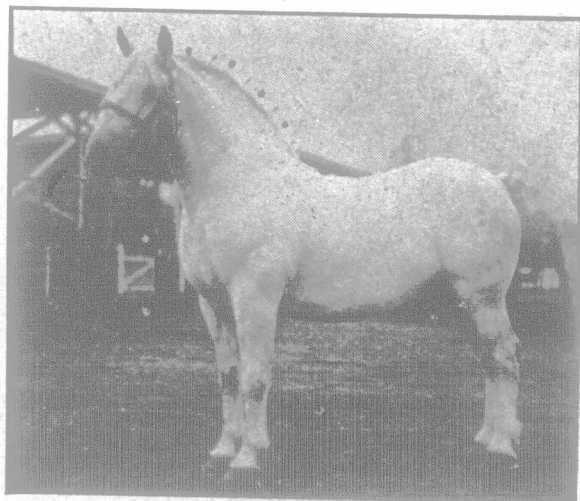
When none of these serious conditions are indicated, and the general health of the animal is not seriously interfered with, the administration of mineral tonics will usually effect a cure. For this purpose 1 dram each of powdered sulphate of copper and sulphate of iron three times daily, either in damp feed or as a bolus, usually gives good results. Both drugs are tonics, and the former has a special action in checking mucous discharges, especially of the sinuses of the head, hence may be considered a specific for nasal gleet. During the treatment the patient should be fed on laxative feed, as the treatment tends to constipation of the bowels. If the evacuations indicate that constipation is threatened a pint of raw linseed oil should be given. Feeding

a reasonable amount of bran, linseed meal, grass, if in season, and raw roots, will, in most cases, prevent trouble of this nature. Where no operation is necessary, and the patient has not become weakened, he can perform his usual work during treatment.

WHIP.

### Shires Selling High in England.

While horses of all types and descriptions still sell in Canada at very modest prices, there seems to be an insatiable demand in the Old Country for breeding stock and even for working kinds. Word comes across the seas that the Pendley Stud Shire sale, held at Tring, England, early in February, established very high averages, and some handsome individual prices were paid. The yearling colt Pendley Footprint fetched \$11,500, and the mare, Snelston Lady, brought \$11,000. The total revenue from the sale of thirty-five head amounted to \$126,340, or an average of \$3,611. Eight yearly fillies averaged \$2,955; six three-year fillies averaged \$2,555, and two four-year fillies averaged \$6,625. Seven mares realized an average of \$4,520; two yearling colts averaged \$6,770, and one stallion sold for \$1,680. These are remarkable figures, but the Pendley stud has the same standing in the Shire world as does that of Wm. Dunlop in Clydesdales, or the herd of Wm. Duthie in the Short-horn fraternity. Would that some of this Old Country horse enthusiasm could be conveyed to Canada!



Monogram.

A Percheron stallion sold in the Hassard sale for \$1,500.

### The Hassard Sale.

The dispersion sale of Clydesdales and Percherons, held by T. H. Hassard at his stables at Markham Ontario, on Friday, February 20, did not establish any high averages for stallions or mares of either breed in Canada. Many of the lots catalogued had been prominent winners at Toronto, Guelph and other large exhibitions throughout Canada, and these, like all the others, were brought forward in excellent condition, but at no time throughout the sale could the bidding be called brisk. However, the Count of Hillcrest, a 7-year-old Canadian-bred horse got by The Bruce (imp.), fetched \$2,000, and Monogram (imp.), a grey Percheron horse of the same age, sold at \$1,500. Both horses had won many laurels in Canadian show-rings. The prices paid did not seem high when the quality of each was taken into consideration. Peter Wilton, the 15-year-old Standard Bred horse by Peter the Great and winner of a score of championship ribbons in the past, sold at \$550. A review of sale shows 14 Clydesdale stallions averaging \$585; 6 Clydesdale mares averaging \$383, and the 4 Percheron stallions averaging \$675. The sales in detail follow:

CLYDESDALE STALLIONS.	
Count of Hillcrest, R. Welsh, Hastings.....	\$2,000
Pride of Dunedin, R. Welsh.....	1,000
Royal Marathon, R. Welsh.....	500
Macaroon's Prince, J. Shaw, Peterborough.....	350
Cairson, R. Welsh.....	500
Netherby (imp.), J. Sullivan, Tweed.....	410
Royal Hopewell, R. Welsh.....	400
Marathon's Heir, R. Welsh.....	500
Marathon's Best, W. Alderson, Kindersley, Saskatchewan.....	395
Joe Marathon, R. Welsh.....	350
Count of York, R. Welsh.....	760
Count Crawford, R. Welsh.....	525
Prince Cairndale, Arthur Mason.....	300
Royal Revelanta, Thos. Roddy, Toronto.....	300
CLYDESDALE MARES.	
Lady Marathon, Robt. Graham, Toronto.....	700
Bell Marathon, J. Bousfield, McGregor, Man.....	470
Myrtle Grove, R. Welsh.....	385
Queen of Hillcrest, W. A. Beamish, Alta.....	295
Josephine, R. Welsh.....	250
Jessie Cairndale, Thos. Roddy.....	200
PERCHERON STALLIONS.	
Monogram (imp.), R. Welsh.....	1,500
Mule (imp.), R. Welsh.....	300
Autumn Boy, R. Welsh.....	500
Dazzle Boy, R. Welsh.....	400
STANDARD-BRED.	
Peter Wilton, J. W. Wilkinson, Toronto.....	550

## LIVE STOCK.

The stock must be well kept if it is to keep you.

Don't forget that constitution is very important in breeding stock.

Those steers to be turned on grass may be dehorned any time now.

Don't let the lice get a start on the cattle if trouble would be avoided.

Those pigs which are commencing to cripple may be straightened up by putting them out in a sunny yard for exercise for a few hours each day.

Begin right in pure-bred live stock. That means secure foundation stock with good blood and of right conformation, then feed and care for it.

Knocking the other breeds isn't going to get you anywhere with the one you are particularly interested in. There are good and poor individuals in all breeds. If you can't say a good word keep quiet.

Pig scours sometimes causes irritation or inflammation at or around the base of their tails, which shuts off circulation of blood, with the result that the end of the tail dries and sluffs off. Clean sleeping quarters are important.

The windows which have been frozen over all winter look dirty now that old Sol is beginning to show his bright face more strongly. Make it a point to sweep the cobwebs out of the windows and wipe off the glass the first mild day.

Worms sometimes cause pigs to be unthrifty. Symptoms are unthriftiness, and either impaired or capricious appetites. Mix one part oil of turpentine in seven parts new milk, and give two to six tablespoonfuls according to size to each pig after fasting them for twelve hours.

### Raising Good Calves.

EDITOR "THE FARMER'S ADVOCATE":

In no class of work is the old adage, "Well begun is half done," more true than in the raising of good cattle. Farmers are more clearly recognizing all the time, that upon the thrifty start given the young calf depends the extra size and plentiful flesh of the finished, fat, beef animal. Nearly every stockman has a sort of special method he calls his own because that particular plan works out most successfully for him, but another man may have even better success by using a method quite different. Comparison of the two methods, with the adoption of the best points of each, may make a splendid method for a third man. With this thought in mind, I wish to describe my way of raising good calves, and hope it may be of use to someone else. To begin with, I do not believe in calves from too young heifers. The immature heifer may possibly have a good calf, but I have always believed that her stock is apt to be stunted and I have yet to be convinced to the contrary. I like the heifers to come in at two and a half years, or even at a few months over that. I keep the calves in boxstalls in the bank barn for their first summer, whether they are born in the fall or in the spring, and since the advent of the wicked "heel-fly", I am more than ever convinced that this is the most advisable plan to follow. The calves are cool and comfortable there, and free from flies, and can be fed just the necessary amount as there is only one calf in a stall—the stalls being divided into spaces as wanted, by means of movable gates. This prevents the forming of the objectionable habit of calves sucking each other.

I always leave the young calf with the cow until the milk is good and this is a very much argued point, and I have no criticism against the man who does not believe in it. But I find it the best plan for my stock, and I never have any trouble with cow or calf when they are finally separated, beyond some noise which is endurable, since I am satisfied the calf has had several day's good start with food at exactly the right temperature, with no bother or guess work on my part. Once by itself in the boxstall, the calf gets warm, new milk three times daily, for three weeks in the case of a spring calf and generally for four weeks if born in cold weather, keeping in mind the fact that some calves require quite a lot more than others may need. The change to one daily feed of skim-milk with flaxjelly or other substitute for the cream, and from that to the diet of all skim-milk is well understood by all experienced feeders, so there is no need of describing it. I might just say here that if flax doesn't seem to suit the calf, I often use a piece of stale bread instead. The three daily meals are a standing rule. As soon as possible when on the all skim-milk diet, I get the calf to eat oats in some shape—rolled or ground, also hay, whatever kind it will eat, and when it is eating fairly well, the flax is omitted and a pail of water introduced. A little salt is put in the milk once a day, and, later on is kept in a box where the calf can help itself. All summer the calves are kept supplied with fresh cut grass until the hay is in the barn, when it can be used in a very busy time. By this method the owner can see at a glance, almost, just how each calf is thriving, and each calf gets just the amount of food required. This may sound like a lot of work, but getting the grass is almost the only



extra chore, as on most farms the milk and water both have to be carried to the orchard or other place used as a calf pasture. The extra work in any case, is to my mind, offset by the advantage of having the manure where it can be loaded up and applied where most wanted.

My method may not appeal to very many, but it may be of use to someone, so I pass it on—it is the result of experience and thought on my part, and by its use I can raise good calves, far better animals than I could raise by the method I used previously.

Middlesex Co., Ont.

A. C. B.

### Hogs and Skim-Milk.

Nearly every feeder recognizes that skim-milk is a valuable feed for swine, but few will agree in any valuation of skim-milk for feeding purposes. Skim-milk is particularly valuable as a supplement to grain and is probably able to bring about larger gains than any other supplement that is at the disposal of the feeder. It carries plenty of mineral matter and is rich in digestible protein for which reason it should never be fed alone, but always in combination with such starchy feeds as corn, barley, wheat and other cereals. For economical fattening and for growth a combination such as this for pigs is difficult, if not impossible, to beat.

An instance of the successful feeding of skim-milk came to our notice a few days ago when, on the farm of Robert McCulloch, Peel County, we saw a very fine litter of eight market hogs just ready for the buyer. Noting their excellent condition we inquired how and what they had been fed. We soon found that skim-milk had formed a very important part of their ration and for the last while back this pen had been getting about 100 pounds daily. The hogs would weigh probably from 225 to 250 pounds and although thought to be of nearly pure Yorkshire blood, looked very much as though a not far distant ancestor belonged with the Chester Whites. However, this litter had been purchased at weaning age (although still on the sow) for \$60. This was on September 16 and it will be remembered incidentally that it was just prior to this date that hogs took such a slump from the sky prices of midsummer.

asked the same question thought 80 cents about right, although he was sure it had been worth at least that with the litter of pigs we have referred to. Just how to arrive at a fair price is difficult to say because there are several rules given and it is rare that any two will agree. All of them, however, are either based on experimental data or on long years of experience by notable live-stock men or students of feeding problems. We are outlining these rules and when working out according to each, the money value of skim-milk, corn will be taken as worth \$1.90 per bushel or \$68 per ton, mixed grain at \$3.25 per 100 pounds and the market value of hogs at 18 cents per pound live weight at country points.

The first rule is an old and simple one. It places the value of 100 pounds of skim-milk when fed along with corn to fattening hogs at half the market price of corn per bushel. Thus we would get a value of 95 cents, per 100 pounds by this rule.

Another rule assumes from the average of experiments that about 525 pounds of skim-milk are required to displace 100 pounds of corn or other grain. Here we get a value of 65 cents per 100 pounds.

A third rule works on the basis that whey is half as valuable as skim-milk and that 1,000 pounds of whey is worth as much for feeding pigs as 100 pounds of mixed grain. This is practically the same rule as the last and gives a value of 65 cents per 100 pounds.

Henry conducted 19 trials at Wisconsin that showed clearly the highest value of skim-milk to be, when not over 3 pounds of skim-milk are fed with each pound of corn to pigs weighing 100 pounds or over. From these figures was deduced a money value of skim-milk where from one to three pounds are found with each pound of corn meal. We are told that when the market price of corn is \$30 per ton or 84 cents per bushel the value of 100 pounds of skim-milk is 46 cents per hundred. With corn at \$1.90 per bushel therefore, skim-milk should be worth \$1.04. Where all trials were averaged, however, with different proportions of skim-milk to corn, the value was much less and would figure out to 72 cents. Just here it might be noted that for pigs just after weaning Henry recommends from 4 to 6 parts of skim-milk to each part of corn.

In the commercial herds there is a tendency towards too much crossing of the breeds. The first cross of some breeds gives good feeders but the second cross very often gives a nondescript so far as quality and character are concerned. These seldom have the square blocky form nor the inherent quality of economically converting feed into meat. Market toppers are bredy animals which is a conclusive argument in favor of having rich blood coursing in the veins of the feeders.

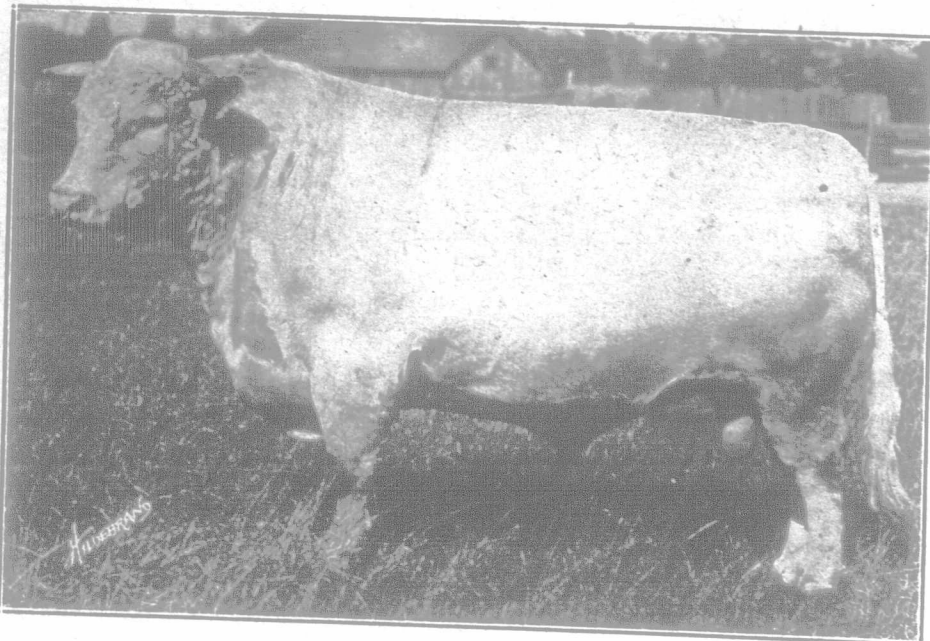
No matter what breed is used the first requisite to success is to get a sire of the right type, quality and character. If he fills the eye then his breeding is likely to be all right. However, one should pay attention to the ancestors, as, if these are not up to the mark, their weak points may crop out in succeeding generations. When a person has a uniform lot of females the securing of a bull that is particularly strong where they show a slight weakness is important. If the sire has a weakness in the part where the females are deficient then it will be accentuated in the progeny. Constructive breeding should be the aim of every one keeping animals. Whether pure-breds or grades are kept the road should lead towards perfection of form and quality. Weak points need to be strengthened, and roughness of form made smooth. This requires that a breeder decide on a definite aim and secure sires, regardless of price, that conforms nearest to his ideal of the perfect animal. If this is done and the heifers showing the greatest promise are kept in the breeding herd improvement is assured. The steers from such herds will be sought after to meet an elite trade. Much time and energy has been spent over the nondescript animal which if turned to breeder stock would have yielded more remunerative returns.

## THE FARM.

### Fertilizer Facts and Fancies.

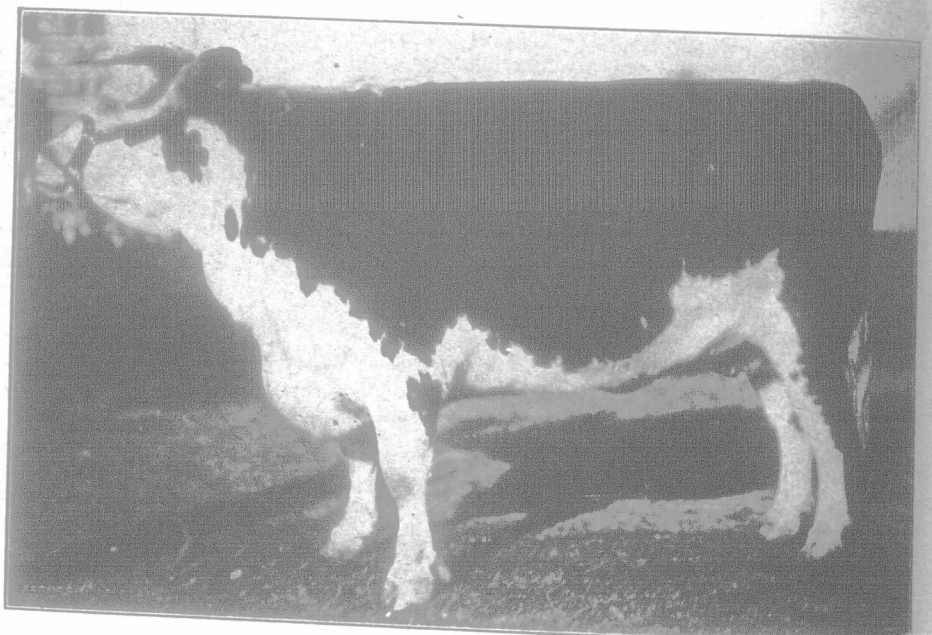
By B. LESLIE EMSLIE, FORMERLY SUPERVISOR, INVESTIGATIONAL WORK WITH FERTILIZERS, OTTAWA.

In this short series of articles an endeavor will be made to discuss briefly and intelligibly the principles of manuring, fertilizing and liming with a view not so



**Burnbrae Sultan.**

The herd sire in A. G. Auld's herd, Guelph, Ont.



**A Hereford Heifer of Show-ring Renown.**

We cannot have too many beef cattle of this conformation.

During the intervening five months (our visit was on February 18) this litter averaged approximately 1.4 pounds gain daily per head, assuming that the average weight at weaning time was 30 pounds. Mr. McCulloch ships cream from a herd of about twenty-five milking cows and consequently had plenty of skim-milk to feed. He informed us that these hogs got practically no water and as mentioned before, got, latterly, about 100 pounds daily of skim-milk. The grain ration was made up of one part barley to two of oats by weight with a small amount of bran added. Probably the amount of bran was no more than was considered essential because of the scarcity of this feed in that locality. About fifty pounds per day of the grain mixture was being fed at the time of our visit. Altogether 2 tons of grain had been fed at \$65 per ton.

When one comes to consider the money value of skim-milk for feeding pigs it is, of course, necessary to remember several things. One important point is the age of the pigs and another is whether skim-milk is being fed alone or in combination with other grains. We have already said, however, that skim-milk is far more valuable when fed in combination. For young pigs skim-milk is worth more than for older pigs and incidentally it might be mentioned that experiments in feeding skim-milk to young pigs indicate danger of our feeding. It is also shown that while older pigs are more thrifty when fed sour skim-milk, this is not the case with very young pigs. The reason skim-milk is more valuable for young pigs is because of its richness in protein and ash which are especially valuable for building the muscles and frame work of young animals. During our visit to Peel County we asked several dairymen what value they would place upon 100 pounds of skim-milk for feeding pigs and the answers ranged from 40 cents to \$1.50. Mr. McCulloch when

The last rule that we know of is to multiply the market value of live hogs by 6 where skim-milk is fed in combination with corn or barley. The present value by this rule is \$1.08.

From these five rules or suggestions we get varied results as has been noted, but the average is 84 cents, the lowest being 65 cents and the highest \$1.08 per 100 pounds. It will be noted that the average corresponds very closely to Mr. McCulloch's estimate and that his actual practice corresponds with Henry's experimental results in that he fed 2 pounds of skim-milk to one pound of meal.

### Breeding With an Aim.

Judging from the class of stock placed on our markets and to some extent in sale rings there are many breeders who have no definite aim in view, other than to increase the flock or herd, when mating animals. Indiscriminate breeding is too much in vogue for the best interests of the live-stock industry. If the idea is not to improve quality then this great industry will stagnate. Breeders of pure-bred stock are calling for quality, character and finish, the butchers want quality and the consumer is willing to pay a premium for choice meats. A glance reveals the fact that comparatively few cattle are in the select category; far too many are classed medium or common. Breeding is partially to blame but we must not forget that feeding is also an important factor. Many of the low-grade animals if fed better would grade higher than they do. Some calves never have a chance, yearlings are allowed to shift for themselves the greater portion of the year and the two-year-old bullock is not fed a ration that will finish an animal for the block. We need better breeding stock, but better feeding is required as well.

much to encourage a more extensive use of fertilizers as to show the need for a greater degree of discrimination in their selection and application.

As commercial concentrated cattle-feeds, rich in protein and fat, serve to supplement the farmer's home-grown grains and fodders, so fertilizers have a place as supplements to manure or to the less readily available sources of plant food in the soil.

War-time conditions caused serious impediments to the fertilizer trade, and, while some of these have now been removed, the war-aftermath in strikes, shorter working hours, increased wages and higher freight rates has prevented the decline in prices, which the return of Peace might have been expected to bring.

The enforced restrictions and rigid discipline in food economy experienced during the war have not been without enduring benefit to some who formerly paid but scant attention to the small details which count.

The high prevailing prices of feeding stuffs and fertilizers have taught the studious farmer to be more cautious and deliberate in the purchase of these supplementary materials and to exercise greater care in the conservation of fertility in manure.

### PLANT-FOOD SUBSTANCES.

Crops require for their nourishment and growth about a dozen plant food substances which they take in solution from the soil. Only three of these tend to become deficient in quantity for crop needs in the average soil. They are nitrogen, phosphoric acid, and potash, each of which performs its own peculiar function in the plant. Nitrogen promotes chiefly the development of stem and leaf and is especially beneficial during the earlier stages of growth.

Phosphoric acid has an important influence on root development in the early stages and on fruit or seed



erds there is a tendency towards  
breeds. The first cross of some  
ers but the second cross very  
t so far as quality and character  
eldom have the square blocky  
quality of economically converted  
arket toppers are breedy animals  
gument in favor of having rich  
ns of the feeders.

ed is used the first requisite in  
of the right type, quality and  
eye then his breeding is likely  
ver, one should pay attention  
these are not up to the mark,  
crop out in succeeding genera-  
as a uniform lot of females the  
particularly strong where they  
s important. If the sire has a  
here the females are deficient  
ed in the progeny. Constructive  
n of every one keeping animals.  
rades are kept the road should  
of form and quality. Weak  
hened, and roughness of form  
sires that a breeder decide on a  
sires, regardless of price, that  
deal of the perfect animal. It  
s showing the greatest promise  
herd improvement is assured.  
ls will be sought after to meet  
ne and energy has been spent  
nal which if turned to breeder  
more remunerative returns.

**FARM.**

**ts and Fancies.**

FORMERLY SUPERVISOR, I.  
WITH FERTILIZERS, OTTAWA.  
f articles an endeavor will be  
and intelligibly the principles  
and liming with a view not so



enown.  
conformation.

extensive use of fertilizers  
water degree of discrimination  
ation.

rated cattle-feeds, rich in  
plement the farmer's home-  
fertilizers have a place as  
to the less readily available  
sical.

sed serious impediments to  
ile some of these have now  
ermath in strikes, shorter  
ges and higher freight rates  
n prices, which the return  
ected to bring.

and rigid discipline in food  
g the war have not been  
o some who formerly paid  
all details which count.

ces of feeding stuffs and  
tudious farmer to be more  
urchase of these supplie-  
exercise greater care in the  
manure.

**SUBSTANCES.**

nourishment and growth  
stances which they take  
only three of these tend to  
or crop needs in the average  
osphoric acid, and potash,  
wn peculiar function in the  
chiefly the development of  
ally beneficial during the

important influence on root  
ages and on fruit or seed

formation in the later stages of growth and promotes maturity.

Potash is indispensable to the formation of carbohydrates—the starches of potatoes, grains, etc., the sugars of fruits, root crops, vegetables, etc., and the fibrous matter of plants.

A ton of well-made mixed horse and cow manure, in which the liquid part has been carefully conserved, may contain approximately 10 pounds of nitrogen, 5 pounds of phosphoric acid and 10 pounds of potash. A serious depletion of these valuable constituents occurs when the manure is subject to losses by fermentation and leaching. Horse manure, being open in texture, will ferment more readily than cow manure.

Where the manure cannot be conveniently taken from the stable and spread on the land immediately, the horse and cow manure should be mixed together and kept in a fairly compact heap with adequate means such as concrete or clay foundation and abundant absorbent material—to prevent loss by leaching. Of course, a certain loss of fertility is inevitable, but proper care will reduce it to a minimum.

The importance of these precautions is manifest in the fact that more than one-half the nitrogen and three-fourths of the potash in the total manure are present in the liquid portion.

The value of manure in the soil is based not alone on the fertility which it contributes, but also—perhaps to a greater degree—on its physical and biological functions.

The exertion of its physical influence may be noted in the improved texture of a soil, be it heavy clay or light sand, which has received a needed application of manure.

It acts biologically in both furnishing and maintaining the favorable bacteria through whose instrumentality plant food in the soil is liberated and prepared in forms suitable for crop use.

One of the most important soil processes dependent on bacterial agency is that of nitrification which involves the breaking down of the humus (partially decomposed organic matter), the liberation therefrom of nitrogen or ammonia and, by further steps, the evolution of a nitrate—the highly oxidized form in which plants assimilate nitrogen.

Besides air and moisture, a certain degree of warmth is essential to nitrification. Hence, in the early spring, before conditions have become favorable, there may be a lack of soluble nitrates in the soil and spring-sown grain crops, as well as fall wheat, would consequently suffer thereby.

When, for instance, the young oat plants have exhausted the reserve of food stored in the seed-grain the "weaning" stage—they become dependent on the soil for their nourishment and, at first, often find difficulty in obtaining the soluble nitrate nitrogen—so essential in the early development of all crops.

Nitrogen in every form, save the nitrate, must first undergo conversion in the soil before becoming assimilable by plants. Nitrate of soda is, therefore, the quickest acting nitrogenous fertilizer, being very soluble and its nitrogen immediately available. To these important and desirable qualities it owes that popularity and place of pre-eminence accorded it by recognized authorities in the domain of agricultural chemistry. Many a grain crop has been saved by a timely application of 75 or 100 pounds, per acre, of nitrate of soda in the spring. Under favorable conditions the noticeable response of the crop to this treatment is usually almost immediate.

**"STANDARD" FERTILIZER MATERIALS.**

While nitrate of soda ranks first among sources of nitrogen, superphosphate (acid phosphate)—likewise because of its quick action—holds the same position among sources of phosphoric acid. As a source of potash, muriate of potash is most generally and extensively employed, although tobacco growers and some potato growers prefer the sulphate of potash.

The potash salts, excluded during the war, are now coming into Canada again and not only from Germany, but from the repatriated French province of Alsace where some of the more recently discovered and richest deposits are situated.

The farmer ought to become thoroughly conversant with these fertilizer materials, which are of constant standard composition, in order that they may serve him as a basis for the valuation of nitrogen, phosphoric acid and potash in various forms and mixtures. Here are the data: Nitrate of soda contains 15 1/2 per cent. of Nitrogen; superphosphate (two grades) contains 14 or 16 per cent. of available phosphoric acid; muriate of potash contains 50 per cent. of water-soluble potash. All leading fertilizer firms stock these separate materials, as well as their own special mixtures.

**FACTORY-MIXED FERTILIZERS.**

Ready-mixed brands are numerous and vary widely both as to percentages of plant food and the nature of the materials entering into their composition. A great many—probably the majority—have tankage as their base and are reinforced by nitrogen or potash or both, according to the formula desired.

Unfortunately, the persistent demand for a "cheap" fertilizer is responsible for the presence on the market of a large number of brands of distinctly inferior quality. Naturally they contain very much less plant food, but more "filler", and are really dearer than the high-grade brands.

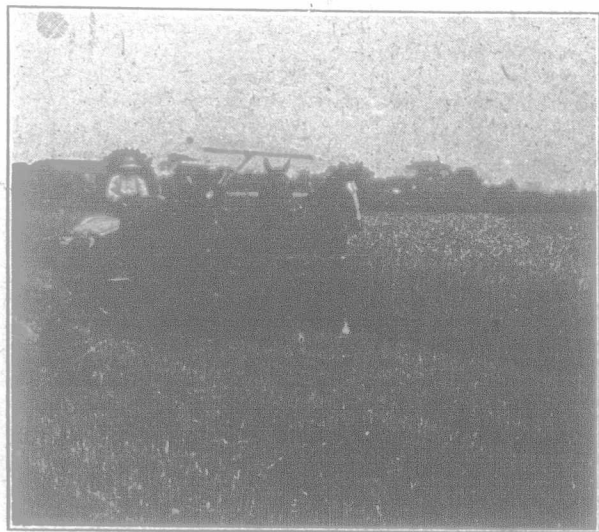
Among users of low-grade fertilizers the writer has seldom found one who could remember, even approximately, the percentages of plant food present, whereas the price paid per ton was usually readily recalled, thus indicating that the relation of price to composition was ignored.

Either through ignorance or with intent to deceive some fertilizer agents make absurd and extravagant claims for the goods they sell. Such is fortunately now less frequent in Ontario, for reputable fertilizer manufacturers are becoming more insistent on a true representation of their products. To meet the demand for a moderate priced fertilizer, certain manufacturers have produced an inferior material containing only a very small percentage of plant food and a larger percentage of carbonate of lime. Now carbonate of lime is not, strictly speaking, a fertilizer, but is primarily useful in correcting soil acidity and, furthermore, it may be purchased in the form of ground limestone (practically pure carbonate of lime) for \$3 or \$4 per ton. It would, therefore, be folly to pay a high price for carbonate of lime in a fertilizer.

In buying fertilizers, the farmer should see that he is paying only for the nitrogen, available phosphoric acid and potash therein and not being overcharged for these.

The next article will deal with the subject in somewhat greater detail and relation to the peculiar needs of various crops and soils.

(To be continued.)



**A Fertilized Field of Grain.**

This field of fall wheat received a spring application of nitrate of soda at the rate of 120 pounds per acre.

**Do Not Plant Small Seeds Deeply.**

EDITOR "THE FARMER'S ADVOCATE":

Why waste two-thirds of your clover seed? That sounds overdrawn, but from close observation and experience in clover and other similar seeds, the writer believes that at least two-thirds of these seeds are buried so deeply they never see the sunshine, or if they do they are so yellow and tender it kills them at first sight. Just here I want to ask the reader, where does nature sow her small seeds, and where do the most experienced seedsmen sow their small seeds? Scientists tell us not to sow deeper than five times the thickness of the seed planted. The writer has had more or less experience with seeds for over fifty years, and has found that all those seeds that start the root downward first and then shove the seed out of the ground before the two small leaves are released, such as clover, rape, cabbage, onions, lettuce, etc., should not be over one-fourth, to one-half an inch in the ground. I have always got my best results and healthiest, big, thick, green leaves of clover when sown on top of the ground in the winter wheat. That is where nature sows all those kinds of seeds, and it does not take a close observer to find even more weed seeds growing on top than one wants. I have tried lettuce and cauliflower seed that would not come up when sown in trenches an inch or so deep, but when sown on top of a level surface with scarcely enough earth sifted over it to hide the seed and covered over with a thick, damp cloth every seed seemed to grow. This being true, what becomes of one's forty-dollar-a-bushel clover seed when one sows it before or after the ordinary farm drill? If one will use his eyes and brains two minutes he cannot help but see that two-thirds of the seeds fall in the trenches made by the drill teeth, often three to four inches deep, and then below the chunks of earth that roll in on them. How can any reasonable person expect that small root to shove that blunt seed up through those chunks and two or three inches of earth, and that often baked so hard with rain and wind that only the hardier and stronger grains that stay under ground to nourish and push their blades to sunlight can possibly get through. It is a blessing that nature has so endowed the staff-of-life producer with a germ that will actually sprout and grow four times after the sprouts have been broken off. My object in writing this is to get reasonable men to think, and to try and adopt some plan to save at least twenty-five dollars' worth of seed on an eight-acre field. My plan the last two years I farmed was to roll after the drill, then sow my seeds with broadcast crank seeder, and use a very short-tooth, light harrow. This means a little extra (and oftentimes needless) work, but I know that two quarts of good seed will seed an acre if properly put on the ground, for I have seen once in my time only one quart of timothy to the acre sown in the fall, after the wheat was up, make a splendid fourteen acres of timothy meadow the next year after the wheat was harvested. I am satisfied from my own experience that nearly all grains are

planted two to three inches too deep, as it is against all nature to place any grain down in the wet, cold ground as deeply as it is plowed, which is quite often done in mellow ground. Corn one inch will outgrow that put in four inches. Potatoes are an exception, as I have tested them at different depths and find the rule applies to them five times their thickness. Five inches proves best for me in a clay-loam soil. Seeds are too scarce and high in price to follow Dad's wasteful way of using five quarts to get two or three pints to grow. And remember this, if two quarts sown on a level surface won't give you a good stand of plants, six quarts won't—before or after the drill. Try it, brother farmer.

Elgin Co., Ontario. G. H. CAUGHELL.

**Governing the Rural School.**

EDITOR "THE FARMER'S ADVOCATE":

In a recent issue I read a letter from "Rural Teacher" telling us that many teachers are looking forward to the township board as the dawn of a brighter day. I do not think that any conscientious gentleman would care to run for such a position, knowing that it is the duty of parents to educate their children and of necessity employ suitable teachers. Of course, there is always a class of men who will do anything for money, and this class would, without doubt, constitute this board. If teachers were not responsible to parents I very much fear they would become indifferent and careless. If the mother of the Kaiser, the daughter of our good Queen Victoria, had engaged her own teacher to educate her own son he might have been a blessing to his country. But that great Kaiser power and selfishness usurped the rights of the mothers of Germany, and consequently she raised a nation of criminals.

To-day we have in this fair land of ours petty kaisers trying to grab this power by advocating township and county board, and closing our rural schools to build consolidated schools. We mothers of Ontario are looking to far-seeing men like Mr. Davidson and all our rural school trustees to protect our rights and keep the gates of our rural communities closed to militarism. Germany was a highly-educated nation. Universities, colleges, technical schools and all manner of educational institutions filled her land. Her teachers were competent men of experience with salaries based, no doubt, on the quality of brick and plate glass in the institutions where they taught. Enthroned selfishness ruled Germany. All her education had no power whatever to direct her ideals toward the things of the spirit to illumine her conscience or awaken in her any moral sense. The most highly-educated men in Germany have lauded her selfish intentions and endeavored to justify her most cruel deeds. Let teachers beware of this monster and take or rather point to the unselfish, self-denying, service-giving and loving Saviour as our model of perfection in our rural schools.

Peel County, Ont. RATEPAYER.

**The Agricultural Outlook.**

EDITOR "THE FARMER'S ADVOCATE":

While orators are blaming the fiscal policy of the country for the exodus of the rural population to the cities, some writers, and lecturers have been just as positive that the reason lay in the lack of a proper community feeling. They have advocated stimulants to the social life of the country districts in the shape of community halls, and co-operative associations for doing everything from family washing to harvesting the ice crop. If only the young people can be interested, they say, and have suitable surroundings they will stay on the farms. According to some political bagpipers, vacant farms point to the fact that the farmers have got discouraged by the impossibility of competing against unjust tariffs imposed by transportation, and middlemen in the handling of their produce. Unwittingly they have stumbled on the very reason for depopulation of the farms. Could a census be taken of the farmers who have left the land it would most likely be found that they were men whose farming was of the rule of thumb type; men whose strength no longer availed against the demands of increased production under old style methods, and in fact, men who have supplied the orators with the statistics they use to show that farming doesn't pay. It is a case of the survival of the fittest at last with agriculture and the fittest in the future will be young men of strength of character, and mind as well as of body. If farming didn't pay why should so many firms advertise costly manufactures in farm journals? Advertisers are human like the rest of us, and they expect some return for the money they spend in advertising. And what is more they get it. Now do you suppose that automobiles, tractors, and other expensive machines so advertised are not bought and paid for by farmers. Of course they are and the farmers of the future will buy more and more of them but there will not be so many farmers. The day of the man on a 100-acre farm with two or three horses, doing the work himself aided by the members of his family, including his wife and daughters, is going never to return. Hereafter the young men who farm will do it on a scientific basis. There will be no more guess work about soil values and more attention will be paid to balanced rations for farm animals. There will no longer be any scrubs allowed, but high-grade, typey herds of cattle, and flocks of sheep will graze on properly rotated fields. The tendency will be to acquire more land under one guiding head, and the consequence will



be fewer fences, and wider sweeps of tractor-worked acreage.

Hitherto slipshod methods have sufficed to provide the world with food, and farmers have been content to bask in the warmth of good seasons, and survive through poor ones losing much stock every year by their lack of proper methods in handling cases of sickness, and in carelessness in matters of feed, and shelter for them. The world has been making strides, and in commerce its demands have been met by new inventions. The man to-day who tries to do business without a telephone or typewriter or a cash register, as the case may be, or without an automobile finds that he is handicapped, and these are no good to him if he doesn't understand modern business usages in every form. There may be occasional cases where a man can keep in the running, but men want to do more than that as a rule, and the men who are forging ahead and making what is generally conceded to be a success commercially are those who know their businesses in every detail and know where the weak spots are, and how to stiffen them up before leaks begin. This is just what is going to happen in agriculture, and those farmers who wish their sons to remain on the soil must give them a scientific grounding in the basic principles of their profession by sending them to college. The greatest difficulty will be to finance the farming operations after that, though a thorough grounding in addition to inbred experience with farming operations will make it possible for a man to get a good start from which he can gradually build up to his capacity as a farmer and will give him a sense of security, and a position in his profession of which he need never be ashamed.

Huron Co., Ontario.

DERMOT McEVROY.

### The Problem of the Rural School.

BY HENRY CONN.

In recent years much dissatisfaction has been expressed in relation to our schools. This is especially true of the schools in the rural districts and in the smaller urban centres. That these schools are decidedly inferior to our city schools is generally recognized. Unfortunately many people assume that the rural schools must necessarily be inferior. This assumption is not justified by the facts. In their attitude towards education the people of the rural parts of the Province are just as progressive and just as enlightened as the people in the cities. They are fully as interested in education, they are fully as desirous of having good schools, they are fully as able to pay for good schools and they are just as willing to pay for good schools as the people in the cities.

The lack of progress in the rural schools is not due to any inherent qualities in the character of the people but is incidental to an antiquated, cumbersome and wasteful system of school administration. The district system of school administration constitutes the one great obstacle to progress in rural schools. Till we get rid of it and substitute a larger administrative unit, real progress is impossible.

The district school system is not of divine origin. As a matter of fact, like Topsy, it just happened. The early settlers in this country were a simple people who derived their subsistence from a primitive type of agriculture. The apprentice system and the school of experience served their educational needs. The aristocratic conception of education prevailed, and there was little in the social and political life of the people which was calculated to develop a wider view of education, or create a demand for education for all and at public expense.

The school was organized as a purely local institution and to meet local needs. Many of our first schools were private undertakings. This is true of the school established in Sarnia in 1838 by Duncan McNaughton. He rented and fitted up a room in the upper part of a warehouse and conducted a school there for a year. It is easy to understand that these private ventures in many cases ultimately become community undertakings, and that these were ultimately recognized by law. In the New England States conditions were much the same; and one can understand that the United Empire Loyalists who settled in this Province endeavored to establish here the school system they had known in the land of their birth. It was natural, therefore, that the school district should become the educational unit for this Province.

It served well the somewhat primitive needs of the time. Districts could be formed anywhere if the demand existed. They might be of any size and shape. It was a simple and democratic arrangement. That the plan was well adapted to existing conditions is shown by the fact that it came into general use, both in Canada and United States. It was adopted not only in the rural districts, but also in the cities. Toronto had at one time 16 school sections and Hamilton 8 or 10.

The system was well adapted to a time of little general interest in public education, and before the period of county supervision and of a highly developed administrative organization. It was well suited to communities with small means of communication, and little interest in each other. It was well adapted, too, to the days of small undertakings, and to schools which gave instruction only in the rudiments of an education.

Social and economic conditions have undergone a radical change in the past fifty years. It is not surprising, therefore, to find that a system of school administration which gave fairly satisfactory results fifty years ago fails to meet the needs of to-day, and fails badly. As a matter of fact, the district system has been condemned by educators for more than fifty years.

Thoughtful men have described the system as expensive, inefficient, short-sighted, unprogressive and penurious. The large number of trustees required, more than 16,000 for the rural schools of the Province, makes it impossible to secure any large number of competent and progressive men. It leads to great and unnecessary multiplication of small schools; it results in unjust inequalities in educational advantages; it makes effective co-operation impossible; and it forms an almost insurmountable obstacle to consolidation of schools.

The system is wasteful. In the territory under my supervision 57 teachers are teaching more pupils in urban schools than 86 teachers are teaching in rural schools. In relation to the enrolment per teacher, if we could reach the same standard of efficiency in rural schools that we have in urban schools, the teaching staff, and the school accommodations could be reduced by one-third. But there are other sources of waste for which the system must be held responsible. The frequent changing of teachers, the employment of young and inexperienced teachers, the unsuitable character of the school buildings, the lack of necessary equipment, the irregular attendance, the small school; these are evils incidental to the district system and are fruitful sources of waste and inefficiency.

That a larger administrative unit would be productive of better results is indicated by the fact that our town schools are better than our rural and village schools, and our city schools are better than our town schools. That is to say, the efficiency of our schools is approximately proportional to the size of the unit of administration. The larger the administrative unit the better the school.

I have mentioned that the district system of rural schools was generally adopted in United States. As social and economic conditions in most of the older states are very similar to those obtaining in Ontario, the people of these states have been confronted with the same problem that now confronts us. It is interesting to find that in every case where a radical reorganization of the school system has been attempted it has invariably involved the adoption of a larger unit of administration. It is interesting to find also that the change has invariably been followed by an immense and immediate improvement in educational conditions.

Township boards have been adopted in about thirteen states and county boards in eleven states. In a general way the township board finds favor in the North and the county board in the South. As the movement began in the North and spread South, it is evident that the present trend in the United States is towards county boards, rather than township boards.

The township system has been in operation in some of the states for many years. It has been subjected to the test of experience, and it has been found infinitely superior to the district system which it has displaced. But the test of experience also indicates that with modern means of communication the townships are too small to give the best results. As our townships are considerably larger than those in the states, we are not likely to experience the same difficulty here.

There is another and more serious weakness in the township system due to the fact that our townships are purely artificial districts. The township area bears no relation whatever to natural community areas which vary in size and shape to meet local needs. The township boundaries run in straight lines and bear little or no relation to geographical features or to natural community boundaries; and it is commonly broken into by the incorporated town or village. If one imagines a city school district hampered and restricted in this manner he will readily recognize that the artificial and arbitrary nature of the township boundaries is a serious source of weakness in the township school system.

The schools in the incorporated villages and small towns could come under the control and supervision of the township board only by agreement. Experience shows that such agreements are very difficult to obtain. Consequently the township board can do little or nothing for the small village and town schools. This also is a serious weakness in the system.

The county system is free, or nearly free from these defects. It provides an administrative unit of adequate size; natural community boundaries are not disregarded to any great extent; and rural, village and town schools all benefit from an administration capable of transforming them into more useful social institutions.

The county system has greater possibilities than the township system. It may be expected to develop a better type of school boards; boards whose duties and powers are of sufficient scope and magnitude to place its numbers in touch with larger educational problems; of the work of the schools and its bearing on our future national welfare. The system would provide an effective barrier to over-centralization which smother local liberty in non-essentials and give the people a local of freedom which would stimulate to greater and more enthusiastic educational activity.

The township system has the advantage of age. strong points have been clearly and accurately determined. This is not entirely true of the county system which is of comparatively recent origin. If we adopt the township system we know exactly what we are getting; we know its possibilities and we know its limitations. But if we adopt the county system we are, to some extent, making an experiment in school administration.

The county system is the natural system where there are no townships. In such cases it is simply a question of choosing between the district system and

the county system. I have the impression that this is true of British Columbia, where the county system is in satisfactory operation. But in Ontario we have townships and consequently the county is not a taxation unit. I am of the opinion that the fact that the county is not a taxation unit will prove a somewhat serious obstacle to the successful introduction and operation of the county system in Ontario. At any rate it is a point which should be very seriously considered.

Three systems of rural school administration have been developed on this continent; the district system, the township system and the county system. The first of these is cumbersome and inefficient. It has survived its usefulness and is in process of displacement. Either of the remaining systems offers immense advantages. It is to be hoped that one or other of them will be brought into operation in Ontario in the not too distant future.

### School Reform Should be Evolutionary Not Revolutionary.

EDITOR "THE FARMER'S ADVOCATE":

It is with some trepidation that a casual observer offers a few observations and suggestions as to improvement, when so many of professional standing are offering their propositions for reform, from the ground floor of experience. One almost naturally asks the question: "Is the lid off?" that so much suggestion comes at once from men who have been so long connected with the teaching profession. If autocracy has been hindering the men nearest the work from expressing criticism of a system whose defects had been appearing more clearly as time went on, then let us be thankful for the opportunity of public discussion, by men qualified to express opinions, that through this medium we may have evolved such reforms as will make our system of public school education as efficient as the boys and girls of Ontario deserve.

Criticism seems to direct attention to defects in efficiency of our educational system, particularly in relation to rural schools. In how far is it a defect of system, and in how far one of condition? Considering the latter phase of the question no one denies that rural depopulation through removal from the farm, and through smaller families in the farm home of today, are productive of conditions which demand solution. Even if school consolidation does not become general, provision must be made to suit conditions that exist where school population can be more economically and efficiently educated, by providing transportation to the school of an adjoining section, and payment of part cost of school maintenance there, rather than in continuing to keep up a school, equipment and teacher for 4, 8 or even 10 pupils. There are more instances than one in the Province where two or three adjoining sections have only a sufficient number of children of school age to justify the engagement of one teacher and the upkeep of one school.

Next, is the criticism of defects of our educational system justifiable in reference to rural schools? In some features yes; in others no. It seems to be the ordered duty of new Governments in Ontario to revolutionize the school system of the Province. The Government that attained power in 1905 began its reform by sweeping out of existence model schools, that by a longer professional course of teacher training, school teaching might cease to be a stepping-stone to other professions, and that teachers would stay longer in the profession. Any observer can tell, by briefly recounting his observations, if such object has been attained. Teaching has become an almost one-sex profession. Trustees complain of less permanency in individual schools than ever before, surely an undesirable condition for efficiency; and it appears as though the over-professionalizing of the profession has hindered many young men, who might have entered through the model school.

Then it was necessary to have a superintendent of education who would, with an advisory council, keep his finger on the pulse of the system. The trouble with this superb organization was that the advisory council did not advise or its advice was not taken, and the superintendent was not only superintendent, but some thought Kaiser. If initiative was present in the organization below the head it did not get opportunity to manifest itself. The inspectorate appointed by the county councils was made absolutely responsible to a dictatorial head. What opportunity had any one interested in public school improvement to make even a minor suggestion effective, unless he went to headquarters. The experience of the past fourteen years has brought Ontario public school supporters to the point where absolutism will no longer be allowed, even in a Department of Education, and those inspectors who have tried to see possibilities in the public school system in Ontario, and would have liked greater latitude in their work, may soon come into their own.

The text-books also went through the same mill, and capable teachers who refused to withhold criticism were finally listened to, and some changes made; but often it seemed as if changes were made not to suit changed teaching methods, but to keep a school-book editorial staff in permanent employment.

What will be the amending process to which the educational system will be subjected under the new Government? Will it be revolutionary or evolutionary? Even though conditions are acute in rural Ontario, should we not hesitate in too drastic changes. No one objects to a more responsive directing head. All are



have the impression that this is a...  
 But in Ontario we have...  
 the county is not a taxation...  
 that the fact that the county...  
 will prove a somewhat serious...  
 successful introduction and operation...  
 in Ontario. At any rate it is...  
 be very seriously considered...  
 rural school administration have...  
 the district system...  
 and the county system. The first...  
 and inefficient. It has survived...  
 process of displacement. Either...  
 seems offers immense advantages...  
 one or other of them will be brought...  
 in the not too distant future.

## Should be Evolutionary-Revolutionary.

EDITOR "THE FARMER'S ADVOCATE":  
 I read with interest a casual observer...  
 on to our public schools system...  
 and suggestions as to improve...  
 professional standing are offering...  
 reform, from the ground floor of...  
 it naturally asks the question:...  
 so much suggestion comes:...  
 have been so long connected with...  
 If autocracy has been hindered...  
 work from expressing criticism...  
 effects had been appearing more...  
 then let us be thankful for the...  
 discussion, by men qualified to...  
 through this medium we may...  
 as will make our system of...  
 as efficient as the boys and girls

direct attention to defects in...  
 tional system, particularly in...  
 . In how far is it a defect of...  
 one of condition? Considering...  
 question no one denies that...  
 ough removal from the farm...  
 milies in the farm home of to...  
 ditions which demand solution...  
 tion does not become general...  
 to suit conditions that exist...  
 can be more economically and...  
 providing transportation to the...  
 section, and payment of part...  
 there, rather than in continuing...  
 ment and teacher for 4, 6 or...  
 re more instances than one in...  
 r three adjoining sections have...  
 of children of school age to...  
 f one teacher and the upkeep

of defects of our educational...  
 erence to rural schools? In...  
 hers no. It seems to be the...  
 ernments in Ontario to rev...  
 tem of the Province. The...  
 ed power in 1905 began its...  
 of existence model schools...  
 al course of teacher training...  
 ase to be a stepping stone to...  
 at teachers would stay longer...  
 observer can tell, by briefly...  
 ns, if such object has been...  
 become an almost one-se...  
 plain of less permanency in...  
 ver before, surely an und...  
 ncy; and it appears as though...  
 of the profession has hindered...  
 ight have entered through the

to have a superintendent of...  
 h an advisory council, keep...  
 e system. The trouble with...  
 as that the advisory council...  
 ce was not taken, and the...  
 ly superintendent, but some...  
 iative was present in the...  
 d it did not get opportunity...  
 spectorate appointed by the...  
 absolutely responsible to a...  
 opportunity had any one...  
 improvement to make even...  
 e, unless he went to head...  
 of the past fourteen years...  
 c school supporters to the...  
 not longer be allowed, even...  
 tion, and those inspectors...  
 bilities in the public school...  
 d have liked greater latitude...  
 e into their own.

at through the same mill...  
 fused to withhold criticism...  
 some changes made; but...  
 es were made not to suit...  
 but to keep a school-book...  
 employment.  
 ling process to which the...  
 subjected under the new...  
 olutionary or evolutionary...  
 e acute in rural Ontario...  
 drastic changes. No one...  
 e directing head. All are

not agreed as yet that the county school board is the desideratum in government, efficient as it may seem. Rural Ontario has had the privilege of township school boards for a number of years, yet few have taken advantage thereof. Does it prove the resistance of the ordinary public school supporter to encroachment on democratic privilege? Will he give up freely to efficient control through township or county boards of management through which he has a voice as elector, the right so sacredly guarded in relation to public school government? We think he will, if efficiency is increased, and responsiveness to public opinion maintained.

There is no proposed phase of rural public school reform which occupies the place in the public mind to-day as consolidation. As an ideal system it seems just right. Will it prove in the practical aspect as nearly so? Should we condemn the ungraded school of rural Ontario as we do, in our hope for the graded school, consolidation will provide. As an observer I am not prepared to say that the ungraded school of rural Ontario, in spite of all handicaps has not for the period of its existence done as efficient work in preparing the youth of rural Ontario for self-dependent activity in secondary education, or even for the stern duties of citizenship, as the graded system under which our urban boys and girls obtain their education. Bright boys and girls will come to the front under either system. The advantage of consolidation does not lie in greater efficiency, if we judge by the past. The Public Schools Act relating to consolidation does not yet, so far as I can see, provide for any advanced course to the public school pupil, that the present rural public school does not or may not provide, and until the curriculum of the public school is enlarged to provide an efficient and continued course, that gives the rural boy and girl in the adolescent stage the same advantage as the urban adolescent, we should not bank too largely on the advantage of consolidation. Then if consolidation is only to provide what our present rural school provides in attainment should we not consider another aspect not unimportant. Since 1905 the rural school sections of a large part of Ontario have spent thousands of dollars in buildings and equipment to provide efficiency and up-to-dateness, and at a time when public indebtedness is assuming alarming proportions should we not go slow in scrapping our present system of buildings and equipment, adopt the evolutionary rather than the revolutionary. I know this may seem a weak argument, but until a new scheme is of sufficiently proven merit to justify this procedure, we should hesitate in too great a revolution.

To my mind the great defect of our system is in the lack of provision for compulsory continuation work in our rural schools. As Premier Drury has said: "A ladder fails of its purpose when one has to get off half way up." We have condemned our system of secondary education, all we have for both rural and urban Ontario, until it is languishing for lack of patronage. It may be that it misdirects the ambition of Ontario rural youth; and may it not also be that its critics, and sponsors as well, have placed too much emphasis on the utilitarian and too little on the cultural in education; that we have stimulated the ambition of too many in the direction of having, rather than a teaching that the first principle of life is being. Our system recognizes the need of a continued educational course for the adolescent urban boy or girl who is under a compulsory attendance law. We have no such law for rural Ontario, because we have nothing to compel the pupil to attend.

What is the immediate remedy? We have a system of continuation and high schools through Ontario, many of which in the villages are languishing through comparative poverty, i. e., the section or district is too small for the cost of upkeep. Cannot these schools be made the centre for the consolidation of such sections as are adjacent thereto to provide for the continuation work we have neglected to provide for? Then provide for the consolidation of all remaining rural schools in groups of sections to suit the convenience of all, and provide for continuation work by a two-roomed school, or larger if required, well equipped, to meet the requirements of the work to be done, and which may ultimately become the nucleus of a consolidated school. The distribution of the cost of maintenance over a larger area would stimulate the work of the present continuation and high schools in many villages over Ontario, justify greater efficiency in a staff because salaries would be higher and would not entail heavy costs on any part of the extended areas brought into the system. Then the costly factor of transportation would largely be solved by the fact that the boys and girls have arrived at that stage where they can look after their own transportation. For this work the curriculum could be arranged to provide for such standard of scholarship as is desired in an efficient system of education. The urban population of Ontario is not affected except favorably. The towns and cities are now troubled to provide for the junior class attending the collegiate institutes. The influx of pupils from the surrounding country, being provided for at home, would cease and possibly the lure of the city would also cease for many a boy and girl who is influenced away from the farm by the opportunities of his early months of secondary education.

This may not be the final solution, but it is one method by which efficiency may be added to our present system at the minimum of cost, and may ultimately help to solve Ontario's problem of education for the 90 per cent. of the rural boys and girls who do not get beyond our public schools.

Middlesex Co., Ont.

CHAS. M. MACFIE.

## The Model Hired Man and Employer.

EDITOR "THE FARMER'S ADVOCATE":

Referring to my article in the issue of February 5, and the editorial note attached thereto it seems to me if I could with fairness have carried my line of argument as far as you indicate you might do the same with yours and say: as it is unreasonable to take foreigners in and teach them etiquette, language and religion, it is also unreasonable to take into the home those that are British in birth and parentage. And this is where it leads. There are many girls and boys coming over from Britain every year; will the farmers of the Dominion shut their homes to them? They, or many of them, will become parents of future farmers. Will you say it is unreasonable to take them into the home and teach them manners and religion, or anything else that will develop them into strong, self-reliant and earnest citizens and farmers? If the farmers do not accept this task then it is a crime to allow them to be landed at our ports, to be absorbed by the cities and towns, already over-crowded. No, I do not desire farmers to do what you mention as to language, manners, and religion but there is the fact that a very large number of farmers cannot see their way to build a cottage and so must have a hired man in the house with the inconvenience that may cause. But perhaps a few words of experience may help and what I say is meant in kindness even if it does not find acceptance as such. There are a few words that run something like this:

"Make yourself at home,  
 Stick your feet on the mantle shelf,  
 Go to the pantry and help yourself,  
 And make yourself at home."

Now perhaps some farmers err in making their hired help so much at home, that they take it for granted they can go where and do what they like. I would say make yourself comfortable. The farmer should give the hired man to understand that he is to be in at a stated time at night and that he regulate himself accordingly, that they would like him to cultivate clean habits, and use clean language, especially where there are young children. According to my experience with strangers the respectable man, so long as he gets a good meal, a comfortable bed, and some pastime, such as reading, an occasional game to break the monotony of long winter hours, will be quite willing to stay in such a place, and the farmer cannot afford to take any one who is not respectable.

When I was single I was very lucky in getting homes that were comfortable and whenever I went to a place where there was a large family I would do what I could to make the work as light as I could for the farmer's wife. I would clean my boots as well as possible, keep the room I slept in tidy, make as little washing as possible; I was careful at the table not to monopolize the conversations and not to poke my nose in, if the conversation did not have to do with me. Some men would do many things if the farmer set the example. Of course, some would not; but I do know that because I practised the things stated I got many little kindnesses shown me that otherwise would not have come my way. One thing more, it is good to remember that there are moments when one likes to be alone and there are occasions when the farmer and his family would like to be alone, and there are delicate situations that call for a measure of commonsense. Happy is the hired man who can see the points, and absent himself.

I do not say that the practice of all these good things will solve labor problems but it will help.

As the man on the 100 acres, I can understand a woman who has a large family, or in ill health, thinking she has enough to do without looking after a stranger, but not a woman who has no one but her husband to look after, and if her husband agrees with her, I would say he is making a virtue of necessity for nothing was ever accomplished by that kind of spirit.

I believe that in all walks of life there are some things that have absolutely got to be borne in the best grace possible, and it is better to take a strong stand and tread the path of duty than to shrink it, no matter how distasteful it may be.

Northumberland Co., Ont. W. J. ANTHONY.

## Finds Alsike a Profitable Crop.

EDITOR "THE FARMER'S ADVOCATE":

The high price of alsike clover seed ought to induce more farmers to attempt its production. It can be grown successfully on any soil, but it will do better on undrained soil than any other clover. I find six pounds to the acre about the right amount of seed to sow. If the field is free of grass I sow one pound of timothy mixed with it; this holds up the seed and it will fill better. It can be sown on wheat or with spring grain. If it shows much growth the first year after the grain is cut pasture it off; it is better not to have too much top. After the first blossoms start to turn brown it requires close watching. If the first heads are well filled and the later ones are not, I cut it early. If the first heads are not filled and the later ones are, I let it get riper. If the heads do not show much seed developing I cut it for hay. The seed shells very readily and should be cut while damp and raked while the dew is still on. It should be bunched just one forkful in each bunch, and all picked up on a fork at one time, and placed on the wagon; this prevents shelling the seed. The idea is to handle it as little as possible. I have

been able to get from six to eight bushel of seed by these methods. I always sow the very best of seed.  
 Norfolk Co., Ont. P. B. F.

## Rates of Seeding Per Acre.

All arrangements should be made soon for the spring seeding and this preparation necessitates making up a list of the seed requirements. Broadly speaking, the amount of seed per acre for the various crops is pretty definitely fixed but there are influencing factors that must be taken into consideration. Some of these are: (1) Fertility of the soil; (2) Condition of the seed-bed (this is now unknown); (3) Stooling qualities of the different varieties; (4) Size of seed sown; (5) Climatic conditions (now unknown); (6) Method of seeding (drill or broadcast); (7) Vitality or germination of the seed used. Considering the foregoing factors and knowing the peculiarities of the soil to be planted, as the farmer usually does, the following recommendations can be taken as a guide to the amounts of seed required for the various crops; they should not be taken as absolute, but they can be adapted to local conditions and requirements.

### AMOUNTS OF SEED PER ACRE.

Wheat (fall and spring), 1½ to 2 bushels; barley, 1½ to 2 bushels; oats, 2 to 2½ bushels; Emmer, 80 pounds; field peas, 2½ bushels; rye (for grain production), 1½ bushels; rye (fodder), 2 bushels; buckwheat, ¾ bushel; flax (seed) ½ bushel; flax (fibre), 2 bushels; beans, ¾ bushel; potatoes, 15 bushels; turnips (Swede and fall), 2 to 3 pounds; mangels, 4 to 6 pounds; sugar beets (for feeding purposes), 4 to 6 pounds; carrots, 3 pounds; rars ips, 5 pounds; corn (flints and dents in drills) ½ bushel; corn (in hills) ¼ bushel; sorghum (grain and fodder) 6 to 10 pounds; millet, (foxtail, for hay and fodder) 30 pounds; millet (barnyard, for hay and fodder) 20 pounds; millet (foxtail, for grain), 20 pounds; millet (barnyard, for grain), 12½ pounds; rape (in drills) 1½ pounds; rape (broadcast), 5 pounds; common vetches (grain), 1 bushel; hairy vetches (fodder) 1½ bushels; timothy (alone) 12 to 15 pounds; timothy (with red clover), 4 to 6 pounds; common red clover (alone), 10 to 12 pounds; common red clover (with timothy), 8 to 10 pounds; alsike (for seed) 6 to 8 pounds; alsike (in a mixture) 1 to 1½ pounds; alfalfa, 20 pounds; sweet clover, 15 pounds.

## CANADA'S YOUNG FARMERS AND FUTURE LEADERS.

### Two Ways of Giving the Boy an Interest.

So many suggestions have been offered that are supposed to be helpful in keeping the boy on the farm that new ones that have seldom been heard of before are apt to slip by unnoticed. We are not setting out here to solve the question of rural depopulation, because we are certain of only one thing about it and that is that no one person or factor in rural life can settle it without the more or less active co-operation of all the others. It must be remembered by those who frequently put forward solutions of the matter that farm boys and girls who leave the farm for urban centres do not all do so for the same reason. There is certainly merit in the statement that a great many young men leave because there is not sufficient inducement for them to stay at home. In other words there is nothing else for them to do if they have any ambition at all. But ambition can certainly be satisfied in other places besides the crowded streets of the city and it is a relief occasionally, to run across some farmers who are trying to satisfy on the farm the ambitions of their sons.

A lot of folk seem to think that because the young people of the present day want to satisfy their ambitions in a manner different from that of their forefathers, they are not made of the same good material. It only takes a little argument to disprove this, because most of it is founded on the forgetfulness of older people that they were once young themselves and wanted things they did not get. "Folks is folks" pretty much now as they were two and three hundred years ago when the Pilgrim fathers left the old land for their principles and religion and when the hardy pioneers of those days in Canada won their way through the pathless woods and built up for us our heritage as Canadian citizens. The trouble is that each generation, with its changing conditions and circumstances, bring new responsibilities and new ways of living and making a living and the people of the previous generation cannot always adapt themselves to the changes. There is an old saying that "boys will be boys," as much as to say that as they grow up boys acquire a certain characteristic of restless ambition that must be satisfied, or that they instinctively want to "start something." In some respects the problem of keeping the boy on the soil is a question of satisfying this boyish spirit until a more mature age is reached. When this age is reached the matter is more a question of dollars and cents and resolves itself into deciding how best he can make his way in the world.

One farmer we recently met has managed very successfully to get his boys to take an interest in the farm and by a method that is, so far as we know, very uncommon. When his eldest boy grew up so that he was doing a man's work on the farm the father decided to try and keep him there. He knew that his boys were good workers and thought that they were entitled to some consideration.



How best to treat them was something of a problem, but he decided to try out a plan that he had never heard of before. This was to give the boy a small percentage of everything that was sold off the place throughout the year. The father knew just about how much he could stand to give them and governed the percentage accordingly. His object, however, was not only to see that the boys were adequately rewarded for their interest in the farm, but to help them also to become thrifty and saving because he recognized from a long experience, that thrift is one of the prime requisites to successful farming. He, therefore, added another feature to his scheme and this was to give the boy at the end of the year fifty per cent of what he had been able to save from his percentage. Last year, for instance, one of the two boys who are still home received about \$700 altogether, of which about \$150 was due to his having saved considerable through the year. The only sequel to this method is the results and as to these we have been informed by the Agricultural Representative for the county that there are not two more contented farm boys in the county than are at home on this farm now.

In another county we recently ran across a man who has tried another plan. This plan, while seldom practiced to the extent that we found it, is the one of giving the boy charge of some kind of stock raised on the place—and then giving him the money he makes from it. The latter is the important part that is so often neglected, with the result that the boy's calf becomes Dad's cow. In this case it is the hogs on a dairy farm that are the moneymakers for the boy. So far as we know the boy does not own the hogs—they belong to the farm—but the boy gets all he can make from them. He can feed them what he likes of the feed grown on the farm, including the skim-milk, but any purchased feeds he must pay for. Here is something that brings out initiative and tends to develop a good feeder of live stock; and in this case the plan has done so. The oldest boy now has a bank account of his own amounting to \$5,000, which is no inconsiderable sum. Of course it has taken several years' work with the hogs to make this sum and for this reason the Board of Commerce and others who may be prejudicially inclined against farmers need not point to this figure as being particularly significant of anything in their line of business. The only significant point is that both the father and the young farmer are satisfied. The younger brother wanted to go to school so he took over the hogs while his brother was overseas and the money he got out of them will have to give him this schooling. Probably it will be taken a little more to heart when he remembers that he made the money to pay for it himself.

### Why Take a Short Course in Agriculture?

EDITOR "THE FARMER'S ADVOCATE":

It was my privilege to attend a short course in agriculture, which was held in our county this winter, and though our class was the largest held in the Province this year, the number that took advantage of the opportunity was small indeed compared with those who did not. I hope, however, that after reading these few lines, some who thought a short course useless may change their minds.

Stock judging plays a very important part, and the practical experience along this line is very helpful. Public speaking is one of the most important subjects, and the short speeches and debates afford the student excellent practice to think on his feet. Under farm management and accounts, the system of farm book-keeping is taken up. Many other subjects are dealt with, such as soils and fertilizer, feeds and feeding, insects and fungus diseases, etc.

The time is so short and the subjects are so many, that each subject is just barely touched on, but even so it opens up avenues of study undreamed of. I am sure that most of us never realized that agriculture required as much knowledge as it does, and the short course opens up the subjects for us so that we can follow them along ourselves more intelligently through the agricultural books and journals.

The short course gives the young farmer a holiday, which in most cases is well earned. He forms new acquaintances and exchanges ideas with the young farmers he comes in contact with; and above all, he becomes interested in farming. Where the boy's interest is there will he be also, therefore, the boy will usually be found on the farm. If instead, he goes to the city for his holiday he is just as likely to become interested in the city, and the same rule applies here so that in a very short time the boy may be working in some dusty factory.

I would, therefore, advise the young farmers to attend a course at the next opportunity, and I am sure they will find it a pleasant and profitable holiday.

York Co.

JUNIOR FARMER.

### AUTOMOBILES, FARM MACHINERY AND FARM MOTORS.

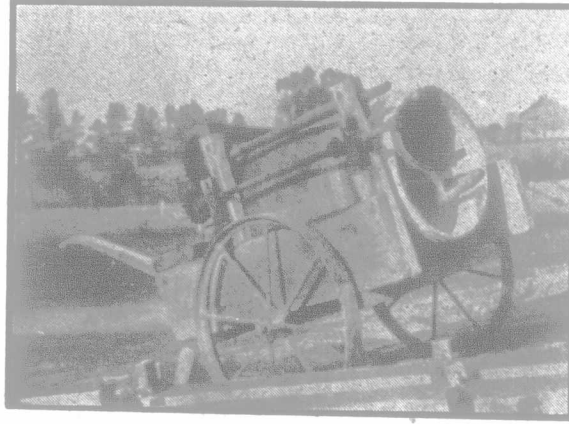
#### Why Does a Crankcase Breathe?

The following discussion of an important consideration in engine operation is taken from "Scientific American":

Fitting a "breather" in the crankcase of a four-cylinder gasoline engine is a matter of some importance. The alternate compression and partial vacuum taking place in the crankcase at every revolution would tend,

in the absence of a breather or vent, to force oil out through the bearings and then draw it back, along with more or less dust and foreign matter. The net result would be a very oily engine exterior, and dirty bearings.

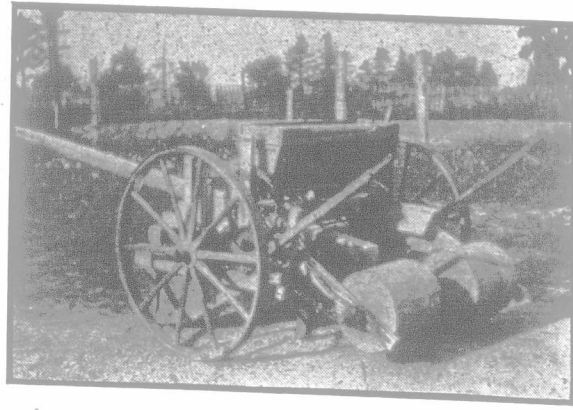
This leads up, however, to something of a puzzle, for after giving the matter a little consideration one might well ask why there should be alternate compression and partial vacuum in the crankcase. The cranks are set at exactly opposite points on the crankshaft, two on one side and two on the other; therefore there must always be two pistons going up while there are two going down. All the pistons are of precisely the same diameter, and all have precisely the same length of stroke; apparently, therefore, the displacement of air by the two descending pistons should be exactly equalled by the space opened by the ascending pair of pistons. At that rate there would never be any change in the cubical contents of the crankcase and cylinders and consequently no change in pressure. The truth is that there is a slight change and that it is due to the movement of the pistons.



A Handy Homemade Cement Mixer.

Why? Is it not true that the pistons travel at exactly the same speeds in opposite directions? It is plain that the piston starts from a dead stop, gradually accelerates until it reaches maximum speed, and then slows down toward the end of the stroke until it reaches the other dead centre and stops before starting the return stroke, so that the motion is to some extent irregular; but is it not true that whatever one piston is doing, say, on the down-stroke, the other is doing on the up-stroke? Curiously enough, such is not the case.

The truth is that the piston travels through the first half of its downward stroke—that is, the stroke away from the cylinder head—at greater speed than it travels through the last half of the same stroke. On the up-stroke the first half is performed more slowly than the second half. So that a piston making the first half of its descent is moving more rapidly than a piston making the first half of its ascent, and displacing more air than the other makes space for; with the result



A Root Seeder Made at Home.

that the pressure in the crankcase increases. In the second half of the stroke the descending piston is slowed down while the ascending piston is accelerated, and the result is an increase in the total amount of space and a slight degree of vacuum. Thus there are two changes in crankcase pressure at every revolution of the crankshaft.

At the bottom of all this is the angularity of the connecting rod—that is, its departure from the vertical in the case of a vertical engine, or in any case the fact that the crank end moves alternately away from and toward the produced axis of the cylinder. To explain the phenomenon, let us consider the downward stroke. The motion of the crankpin is a compound of vertical and horizontal motions. It is clear enough that the equal vertical motion of the piston must be followed by an equal horizontal movement of the piston to which it is connected. It may not be quite so clear, however, that the horizontal movement of the crankpin—that is, its duces vertical movement of the piston, which must be added to the other. Let us imagine the connecting rod with its upper end in the usual place in the piston, but the lower end, instead of being on the crankpin, arranged so that it could move only in a straight, horizontal line. Starting with the connecting rod vertical let the lower end be moved horizontally. The result will be, of course, a downward movement of the piston. The point can be practically demonstrated by

holding a pencil vertical to the table and moving its lower end along the table, which will cause the upper end to be lowered.

Thus the piston in following the first quarter revolution of the crank moves vertically a distance equal to half the stroke plus the extra distance due to the angularity of the connecting rod; this distance depends upon the length of the rod in proportion to the length of the stroke. In the second quarter of the revolution, the piston still moving downward, the crank end of the connecting rod reserves its horizontal component and moves inward. Experimenting with the pencil, it is found that coming back to a vertical position raises the upper end. In the case of the piston the vertical component is much greater than the horizontal, so the piston continues to move downward, but the inward swing of the connecting rod slows it down and shortens its travel as compared with the distance travelled during the first quarter revolution of the crank. Briefly, while the crank goes through the first quarter revolution, the piston makes something more than half its stroke, and while the crank goes through the second quarter the piston makes something less than half its stroke. But the fly-wheel keeps the crank turning at a speed that is constant throughout the revolution, and as a result the long half of the stroke is done in precisely the same time as the short half.

In the first part of the up-stroke the crankpin swings out from the centre, the result being the subtraction of something from the upward travel; thus there is a short stroke, just as in the last part of the down-stroke. In the last quarter of the revolution the crank is again swinging in, and the addition to the vertical component makes another long stroke, as in the first part of the down-stroke.

Now for the breathing. The point is simply that when one pair of pistons is making a long stroke, the other is always making a short stroke, though the time is the same for both. While the descending pistons are moving faster than the ascending pistons the air in the crankcase is compressed; when the ascending pistons move more rapidly than the descending pistons a partial vacuum is formed. So the crankcase breathes, even though a superficial consideration of the matter might make it seem impossible for such action to occur.

## THE DAIRY.

Feeders of dairy cattle should not forget that sometimes the highest priced feeds are the most economical after all.

The fact that the dairy cow specializes in the economical use of roughage makes it more difficult for dairymen who are short of roughages to make a profit out of milk production.

Many dairymen are put to it severely when confronted with the impossibility of securing sufficient supplies of bran, to find a suitable substitute to take its place. Bran is so important a feed that its absence makes successful feeding very difficult.

The experience of many good dairymen points to decided advantages in favor of running water in dairy stables, during the winter months. Cows will not milk what they need if they have to be turned out to a trough of ice water in zero weather.

Farm surveys offer best possible argument for the elimination of the scrub bull. They have shown that although it is a slower method of raising the labor income on a dairy farm than feeding better breeding is more powerful and effective in the long run.

A great many dairymen make a serious mistake when they fail to grow real good hay for the cows. Timothy hay, so often used in dairy rations is a poor milk producer and should only be used where it is impossible to grow more suitable crops.

Due to the fact that hundreds of dairymen are merely milk producers and not breeders, the percentage of scrub bulls on dairy farms is larger than of beef bulls. This is not as it should be and if dairymen cannot maintain pure-bred bulls in each individual herd, there should be at least a pure-bred bull available for every individual dairy herd in Ontario.

### Cheese and Butter Prospects.

Information received from the Dairy and Cold Storage Branch, Department of Agriculture, Ottawa, states that commencing Monday, February 23, the retail price of butter imported by the British Ministry of Food will be raised from sixty to seventy-two cents per pound. There are also given brief extracts from the "London Grocer" of February 7, on the butter and cheese situation, which we reproduce here:

"Although British butter has been decontrolled and big prices are mentioned as being required by sellers, it is not likely that such prices can obtain for long. Supply and demand will tell their own tale. The butter position, however, will remain very awkward for a considerable time. It is possible that two years may elapse before the production of butter regains its normal condition, and prices will inevitably rule much above those of pre-war times. As the result of the war all commodities have been forced to a higher level of cost in all countries, and butter seems to have fared very badly. We are deprived of supplies from Siberia through the devastation of civil war in Russia. This source



of supply alone had a material influence in pre-war times in keeping down prices during the summer. In the autumn and winter liberal imports from Australia and New Zealand exercised considerable effect in preventing prices from advancing. Unhappily, this year drought and other unfavorable weather conditions in Australia and New Zealand have been most disastrous to production. Imports from that quarter of the globe have not been so small for many years as they are this season.

"A distribution of British-made cheese took place last Tuesday on the basis of 50 per cent. for February requirements. Quality was very good, considering that it was made in the winter time. An allotment of imported cheese of 100 per cent. of February requirements was made to-day for ships' stores. There is no appreciable evidence of an early decontrol. Various bodies connected with the trade keep on sending deputations to the Ministry of Food, but these are by no means unanimous in their representations. In Canada markets are on the quiet side. The stocks held there are still large, but a large proportion of this is held on Government account, and the balance causes no anxiety on the part of holders, who can easily deal with the surplus long before the new make is forthcoming in any quantity. Europe is in need of cheese, and shipments will go to Antwerp, which is the chief distributing centre for Canadian produce. As soon as credits are arranged and when completed large shipments will ensue. Fair quantities of Dutch are arriving, the lower qualities being plentiful. Prices of free cheese are—finest grades, wholesale 1s. 4d., retailers, 1s. 8d.; lower grades, wholesale 1s. 2d., retail, 1s. 6d. per lb."

The butter situation in New York is given by an extract from "The Producers' Price Current" of February 21, part of which reads as follows: "Values are being sustained to a much later period than operators expected. But the fact is that all the distributing channels were so nearly out of butter that it is taking a good many goods to give even a moderate working stock. Out of town markets have also called for numerous shipments, and in addition to a close absorption of fresh arrivals we have cut into the storage reserves to the extent of more than 1,000,000 lbs. Present holdings in the public warehouses are 11,733,020 lbs. against 9,045,819 lbs. same time last year. The steamer Oscar II brought 6,435 casks Danish creamery for this market, and she had 735 cases tinned butter for the tropics. The 558 casks Holland butter in last week, have also been on the market. Another steamer left Copenhagen on February 19 with a large cargo, and we understand that the steamer Stockholm sailing about a week later, will bring some butter. Shipments now on the way cost around 52 to 55c. landed New York, duty paid, but the best fresh goods are offering for March shipments at 50 to 51½ cents. Considerable of the butter in storage in this country, owned by the Belgian Government, is being prepared for shipment on an Antwerp boat, but there is no prospect of any new business with Europe for awhile. Most of the Holland butter scoring 89 to 91 points has been sold at 61½ to 63 cents."

**Annual Meeting of the National Dairy Council.**

The annual meeting of the National Dairy Council of Canada was held in Winnipeg, February 17th. Among the important matters taken up was a recommendation of the executive to hold a National Dairy Show in Canada in October of next year. This will be the first exclusive large dairy show that will have been held in Canada and the idea is to make it an annual affair. It was also decided to give representation in the Council to breeders of dairy cattle, two from the Holstein Cattle Breeders' Association, two from the Ayrshire Cattle Breeders' Association, and one from the Jersey Cattle Breeders' Association or Club. This will increase the number of members from 35 to 40. The Secretary, D'Arcy Scott outlined a plan for a nation-wide educational campaign, for the development of dairy products in Canada.

Four addresses were given. The Dairy Commissioner, J. A. Ruddick, spoke on the present condition of the dairy industry in Canada. He stated that for the year of 1919, the total value of milk and milk products produced in Canada amounted to \$250,000,000, made up as follows:—

Cheese, 175,000,000 pounds, value \$47,250,000; creamery butter, 100,000,000 pounds, value \$53,500,000; dairy butter, 120,000,000 pounds, value \$56,250,000. The balance being made up of the manufacture of condensed milk, the demand for which has quadrupled since 1914, and milk powder. During the year the production of creamery butter increased in every province except Manitoba, where there was a slight decrease, owing to conditions in Manitoba during May and June in regard to transportation. Another speaker, Miss Louise Holbrook of the Dairy Division of the United States Federal Department of Agriculture, discussed the methods used in the United States to stimulate and increase the use of milk and milk products in the cities and of the campaigns to interest the city people in the greater use of milk.

Of course, oleomargarine naturally came up for discussion, and the methods that were used in the advertising of it, came in for strong condemnation. There will, no doubt, be action taken to have the manufacture of and importation into Canada prohibited. The Dairy Commissioner, J. A. Ruddick, stated that the Department of Agriculture, had never been in any doubt as to where it stood in regard to oleomargarine, and added that if an energetic organization like the National Dairy Council had been in existence at the time

that the ban was temporarily lifted on oleomargarine this action might have been prevented. He further stated that the person who says to you that oleomargarine is as good a food as butter, is either not well informed, or is guilty of misrepresentation. At the afternoon meeting, which was open, oleomargarine came up for discussion, and it was remarkable to see the number of city people who were fully in accord with the dairymen in the demand that oleomargarine should be banned.

It was regretted by those present, that the President, E. H. Stonehouse, of Weston, Ont., was unable to attend, owing to illness in his family. Alex. McKay of Winnipeg presided over the meeting. The election of officers for the ensuing year, resulted as follows:—President, E. H. Stonehouse, Weston, Ont.; Vice-President, Alex. McKay, Winnipeg, Man. Eastern Executive: E. H. Stonehouse, Weston, Ont.; Mr. Medd, Exeter, Ont.; E. Boyer, Montreal, Que.; J. Bingham, Ottawa Ont.; Capt. Dixon, Truro, N. S.; Western Executive: Alex. McKay, Winnipeg, Man.; P. Pallesen, Calgary, Alta.; J. W. Berry, Vancouver, B. C.; J. A. Caulder, Moose Jaw, Sask.

**A Visit to Some Peel County Dairymen.**

The 1918 report of the Ontario Bureau of Industries credits the County of Peel with 91.74 per cent. of cleared land, which is the highest percentage of any county in Ontario. It is, of course, not so large as some other counties, having only 288,133 acres of assessed land, as compared with 518,623 acres of assessed land in Perth County, for instance, but the county is recognized as a particularly good one, and contains some very creditable farming sections. It was in Caledon Township in the north where the first farm management survey was conducted. It is in this section of the county, too, that potatoes are grown very extensively as a special

Peel County is almost entirely one of cream and milk shipping. We were informed that there is not a single creamery in the county, and so far as we know there are no cheese factories, but there are one or more cream buying stations where cream is taken in and shipped to centralized creameries. A large proportion of the milk produced in the county goes direct to Toronto for consumption, and to safeguard the marketing of milk and cream generally, there is a live county milk and cream producers' association organized, which, at the recent annual meeting, decided to affiliate with the Toronto Milk Producers' Association, and also with the Ontario Milk and Cream Producers' Association.

The first farm we visited was that of Nelson Carter. The herd numbered fourteen cows, of which nine were milking. As a usual thing, several more cows are kept, but last year Mr. Carter was unfortunate in the matter of growing roughage for the herd. He planted no corn for silage, thinking that he would try roots instead, but in spite of the fact that he sowed the roots twice he had no crop, and as a result is now feeding mixed hay and straw along with a mixture of oats, barley and wheat. Two bags of this grain mixture are mixed with one bag of shorts, very small quantities of which can be purchased for fifty dollars per ton. We were informed that it was impossible to get bran locally. The milking cows are also getting gluten meal, which can be secured throughout this district at from sixty-four to sixty-seven dollars per ton, depending upon the amount of protein it carries. Mr. Carter is soaking the gluten meal for his herd so that it stands in water from one feed to the next. He is feeding a ten-quart pailful of the soaked meal to each two cows. All the cows in the herd are grades but one, and three cans of milk are being shipped per day. Nearly every dairyman whom we visited was feeding what was said to be gluten meal. This rather surprised us, because of the fact that gluten meal is not used very often in Canada. On the other hand, gluten feed is considerably better known. Only



**Group of Representatives Attending the Annual Meeting of the National Dairy Council, Winnipeg, February 17, 1920.**

crop. Farther down in the county, in the district about Cheltenham, alsike seed growing is markedly popular and lately very appreciable acreages of sweet clover have been sown for seed. Along the lake shore and in the valley of the Credit River, fruit growing is receiving quite an impetus. Small fruits particularly are grown to good effect, and there seems to be every prospect that a much fuller development will be secured along this line.

There are also appreciable numbers of good live stock in the county and particularly in dairying, due to the close proximity to the big Toronto market, there has been notable development. It was in this connection that a representative of "The Farmer's Advocate" recently spent two days in the county visiting various milk producers on their farms. Our

one man that we visited said he was feeding gluten feed, but on closer questioning he was not altogether sure whether it was gluten feed or gluten meal. In some barns we were able to see the original bags in which the feed came, and those that we saw were marked "maize gluten meal." We understand that the dairymen in Peel County have two sources of supply for this feed; one of them is the local factory, and the other is at Fort William. The local factory puts out a cheaper grade of meal containing about eighteen per cent. of protein, while the other product sells for a few dollars more per ton but contains, we understand, about twenty-three or twenty-four per cent. of protein.

Henry and Morrison give the following digestible nutrients as applying to low-grade gluten feed, high-grade and low-grade gluten meal:

Feeding Stuff	Per cent. dry matter	Per cent. digestible crude protein	Per cent. digestible carbohydrates	Per cent. digestible fat
Gluten feed, low grade.....	91.2	15.1	57.8	4.8
Gluten meal, high grade.....	90.9	30.2	43.9	4.4
Gluten meal, low grade.....	91.8	23.2	44.1	9.7

object was principally to discuss with representative dairymen the question of feeds for dairy cows under present conditions of scarcity and high prices. We wanted to find out in what way dairymen are attempting to overcome the handicaps. The dairy business in

Bulletin 253 of the Ontario Agricultural College has the following to say regarding gluten feed and gluten meal, which may be interesting in view of the somewhat extensive use being made of these feeds in Peel County: "The best-known by-product of corn in this country is

**DAIRY.**

Little should not forget that mixed feeds are the most economic

any cow specializes in the creamery it more difficult for dairy-herdages to make a profit out of

put to it severely when possibility of securing sufficient a suitable substitute to take a hearty feed that its absence very difficult.

any good dairymen point to the favor of running water in dairy months. Cows will not milk well to be turned out to a trough.

best possible argument for the bull. They have shown that method of raising the labor man feeding better breeding is in the long run.

men make a serious mistake real good hay for the cows. fed in dairy rations is a poor only be used where it is suitable crops.

hundreds of dairymen are not breeders, the percentage of farms is larger than of beef could be and if dairymen could in each individual herd, pure-bred bull available for in Ontario.

**Butter Prospects.**

from the Dairy and Cold Department of Agriculture, Ottawa, Monday, February 23, reported by the British Ministry of sixty to seventy-two per cent given brief extracts from the Dairy 7, on the butter and cheese success here:

er has been decontrolled and as being required by sellers, prices can obtain for long, all their own tale. The butter remain very awkward for a possible that two years may in of butter regains its normal, inevitably rule much above. As the result of the war all led to a higher level of cost er seems to have fared very supplies from Siberia through war in Russia. This source



gluten feed, which is a by-product from the manufacture of starch from corn. It contains all that is left of the corn after the starch is removed, except the germ. High-grade gluten feed is a very valuable product, containing a high percentage of protein and only a moderate amount of fibre. The low-grade gluten feed is not worth so much by a good deal, and buyers should be on the watch in this connection, and should see to it that a satisfactory guarantee as to composition accompanies the feed. Gluten feed is especially valuable for dairy cows in milk, being usually a cheap source of protein and reasonably light and bulky. As a source of protein, the high-grade feed is worth 20 per cent. more per ton than bran, but as it is not so laxative in its nature, it is most valuable in forming part of the ration mixed with bran. There is occasionally sold, in this country, Continental gluten feed which is a by-product in the distillation of alcohol from corn. This feed has nearly the same feeding value as gluten feed, but is not quite so well relished by cows, so it cannot be so profitably fed in large quantities.

"Gluten meal is seldom sold in this country. It consists entirely of the gluten of corn without the admixture of the corn bran, as is found in gluten feed. This meal is heavy in its nature, but as part of the grain ration it is almost equal to oil cake in its ability to produce milk."

To further illustrate the difference between these two feeds, Henry and Morrison say that gluten feed which contains about twice as much digestible crude protein as wheat bran is not a very heavy feed, and is a valuable concentrate for the dairy cow. They quote a test at the Vermont Station with two cows fed in eighteen-day periods, wherein it was found that when four pounds of gluten feed replaced an equal weight of the mixture of wheat bran and cornmeal, the yield of milk was increased 15 per cent. At the same Station, six cows were fed for twenty weeks in order to compare gluten meal with a mixture of equal parts of cornmeal and wheat bran. It was found that 100 pounds of dry matter, in the form of gluten meal, increased the yield of milk and total solids by 12.5 per cent., when substituted for an equal amount of dry matter in a mixture of equal parts of cornmeal and wheat bran. As generally put on the market, gluten feed is composed of gluten meal and corn bran ground together.

is to be gained from the use of molasses in place of cornmeal and similar feeds, but for facilitating the disposal of unpalatable and inferior roughage, and as a tonic for cows out of condition, the molasses may be helpful. Molasses has been recommended as a satisfactory addition to the ration when it is diluted with four to six times its bulk of hot water, and a pint per day of this diluted molasses poured on each cow's hay or roughage. It has also been advised that because the roughage is made more palatable by the addition of molasses, cows and heifers can be induced to consume more roughage by the use of molasses. So far as we can learn, however, from the experience of the dairymen we visited, it does not add much to the ration aside from increasing the palatability. The effect on palatability is especially true when silage is none too plentiful and a good percentage of straw is mixed with it, as was the case in one instance. Molasses was being used in order to increase the consumption of straw. We found two or three instances, however, where molasses was being fed to pigs, and it was thought to be very beneficial.

The next farm visited was that of Robert McCulloch, President of the Peel County Milk and Cream Producers' Association. Here we found a herd of grade Jerseys supplying cream for a Toronto creamery. There are about 25 milking cows in the herd. Mr. McCulloch keeps a pure-bred bull and raises nearly all of the heifers produced, selling off some of the mature cows as the heifers come along. In this respect he follows the same plan as Mr. Monkman, both claiming that mature cows sell better than heifers, and that for this reason the practice they follow pays them better. Mr. McCulloch had some silage and was feeding about 30 pounds per day along with mixed hay of only average quality and containing a fairly large percentage of timothy. The grain mixture amounted to eight pounds daily per head of a mixture of gluten meal and bran, equal weights. Both grades of gluten meal procurable in the district had been tried, but the one with the higher percentage of protein was declared by far the better of the two. We were informed that the grain feed most preferred, if it could be secured, would be a gallon of oat chop and a gallon of bran night and morning. Bran, however, is almost impossible to obtain, and Mr. McCulloch's chief problem was to find some substitute. He was undecided between corn and oats. He also had some

About three pounds of this meal mixture was being fed night and morning. This herd while composed of grade cows is proving profitable. Taking it all in all, it is safe to say that not a single dairyman visited is feeding exactly as he would like to feed if feeds were available. Labor conditions have militated against growing enough of some kinds of feeds on the farm, and the high market prices of such concentrates as are available forces dairymen to compromise with more or less makeshift rations. These factors are responsible for the fact that it is only the exceptional feeder who can be said to be making any appreciable amount of profit from feeding dairy cows.

### Opportunities for Organization Work.

We are informed that a deputation representing the Ontario Milk and Cream Producers' Association waited upon the Honorable Manning W. Doherty, Minister of Agriculture, on Friday, February 20. The purpose of the deputation was to lay before the Minister the following program of activities:

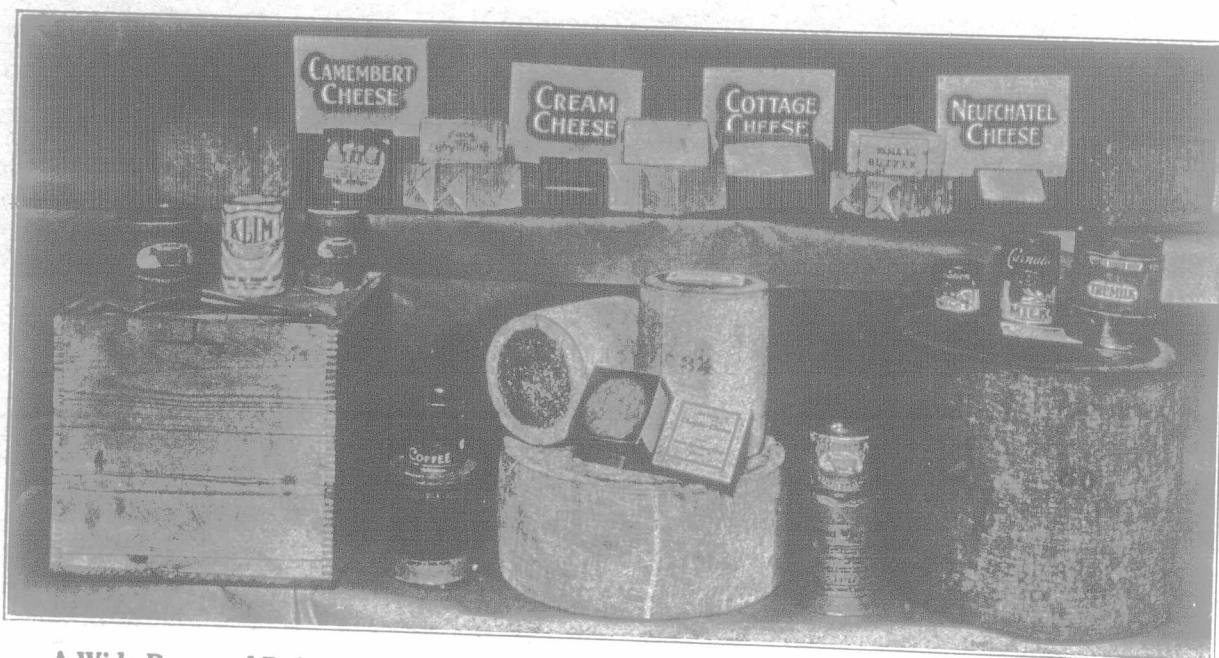
1. Ascertaining the cost of production of milk in all milk producing counties of the Province and to supplement the present Government surveys.
2. To keep in touch with domestic and foreign markets for milk and its products.
3. To secure a fair price to the producer on the basis of production and market conditions.
4. Educational: To institute an educational campaign to assisting the producer in the most efficient and economical methods of producing and caring for his product, and improving the quality and increasing the quantity of the same, and to educate the consuming public as to the food value of milk and its products, and also to demonstrate the actual cost of production.
5. To protect the industry by securing an adequate system of inspection which will ensure a pure and unadulterated article for the manufacturer and consumer; also to ensure that the producer obtain a fair and satisfactory test for his milk and cream.

In all of this work it is the apparent desire of the Milk and Cream Producers' Association to co-operate with the Department of Agriculture, in order to prevent duplication of effort and to stimulate a more general co-operation with the Department on the part of the public. The President, E. H. Stonehouse, expressed the hope of putting into effect the above programme, throughout all sections of the Province, and the Minister assured the deputation that he and the permanent officials of the Department would gladly co-operate along the lines indicated, and would render assistance in every way possible. J. E. Brethour of Burford reported co-operation on the part of the manufacturers and distributors, in paying prices throughout the year which will tend to stimulate, rather than discourage, production. Our large export trade in cheese, and the increasing amount of butter being sent across the water, will be materially added to by the output of condensed milk, milk powder, etc.

The Ontario Milk and Cream Producers' Association is an organization that can do, and has done, a very great deal of valuable work for the dairy industry of Ontario. There are now affiliated with it several local associations in the dairy districts of the Province, and under the able leadership and sincerity of E. H. Stonehouse, the President of the Provincial Association, the dairymen of Ontario should be able to perfect an organization that will be powerful in its influence for good upon the industry. In order that the objects and qualifications for membership in local associations may be better understood, we are quoting herewith the articles of the constitution suggested for local associations: "The purposes of the Association are to promote the interests of the producer and consumer of milk, cream and other dairy products by: (a) Improving the conditions under which milk is produced; (b) Improving marketing methods; (c) Standardizing the product; (d) Generally by doing such other things as are necessary with respect to the quality, the cost of production and distribution of milk, and the return to the producer and the cost to the consumer as will promote the interests of both, and to do all things necessary therefor.

"Any person may become a member of this Association who is identified with the production of milk, cream and other dairy products, and who conforms to the purposes and by-laws and rules and regulations of the Association, and who pays the annual membership fee."

In the program outlined above there is mentioned an educational campaign to be directed at both the consumer and the producer. There is a general and well-founded feeling that dairy products are not appreciated as well as they might be by the great mass of people. Very few people really know the great variety of dairy products that are manufactured. When one considers the large number of different kinds of cheese that are made, along with the various milk products and butter of various kinds, the array of dairy products resulting from the Canadian dairy industry is of more or less surprising proportion. The accompanying illustration serves simply to show the variety of dairy products on exhibition at the recent convention of the Dairy-men's Association of Western Ontario, in January. At this small dairy show, conducted as an adjunct to the convention, all of these products were on exhibit. It should be materially to the advantage of the dairymen of Canada to see to it that a campaign is carried on that will make these products better known, better appreciated, and better distributed.



A Wide Range of Dairy Products Exhibited at the Recent Convention of the Western Ontario Dairymen's Association.

At the farm of E. C. Monkman we found a herd of seventeen cows, Jersey and Ayrshire grades, of which eleven were milking. Some of these cows were going to 50 or 60 pounds per day. The ration consisted of 15 pounds mangels, 10 pounds of alfalfa hay, one bushel of silage, one bushel of cut straw, 4 pounds of oat and barley chop, and one pound of oil cake. The silage and cut straw were mixed half and half, and a bushel of the mixture fed night and morning. We found that Mr. Monkman was using, for a time, some molasses as feed for the cows. It cost him forty cents per gallon of fourteen pounds, but he had hesitation in pronouncing it far less valuable at this price than oil cake at \$90 per ton. We found two or three dairymen who were trying to supplement their feeds with molasses, but none of them were very strong for it. There are two kinds of feed molasses sold, the one being the molasses from beet-sugar factories, and containing about 66 per cent. of what is called nitrogen-free extract, which is nearly all sugar, the other being the cane molasses, or blackstrap, which contains about the same amount of digestible nutrients as the beet molasses. The protein is very low in each, being about one per cent., while the carbohydrates run about fifty-eight or fifty-nine per cent., and the fat is a negligible quantity. Beet molasses is very laxative in effect when fed in too large amounts, but Henry says that in beet-sugar districts the molasses is usually a cheap source of carbohydrates, its value per ton being rated at three-fourths that of corn. Cane molasses, according to this authority, does not have the purgative effect of beet molasses when fed in large amounts, but tends to be costive in its action. We find that of each of these feeds, from two and a half to three pounds of molasses per thousand pounds of live-weight is the most that is recommended for dairy cows. At Massachusetts it has been found that no advantage

goose wheat and was wondering whether it would pay to feed it. Corn was quoted locally at \$1.90 per bushel, oats \$1.15, and wheat at \$1.91 (disregarding the participation certificate) and he finally decided to get as he can get bran again.

Joe Dolson was visited next and here we found a herd of about 40 Jerseys, about two-thirds of which were pure-breds. Silage was scarce and some molasses was fed to add palatability to the mixture of straw and silage. Mr. Dolson said the straw was eaten up better when the molasses was fed. The herd gets two gallons of molasses daily. This was diluted to ten times its bulk with water as it was being mixed up. This farm was probably typical of a great many others, in that the feeding problems this winter are, partially at least, a result of last year's labor conditions. Many farmers who like not see their way to take care of them last summer. Mr. Dolson did not consider roots as cheap a feed for them. There is not a great deal of alfalfa in Peel County, but sweet clover is becoming plentifully grown and red clover and alsike are abundant. We asked regarding oil cake and cottonseed, but Mr. Dolson said nearly everyone in the district had shied away from the feeds last fall on account of the price. They had some on hand, since they are very difficult to obtain at even very high prices.

H. A. Dolson was visited next, and here we found gluten meal very highly regarded as the best feed ever fed to the herd of grade Holsteins. Alfalfa hay, silage and straw are being fed along with a mixture of one bag of gluten meal, one bag of bran and one bag of shorts.



## POULTRY.

### Egg Production and Marketing.

The following is part of an address delivered recently by W. A. Brown, Chief of the Poultry Division, Department of Agriculture, Ottawa. We have picked out part of this address which should be of particular interest to producers and wish to emphasize the fact that Mr. Brown knows his subject thoroughly, and what he says is well worth the attention of everyone.

"During the war poultry production in most countries was seriously disturbed owing to the scarcity of and rapid increase in the cost of feed. The first effect was a curtailment in poultry flocks practically the world over. In Canada the heaviest movement of laying stock to market took place in the fall of 1915. In England and other countries the feeding of many cereals was prohibited. For a time the outlook was dark, but soon a distinct reaction occurred which gave poultry and egg production the greatest momentum it has ever received. In the first place poultry flocks were thoroughly culled and large numbers of aged, nondescript stock were sent to market and in the second place the demand for eggs became so keen that prices rose by leaps and bounds. The price of eggs during the last two years have provided the greatest possible incentive for increased production, and the profitability and practicability of egg production has been brought home to the individual farmer and producer the world over. The effect of the universal tendency towards increased production may be pronounced this year, but in a year or two it is clearly evident that the world's trade in eggs will be called upon to handle a volume of supply well in excess of the present demand. What then will be the outcome? Will the price to the producer be allowed to drop beyond the point of economical production, or will those interested in the world's egg trade be prepared to undertake such a comprehensive campaign of salesmanship and advertising as will insure a demand well in excess of the supply.

"Eggs are one of the most palatable, most nourishing and most convenient of foods. In chemical composition eggs closely resemble meat. In nutritive value, they stand between cheese and milk, while in real intrinsic value eggs stand on a pedestal far above their value as ordinarily rated. Investigations conducted under the 'New Nutrition' classify foods on a basis of their growth-promoting, disease-resisting powers. In other words, only a limited number of natural foods such as eggs and milk have been found to contain those vitamins absolutely essential to the proper growth and development of the human body and for the repair of tissue so essential in the resistance of disease. Eggs and milk are natural foods, the only foods, in fact, that contain all the elements for the growth of the young. A chick hatches from and will live for days upon the content of the original egg. A nation's greatest asset is a high degree of public health. Eggs and milk have those elements absolutely essential to a high degree of public health. Provincial health departments, state legislatures and municipalities spend large sums of money annually in the prevention of epidemics. These epidemics spread in proportion to the vitality of the people. The use of eggs and milk in abundance would do much to promote growth, maintain health and resist disease, all of which constitutes a veritable bonanza of possibilities for the advertising genius that is prepared to undertake a world-wide advertising campaign under the slogan 'Eat more Eggs.'

#### THE FAULT OF THE SYSTEM.

"In the usual course of events, eggs find their way to the consumer in devious ways. A large proportion commence their journey through the medium of the country store. Most merchants are not particularly interested in eggs but buy eggs because it enables them to sell goods, and they, therefore, bid for eggs. It is not considered good business for a merchant to refuse eggs, and if he bids low his customer will go to his competitor across the street. As a result eggs are bought at country points by number, without regard to quality. This system of purchase actually penalizes farmers and others who take pains to produce high-grade eggs, and, moreover, does not only fail to place a premium on good eggs but actually offers an incentive for a continuance of careless and dilatory methods on the farm. It makes possible as well, the disposal of eggs in all stages of decomposition and actually encourages farmers and others to hold eggs at seasons of the year when there is an advancing market.

"Some country merchants ship direct to retailers who, in turn, frequently supply the consumer under the caption—'The eggs are fresh! Yes! Fresh from the country!' The bulk of the receipts go to the wholesale distributor when they are candled and graded. From June on, candled current receipts show a high percentage of low grades which are slow sale, and a low percentage of higher grades for which there always is a keen demand. The distributor is in a quandary and the solution in the past has been to dilute the best with a portion of the poorest and sell the balance to the best advantage possible. The balance, largely seconds, effectively retards consumption.

"A nation's home market is its largest market. Canada, with a production of roughly 165,000,000 dozen, has a surplus of only a few million dozen for export. The States, with a production of several billion dozen, has a surplus of perhaps nine million. Even England produces more than half of her requirements at home. While undoubtedly the selling price of the exportable surplus will be the controlling element in price, yet the home market presents the most tangible possibilities for increased consumption. The per capita

consumption of eggs in Canada is between three and four eggs per week. Increased to an egg a day, Canada would require an additional hundred million dozens to supply her own requirements or an increase of approximately sixty per cent. over her present production. Consumption in the United States is about the same as in Canada. Pre-war consumption in England was lower, not over two or two and one-half eggs per capita per week. The possibilities of consumption are, therefore, equally as great, if not greater, than the possibilities of production, especially when viewed in light of the potential consuming power of, for instance, the United States."

## HORTICULTURE.

### Outstanding Problems in Hot-Bed Management.

EDITOR "THE FARMER'S ADVOCATE":

One of the first considerations for successful hot-beds, is the location of the yard. The soil should be sandy or loamy, as any considerable mixture of clay in the soil prevents good drainage, and, in the early season, makes a disagreeable condition under foot, when so much walking must be done. At the present price of glass a well-sheltered yard is a great advantage, as sudden or high winds cause much breakage and loss of plants, especially in the more tender varieties. Buildings and board fences have been much used in the past, but windbreaks are now probably the most economical. Cedars do well for this purpose. Planted from 4 to 6 feet apart they grow fairly well on rich soil, but if conditions of growth are not very favorable, Norway spruce makes a better growth. They may be planted 6 to 10 feet apart, and mulched to increase their size rapidly. Handiness to buildings and water supply should also be considered, as much watching is required, especially early in the season, and the art of carrying water for long distances, except pumping in pipes, is fast disappearing.

Now the hot-bed is valuable to the vegetable grower, as an economical means of obtaining heat, as an occupation for his labor early in the season and to grow the early vegetables to supply his trade, which would otherwise look elsewhere and perhaps be lost. To the farmer the hot-bed is valuable, not only to supply his table with the early green food, so necessary to the health of his family, but by its use he can grow crops fully matured of such vegetables as peppers, tomatoes, eggplants, cucumbers and melons, and have them on his table for a much longer season.

The earth for hot-beds should be prepared the fall before. Good loamy garden soil should be used and mixed with one-third its bulk of well-rotted manure. This should be turned over once to mix it and piled in a handy location. This is allowed to freeze solid, and about three weeks before the time for using it is surrounded by hot manure and thawed out. The manure used is horse manure with a considerable mixture of straw, so that it will not become soggy in the beds. This is put on the bed in layers of about 6 inches depth and well tramped between layers. In early March you should have 2 feet when done of well-tramped manure 2 feet larger all around than your frame, to allow for banking up to the top of your frame. From 6 to 8 inches of earth is immediately placed in the frame which has been placed on the tramped manure. The glass is then put on the frame and left stand for about a week. The excessive first heat passes off and in so doing sprouts many weed seeds in the soil, and they are killed in digging the soil and raking it fine in preparing the seed-bed.

When the soil is perfectly fine and level, rows are made with a row-maker—a stick  $\frac{3}{4}$  inch thick, 5 inches broad and 5 feet long; one edge is beveled sharp and drawn back and forth across the bed so that it makes a nice row for the seed. Rows are made from 2 inches to 3 inches apart to allow for cultivation between them. The depth is different for different seeds. For celery and lettuce only a mark is necessary, in fact they are often sowed on top of the soil and raked in. For such shallow plants it is necessary to shade the ground with sacking or paper to hold the moisture until they start to move the earth, then it should be removed. Most of our seeds should be sown in a trench  $\frac{1}{2}$  inch deep and the ground well tamped to secure a good germination. If the soil is not in good condition as regards moisture it should be well watered before digging it over, as it is not a good idea to water soil immediately after sowing the seed, since moisture conditions are formed which may start the damping-off fungus, which will often attack young seedlings just coming through the soil.

Have the soil in a moist condition before sowing the seed, and you will then have no trouble as far as watering is concerned until the plant is well above ground. Exception is sometimes made to this in the case of seeds which germinate slowly, such as peppers. It may be found that the ground in a very hot bed, especially if the weather is sunny, may become dry and might burn the small roots after germination. In this case water well in the morning of a sunny day, and air thoroughly so that the surface of the ground may become dry before the bed is closed up for the night.

The earliest seed sown is generally those of the peppers, lettuce for future frame work, cabbage for early potted garden plants, onions for transplanting in the field, and these are soon followed (March 15) by tomatoes, for a very early crop. It seems almost impossible to get too much heat early in the season,

but later on the manure is cut down so that by April 1 about one foot to 15 inches is used in the beds. Radishes are sowed for early bunching at any time from March 1 and require about 5 weeks from sowing until the bed is cleared of the crop. One advantage of this early sowing of radishes is that the bed may profitably be used for a second crop. Lettuce is taken from the seed bed and transplanted 2 inches apart to get good sturdy and well-rooted plants, and in about 3 weeks are transplanted to their permanent bed—48 plants to a 3 x 6-foot sash.

Cabbage is transplanted when 3 inches high in beds with about one foot of manure underneath and about April 10 are replanted into 4-inch pots and placed in the field the last week in April. Many use smaller pots, but the advantage of 4-inch pots is that they are brought in from the fields in time to pot the early tomatoes, which have been transplanted from the seed bed, April 10, put in beds (200 plants to a 3 x 6-foot sash) and are now ready for the pots. These plants are placed in the field the last week in May. The beds for the potting of cabbage should have very little heat; in fact, about enough straw manure is used for good drainage. The tomato, a heat-loving plant, requires a slight heat, but not more than 6 inches of manure is used at this time of the year, as they must be grown hardy to stand early field planting.

Cucumbers and melons are sowed in small, very hot beds about the middle of April. They require great heat to germinate, and two feet of the very hottest manure is used at this date. As soon as the true leaf starts they are transplanted into pots, 4 plants to a pot. If damping-off starts in this seed bed we start to transplant immediately, no matter what the size of the plant. These pots are placed on 1 inch of earth over the manure of a newly-made, very hot bed, as heat is the great essential for the healthy growth of these plants. In two weeks they will be ready for permanent beds, each hill being given a space 6 by 6 feet under glass and intercropped with lettuce, which is cut before serious running of the vine takes place.

From the foregoing description it will be gathered that different temperatures are required for different plants. For the plants like cucumbers, tomatoes, peppers, etc., 70 to 80 degrees F. is required, while onions, lettuce, radishes, etc., do better from 65 to 70 degrees F.

The diseases which attack hot-bed crops (chief of which is damping-off) are mainly caused by unnatural conditions in the beds. Changing the soil every year is the best precaution. Thorough airing to prevent stagnation of air space, which is limited, is another essential. In muggy weather be especially careful to air thoroughly, or if possible, take the sash off entirely. A mistake often made is in not airing early enough on sunny mornings. The sun, especially later in the season, warms the beds very quickly, and temperatures must be carefully watched.

Watering should be done thoroughly when necessary, and avoid frequent dribbles. It should be done on the morning of a sunny day, especially well aired afterwards, and after dinner stir the soil between the rows with a 4-inch nail, so that the land will dry on top, thus preventing the forming of fungus, and helping to hold moisture.

Lime and phosphorus are good additions to be made to hot-bed earth, as they balance the manure in the soil and keep it sweet.

The growing of frame crops requires careful attention but comes at a time of year when work is not rushing, and proves a very remunerative part of vegetable growing, and one which will give the farmer good returns in good value and general health.

Frontenac Co., Ont.

WALTER J. COOK.

### Principles of Grape Pruning.

The object in pruning the grape is, as in the case of all other fruit trees and fruit plants, to so regulate the amount of bearing surface and new wood that the vine will be able to produce the greatest possible amount of good fruit that is consistent with longevity. Too often we confuse pruning with training, the latter having only to do with those operations which regulate the size, shape, or convenience of these plants in order that the labor that is required by it may be used economically. The training of a grape vine is more or less similar in all cases where grapes are grown commercially; that is to say, the trellising and the distance of planting are more or less similar on all plantations, but the systems followed, such as the Fan system, the Arm system, the Horizontal, Kniffin, or Improved Kniffin, vary very largely with the individual taste and experience of the grower. Each system has its particular merits, and so far as we know, no authority is prepared to state which is the best for general use. Quoting from Bulletin 237 of the Ontario Department of Agriculture, we read as follows: "It is claimed for the Kniffin that the largest bunches and highest quality are produced; for the Improved Kniffin, that is, when the main stem is divided below the first wire, the food supply is more evenly divided between the upper and lower arms; for the Fan system is claimed an even distribution of bearing wood, a greater weight of fruit, though the bunches may be smaller; and for the Arm system, an equal quantity of fruit, high up from the ground where it is least affected by disease. Ease and rapidity of pruning are also claimed for this system."

The accompanying illustration shows a vine pruned according to the Fan system and tied up ready for fruit bearing. Bulletin 237, already referred to, illustrates other systems of training, and should prove valuable reading for all interested in this fruit crop. With regard



to the pruning of the vine, we can do no better than quote the following: "With young vines the main or only object in pruning is to develop a framework of the proper form. Young vines, which are pruned with this in view, are not only stronger and have straight trunks, but they bear earlier, and the subsequent crops are larger than those from vines which have not been cared for. The proper treatment of the young vine at the close of its first season's growth is to cut it back to two buds. In the spring, when shoots are produced, all excepting the two strongest should be rubbed off when they are about nine inches long, or before they begin to get woody. As these shoots grow they should be trained to the wires in such a way as to make a strong, straight growth. All suckers and secondary shoots which are produced below the first wire should be rubbed off. If this is done carefully, the grower will rarely be troubled with suckers and shoots coming out here on these vines when they are mature. After the third season's growth the vine is pruned to suit the system of training which is to be followed; and from then on it is treated as a mature vine.

"Pruning may be done any time after the leaves have fallen from the vines until the vines begin to 'bleed' in the spring. The usual practice throughout the Province is to do most of the pruning during the months of January, February and March. Any time during these months will be quite satisfactory except on very cold days, when the vines are very brittle from heavy freezing and on such other days as it is impossible for a man to work conveniently and to good advantage out-of-doors. The usual plan in the Niagara District is to prune the grapes first during the winter months, leaving the peaches till the warmer days of early spring.

"Different systems of pruning are followed by different individuals, but, except for the general advantage of uniformity of work and appearance, no distinct advantage seems to be gained. The proper number of buds on the canes well selected and distributed seems to give as great a quantity of good fruit as where a definite system based on certain rules is laid down. The best pruners seem to be able to size up a vine, select certain canes and prune accordingly. In the very next vine other canes spaced very differently may be chosen. In the absence of definite experimental evidence, it is perhaps not well to make a definite statement on pruning, but the discussion might be carried still further. No fixed number of buds or certain length of cane can be said to give most fruit. These vary with the variety. A Delaware cane may be very short, twenty-four to thirty inches, and still have eight to ten healthy buds, while a Concord may be twice the length and have no more buds. The general rule of twenty-eight to forty buds per mature vine may be laid down, but it depends on the variety and the distance apart the vines are planted. Some growers in Michigan and in New York leave many more buds, or from forty to sixty per vine. The medium-sized yet thrifty canes, about the thickness of a lead pencil, are considered best, though it has not been established that the larger canes, sometimes called 'bull' canes, are not of equal value. General opinion, however, is that they are not as good. Experience also seems to point to the fact that the best fruiting buds are not at the base of the cane, but rather are included in the fourth to seventh buds.

"One other point to remember is that the fruit is always borne on shoots that have sprung from canes produced the previous year. This is why it is highly essential to prune a grape heavily. No fruit spurs are produced."

### Commercial Varieties of Apples.

BY W. T. MACOUN.

#### PART IV.—WINTER VARIETIES.

What is the outstanding winter variety of apple where the whole of North America is considered?

There are about ten from which to select the leader. They are Baldwin, Northern Spy, Winesap, Yellow Newtown, Stayman Winesap, Rome Beauty, York Imperial, Stark and Ben Davis.

Of these, Ben Davis is undoubtedly the variety that has been most generally successful if we may call getting large crops of well-colored fruit and selling at a good profit being successful, and most fruit growers would consider this to be so. Ben Davis has done well in the North, South, East and West in the United States, except in the very coldest parts. It has been grown profitably also in Canada except in the coldest districts. The plantings of Ben Davis are, however, getting less each year in proportion to other sorts as, considering the enormous number of trees which have been set out of varieties of better quality than Ben Davis, growers are a little afraid that Ben will not be so profitable in the future as he has been in the past. Moreover, recent severe winters have been hard on Ben, Middle West in the United States and in Ontario in Canada.

The plantings of Baldwin are confined mainly to the States East of the Mississippi Valley, to the warmer parts of the Province of Ontario and to the warmer parts of Nova Scotia, and over that great area an enormous quantity of this fine apple is grown. It might be considered the great staple winter apple of America. It is productive, handsome in appearance, and good in quality. It is one of the tenderest of the winter varieties, however, and it is useless to plant it where the coldness of a climate makes its success doubtful.

ful. To do its best it requires a warmer summer than it gets in the Annapolis and Cornwallis Valleys.

If the average consumer in Canada were asked which is the best winter apple he would unhesitatingly say Northern Spy. Northern Spy has acquired a reputation for quality in Canada and certain parts of the United States which would make other sorts envious if they were human. Like the Baldwin, however, the Northern Spy, though grown to some extent in the North-western States, is essentially an Eastern apple. It is one of the hardiest of the winter varieties and will fruit where Baldwin, Greening and King are winter killed. Many growers of Northern Spy, however, find that it is not one of the most profitable for them to grow as there is a large proportion of wastage in the fruit, apart from the fact that it takes so long to come into bearing, and if it were not for the great demand for it by consumers we fear that this fine sort would not hold its own among other sorts.

The Winesap, while not much-known in Canada, is a very important apple in the South-eastern States, the Southern States, the Middle West, and the North-western States. In Canada the only part which seems to suit it is the most southerly part of British Columbia, where the summers are hot and relatively long. This variety is very good in quality, and we might say is to the South as a dessert apple what the Northern Spy is to the Northern parts of the United States and to Canada.

The Stayman Winesap is larger than the Winesap and just as good or better in quality, and is rapidly taking the place of Winesap in some sections. It seems harder than Winesap and is being grown successfully where Winesap does not do well. It is an apple which should be thoroughly tested in the warmer parts of Ontario.

The Rome Beauty has become a very familiar apple in Canada during the winter in boxes from the North-western States, where this variety has come rapidly to the front. It is of good size, very handsome in appearance, and good in quality, though not as good as Northern Spy or Winesap or Stayman Winesap. While it is doing particularly well in the West, it is now one of the leading apples in the Middle West. It is also succeeding well in Virginia, Georgia and New Mexico. Doubtless, it will soon take an important place in more of the Eastern States. While planted to some extent in British Columbia, it has been little planted in Eastern Canada yet. It seems harder than most of the great commercial winter sorts, and is an early and heavy bearer. It is well worthy of a thorough test in the great apple districts of Ontario.



Grape Vine Pruned and Tied.

Yellow Newtown or Albermarle Pippin is another variety which requires a long, warm season for full development. It is one of the tenderest of the winter apples, and is grown mainly in the Southern States, in the North-western States, and to some extent in the warmer parts of British Columbia. The Yellow Newtown on account of its firm flesh is a good shipping apple. It is of very good quality and is highly regarded in the Old Country.

The Stark Apple is not mentioned by any of the States as being a leading apple. In Canada it has been more extensively planted in the Province of Ontario than anywhere else, and has proved a profitable variety there, as it is an early and heavy bearer. It has been planted to some extent in Nova Scotia also, and we understand is now considered one of the leading apples in the Annapolis Valley. The quality of the Stark, however, like the Ben Davis, is not good enough to insure its permanency, and it is too mild in flavor even for a cooking apple.

York Imperial is another winter sort which is confined mainly to the Southern States and to the Middle West. It is handsome in appearance, but the quality is not high. It is, perhaps, being more largely planted in Virginia than in any other State.

Roxbury Russet or Nonpareil.—This variety is not an important apple outside New York State, Ontario and Nova Scotia. The good qualities of the as they are in Great Britain and Europe, and if it were not for the export trade this fruit would probably not be so much grown in Nova Scotia as it is. It is one of

the best keeping winter apples, and the quality is good to very good.

American Golden Russet is little planted nowadays. It has the reputation of being a shy bearer, and there is also only a limited demand in the home markets for this fine dessert sort.

Esopus Spitzenburg is one of the finest dessert apples, but does not appear to be a profitable variety to grow in most sections. It is not very productive and scab badly in the East. It is still considered an important variety in New York State, but the Washington Spitzenburgs are those best known on the market, and they command a very high price.

The remaining winter sorts may be very briefly mentioned. Gano and Black Ben Davis, highly colored strains of Ben Davis, have been planted to some extent, but are no better except in color than Ben Davis.

Red Canada is a handsome winter apple of high quality, which is considered one of the best commercial apples for Vermont, and is highly regarded in Western Ontario where it is increasing in popularity. It is also called Steele's Red Winter and differs from the Canada Red, grown in the Province of Quebec, a much inferior apple, the proper name of which is Roseau.

Akin Red is another highly colored winter apple of very good quality, which, although not a leading sort anywhere so far as we are aware, has been planted to some extent in recent years. It seems to require a long rather warm season for best development.

Minkler is a prominent winter apple in the State of Illinois, and is met with to a limited extent in other parts of the United States and Canada.

Salome is one of the hardiest of the late-keeping varieties. It is handsome in appearance, productive, and good in quality, and, while it does not seem to be an outstanding variety anywhere, it is well thought of in the North-eastern States and by some growers in Ontario. It is grown to some extent in British Columbia and the North-western States. In some districts it runs uneven in size, a large proportion of the fruit being too small.

Fallowater is a well-known winter apple in Nova Scotia and Ontario and in the Eastern States, but is no longer extensively planted. It is not good enough in quality to compete with other better apples.

The Wellington apple, an English variety, seems to have found a place in Nova Scotia.

Blue Pearmain is an old variety, which is one of the hardiest winter apples, but usually does not bear enough to make it very profitable. It is found to a limited extent in the North-eastern States, and all through Eastern Canada. It is of very good quality.

Ontario is an apple originated in the Province of Ontario, a cross between Northern Spy and Wagener. The tree bears young and heavily. This variety has done well in Ontario, in New York State and in Annapolis Valley, but it bruises so readily that it does not advance rapidly in favor.

Cranberry Pipping is a variety which has succeeded very well in Southern Ontario, but is too inferior in quality to be planted any more.

Tolman is still the principal sweet apple grown and succeeds well in the Eastern States, in Ontario, and in the Maritime Provinces.

Paragon, sometimes known as Mammoth Black Twig, is a red apple of good quality, which has proven particularly suitable for the South-eastern and Middle West apple districts where Winesap is so well known.

This is not the same as another apple sometimes known as Mammoth Black Twig but more correctly Arkansas Black, which seems to be an important variety in Idaho, Texas and New Mexico.

Bethel, Scott Winter, Pewaukee, North Western Greening, and Canada Baldwin are all varieties which succeed in the colder parts of Canada and the United States where the best winter apples do not succeed, but none of them are good enough even for these regions.

Farm orchards have been sadly neglected during the war, and are now badly in need of pruning and spraying. Perhaps one can handle an orchard profitably with less cultivation than was once considered necessary, but pruning can hardly be done away with, and spraying is increasingly essential if marketable fruit is to be produced.

Make a plan of the garden and decide what varieties you wish to produce. Some varieties do better in some districts than in others, and it is often wise to consult a successful gardener in your locality before purchasing the supply of seeds.

Don't push the farm garden into the background of your mind when planning for the spring operations. Plan on a good garden and plant it early.

No farm should be without its small fruits and berries.



## FARM BULLETIN.

### Parliament Opens Ceremoniously at Ottawa.

When the Senate and House of Commons met in Ottawa, on Thursday, February 26, for the opening of the fourth session of the thirteenth Parliament of Canada, the occasion was marked by a return to all of the pre-war ceremonial and pomp which has been traditionally characteristic of such occasions. In fact, the scene at Ottawa at the opening of this session was probably the most gorgeous and the display probably more brilliant than any brought forth by previous occasions of the kind in Ottawa. Much was added to the significance of the event by reason of the fact that the new, monumental and stately Parliament Buildings are being occupied by Parliament for the first time, and the beautiful, though unfinished chambers of the House, added strikingly to the magnificent social display. Mingled among the large crowd of gaily attired people, that represented only a fraction of those who had endeavored to gain admittance, could be seen the crimson and ermine robes of the Justices of the Supreme Court, the scarlet gowns of the papal delegates, the navy blue of the naval officers, the plain khaki of military officers, the striking uniform of the Duke of Devonshire, the Windsor uniforms of the Privy Councillors and many costly evening dresses and scintillating jewels, all of which added lustre to the richness and picturesqueness of the scene.

By reason of the fact that the speech from the Throne is always delivered in the Senate or Upper House, the Commons Chamber was given over to the Senate for the afternoon. The speech from the Throne carried little in the way of important legislation, but was largely congratulatory in view of the fact that Parliament is meeting in the new building, and on the score of the progress of negotiations for peace, as well as because of the fact that Canada, it was said, has a definitely fixed status as a member of the League of Nations. Pleasure was expressed that the Treaty of Peace with Bulgaria had been concluded, and that negotiations with Hungary and Turkey are well advanced, and also that Canada has been selected as one of the twelve governments whose countries are entitled to representation on the governing body of the International Labor Office, which arose out of the first meeting at Washington, in October and November last, of the International Labor Conference. The legislation which, it was intimated, will be brought down during the session, includes a Dominion Franchise Act, a Copyright Act, amendments to the Patents Act, the Loan and Trust Companies Acts, the Indian Act, the Exchequer Court Act, and a Bill to ratify the International Opium Convention.

A cablegram was read by the speaker of the House of Commons from the King, whose congratulatory message was as follows: "I desire you will convey to my faithful Senate and House of Commons of Canada my warmest greetings on this, the first occasion, of their assembly in the new buildings, with the erection of which my son is proud to have been associated. It is my firm assurance that the deliberations of the Parliament of Canada will, as in the past, redound to the happiness and prosperity of the great Dominion, whose well being is so vital to the whole empire."

Sir George Foster, Acting Premier, moved a resolution of acknowledgement to the King's cable, and was later congratulated by the liberal leader, who seconded the resolution, as the oldest member of the King's Privy Council in Canada. Two new farmer members were introduced, namely, R. H. Halbert, North Ontario, introduced by W. C. Kennedy and Dr. Michael Clark, and O. R. Gould, Assiniboia, introduced by Thos. McNutt and Andrew Knox. During the short afternoon session, Honorable N. W. Rowell tabled the Treaty of Peace between the Allied Associated Powers and Bulgaria. After an hour's session the House adjourned until Monday at three o'clock.

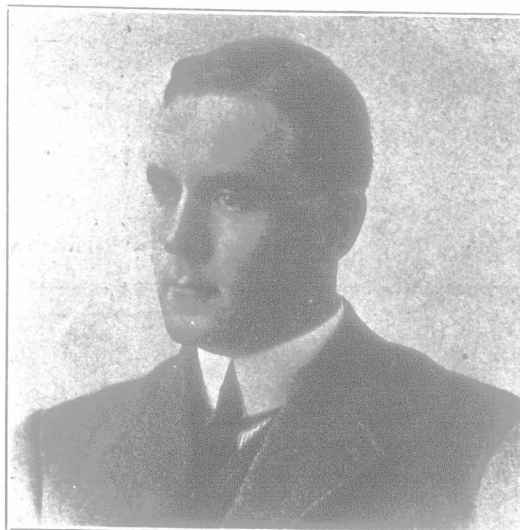
### Board of Commerce Chairman Resigns.

Judge Robson, Chairman of the Board of Commerce, tendered his resignation on February 25, and shortly afterwards left Ottawa for his home in Winnipeg. His reason for resigning was stated thus: "Price fixing and profit restrictions on the products of the country, while well for war time, should not, in my view, be part of the permanent law. Regulation of profits on necessities will tend to discourage persons from entering on the useful services of life. It is besides an injustice to restrict these classes, while those engaged in production and distribution of luxuries or even useful things not classed as necessities, go free. This seemed to me so incongruous that I was uneasy in the administration of the Act and felt it my duty to resign."

Strange indeed is the fact that Judge Robson accepted the chairmanship in the first place, when the Act under which the Board of Commerce came into existence specifically mentions restraint and profit control. Just at present a case is pending before the Supreme Court to decide whether Price Bros., a large lumber and paper company in the Province of Quebec, can continue to defy the Board of Commerce. The chairman's resignation came at a very inopportune time, but if he was not in sympathy with the true functions of the Board it is well that he made way for another.

### Professor Wade Toole Resigns.

Professor Wade Toole, head of the Department of Animal Husbandry and Farm Superintendent at the Ontario Agricultural College, Guelph, has tendered his resignation to take effect May 1, and has accepted the position of Managing Editor of The Farmer's Advocate and Home Journal of Winnipeg. Professor Toole's stay at the College has been comparatively brief, dating only from the spring of 1918, but during the period of almost two years he has reorganized the lecture course of his Department considerably, and instituted several lines of investigational work that should give valuable results. In the fall of 1918 the O.A.C. Stock Judging Team, trained by Professor Toole, carried off the



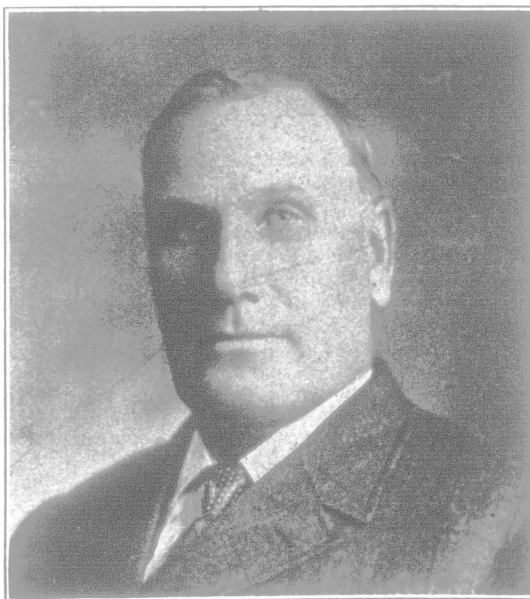
Professor Wade Toole.

honors at the International Fat Stock Exposition, Chicago, and thereby brought fame to the Institution and to their instructor. Professor Toole has proven a popular head of the Animal Husbandry Department, his work with the stockmen of this Province generally has been satisfactory indeed, and his retirement from the centre of live-stock activities in Ontario will be much regretted.

Journalistic work will not be new to Professor Toole. For seven years, from the spring of 1911 to 1918, he was a member of the editorial staff of The Farmer's Advocate and Home Magazine of London, five years of which time he was Managing Editor.

### Henry Glendinning Passes.

Henry Glendinning, of Manilla, Ontario, passed away on February 19 in his seventieth year after a life of long and faithful service in the interests of his brother man. Henry Glendinning was an outstanding figure at meetings of the Dominion Grange and the Eastern Ontario Dairymen's Association. Being large in stature he always commanded attention when he rose to speak, and his wisdom and good common sense always earned for him the respect of everyone whether they agreed



The late Henry Glendinning.

with him or not. His kindly though frank manner made him many friends, and as he went about Ontario preaching better methods in dairying and advocating the growing of alfalfa, of which crop he was a devout apostle, he was listened to attentively. In private conversation, on the public platform and through the press Henry Glendinning exerted a powerful influence for good, and his decease removes from the life of this Province a strong character and able champion of good farming and high standards of citizenship.

### The Paper Crisis.

There is great uneasiness in publishing circles on account of the difficulty in getting an uninterrupted supply of paper. Winnipeg dailies were recently obliged to suspend while they awaited deliveries, and last week they found it necessary to refuse advertisements in order to maintain their news service. Last week two leading Montreal weeklies had their forms ready for the press but had no paper. Finally by receiving the loan of some stock they managed to get out two days late, but still had no paper in view for following issues. Plenty of paper is being made in Canada, but certain manufacturers have refused point blank to obey the ruling that Canadian publishers should be supplied an amount sufficient to meet their requirements at a price set by the Paper Controller. The duties of the Paper Controller were absorbed by the Board of Commerce, the authority of which body Price Bros., of Quebec, have recently defied. This large firm is a big paper and lumber company which has over 4,000,000 acres of land under lease from the Quebec Government, besides smaller free-hold acreages. They have defied the Board of Commerce and claim that its order is not a law of Canada. They refused to supply paper to Montreal consumers at \$80 per ton, which Counsel for the Board declared leaves them a profit of \$34.11 per ton, according to their own books; and they refused to appear before the Board to state their case. Counsel for Price Bros. asked leave to appeal to the Supreme Court against the order determining the price and distribution of newsprint. Mr. Justice Anglin, of the Supreme Court, has granted a hearing, provided Price Bros. commence immediate delivery of newsprint to Montreal firms.

This is a matter which concerns the general public to no small degree. When the press is dependent on the manufacturers of paper, some of whom openly defy the law, it is time for us to determine definitely whether the Government or the millionaire manufacturer will rule Canada. The issue involves the whole question of profiteering and whether capital will be allowed to defy constituted authority and ride rough-shod over the rights of the individual.

### Conference on Onion and Potato Grading.

As announced in an earlier issue, a conference of those interested in the growing and marketing of onions and potatoes was held in Ottawa, under the authority of the Honorable S. F. Tolmie, Minister of Agriculture, to consider the grading of these two crops. The conference was conducted on February 24 and 25 by C. W. Baxter, Fruit Commissioner, and was on the whole successful. This was the first time that the question of regulating the sale of these commodities had come up from consideration. The first day was devoted to the advisability of enacting legislation requiring that potatoes and onions be graded before being offered for sale. The second day was devoted to discussing the recommendation of a committee appointed to name designations of grades and definitions for same for both commodities. It was evident that there was a better understanding of what was proposed towards the end of the second day, and the recommendations of the committees were accepted with some few amendments. The designations of grades recommended by the committee for potatoes were "Canada A," "Canada B" and "Canada C2." Upon the recommendation of the delegates from British Columbia the term "Ungraded" was added to the designation of "Canada C," and the only requirement for that grade is that no potatoes under one and one-half inches may be included. Compulsory grading of onions and the establishing of grade marks and definitions, met with practically no opposition. The designations of grades recommended were fancy, choice standard and boilers, and the definitions of these grades were accepted by the conference practically as they were introduced by the committee. The conference also discussed the question of standard containers for these commodities, and the marking or branding of such containers. The delegates were unanimous in favoring the adoption of the pound as the unit of sale for potatoes, onions and such vegetables.

### Officers Elected for the Royal Winter Fair.

The Directors of the Royal Agricultural Winter Fair gathered at Toronto on Wednesday, February 25, and elected the following officers: President, W. A. Dryden, Brooklin; Vice-President, H. C. Cox, Oakville. O. W. Waller, Harry McGee, J. J. Morrison, and Geo. Pepper, all of Toronto, and W. W. Ballantyne, Stratford, will, with the President and Vice-President, constitute the Executive Committee. C. F. Bailey, formerly Agricultural Commissioner, has been engaged as Managing-Director of the Association.

At a meeting of the Western Fair Board, held in London, on Saturday last, it was decided to proceed with the extension of the fair grounds eastward, and thus overcome, to some extent, the over-crowded condition. A new site seems to be desired by all but, at present, the Board feel that it could not be financed. Lieut.-Col. Robt. McEwen urged that a catalogue be issued at fair time and the proposal was left with the executive committee as was the matter of extension.

An exhibition the size of the Western Fair should publish a catalogue but up to the present it has not been done.



# Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending February 26.

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 Feb. 26	Same Week 1919	Week Ending Feb. 19	Week Ending Feb. 26	Same Week 1919	Week Ending Feb. 19	Week Ending Feb. 26	Same Week 1919	Week Ending Feb. 19	Week Ending Feb. 26	Same Week 1919	Week Ending Feb. 19
Toronto (U.S.Y.)	7,206	6,740	2,103	\$14.50	\$16.00	\$14.50	1,030	517	451	\$24.00	\$19.00	\$25.00
Montreal (Pt. St. Chas.)	365	666	260	13.50	14.50	13.25	418	694	130	20.00	14.50	20.00
Montreal (East End)	451	1,045	225	13.50	14.50	13.25	673	367	150	20.00	14.50	20.00
Winnipeg	857	3,565	1,469	12.50	15.50	12.00	35	75	87	16.00	12.00	13.00
Calgary	1,357	—	1,197	11.50	—	11.75	160	—	221	10.50	—	9.50
Edmonton	547	1,174	947	12.00	13.75	11.50	52	109	67	12.00	11.00	12.00

	HOGS						SHEEP					
	Receipts			Top Price Selects			Receipts			Top Price Good Lambs		
	Week Ending Feb. 26	Same Week 1919	Week Ending Feb. 19	Week Ending Feb. 26	Same Week 1919	Week Ending Feb. 19	Week Ending Feb. 26	Same Week 1919	Week Ending Feb. 19	Week Ending Feb. 26	Same Week 1919	Week Ending Feb. 19
Toronto (U.S.Y.)	10,130	8,958	1,789	\$19.50	\$18.00	\$20.00	730	1,333	380	\$24.00	\$17.75	\$21.00
Montreal (Pt. St. Chas.)	1,990	1,361	500	20.25	18.00	19.40	104	123	61	17.00	15.00	17.00
Montreal (East End)	825	744	177	20.25	18.00	19.40	150	2,233	79	17.00	15.00	17.00
Winnipeg	2,360	8,650	2,906	18.75	17.25	18.50	256	70	206	15.50	15.25	15.50
Calgary	692	—	1,477	19.75	—	20.25	1,383	—	678	17.00	—	16.25
Edmonton	710	1,023	956	18.65	16.40	18.50	11	2,749	260	15.00	10.00	11.50

## Market Comments.

### Toronto (Union Stock Yards).

Under the influence of a liberal movement of cattle to the Yards the enhanced values of the previous week were obliterated. With over ten hundred head of cattle on sale during the previous week end a sharp decline was effected, while a run of forty-five hundred cattle on the market on Monday further depressed trading and moved cattle values back to the level of two weeks ago, and from \$1 to \$1.50 per hundred below the high point reached by butcher steers and heifers week before last. Notwithstanding the fact that several outside packers were operating trading was very slow on Monday, and fully fifteen hundred cattle were carried over to the next market. On Tuesday trading was steady, but on the following day, with a moderate supply available trading was brisk and prices a shade higher. The market on Thursday closed steady in tone at values 10 cents to 25 cents above the market of the previous week. Owing to the condition of foreign exchange, and the curtailment of purchases of American live-stock produce on overseas account, United States' markets are in a more or less demoralized condition; this situation had a bad effect on local trading as speculators catering to the Buffalo demand confined their shipments to a very few cars. Europe is limiting purchases of Canadian beef to a narrow volume, while, due to the Lenten Season local demand has fallen off. These are factors that have placed the beef trade on a rather unstable footing, and any large runs of cattle to the local yards will be followed by further depression in values. With moderate supplies coming forward, present prices should be fairly well sustained. Only a few heavy cattle averaged fifteen hundred pounds topped the market at \$14.25, a load of about twelve hundred pounds average sold at \$13.85, and four or five loads of various weights at \$13 to \$13.50 per hundred. A price of \$13 per hundred was paid for a few head averaging from eleven hundred to eleven hundred and fifty pounds, while the majority of the sales of about similar weights were made at from \$11.50 to \$12.75 per hundred. A pair of heifers averaging eleven hundred pounds sold at \$13. The top price for a straight load of butcher steers and heifers averaging under ten hundred pounds was \$12.75, several sales were made at from \$12 to \$12.50, while the big proportion of the good stock went to the scales from \$10.50 to \$11.50, and medium quality kinds from \$8 to \$10. Cows and bulls did not share as strongly as steers in the previous week's inflated values, and consequently the decline on these classes last week was less marked. An extra choice bull which weighed eleven hundred pounds sold at \$12.50, and a few choice cows sold at \$11 to \$11.50. Most of the good cows sold from \$9.50 to \$10.25, and medium quality in both bulls and cows from \$7 to \$9. The stocker and feeder trade was very quiet, with good feeders quoted from \$10 to \$11 per hundred. Calves are moving more freely. One thousand head were offered for sale on a market barely

CLASSIFICATION	No.	Avge. Price	TORONTO		Top Price	MONTREAL (Pt. St. Charles)		Top Price
			Price Range	Bulk Sales		Price Range	Bulk Sales	
STEERS								
heavy finished	372	\$13.31	\$12.50-13.75		\$14.75			
STEERS good	847	12.45	11.50-13.75		14.50			
1,000-1,200 common	3							
STEERS good	1,734	11.49	10.00-12.50		12.75			
700-1,000 common	438	9.22	8.00-10.25		10.50			
HEIFERS good	1,306	11.62	10.50-13.00		13.00			
fair	264	9.36	8.50-10.50		10.50			
common	40	7.91	7.50-9.00		9.00			
COWS good	237	9.89	9.50-10.75		11.50			
common	728	7.44	6.75-8.50		8.75			
BULLS good	90	9.82	9.25-10.50		11.00			
common	47	7.49	6.75-8.50		9.75			
CANNERS & CUTTERS	155	5.91	5.25-6.50		6.50			
OXEN								
CALVES veal	970	19.85	18.00-23.00		24.00			
grass	60	9.40	6.00-11.00		11.00			
STOCKERS good	533	9.32	9.00-10.00		10.00			
450-800 fair	119	7.88	7.00-8.50		9.50			
FEEDERS good	293	10.41	10.00-11.50		11.50			
800-1,100 fair								
HOGS selects	9,320	18.99	18.50-19.50		19.50			
(fed and watered) heavies								
lights	605	16.87	16.50-17.50		17.50			
sows	192	14.95	13.50-16.50		16.50			
stags	13	13.50	12.50-14.50		14.50			
LAMBS good	552	21.47	18.00-23.00		24.00			
common	13	16.54	15.00-18.00		18.50			
SHEEP heavy	149	12.41	10.00-14.50		14.50			
light	16	7.86	6.00-9.00		9.00			
common								

as strong as that of the previous week, and while a few choice calves sold on the mid-week market at \$23 per hundred, most of the sales were made from \$19 to \$22.50, while stock of common quality moved at \$11 to \$15. No milch cows of good promise were offered and most of the transactions were closed from \$100 to \$140 per head, with choice milkers quoted up to \$165.

Lambs and sheep receipts were comparatively light in number, only seven hundred and fifty being on sale. Trading was very strong, with values \$1 to \$1.50 per hundred higher. A pair of fancy lambs sold at \$24 per hundred, numerous sales were made at \$23 and a deck of sheep weighing one hundred and forty pounds sold at \$14.50. Lamb sales ranged generally from \$19 to \$23, and ewes from \$11 to \$14.50.

Almost eleven thousand hogs were on sale and buyers were successful in effecting a decline in prices. On Monday hogs were weighed up at \$19 to \$19.25 per hundred, but for the balance of the week's supply, prices settled at \$18.50 for fed and watered selects, f.o.b. hogs at \$17.50 and sows from \$13.50 to \$15.50 per hundred, fed and watered.

Of the disposition from the Yards for the week ending February 19, Canadian

packing houses purchased 254 calves, 2,039 butcher cattle, 1,899 hogs and 250 sheep. Local butchers purchased 158 calves, 136 butcher cattle, 156 hogs and 37 lambs. Canadian shipments were made up of 4 calves and 14 stockers. Shipments to United States points consisted of 78 calves, 53 butcher cattle, 23 stockers and 132 lambs.

The total receipts from January 1 to February 19, inclusive were: 36,698 cattle, 4,957 calves, 49,203 hogs and 12,113 sheep; compared with 47,813 cattle, 4,084 calves, 53,404 hogs and 20,320 sheep received during the corresponding period of 1919.

Montreal. There were three hundred and sixty-five cattle for sale on the two markets during the week compared with two hundred and sixty cattle during the previous week. Despite the fact that there is still plenty of beef in storage, amount of fresh-killed meat and on account of the light runs, prices for cattle were about 50 cents higher. Trading on Monday was fairly brisk. On Tuesday, prices for good cattle fell off a bit, and by the close of the week the demand had become quite slow owing principally to reports of heavy receipts, and lower

prices at Toronto. One load of cattle, made up of steers and a few heifers which averaged nine hundred and fifty-five pounds per animal sold at \$13.50 per hundred, while a price of \$13.25 was paid for a load averaging eighty pounds more per steer, but not quite so bred or well-finished as the former. A couple of loads of heavy, rough cattle were sold at \$12 and the balance of the butcher steers brought around \$11 and \$11.50. There were no good cows offered. The best of the cows were of dairy type and brought \$10.50; a few fair strippers were bought for \$9.50, but nearly all the cows offered were sold at \$9 per hundred or under. Canners were \$5.50 per hundred, and cutters generally \$6.50. The top price for bulls was \$12, and was paid for a pair of young bred animals, one of about nine hundred pounds and the other about twelve hundred pounds. Common light bulls were sold from \$7.50 to \$8.50, and heavier bulls up to \$10. The numbers and quality of the veal calves offered indicates the beginning of the heavy calf runs. In 1919 from the first of March to the end of October the lowest receipts of calves, for any month was about ten thousand and the highest twenty-three thousand five hundred, the latter number being received



CALVES

Top Price Good Calves

Week Ending	Same Week	Week Ending
Feb. 26	1919	Feb. 19
\$24.00	\$19.00	\$25.00
20.00	14.50	20.00
20.00	14.50	20.00
16.00	12.00	13.00
10.50		9.50
12.00	11.00	12.00

TOP PRICE GOOD LAMBS

Week Ending	Same Week	Week Ending
Feb. 26	1919	Feb. 19
\$24.00	\$17.75	\$21.00
17.00	15.00	17.00
17.00	15.00	17.00
15.50	15.25	15.50
17.00		16.25
15.00	10.00	11.50

MONTREAL

Price Range	Top Price
12.00-13.25	13.50
11.00-11.50	11.50
12.00-13.50	13.50
10.00-11.50	11.75
11.00-12.00	13.40
9.50-10.75	10.75
7.50-9.00	9.00
10.00-10.50	10.50
7.00-9.00	9.50
10.00-12.00	12.00
8.00-9.00	9.50
5.50-6.50	6.50
16.00-20.00	20.00
19.25-20.25	20.25
19.25-20.25	20.25
15.25-16.25	16.25
17.00	17.00
16.00-16.50	16.50
11.00-12.00	12.00
10.00-11.00	11.00

ronto. One load of cattle, steers and a few heifers which were hundred and fifty-five animal sold at \$13.50 per head. A price of \$13.25 was bid averaging eighty pounds, but not quite so breeded as the former. A couple heavy, rough cattle were sold at the balance of the butcher at around \$11 and \$11.50. No good cows offered. The cows were of dairy type and a few fair strippers were sold, but nearly all the cows sold at \$9 per hundred or less were \$5.50 per hundred, generally \$6.50. The top was \$12, and was paid for a good breeded animal, one of hundred pounds and the twelve hundred pounds. Bulls were sold from \$7.50 heavier bulls up to \$10. and quality of the veal indicates the beginning of calf runs. In 1919 from arch to the end of October receipts of calves, for any lot over ten thousand and three thousand five hundred number being received

during the month of April. During the past week the demand for calves was good and nearly all sales were made between \$16 and \$20 per hundred. A few very thin grass calves were sold for \$7.50, but the common price range for this class was \$8 to \$8.50 per hundred.

Sheep and lambs remained about steady. Owing to the very light receipts, there was not very much close bidding and nearly all sales were made at \$11 to \$12 per hundred for sheep, and \$17 for lambs.

Hogs sold during the week at \$20.50 on Monday, and at \$19.50 on Wednesday. The market closed very unsettled and future prices will depend on the numbers of hogs offered. Some contracts are being made at \$19.50 for future delivery. In most cases light hogs were sold at prices equal to those paid for selects.

An incident worthy of note in the horse market is the number of heavy stallions passing through the stock yards. There were thirteen heavy young Percheron stallions from Bloomington, Illinois, for sale at one of the Yards.

**Pt. St. Charles.**—Of the disposition from the Yards for the week ending February 19, Canadian packing houses and local butchers purchased 130 calves, 14 bulls, 231 butcher cattle, 500 hogs, 26 sheep and 35 lambs. There were no shipments to United States points during the week.

The total receipts from January 1 to February 19, inclusive, were: 4,402 cattle, 1,526 calves, 7,044 hogs and 4,388 sheep; compared with 6,190 cattle, 2,136 calves, 8,967 hogs and 4,597 sheep, received during the corresponding period of 1919.

**EAST END.**—Of the disposition from the Yards for the week ending February 19, Canadian packing houses and local butchers purchased 150 calves, 208 butcher cattle, 177 hogs and 79 sheep. Shipments to United States points consisted of 17 butcher cattle.

The total receipts from January 1 to February 19, inclusive, were: 6,719 cattle, 1,956 calves, 5,122 hogs and 3,447 sheep; compared with 7,263 cattle, 1,327 calves, 5,051 hogs and 4,940 sheep.

Buffalo.

**Cattle.**—Cattle prices took a tumble last week, trade on shipping steers being the worst that has been witnessed here for a long time back. Around 25 to 30 cars of these were offered and with only one buyer in the field it was a slow, draggy affair, with prices fifty cents to a dollar lower than the week before and they could not all be sold at that. Practically all of the shipping cattle were natives and they sold on a range of from \$11.50 to \$14.25, a good kind landing around \$13 and \$13.50. Supply of Canada's totaled 15 cars and while no good ones were included sellers said that \$12 would have stopped the best. Butchering grades also suffered a decline of a quarter to fifty cents but trade on these was more active than on the good cattle. Best butchering steers brought from \$12 to \$12.50, a load of long yearlings made \$13.50 and a commoner class of butchering steers ranged down to \$9.50 and \$10. Cows and heifers showed about the same decline that was noted on butchering steers. Few heifers reached above \$10.50, best heavy cows sold around \$9.50 and \$10, with a good butchering class of cows selling from \$8 to \$8.50, and canners, which were steady, landed around \$5 and \$5.25 for the better kinds. Bulls, which were in light supply, were about steady, stockers and feeders, with practically no demand, had to sell mostly to killers for what they were worth and only the best fresh cows and springers could be sold by the dollars, others going for beef. Trade on shipping steers continued slow all week, with prices after Monday 15 to 25 cents lower and butchering grades remained steady to strong all week. According to reports the beef trade is not any too good and little improvement is looked for for the immediate future. Receipts the past week totaled 4,250 head, as compared with 3,175 head for the week before and 4,550 head for the same week a year ago. Quotations

Shipping Steers — Natives — Very choice heavy, \$13.75 to \$14.25; best heavy, over 1,300, \$13 to \$13.50; fair, over 1,300, \$12 to \$12.75; best, 1,200 to 1,300, \$13 to \$13.50; good, 1,200 to 1,300, \$13 to \$13.50; good, 1,200 to 1,300, \$12 to \$12.75; plain, \$11 to \$11.50. Shipping Steers — Canadians — Best heavy, \$11.50 to \$12; fair to good, \$11 to \$11.50; medium weight, \$10.75 to \$11.25; common and plain, \$10 to \$10.50. Butchering Steers — Yearlings, fair to prime, \$12 to \$13.50; choice heavy, \$12.25 to \$12.75; best handy, \$11.50 to \$12; fair to good, \$10.50 to \$11; light and common, \$9 to \$10. Cows and Heifers — Best heifers, \$10.50 to \$11; good butcher heifers, \$9.50 to \$10; fair butchering heifers, \$8 to \$9; light, common, \$6 to \$7; very fancy fat cows, \$9.50 to \$10; best heavy fat cows, \$9 to \$9.50; medium to good, \$7 to \$8.50; cutters, \$5.50 to \$6; canners, good, \$4.50 to \$5.25. Bulls — Best heavy, \$10 to \$10.50; good butchering, \$9 to \$9.50; sausage, \$8 to \$8.50; light bulls, \$7 to \$8. Stockers and Feeders — Best feeders, \$9.50 to \$10; common to fair, \$8 to \$9; best stockers, \$8 to \$8.50; fair to good, \$7.75 to \$8.25; common, \$6 to \$7. Milkers and Springers — Good to best, small lots, \$110 to \$135; in carloads, \$90 to \$100; medium to good, small lots, \$85 to \$100; in car loads, \$75 to \$85; common, \$50 to \$55. Hogs — Prices, as a result of liberal receipts, took a big tumble on the opening day of last week but after Monday the trade was considerably improved. The week opened with a drop of 25 to 75 cents from the previous week's close. Mediums and heavies sold from \$14 to \$14.50 and the bulk of the light hogs moved at \$15, with a few yorkers up to \$15.25. Tuesday prices on good hogs were steady, with light grades strong to a quarter higher, Wednesday values were advanced 25 to 75 cents, Thursday the market was a quarter to fifty higher and Friday prices were up a quarter. The fifth day of the week showed mediums and heavies selling from \$15 to \$15.50, mixed grades ranged from \$15.75 to \$16.25 and the latter figure caught the bulk of the yokers, lights and pigs. Roughs were \$12.50 to \$13, and stags mostly \$8 to \$9. Receipts for the past week were 27,300 head, being against 32,447 head for the week before and 24,700 head for the same week a year ago. Sheep and Lambs — Lamb values were hit hard on the opening day of last week. Supply Monday totaled 85 cars and prices showed a drop of \$1 from the previous week's close. Best lambs sold at \$20.50, with culls \$18 down. Tuesday's trade was steady, Wednesday best lots brought \$20.75, Thursday's tops reached \$21 and Friday the majority had to take \$20.85. Cull lambs and sheep were steady all week. Yearlings sold at \$18.25 and \$18.50, two and three-year-old wethers brought \$16.25 and \$16.50, with aged wethers selling at \$15.50 and \$16, and best ewes ranged from \$14 to \$14.50, with a fair kind going at \$13.50. The past week's receipts totaled 26,800 head, being against 21,024 head for the week before and 22,500 head for the same week a year ago. Calves — Trade in this department was active all week, with prices showing an advance. Monday the tops moved at \$22.50 and Friday the best reached up to \$25. Top Canadian calves sold Friday at \$23.50. Culls also got good action, ranging from \$19 down, Canadian throw-outs selling from \$14.50 to \$17. Receipts the past week were 4,600 head, as compared with 3,527 head for the week previous and 3,700 head for the same week a year ago.

Toronto Produce.

Receipts of live stock at the Union Stock Yards, West Toronto, on Monday, March 1, numbered 82 cars, 1,003 cattle, 267 calves, 1,764 hogs, 123 sheep and lambs. Strong active market, steers and heifers, selling 75 cents to \$1 per hundred higher than a week ago; top, \$14.25 for twenty-two head, average weight 1,255 pounds each. Cows, strong, choice, \$10.50 to \$11.50, canners, \$5.25. Bulls, steady, choice, \$10.50 to \$11. Sheep strong, choice, \$14 to \$15; lambs were steady. Calves steady, tops \$22 to \$23. Hogs, \$18.75, fed and watered. **Breadstuffs.** Manitoba Wheat.—(In store, Ft. William)—No. 1, northern, \$2.80; No. 2 northern, \$2.77; No. 3 northern, \$2.73. Manitoba Oats.—(In store, Fort William)—No. 2 C. W., 97½¢; No. 3 C. W., 93½¢; extra No. 1 feed, 93½¢; No. 1 feed, 92¢; No. 2 feed, 91½¢. Manitoba Barley.—(In store, Fort William)—No. 3 C. W., \$1.71½; No. 4, C. W., \$1.45½; rejected, \$1.31½. American Corn (prompt shipment)—No. 3 yellow, \$1.89; track, Toronto; No. 4 yellow, \$1.86, track, Toronto.

Ontario Oats (according to freight outside).—No. 3 white, \$1 to \$1.02. Peas (according to freights outside).—No. 2, \$3. Barley (according to freights outside).—Malting, \$1.75 to \$1.77. Buckwheat (according to freights outside).—No. 2, \$1.55 to \$1.60. Ontario Wheat (f.o.b. shipping points, according to freights).—No. 1 winter, per car lot, \$2 to \$2.01; No. 2 winter, per car lot, \$1.98 to \$2.01; No. 3 winter, per car lot, \$1.92 to \$1.93; No. 1 spring, per car lot, \$2.02 to \$2.03; No. 2 spring, per car lot, \$1.98 to \$2.01; No. 3 spring, per car lot, \$1.95 to \$2.01. Rye (according to freights outside).—No. 2, \$1.77 to \$1.80. Manitoba Flour (Toronto).—Government standard, \$13.25. Ontario Flour (prompt shipment, in jute bags).—Government standard, \$10.80 to \$11, Montreal; \$11, Toronto. Millfeed (car lots, delivered, Montreal freights, bags included).—Bran, per ton, \$45; shorts, per ton, \$52; good feed flour, per bag, \$3.60 to \$3.75. Hay (Track, Toronto).—No. 1, per ton, \$27 to \$28; mixed, per ton, \$25. Straw (Track Toronto).—Car lots, per ton, \$16 to \$17.

**Hides and Skins.** Hides (f.o.b. country points).—Beef hides, 28c. to 30c.; flat cured, 26c. to 28c.; part cured, green or frozen hides, 24c. to 26c.; deacon or bob calf, \$2.50 to \$3; horse hides, country take-off, \$8 to \$10; No. 2, \$6 to \$7; No. 1 sheep skins, \$2.50 to \$4; yearling lambs, \$1.75 to \$2.50; horse hair, farmer's stock, 38c. to 40c. per lb. City Hides.—City butcher hides, green flats, 25c.; calf skins, green flats, 55c.; veal kip, 30c.; horse hides, city take-off, \$11 to \$13.

**Farm Produce.** Butter.—Butter declined during the past week, selling as follows, wholesale: Fresh-made creamery squares selling at 65c. to 67c. per lb.; cut solids at 63c. to 65c. per lb.; and choice dairy at 60c. to 63c. per lb. Eggs.—New-laid eggs declined materially in price. There are practically no cold-storage on the market. New-laid are selling at 72c. per dozen, wholesale. Cheese.—Cheese also declined; the old variety selling at 31c. to 32c. per lb.; with the new bringing 27c. to 28c. per lb. (wholesale). Poultry.—Receipts have been light and prices advanced, especially on heavy weight live hens, and live ducklings; the latter being worth five cents per lb. more than the dressed variety; these higher prices being partly due to the heavy demand of the Jewish trade. Poultry prices being paid to producer: Chickens, per lb., alive, 30c. to 32c.; dressed, 38c. Chickens, milk-fed, per lb., alive, 35c.; dressed, 40c. Ducks, per lb., alive, 40c.; dressed, 35c. Hens, under 4 lbs., per lb., alive, 28c.; dressed, 30c. Hens, from 4 and 5 lbs., per lb., alive, 32c.; dressed, 33c. Hens, over 5 lbs., per lb., alive, 35c.; dressed, 35c. Turkeys, per lb., alive, 45c.; dressed, 50c. Guinea hens, per pair, alive, \$1.60; dressed, \$1.75.

**Seeds.** Following are the prices that wholesalers were paying for alsike and clover at country points: Alsike.—No. 1 fancy, per bushel, \$33 to \$34; No. 1, \$32 to \$33; No. 2, choice, \$31 to \$32; No. 2, \$29 to \$30; No. 3, \$21 to \$23; rejected, \$14 to \$20. Red Clover.—No. 1 fancy, per bushel, \$34 to \$35; No. 1, \$33 to \$34; No. 2, \$31 to \$32; No. 3, \$29 to \$30. Sweet clover, per bushel, \$18 to \$19. **Wholesale Fruits and Vegetables.** Trade has been active and prices very firm in wholesale fruits, especially oranges and grapefruit, and we may look for a further advance in oranges owing to the shortage of the crop and the heavy demand. Potatoes have been weak at slightly lower prices; the other lines of domestic vegetables also showing a lower tendency. **Wholesale Fruits.** Apples.—Western, \$3.50 to \$4.50 per box; Ontario \$5 to \$11 per bbl.; Nova Scotia, \$3 to \$7 per bbl. Tomatoes.—Hot-house, No. 1's, 45c. per lb.; Florida, \$8 to \$8.50 per case. **Vegetables.** Beans.—Dried white hand-picked, \$5.50 per bushel.

Beets.—\$2.25 to \$2.50 per bag. Cabbage.—Domestic, \$5 to \$3.50 per bbl. Carrots.—\$2.25 per bag. Lettuce.—Leaf, 30c. to 50c. per doz. Onions.—\$7 to \$8.50 per cwt.; Spanish, \$7 to \$8 per case. Parsnips.—\$2.50 to \$2.75 per bag. Potatoes.—\$4 to \$4.50 per bag. Turnips.—\$1.25 per bag.

Montreal.

**Horses.**—Demand for horses keeps up somewhat better owing to the heavy roads and the necessity for extras. Prices were unchanged. Heavy draft, weighing 1,500 to 1,600 lbs., \$250 to \$300; light draft, 1,400 to 1,500 lbs., \$200 to \$250; light horses, \$125 to \$175; culls, \$75 to \$100, and fine saddle and carriage horses \$175 to \$250.

**Dressed Hogs.**—Prices fluctuated somewhat but were about the same as for the previous week, on dressed hogs, being 26c. to 26½¢ per lb. for country dressed hogs, light weights, this being for fresh killed, the frozen stock being 25c. to 25½¢.

**Poultry.**—Supplies of poultry were on the light side, so far as concerns fresh arrivals, and prices were about steady, being: turkeys, 53c. to 54c. per lb.; chickens, 38c. per lb. for choice, and 36c. for medium. Geese are 35c. to 36c. per lb.

**Potatoes.**—Receipts of potatoes were on the light side. Temperatures are more favorable but the roads are almost impassible in places, so that supplies are light and prices were firm, at \$3.50 per bag of 90 lbs. for Quebec white stock, ex-track, and \$4 for broken lots, ex-store. Honey and Maple Syrup.—Producers of maple syrup are beginning to make preparations for the spring run of sap. This is still some weeks off and supplies of old stock were so light that they were not affected. Gallon tins of syrup were nominal at \$1.50, sugar being 35c., and white clover comb honey in pound sections was nominal at 25c. to 30c.; strained being 22c. to 25c., and dark strained 20c. to 23c. per lb. in 30-lb. tins. Eggs.—Prices are easier with new-laid Canadian eggs holding at 75c. per dozen, and Americans at 73c. Cold storage select stock showed no change, being 60c. to 62c. per dozen. Production of new-laid stock is increasing but is still light and the cold weather of the past few days is having its effect.

**Butter.**—There is a good demand for butter, and some export is taking place to the United States. Fodder makes were reported at 51c. to 55c., while finest grass goods sold at 64c. to 65c. per lb. **Grain.**—No. 2 Canadian Western oats were steady, being quoted at \$1.16; No. 3 were \$1.00½; No. 2 feed were 97½¢; tough No. 2 are \$1.01, and tough No. 3 were \$1 per bushel, ex-track. **Flour.**—The announcement was made that the surtax of \$2 per bbl. on blended and hard spring wheat flours exported to British possessions has been removed, the only restrictions being now the export license. Meantime, prices were steady, being \$13.25 per bbl. for spring wheat flour, in carloads, in jute bags, ex-track, Montreal freights, with 10c. off for spot cash. Blended flour was in good demand at \$12.50 per bbl., in jute, cash, and Ontario winter wheat flour was quiet at \$11.25. White corn flour was steady at \$10.50 per bbl. to \$10.60. **Millfeed.**—Bran was in good demand and prices showed little change, being \$45.25 per ton, and shorts being \$52.25 per ton, including bags, ex-track, and 25c. per ton off for spot cash. From \$1.50 to \$2 per ton more was quoted for smaller lots, barley meal being \$75 to \$76 per ton; middlings \$60, mixed mouille, \$58 to \$60 per ton. **Baled Hay.**—Prices of baled hay showed little change, being \$26 to \$27 per ton, in car lots, for No. 2 timothy; \$25 to \$25.50 for No. 3; and \$22 to \$24 for clover and clover mixed, ex-track. **Hay Seed.**—The market was strong, more especially because of the fact that a high rate of exchange has to be paid on all imports from the United States. Timothy seed was 17½¢ to 20c. per lb., red clover was 65c. to 75c., sweet clover was 40c. to 45c., alsike was 65c. to 75c. and alfalfa 58c. to 60c.

**Hides.**—The market was lower. Cow and steer hides were 28c. per lb., bulls 22c., calves were 75c. per lb., and kips 30c. Lamb skins were \$4.10 each, and horse hides \$9 to \$9.50 each.



# HOME MAGAZINE

## LIFE · LITERATURE & EDUCATION

### The Hero.

"Quit you like men—be strong!  
There's a work to do,  
There's a world to make new,  
There's a call for men who are brave and true—  
So fare ye forth with a song.

"Quit you like men—be strong!  
There's a battle to fight,  
There's a wrong to right,  
There's a God who blesses the good with might—  
On, on with a song."

### Among the Books

#### "Winter Studies and Summer Rambles."

—BY MRS. JAMESON.

(Concluded.)

#### The Indians at Mackinaw 1837.

As the days went on Mrs. Jameson became a great favorite with the Indians at Mackinaw, and, in turn, grew to have considerable respect for them, and a corresponding indignation for white men who tried—and so often with success—to get the better of them. "Mr. Schoolcraft told me," she says, "that during the time he had been Indian agent (five-and twenty years) he had never known the Indians to violate a treaty or break a promise. He could not say the same of his government." . . . The eloquence of the Indian orators who acted as spokesmen in the Councils was a never-ending source of interest to her, while even for their savageries she finds parallel among "civilized" Indians, quite agreeing with a half-Indian (Mr. Johnson, brother of Mrs. Schoolcraft) when he said, "It is a favorite subject of reproach against the Indians—this barbarism of their desultory warfare; but I should think more women and children have perished in one of your civilized sieges, and that in late times, than during the whole war between the Chippewas and Sioux, and that has lasted a century."

"I was silent," Mrs. Jameson writes, "for there is a sensible proverb about taking care of our own glass windows; and I wonder if any of the recorded atrocities of Indian warfare ever exceeded Massena's retreat from Portugal—and the French call themselves civilized. A war party of Indians, perhaps two or three hundred (and that is a very large number) dance their war dance, go out and burn a village, and bring back twenty or thirty scalps. They are savages and heathens. We Europeans fight a battle, leave fifty thousand dead or dying by inches on the field and a hundred thousand to mourn them, desolate; but we are civilized and Christians. Then only look into the motives and causes of our bloodiest European wars as revealed in the private history of courts—the miserable, puerile, degrading intrigues which set man against man—so horridly disproportioned to the horrid result! . . . One scalps his enemy, the other rips him open with a sabre; one smashes his brains with a tomahawk, and the other blows him to atoms with a cannon-ball: and to me, femininely speaking, there is not a needle's point difference between the one and the other. If war be unchristian and barbarous, then war as a science is more absurd, unnatural, unchristian, than war as a passion."

#### An Indian Dance.

An Indian dance is described as follows: "In the afternoon, Mr. Johnson informed me that the Indians were preparing to dance for my particular amusement. I

was, of course, most thankful and delighted. Almost in the same moment I heard their yells and shrieks resounding along the shore, mingled with the measured, monotonous drum. We had taken our place on an elevated platform behind the house—a kind of little lawn on the hill side;—the precipitous rocks, clothed with trees and bushes, rose high like a wall above us: the glorious sunshine of a cloudless summer's day was over our heads—the dazzling blue lake and its islands at our feet. Soft and elysian, its beauty was all around. And when these wild and more than half-naked figures came up, leaping, whooping, drumming, shrieking, hideously painted and flourishing clubs, tomahawks, javelins it was like a masque of friends breaking into paradise! It was a grotesque and horrible phantasmagoria. Of their style of clothing I say nothing—for, as it is wisely said, nothing can come of nothing. If the blankets and leggings were thrown aside, all the resources of the Indian toilette, all their store of feathers, and bears' claws, hawks, bells, vermillion, soot, and verdigris, were brought into requisition as decoration; and no two were alike. One man wore three or four heads of hair, composed of the manes and tails of animals, another wore a pair of deer horns. . . . Another had the shell of a small turtle suspended from his back and dangling behind; another used the skin of a polecat for the same purpose. One had painted his

right leg with red bars and his left leg with green lines; particoloured eyes and faces, green noses and blue chins, or vice versa, were general. . . . The orchestra was composed of two drums and two rattles, and a chorus of voices. The song was without melody—a perpetual repetition of three or four notes, melancholy, harsh and monotonous. A flag was stuck in the ground, and round this they began their dance—if dance it could be called—the movements consisting of the alternate raising of one foot, then the other, and swinging the body to and fro. Every now and then they paused and sent forth that dreadful, prolonged, tremulous yell, which echoed from the cliffs, and pierced my ears and thrilled along my nerves."—While watching, by association of contrast, Mrs. Jameson remembers that "on this very day last year," she was seated in a box at the opera looking at Carlotta Grisi and Perrot dancing, or rather flying through the galop in "Ben-yowski."

#### "The Sault."

On July 25th, the traveller left Mackinaw—"that fairy island"—for the Sault Ste Marie, making the voyage of two days in a little Canadian bateau rowed by five voyageurs from the Sault, the distance being 94 miles by water. A sail was put up whenever the wind was favorable.

"Two days and nights," runs the

narrative, "the solitude was unbroken; not a trace of social life, not a human being, not a canoe, not even a deserved wigwam, met our view. Our little boat held on its way over the placid lake and among green tufted islands; and we its inmates, two women (herself and Mrs. Schoolcraft) differing in complexion, complexion, might have fancied ourselves alone in a new-born world."

St. Joseph's Island was one of the points where a landing was made to boil the kettle and get a meal. Thence the way led along the south coast of the island, through fields of rushes, across Lake George and Muddy Lake.—"All the islands we passed were so woody, and so infested with mosquitoes that we could not land and light our fire till we reached the entrance of St. Mary's River, between Nebish island and the main land; but even here, in spite of six fires placed in a circle, the women and Mrs. Schoolcraft's two children were driven, by the small marauders, to the boats."

With the "St. Mary rapids" she is greatly impressed, and she pauses to tell, not only of the Chippewas on the shore and the beauty of the scenery, but also of the white-fish. "Here at the foot of the rapids, the celebrated white-fish of the lakes is caught in its highest perfection. The people down below (along Lakes Ontario and Erie) who boast of the excellence of the white-fish, really know nothing of the matter. There is no more comparison between the white-fish of the lower lakes and the white-fish of St. Mary's, than between plaice and turbot, or between a clam and a Sandwich oyster."

At that time the "Sault" signified chiefly a great rapid in the midst of a wilderness. On the American shore was a settlement of whites, a large village of Chippewas, and a "fort" surrounded with pickets of cedar wood, called Fort Brady, which contained within its protection the principal trading store and a few soldiers. "On the Canada side," she says, "we have not even these demonstrations of power or prosperity. Nearly opposite to the American fort there is a small factory belonging to the Northwest Fur Company; below this a few miserable log huts occupied by the French Canadians and voyageurs in the service of the company." Lower down still stood the house of the missionary, Mr. MacMurray, with whom Mrs. Jameson stayed while at the Sault.

She was the first European woman who shot the rapids, and here is her description:

"The more I looked upon these glancing dancing rapids, the more resolute I grew to venture myself in the midst of them. George Johnston (brother of Mrs. Schoolcraft and Mrs. MacMurray) went to seek a fit canoe and a dexterous steersman, and meantime I strolled away to pay a visit to Wayish-ky's family, and made a sketch of their lodge, while pretty Zalgah-see-gah-qua held the umbrella to shade me.

"The canoe being ready, I went up to the top or the portage, and we launched into the river. It was a small fishing canoe about 10 feet long, quite new, and light and elegant and buoyant as a bird on the waters. I reclined on a mat in the bottom, Indian fashion. In a minute we were within the verge of the rapids, and down we went with a whirl and a splash!—the white surge leaping around me—over me. The Indian with astonishing dexterity kept the head of the canoe to the breakers, and somehow or other we danced through them. I could see as I looked over the edge of the canoe, that the passage between the rocks was sometimes not more than two feet in width, and we had to turn sharp angles—a touch of which would have sent us to



A New Picture of the Liberal Leader.

Hon. W.L. MacKenzie King, Leader of the Opposition (on the left), and Mr. G. H. Ross, Barrister, Calgary, on the steps of the entrance of Canada's new \$10,000,000 Parliament Building, Ottawa.



destruction—all this I could see through the transparent eddying waters, but I can truly say I had not even a momentary sensation of fear, but rather of giddy, breathless, delicious excitement. I could even admire the beautiful attitude of a fisher, past whom we swept as we came to the bottom. The whole affair, from the moment I entered the canoe till I reached the landing place, occupied seven minutes, and the distance is about three quarters of a mile."

For this feat Mrs. Jameson was named, by the wonderful old Indian woman, Mrs. Johnson, "Wah-sah-ge-wah-no-qua," which signified *the woman of the bright foam*.

One would like to tell here the whole love-story of Mrs. Johnson—of her wooing by the gallant young Irishman, who was true to her all through his life—and of the fine qualities which kept for her the adoration of her educated and cultured children, but we must hasten on.

#### To the Manitoulin.

On the 31st of July a little party left the Sault, Mr. and Mrs. MacMurray accompanying Mrs. Jameson, while Mrs. Schoolcraft remained with her mother. The voyage to the Manitoulin (she spells it "Manitoolin") was reckoned at three days and a half to cover the distance of about 170 miles. "We had," she says "a small but compact and well-built boat; we had four voyageurs, all Canadian voyageurs of the true breed, that is, half-breed, showing the Indian blood as strongly as the French."

Interesting indeed is the account of the trip over the waves and among the "enchanted isles," even though, on landing on some of them, it was necessary to be wary of the rattlers. Upon the way, and when just in sight of the Manitoulin, a schooner was met, whose skipper conveyed the information that King William IV was dead, and that Victoria had been proclaimed Queen.

Landing was made at the head of the "Bay of Manitoolin," where the annual presents to the Indians had just been distributed and where a great council was to be held.

"There are three thousand seven hundred Indians, Ottawas, Chippewas, Pottowattomies, Winnebagoes and Menomoniens encamped around us. The issue of the presents has just concluded, and appears to have given universal satisfaction; yet, were you to see their trifling nature, you would wonder that they think it worth while to travel from one to five hundred miles or more to receive them. . . . The common equipment of each chief or warrior consists of 3/4 yard of blue cloth, 3 yards of linen, 1 blanket, 1/2 oz. thread, 4 strong needles, 1 comb, 1 awl, 1 butcher's knife, 3 lbs. of tobacco, 3 lbs. of ball, 9 lbs. of shot, 4 lbs. of powder, and 6 flints.

"The council met about noon. At the upper end of the log house stood the chief superintendent, with his secretary or grand vizier, Major Anderson; the two interpreters, and some other officials. At some little distance I sat with Mr. and Mrs. MacMurray and a young son of the lieutenant-governor, near me I perceived three Methodist missionaries and two Catholic priests. The chiefs came in, one after another, without any order of precedence. All those whom I had seen at Mackinaw recognized me immediately, and their dusky faces brightened as they held out their hands with the customary *bojow!* There was my old acquaintance the Rain, looking magnificent and the venerable old Ottawa Chief Kish-ke-nick (the Cut Hand). . . . Nearly opposite to me was a famous Pottowattomie chief and conjuror called Two Ears. He was most fantastically dressed and hideously painted, and had two large clusters of swandown depending from each ear—I suppose in illustration of his name. . . . The whole number of chiefs was about seventy-five.

"When all were assembled, and had seated themselves on the floor, without hurry, noise or confusion, there was a pause of solemn preparation, and then Mr. Jarvis rose and addressed them. At the end of every sentence *As-si-ke-nack* (the Black-bird) our chief interpreter here, translated the meaning to the assembly, raising his voice to a high pitch, and speaking with much oratorical emphasis—the others responding at intervals *'Ha'* but listening generally in solemn silence. This man, the Black-bird, who understands English well, is

the most celebrated orator of his nation. They relate with pride that on one occasion he began a speech at sunrise, and that it lasted without intermission till sunset."

Here follows a verbatim account of the speech to the Indians, which cannot, because of its length, here be quoted.

From the Manitoulin Mrs. Jameson again set forth directly en route to Penetanguishine, "a voyage of four days at least, supposing wind and weather favorable," the party this time consisting of twenty-one souls in two canoes, each 25 feet in length and four feet in width.

Of this trip Mrs. Jameson says: "You shall confess ere long that the Roman emperor who proclaimed a reward for the discovery of a new pleasure ought to have made a voyage down Lake Huron in a birch-bark canoe."

The start-off was auspicious: "We started off in swift and gallant style, looking grand and official with the British flag floating at our stern. Major Anderson and his people, and the schooner's crew, gave us three cheers. The Indians uttered their wild cries, and discharged their rifles all along the shore. As we left the bay, I counted 72 canoes before us, already on their homeward voyage—some to the upper waters of the lake—some to the northern shores; as we passed them they saluted us by discharging their rifles: the day was without a cloud, and it was altogether a most animated and beautiful scene."

Thenceforth the story is one of description of the way along the north shore, in and out among the channels of the thirty thousand islands of the Georgian Bay, past the mouth of the *Riviere des Français*, which she describes as "the most important of all the rivers which flow into Lake Huron." Let us pause to give but one bit of this excellent word-picturing:

"I wish I could give you the least idea of the beauty of this evening; but while I try to put in words what was before me, the sense of its ineffable loveliness overpowers me now, even as it did then. The sun had set in that cloudless splendour, and that peculiar blending of rose and amber light that belongs only to these climes and Italy; the lake lay weltering under the western sky like a bath of molten gold; the rocky islands which studded its surface were of a dense purple, except where their edges seemed fringed with fire. They assumed, to the visionary eye, strange forms; some were like great horned beetles, and some like turtles, and some like crocodiles, and some like sleeping whales and winged fishes; the foliage upon them resembled dorsal fins, and sometimes tufts of feathers. Then, as the purple shadows came darkening from the east, the young crescent moon showed herself, flinging a paly splendour over the water. I remember standing on the shore, my spirits as in a dream were all bound up! . . . They pitched my tent at a respectful distance from the rest, and Mr. Jarvis made me a delicious, elastic bed of boughs, over which was spread a bearskin, and over that blankets; but the night was hot and feverish. The voyageurs, after rowing since daylight, were dancing and singing on the shore till near midnight."

"Next morning we were off again at early dawn, paddled *'trois pipes'* before breakfast over an open space which they call a 'traverse,' caught 11 bass fish and shot two pigeons. The island on which we breakfasted was in great part white marble; and in the clefts and hollows grew quantities of gooseberries, and raspberries, wild roses, the crimson columbine, a large species of harebell, a sort of willow, juniper, birch, and stunted pine; and such was the usual vegetation." . . . She mentions in several places, "fields of white water-lilies, and tells of a rock "so exactly resembling the head and part of the back of a turtle, that the Indians look upon it as sacred, and it is customary for all who pass to leave an offering in money, tobacco, corn, etc., to the spirit."

#### Penetanguishine.

Without stopping at the *Isle des Chretiens*, the party made on through clouds of "cold gray vapour," the weather having become lowering and stormy, and finally safe entrance was made into the bay of Penetanguishine, "so called from a high sand-bank at the entrance, which is continually crumbling

away. The expressive Indian name signifies 'Look! it is falling sand!'"

Two days Mrs. Jameson spent in this place, which she describes as "truly a lovely spot" . . . "The bay runs up into the land like some of the Scottish lochs, and the shores are bolder and higher than usual, as yet all clothed with the primeval forest. During the war (1812-13-14) there were dockyards and a military and naval depot here, maintained at an immense expense to the Government, and it is likely from its position, to rise into a station of great importance. At present the only remains of all the warlike demonstrations of former times are a sloop sunk and rotting in the bay, and a large stone building at the entrance, called the 'Fort,' but merely serving as a barrack for a few soldiers from the garrison at Toronto. There are several pretty houses on the beautiful declivity rising on the north side of the bay, and the families settled here have contrived to gather round them many of the comforts and elegancies of life. I have reason to remember with pleasure a Russian lady, the wife of an English officer, who made my short sojourn here very agreeable."

Less pleasant was a visit to a nearby "hamlet," consisting of "twenty or thirty log houses, where a small remnant of the poor commuted pensioners (in all 126 persons) now reside, receiving daily rations of food, and some little clothing, just enough to sustain life."

#### Home Again to Toronto.

From Penetanguishine the route lay across Gloucester Bay to Coldwater, thence across a 16-mile portage to the Narrows, at the head of Lake Simcoe, this part of the trip being made by a cart drawn by oxen.

"Next day we went on a fishing and shooting excursion to Lake Couchiching, and to see the beautiful rapids of the river Severn. . . . If I had not exhausted all my superlatives of delight, I could be eloquent on the charms of this exquisite little lake, and the wild beauty of the rapids. Of our sport I only recollect the massacre of a dozen snakes which were holding a kind of conversation in the hollow of a rocky islet where we landed to dine. The islands in Lake Couchiching belong to the Indian chief, the Yellow-head; and I understand that he and others of his tribe have petitioned for legal titles to their reserved lands."

Next morning the journey was continued down Lake Simcoe in the Peter Robinson steamer, and the writer mentions seeing at one point a clearing where a few houses had been built and a village laid out—possibly the nucleus of Barrie. At about 3 o'clock Holland Landing was reached, and thence the party proceeded to Toronto by wagon.

So ends the story of a trip of 83 years ago which, we hope, has been followed with interest by the people now living in those places described, which, even so short a time ago (as antiquity counts) were at most but little beginnings on the fringe of the wilderness.

## Your Health.

QUESTION BOX, ANSWERS BY "MEDICUS."

### Hemorrhoids.

F. D., N. B.—"Kindly give treatment for piles or hemorrhoids, describing diet, etc. I feel sure it would interest a good many of your readers if there are as many who suffer from this trouble as some claim."

Ans.—Piles or hemorrhoids are dilated or varicose veins, like those large dark blue veins on the back of the leg. The young recruit who wanted to get overseas got rid of his varicose veins by an operation. So with you. If you want to get cured it will be necessary for you to have an operation.

I know of no other condition of the body that is so trivial from the operation standpoint but is so serious to the patient. You are never free of annoyance. The piles are either bleeding or throbbing or itching. You are a semi-invalid because you cannot do heavy lifting or work. You run the risk of losing your ambition, your optimism, and perhaps at times your religion. The operation apart from the anesthetic is practically without risk and should be done in every case where the piles give much trouble.

Constipation and diarrhoea aggravate the condition of the piles, one as harmful as the other, because of the straining. The treatment of the constipation is largely dietetic. You should eat foods that leave a residue in bowel, which fill the bowel and stimulate it to contract. Milk, cheese and meat, for example, are constipating because when they are digested, all the products of digestion are absorbed and nothing is left in the bowel for it to contract on. Foods that leave a residue are rich in cellulose. The skins and seeds of fruits are not digested and increase the bulk of residue in the bowel. For this reason fruits and vegetables are especially useful. "An apple a day will keep the doctor away." In eating your apple you should swallow the skin, the seeds, the stem and the flower. That old idea that seeds (grape seeds) cause appendicitis has been disproved. We would all be dead if it were true. Bran bread and oatmeal are recommended because the hulls of the wheat and oats are largely cellulose. In feeding "roughage" to your cattle you are giving a diet which adds bulk or residue to the content of the bowel.

Regular habits are recommended and undoubtedly are of benefit. You should drink freely of water, so that the stool will not be so dry and irritating to the inflamed piles. Equally important with diet and the liberal drinking of water is abdominal massage. The easiest way to exercise the abdominal muscles is to lie flat on your back with your hands by your side, and then slowly raise your legs to a right angle to the body. Do that ten times every morning.

You will not care to do all these things that you *must* do if you will cure yourself, and if you don't cure yourself nobody else can. If you are like the rest of us (and I suspect you are) you will prefer to take a sugarcoated pill at night. It is a little more expensive but it is less troublesome and more pleasant. If you must take medicine, the two least harmful drugs are liquid vaseline (mineral oil, Russian oil, liquid albolene, Nujol, etc.) and ordinary sulphur. Take 1 to 2 tablespoonsful of the oil at night. It acts as a lubricant, and so does not irritate. It is really a high-grade cylinder oil but is too expensive to use in your "Lizzie." Sulphur if it cost a dollar a pound would be used much more than it is now. It is perfectly harmless and non-irritating to the bowel. You will not "catch cold" if you take it. That idea has been exploded long ago. Take a teaspoonful one to four times a day as required. Epsom salts are very mild and can be taken occasionally but should not be taken as a regular purge.

So try to cure your constipation yourself without drugs. That is essential even though you have an operation. Decide to have an operation.

### "Rheumatism."

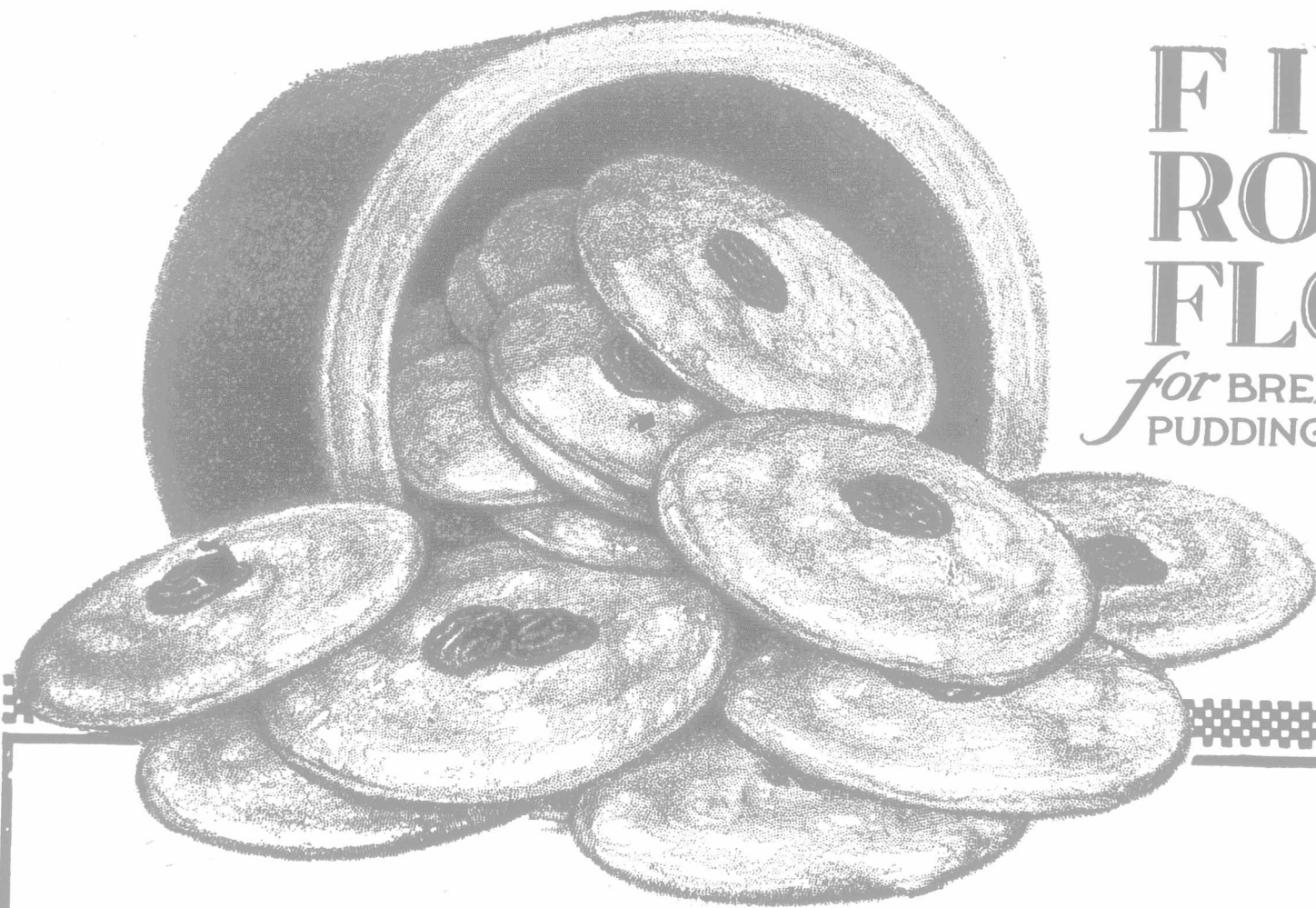
C.—"Some of my family are troubled with rheumatism and aching muscles. Will a violet ray vibrator or generator give any relief? We have hydro in the house and could use one nicely."

Ans.—"There hain't no such animal" as muscular "rheumatism." A pain in a joint or muscle was formerly called "Rheumatism." Now we know it has no relationship to *true* rheumatism (an infectious disease affecting many joints, with temperature, acid sweats, and running a course of about six weeks.) The so-called "rheumatism" means that you have a pocket of pus somewhere in your body and the poison from the pus irritates the muscles and joints and causes aches and pains.

So if you want to get rid of your "rheumatism" you must find the focus or pocket of infection. Abscesses at the roots of teeth is one of the common causes of this trouble. Look out for crowns or bridge-work that is not removable. An X-ray picture is the only means of telling about the condition of the teeth. The tonsils, gall bladder, appendix, bladder, ear and nose are other possible sources of trouble. So make an appointment with your family doctor and arrange that he give you an hour or two of his time, so that he can make a *thorough* physical examination and find the cause of your trouble.

The violet ray vibrator, as you can understand, will not cure your "rheumatism" because it does not remove the cause. It may give you relief, however. On the other hand you will find that some days you are quite free of aches and pains





# FIVE ROSES FLOUR

for BREADS, CAKES, PUDDINGS, PASTRIES

**C**OOKIES, Gems, Snaps, Jams-Jams, Crackers and Wafers—keep the jar well filled for the pantry pirates! And even grown-ups find they fill a vacant place most pleasantly when nothing else will do.

But first make sure of the

## Exceptional Keeping Qualities

that the use of FIVE ROSES flour brings to economical home baking. The lasting freshness and aroma so essential are assured because of the stubborn manner in which FIVE ROSES bake things retain their original freshness. Thus, *without fear of waste*, you can make a lot of these dainty goodies at one baking.

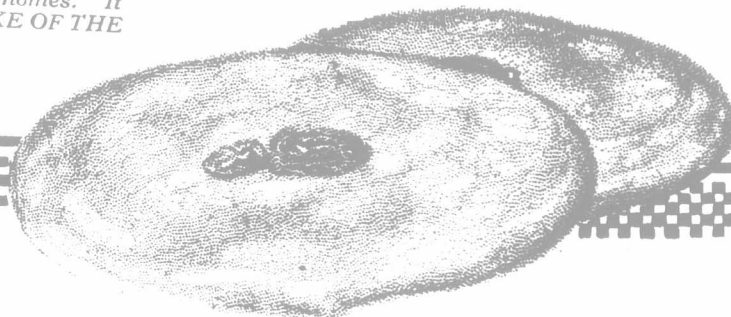
Then, due to the fineness and liveliness of this famous flour, your cookies and wafers are much more melting and digestible.

To these appetizing qualities, FIVE ROSES adds the wonderful nutrition of Manitoba's richest wheat, together with the amazing strength that spell *economy* in baking.

There is a bag of FIVE ROSES flour waiting for *YOU* at your dealer's.

### Over 35 Magic Cooky Recipes

*Hundreds of suggestions on bread, puddings, rolls, buns, biscuits, fried cakes, pastries and cakes of all kinds. Every one of its 144 pages points the way to thrifty baking. The famous FIVE ROSES Cook Book is already indispensable in over 500,000 homes. It becomes YOURS for 30c (stamps or silver. Address Dept. "O" LAKE OF THE WOODS MILLING CO., LIMITED, Montreal and Winnipeg.*



and you took no special treatment. And this is what I would expect if you use a violet ray vibrator. Some days you are very optimistic because you feel fine. The vibrator is doing the trick. Next week you are just as bad as ever, even though you used the vibrator regularly. It is a question then if on the days when you used the vibrator and you are free of aches and pains, you would not have been just as comfortable without any treatment of any kind.

### Getting Garden Things Started Indoors.

Very few farms have a hotbed, fewer still a greenhouse, but any housewife who possesses a roomy kitchen with bright windows, a love for plants, and an eye that looks forward to summer vege-

tables for the table, will not find it hard to start a few seeds for early use.

The time for starting the seeds must, of course, depend upon the climate of the especial part of the country in which one lives. In places where the snow leaves early and warm weather comes on apace some seeds may be started about the latter part of February (in any case it is well to start egg-plant and peppers at that time); but where the winter, as a rule, lags late and warm weather is not to be expected until well along in May the seed-sowing in flats in the house may well be postponed until any time in March. When one has a hotbed and a cold-frame to which the plants can be transplanted from it when ready, one is, of course, more independent of the weather.

The reason for not sowing seeds in the house before March, in a cold climate, is that they are likely to get too tall and

spindling before one can transplant them out to the garden.

The best flats are shallow boxes, about 3 inches deep on the inside, with a number of holes  $\frac{1}{2}$  to  $\frac{3}{4}$  inch in diameter in the bottom for drainage. Two cleats nailed to the bottom will keep the box up so that the drainage will be still better. When filling the flats first put curved pieces of broken crockery (convex side up) or some rough cinders over the holes, cover with a little coal-screens or broken plaster, then sift in the soil; a piece of window-screen is good for this. Finally firm the soil down, but do not pack it too hard. The soil should be good mellow garden soil, rich, but not rich enough to induce a too-rapid, spongy growth.

Sow the seed in rows about 2 inches apart. If it is very fine just press it in; larger seed may be covered with a sprinkling of soil, or pressed in, the table

being to cover with soil to a depth of about four times the depth of the seed. Next dampen the soil thoroughly with a fine rose spray that will not dash the seed up, cover the flats with newspaper and set in a warm place where there is plenty of ventilation until the seedlings appear, when the paper must be taken off. An even temperature of  $65^{\circ}$  to  $70^{\circ}$  is best during all this time, but a variation of  $15^{\circ}$  at night will do no harm. While the ventilation should be good never let direct draft strike on the young plants. Give them plenty of light, but if the sunshine should become too bright in the middle of the day shade it off by putting a newspaper against the window. Thin the plants out well as soon as ready, leaving the strongest.

With a hotbed plenty of lettuce and radishes will soon be ready for the table. But even with a flat a small supply may be obtained much earlier than by sowing



**VE  
SES  
OUR  
DS. CAKES,  
S. PASTRIES**

the seeds directly in the open. A few seeds of early cabbage, beets, onions, celery, cauliflower, etc., sown this way and carefully transplanted out of doors when the ground is ready will also start the table supply much earlier than the first out-of-door sowing. At "garden time" the rest of the seeds will be sown, and so a long succession of fresh and tender vegetables will be kept up. . . . Tomatoes may be sown in flats, transplanted to other flats and finally into the garden. Or they may be transplanted into small flower pots, small cotton bags filled with soil, or old cans burnt until the bottoms fall out, tied with string and packed side by side in a box. The idea in each case is to have a ball of earth about the roots which can be set out in the open when danger of frost is past, without disturbing the roots of the plants, which are thus enabled to grow without check.

The flower-lover will see to it that a few flower seeds, also, are started in good time, in the house,—ageratum, allysum, lobelia, petunia, pansies, verbenas, salvia, asters, stocks. Nasturtiums may be started in the house, but not too soon else they will grow spindly. Dahlia tubers may also be started, preferably in clean sand, kept moist. Vines that may be started in the window-box or hotbed are: Cinnamon vine, Madeira vine, Japanese hop, cup-and saucer vine, hyacinth bean, scarlet runner, balloon vine, gourds and cypress vine. Perhaps vines do more to add to the cosy appearance of a home than anything except trees.

At all events start a few vegetable seeds. Vegetables mean health, as you will know if you read the article by "Medicus" on "Vitamines."

**The Children's Poem.**

**Nobody's Cat.**

Houseless and friendless, a stranger to joys,  
Worried by dogs, and tormented by boys,  
Wandering nightly in search of a rat,  
Poor old unfortunate, nobody's cat

Lurking round outhouses, mewing at doors  
Begging a morsel from plentiful stores,  
Nothing she gets but a blow or a "scat,"  
Poor old unfortunate, nobody's cat!

Somebody's chickens were missing one night—  
Animal craving discusses no right—  
Did her fierce hunger impel her to that?  
Excusable quite in a famishing cat.

Maternal conditions at times would ensue,  
Betrayed on the day by a faint little "mew,"  
Murderous boys the whole brood would be at:  
Poor old bereaved, disconsolate cat!

Pampered young tabby, how little you care,  
Purring or dozing on cushion or chair,  
Sighing she saw you so glossy and fat,  
Comfortless sight for a desolate cat!

Pussy had lives, the conventional nine,—  
Lives are unlasting unless we can dine,—  
Toothless, disabled, she weakened for that,  
Poor old unfortunate, nobody's cat

Guilty or innocent, dying she lies,  
Vacantly staring with glittering eyes,  
Doubtless, if sensible, thankful for that,  
Poor old unfortunate, nobody's cat

Unlike us, for pussy, tho' trespassing here,  
Death had no terrors, the future no fear,  
No fear that Saint Peter would say to her  
"scat,"

All is now over—write—*requiscat.*  
J. H. B.

**Hope's Quiet Hour.**

**The Divine Lover.**

I will betroth thee unto Me forever;  
yea, I will betroth thee unto Me in  
righteousness, and in judgment, and in  
lovingkindness, and in mercies. I will  
even betroth thee unto Me in faithfulness.  
—Hosea 2, 19, 20.

The prophet Hosea spoke very plainly  
about the sins of his people. He com-  
pared Israel to a faithless, shameless

woman; and yet held out a wonderful hope of restoration the pardon, purity and peace. The God she had rejected made the path of sin a way of thorns, and He took away the gifts she had despised. In shame and misery, hunger and nakedness she learned to folly of ungodliness. Like the prodigal she turned in humble penitence to the God she had deserted and insulted, and found marvelous Love waiting to welcome her. Though she had forgotten God He had never forgotten her. He said tenderly: "I will allure her, and bring her into the wilderness, and speak comfortably unto her. . . and she shall sing there, as in the days of her youth." His forgiving love drew her so near that she dropped the old name of "Master", and ventured to call Him "Ishi" (My Husband.) For her sake He was ready to make the earth like a safe and fruitful garden, where there should be no danger from the beasts of the field or creeping things, where the bow and the sword should be broken, and the earth should bring her bridal gifts of corn and wine and oil.

The Bible has been called "The Love Story of God," and His faithful love for unloving and unlovely men and women is the great Romance of the ages.

Last Sunday we were studying in my Bible Class the story of Balaam's attempt to curse the people of God. Down in the valley the banners waved over the tents of Israel. God was in the midst, and therefore the people were safe; though on the heights above their mighty foes plotted how they might destroy the nation.

King and prophet did their utmost and all their fierce curses were changed into blessings. "How shall I curse, whom God hath not cursed?" asked the man who had travelled far in his eager desire to win the wages of unrighteousness. Very unwillingly he described the coming greatness of the people of God and the glorious conquests of their King. Though their position seemed to be one of great danger, they were safe because they were under the shield of the Almighty.

In these days of unrest, when the world is being turned upside down by many kinds of earthquakes, and threatened by smoking volcanoes of "Bolshevism," we can go forward fearlessly under the guidance of the One whose love is changeless and eternal.

We are not worthy of His wonderful love, and yet it floods our lives with sunshine. The prophet Isaiah acknowledged that the robe of Israel's righteousness was as filthy rags, and yet the Divine Lover waited with open arms to welcome, pardon, cleanse and strengthen all who came to Him for help.

Two men were riding together on one occasion when one of them asked: "Do you read your Bible?" The other answered that it was no use doing that for he did not love God. The first speaker said: "I did not love God either, but He loved me."

The words were like the passing of a heavy cloud and the world seemed to be made over new in the glorious sunshine of God's love.

When Joshua was appointed to be the leader of the host of Israel he sent a message to all the people to make preparations for passing over Jordan. "Ye shall pass over this Jordan, to go in to possess the land, which the Lord your God giveth you." How could that great multitude of men, women and children cross the swift river, in the face of their watchful and mighty foes? Joshua could not tell them, in advance, how the crossing was to be done without boats or bridges; and it was the time when the river was in flood, overflowing all its banks. When the hour should arrive the way would be made plain. The one thing to be remembered was that when they passed through the waters the Lord would certainly be with them.

Let us try to rest our hearts on that certainty as we prepare to pass rivers of difficulty or sorrow; or consider how we can cross the dark flood which stands between us and our Promised Land. Though the way may seem blocked we may go forward in quiet confidence, leaning on the Love which can never fail or forsake us.

In that beautiful love-poem, the Song of Solomon, we read these words: "Who is this that cometh up from the wilderness, leaning upon her beloved?" How safe



**Like Nut Bubbles**  
Yet It's Whole Wheat Puffed

There lies the fascination of Puffed Wheat. The grains are light and airy—puffed to eight times normal size. They almost melt away.

An hour of fearful heat has given them a taste like toasted nuts. Yet they are whole wheat. Every food cell is exploded so digestion is easy and complete.

They supply whole-wheat nutrition as no other food can do. In lesser ways of cooking the outer wheat coats pass largely undigested.

**Dozens of Delights**

The two puffed Grains with their different flavors offer dozens of delights.

They are not for breakfast only. Every home finds countless uses for these nut-like, flimsy grains.

**Remember These**

Puffed Wheat in milk is the utmost in a food. With every food cell broken it is easy to digest.

For luncheons, suppers and at bedtime there is nothing to compare with this dish.

Puffed Rice mixed with fruit adds a delicious blend. It adds what a light and dainty crust adds to shortcake or to pie.

Puffed Rice crisped and lightly buttered, becomes a food confection.

Have a dish ready when the children come from school. They will eat them like peanuts or popcorn. And they take the place of foods less healthful, less easy to digest

Millions of children are now enjoying Puffed Grains, but not half of them get enough.

Every home should keep Puffed Grains on hand.



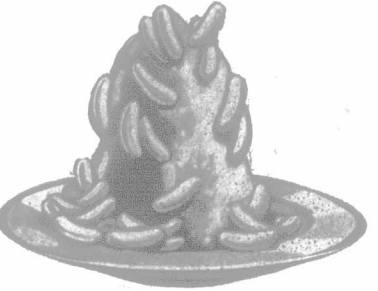
In Milk



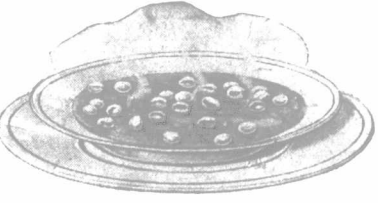
With Fruit



Buttered to Eat Dry



On Ice Cream

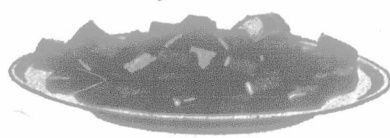


In Soups

**Puffed Wheat Puffed Rice**  
Steam Exploded—8 Times Normal Size

**Used Like Nut Meats, Too**

Puffed Rice is used like nut meats in home candy making. The flavor is like toasted nuts, and it makes the candy light. Think of a whole-grain food made so delicious that it is also a confection. And so crisp and flavory that children like to eat it dry.

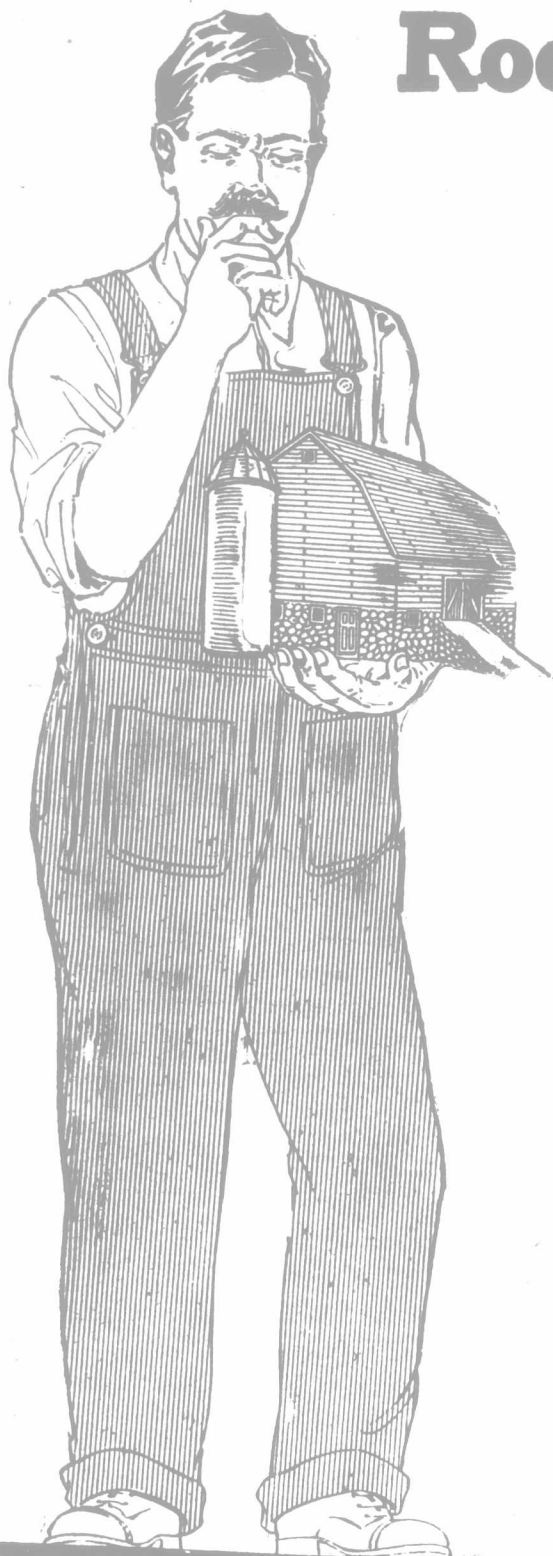


**The Quaker Oats Company**

Peterborough, Canada Sole Makers Saskatoon, Canada



# Paroid Solves Your Roofing Problems



To receive roofing satisfaction whether on a Barn, Warehouse, Railroad Building or large Industrial Plant, consider the following points.

Roofing must primarily give continuous service under every weather condition. It must be easily laid—adaptable to every description of roof. Further, roofing once laid should not become a liability through requiring constant repair.

## NEPONSET PAROID

withstands hard and continuous wear, and is adaptable to all roof surfaces. Cheapness of first cost, as compared with wood and metal shingles, or slate, and economy of maintenance are some of its principal features.

The base of Neponset Paroid is a high grade rag felt thoroughly impregnated with asphalt, making it positively water-proof and fire-resisting.

It is further reinforced with a talc surface, grey in color; or with a permanent slate surface, red or green in color.

**EASY TO LAY**—With every roll of Neponset Paroid is supplied sufficient nails and cement with full directions.

Ask the Neponset dealer in your district, or write to us for an interesting booklet, "Roofing Canada"

Made in Canada by  
**BIRD & SON, LIMITED**  
HAMILTON, ONTARIO

"Canadian money, Canadian made, should be spent in Canada for Canadian trade."



# NEPONSET ROOFS

## THE MOLSONS BANK

Incorporated in 1855  
Capital & Reserve \$9,000,000

Travellers can get cash anywhere for letters of credit issued by The Molsons Bank.

Safety—economy—convenience recommend them to all travellers.

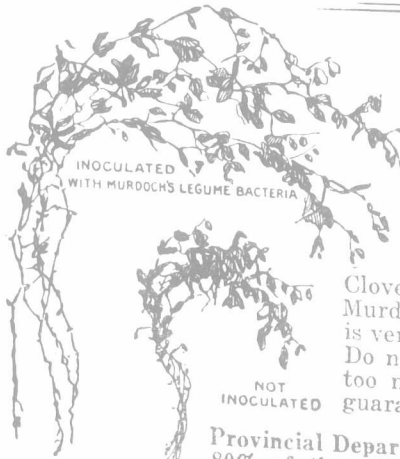
Over 120 Branches

## SEED CORN

For sale, many varieties Essex grown; special crop seed corn. Satisfaction guaranteed. Club orders a speciality. Apply to

ED. TELLIER - ST. JOACHIM, ONT.

Please mention The Advocate when writing



## —At Little Cost and Less Time YOU can anticipate big crops

No farmer can afford to sow Alfalfa or Clover Seed without inoculating it with Murdoch Legume Bacteria. Seed inoculation is very simple and only takes a few minutes. Do not let good seed go to waste—it costs too much. Murdoch Legume Cultures will guarantee you a good catch and a good crop.

Provincial Department of Agriculture reports show that 80% of the Alfalfa experiments and 70% of the Red Clover experiments gave increased crop returns following seed inoculation.

Price \$1.00 each culture—sufficient to inoculate one bushel of seed—money back guaranteed.

MURDOCH LEGUME CULTURES are put up for Alfalfa, Red Clover, Sweet Clover, Peas, Alsike Clover and all other legumes. Alfalfa and Clover from seed treated with Murdoch Legume Cultures do not winter-kill readily—besides we guarantee you a good catch or refund your money. Write us to-day for Convincing Literature.

## MURDOCH LEGUME LABORATORY

"ALDIE"

GUELPH, ONT.

and happy our march towards the river would be if we walked always leaning upon our Divine Lover. Then each disappointment would be accepted as a gift from Him—a gift intended to strengthen our trust in His lover and wisdom. Then we could not be afraid, though danger, darkness or pain were our portion. He can give sufficient strength as it is needed. We are weak, but He is able to supply all our need. Fearfulness springs from distrust—and cowardice is a crime when soldiers are on active service.

God loves to touch your hand in the darkness and say tenderly: "Be strong and of a good courage; be not afraid, neither be thou dismayed: for the Lord thy God is with thee whithersoever thou goest."

Sometimes, when a cloud of depression and distrust has shut out from one of His troubled children the vision of His Face, a tiny candle throws enough light to show the way.

A candle will serve—at times, I speak from experience, for twice since I began to write this "Quiet Hour" has the electric light gone out. I didn't sit still and submit to the darkness. I lit a candle and went on with the work which is a weekly pleasure. Now the blaze of light makes writing easier, but I blew out the friendly little candle not unthankfully.

A great preacher was feeling very downhearted one day when he passed an open cottage door and "happened," as he said, to hear a child reading: "As thy days, so shall thy strength be." The words were like a hand-clasp of the Great Lover, or like the light of a lantern driving away gloom and showing that the next step was clear.

I think the Companion of souls must smile in tender amusement when one of His "beloved" imagines that such a gleam of light "happened". Did you ever hear Him whisper: "Fear thou not, for I am with thee?" Of course you have! The Divine Lover makes no secret of His Love. The Bible is one of His love-letters; the blue sky, beautiful scenery, the perfume of flowers and songs of birds are love-messages from Him; and the still small Voice within each heart comes nearer still—for it speaks directly to His "beloved."

And it is wonderful to know that He cares about our love in return. We, who have nothing that we do not receive from Him, have power to give something of great value to the Lord of all. He wants our answering love—

"And He hath need of thee, thy love is dear,—  
Thine uttered love, told waiting at His feet;  
And hurry not to service till prepared,  
By quiet waiting in His Presence sweet."

Like another beloved friend of the Master, you are free to lean back on His heart, and rest soul and body by touching Him. You can do that anywhere, in a crowd or alone, in church or when you are hanging out the weekly washing.

Perhaps, like Zacchaeus, you are only interested enough in Jesus to watch Him as He passes by. But to such interested onlookers He has a fashion of saying: "Make haste! . . . for to-day, I must abide at thy house." Those who love the Lord may plead earnestly: "Abide with us!" while others, who think themselves outside the circle of His disciples, may be won suddenly and unexpectedly by His openly expressed wish to abide with them.

Where is your guest-chamber? Is it purified and made beautiful in readiness for the coming of the King? Or are you closing the door against Him because you are hiding there some secret sin? Our hearts are hungry for love—love that is flawless and faithful. When perfect Love is given, how can we turn away coldly or carelessly? Listen!

"So, through the thunder comes a human voice  
Saying, O heart I made, a heart beats here!  
Face, my hands fashioned, see it in myself!  
Thou hast no power nor mayst conceive of mine,  
But love I gave thee, with myself to love,  
And thou must love me who have died for thee!"

DORA FARNCOMB.



A cup of hot OXO keeps the warmth IN and the cold OUT.

A Cube to a cup.



Dyed Her Faded Skirt, Also a Coat

"Diamond Dyes" Make Shabby Apparel Just Like New—So Easy!

Don't worry about perfect results. Use "Diamond Dyes," guaranteed to give a new, rich, fadeless color to any fabric, whether wool, silk, linen, cotton or mixed goods,—dresses, blouses, stockings, skirts, children's coats, draperies,—everything! A Direction Book is in package. To match any material, have dealer show you "Diamond Dye" Color Card.

Color Sells Butter

Add a rich "June shade" to the splendid taste of your butter and get top prices. Try it! It pays!

Dandelion BRAND Butter Color

gives that even, golden shade everybody wants. Purely vegetable. Harmless. Meets all laws. Small bottle costs few cents at any store. Enough to color 500 lbs.

Tudhope-Anderson

WIDE TIRE Steel Wheels

Save your fields and horses

No farmer can afford to have his horses or fields used up by the extreme heavy draft of ordinary wheels in soft soil. Tudhope-Anderson Wide Tire Steel Wheels are a paying investment.

The heavy cast-iron two piece hub can be made to fit any skein or axle bearing—diameters, 20" to 60"; tire widths, 8" to 10".

Write us now for order-blanks and full particulars about Wide Tire Steel Wheels for work about the farm. Remember this is Made-in-Canada wheel.

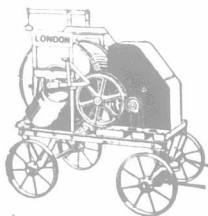
We also manufacture Low Down Wide Tire Steel Wheel Trucks.

Tudhope-Anderson Co., Limited  
Orillia Ontario  
Cut out this advertisement and mail to us



London Concrete Mixer

No. 4



EQUIPPED WITH "Novo" Dust Proof Gasoline Engine  
Capacity 40 cu. yds. per day.

This machine is especially suitable for small jobs. It is built to last a lifetime. Saves the price of itself in thirty days' use. Write for catalogue No. 1-K.

London Concrete Machinery Co., Limited  
Dept. B, London, Ontario  
World's Largest Manufacturers of Concrete Machinery.

PATENTS Canadian, Foreign, Booklets Free

EGERTON R. CASE, M.C.I.P.A. (Lond.)  
10 Adelaide East. TORONTO

PATENT SOLICITORS Fetherstonhaugh & Co. The old-established firm. Patent everywhere. Head Office: Royal Bank Buildings, Toronto. Ottawa Office: 5 Elgin Street. Offices throughout Canada. Booklet free.

The Ingle Nook

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

For "Would-be Nurse."

Dear Junia.—Many a time I have been tempted to write you on some important subject that has been suggested through your helpful column in this valuable paper. Now the challenge is so great I cannot refrain and also feel I should not.

A "Would-be Nurse," Huron Co., has touched a sympathetic chord in my make-up and since I found, enjoyed, and was able to do, for a time at least, just what she wants, I would like for her sake and all young women who have like desires to tell where I obtained my training and how very much it meant to me and to many, many a mother in the far West, and also in Ontario.

The "Nursing-at-Home" Mission, 76 Hayter St., Toronto, gives a two-years' course to Christian young women. It is some years since I trained, but as far as I know the same rules and regulations govern the acceptance of prospective nurses. A public school education with entrance was all that was required.

The training was most practical, almost all being done in the private homes of the poor and needy of the city. This to me was very helpful in after work, for we had always during training to adapt ourselves to circumstances and make the most of what we found to work with. Whereas a hospital trained nurse misses sorely the convenient appliances. On one occasion I remember finding nothing but the father's new handkerchief to clothe the new wee son, and a small granite pudding dish to serve as all basins. The family had only arrived in this country a few days before.

The obstetrical work occupied most of our time so our experience was varied and thorough along that line. In fact during our work in the West we seldom ever had a doctor assist in the obstetrical cases. Not that we wished it so, I assure you, but none were nearer than twenty-five miles and often farther and unless the case was very, very serious a doctor could not be gotten.

Regarding the shorter course.—The full course is most desirable and if possible at all, take it.

It gives you so much more confidence when you run up against the serious things in nursing.

You also receive your full course of lectures, similar to all hospital training, and try your examinations, which helps the mind to act more promptly and thoroughly when difficult symptoms arise. You also receive such a thorough dispensary training in which you see and hear diseases diagnosed, explained and prescribed for by a staff of doctors, also having a hand in making up the medicines which gives one a knowledge of the whys and wherefores of drugs and their actions.

There is also the option of a post-graduate course in any subject you wish to develop more fully in some of the American hospitals, another nurse and I took "Infectious Diseases" in New York and found the staff there as interested and willing to help us as the other graduate nurses. In fact, we were always shown the preference when very serious cases were to be speacial. I merely mention this to show they recognized the thorough, efficient training we had received.

You also receive your certificate and pin at graduation. But, if this is entirely out of the question, I know while I was in training, Deaconesses and Missionaries were allowed short courses, which would be helpful in their work. I do not know the superintendent there now nor who is on the Board of Managers, so cannot say what they allow, but I know the "Nursing-at-Home" has always stood "To Help" and if you stated your case and desire they would surely do something for you.

It is the training I know you want so I sincerely hope they will be free to give it to you that you may be the noble help you wish to be.

There is also a "Nursing-Mission" on Beverly St., Toronto, something

WRIGLEY'S

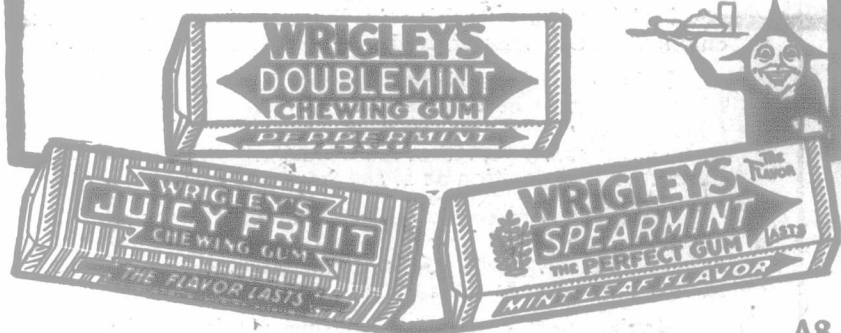


After a hearty meal, you'll avoid that stuffy feeling if you chew a stick of

WRIGLEY'S

Other benefits: to teeth, breath, appetite, nerves. That's a good deal to get for 5 cents!

Sealed Tight—Kept Right



→The Flavor Lasts←

90% No. 1's!

Isn't it worth a little extra time and money to be sure of trees bearing like that on the left?

Trees such as that on the right, left to the mercy of insects and fungus growths, are a luxury none can afford these days.

Ensure a big and profitable yield by careful spraying with reliable and economical J. C. sprays.

ARSENATE OF LEAD  
CAL-ARSENATE  
POISON BORDO DUST

John Cowan Chemical Co. Limited  
7 Dalhousie Street, Montreal

by our march towards the river... if we walked always leaning... Divine Lover. Then each dis... ent would be accepted as a... Him—a gift intended to streng... trust in His lover and wisdom... could not be afraid, though... darkness or pain were our portio... give sufficient strength as it i... We are weak, but He is able... y all our need. Fearfulness... from distrust—and cowardice... e when soldiers are on active

ves to touch your hand in the... and say tenderly: "Be strong... good courage; be not afraid... e thou dismayed: for the Lord... s with thee whithersoever thou

es, when a cloud of depression... st has shut out from one of His... children the vision of His Face... ndle throws enough light to... way.

He will serve—at times, I... m experience, for twice since... write this "Quiet Hour" has... ight gone out. I didn't sit... submit to the darkness. I lit... and went on with the work... a weekly pleasure. Now the... ight makes writing easier, but... t the friendly little candle not... lly.

t preacher was feeling very... ed one day when he passed... cottage door and "happened,"... to hear a child reading: "As... so shall thy strength be"... ere like a hand-clasp of the... er, or like the light of a lantern... ay gloom and showing that the... was clear.

the Companion of souls must... nder amusement when one of... ved" imagines that such a... light "happened". Did you... Him whisper: "Fear thou not... with thee?" Of course you... Divine Lover makes no... His Love. The Bible is one... letters; the blue sky, beautiful... ne perfume of flowers and... birds are love-messages from... the still small Voice within... comes nearer still—for it... ctly to His "beloved."

wonderful to know that He... t our love in return. We... othing that we do not receive... have power to give something... ue to the Lord of all. He... nswering love—

ath need of thee, thy love... ar,—... red love, told waiting at His

not to service till prepared... aiting in His Presence sweet."

ther beloved friend of the... n are free to lean back on His... est soul and body by touchi... can do that anywhere, ... or alone, in church or when... ging out the weekly washing... like Zacchaeus, you are only... ough in Jesus to watch... passes by. But to such inter... kers He has a fashion of... lake haste! . . . for to-day... de at thy house." Those... e Lord may plead earnestly... us!" while others, who think... outside the circle of His... may be won suddenly and... y by His openly expressed... e with them.

your guest-chamber? Is it... made beautiful in readiness... ning of the King? Or are... the door against Him because... ling there some secret sin?... are hungry for love—love... wless and faithful. When... e is given, how can we turn... or carelessly? Listen!

the thunder comes a human... art I made, a heart beats here!... hands fashioned, see it in... f!

o power nor mayst conceive... e, ... ve thee, with myself to love... ust love me who have died... ee."



### Ontario Seed Corn Co-Operative

Organized for the growing and marketing of No. 1 standard varieties of seed corn. Special attention to Farmers' Clubs. Write:

Walter Anderson, Secretary  
Amherstburg, Ont.  
Or J. F. McGregor, Sales Manager  
Wardsville, Ont.

FOR SALE  
**O.A.C. No. 21 Barley**  
1918 grown. Choice seed. Apply  
PETER G. MORISON, Route 3  
St. Mary's Ontario

Keep your eye on this Brand



The one Tea that never disappoints the most critical tastes.

# "SALADA"

on a Sealed Packet is Your Safeguard.

similar, so if one is not approachable the other may be.

The line of work you have suggested is so much needed I hope your outspoken desire may arouse others who can, to go and do likewise.

If there is any more information required that I can give my address will be with "Junia".

Will you pardon all errors, it is the first time I have written anything that might appear in print and an amateur's nervousness and excitement has kept me company. There is also such a store of interesting things in my vast experience that it is hard to refrain from relating some of them. May I come again?  
"A NURSING-AT-HOME" NURSE.

Certainly come again. This letter is very helpful. Why should you be nervous? We are just a little company chatting about the "Ingle Nook," you know.

#### Re Letter From Quebec.

Dear "T. C. M."—Thank you very much for your charming letter, which brought me, not only your kind words, but a breath of your own personality, which I have felt before in every communication from you. It was almost a matter of regret to me, however, that it was marked "personal." So much do I feel myself merged with this cozy corner of ours and the people who come here to chat a while, that it seems as though everything that comes to me, through our paper, should be for all. Do you mind if I quote just one sentence—not because of the kindly "bouquet" handed to us, but because of a thought that may set someone off on a new (to her) track of thinking. You say: "What wonderfully good taste and judgment you editors of the Home Department display! Some farm journals always keep one in mind of the work, not seeming to realize that the mind needs diversion, with the result that the best work is accomplished and enjoyed thereby." For the compliment I thank you; with the thought regarding work I absolutely agree; it is true that the hands work best when the mind is really trained to interesting and inspiring thought. Thank you, also, for the little poem, which I shall keep for the children. I am glad you like Ernest Poole's writings. His insight into human nature is quite wonderful (how he understands "Deborah," and "Edith" and "Roger Gale") and he is a real artist besides, one of the few folk in America to-day who are writing literature. I thought "The Harbor" especially artistic,—didn't you?—written with wonderful power. Could you ever forget his description of the stokers on the great ocean liners? And didn't it make you realize, sharply and pitifully, how many people there are in the world who are slaving in just such ways that others may enjoy comforts and luxuries and prosperity impossible without the toil of these hidden ones? Did the thought cross your mind that surely some better system must be invented before ever this world can be founded on a basis of humanity—not to speak of Christianity?—The fashionables in the first cabin—the stokers in the hold! No, it is not right. One has only to read Poole's description to realize that. Last of all, (to return to your letter), no, I never "breathed the air of Cornell." But how I should love to!

#### Book for Elocutionist.

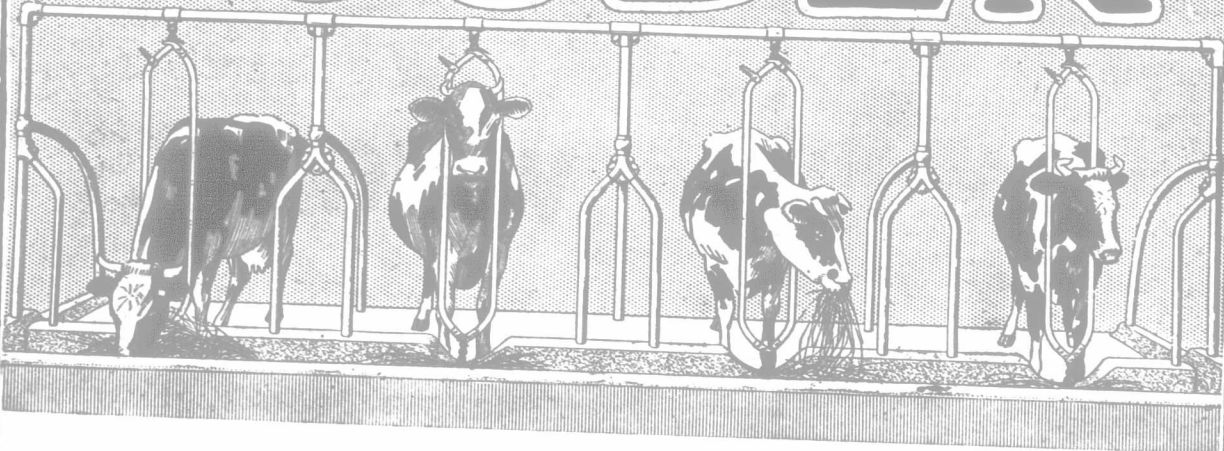
For A. L. H. A book such as you want can probably be obtained at the bookstore nearest to you, or at the T. Eaton Co., Toronto; McAinsh's bookstore, College St., (near Yonge), Toronto; or Tyrrell's bookstore, King St., Toronto. Write for prices.

#### Filling the Marmalade Jars.

**Grape Fruit Marmalade.**—Take 2 grape fruit and 1 lemon and shred finely. To every pint of fruit add 2½ pints water. Soak the grape-fruit seeds in a little water separately. Let all stand over night. Add the water off the seeds and boil the fruit ¾ hour. For every pint of fruit add 1½ pints sugar and boil just until it is of the right consistency when cool.

**Mixed Marmalade.**—Shred finely (or put through the meat-grinder, 1 large grapefruit, 1 orange and 1 lemon, first removing seeds and cores, which should

# LOUDEN



## Swinging Stanchions and Stalls

BESIDES being the strongest cow tie made, the Louden Stanchion is also the most comfortable.

Holding the Stanchion to the curb is a single slack chain, with a tensile strength of no less than 5,000 lbs.

This slack chain allows the cow to swing the Louden Stanchion freely in a circle eight to ten inches wide. Think of the comfort and freedom this gives. It enables the cow to lie down easily on either side, placing her body and head in as restful a position as if she were not tied at all.

Think of how comfortable the sloping corners of the stanchion are for the neck and how safe for her feet. No danger of a cow getting a foot caught between the bottom of this stanchion and the curb.

Don't worry about the twisting strain on the hinge at the bottom. The Louden Stanchion is strong where others are weak. It is reinforced and riveted and is of very great strength.

And, remember, you can open the latch of the Louden Stanchion with one hand, but it can never be unlatched by the cattle.

Like Louden Stanchions, Louden Stalls are built of smooth, high-carbon steel tubes and excel in durability, simplicity, cleanliness and comfort.

The Louden Y Stall, illustrated above, is so constructed that when the cow enters the stall she immediately places her head right into the stanchion. When tied she can easily turn her head and lick herself.

The Y Legs prevent the cow from working hay and other feed out of the manger into the stall and wasting it.

The Y Legs and uprights are so firmly clamped together with Louden's telescoping dust-proof couplings that this patented Louden Stall combines all the strength and good features of the double or triple post stall.

### The Louden Machinery Co., of Canada, Limited

No. 620 Crimea St., Guelph, Ont.

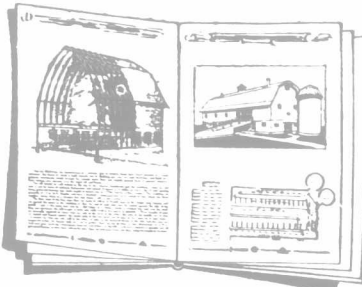
Branches at Winnipeg, St. John, N.B., Quebec and Vancouver also the Alberta Dairy Supplies, Limited, Edmonton, Alta.

This stall is patented by the Louden Machinery Company. Its construction is exclusive to Louden's. There is no other similar stall on the market.

With Louden Barn Equipment, you can keep cows clean, comfortable, and contented. You can save time, labor, and money. You can save feed and straw. You can get more milk from your cows.

Write for the big Louden Catalogue and full particulars. Also send for the

#### Free Barn Plan Book



74 modern barn plans, for small and large requirements, 112 pages of information about ventilation, drainage, lighting, mixing and laying of concrete, etc. The coupon is handy. Fill in, clip out and mail it in an envelope right away.

Louden Machinery Co., of Canada, Ltd.

No. 620 Crimea St., Guelph, Ont.

Please send me, postpaid, the book(s) checked below:

Louden Barn Plan Book.

Louden Illustrated Catalogue.

I expect to build (or remodel) a

barn about (date) .....

for ..... cows ..... horses.

Name .....

P.O. ....

Province .....



if one is not approachable may be. The work you have suggested I hope your outspokenly arouse others who can, to likewise. If any more information I can give my address will be "Ingle Nook," you know.

**Letter From Quebec.**

"C. M."—Thank you very much for your charming letter, which is not only your kind words, but of your own personality, which I felt before in every communication from you. It was almost a regret to me, however, that you had "personal." So much do I merged with this cozy corner of the people who come here, that it seems as though that comes to me, through the should be for all. Do you quote just one sentence?—not the kindly "bouquet" handed because of a thought that may be off on a new (to her) track. You say: "What wonderful taste and judgment you editors of the Department display! Some always keep one in mind of not seeming to realize that it is a diversion, with the result that work is accomplished and rebuffed." For the compliment with the thought regarding the utterly agree; it is true that work best when the mind is directed to interesting and insight. Thank you, also, for the poem, which I shall keep for my collection. I am glad you like the writings. His insight into nature is quite wonderful. He understands "Deborah," and "Roger Gale" and he is a goodly one of the few folk of the day who are writing literature. "The Harbor" especially is a gem. Don't you?—written with wonderful insight. Could you ever forget his words of the stokers on the great ship. And didn't it make you pityingly, how there are in the world who just such ways that others can enjoy comforts and luxuries and possible without the toil of the day? Did the thought and that surely some better way can be invented before even a ship can be founded on a basis of not to speak of Christian-ity in the first cabin of the hold! No, it is not as only to read Poole's realize that. Last of to your letter, no, I never air of Cornell." But how JUNIA.

**The Scrap Bag.**  
**Table Cloths.**  
 When table cloths are worn thin at the edges of the table, run a tuck the whole length of the cloth which is not noticeable when laundered and will insure several more weeks' wear.  
**Cleaning Tins**  
 All cooking utensils, platters, and plates, or gravy dishes that are greasy are more easily washed if first rubbed off with paper which may be put in safe place to assist in kindly a fire. Sent by "T. C. M.", Quebec.

be boiled 15 minutes in a cup of water. Cover the fruit with 12 cups cold water, add water from the seeds and cook slowly for 2 hours, then add 12 cups granulated sugar and boil hard for 20 minutes stirring very frequently to prevent burning.

**Orange Marmalade.**—Wash 4 dozen oranges and 1 dozen lemons. Cut in quarters and slice very thin, removing seeds. To each pound of fruit add 3 pints cold water and let stand in a cool place 24 hours; then boil until the skin is tender and set away to cool. Later in the day weigh again—water and all—and to each pound of the mixture add 1½ lbs. loaf sugar. Boil until the skins are transparent. This is delicious. Either sweet or bitter oranges may be used, but the bitter ones jelly best and many people prefer the flavor.

**A Marmalade Hint.** If one has not a good slicer or chopper to use when making marmalade, a good idea is to grate the rind, then cut the fruit in two, take out the seeds and cut in very small bits with a sharp knife, afterwards adding the grated rind.

**Carrot Jam.**—Boil 3 lbs. carrots until tender, drain, mash fine, add 1½ lbs. sugar and 12 bitter almonds and boil ½ hour. Chopped orange and lemon may also be mixed with the carrot for variety.

**Orange and Lemon Marmalade.**—One dozen oranges and 3 lemons put through the chopper. Add 6 qts. water, 11 lbs. granulated sugar, and boil until it thickens.

**To Candy Peel.**—Take the peel of 4 oranges or 6 lemons, cover with cold water, bring to a boil and cook slowly until tender. Drain for 2 hours. Remove all the white skin, from the rind and cut the rind into strips. Boil 2 cups sugar with ½ cup water until it spins a thread. Drop in the peel, part at a time, and boil 5 minutes. Remove with a fork and roll in sugar.

**The Scrap Bag.**

**Table Cloths.**  
 When table cloths are worn thin at the edges of the table, run a tuck the whole length of the cloth which is not noticeable when laundered and will insure several more weeks' wear.

**Cleaning Tins**  
 All cooking utensils, platters, and plates, or gravy dishes that are greasy are more easily washed if first rubbed off with paper which may be put in safe place to assist in kindly a fire. Sent by "T. C. M.", Quebec.

**Serial Story**

**"His Family."**

BY ERNEST POOLE.

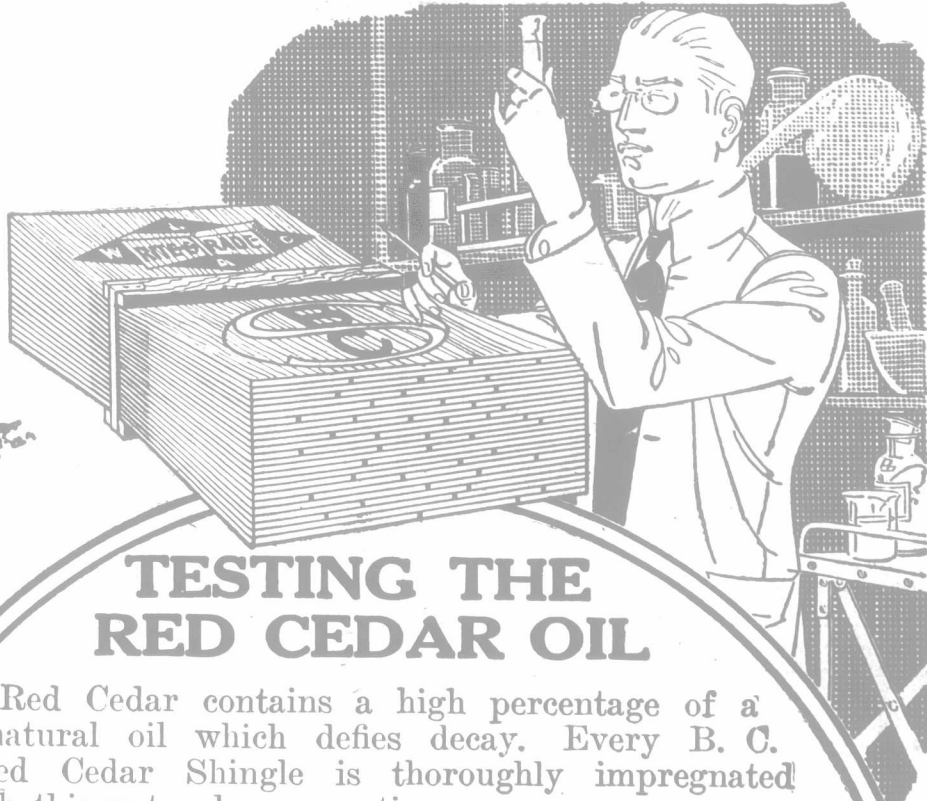
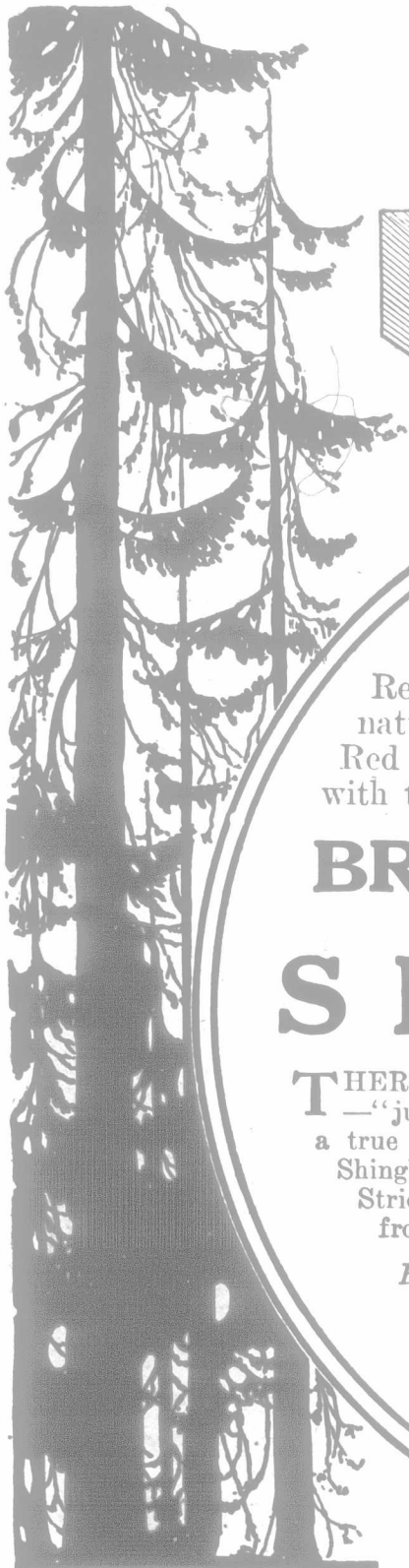
(Serial rights reserved by the Farmer's Advocate and Home Magazine.)

CHAPTER XXVI.

It was only a few days later that Edith arrived with her children.

Roger met her at the train at eight o'clock in the evening. The fast mountain express of the summer had been taken off some time before, so Edith had had to be up at dawn and to change cars several times on the trip. "She'll be worn out," he thought as he waited. The train was late. As he walked about the new station, that monstrous sparkling hive of travel with its huge halls and passageways, its little village of shops underground and its bewildering levels for trains, he remembered the interest Bruce had shown in watching this immense puzzle worked out, the day and night labor year after year without the stopping of a train, this mighty symbol of the times, of all the glorious power and speed in an age that had been as the breath to his nostrils. How Bruce had loved the city! As Roger paced slowly back and forth with his hands clasped behind his back, there came over his heavy visage a look of affection and regret which made even New Yorkers glance at him as they went nervously bustling by. From time to time he smiled to himself. "The Catskills will be Central Park! All this city needs is speed!"

But suddenly he remembered that Bruce had always been here before to



**TESTING THE RED CEDAR OIL**

Red Cedar contains a high percentage of a natural oil which defies decay. Every B. C. Red Cedar Shingle is thoroughly impregnated with this natural preservative.

**BRITISH COLUMBIA RED CEDAR SHINGLES**

THERE'S no substitute—"just as good"—for a true B. C. Red Cedar Shingle—Vertical grain Strictly clear—Free from sap.

Our Shingle Booklet contains information every man intending to build or repair should have on hand. Ask your Local Dealer for it or send us a postcard request.

**Shingle Agency of B. C.**  
 910-11 Metropolitan Bldg., Vancouver, B.C.

Enquire of your Dealer.



**British Columbia Shingles.** A PRODUCT from the forest giants of the Pacific Coast—a Roofing or Siding that will last a lifetime—that gives an artistic finish to any home.

**CLYDESDALES**

AND

**PERCHERONS**

STALLIONS AND FILLIES

T. H. Hassard, of Markham, is offering for quick sale 12 Clydesdale stallions, from three to six years old, including the champion **Count of Hillcrest, Marathon's Heir, Marathon's Best, Count of York, Count Crawford, Royal Revelanta,** and others of like quality and show-ring renown. There are **four fillies three years old,** which have stood well to the top of large classes.

There are four Percheron stallions, including the champion **Monogram, Jasion, Mulet and Autumn Boy.**

Peter Wilton, that great son of Peter the Great, the well-known Standard-bred stallion, is also in the sale. He has a great show record.

These horses must be sold before April 1. Every day will be a bargain day.

**T. H. HASSARD, Markham, Ont.**

meet his wife and children, and that Edith on her approaching train must be dreading her arrival. And when at last the train rolled in, and he spied her shapely little head in the on-coming throng of travellers, Roger saw by her set steady smile and the strained expression on her face that he had guessed right. With a quick surge of compassion he pressed forward, kissed her awkwardly, squeezed her arm, then hastily greeted the children and hurried away to see to the trunks. That much of it was over. And to his relief, when they reached the house, Edith busied herself at once in helping the nurse put the children to bed. Later he came up and told her that he had had a light supper prepared.

"Thank you, dear," she answered, "it was so thoughtful in you. But I'm too tired to eat anything." And then with a little assuring smile, "I'll be all right—I'm going to bed."

"Good-night, child, get a fine long sleep."


And Roger went down to his study, feeling they had made a good start.

"What has become of Martha?" Edith asked her father at breakfast the next morning.

"She left last month to be married," he said.

"And Deborah hasn't replaced her yet?" In her voice was such a readiness for hostility toward her sister, that Roger





## An Invincible Barrier

**Q** The gospel of better farm fences is being surely spread, and each year shows an increase in the demand for


### Invincible FENCING made from Open Hearth Steel

**Q** Your purchase of this fencing means a permanent and safe barrier on your farm.

**PROTECTION**


**Q** Strong enough to stop anything. Your grain is safe, and your neighbor's grain is safe when Invincible Fencing protects it.

**Q** Sold by the better class of dealers all over Canada. If you do not know our Agent, write to us direct. Catalogue upon request.



## THE STEEL COMPANY OF CANADA LIMITED

MONTREAL



shot an uneasy glance from under his thick grayish brows.

"Has Deborah left the house?" he asked, to gain time for his answer. Edith's small lip slightly curled.

"Oh, yes, long ago," she replied. "She had just a moment to see the children and then she had to be off to school—to her office, I mean. With so many schools on her hands these days, I don't wonder she hasn't had time for the servants."

"No, no, you're mistaken," he said. "That isn't the trouble, it's not her fault. In fact it was all my idea."

"Your idea," she retorted, in an amused affectionate tone. And Roger grimly gathered himself. It would be extremely difficult breaking his unpleasant news.

"Yes," he answered. "You see this damnable war abroad has hit me in my business."

"Oh, father! How?" she asked him. In an instant she was all alert. "You don't mean seriously?" she said.

"Yes, I do," he answered, and he began to tell her why. But she soon grew impatient. Business details meant nothing to Edith. "I see," she kept saying, "yes, yes, I see." She wanted him to come to the point.

"So I've had to mortgage the house," he concluded. "And for very little money, my dear. And a good deal of that—" he cleared his throat—"had to go back into the business."

"I see," said Edith mechanically. Her mind was already far away, roving over her plans for the children. For in Roger's look of suspense she plainly read that other plans had been made for them in her absence. "Deborah's in this!" flashed through her mind. "Tell me what it will mean," she said.

"I'm afraid you'll have to try to do without your nurse for a while."

"Let Hannah go?" Oh, father! And Edith flushed with quick dismay. "How can I, dad? Five children—five! And two of them so little they can't even dress themselves alone! And there are all their meals—their baths—and the older

ones going uptown to school! I can't let them go way uptown on the 'bus or the trolley without a maid—"

"But, Edith!" he interrupted, his face contracting with distress. "Don't you see that they can't go to school?" She turned on him. "Uptown, I mean, to those expensive private schools."

"Father!" she demanded. "Do you mean you want my children to go to common public schools?" There was rage and amazement upon her pretty countenance, and with it an instant certainty too. Yes, this was Deborah's plan! But Roger thought that Edith's look was all directed at himself. And for the first time in his life he felt the shame and humility of the male provider no longer able to provide. He reddened and looked down at his plate.

"You don't understand," he said. "I'm strapped, my child—I can't help it—I'm poor."

"Oh, Oh, dad. I'm sorry." He glanced up at his daughter and saw tears welling in her eyes. How utterly miserable both of them were.

"It's the war," he said harshly and proudly. This made a difference to his pride, but not to his daughter's anxiety. She was not interested in the war, or in any other cause of the abyss she was facing. She strove to think clearly what to do. But no, she must do her thinking alone. With a sudden quiet she rose from the table, went around to her father's chair and kissed him very gently.

"All right, dear—I see it all now—and I promise I'll try my best," she said.

"You're a brave little woman," he replied.

But after she had gone, he reflected. Why had he called her a brave little woman? Why had it all been so intense, the talk upon so heroic a plan? It would be hard on Edith, of course; but others were doing it, weren't they? Think of the women in Europe these days! After all, she'd be very comfortable here, and perhaps by Christmas times would change.

He shook off these petty troubles and went to his office for the day.

As she busied herself unpacking the trunks, Edith strove to readjust her plans. By noon her head was throbbing, but she took little notice of that. She had a talk with Hannah, the devoted Irish girl who had been with her ever since George was born. It was difficult, it was brutal. It was almost as though in Edith's family there had been two mothers, and one was sending the other away.

"There, there, poor child," Edith comforted her, "I'll find you another nice family soon where you can stay till I take you back. Don't you see it will not be for long?" And Hannah brightened a little.

"But how in the wide world," she asked, "will you ever do for the children, me gone?"

"Oh, I'll manage," said Edith cheerfully. And that afternoon she began at once to rearrange her whole intricate schedule, with Hannah and school both omitted, to fit her children into the house. But instead of this, as the days wore on, nerve-racking days of worry and toil, sternly and quite unconsciously she fitted the house to her children. And nobody made her aware of the fact. All summer long in the mountains, everyone by tacit consent had made way for her, had deferred to her grief in the little things that make up the every-day life in a home. And to this precedent once established Edith now clung unawares.

Her new day gave her small time to think. It began at five in the morning, when Roger was awakened by the gleeful cries of the two wee boys who slept with their mother in the next room, the room which had been Deborah's. And Edith was busy from that time on. First came the washing and dressing and breakfast, which was a merry, boisterous meal. Then the baby was taken out to his carriage on the porch at the back of the house. And after that, in her father's study from which he had fled with his morning cigar, for two hours Edith held school for her children, trying her best to be patient and clear, with text-books she had purchased from their former schools uptown. For two severe hours, shutting the world all out of her head, she tried to teach them about it. At eleven, their nerves on edge like her own, she sent them outdoors "to play," intrusting the small ones to Betsy and George, who took them to Washington Square nearby with strict injunctions to keep them away from all other children. No doubt there were "nice" children

# Shinn-Flat

## Lightning Rods

Are scientifically the nearest approach to absolute protection that has ever been devised. Their form gives them 36% greater electrical carrying capacity than old style round cable of the same weight and number of strands—putting them in a class by themselves and making them much easier to sell. There is no competition for Shinn-Flat.

Lightning Can't Strike  
if  
Shinn Gets There First



We want good dealers who are interested in a specialty line that sells readily and affords a good margin of profit. Every property owner is a prospect. Ask us how we help you get started.

**Shinn Mfg. Co. of Canada, Limited**  
Prof. W. H. Day, Secretary and General Manager  
Manufacturers of Shinn-Flat Lightning Rods  
"The Kind That Carry a Cash Bond"

110 Woolwich St. Guelph, Ont.

## See my Three Shorthorn Bulls and Three Heifers

That will be at the London, Ontario, Shorthorn Show and Sale, March 23rd and 24th. Anyone wanting a herd or show bull should see these bulls before buying.

**J. T. Gibson - Denfield, Ont.**



# Safety Points

## in Farm Investments

### I. Insure Clover Catch

With clover seed selling from \$40 to \$50 per bushel, you want to make sure of a stand.

25 Ontario Farmers reporting to us on the results from fertilizers claim that fertilizers produced a strong catch of clover and grass seed. 251 lbs. of Fertilizer per acre, used with wheat or oats seeded to clover and grass, gives the clover and grass a vigorous start, and materially increases the yield of grain.

Average of \*95 Years' Results on Wheat



Fertilized Not Fert.

\*Long Time Results on Corn 95 Years



Fertilized Not Fert.

\*Tests of Ohio, Pennsylvania, Indiana and Virginia, averaged.

### II. Insure Increased Yields

The Ontario Agricultural College and New Jersey Experiment Station have shown that the higher the crop yields the greater the labor income.

### Fertilizers Increase Crop Yields

See comparisons from leading experiment station tests illustrated here

Average of \*Long Time Results on Potatoes 26 Years



Fertilized Not Fert.

†Paying Results on Sugar Beets



Fertilized Not Fert.

\*Tests of Ottawa and Ohio averaged.

†Test at Monominee School of Agric., Mich.

### III. Increase Meadow Yields

and pasture-carrying capacity by fertilization.

Midland Agricultural Station, England, reports that by fertilizing on heavy clay pastures with 400 lbs. of fertilizer once in four years, applying it broadcast early in spring, they increased the carrying capacity from 3 head of sheep per acre to 11 head per acre.

Use 200 to 300 lbs. per acre of fertilizer, analyzing 3 to 5% Ammonia and 10 to 12% Phosphoric Acid, and 2 to 4% Potash, this spring on your meadows and pastures and get a similar increase.

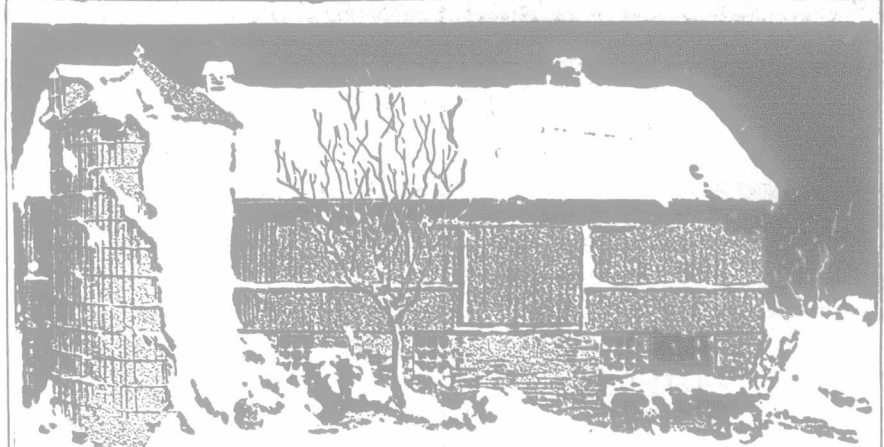
Write for our literature re the profitable use of Fertilizers.

## The Soil and Crop Improvement Bureau

of the Canadian Fertilizer Association

Henry G. Bell, B.S.A., Director

1111 Temple Building - Toronto



## Now is the time you need an IDEAL GREEN FEED SILO

It provides succulent feed during the cold winter days, which enables the cows to give 25% more milk than if they were fed on a dry feed ration. And a silage ration is considerably cheaper than a dry ration.

At the present high prices of milk and butter-fat, no dairy farmer can afford to go through another season without a silo. Soon the rush of spring work will be on and the question of getting a silo may again be sidetracked.

### Plan for your silo now

An Ideal Green Feed Silo will make better silage than any other silo, and will last longer. Thousands of Canadian cow owners have proved this to their own satisfaction.

Write to nearest office for catalogue, which describes the Ideal Green Feed Silo and gives valuable information about silage.

## THE DE LAVAL COMPANY, Ltd.

MONTREAL PETERBORO WINNIPEG VANCOUVER

50,000 Branches and Local Agencies the World Over

there, but she herself could not be along to distinguish the "nice" from the "common"—for until one o'clock she was busy at home, bathing the baby and making the beds, and then hurrying to the kitchen to pasteurize the baby's milk and keep a vigilant oversight on the cooking of the midday meal. And the old cook's growing resentment made it far from easy.

After luncheon, thank heaven, came their naps. And all afternoon, while again they went out, Edith would look over their wardrobes, mend and alter and patch and contrive how to make last winter's clothes look new. At times she would drop her work in her lap and stare wretchedly before her. This was what she had never known; this was what made life around her grim and hard, relentless, frightening; this was what it was to be poor. How it changed the whole city of New York. Behind it, the sinister cause of it all, she thought confusedly now and then of the Great Death across the sea, of the armies, smoking battle-fields, the shrieks of the dying, the villages blazing, the women and children flying away. But never for more than a moment. The war was so remote and dim. And soon she would turn back again to her own beloved children, whose lives, so full of happiness, so rich in promise hitherto, were now so cramped and thwarted. Each day was harder than the last. It was becoming unbearable!

No, they must go back to school. But how to manage it? How? How? It would cost eight hundred dollars, and this would take nearly all the money she would be able to secure by the sale of her few possessions. And then what? What of sickness, and the other contingencies which still lay ahead of her? How old her father seemed, these days! In his heavy shock of hair the flecks of white had doubled in size, were merging one into the other, and his tall, stooping, massive frame had lost its look of ruggedness. Suppose, suppose. . . . Her



## At Your Service

Wherever You Live

The woman in town, or country, has the same advantage as her sister in the city in expert advice from the best-known firm of Cleaners and Dyers in Canada.

Parcels from the country sent by mail or express receive the same careful attention as work delivered personally.

## Cleaning and Dyeing

Clothing or Household Fabrics

For years, the name of "Parker's" has signified perfection in this work of making old things look like new, whether personal garments of even the most fragile material, or household curtains, draperies, rugs, etc.

Write to us for further particulars, or send your parcels direct to

# Parker's

## Dye Works Limited

### Cleaners & Dyers

791 Yonge St. Toronto

Is Your Spare Time Worth Money? If not write to The Farmer's Advocate and Home Magazine and learn how you can make money in your spare time in an easy and pleasant way. Address: THE WILLIAM WELD CO. LTD., London, Ontario

breath came fast. Was his life insured, she wondered.

On such afternoons, in the upstairs room as the dusk crept in and deepened, she would bend close to her sewing—planning, planning, planning. At last she would hear the children trooping merrily into the house. And making a very real effort, which in times was in truth heroic, to smile, she would rise and light the gas, would welcome them gaily and join in their chatter and bustle about on the countless tasks of washing them, getting their suppers, undressing the small ones and hearing their prayers. With smiling good-night kisses she would tuck her two babies into their cribs. Afterward, just for a moment or two, she would linger under the gas jet, her face still smiling, for a last look. A last good-night. Then darkness.

Darkness settling over her spirit, together with loneliness and fatigue. She would go into Betsy's room and throw herself dressed on her daughter's bed, and a dull complete indifference to everything under the moon and the stars would creep from her body up into her mind. At times she would try to fight it off. Tonight at dinner she must not be what she knew she had been the night before, a wet blanket upon all the talk. But if they only knew how hard it was—what a perfect—hell it was! Her breath coming faster, she would dig her nails into the palms of her hands. One night she noticed and looked at her hand, and saw the skin was actually cut and a little blood was appearing. She had read of women doing this, but she had never done it before—not even when her babies were born. She had gripped Bruce's hand instead.

(To be continued.)

Soviet Russia plans to convert the Red army, until demobilized, into an army of labor which will build, repair roads, obtain fuel, repair agricultural implements, and work the land.



**POULTRY AND EGGS**

Condensed advertisements will be inserted under this heading at four cents per word each figure 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.

**BABY CHICKS—BRED-TO-LAY BARRED ROCK**, 25c. each; S.-C. White Leghorns, 20c. each; hatching eggs, \$2 and \$1.75 per 15. Circular. G. W. Grieve, Parkhill, Ont.

**BABY CHICKS, EGGS FROM OUR WHITE LEGHORNS**, "Barron-Wyckoff strains." Send for our new, free catalogue and prices. Britannia Poultry Farm, R.R. 6, Brampton, Ont.

**BARRED ROCKS—EGGS FOR HATCHING** from trap-nested, pedigreed layers. Ten pullets laid 2,044 eggs in eleven months. Few cockerels left. F. Coldham, Box 12, Kingston, Ont.

**BABY CHICKS, ANCONAS, AND LEGHORNS** \$13 per fifty, \$25 per hundred, delivered. Mating list ready, order now. G. A. Douglas, Iderton, Ont.

**BRED-TO-LAY S.-C. WHITE LEGHORNS**—Cockerels \$3 each, chicks 25c. each, \$23 hundred, eggs \$2 setting. Descriptive literature free. Cooksville Poultry Farm, Cooksville, Ont.

**BOOK YOUR ORDER NOW FOR BRED-TO-LAY BARRED ROCK EGGS**, one seventy-five per setting. Few Barred Rock cockerels at four dollars each, one White Leghorn cockerel at three dollars. Henry Hooper, 83 Nottingham Street, Guelph.

**BARGAIN SALE BARRED ROCK COCKS** and cockerels, bred from high-class exhibition stock. As I have too many I offer them at five and ten dollars each. These birds will add quality to your flock. Get one or two while they last. I also have A.O.C. strain, B. Rock cockerels, bred-to-lay strain, big-strung birds, rich yellow legs. Price \$5 each. Idlewild Poultry Yards, Burlington, Ont. C. F. Coleman, Prop.

**BABY CHICKS FROM FERRIS STRAIN** White Leghorns and O.A.C. Barred Rocks, 25c. each. Book your order now for March, April and May delivery; 25% deposit with order. Eggs for hatching, three dollars per fifteen. E. E. Charlton, Iderton, Ont.

**EGGS FOR HATCHING FROM TRAP-NESTED**, bred-to-lay Barred Rocks, \$2.50 per 15. Order early. Send for circular. Gus Langelier, Supt. Experimental Station, Cap Rouge, Que.

**INDIAN RUNNER, WILD MALLARD** ducks, White Guinea Barred Rocks. Mrs. John Annesser, Tilbury, Ont.

**PURE-BRED WHITE LEGHORN EGGS** \$1.50 per 15. A. F. Thornton, Thamesford, Ont.

**S.-C. ANCONAS—EGGS FOR HATCHING**, \$3 and \$4 for fifteen, from my best laying and exhibition strains. E. Brown, 502 Grosvenor St., London.

**WHITE WYANDOTTES—HEAVY LAYING** strains my speciality. Eggs \$3 per fifteen, \$5 per thirty. Frank Morrison, Jordan, Ont.

**WANTED** Crate Fed Chickens Dressed

Also Large Hens Alive or Dressed

Write for price list.

**WALLER'S** 702 Spadina Ave. TORONTO

**FOR SALE** Barred Rock Cockerels

The O.A.C. bred-to-lay strain. Finely barred, single comb, rich yellow legs; sisters laid at 5 months. Price \$5 each.

A. H. CROZIER Meadowvale, Ontario

**Hens Wanted**

alive, 26 cents a pound, any kind, any size, any age. No deduction for shrinkage. I pay express from any station in Ontario. Ship collect on delivery for full amount. Use crates or boxes. Crates loaned free.

**ALBERT LEWIS,** 666 Dundas West, Toronto

**STURDY CHICKS**

From superior strains, free range flocks, the profitable kind that live and grow. White Wyandottes, Barred Rocks, White Leghorns, Mottled Anconas, R. I. Reds. We ship strong, healthy chicks, and guarantee safe arrival.

Write for catalogue and price list. **QUEEN CITY HATCHERY** Linnmore Crescent & Danforth Ave. TORONTO, ONT.

**POULTRY WANTED**

It will pay you to sell your poultry to the best market in Western Ontario. Special prices this month for heavy live hens. Be sure and sell to **C. A. MANN & CO.** 78 King St. London, Ontario

**62 BREEDS PROFITABLE** Pure-Bred Chickens, Geese, Ducks, Turkeys, Hardy Fowls, Eggs and Incubators at lowest prices. Pioneer Poultry Farm. Valuable poultry book and catalog FREE. **F. A. NEUBERT**, Box 110 Mankato, Minn.

**Current Events**

Parliament was opened at Ottawa, on Feb. 26, with great pomp and splendor, in the new, uncompleted but magnificent building on the Hill.

Premier Drury, of Ontario, has decided to proceed with the extension of the Nipissing Central Railway from New Liskeard to the head of Lake Timiskaming.

All trading in stocks, bonds and other securities from outside Canada came to a stop on February 26. The step was taken at the request of the Minister of Finance, Sir Henry Drayton, to protect the home security market.

Hon. F. C. Biggs announced that one of the Ontario Provincial Railways will run from Port Credit to Owen Sound. It will be the first north and south Provincial road in Western Ontario. Another road will be the Dundas highway from Toronto and Hamilton.

The abrogation of the control of sugar prices by the Board of Commerce, was followed next day by action of the sugar refineries, which have raised their prices to a rate that will probably mean a minimum retail price of 18 cents per lb.

A plebiscite just taken in the Yukon territory endorses absolute prohibition of the liquor traffic.

Dr. J. W. Robertson predicts a great increase in production in Canada, in all branches of industry, during this year.

Administration leaders in the U. S. Senate say there are not yet enough votes to ratify the Peace Treaty with the original Lodge reservations to the League of Nations Covenant. The Democrats who signified willingness to take the reservations on Art. X and the Munroe doctrine have receded from that position because they see no hope of modification in other Lodge reservations with which they do not agree.

The British Government, on Feb. 27, made public the text of the Irish Home Rule Bill, which follows closely the outline given to the House by Premier Lloyd George in December last. By it two Parliaments are proposed for Ireland, one of 52 members for the North, and the other of 128 members for the South, with, in addition a Council for Ireland composed of 40 men, half of whom would be selected by each of the Parliaments. The framers of the Bill hope it will form a nucleus around which will be built in time, one Parliament for the whole of Ireland.

The railway strike declared last week in France is now believed to be of a definite revolutionary character, aiming at a general Soviet movement, through centering about a demand for nationalization of the railways. A time of going to press many of the railwaymen have refused to walk out.

Conscription will be abolished in Great Britain on March 31.

Former Premier Asquith was elected to Parliament for the Paisley constituency by a majority of nearly 3,000 votes over the Labor candidate who opposed him.

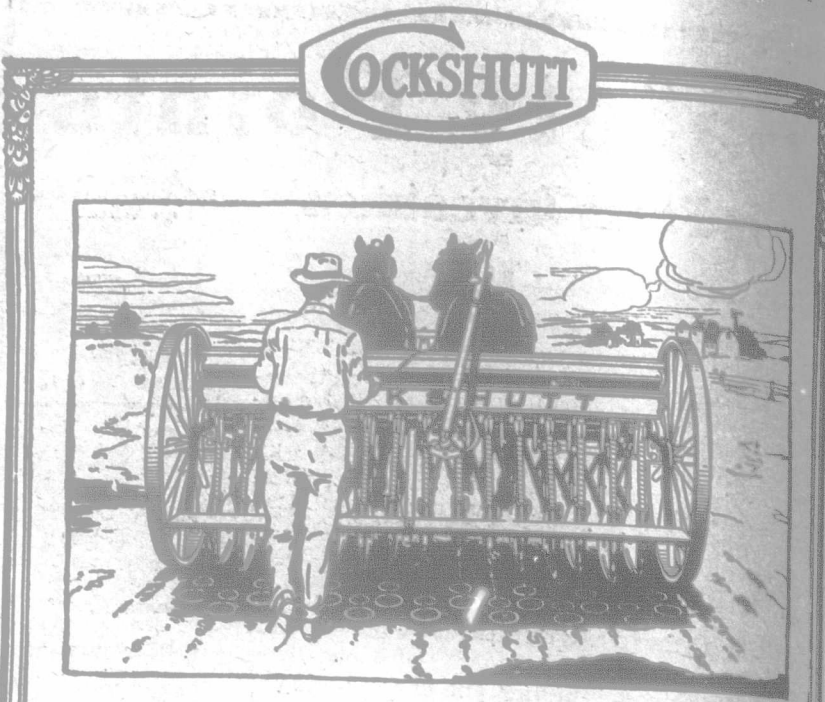
Lady Astor made her maiden speech in the Parliament of Great Britain on Feb. 24, during the course of a debate on liquor control. She pleaded strongly for drastic reforms, for the sake of the children, and was warmly cheered on resuming her seat.

It is proposed in Great Britain to tax all war profiteers who made over \$25,000 during the war.

Mathias Erzberger, German Minister of Finance, accused of graft, resigned from the Cabinet on Feb. 24.

A band of 634 Jews from Southern Russia, the first large group in the return movement to the Holy Land, arrived in Palestine last week.

The Allied Council at Paris has decided upon resumption of trade relations with Russia with some reservations, one of which is that the Soviet Government agrees



**The Cockshutt Drill — Perfect Seeding**

Of all farming operations, seeding is the one in which guess work and haphazard methods must be eliminated. You have so much land to work. You want to use a minimum of expensive seed grain and you have only a limited time in which to work. All these factors have been carefully considered in the designing of the famous Cockshutt light draft Grain Drill.

It has a strong, non-sagging steel frame. Its positive force feed sows any quantity desired. The discs rise independently when striking obstructions. A convenient lever varies the depth of the seeding. The grain shoes deposit the seed accurately and the following rings cover it evenly and thoroughly.

When you buy a drill, get the best. Nothing else is worth while. Get a Cockshutt. It is no experiment but a proven, popular success. See one at our nearest Dealer's or write our nearest Branch for illustrated Drill Folder and catalogue of our full line of Farm Implements and Machines.

**Cockshutt Plow Co., Limited** BRANTFORD, ONT.

Sold in Eastern Ontario and Eastern Canada by **THE FROST & WOOD CO., LIMITED** SMITHS FALLS, ONT. St. John, N.B.

**Undeniable Evidence**

The Great-West Life Assurance Company produces in the actual results already accomplished for policyholders—undeniable evidence that applicants secure the best possible returns by placing their insurance with the Great-West Life. Not only in the high profit returns paid to policyholders, but in low premium rates and liberal conditions of insurance the Great-West Life contracts are singularly attractive.

Let us explain the best Policy for YOUR needs.

**The Great-West Life Assurance Company** Dept "Z" Head Office: WINNIPEG

Ask for a 1920 Desk Calendar—Free on request.

**LARKIN FARMS, QUEENSTON, ONT.** ABERDEEN - ANGUS CATTLE, SHROPSHIRE and SOUTHDOWN SHEEP

CORRESPONDENCE and INSPECTION INVITED (Mention Farmer's Advocate)





The varnished boat puts the surface coating to strenuous tests and emphasizes what we can expect from varnish in our own homes.

That metal roof—what a life it leads if not given surface protection. Rust, leaks, ruined ceilings, expense, can all be charged to neglect of the roof's surface. Save the surface.

## Post-Mortem

**T**HIS drawing is from a photograph of a veranda post from which the paint has been allowed to wear off. Is it not eloquent?

This was a good post not so very long ago but it has now gone beyond redemption. Think of the trivial cost of the paint to protect the post and keep it sound.

Every crack in this post started from the outside. Those deep checks were at the first little checks. Once the surface was broken down, the damage was under way.

How much is similar deterioration under way on your property? Do you dare to say? Have you examined it or just taken for granted that its condition is sound? Have you examined the siding of your building? Have you inspected the eave troughs and other metal trim? Have you seen the roof lately—

have you really looked at it in years? Are you watching the floors, and woodwork, and furniture inside the house.

Your thoughtful answer to these questions we do not ask that you give us; give them to yourself. You owe it to yourself and to those who will inherit your property to ask these questions and answer them.

All over this country property is rotting, rusting, crumbling, wearing, which a surface coating of paint and varnish would save.

The most needless, useless, senseless, and most aggravating loss in the world is loss due to neglect on our own part. Isn't it so?

Look at your property in a new way—closely.

Save the surface and you save all.



THIS ANNOUNCEMENT is issued by the Canadian Save the Surface Campaign Committee for the purpose of educating the Public in the Preservative and Protective value of Paint, Varnish and Allied Products for the Conservation of Property, and has received the approval of the Canadian Trade Commission in the following words:

"The realization of the above objects will lead to employment during the Reconstruction Period and bears our entire approval."

THE CANADIAN TRADE COMMISSION

*Harry M. Thomas*  
Commissioner

**"SAVE THE SURFACE AND YOU SAVE ALL" Paint & Varnish**

# SOW SIMMERS' SEEDS



Successful Since 1856

It is easy to make claims for seeds—it is another thing to be able to substantiate them. We are emphatically able to make our claims good because our record for "seeds that grow" has gone unbroken for 64 years. For seeds, bulbs, plants of all kinds, trust Simmers' goods. **THEY GROW!**

Write for our handsome new 1920 Catalogue today.

J. A. Simmers Limited, Toronto

to abandon propaganda and recognize existing loans. France is willing to agree to terms with Russia through fear that a united Russia might be a menace to Western Europe, while Premier Lloyd George and Nitti take the view that Russia has really broken up and so is not dangerous. It has been decided that Constantinople is to remain with the Turks, although the Dardanelles are to be neutralized and the fortifications razed. President Wilson's recent reply to the note from Premier Lloyd George and Millerand on the Adriatic question states that he will make no objection to any settlement mutually agreeable to Italy and Jugo-Slavia in regard to Fiume, if they agree without compensations at the expense of a third power on the Adriatic; he is not prepared to yield on rearrangement of the boundaries of Albania to the injury of Albania, but insists on the principle of self-determination.

### Sale Dates.

- March 4, 1920.—W. G. Strong & Sons, Gorrie, Ont.—Ayrshires.
- March 4, 1920.—Geo. M. Hearne, Burford, Ont.—Shorthorns.
- March 9, 1920.—R. Willis, R. R. 1, London.—Holsteins.
- March 9, 1920.—Robt. Nichol, Hagersville, Ont.—Shorthorns and Clydesdales.
- March 10, 1920.—Caledonia Shorthorn Breeders, Caledonia.
- March 10, 1920.—R. M. Holmes, Otterville, Ont.—Clydesdales and Holsteins.
- March 10, 1920.—A. G. McNiven, Putnam, Ont.—Shorthorns.
- March 10, 1920.—Jas. McGillawee & Sons, Stratford, Ont.—Shorthorns and Clydesdales, etc.
- March 10, 1920.—Frank I. Bolton, Guelph, Ont.—Shorthorns.
- March 11, 1920.—Russell Bryant, Strathroy, Ont.—Holsteins.
- March 16, 1920.—London District Holstein Breeders' Club, London.
- March 17, 1920.—Oxford Holstein Breeders' Consignment Sale, Woodstock, Ontario.
- March 17, 1920.—Geo. A. Ritchie, Plainville, Ont.—Aberdeen-Angus.
- March 18, 1920.—Fred V. Heeney, Ingersoll, Ont.—Holsteins.
- March 23, 24, 1920.—Western Ontario Shorthorn Show and Sale, London, Ont.
- March 24, 1920.—Perth Breeders' Holstein Club, Stratford, Ont.
- March 25, 1920.—F. A. Legge, Jefferson, Ont.—Holsteins.
- March 31, 1920.—Belleville District Holstein Club, Belleville, Ont.
- March 31, 1920.—Brant District Holstein Breeders' Club, Brantford, Ont.
- April 1, 1920.—Norfolk Holstein Club, Hagersville, Ont.
- April 8, 9, 1920.—Canadian National Sale of Holsteins, Union Stock Yards, Toronto, Ontario.
- June 15, 16, 17 and 18.—Live-Stock Breeders' Association of the District of Beauharnois, Limited, Ormstown, Que.

### Chicago.

Hogs.—Heavy, \$14.10 to \$14.65; medium, \$14.60 to \$15.25; light, \$14.90 to \$15.35; light light, \$14.50 to \$15.10; heavy packing sows, smooth, \$12.75 to \$13.50; packing sows, rough, \$12.40 to \$12.75; pigs, \$13.25 to \$14.75.

Cattle.—Compared with a week ago beef steers and butchers' stock, 25c. to 50c. lower; canners, 50c. lower; bulk about steady; calves, 50c. to 75c. lower; stockers and feeders, steady to strong.

Sheep.—Compared with a week ago lambs and handy yearlings, 75c. to \$1.25 lower; matured sheep firm.

### Victory Bonds.

Following were the values of Victory Bonds on the Toronto market, Saturday, February 28: Victory Bonds maturing 1922, 98 $\frac{1}{2}$ %; Victory Bonds maturing 1923, 98 $\frac{3}{4}$ %; Victory Bonds maturing 1933, 99 $\frac{1}{4}$ %.

"We have had 'The Farmer's Advocate' in our home for several years and firmly believe it is one of the strongest assets for rural progress available to those engaged in agricultural pursuits."

W. F. PATTERSON.  
Wentworth Co., Ontario.

**Hot Best Friend**

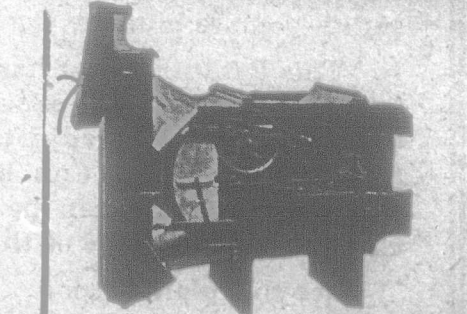
Back of most of the notable successes in the poultry field is **Pratt's Poultry Regulator** the best friend of the industrious layer.

Fowls like it, because it makes them feel so good. Gives them a taste for their feed and starts them hunting the nest.

Poultrymen use it because it pays big profits.

At your dealer's. Booklet FREE.

Pratt Food Co. of Canada, Limited  
328L Carlaw Ave., Toronto.  
PS-12



Are you looking for the best FANNING MILL made, the World's Champion hand and power mill, will do work others will not do.

**Kline Fanning Mill Co.**  
480 Crawford St., Toronto, Ont.

Spray with the world's best machine. The Spramotor has won over 100 gold medals and first awards against the world. Write for free illustrated folder on Crop Diseases.

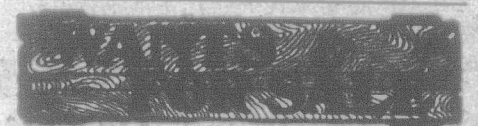
**Spramotor**  
It isn't a SPRAMOTOR unless we made it.

Spramotor Co., 18 King St., London, Can.

### Registered Clydesdale Stallion

Earl of Stanley (18390)  
Foaled in 1916, sire and dam imported. Won first prize and sweepstakes at Clinton Spring Fair in 1919. Enrolled and inspected. For further particulars apply to

R. D. Murdoch, Brucefield P.O., Ont.



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.

FOR SALE—86 ACRES, ELGIN CO.; 30 acres best celery land in Ontario; house, barn, pig-pens, wagon and tool sheds; \$45 per acre; 2 miles to two railroads. Terms: A. D. Urtin, 807 Main St. E., Hamilton, Ont.

FARM WANTED—ONE HUNDRED TO ONE hundred and fifty acres. Must be a one property, stating best cash price and terms to W. C. Hastings, New Liskeard.

### The Vancouver Express

For Winnipeg—Calgary—Vancouver Passengers for Western Canada will find the "Vancouver Express" from Toronto, 10 p.m. Daily via Canadian Pacific a most convenient train. It stops at and connects for all principal points.

The equipment consists of up-to-date Standard Sleepers, Dining Car, Tourist Sleepers, Compartment Observation Car, First-Class Coaches and Colonist Car.

The most beautiful scenery in Canada is along the line of the Canadian Pacific with magnificent Rocky Mountain Resorts at Banff, Lake Louise and Glacier.

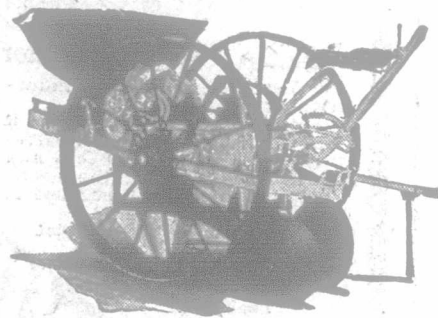
Those contemplating a Pacific Coast Trip should get in touch with Canadian Pacific Ticket Agent or write W. B. Howard, District Passenger Agent, Toronto.—Advt.



# Hoover Visible Potato Planter

**Accurate and Fast**

**A Money Maker**



Why take the time and go to the trouble of planting by hand—the Hoover Visible Potato Planter is just as accurate and a whole lot faster. It saves time and labor.

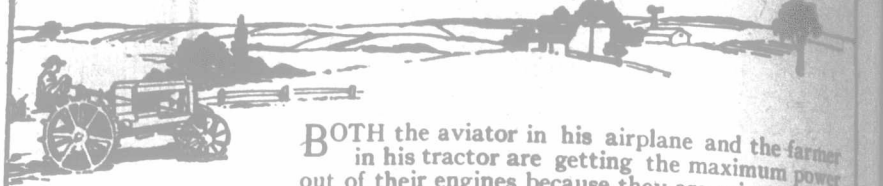
Levers easily adjusted for depth and spacing. Picking and dropping mechanism accurately plants seeds in each hill and spaces properly without effort on your part. The dropping mechanism is in plain sight—you see how the work is done.

This Potato Planter has a frame of channel steel—it stands up under severe strains. The spring-pressure furrow openers and adjustable disc covers are regulated by one lever. Can be equipped with fertilizer attachment. This can be put in place without any changes on the frame of the Planter.

See this planter soon. Make this season's potato crop the best ever. Ask your John Deere dealer about it.

**John Deere Manufacturing Co. Limited**  
Welland, Ontario

# Do it the Airplane Way



BOTH the aviator in his airplane and the farmer in his tractor are getting the maximum power out of their engines because they are using

## En-ar-co Motor Oil

The Perfect Lubricant

During the war, thousands of gallons of En-ar-co Motor Oil were used in airplanes, after passing all Government tests for efficient lubricating quality. The same high quality has given it supremacy on the farm for all lubrication purposes on tractors, trucks, automobiles, motor boats, stationary and other engines.

Scientifically refined by skilled workers, it gives perfect lubrication without carbon deposits and means added power and longer use for your engine. If your dealer cannot supply you, mail us your order direct. Order by the barrel—the most economical way.

Other En-ar-co products for farm use are:

**White Rose Gasoline**  
A pure, dry power fuel, that will put extra "pep" into your engine.

**National Light Oil**  
The best fuel for kerosene powered tractors. Burns brightly without forming soot in lamps and lanterns. Gives added warmth in stoves, heaters, brooders and incubators.

**En-ar-co Motor Grease**  
For every grease point on your car or tractor—compression cups, transmissions, and differentials alike.

**Black Beauty Axle Grease**  
Ensures a smooth-running, wear resisting axle on your wagon.

**Send for Free Auto Game**  
A fascinating game in which autos compete in a cross country race will be sent free to any auto, tractor, motor boat or engine owner who will fill out this coupon and mail it to us.

**CANADIAN OIL COMPANIES Limited**  
Branch Offices in 35 Cities. General Offices: Toronto, Ont.

**CANADIAN OIL COMPANIES 1428 LIMITED**  
Excelstor Life Building, Toronto, Ontario

Send me En-ar-co Auto Game free. Enclosed find three cent stamp for postage. Also give nearest shipping point and quote prices on items marked.

I use.....gals. Gasoline per yr.  
I use.....gals. Motor Oil per yr.  
I use.....gals. Kerosene per yr.  
I use.....gals. Tractor Oil per yr.  
I use.....lbs. Motor Grease per yr.  
I use.....lbs. Axle Grease per yr.

Name.....  
Post Office.....  
County.....Province.....  
I own.....(make of auto, tractor or motor boat.)  
(Be sure to give make of auto, tractor or motor boat, or game will not be sent.)  
Am at present using.....motor Oil.  
I will be in the market again for more oil about.....and you may quote me on.....gals. En-ar-co Motor Oil.

# The Road to Independence



Trouble comes to all of us at one time or another.

The man with a snug bank account, is fortified against the "slings and arrows of outrageous fortune".

It is the duty of every man to lay aside something for the inevitable rainy day.

Open a Savings Account today—and take your first step along the road to Independence.

## THE MERCHANTS BANK OF CANADA

Head Office: Montreal, Established 1864.  
With its 138 Branches in Ontario, 44 Branches in Quebec, 1 Branch in New Brunswick, 2 Branches in Nova Scotia, 36 Branches in Manitoba, 46 Branches in Saskatchewan, 86 Branches in Alberta, and 12 Branches in British Columbia, serves rural Canada most effectively.  
WRITE OR CALL AT NEAREST BRANCH.

# NORTHERN ONTARIO

A vast new land of promise and freedom now open for settlement to returned soldiers and sailors FREE; to others, 18 years and over, 59 cents per acre. Thousands of farmers have responded to the call of this fertile country, and are being made comfortable and rich. Here, right at the door of Old Ontario, a home awaits you. For full particulars as to terms, regulations, and settlers' rates, write

H. A. MACDONELL, Director of Colonization, PARLIAMENT BUILDINGS, TORONTO.  
BENIAH BOWMAN, Minister of Lands, Forests and Mines.

### Dr. Hassard's Clydesdales and Percherons.

Many of the horses which Dr. T. H. Hassard advertised to be sold by auction on February 20 were not disposed of. There are a number of them still in the stable which will be disposed of privately. Breeders wishing to secure some fine quality Clydesdale stallions or fillies should get in touch with Dr. Hassard. These horses have been well to the fore in all big Ontario shows. They are in the pink of condition, and they and the Percheron stallions will do good in any community. The Count of Hillcrest, a six-year-old stallion, is well known to Canadian horsemen. He is a horse of excellent

quality and outstanding under-pinning. The Pride of Dunedin, a four-year-old stallion, has size and quality and was first and reserve champion at both the Toronto National and Guelph Winter Fairs. Marathon's Heir, a two-year-old, has extra good quality and show-ring type. In 1918 he was first in the yearling class and Canadian-bred champion. Lady Marathon, a three-year-old mare with great Clydesdale character, is a show mare, as is also Myrtle Grove, a two-year-old. The Percheron stallions are all comparatively young and are horses whose progeny should be of the desired draft type, and character. The report of Dr. Hassard's sale

# Courteous, Painstaking Service

From the moment you have opened your account with us we look upon you as a friend of the Bank, to be served in every way possible, at every turn.

It is this spirit of "friendly service" that has been largely responsible for this Bank's solid, steady 87 years of progress.

We will appreciate your account.



## THE BANK OF NOVA SCOTIA

Paid-up Capital \$ 9,700,000  
Reserve Fund - 18,000,000  
Resources - - 220,000,000

We invite your account. Special facilities for Banking by Mail, 310 Branches. General Office Toronto.



# APPLE TREES

We still have an excellent stock of thrifty, clean, well-grown, inspected Apple Trees and other Nursery Stock.

Prices are bound to advance, and we advise intending purchasers to send us a list of their requirements at once.

**E. D. Smith & Son, Limited**  
Nurserymen, WINONA, ONT.

which appears in this issue was obtained and printed before we were fully acquainted with the actual facts. Later we were informed that the sales were not all genuine but the report was then on the press and could not be altered. However, as stated in the report, the crowd was very small, buyers not being

present. Consequently, many of the horses were bought in. As Dr. Hassard is going out of the horse business, these horses must be disposed of by April 1, at whatever Dr. Hassard can get for them privately, regardless of the price they were knocked down at in the public sale.



# The Royal Bank of Canada



Farmers' Sons and Daughters have great opportunities to-day.

They never had better chances to make and to save money. Now is the time to lay the foundation of future prosperity by cultivating the habit of thrift.

There is a Savings Department at every branch of this bank. The staff will be glad to show you how to make the first deposit.

CAPITAL AND RESERVES \$35,000,000  
TOTAL RESOURCES - \$535,000,000  
625 BRANCHES

## LIFT OFF CORNS!

Apply few drops then lift sore, touchy corns off with fingers—No pain!



Doesn't hurt a bit! Drop a little Freezone on an aching corn, instantly that corn stops hurting, then you lift it right out. Yes, magic!

A tiny bottle of Freezone costs but a few cents at any drug store, but is sufficient to remove every hard corn, soft corn, or corn between the toes, and the calluses, without soreness or irritation. Freezone is the sensational discovery of a Cincinnati genius. It is wonderful.

## SEEDS

Alfalfa Genuine Ontario Variegated.....	Per bush. \$45.00
Alfalfa No. 2—No. 1 Purity (local grown).....	45.00
Red Clover, No. 1 Govt. Standard.....	45.00
Red Clover, No. 2 Govt. Standard (local grown).....	42.00
Timothy No. 2—No. 1 Purity.....	9.50

Situated in one of the best seed-producing districts in Ontario, and having the very best of cleaning machinery we are in a position to offer high-grade seed, acclimatized and much superior to imported seed. Write for catalogue—mailed free.

**DOUGLAS & ROY, Seedmen**  
Box 254 Brantford, Ont.

## Choice Seed Corn

Wisconsin 7 and White Cap. Satisfaction guaranteed. Club orders solicited.  
W. A. BARNET :: Leamington, Ontario

"Advocate" Advt. Pay.

## A Good Sire is a Profitable Investment.

EDITOR "THE FARMER'S ADVOCATE":  
I am a young farmer engaged in the breeding of live stock and feel it my duty to use my influence as much as possible not only for the benefit of myself, but to help my fellow men.

This scrub bull plague is not only a hindrance, and an eye sore to the country, but a great drawback. Besides it is a losing investment in most cases.

It has been proven at public and private sales, but more so at public sales, that steers and breeding cattle from a registered sire, will sell from five to twenty-five dollars more than the kind with the same care from a scrub sire.

A farmer that invests from \$200 to \$500 in a good type of a registered bull, and can get even five dollars more for his calves, and the bull sires 100 calves, it is a pretty fair investment. I have seen men who run down registered bulls to a certain extent, but still if they have the chance to breed to one they won't go by and breed to a grade.

I think a good way to get rid of the scrub bull is to pass a law against any non-pedigreed or inferior bull running at large. Hope that the time is near at hand, when we can look in the barn or paddock of every farmer and see a bull of the right type.

Elgin Co., Ont. E. M. NETHERCOTT.

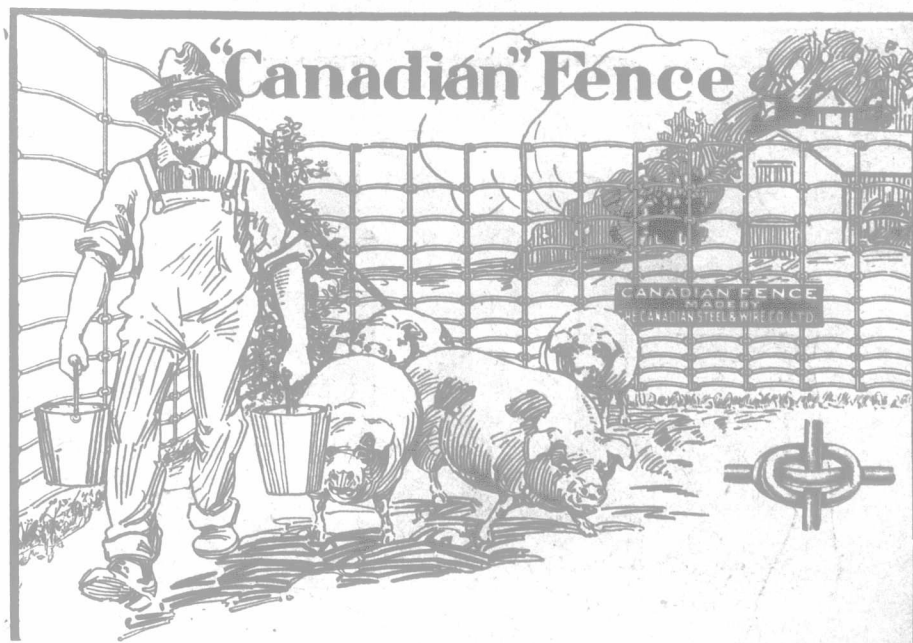
## Shorthorn Cattle Breeders Club.

The Shorthorn Cattle Breeders of Carleton County recently organized a club, with a view to promoting the interests of this popular breed of beef cattle in Eastern Ontario. The following Shorthorn breeders for the original officers for the year 1920. President—W. A. Wallace, Kars, Ont.; 1st Vice-Pres., Ambrose Carroll, Dunrobin; 2nd Vice-Pres., Walter Graham, Britannia Bay; Sec.-Treas., H. W. Graham, Carp, Ont.; Directors, Herb Graham, Britannia Bay; Geo. Wiggins, Kemptville; W. Brownlee, North Gower; A. H. Foster, Richmond; Robt Wallace, Bells Cors.; Cameron Thompson, North Gower; Angus Robinson, Richmond; W. D. Jackson, Carp, Ont. The objects of the club are to promote the general interests of the breed by encouraging better breeding, feeding, and by offering for sale only such individuals as will tend to improve the breed and be a credit to the Shorthorn breeders. The club will shortly be in a position to advertise breeding stock offered for sale by its members, and to assist intending purchasers.

## Gossip.

### The Western Ontario Consignment Sale.

The semi-annual Western Ontario Consignment sale is to be held at the Exhibition grounds, London, on March 23 and 24, when 150 head of Shorthorns will be offered to the public. This year there will be a slight departure from the customary method, and the cattle will be shown in classes during the forenoon and prizes awarded. The auction will be in the afternoon. Thus there will be a show of 75 head each forenoon, and the sale of a like number each afternoon, making an event of unusual interest. A glance over the catalogue will show that the breeding is superior to anything offered in the past, and on the whole the quality excels that of previous sales. Many of the most fashionable families in Shorthornedom will be represented. The consignors are offering some of their best things in an effort to have this sale surpass previous ones. Such families as Orange Blossom, Lancaster, Butterfly, Claret, Lustre, Missie, Duchess of Gloster, Lavender, etc., are well represented. Those interested in Shorthorns should plan on spending two days in London so that they will not miss any part of the show or sale. The usual guarantee as regards breeding will be given and purchasers may be assured of a square deal. Write Harry Smith, Hay, Ontario, for a catalogue, mentioning The Farmer's Advocate. These catalogues contain a wealth of information regarding the breeding of the animals offered.

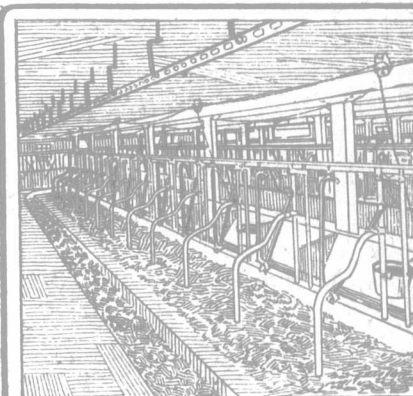


## This is a Remarkable Fence

The wires in "Canadian" Fence are full gauge. They are made of "Open Hearth" or "Bessemer" Steel. The galvanizing is thick and evenly applied to avoid cracking and flaking off in splicing, and to protect it against weather.

Look for the "Canadian" Knot. In "Canadian" Fence the stay wires are fastened to the line wires by a separate piece of wire. This makes a smooth knot that makes "Canadian" Fence extra strong and durable. It is woven with expert care—it is mechanically perfect in construction and gives maximum service at a minimum cost. Ask your dealer for prices.

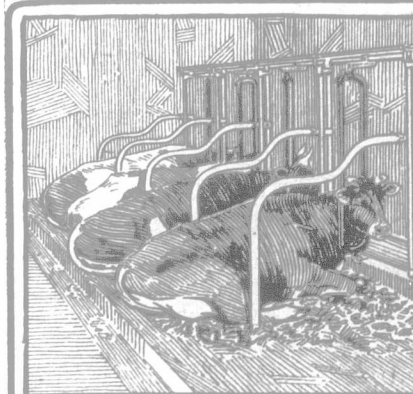
**The Canadian Steel and Wire Co., Limited**  
Hamilton, Ont. : : Winnipeg, Man.



1. BT Steel Stalls last for a lifetime and need no repairs. The first cost is the only cost. Lumber is expensive so it certainly pays to put in steel. Steel Equipment will make money for you from the day you install it. Wood Equipment is a source of expense.



2. Wood Stalls and floors are always needing repairs. Planks rot; nails pull loose; posts have to be renewed. Wood Stalls are a constant expense and a continual worry. Your stock never look as well in wood stalls as they do in bright, clean, steel stalls.



3. BT Steel Stalls stay right for the rest of your life. They always look well and your stock always look well in them. Send in the coupon below for the BT Barn Book. It shows many barns, remodelled by farmers who needed profitable, handsome stables. They obtained them by putting in steel.

Send this coupon for the 352-page Barn Book. Tells how to plan and build the barn, how to ventilate, how to frame, how to save steps, labor, time and feed. This book saves you hundreds of dollars in building.

**BEATTY BROS. LIMITED**  
K481 Hill St., Fergus, Ont.

I intend to build about.....  
I intend to remodel about.....  
I keep..... Cows  
My name is.....  
My Post Office is.....  
R. R. No.....  
Nearest Railway Station.....  
If you live in Maritime Provinces, please give Lot and Concession. If you live in Western Provinces, please give Section, Township and Range.....



# DOMINION TIRES ARE GOOD TIRES



## Get There First

Don't wait until you are ready to drive your car before ordering new DOMINION TIRES.

The next time you are in town, go to your dealer and select the new tires you need. Then everything will be ready when you want the car for farm hauling or for pleasure.

DOMINION TIRES are *good* tires for every load and every road; and you have the choice of "Nobby"—"Chain"—"Dominion"—"Grooved" or "Plain" Treads.

Remember to get an extra DOMINION INNER TUBE, that will fit the Dominion Tires—and you'll need TIRE ACCESSORIES, too, to fix the little cuts, bruises and holes in the tires, and thus make them last much longer.

DOMINION TIRE DEALERS also carry Dominion Inner Tubes and the complete line of Dominion Tire Accessories.



232

## Different Methods of Farming.

EDITOR "THE FARMER'S ADVOCATE":  
Possibly we have all noticed and wondered why some farmers of apparently equal ability and possessing farms of like fertility differed so much in their manner of conducting their farms.

One man may keep but very little stock and specialize on field crops. He plans to have the best seed obtainable and gain a revenue from the sale of first quality seed. Such a man is usually a very tidy and energetic worker and his delight is in a well-tilled farm free from all noxious weeds. His neighbor probably is just a little indifferent whether the thistles are cut or the mustard pulled, but is equally alert if the pastures are becoming dry and the cows should by any chance not be getting what is their share. Another man may specialize entirely in stock and keep possibly twice the number of animals that his neighbor, on a similar farm, deems profitable to maintain. Why this difference of opinion?

In the survey of Oxford County farms, Prof. Leitch claimed that it was proven that the farmer who specialized in live stock secured the highest returns financially. Therefore we will discuss the different view points of the live-stock farmer. One man believes the greatest results can be obtained by breeding, rearing and finishing just what stock his farm seems able to maintain. He believes and is probably correct that this method is securing him maximum returns. This system is correct in that. A man usually takes more interest in the stock which he has developed and finished. Another man maintains a large breeding herd or flock and sells the increase to some other farmer to finish. A popular method for this man is to work into a large stock and hold a surplus sale every two or three years. He claims that his returns though not as regular are just as great. Now we have the man who makes it his business to buy the majority of his stock and turn his feed into cash by finishing them only. This man is usually able to maintain a large number of animals during the winter-feeding period. Possibly the two latter men are necessary to each other, and if their talents seem to lie along those lines they are justified in following that course.

Some men plan to produce as much as possible, hay, roots and silage, and buy what concentrates are needed to form a balanced ration. This will allow one to carry quite an additional number of animals and if concentrates are bought in the right season, fair returns may be looked for. This method requires quite an amount of capital to finance the buying of grain which is done some times months before any returns are expected. Possibly lack of finances is the greatest hindrance to profitable farming. Many young farmers though ready and willing to do their best find themselves handicapped for this very reason. There is a saying that "Money makes money" and this is well proven. The well-to-do farmer is able to buy to advantage because the other man is often obliged to sell.

Then again some farmers make a practice of finishing their stock at an early age and overcome the difficulty of limited pasturage. This should be quite a profitable line. On an average 100-acre farm where a farmer breeds his own stock it ought to be profitable to keep about six dual-purpose cows, fifteen breeding ewes and two brood sows and be able to finish the increase from year to year.

However each farmer is best able to judge what his farm is able to carry in the live-stock line and bear in mind that a small stock well fed is usually more profitable than the other extreme.

Wellington Co. W. McK.

"We would not know how to get along without 'The Farmer's Advocate' now. I think we have taken it for seven years. There is much valuable information in it, and every farmer ought to take it. My wife also likes it very much. She always looks for recipes and feels a little disappointed if there aren't any. It certainly is a good farm paper."  
W. STANLEY GREY.

Leeds Co., Ontario.



**Different Methods of Farming.**

THE FARMER'S ADVOCATE: we have all noticed and many some farmers of apparently different so much in their conducting their farms. Some may keep but very little and specialize on field crops. Some have the best seed obtainable in a revenue from the sale of quality seed. Such a man is a tidy and energetic worker who is in a well-tilled farm free of noxious weeds. His neighbor is a little indifferent whether the cut or the mustard pulled, and the cows should be alert if the pastures are not getting what is needed. Another man may specialize in stock and keep possibly twice as many animals that his neighbor, and deems profitable to pay this difference of opinion? Some of Oxford County farms, it is claimed that it was proven by a man who specialized in live stock the highest returns financial. We will discuss the different methods of the live-stock farmer. One of the greatest results can be obtained in feeding, rearing and finishing stock his farm seems able to do. He believes and is probably right in his method of securing him a good stock. This system is correct and usually takes more time and stock which he has developed. Another man maintains a large herd or flock and sells to some other farmer to do a large stock and hold for every two or three years. This returns though not as much as great. Now we have a man who makes it his business to buy up his stock and turn it over by finishing them only, usually able to maintain a large stock of animals during the winter. Possibly the two latter methods are to each other, and if they seem to lie along those lines justified in following that

**It costs less to buy an ALPHA GAS ENGINE than to do without one**

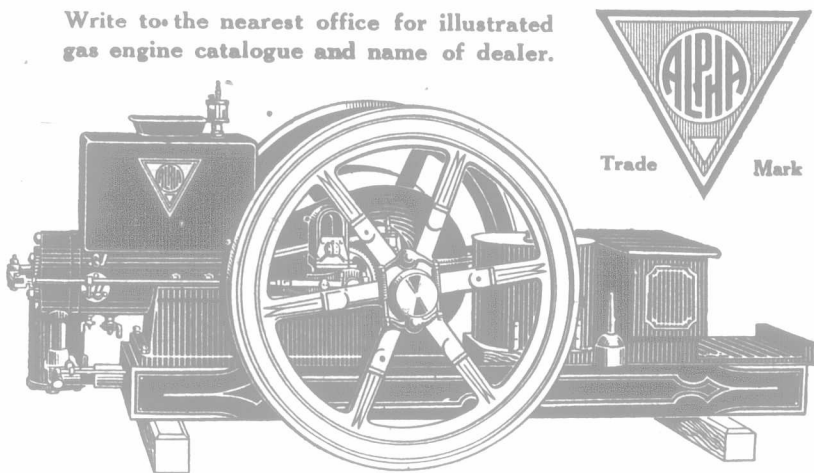
Many men who have no gas engines are often obliged to hire one when there is work to be done that requires power.

The money paid for hiring a gas engine and the much greater amount of work that could be accomplished with an engine all the time, would soon pay for an Alpha.

The usefulness of the Alpha does not end with doing only work which absolutely requires power. It can be used to do a lot of things that now have to be done by hand—such as running the separator, churn, washing machine or pump. An Alpha will save many hours of hard work for everybody.

There are many reasons why the Alpha is the most satisfactory engine to buy. It is always dependable, always ready; it is so simple a boy can operate it, and it requires a minimum of fuel—either gasoline or kerosene. And it is sold by local dealers who are ready to give gas engine service.

Write to the nearest office for illustrated gas engine catalogue and name of dealer.



**THE DE LAVAL COMPANY, Ltd.**  
MONTREAL PETERBORO WINNIPEG VANCOUVER  
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER



**Good Feeding and Big Profits go hand in hand**

On the number of times your cows fill the milk pail morning and evening depends the amount of your profits.

To fill the pail the greatest number of times, cows must be properly housed, well cared for, and most important of all, must be fed properly balanced food for milk production.

After searching investigations—and tests by experts in feeding, Monarch Dairy Feed was produced.

**Monarch Dairy Feed**

is very highly digestible, which means that the greatest possible percentage of it is turned into milk. It also means that it is an economical feed to use.

Monarch is an appetizing feed that cows relish.

Guaranteed Analysis—Protein 20%, Fat 4%.

Try a ton. If your dealer cannot supply you, write us, giving us his name.

The Campbell Flour Mills Co., Limited, affiliated with  
**Maple Leaf Milling Co., Limited, Toronto**  
*Monarch Hog Feed and Sampson Feed are two other popular lines of correctly balanced feeds*

**Report of Farm Conditions**

The following is a summary of the reports made by Agricultural Representatives to the Ontario Department of Agriculture under date of Feb. 16:

Fall wheat is still well protected by snow, and growers are so far optimistic regarding the prospects of the crop.

About the usual number of cattle on hand. Farmers, however, are feeding carefully, and many of the animals are thinner than usual at this time of year, and some of the beef cattle are going to market rather unfinished. Good veal calves in Brant are commanding from 17 to 18 cents a lb., while ordinary weaners are going at about 14 cents.

Dairy cattle are in brisk demand all over the province, and fresh milkers are selling at from \$150 to \$200.

There are fewer swine on hand, both feeding hogs and brood sows. Bacon hogs in Kent are quoted at \$17.25 a cwt. Peel states that brood sows are fetching from \$50 to \$75 at sales. One representative states that little pigs are selling at from \$8 to \$10 each at auction sales, which is more than the regular selling price on the market, and adds that auctioneers state that recent live stock prices have run, about 20% above the figures for 1919.

Farmers seem inclined to hold on to grain for their own use, and are feeding it sparingly in order to carry stock over to the grass. While some may have a small surplus on hand a few will have to buy; in fact, some are now purchasing grain for feeding. Silage, however, is helping out the feeding situation.

Pressers are scouring the country for hay. Prices at the barn now range from \$20 to \$24 a ton, but on the market from \$25 to \$30 is paid. In Northern Ontario,

**"For The Land's Sake" use**  
**STONE'S FERTILIZER**  
**For Bigger and Better Crops**  
Agents wanted where not represented  
**WM STONE SONS LIMITED**  
INGERSOLL ONT.



**Satisfaction**

Collins Cycle Incubators and Radio Hovers are made in our own factory in Canada. Repeat orders prove the worth of careful construction and best regulators and thermometers. Be sure you get Collins own machines. They have stood the test of years.

Write for free catalogue to-day.  
**The Collins Manufacturing Co.,**  
331 Symington Ave., Toronto.

however, prices are fully \$5 a ton higher. Straw keeps its value all over the Province, selling at from \$10 to \$13 a ton.

Seed corn in Kent is bringing \$2.50 a bushel for flint and \$2.25 for dent varieties.

Last week a one-hundred bushel lot of sweet clover seed sold for \$20.50 a bushel in Peel.

Potatoes are selling around \$3.50 a bag, but shipments are risky owing to the cold weather.

Farm laborers are hard to secure in advance. Wages are likely to increase.

In another column of this issue, A. G. Auld, of Guelph, is offering a number of choice young Shorthorn bulls for sale. These are sired by Burnbrae Sultan, a bull of renown, illustrated in the reading columns of this issue. This sire has left many promising young sires which have been prominent in show-ring circles. If in need of a herd header, write Mr. Auld, R. R. 2, Guelph.

**Willis Holstein Sale.**

Attention is again drawn to the Holstein sale of R. Willis, R. R. 1, London on March 9. Mr. Willis has bred and reared a profitable commercial herd. The present offering is the result of twenty-seven years' work, and it is to his credit that a large number of the cows in milk have made good records. There are no old cows in the sale, and the majority of them are in condition to go ahead and make even higher records than they have in the past. London is the nearest station and conveyances will be at the Brunswick Hotel, corner York and Talbot Streets, on day of sale to convey prospective purchasers to the farm. Write for a catalogue to R. Willis, R. R. 1, London.



### Builders of the Mutual

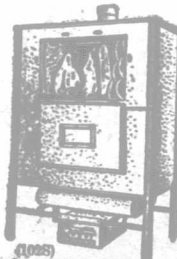
"In no one thing has the Mutual of Canada been more blessed than in having its destinies directed by men whose single-mindedness and honesty of purpose have never been excelled."—Hume Cronyn, M.P.

The exceptional ability of the builders of the Mutual is shown in the results of their work—a Company established upon an unshakable financial basis having a membership of about 70,000; assets of \$38,000,000 and assurances in force of \$170,000,000.

Among those men whose efforts helped in the building of the Mutual was the late William Hendry, who joined the company in 1870. With him were associated others of like energy and consecration who gave the Company its noble traditions which are being followed to-day.

**Mutual Life of Canada**  
Waterloo-Ontario

106



**Don't Pay Big Butcher Bills!** **SMOKE MEAT FREE!**

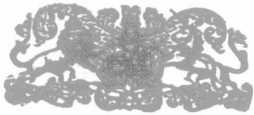
Don't sell all your hogs and buy meat from butcher at double price! It is an unnecessary waste! Butcher a few hogs for your own table. Smoke ham, bacon, sausage, etc. Cut meat bills in half! Sell to neighbors at tremendous profit!

**Kirstin ALL-STEEL Smoke House**

Write Free Book for New "Kirstin Meat Handling Service" helps you give reasons why the Kirstin is better, more efficient, and more convenient. Write for free book today.



All-steel, fire-proof! Can't burn up and destroy meat. Can't burn down buildings. Can't frizzle the savory juices out of meat—as do old style smoke houses. Smoke is air cooled! The Kirstin lasts longer and is better than wood—costs much less! Suitable for use in basement, kitchen or porch. If satisfied, after 30 days trial, money refunded. You don't risk a penny. Four easy ways to pay. Write for FREE BOOK and Special Agent's Proposition—Today! **A. J. KIRSTIN CANADIAN COMPANY** Bell Ave., Sault Ste. Marie, Ont.



SEPARATE SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Gate, Keeper's Lodge, Assistant M. O.'s Quarters, Nurses' Quarters, etc., Westminster Psychopathic Hospital, London, Ont.," as the case may be, will be received until

12 o'clock noon

Thursday, March 25th, 1920

for the construction of a Gate Keeper's Lodge, Assistant Medical Officers' Quarters, Nurses' Quarters, and Heating Conduit to M. O.'s residence, Assistant M. O.'s Quarters, and Nurses' Quarters, Westminster Psychopathic Hospital, London, Ont.

Plans and Specifications can be seen and forms of tender obtained at the offices of the Chief Architect, Department of Public Works, Ottawa; the Superintendent of Westminster Psychopathic Hospital, London, Ont.; the Superintendent of Dominion Buildings, Postal Station "F," Toronto, Ont.; the Builders' Exchange, Montreal, P.Q., and the Overseer of Dominion Buildings, Central P.O., Montreal, P.Q.

Tenders will not be considered unless made on the forms supplied by the Department and in accordance with the conditions set forth therein.

Each tender must be accompanied by an accepted cheque on a chartered bank payable to the order of the Minister of Public Works, equal to 10 p. c. of the amount of the tender. War Loan Bonds of the Dominion will also be accepted as security, or war bonds and cheques if required to make up an odd amount.

By order,

R. C. DESROCHERS, Secretary.

Department of Public Works, Ottawa, February 23, 1920.

#### Make Money This Winter—Saw Wood

There is big money this winter sawing wood. Coal is high. Wood will be scarce. Now is the time to clean up. The **GILSON HEAVY-DUTY SAWING OUTFIT** is the machine to do it with. Makes its own spark without the aid of batteries. You cannot afford to buy any engine until you know all about the Gilson Heavy-Duty. When you know about it, you will not buy any other. Catalog and information free if you act quickly. Write to-day. **GILSON MFG. CO., Ltd.** York St., Guelph, Ont.



### What Factors Influence Seed Yields in Roots?

(EXPERIMENTAL FARMS NOTE.)

During the last few years considerable quantities of field root seed, including mangel Swede turnip, and carrot seed, have been raised by the Dominion Experimental Farms' System for the purpose of safeguarding against a threatening shortage in the supply. Much valuable information has been accumulated on the subject of root seed production, the more so because, while engaged in seed growing as an emergency undertaking, the Experimental Farms' System at the same time desired to gain reliable data bearing on the possibilities of making root seed growing a permanent agricultural industry in Canada.

One of the more important subjects in connection with root seed growing which have been investigated is the question of under what conditions the heaviest possible seed yields may be expected. This question is of course, of particular interest, as the size of the seed yields will largely determine the profit from seed growing.

In the first place, it is necessary that the roots to be used for seed raising are absolutely sound when planted out. Our experience is that planting of roots which show signs of disease or rot, especially at the crown, lead to most disappointing results. Such roots may linger along for some time, but sooner or later they die off, with the result of course, that the seed field becomes patchy and consequently gives a comparatively low yield per acre.

In the second place, the seed roots should be planted as early as possible in the spring. The earlier they are set out the heavier are the seed yields which may be expected. This applies to all kinds of field root seed crops and has been demonstrated over and over again.

In the third place it is absolutely necessary that the land is in good tilth and in a high state of fertility. Several experiments conducted the last few years have most decidedly shown that the land must be in the best possible shape if good seed crops are to be expected. An experiment carried out at Ottawa in 1915 gave results to the effect that an application of 20 tons of barnyard manure to the acre, or of a commercial fertilizer, composed of 500 pounds of Superphosphate, 200 pounds of nitrate of soda, and 200 pounds of muriate of potash, increased the seed yield of mangels by almost 50 per cent. Experiments carried out later have not only substantiated this result but also shown that a still greater increase in the yield may be realized if the land is given both manure and artificial fertilizers in liberal quantities.

Sound roots, early planting, and rich land are the main factors which determine the size of the yields. It should be added, though, that the yields are also influenced, to a not unimportant degree, by the supply of farm labor that may be available and by the size of the seed fields. Profitable root seed growing requires plentiful labor at certain periods and under present conditions, the writer would say that to a farmer who has not had years of experience in root seed growing one or two acres may prove more remunerative than a large acreage, because with a small acreage, the yield is apt to be much greater per acre than if the acreage is so large that it cannot be handled conveniently.

Dom. Agrostologist M. O. MALTE.

### Questions and Answers. Miscellaneous.

#### Police Village Trustees.

Have trustees of a police village power to pass by-laws compelling rate payers to keep snow shovelled off the sidewalk in front of their premises?

Ontario.

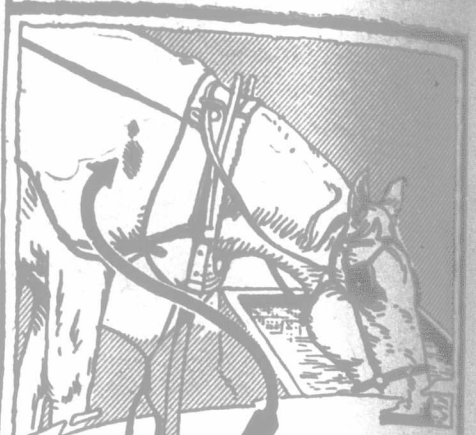
A. SUBSCRIBER.

Ans.—Yes; see the Municipal Act (Revised Statutes of Ontario, Chapter 192) Sections 522 (c) and 399 (61, 62).

"Concerning 'The Farmer's Advocate,' I think the subscription price is the best spent \$1.50 in my year's experience." Simcoe Co., Ont. FRED RITCHIE.



The 'Tapatco' Collar Pad



The unpadded collar caused this horse's shoulder-gall

To have horses "fit" see that their collars fit

There is no such thing as a perfect-fitting horse collar—for no horse's neck remains the same size all the year round. After hard work the horse loses flesh. That's when the collar slips and chafes, as the poor beast strains at the traces. That constant chafing of a sweaty leather collar inevitably produces gall-sores. All this suffering, and consequent loss of money through horses laid up, can easily be prevented by the use of—

**TAPATCO BRAND COLLAR PADS**

to "fill out" the collar at the points where extra cushioning is needed. A Tapatco Pad fits snugly under the collar and quickly adjusts itself to the size and shape of the horse's neck. Our specially prepared Composite Stuffing ensures that softness and pliability which are so essential to a satisfactory Collar Pad.

Another exclusive feature is the Patented Hook Attachment (patented in U.S.,

December 1, 1914; patented in Canada, April 6, 1915). A wire staple, reinforced by felt washer, firmly grips hook to body of Pad, so that hooks cannot pull off even though the fabric itself has been weakened by long use.

Insist on the "pad with the felt washer under the hook staple," and if you have any trouble getting this Brand, write direct to—

**THE AMERICAN PAD AND TEXTILE COMPANY** CHATHAM ONTARIO

"38 YEARS MAKING PADS."



## IMPERIAL HARNESS

IMPERIAL BRAND HARNESS is guaranteed free from all defects in workmanship and materials. You are certain of satisfaction when you buy a set of harness made by Trees & Company.

No. 640, Team Harness, is especially designed for farm work such as ploughing, seeding and general hauling. Exceptionally good value at a very low price. Blind Bridles with side check; lines one inch; high top hames; traces, steel riveted on top. White metal or japanned mounts, less collars. **\$57.00**

Sold by the Harness Trade throughout the Dominion. If your dealer will not get Imperial Harness for you, write direct to us for Catalogue and prices.

**SAMUEL TREES & CO., LIMITED.** Established 1866. Manufacturers of Harness and Dealers in Automobile Accessories. 42 WELLINGTON ST. EAST, TORONTO

### Just Put Clothes In—the Washer Does the Work

If you have a gasoline engine—if you have electric power—then no longer need you work the lever of a hand-power washing machine. Let "power" help your work as it does your husband's!

Of course you realize that a washing machine, even run by hand, is quicker, easier, better than washing by muscle-power. But here's a washer that does everything—all you have to do is "turn on the juice."



**Maxwell**

#### Power Bench Washer

—will do the washing while you do other work! No need to watch it—it can't go wrong. It will do the wringing too. Easy to operate—simple and strong in construction—perfect in mechanism. Made in one-, two-, or three-tub size; operated equally well by 1/2 h.p. electric motor, or any gasoline engine. Write us to-day for full particulars—it will be time well-spent.

38 MAXWELLS LIMITED, Dept. W ST. MARTS, Ont.



**Questions and Answers.**  
Miscellaneous.

**A Minor.**

1. How old is a girl when she ceases to be a minor?
2. Has a girl any right to obey her stepmother when grown up, her stepmother having raised her from a little girl.
3. Has her father any legal right to control the girl until she is twenty-one? Ontario.

J. H. W.

- Ans.—1. Twenty-one.  
2. Yes.  
3. Yes.

**A Wages Claim.**

A man that B had hired last year was out of a job and came back and wanted to hire again to do chores for the rest of the winter till the cattle went on the grass. The man knew perfectly well what the chores consisted of as that had been his work when he had worked with B before.

B made an agreement for \$25 a month for February and March, and \$30 a month for the succeeding months till the cattle went on the grass. The first two months B could have done without a man but to secure one for the seeding months B gave him a job. B had a man engaged to do chores. B told the man that if he did not stay till the cattle went on the grass he did not want him at all, so he promised that he would. He only stuck to his agreement one day till he was grumbling about the job and wages, and left at the end of the week.

1. Does B have to pay him any wages for the week he stayed as B's man lost a lot of time showing him how to get on to the work?

2. If a man hires by the month and works one week and quits of his own accord can he collect wages for the time he has worked?

Ontario. W. C.

Ans.—1 and 2. We do not think that he is legally entitled to collect any wages, but if he were to lay an information before a Justice charging non-payment and the case went to trial the Justice might allow him some amount in respect of the time he actually worked.

**Mother and Sons.**

A farmer living on a rented farm some 40 years, his wife receives a sum of money from her parents which she invests in same some thirty years ago. Now their two sons have rented same without parents giving up old lease and have been doing all business this last few years. Now they are dividing all money, stock, implements and grain between themselves and leaving their mother without anything, to find a home wherever she can. She went to them to try and come to some agreement but they would not talk to her. She is now about 70 years of age and has worked hard all her life. If she had placed money she got from home in bank she would have had plenty for her old age. One son said he would give her a home but will not sign an agreement to this effect. Then perhaps when they had all to their liking she might hunt a home elsewhere. There is no agreement between father and sons of any kind. He will not make one, yet he lets them go on and divide the stuff. He does not realize what it will mean to himself and all the rest of family. There was no trouble till these two sons got married and that is what is making trouble. All the mother wants is enough to keep her in clothes and food, or a home and a stated amount for clothes.

1. Can she collect the amount of money she invested in place?
2. Can they lawfully divide everything between themselves against their mother's wishes.
3. Can she take furniture that she bought after she was married and paid for herself?
4. If they divide everything among themselves can they be compelled to pay her enough to live on?
5. If not what steps should she take or can she do anything?

Ontario. M. O. G.

Ans.—1. No.

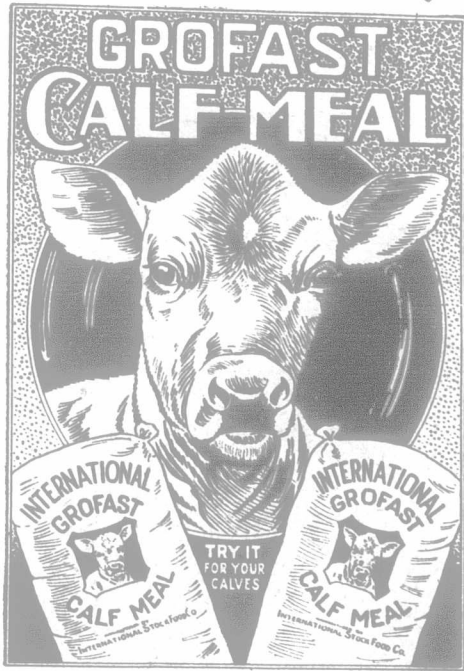
2. Yes.

3. Yes.

4. No.

5. We do not see that there is anything in a legal way, that she can do effectively.

**THRIFTY, LUSTY CALVES**



TO raise calves that are profitable, that make good beef or become a valuable addition to your dairy herd without the use of milk is possible through the use of

**INTERNATIONAL GROFAST CALF MEAL**

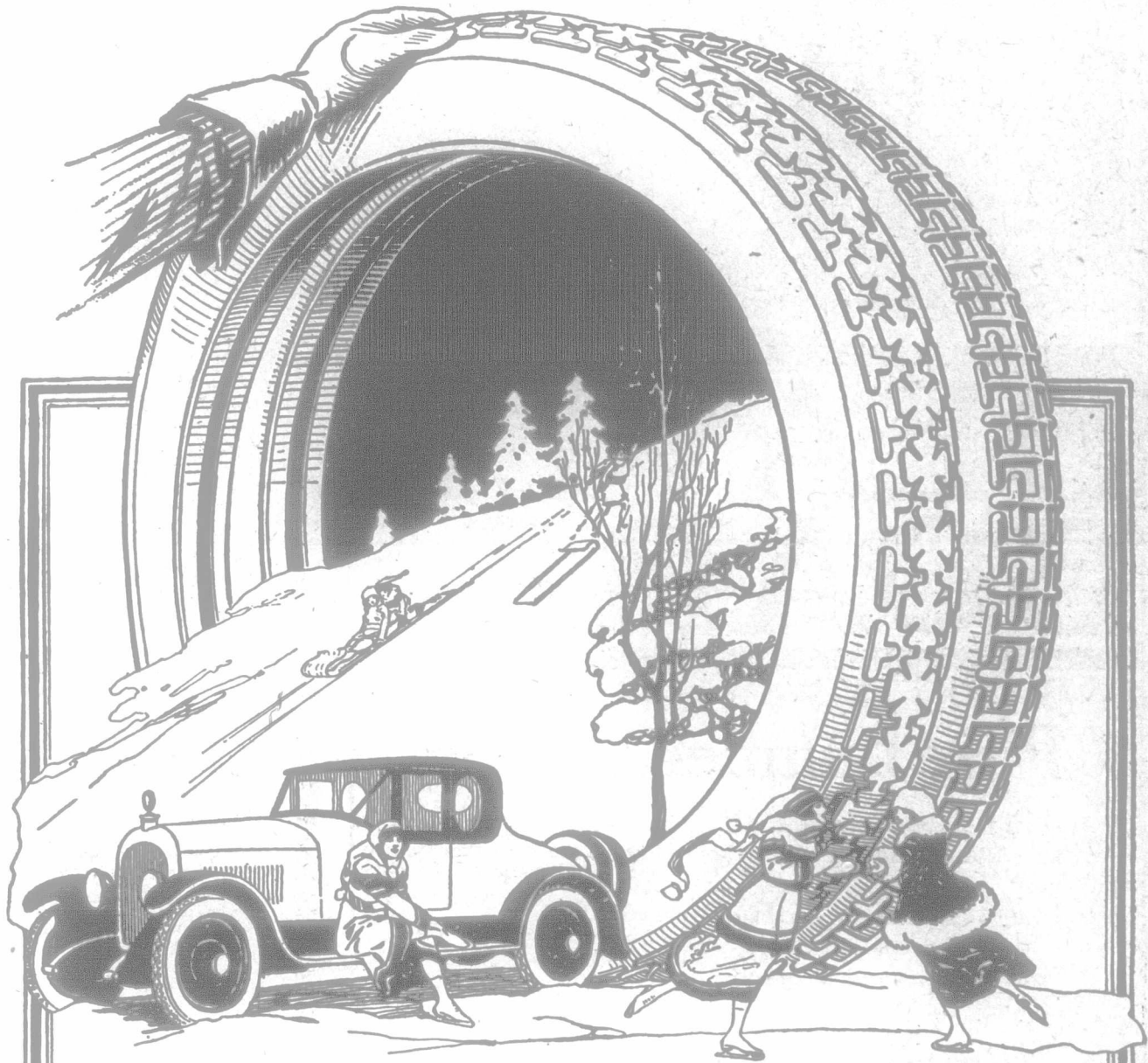
Grofast makes a pleasing and nutritious gruel, eagerly eaten by calves, making them grow sleek, thrifty and lusty. When compared with new milk the cost is infinitely less—yet the results are equally as good.

Grofast Calf Meal is endorsed by thousands of successful breeders throughout Canada as the finest substitute for new milk. Try it yourself—you will be more than pleased with the results.

Sold in 25, 50 and 100 lb. bags. For guaranteed results demand Grofast and refuse substitutes.

Dealers everywhere sell GROFAST. Or write us.

**INTERNATIONAL STOCK FOOD CO.,**  
Limited  
TORONTO CANADA



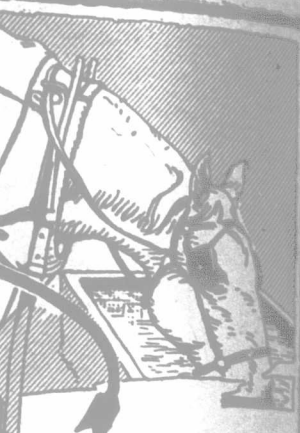
**Pride in the Way Your Car is Shod**

TO be proud of your car you must be proud of its tires. You look with pride upon the graceful design, the fashionable top, the rich upholstery, the glittering finish—and the tires—are you proud of them? If you love your car, you will desire to give it the best tires in the whole Kingdom of Tiredom. For service and for appearance, you will find your desires fulfilled in Gutta Percha Tires—"the Tires that give Satisfaction."

Maltese Cross Tires, Gutta Percha Tires and Gutta Percha Tubes are the NE PLUS ULTRA of owners of high-powered cars.

**"GUTTA PERCHA" Tires**

GUTTA PERCHA & RUBBER, Limited  
Head Offices and Factory: TORONTO. Branches in all the Principal Cities of the Dominion.



The unpadded collar caused this horse's shoulder-gall

**Collars fit**

g horse collar—for no reason round. After hard work the collar slips and causes sore chaps. That constant rubbing produces gall-sores, and money through horses

**CO**

**DS**

1914: patented in Canada. A wire staple, reinforced, firmly grips hook to body so that hooks cannot pull off even if fabric itself has been weakened.

The "pad with the felt wash" hook staple, and if you trouble getting this Brand, to

**TILE COMPANY**  
ONTARIO



**WARRNESS**

Remove all defects in work when you buy a set of

work such as ploughing, at a very low price. Up hames; traces, steel trap with trace carriers. \$57.00

If your dealer will not catalogue and prices.

Established 1866. Automobile Accessories.

TO

**es the Work**

that a washing machine, quicker, easier, better than ever. But here's a washer you have to do is "turn

**xwell**

**r Bench Washer**

the washing while you do it! No need to watch it—wrong. It will do the job. Easy to operate—perfect in construction—perfect in one-, two-, or three-tub well by 1/6 h.p. electric engine. Write us to-day and will be time well-spent.

ST. MARYS, Ont.



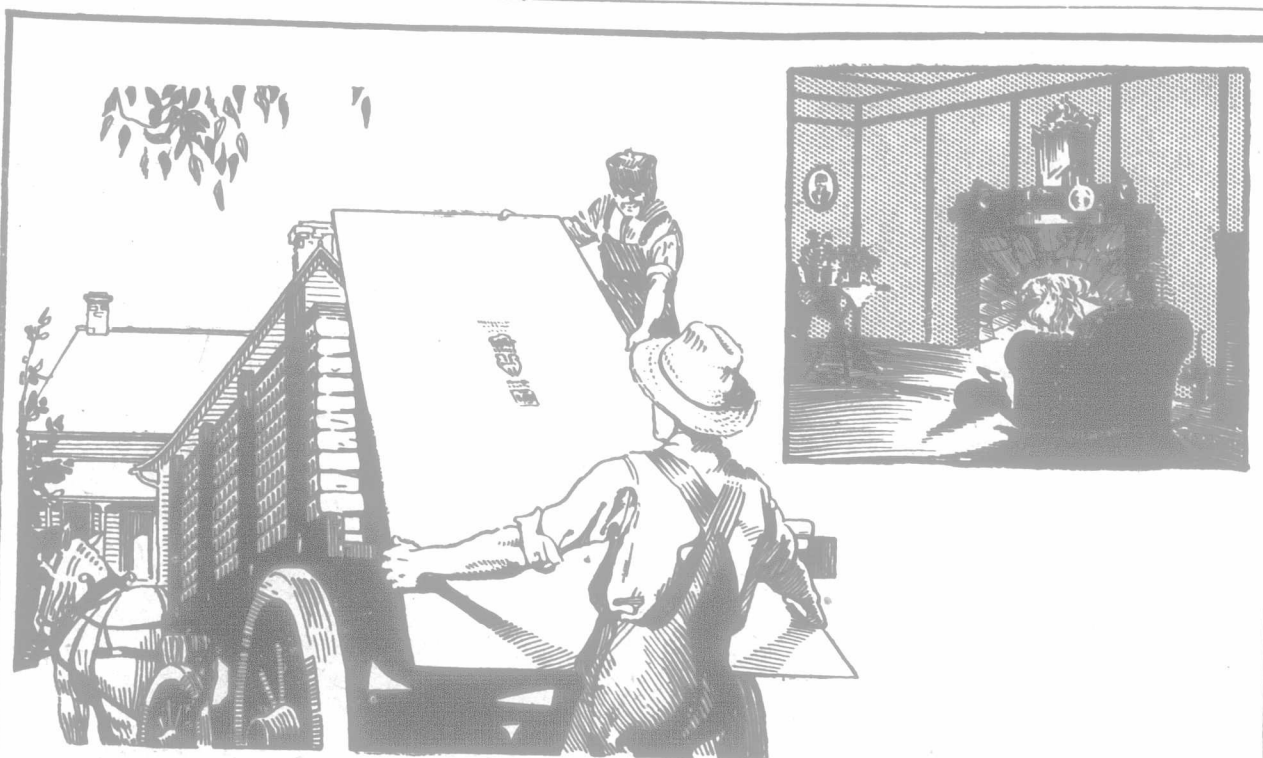
## Attention, Canadian Stallion Buyers!

BEFORE YOU BUY A

SHIRE, PERCHERON or BELGIAN STALLION

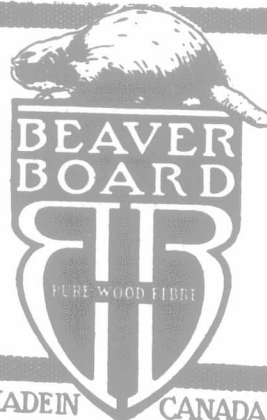
Write us for full particulars, prices and SPECIAL INDUCEMENTS to ONTARIO and QUEBEC STALLION BUYERS, also for our Illustrated Catalogue It will only cost you a postage stamp, and may SAVE YOU SEVERAL HUNDRED DOLLARS. Address:

TRUMAN'S PIONEER STUD FARM (Box A), Bushnell, Ill., U.S.A.



# BEAVER BOARD

You can't expect Beaver Board results unless this trademark is on the back of the board you buy.



FOR BETTER WALLS & CEILINGS MADE IN CANADA

## Pure Lumber, Three Trees Wide

Big, flawless panels, three times as wide as the average tree—is the way Beaver Board is made. Imagine lumber without cracks and knots in such large sizes and you will have a good idea of Beaver Board.

Then think of these big crack-less panels on your walls and ceilings, beautifully decorated and attractively paneled and you will have a still better idea of the true usefulness of this good building material.

There are reasons for this sure result when you get genuine trade-marked Beaver Board. Beaver Board is a true

lumber product. It is made of the fibres of the spruce tree and built up in large panels by powerful machinery. It is thoroughly sealed by the "Sealtite" process to prevent warping.

Beaver Board is as easy to get as it is to use. Your lumber dealer will deliver it, or you can take it out on your next trip.

We have published an interesting book "Beaver Board and Its Uses," which tells how Beaver Board is made and contains many pages of building suggestions for the home. Send for a copy to-day.

**THE BEAVER COMPANY LIMITED**

£05 Beaver Road, Thorold, Ont.  
Timber Operations at Frederickhouse and Charlton, Ont.  
Plans and Mills at Thorold and Ottawa, Ont.  
Distributors and Dealers Everywhere.

### The Canadian Pony Society.

The Canadian Pony Society ended the year 1919 with a somewhat larger balance on hand than at its commencement. There were 63 registrations last year, 46

transfers and the membership amounted to \$84. At the annual meeting held during the first week of February the following officers were elected: President, J. M. Garhouse, Weston; Vice-President, Dr. Fowler, Toronto; Secretary-Treasurer, G. de W. Green, Toronto. Directors:

Robt Graham, Toronto; W. J. Stark, Edmonton; C. E. Stone, Toronto; H. M. Robinson, Toronto; Dr. T. H. Hassard, Markham; E. C. H. Tisdale, Beaverton; J. E. Chandler, Montreal; W. Brice Arbury, Sask.; A. E. Major, Whitevale, Ont.; J. E. Jamieson, Lennoxville, Que.

### Co-operative Fertilizer Experiment With White Burley Tobacco.

During the past year a co-operative fertilizer experiment was conducted on a good well-drained sandy loam soil at Kents Bridge by Geo. Allison of Chatham. The soil selected is very representative of a great number of farms on which White Burley tobacco is now being produced in Kent and Essex Counties. The land has been well taken care of and the practice of applying large quantities of barnyard manure to the tobacco in the regular four year rotation has been followed. A fertilizer experiment even though conducted for only one year may give some valuable indications, and when conducted under the circumstances mentioned should be of special interest to those contemplating the use of fertilizer in growing white Burley tobacco.

The land on which the experiment was made was clover sod, manured in the fall at the rate of approximately twenty tons of barnyard manure per acre, and fall plowed. In the spring the land was worked up constantly till June 5. On this date the plots were staked out, six in number, and the fertilizer applied in the row of drill as follows: Plot No. 1 received no fertilizer, Plot No. 2 received an application of 300 pounds of sulphate of potash per acre; Plot No. 3 received an application of 2,000 pounds per acre of a 2-8-2 fertilizer; Plot No. 4 received an application of 1,000 pounds per acre of a 3-8-3 fertilizer; Plot No. 5 received an application of six hundred pounds of acid phosphate and three hundred pounds of sulphate of potash, and Plot No. 6 received no fertilizer. On June 7 Broadleaf White Burley was planted in the field, only good stocky medium sized plants being used. The results, are given in the following table:

Plot No.	Fertilizer per acre	Present cost fertilizer per acre	Yield lbs. per acre	Value of crop after deducting cost of fertilizer
1	no fertilizer	none	1,156	\$462.40
2	300 lbs. S. Potash	\$22.50	1,243	475.70
3	2,000 lbs. 2-8-2	54.25	1,380	497.75
4	1,000 lbs. 3-8-3	28.60	1,360	515.40
5	600 lbs. A. Phosphate 300 lbs. S. Potash	31.50	1,400	528.50

Plots No. 1 and No. 6, "no fertilizer," made an average yield of 1,156 pounds of White Burley per acre.

In the table given the tobacco is figured at 40 cents per pound. The quality of the leaf from Plot 5 was superior to all others, that from the "no fertilizer" plots was poor in body and color. The present cost of fertilizer is the price at which these plant foods can now be purchased.

After transplanting dry weather set in and lasted for practically five weeks, and the weather was rather dry throughout the summer. This did not give the fertilizer a very good season. Despite this fact, all of the plots receiving fertilizer showed a profit after paying the cost of fertilizing over these plots receiving no fertilizer as can be seen by referring to the above table. Plot No. 2 fertilized with potash alone returned a profit of approximately fifty cents for each dollar spent for potash after paying the cost of the fertilizer. Plot No. 3 fertilized at the rate of 2,000 pounds per acre with a 2-8-2 returned a profit of approximately 75 cents for each dollar spent for fertilizer after paying the cost of the fertilizer.



**Co-operative Fertilizer Experiment With White Burley Tobacco.**

The past year's co-operative experiment was conducted on a well-drained sandy loam soil at Ridge by Geo. Allison of Chatham. Selected is very representative at number of farms on which Burley tobacco is now being grown in Kent and Essex Counties. It has been well taken care of in practice of applying large quantities of barnyard manure to the tobacco regular four year rotation is followed. A fertilizer experiment was conducted for only one year some valuable indications, and should be of special interest contemplating the use of fertilizing white Burley tobacco. It was on which the experiment was conducted under the circumstances and should be of special interest contemplating the use of fertilizing white Burley tobacco. It was on which the experiment was conducted under the circumstances and should be of special interest contemplating the use of fertilizing white Burley tobacco.



That Excellent Flavor Is Due To -  
**Windsor Dairy Salt**  
Made in Canada  
THE CANADIAN SALT CO. LIMITED

**Scratches and Stocking**

Are prevalent in cold weather irregular work and overfed induces both. A system tonic and blood purifier, such as **FLEMING'S TONIC HEAVE REMEDY** will prevent these troubles and when developed, with Fleming's Veterinary Healing Oil will quickly cure them. Per box, \$1.  
Fuller information in Fleming's Vest Pocket Veterinary Adviser Write us for a Free Copy  
**FLEMING BROS., Chemists**  
75 Church St., Toronto

**Sure Cure for HEAVES**

112 Portland St., Dartmouth, N.S., Nov. 29, 1919  
"Will you please send F. W. Cooper, Montague, Halifax Co., N.S., a sample of your Heaves Cure. He has a horse with a slight dose of Heaves and I know your remedy will cure him as I have used it with good results when I was in the horse business."  
C. G. NORTON.  
Our records show that a trial package of **Capital Heaves Remedy** was sent Mr. Norton, on July 23, 1917, and it was this trial package that made him a good friend of Capital Heaves Remedy and caused him to write the above letter.  
**FREE** We send a full week's trial free for 5c to cover postage and wrapping. If you have a horse that coughs or heaves write **Veterinary Supply House, 750 Cooper Street, Ottawa, 10**

**For Sale Pure-bred Percheron Stallion**

**French Sport [5760]**  
Dark grey blaze, born May 29th, 1916 in New York State. Weight 1,600 lbs.  
Dam Isomerie [2942] [82699]. Sire Highland Berdell [5759] [43387]. Owner I. J. PITT, R.R. No. 1, Iroquois, Ontario.

**Sundrum Clydesdales**

For sale at the present time—choice selection of Clydesdales, including stallions, fillies and mares, safe in foal. All having size and quality, and priced to sell.

**W. A. McNIVEN**  
R.R. 4 Hamilton, Ont.

**For Sale or Let—A Grey Percheron Stallion, John D—**an AI stock horse and a money-maker.  
**D. A. GRAHAM**  
R.R. No. 4 Parkhill, Ontario

**Clydesdale Stallion (Royal Marquis 12063)** foaled Sept. 2nd 1908. This is a horse of size, quality and action. Come and see his stock. Priced to sell.  
**BROWN BROS., R.R. No. 2, Cornwall, Ont.**

**For Sale—A Clydesdale Registered Stallion** rising 2 years old; in first-class condition. For particulars, write  
**REUBEN ROGERS, Stayner, Ont.**

**For Sale—Percheron Stallion, Mauchair**, imported from France, Premium Certificate, rising eight; dappled-gray; weighs twenty-one hundred and sixty lbs. Write:  
**JOHN BUCHANAN, Campbellton, Ont., Elgin County**

"Advocate" advts. Pay.

Plot No. 4 fertilized at the rate of 1,000 pounds per acre with a 3-8-3 fertilizer returned a profit of \$1.50 for each dollar spent for fertilizer after paying the cost of the fertilizer. Plot No. 5 fertilized with 600 pounds of 16% acid phosphate and 300 pounds of sulphate of potash per acre returned a profit of approximately \$2 for each dollar spent for fertilizer after paying the cost of the fertilizer.

The plots receiving no nitrogen or ammonia, except that furnished in the manure, yielded as well as those receiving additional nitrogen or ammonia in the fertilizer applied. This might be expected when it is remembered that the land had an application of not less than twenty tons per acre of barnyard manure preceding tobacco, and clover is grown in the regular rotation.

In the fertilizers applied, mixed and unmixed, acid phosphate applications were 500 pounds, 600 pounds, and 1,200 pounds per acre. The highest yield was obtained with an application of 600 pounds per acre of acid phosphate.

Potash as sulphate of potash and in mixed goods was applied at the rate of 60 pounds, 80 pounds and 300 pounds of sulphate of potash per acre. The plot receiving 300 pounds made the largest yield, but the one receiving 80 pounds made almost as large a yield. In view of this 100 to 150 pounds per acre of sulphate of potash would be an application which could be safely depended upon to yield a good return.

Summary: From the results of this experiment it seems that; 1, Acid phosphate and sulphate of potash can be very profitably used along with barnyard manure in growing White Burley tobacco, the quality of the leaf being thereby improved and the yield per acre increased. 2. That on land in good tilth, and heavily manured, and where clover is grown in the rotation, that the nitrogen or ammonia contained in the manure seems sufficient for the crop's requirements of this plant food.

3. That a very profitable and economical rate of fertilizing would be 600 pounds of 16 per cent. acid phosphate and 100 to 150 pounds of sulphate of potash where the land has been well manured and clover grown in the rotation. At present prices of 16% acid phosphate \$32 per ton, and sulphate of potash at \$150 per ton it would cost from \$16.50 to \$20.50 per acre to fertilize at the rates recommended. This rate would be equal to 1,000 pounds per acre of a ready mixed fertilizer having the formula 10-6, such a fertilizer on the market would probably cost about \$55 or \$60. It can be seen that there is greater economy in buying the unmixed goods and mixing them at home.

On light sandy loams and sands, not so heavily manured as that on which this experiment was made, no doubt applications of 150 to 200 pounds of sulphate of ammonia along with 500 or 600 pounds of acid phosphate and 100 to 150 pounds of sulphate of potash would be profitable.  
**H. A. FREEMAN,**  
Tobacco Inspector.

**Wants Four-Foot Sleighs.**

EDITOR "THE FARMER'S ADVOCATE":  
It was with much pleasure that I read the letter of Mr. Dawson of Muskoka district, on making the width of sleighs used in Ontario four feet.

I may say just here that I use one 4 feet wide, and the horses are far enough apart on it, a flour barrel could easily pass between them; whereas putting them on the narrow sleigh they are right together.

In the year 1905, I think it was, the Ottawa Government passed a law to make all heavy sleighs four feet wide and were given to December 15 of that year to make the necessary changes; but through fear of losing votes or power the law was rescinded, and nothing much has been heard of it since but a few words of drivers of crowding horses that would not look well in print.

I was overhauling my stables that year and I had four-foot sleighs built, to conform to the law, to haul the manure direct from stable to the field.

I have heard some of my neighbors remark, when in trouble on narrow roads. "If we had wider sleighs to make us a road we would not have this difficulty."

But now that we have a farmer Government, possibly something might be done to make the sleighs four feet wide if the matter could be brought to their attention.  
Dundas Co., Ont. SUBSCRIBER.

**Gombault's Caustic Balsam**

The World's Greatest and Surest Veterinary Remedy  
HAS IMITATORS BUT NO COMPETITORS!

**SAFE, SPEEDY AND POSITIVE.**

Supersedes All Caustery or Firing. Invaluable as a CURE for

- FOUNDER, WIND PUFFS, THRUSH, DIPHTHERIA, SKIN DISEASES, RINGBONE, PINK EYE, SWEENEY, BONY TUMORS, LAMENESS FROM SPAVIN, QUARTER CRACKS, SCRATCHES, POLL EVIL, PARASITES.

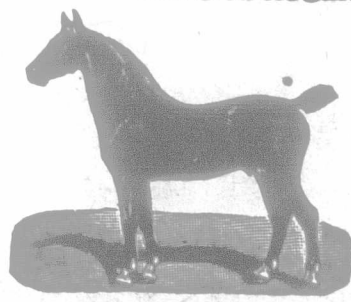
- REMOVES BUNCHES or BLEMISHES, SPLINTS, CAPPED HOCK, STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, \$1.75 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

**The Accepted Standard VETERINARY REMEDY**

Always Reliable. Sure in Results.



See genuine without the signature of **The Lawrence-Williams Co.**  
Sole Importers & Distributors for the U.S. & CANADA. CLEVELAND, O.

**NOTHING BUT GOOD RESULTS.**

Have used GOMBAULT'S CAUSTIC BALSAM for more than 20 years. It is the best blister I have ever tried. I have used it in hundreds of cases with best results. It is perfectly safe for the most inexperienced person to use. This is the largest breeding establishment of trotting horses in the world, and use your blister often.—W. H. RAYBOND, Prop., Belmont Park Stock Farm, Belmont Park, N.Y.

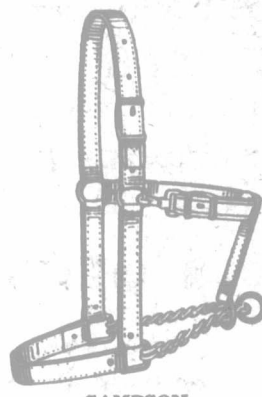
**USED 10 YEARS SUCCESSFULLY.**

I have used GOMBAULT'S CAUSTIC BALSAM for ten years; have been very successful in curing curb, ringbone, capped hock and knee, bad ankles, rheumatism, and almost every cause of lameness in horses. Have a stable of forty head, mostly track and speedway horses, and certainly can recommend it.—C. C. CHAMBER, Training Station, 500 Exchange Street, New York City.

Sole Agents for the United States and Canada.  
**The Lawrence-Williams Co.**  
TORONTO, ONT. CLEVELAND, OHIO.

**Your Horse Can't Break This Halter**

We assume the full responsibility by attaching our guarantee tag to this Griffith Sampson Halter. This means that if it breaks within a year from date of purchase we will repair it, or send you a new halter absolutely free of charge.



There's strength in every strap and stitch of the Sampson. See that chain chin draw? That's electric welded steel chain—it grips the horse under the jaw when he pulls and he soon yields to its strength.

**Griffith Guaranteed Halters**

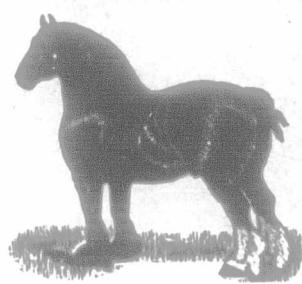
Our guarantee tag is attached to all our guaranteed halters. Isn't that a worth while consideration when buying your next halter? Price of Sampson \$2.50 (in the West \$2.75). If your dealer can't supply you send direct to us giving dealer's name.

Send for free booklet. Shows a halter for every purpose—at a price to suit your purse.

**G. L. Griffith & Son 68 Waterloo St., Stratford, Ont.**

**PREMIUM CLYDESDALES**

Our Stud is headed by **BARON GARTLY**



winner of third place in open class at Glasgow, Scotland, and grand champion at both Toronto and Ottawa. Progeny have stood high in large classes at the latter two shows. High quality stallions for sale. Our new importation has just arrived including several noted premium winners. Intending purchasers should see our horses before buying.  
**BRANDON BROS., Forest, Ontario**

**FAIRVIEW CLYDESDALE CHAMPIONS**

We have at present, several mares that have been champion winners at Toronto, Guelph, London and Ottawa. Look up our past winnings and call on us if you want something choice. We also have Shorthorn bulls and females of show individuality.  
**ROBERT DUFF & SON MYRTLE, ONT.**



## Percherons and Belgians THE POPULAR BREEDS

We have in our stables a select lot of Percheron and Belgian stallions and mares, running in age from 4 to 7 years. Our stallions weigh from 1,900 to 2,200 lbs., and mares from 1,700 to 2,000 lbs.

Use good breeding stock now and be ready to meet the demand which is sure to exist. All horses have been Government inspected, and we guarantee them to be satisfactory sure breeders; if they are not, you do not have to keep them.

We will sell on time to responsible parties. Look up our winnings at the Western Fair, Guelph Winter Fair and Ottawa Winter Fair. These will give you some idea as to the class of horses we are offering.

Inspection Welcomed.

Correspondence Solicited.

ADDRESS ALL CORRESPONDENCE TO

**G. R. Crouch,** Vice-President La Fayette Stock Farm Company of Canada, Limited, London, Canada

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.



A GROUP OF PERCHERON BELGIANS

### Corn That Will Grow

Canadian-Grown Seed Corn  
Your money back if not satisfied

J. O. Duke - Ruthven, Ont.

### Sunny Side Herefords

Herd headed by Brummel's Chance (Imp.)  
Champion at London and Guelph, 1919.  
We have for sale now a few choice  
bulls and heifers about a year old.

MRS. M. H. O'NEIL & SONS  
R.R. No. 4 Denfield, Ont.  
Phone Elderton.

### Aberdeen-Angus Cattle

Suffolk Down Sheep or  
Clydesdale Horses.

WRITE:  
JAMES BOWMAN  
Elm Park Guelph, Ont.

### GLENGORE

### Aberdeen - Angus

Do not miss the opportunity to secure some of the choice males and females of wonderful smoothness, quality and strain type that are being offered by GEO. DAVIS & SONS, R.R. No. 1, Erin, Ont. Herd sire a son of Black Abbott, Champion Angus bull of Canada. Write for particulars.

### 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.

G. C. CHANNON, Oakwood, Ontario  
P. O. and phone. Railway connections:  
Lindsay, C.P.R. and G.T.R.

### Aberdeen - Angus

Meadowdale Farm  
Forest, Ontario

Alanzo Mathews Manager  
H. Fraleigh Proprietor

### ALLOWAY LODGE STOCK FARM

Angus, Southdowns, Collies

Choice bred heifers. Bulls 8 to 15 months.  
Southdown ewes in lamb.

ROBT McEWEN, R. 4, London, Ont.

### ANGUS BREEDERS—ATTENTION!

If you want a first-class Angus Bull to head your herd get Justice of Aberdeen, the 2nd prize senior calf at the Winter Fair, Guelph, 1919. Other stock for sale, male and female. J. W. Burt & Sons, Aberdeen Farm, Hillsburg, R. R. 1, Ont.



SUNNY SIDE HEREFORDS  
12 bulls, serviceable ages; 5 by breeding and individual merit are good enough to head any pure-bred herd. Females of different ages. Inspection invited. They are priced to sell.  
Arthur F. O'Neil & Sons, Denfield, Ont., R. No. 2.  
Phone 27-12

Aberdeen-Angus—"Middlebrook Abbot 2nd," prize winner at Toronto and Ottawa, for sale, as have had 5 years—price \$500 Young bulls and heifers \$175 and up. Get a pure-bred sire even if herd grades.—It pays. A. Dinmore, Mgr., "Grape Grange" Farm, Clarksburg, Ont.

Auctioneers' School of Experience  
2112 Farnum St., Devenport, Ia.—Teaches all branches. You learn at home. Students now selling in 17 States. Write to-day.

### ABERDEEN-ANGUS CATTLE CLYDESDALE HORSES.

We offer good young stock for sale.  
Jno. Underwood & Son, Grafton, Ontario

### Grandfather's Tool-House.

EDITOR "THE FARMER'S ADVOCATE":

In one end of a large wood-house attached to the rear of the farm-home to be handy, a room was partitioned off and furnished with a couple of good windows and provided with a good door lockable with a padlock. The room had a carpenter's bench a relic from house building and shelves and racks about the walls for holding various tools and a place for boxes of nails of different sizes, etc. A strong vice was attached to the bench and a low seat and some lasts provided where a bit of harness or a shoe could be cobbled against the time when it could be taken to a regular workman. This saved much valuable time and tided one over a moment of necessity.

In the tool-room were stored the extra scoop-shovels, spades and pitch forks that were only needed on occasion. Here were housed scythes, wire-stretchers, mallets, etc. It was the rule that the men must return all tools to the tool-room when they were done with them. Men and boys who did not know how to use good tools were not trusted with them.

Often we had hired men who were handy with tools and took pride in the things they were able to make. Axe-handles was a favorite with one. He would cut the timber in wood lot, season it and fashion the handle and when it was dressed and finished was superior to any you could buy and how they wore! They were not all the time splintering but when they were worn out they went to pieces all at once like the Deacon's "Wonderful one-Hoss Shay." I came across a clothes-hanger the other day made by another hired man. He took a notion one winter to make these and we had a lot about the house. They'll last a life-time and are lighter and stronger and not so clumsy as the wooden ones you buy. He cut the lumber, seasoned it and shaped the hangers, and finished them off with wires for hanging, leaving the wood in its natural color.

A wash-tub-bench is another handy thing. It is so well made, so light and yet so strong it is a constant pleasure to use it.

A workman without a bench and tools is handicapped and loses a lot of time. There are an astonishing lot of good tools about the farms kept put away for safe keeping and forgotten because there is no safe place in which to keep the tools together. Hunt up your tools and add to your collection from time to time. Many men who never attempt to do any little fixing about the premises would be encouraged to do so if they had good tools to work with.

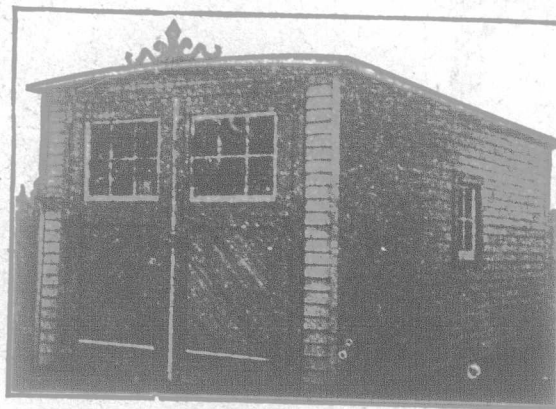
There is a pleasure in the use of a light running saw that keeps its edge, cuts true and does not bind and so with other tools. Keep them sharp and in repair and oiled and ready for instant use.

There is an advantage in locking up the tool-room at times. It prevents the borrowing of tools, by nobody knows who when you are away. It secures from visiting children who have little respect for other's property and provides a place to work free from interruption. The tool-room had a stove so that in cold weather the place was warm and comfortable to work in.

F. M. CHRISTIANSON.

Welland Co., Ont.

## The Auto-Home Garage



is just what you need for your car. It is built in sections; any one can erect it. It is painted and glazed complete. Built in four sizes. Place your order early; have a neat, warm place for your car in cold weather. Send for full particulars.

A. COATES & SONS  
MANUFACTURERS  
BURLINGTON  
ONTARIO  
Box 151

### CLEARING SALE OF

## SCOTCH TOPPED SHORTHORNS

The entire herd of Frank I. Bolton will be sold at the farm, 4 miles from Guelph, Ontario, on the Eramosa Road.



### Wednesday, March 10th, 1920

This herd consists of 20 head of choice animals. The females are all extra good representatives of the breed and selling in the best of breeding condition. The majority of the cows will have calves at foot or be calving early to the service of the herd sire "Nero of Belmont"=115690=, a son of the noted imported bull "Nero of Cluny" (116731). The value of this herd sire's yearling progeny and calves on day of sale.

Plan to attend. Send for catalogue now.

THERE WILL BE POSITIVELY NO RESERVE

Frank I. Bolton R. R. No. 1, Guelph, Ontario

### BROOKDALE HEREFORD FARM

Young stuff for sale at all times. Visitors always welcome and met any time.  
Telephone. W. READHEAD, Milton, Ontario





# WESTERN ONTARIO SHORTHORN SHOW AND SALE

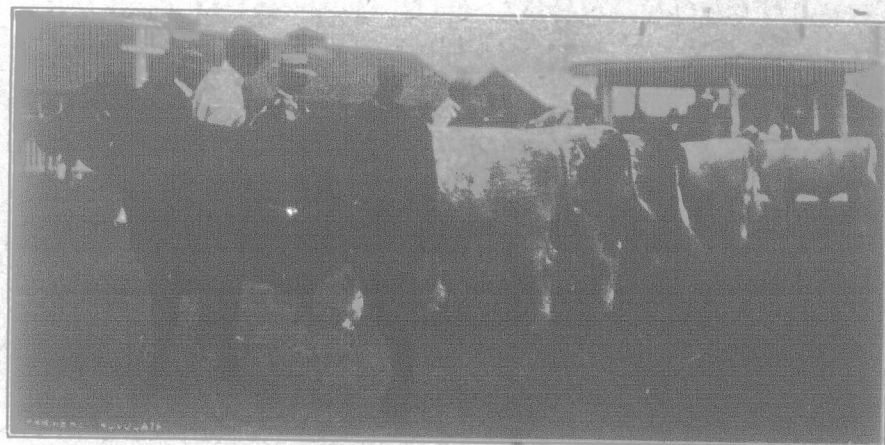
LONDON, ONTARIO

March 23rd and 24th, 1920

## 110 Cows and Heifers, 40 Bulls

There will be 15 or 20 cows with calves at foot, 30 cows and heifers well along in calf, and the remainder of the females younger heifers, mostly of breeding age. The bulls will all be of serviceable age, including the very best progeny of such famous sires as Escana Champion, Gainford Supreme, Collynie Landmark and other sires equally as popular. The general high quality of the animals in this sale can be readily judged by the fact that they come from the herds of such prominent breeders as:

- |                     |                   |
|---------------------|-------------------|
| Geo. Gier           | F. W. Scott & Son |
| Wm. Waldie          | John McLean & Son |
| H. McGee            | Geo. Attridge     |
| Kyle Bros.          | E. Brien & Son    |
| R. & S. Nicholson   | Jos. White        |
| R. S. Robson & Son  | Percy De Kay      |
| Peter Stewart & Son | J. T. Gibson      |
| F. McDonald & Son   | Wallace Gibb      |
|                     | Harry Smith       |



The animals sold each day will be shown in the forenoon and prizes awarded.

The usual liberal guarantee will be given as to females bred.

Send for catalogue and plan to attend this great sale.

**HARRY SMITH :: Hay, Ontario, Sales Manager**

### "Win One Campaign" in Prince Edward County.

EDITOR "THE FARMER'S ADVOCATE":

On Thursday night, February 19, a meeting was held in Picton, Prince Edward County, in connection with the Live Stock improvement and Scrub Bull Campaign. The meeting was preceded by a banquet, which thirty prominent breeders of the County attended. After the banquet the meeting was addressed by J. Cooke, of the Farm Management Department, O. A. C., Guelph. Mr. Brethen of Norwood, a prominent Holstein Breeder; Mr. Hammerquest of the Carnation Stock Farms, U. S. A., and a number of local breeders, including E. Purtelle, C. Mallory, G. Thompson, A. D. Foster, Mr. Yarwood, and several others.

The breeders present were very optimistic and enthusiastic regarding the success of the work. During the meeting a written pledge was passed

### DUAL-PURPOSE SHORTHORNS

Herd headed by Dominator 106224, whose two nearest dams average 12,112 pounds of milk in a year. Inspection of herd solicited.

WELDWOOD FARM, - Farmer's Advocate, - London, Ont

**Imported Scotch Shorthorns** For Sale—three imported bulls, one yearling, one two-year-old, and our three-year-old herd sire, also a choice two-year-old Orange Blossom of our own breeding and three well bred bull calves about year old. Would consider exchanging an imported bull for Scotch females.  
R. M. MITCHELL, - R. R. No. 1, - FREEMAN, ONT.

**20 Bulls—SPRUCE LAWN—100 Females**—Clydesdales, Shorthorns, Yorkshires. Herd headed by Imported Golden Challenger 122384. A Rubyhill bred by Earl of Northbrook, by Ascott Challenger, bred by L. De Rothchild. Special bargains in farmer's bulls. Cows and heifers in calf, yearling and heifer calves. Yorkshires either sex. J. L. and T. W. McCamus, Cavan, C.P.R., Millbrook, G.T.R. and P.O., Ontario.

**Newcastle Herd of Shorthorns and Tamworths for sale**—Several young bulls ready for service; several heifers bred to Primrose Duke =10754 =, and several young things of nice quality and breeding. Two young cows with heifer calves at foot, all of a good milking strain. A choice lot of Tamworths of both sex, and various ages, from noted prize-winning stock. Pair of registered Clydesdale fillies rising 3.  
Long-distance Phone. A. A. COLWILL, R.R. No. 2, Newcastle, Ont.

**Spring Valley Shorthorns**—Herd headed by Sea Gem's Pride 96365. We have a number of good bulls for sale, including the Champion Ivanhoe 122760, and his full brother also, an extra well bred Rosewood, and others. Write for particulars.  
Telephone and telegraph by Ayr. KYLE BROS., Drumbo, Ont.

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

around, asking that every pure bred breeder present endeavor to replace one scrub sire with a pure-bred during the year. The final result showed that every man at the meeting signed the pledge.

Regret was expressed that Mr. MacVannel, the genial, energetic Agricultural Representative of the County was unable to be present on account of a serious cold.

Prince Edward County is bound to make a great showing, in the improvement of their live stock, as the men of the County are showing the utmost willingness to co-operate with Mr. MacVannel. Every County in Ontario would do well to emulate the example set by Prince Edward.

Watch the Scrub Sire vanish.  
C. F. MACKENZIE,  
Field Man, Ontario Cattle Breeders' Association.

"The Farmer's Advocate" is the best agricultural paper I am acquainted with."  
Fontenac Co., Ontario. R. E. FORD.

### Garage

is just what you need for your car. It is built in sections; any one can erect it. It is painted and glazed complete. Built in four sizes. Place your order early; have a neat, warm place for your car in cold weather. Send for full particulars.

A. COATES & SONS  
MANUFACTURERS  
BURLINGTON  
ONTARIO  
Box 151

### OF HORNS

at the farm, 4 miles  
Rosa Road.

### Oth, 1920

females are all extra good  
st of breeding condition.  
t be calving early to the  
90 =, a son of the noted  
value of this herd sire's  
iated when you see his

now.  
NO RESERVE

Guelph, Ontario

### RD FARM

come and met any time.  
DHEAD, Milton, Ontario





# What a difference!

—and Dreadnaught Chains will do it—giving you that perfect control and ease of mind under otherwise hazardous conditions.

A similar name will not give you Dreadnaught quality and service. Insist on Dreadnaught—*The Master Chain.*

Made in Canada

**McKinnon-Columbus Chain, Ltd.**  
St. Catharines Ontario

**Messrs. A. J. Hickman & Co.**  
Halse Grange, Brackley, England  
Exporters of all Breeds of Pedigree Live Stock

Send for an illustrated catalogue and see what we can do for you. Whether you want show or breeding stock, buy direct from England and save money.

### Horse Vermin

All kinds of vermin—lice, mange, dandruff, scurf—thrive in long hair of horses matted with winter's filth. Clip your horses and avoid such troubles. Horses will be healthier and do better work if clipped in the spring with a Stewart No. 1 Ball Bearing Machine. Insist on a Stewart—the only machine that always satisfies. Write for new catalogue.

CHICAGO FLEXIBLE SHAFT COMPANY.  
Dept. A 161, 12th St. and Central Ave., Chicago, Ill.

### Buy Glenfoyle Shorthorns

9 bulls, all ages; 25 heifers and cows. Herd bull 2,400 pound quality kind, which sire's dam and three nearest dam's milk records average over 9,000 pounds; also high-class yearling Clyde stallion. Come and see them.

Stewart M. Graham - Lindsay, Ont.

### Mardella Dual-purpose Shorthorns

8 choice young bulls; 30 females, cows and heifers. All of good size, type and breeding. Herd headed by The Duke; dam gave 13,599 lbs. milk, 474 lbs butter-fat. He is one of the greatest living combinations of beef, milk and Shorthorn character. All priced to sell. Write, call or phone.

THOMAS GRAHAM, Port Perry, R.R. 3, Ont.  
Scotch Shorthorns—Herd headed by Master Marquis =123326=, by Gainford Marquis. Stock of either sex for sale. Also Oxford Down ewes.

GEO. D. FLETCHER, Erin, R.R. 1, Ont.

### Evergreen Hill Farm—R.O.P. Shorthorns

Present offering: Two 12-month bulls by the R.O.P. bull St. Clare =84578=, also a few heifers and heifer calves.

S. W. JACKSON, Woodstock, Ont.

### SHORTHORNS FOR SALE

Nonpareilla 14th =123006, bred to an imp. bull, due to calve April 1st. Also two of her heifers, all bred and registered. Call or write. Farm 1/4 mile from station.

JAC. Z. IUTZE, Box 80, Baden.

## Shorthorn Bulls for Sale at Bargains for Quick Sale

Having purchased the \$3,100 bull, **Augusta Emblem**, at the Dryden-Miller sale, I am offering my 4-year-old herd bull, **Imp. Marigold King** (108395), sire **British Consul**, dam **Marigold Ruby**, for sale at the low price of \$500. Marigold King is a red, and has type to burn, he is a sure sire and a good producer, as my young stock will prove in the near future. I also offer the red 15-month **Missie** bull, **Lord Beaverbrook** 132565, sired by Marigold King, dam Dymont's **Missie** 131299, at the low price of \$700. He is a grandson of **Missie** 166th (imported) 34299, and his pedigree contains such great bulls as **Missie Champion**, **Captain Inglewood**, of no mean quality, and will prove himself a bargain to the purchaser, his breeding alone is worth more than the price asked. I also have 2 young red bulls, 8 months old, a **Missie** and a **Ruth**, that I am offering at exceptionally low prices. Here is sold at once, and the prices quoted are away below the value of the animals offered. Farm 10 minutes' drive from Barrie station. Apply to

HAROLD M. DYMENT

Barrie, Ontario

## Burnbrae Shorthorns

Eighty-three years without change we have been breeding Scotch Shorthorns. The foundations of many of the best herds in America were laid from our farms. I am in a position to furnish you now with the BEST in FORM and in BREEDING that can be found any place. Twenty-five young heifers, from small calves to fifteen months old. Sixty-three cows and lot. Every animal that I have sold in two years has been satisfactory in what you want at a price that will give you a chance, and I will pay the freight to your station. A Grand Champion and the son of a Grand Champion at head of the herd.

ROBERT MILLER

Stouffville, Ont.

## A NEW IMPORTATION OF FORTY SCOTCH SHORTHORNS

arrived home Dec. 17th. From our herd of 125 head we can offer a large selection in choice-bred bulls and females. Anyone in need of foundation stock may find it to their advantage to look over our offering before making any purchases.

J. A. & H. M. PETTIT,

Freeman, Ontario

### SHORTHORNS

### SHROPSHIRE

### COTSWOLDS

Cows in calf and calf by side.

BLAIRGOWRIE STOCK FARM

Bulls of serviceable age

JOHN MILLER

(Myrtle Stations, C.P.R., G.T.R.)

ASHBURN, ONTARIO

## Advertising on the Farm

EDITOR "THE FARMER'S ADVOCATE":

The statement that "it pays to advertise" is so well known to most of us that it has almost become a household phrase. It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its significance.

In spite of this, however, in the writer's opinion, the farmer has not taken full advantage of the advertising media. The idea prevailing among many farmers is that only business men need to advertise, forgetting, at the same time that they themselves belong to the same class in every sense of the word. If we consider for a moment what other business men are doing along this line, we find that in the case of a reasonably large business, thousands of dollars are expended annually for advertising purposes alone. Where the mail order system is used, also, hundreds of catalogues are published and distributed to prospective purchasers who do not contribute a single farthing towards the business in the form of purchases, all of which plainly shows that advertising must be profitable or it would otherwise be discontinued.

Returning to the subject of farm advertising, if we are agreed that advertising pays, let us consider a few of the ways in which it may be accomplished. Many farmers, of course, use the daily paper or farm journal to some extent, but even this, rather limited. At the present time the amount of advertising is, practically speaking, confined to the exchange of farms and farm lands, live stock, and to some extent, seed grain. There are, however, other ways of accomplishing the same and other purposes. This does not mean, of course, that the use of the press should be displaced, but rather encouraged. A few of the ways which might be mentioned are: the keeping of a clean farm; selling only genuine products; auction sales; fairs and exhibitions; naming of farm; and the use of letter heads. A brief discussion of each of these may be of some interest.

There is, perhaps, no better advertisement in any line of business than the turning out of a genuine product. We are all aware of the various means of adulteration and substitution which are employed by unscrupulous dealers. The goods thus produced will probably continue to be sold to unsuspecting purchasers; but never will they gain a permanent foothold on the public market. Time was when slightly watered milk, underweight butter; or a diseased animal could be disposed of with comparative ease. But with the present knowledge of the composition of dairy and other products, and the presence of disease, it is not such an easy matter. Even if it were, it does not alter the fact that the product which measures up to standard requirements reflects credit to the owner and is one of the best means of advertising. On the farm honesty is the best policy.

In auction sales, also, there lies a splendid opportunity of acquainting the public with the farmer's stock-in-trade. Assuming that a man has a well-kept farm on which is found high-grade, or possibly pure-bred stock, good varieties of seed, and a first-class equipment, we are safe in saying that if the sale is not too small, it will certainly pay to sell by auction. By so doing the farmer is in a position not only to receive higher returns from his sale, but also to attract to the farm those who may not contribute toward the particular sale being held, but are quite likely to become purchasers in the future, because they recognize the merits of a good animal or other product; which is not found on all farms. In this connection it is well to note that in presenting goods for public inspection, the better the condition, the better will be the advantage to which they are sold. For instance, in the case of live stock, it is good practice to train the animals to lead properly, thus giving them a decided advantage over those untrained. It also pays to have them well groomed and in good condition if the best results are to be expected. An hour or more spent daily during the last six weeks previous to the sale will more than repay for the time and labor spent. Mention should have been made



Advertising on the Farm. The Farmer's Advocate. It pays to advertise. It is so well known to most of us that it has almost become a household word. It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its value.

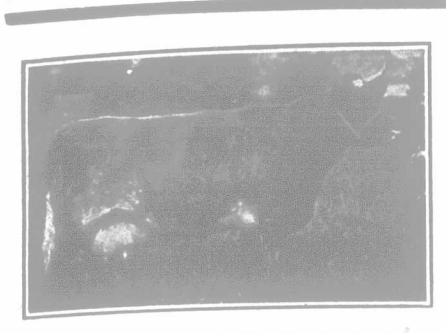
It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its value. It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its value.

It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its value. It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its value.

It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its value. It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its value.

It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its value. It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its value.

It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its value. It is one, also, which requires no further proof, since, on all sides, we have ample concrete evidence of its value.



Melody 13, bred by R. W. Hobbs & Sons  
A Prize Winner at the London Dairy Show and a 1,400-gallon cow.

The Kelmscott Herd of  
**PEDIGREE MILKING**  
**Shorthorns, Flock of**  
**Oxford Down Sheep and**  
**Stud of Shire Horses**

THE PROPERTY OF  
**Robert W. Hobbs & Sons**  
Kelmscott Lechlade, Gloucestershire  
England.

**SHORTHORN CATTLE**  
One of the oldest and largest pedigree herds in existence. Milk, Flesh and Constitution studied. Daily milk records kept. Numerous prizes won for inspection, milking trials and in butter tests. The Gold Medal Spencer and Shirley Challenge Cups were won at the London Dairy Show in 1914. The fifty Guinea Challenge Cup for the best group of Dairy Shorthorns at the Royal Show was won for the third successive year at the last exhibition at Manchester in 1916, also two firsts, one second and one third prize. All cows in milk and the stock bulls have passed the tuberculin test. Bulls and bull calves on sale at prices to suit all buyers.

**OXFORD DOWN SHEEP**  
The flock was established in 1868 and consists of from 1,000 and 1,250 registered Oxfords. Numerous prizes for many years have been won at the principal Shows. At the last Royal Show, first prize was taken for a single Ram Lamb and first prize for pen of Ram Lambs. Rams, Ram Lambs and Ewes always on sale.

R. W. HOBBS & SONS are breeders of high-class Shires. Sound active colts and fillies always on sale.  
TELEGRAM HOBBS, LECHLADE  
Inspection cordially invited

**Maple Shade**  
**SHORTHORNS**  
A dozen young bulls imported and my own breeding at moderate prices.  
W. A. DRYDEN  
Brooklin - - Ontario

**IMPORTED DUAL-PURPOSE**  
**Shorthorns**  
If you require a bull bred on the English system for milk and beef, we can sell you one of choice breeding, and in every way a good individual—one which will add value to your herd. We have a fine selection of young bulls at present, also English Large Black pigs.  
CALL OR WRITE.  
**LYNNORE STOCK FARM**  
F. W. COCKSHUTT, Brantford Ont.

**DUAL-PURPOSE**  
**SHORTHORNS**  
Present offering: Six young bulls, Reds and Roans, also a number of females. They have size, quality and breeding from good milking dams. Prices moderate. Satisfaction guaranteed.  
CHAS. GRAHAM - Port Perry, Ontario  
**LABELS**  
Live-stock Labels for cattle, sheep and hogs. Manufactured by the Ketchum Manufacturing Co., Ltd., Box 501 Ottawa, Ont. Write for samples and prices.  
**DUAL-PURPOSE SHORTHORNS**  
Herd headed by Darlington Major Maude 101212, son of Darlington Major 91279—114994. For sale: a number of young bulls and females. Choice reds and roans. R. H. & WALTER S. SCOTT, Tillsonburg, Ont. - Box 231

earlier regarding the keeping of the farm itself in a respectable condition. Nothing does more, perhaps, to create an unfavorable impression upon a visitor than to see an ill-kept farm. If the farmer wishes to gain the respect of the neighborhood, and especially prospective buyers, it is almost essential that he have the farm in the best condition possible. For instance, the leaving of old rails, stumps, tree tops along the roadside, a dilapidated milk stand; a rough, unkept lane, neglected orchard, hingeless gates and a chip-strewn yard—all tend to unsightliness, and should not be tolerated. Even if the land is first-class, and the farmer apparently prosperous, the conditions just mentioned are decidedly unfavorable and greatly lessen the value of the farm in the eyes of the prospective purchaser. A clean, well-kept property will be found to be considerably in favor of the farmer even if the land and other factors are not in the first rank.

Most agriculturists are too well acquainted with the value of fall fairs, to require much discussion here. They have come to be recognized as a permanent rural institution and from the standpoint of advertisement, it is to be ranked among the most important factors. This, it should be remembered, applies as well to those who exhibit the inferior class of products as to those who show the best. So, it is greatly to the farmer's interest to have his products in the best condition possible. The fact that a first-prize animal commands more than double the price it otherwise would have, is sufficient evidence in favor of the fall fair and the larger exhibitions as an advertising medium.

Of lesser importance, perhaps, but nevertheless valuable in advertising the farm is giving it a name, an appropriate name, well chosen, certainly adds to the value of the property. A suitable tablet placed at the farm entrance would claim some attention. If the owner specialized in a certain line of stock, this fact might also be included on such a tablet, making it a quiet but effective means of advertisement.

Still another way in which the farmer may more effectively bring his products to the attention of the business world is through the use of letter heads. As in the case just mentioned, the use of a well-designed letter head, including the name of the farm, the class of live-stock, etc., kept is much more desirable and forceful, than the use of plain writing material. It adds some dignity to the business and gives to the farmer's clientele the impression that he offers for sale something worth while.

These are some of the ways, then, by which the farmer may enhance his opportunities of disposing of his saleable products. In these days of keen competition, the agriculturists, can afford as well as other lines of business to use every means of promoting his interest in an honest, legitimate manner.  
Wellington Co., Ont. W. J. L.

**Gossip.**  
**Bryant's Holstein Sale.**

All interested in Holsteins should not forget the dispersion sale at Meadow Park Stock Farm, on March 11. The offering consists of the entire herd of forty-two females and one male. The latter is a grandson of that great cow Lulu Keyes, which has a butter record of 36.05 lbs., and is a son of a 16.35-lb. two-year-old. This breeding should appeal to anyone interested in high-producing stock. The cows and heifers which are old enough have either freshened recently or are in calf to the same sire. There will be ten cows and heifers freshen before sale time, thirteen more during the next two months, and several in the fall. There is a splendid bunch of ten yearling heifers, nearly all being granddaughters of Francy King Ormsby, a 29.10-lb. bull. Very little testing has been done in this herd, owing to the shortage of labor, but the individuals are all from high-testing stock and undoubtedly many of them would make high records. Not only has the herd good breeding, but it has splendid individuality. For further particulars see the advertisement in another column of this issue, and write Russell Bryant, R. R. No. 3, Strathroy, Ontario, for a catalogue, mentioning "The Farmer's Advocate."

**Second Annual Sale**  
**Caledonia Shorthorn Club**

**ATTRACTIVE**  
**57 Breeding Cattle 57**

Carefully selected from the leading herds of the district and selling without reserve at  
**Caledonia, Ont., Wednesday, March 10, 1920**

**Forty Young Bulls. Seventeen Females.**

The largest offering of young bulls ever offered in an Ontario sale ring. There is herd sire material here, and breeders who are looking for a herd sire should attend this sale. The females, too, will please.

Consignors: J. B. Calder, Glanford; D. B. Campbell, Cainsville; E. W. Gowan, Jarvis; Peart Bros., Caledonia; Hugh Scott, Caledonia; Ross Martindale, Caledonia; Jno. Senn, Caledonia, and others.

For catalogues, address:  
**HUGH SCOTT, Caledonia, Ontario**  
Sales Managers: W. A. Douglas, D. Z. Gibson  
Auctioneer: T. E. Robson

**PLASTER HILL STOCK FARM**  
The Home of Dual-Purpose Shorthorns  
I have now a large number of cows running in the Record of Performance, and have a few bull calves for sale from these. Can also spare a limited number of females.  
Herd sires:—Green Leaf Record 96115 and Commodore 130056. The two nearest dams of the latter average 12,112 lbs.  
**ROSS MARTINDALE - - Caledonia, Ont.**

**GRAND RIVER DUAL-PURPOSE SHORTHORNS**  
Herd headed by Prince Lavender whose dam gave 16,596 lbs. of milk as a four-year-old. A real choice red bull, 11 months old, for sale now—his dam is a splendid milker. Also have a few good bull calves coming on.  
**HUGH A. SCOTT, - - CALEDONIA, ONT.**

**Irvin Scotch Shorthorns**—Herd Sire Marquis Supreme—by Gainford Marquis (imp.). We have at present three young bulls of serviceable age and one younger, all sired by our herd sire and from Scotch bred dams. Good individuals and the best of pedigrees. Also pricing a few females.  
J. WATT & SON, - - ELORA, ONT.

**Spruce Glen Shorthorns**—When in want of Shorthorns visit our herd. We have 80 head to select from—Minas, Fames, Florences, Emils, Red Roses and Elizas—good milkers; a few heifers for sale; also several young bulls of breeding age, thick, level, mellow fellows and bred just right.  
**JAMES McPHERSON & SONS, Dundalk, Ont.**

**Shorthorn Females—Shorthorn Bulls**—We are now offering a number of choice heifers, good families and good individuals. Many are well forward in calf to our Roan Lady-bred sire, Meadow Lawn Laird. We also have bulls ready for service. Prices right. Satisfaction guaranteed.  
**J. K. CAMPBELL & SONS, Palmerston, Ont.**

**GLENGOW SCOTCH TOPPED SHORTHORNS**  
We have several thick, growthy bulls about a year old and sired by Prince Sultan; our present herd sire—a Roan Lady, by Lavender Sultan. The families represented are Golden Drop, Crimson Flower, Wedding Gift, Wimple and Kilblean Beautys. Also pricing females.  
**WM. SMITH, M.P., Columbus, Ont. Brooklin, G.T.R.; Myrtle C.P.R.; Oshawa, C.N.R.**

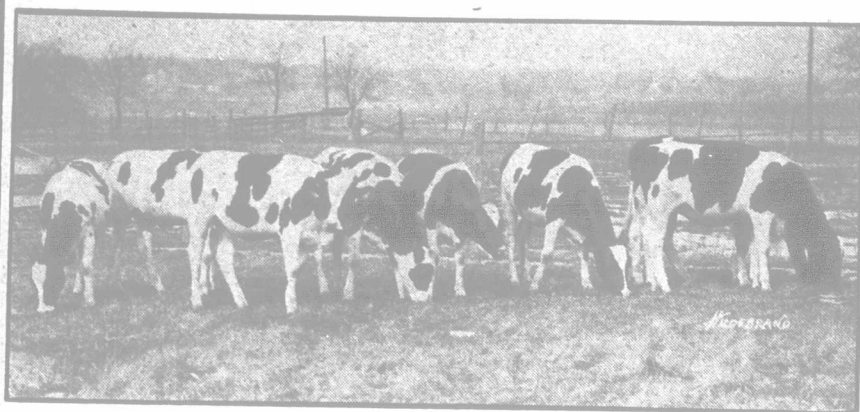
**MANOR FARM SHORTHORNS**  
Five bulls from six to fourteen months. A Rosemary, Beauties and a Martha. I seldom, if ever, owned such a good lot.  
**J. T. GIBSON, Denfield, Ont.**

**PUSLINCH PLAINS SHORTHORNS**  
Five bulls for sale by Burnbrae Sultan =80325=  
**A. G. AULD, - - R. R. 2, - - GUELPH, ONT.**

**ROWAN RIVER STOCK FARM**  
At present we have 3 bulls of serviceable age, sired by a 31-lb. sire from R. O. M. and R. O. P. dams. Younger ones sired by a grandson of May Echo Sylvia; his two nearest dams average 832 lbs. milk, 33½ lbs. butter for 7 days. Priced to sell.  
**PETER B. FICK, - - PORT ROWAN, ONT.**

**CLOVERLEA HOLSTEIN FRIESIANS**  
We are offering this week two choice bulls, one ready for service, from a 25-lb. dam. Priced right for a quick sale. For price and particulars, apply to  
**GRIESBACH BROS., - - R. R. No. 1. COLLINGWOOD, ONTARIO.**





## The Annual Spring Sale of the London District Holstein Breeders

Will be held at WESTERN FAIR GROUNDS

**Tuesday, March 16th, 1920**

FIFTY-FIVE HEAD OF CHOICE CATTLE

Consisting of new milkers and springers, granddaughters of King Pontiac Artis Canada 10042, and from dams with good records.

The bulls in this sale are by sires and out of dams with high records, up to 24.84 lbs. butter in seven days.

Sale starts at 1 o'clock. Write for catalogue.

**H. C. HOLTBY, Glanworth, Ont.**  
President

**J. McMILLAN, Glanworth, Ont.**  
Secretary

Auctioneers: T. MERRITT MOORE & DEAN

## LAST CALL FOR THE GREAT DISPERSION SALE OF

43 Head of High-Class

## Registered Holstein-Friesian Cattle

At Meadow Park Stock Farm, Lot 6, Con. 12, Metcalfe, 7 miles  
south-west from Strathroy, on

**Thursday, March 11, 1920**  
at 1 o'clock

We consider this one of the greatest opportunities of the season in many ways to purchase high-grade stock, and at your own prices.

You will notice in the preceding issue of this paper the breeding of the majority of this herd, and while none of them have been officially tested they are all from high-record stock with the best of backing, and many would make high records if given a chance. Of the 42 females only two are over six years old, and 10 will have freshened before sale time and milking well, 13 more during the next couple of months, and the balance of which are old enough are bred to freshen in fall. All are bred to the present young herd sire, King Nicolo Korndyke (3,344), a grandson of the great cow Lulu Keys, butter 36.05 lbs.

This will be a splendid opportunity for the beginner to start into the right kind of stock or to those who are already in the business, to add to their herd. We would like this sale to be well attended with prospective buyers from both far and near. We feel confident we have the stock that will suit you and that they will suit you still better after you have tried them.

Morning trains will be met at Strathroy, G.T.R., and North Appin, C.P.R., on day of sale. Catalogues are now ready and will be mailed on application.

**RUSSELL BRYANT, - Strathroy, R. R. No. 3**  
T. MERRITT MOORE, Auctioneer.

### Questions and Answers. Miscellaneous.

#### Machine Agent.

Does a machine agent require a license in Ontario. Both the company and agent operate in the Province. E. W.

Ans.—Not that we are aware of.

#### Bots.

What is the best treatment for a young mare that has bots? C. B.

Ans.—Treatment for bots is largely preventive. Once the animal has swallowed the eggs of the bot fly very little can be done to detach the larvae, which hatch, from the mucous membrane.

#### Holidays.

Has a man, hired by the month on a farm for a period of eight or nine months, the right to the legal holidays, the same as one hired by the year for a lump sum? R. M.

Ans.—Yes, subject, of course, to the doing his portion of the necessary chores.

#### Length of Lactation.

How long should elapse after a cow freshens before she is bred again? N. F.

Ans.—It depends on how long you wish to milk the cow. It is advisable to breed about three months after freshening, although if desirous of milking a cow for a full year she should not be bred for five months.

#### Trimming a Hedge.

When is the proper season to trim a spruce or cedar hedge? Is there any danger of cutting the trees too far back? J. M.

Ans.—The hedge may be pruned anytime in the spring and up until June. We do not know that there would be any particular harm from giving it a heavy pruning. If one prunes the trees back too closely, it will possibly spoil the appearance of the hedge, especially if it has not been kept pruned from the time it was planted.

#### Curing Pork.

What is a good way to salt pork so it will keep in warm weather? J. B.

Ans.—1. There are a number of recipes which have proven satisfactory. A mixture of 4 lbs. salt, 2 lbs. of brown sugar, and 2 ounces pulverized saltpetre may be used for 100 lbs. of meat. This should be thoroughly rubbed into the meat two or three times, for hams and shoulders, at intervals of about a week. The meat should then be smoked in order to keep it for summer use. There is a liquid smoke which may be purchased at most drug stores that can be painted on the meat. This gives good results.

## DISPERSION SALE

LEAVING THE FARM

## Holstein-Friesian Cattle

35 Head

Will be sold at the Farm, 4½ miles from London, on the Lambeth Road

**Tuesday, March 9th**

No old cows. Several cows and heifers, milking; several springers. The mature cows have very creditable records. The young herd sire King Alcartra De Kol, whose three nearest dams average over 29 lbs. butter. This is a show animal. This herd is the result of 27 years careful breeding.

Conveyances will be at Brunswick Hotel.

WRITE FOR CATALOG.

Sale—1.30 p.m.

**ROBT. WILLIS, Prop., R. R. No. 1, London**

Auctioneers: LINDSAY & POUND, J. W. LAIDLAW

**HOLSTEIN HERD SIRES** I have at present several young show calves nearly ready for service, all of which are from tested dams and sired by my 30-lb. sire Gypsy Pontiac Cornucopia. This bull is a grandson of May Echo Sylvia and our entire offering in females are bred to him. Prices right.

**JOSEPH PEEL,**

**PORT PERRY, ONT.**

**ELDERSLIE HOLSTEIN-FRIESIANS**

Am all sold out of heifers, just have three bull calves left, from four to six months old. They are sired by Judge Hengerveld De Kol 8th, a 32.92-lb. bull. The dam of one is a 20.225-lb. cow. Write for prices and come and see them.

**ARCHIE MUIR,**

**SCARBORO' P.O., 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, Ont.**

**30-lb. Bull for sale**—Lord Lyons Hengerveld, his 5 nearest dams average 30.94 lbs. of butter in 7 days. Sire, King Lyons Hengerveld whose 5 nearest dams average 31.31. Dam Madoline Dolly Dekol, a 25-lb. daughter of Baroness Madoline R.O.M. April; must sell to avoid in-breeding. Priced right, if interested write at once. We also have a few young bulls left. **Jacob Mogk & Son, R.R.1, Tavistock, Ont. Innerkip Phone 1 on 34**

**Summer Hill Holsteins**

We have the best bunch of Holstein bulls ever offered at our farm. Their dams have records up to over 34 lbs. of butter in 7 days. All are sired by a bull with a 34-lb. dam. One is a full brother to the Grand Champion bull at Toronto this year. Prices reasonable.

**D. C. FLATT & SON, R.R. No. 2, Hamilton, Ont.**

**Cedar Dale Farm**—The Home of Lakeview Johanna Lestrangle, the \$15,000 sire—He is the son of the 38.06-lb. cow, Lakeview Lestrangle, and is our chief sire in service. We are offering a few females bred to him and also have a few full calves sired by him at Walker. Other older bulls, sired by our former herd sire, Prince Segis Walker, son of King Segis A. J. **TAMBLYN, Cedar Dale Holsteins - (C.N.R. station one mile) - Orono, Ontario**

**WALNUT GROVE HOLSTEINS**

I am offering a choice lot of bull calves sired by May Echo Champion who is a full brother of world's champion May Echo Sylvia, also a few cows just fresh.

**C. R. James, Richmond Hill, R. R. No. 1, Ont.**

#### Muskrats.

What is the best method of trapping muskrats? Can you trap on your own place without securing a license, when the rats are doing damage? H. H.

Ans.—In our issue of January 29, page 178, a full description of muskrat trapping is given. One does not need a license when trapping on his own place.

#### Turpentine.

We have a lot of pine trees around the place. Is it possible to extract turpentine from them? How and at what time could this be done, and how could it be refined for use?

Ans.—The resin yielded by coniferous trees is gathered and is then distilled with water and alkali carbonates. The water which the resin carries is further removed by distillation over calcium chloride. It is doubtful if it is advisable to carry this on a small scale, and the refining of the product is impracticable, except in a plant specially prepared for same.

#### Painting a Barn.

1. Can rough lumber on an old barn be painted? I tried painting with a brush but the lumber was too rough.

2. Will it pay to paint shingles?

3. Could I get a spraying outfit to paint rough lumber?

4. How much paint would it take to the square, and what kind of paint would be best?

5. Will the fire insurance company insure a tool shed and garage together? E. D.

Ans.—1. Yes.

2. Many claim that it will.

3. Yes. Spraying outfits suitable for the work are advertised in our columns.

4. It would depend a good deal on the kind of lumber. Some absorb paint more than others. Then, too, rough lumber will take a lot more paint than dressed lumber. A gallon of paint will cover around 50 square yards. This is only approximate, as it depends entirely on the thickness of the paint, and on the kind of lumber. Ordinary barn paint that is usually advertised is about the best kind available.

5. Most insurance companies will, although the premium may be higher than on an ordinary building.

"I am delighted with the good reading in the columns of 'The Farmer's Advocate', as well as with the valuable information. In farm duties nothing is forgotten. It is without doubt the mainstay of the farmer."  
Victoria Co., Ont. **MILSON WHYTE.**



**DISPERSION SALE OF**  
**Class**  
**Friesian Cattle**  
 2, Metcalfe, 7 miles  
 on  
**11, 1920**

ities of the season in many  
 own prices.  
 s paper the breeding of the  
 have been officially tested  
 best of backing, and many  
 of the 42 females only two  
 before sale time and milk-  
 s, and the balance of which  
 e bred to the present young  
 grandson of the great cow

beginner to start into the  
 in the business, to add to  
 attended with prospective  
 ent we have the stock that  
 after you have tried them.  
 G.T.R., and North Appin,  
 dy and will be mailed on

hroy, R. R. No. 3  
 ioneer.

**Muskrats.**  
 the best method of trapping  
 Can you trap on your own  
 ut securing a license, when the  
 ing damage? H. H.  
 our issue of January 29, page  
 description of muskrat trap-  
 ven. One does not need a  
 trapping on his own place.

**Turpentine.**  
 a lot of pine trees around the  
 possible to extract turpentine  
 ? How and at what time  
 e done, and how could it be  
 se?

e resin yielded by coniferous  
 hered and is then distilled  
 and alkali carbonates. The  
 the resin carries is further  
 y distillation over calcium  
 is doubtful if it is advisable  
 on on a small scale, and the  
 he product is impracticable,  
 plant specially prepared for

**Painting a Barn.**  
 ough lumber on an old barn  
 I tried painting with a  
 e lumber was too rough.  
 pay to paint shingles?  
 I get a spraying outfit to  
 umber?

uch paint would it take to  
 nd what kind of paint would  
 he fire insurance company  
 shed and garage together?  
 E. D.

Yes.  
 claim that it will.  
 praying outfits suitable for  
 advertised in our columns.  
 d depend a good deal on  
 mber. Some absorb paint  
 thers. Then, too, rough  
 ke a lot more paint than  
 r. A gallon of paint will  
 50 square yards. This is  
 ate, as it depends entirely  
 ss of the paint, and on the  
 Ordinary barn paint that  
 ertised is about the best

nsurance companies will  
 premium may be higher  
 inary building.

ted with the good reading  
 s of 'The Farmer's Ad-  
 ll as with the valuable  
 n farm duties nothing  
 t is without doubt the  
 e farmer."  
 Ont. MILSON WHYTE.



**OXFORD COUNTY HOLSTEINS**  
**ANNUAL SPRING SALE**  
**80 HEAD** Sixty-Four Females - Sixteen Young Bulls **80 HEAD**  
 WOODSTOCK, ONT.  
**Wednesday, March 17th, 1920**  
 Listing the greatest number of fresh cows we have ever offered  
**MORE HIGHER RECORD BULLS**  
 Eighty Breeding Cattle Consigned by Oxford's Leading Breeders  
 We have catalogued for this sale 64 choice females and 16 of the best young bulls of the year. Among the former are 16,000-lb. three-year-olds; three-year-olds that have produced 707 lbs. of butter in the year; 25-lb. cows in calf to 30-lb. bulls; 20-lb. cows in numbers and dozens that on private have milked up to and beyond 60 lbs. per day. In young bulls we have 16, all of the herd sire sort, with the records of their dams running up to 30 lbs of butter in 7 days—a choice lot of youngsters, well grown and well bred.  
*The Place to Buy the Best is where they Breed the Best*  
**COME TO WOODSTOCK**  
 For catalogues address: **ANDREW DUNN, President**  
**GEO. C. CURRIE, Secretary** Auctioneers: **MOORE, DEAN & PULLIN**  
 Ingersoll, Ont.

**Important Dispersion Sale**  
**Thirty-five Pure-bred Holsteins** *The entire high-testing Glenroe Holstein Herd, selling at the farm, one and a half miles east of* **Thirty-five Pure-bred Holsteins**  
 INGERSOLL, ONTARIO  
**Thursday, March 18th, 1920**  
**35 HIGH-TESTING HOLSTEINS**  
 All bred on the farm  
 The Glenroe herd is one of the select small herds of Oxford County—with two exceptions, every animal bred on the farm. The females are all young and have never been forced. The records, although not large, were each made under strictly commercial conditions, and only one was made at full age. There is not a two-year-old, three-year-old or a four-year-old but what should increase their record materially at this freshening. If you like to make your selections from a breeders' herd, you should attend this sale. There will be no reserve.  
**CATALOGUES READY MARCH 5th.**

**Fred. V. Heeney, GLENROE FARM Ingersoll, Ontario**  
 (This sale follows the Oxford County Holstein Club Sale at Woodstock, March 17.)

**Hospital for Insane, Hamilton**  
 Holsteins, yes! All bulls of serviceable age are sold, but several of six months and younger, from one of the best sons of King Segis Alcartra Spofford, and our best dams will be sold at reasonable prices.  
**APPLY TO SUPERINTENDENT**

**HOLSTEIN HERD AVERAGES 18,812 LBS. MILK**  
 A herd of 13 pure-bred Holsteins last year averaged 18,812 lbs. milk and 638.57 lbs. fat. Do you realize the money there is in such cows? It is estimated that the average annual yield of all cows in this country is under 4,000 lbs. These 13 cows produce as much milk as 62 cows of the 4,000-lb. class.  
 Why feed, milk and shelter any more cows than you need to produce the milk you require? If interested in **HOLSTEIN CATTLE** send for booklets—valuable information they contain much **HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA** ST. GEORGE, ONT.  
**W. A. CLEMONS, Secretary.**

**SUNNYBROOK FARM HOLSTEINS**  
 We are offering for quick sale one 24-lb. bull and one 26-lb. bull ready for service. Both are sired by a 33-lb. son of the great King Segis.  
**JOSEPH KILGOUR, NORTH TORONTO, ONT**

**Seven Registered Clydesdales** **GREAT** **Forty-five Registered Holsteins**  
**CLEARING SALE**  
 The entire farm stock, implements, etc. belonging to R. M. Holmes and selling at the farm, near  
**OTTERVILLE, ONTARIO**  
**Wednesday, March 10th, 1920**  
**HOLSTEINS**  
 15 young cows, fresh or in full flow of milk.  
 5 young cows near calving.  
 16 one and two-year heifers sired by a son of Grace Fayne 2nd, Sir Colantha.  
 8 cows calving in early summer.  
 A number of 1920 calves sired by the present herd sire Colantha Fayne Abbekerk No. 32239.  
**CLYDESDALES**  
 2 seven-year old stallions guaranteed right.  
 5 registered brood mares, all under six years of age and supposed to be in foal.  
 Sale commences 9.30 a.m. sharp. Lunch at noon.  
 Cattle will be sold immediately after arrival of noon train. As the farm is sold there will be no reserve.  
 Auctioneers: **MOORE, DEAN & LONGWORTH** Sales Manager: **M. L. HALEY**  
 Write for Catalogue  
**R. M. HOLMES, - Otterville, Ontario**

**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. Their youngsters should not remain long. Write to-day.  
**RAYMONDALE FARM, Vaudreuil, Que. D. RAYMOND, Owner, Queen's Hotel, Montreal**

**Hamilton House Holstein Herd Sires**  
 Our highest record bull for sale at present is a 4 months calf from Lulu Darkness 30.33 lbs. and sired by a son of Lulu Keyes 36.56 lbs. His two nearest dams therefore average 33.44 lbs. and both have over 100 lbs. of milk per day. We have several older bulls by the same sire and from two and three-year-old heifers with records up to 27.24 lbs. All are priced to sell.  
**D. B. TRACY, Hamilton House, COBOURG, ONT.**  
**HOLSTEIN BULLS FROM 30-lb. DAMS**  
 If you want 30-lb. bulls—good individuals—and priced right—you should see my present offering. I also have lower priced bulls and am offering females bred to Ormsby Jane Burke. Correspondence solicited. **R. M. HOLTBY, Manchester G.T.R.; Myrtle C.P.R.; PORT PERRY, Ont.**

**Sylvius Walker Raymondale** is the sire of the majority of our young bulls now listed. If you see these calves you will appreciate them. Their dams are mostly daughters of King Segis Pontiac Duplicate. Don't delay if you want a good bull at a right price. We are also offering females.  
**R. W. WALKER, & SONS, Port Perry, Ont.**



## Complete Clearing Sale

At Maple Farm, near Putnam

The entire farm stock, machinery, grains, hay, hogs cattle, etc.  
The latter includes upwards of 30 grade and 20 pure-bred

# Ayrshires

SELLING AT

Putnam, Ont., Wednesday March 10th, 1920

These twenty pure-bred Ayrshire cattle, which comprise the entire registered Maple Farm herd, were, with the exception of the herd sire, all bred on the farm, and nearly all are descended from the great 10-year-old cow, Juno York, which is also selling. This cow, as will be seen on sale day, is one of the outstanding matrons of the breed, and her sire was a son of the noted old-time breeding sire, White Prince of Elm Shade. Juno York has six daughters in the breeding herd, and the remaining females are, as mentioned above, nearly all granddaughters or great granddaughters of this cow. On the sires' side, these young cows are got by such bulls as Annie Laurie 2nd's Fortune, a son of Garclaugh Prince Fortune; Advance's King, by Advance, the great son of Jean Armour, and last, the young R.O.P. bred sire, Prince of Fernbrook. The females are all in bred to Selwood Champion, the present herd sire, which is a grandson of the 8,404-lb. R.O.P. two-year-old, White Lass of Trout Run.

The general farm stock consists of 30 grade cattle, 11 horses, 30 high grade Shropshire ewes, etc.

Write for catalogue. The farm is sold and there is no reserve.

**A. G. McNIVEN, Putnam, Ontario**

C.P.R. station 1/2 mile from farm.

### Questions and Answers.

#### Miscellaneous.

##### Leaky Teat.

I have a cow which is a very good milker and an excellent stock cow, but the milk leaks away quite fast. Is there any treatment?  
A. P.

Ans.—It is possible for a veterinarian to perform an operation when the cow is dry. This consists of scarifying the point of the teat. It is not always successful, however, and as the animal is a good stock cow it might be well to leave the calves with her, instead of milking her by hand. If the calves ran with her there would be no loss of milk.

##### Smut.

What is a recipe for treating grain for smut, under the dry system?  
W. W.

Ans.—The dry formaldehyde treatment is for use on oats only. It consists of using one part formalin to one part of water, and use at the rate of one pint of the solution to twenty-five bushels of seed. As the grain is being shovelled over, the liquid may be applied with a small sprayer. This should then be covered and left for five or six hours. Quite a number used this method last year with good results.

##### Soil Analysis.

Is there a place where I can send samples of soil to be analyzed, with the object of ascertaining what fertilizer is needed? How much soil is needed for a test, and what will the charges be?  
G. E. R.

Ans.—The Chemical Department of the O.A.C., Guelph, or the Chemical Department of the Experimental Farm, Ottawa, will, no doubt, make an analysis for you. A person would require at least eight or ten pounds of soil, and this should be taken so as to give a fair sample of the soil of the entire field. We cannot say just what the charges are. You might write the places above mentioned for a detailed description of how to take the sample, and also for the amount they wish to have. The chemical analysis will give the mineral content of the soil. A very good way of ascertaining the kind of fertilizer a soil will need for a particu-

### WESTSIDE AYRSHIRES AND YORKSHIRES

I have one young bull, 10 months old, from high testing dam and would sell my herd bull, 3 years old—St. Nicholas of Orkney—57087—, whose dam gave 11,140 lbs. milk, 394 lbs. fat as a 3-year-old, and whose sire's dam is the famous Milkmaid of Orkney—39834—, with 3-year-old record of 14,060 lbs. milk, 534 lbs. fat. Write **DAVID A. ASHWORTH, Denfield, Ont.** (Middlesex Co.).

### SPRINGBANK R. O. P. AYRSHIRES

Our Ayrshires win in the show ring and they fill the pail. We hold more present R. O. P. champion records than any other herd in Canada. Present offering, 9 young bulls seven months and under, all from high record dams.

**A. S. Turner & Son, Railway Station, Hamilton Ryckman's Corners, Ont.**

**Stockwood Imported and Canadian-bred Ayrshires**—Write me for your next herd sire. I have own herd sire, Killoch Gold Flake (imp.) 51225, and from imported dams that are still in the herd. Call and see the kind we breed. Also pricing a few young cows safe in calf to herd sire.

**D. M. WATT, St. Louis de Gonzague, P. Q.**

### CITY VIEW AYRSHIRES

Three bulls ready for service. One two-year-old heifer, bred. Bull calves, all have several direct crosses of R.O.P. blood.

**James Begg & Son, St. Thomas, Ont.**

### 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.**

## Can You Grow Potatoes like this?

With a reasonably good soil and rainfall and the liberal use of Harab-Davies Fertilizer, you can be sure of a potato crop superior in both quantity and quality. The potato shown in our illustration was grown by a New Brunswick farmer who is a consistent user of Harab-Davies Fertilizer. He sent us this potato as a good average sample of his crop. There's no magic about it. Harab-Davies Fertilizer is simply an efficient plant food, containing Nitrogen or Ammonia, Phosphoric Acid and Potash in readily soluble form. Its record of success is its truest recommendation. Write us to-day for our booklet, "Fertilizer Results by Satisfied Users." It will be sent free on request, and it will give you evidence in the shape of signed letters from farmers in all parts of the country who know by experience how profitable Harab-Davies Fertilizer is.



**Harab-Davies FERTILIZERS**

**ONTARIO FERTILIZERS LIMITED**

Dept. F. A. West Toronto, Ontario

## Important Auction Sale

THE ENTIRE FERNBROOK HERD OF

# R. O. P. AYRSHIRES

Tuesday, March 9th, 1920

(General Sale 10 a.m., Ayrshire Sale 2 p.m.)

Having disposed of one of our farms, which calls for a division of the estate, we are offering our entire herd of R.O.P. Ayrshires by public auction, to be sold without reserve on the above-mentioned date. These comprise 30 choice selections, all bred on the farm and all have semi-official records or semi-official backing—the best producing families of the breed.

All other farm stock and implements will also be sold. No reserve. Apply for catalogue.

**Collier Bros., (Oxford County Jno. McKee, Sales Mgr.) Beachville, Ont.**

## Choice Ayrshire Bulls

One bull, 15 months old; dam's average test, 4.7 butter-fat; price, \$150.  
One bull, 16 months old; dam's average test, 4.8 butter-fat; price, \$175.  
One bull, 14 months old; dam's average test, 5.8 butter-fat; price, \$175.  
Also male calves, two and three months old—same dams.

**Thomas A. Low, Elm Valley Stock Farm, Renfrew, Ont.**

## A Real Ayrshire Herd Sire (Priced right)

We are offering at a very reasonable price a 4-months' son of Rose of Montrose, 8,831 lbs. of milk and 380 lbs. of fat in the R.O.P. (334 days), average test 4.3%—her dam again, Rose of Verchlope, has 10,823 lbs. of milk and 382 lbs. of fat, with a test of 3.55%. The sire of this calf is a son of Daisy of Ferndale, who holds R.O.P. records as follows: 15,534 lbs. of milk, 590 lbs. of fat in one year; 30,064 lbs. of milk, 1,111 lbs. of fat in two years, and 58,072 lbs. of milk and 2,276 lbs. of fat in three years and nine months. She was also the Sweepstakes Cup winner (mature class) 1915.

**MRS. A. L. DAVIS (York Co.), BALLANTRAE, ONTARIO**

## Craigielea Ayrshire Herd Sires

TWO YOUNG BULLS SPECIALLY PRICED and special individuals.

No. 1, a 15 months calf by Lady's Milkman, he by a son of Fairview Milkman and out of Milkmaid 7th, 16,696 lbs. of milk, 729 lbs. of fat (one time Canadian Champion). The dam of this calf is Rose of Montrose an 8,831-lb. R. O. P. two-year old.

No. 2 a year old calf by Fairview Milkman and dam White Lady of Craigielea 2nd, 11,700 lbs. of milk, 458 lbs. of fat in one year, and one of our very best R. O. P. breeding cows.

We also have calves younger and can spare a few females, safely bred. Give us a call.

**H. C. HAMMIL (Locust Hill, C.P.R. Markham, G.T.R.) MARKHAM, ONT.**

lar crop is to conduct experiments in a small way in the different fields. This is not difficult to do, and it will give an idea of the kind and amount of fertilizer which the soil responds to.

#### Book on Feeding.

1. Where can I procure a book on feeding stock, entitled "Feeds and Feeding," by Henry. What will it cost?

2. Why is a person not allowed to have an underground cistern in an incorporated city?  
J. F.

Ans.—1. "Feeds and Feeding" is a good book on the subject of feeding stock of all kinds. It may be secured through this office for \$2.75.

2. We did not know that a person was forbidden to have an underground cistern. We know of a good many in the City of London.

#### Sweet Clover for Pasture.

1. I have a field of fall wheat which I wish to seed down for pasture. Would it be all right to sow sweet clover on it in the spring? What time should the seed be sown? The field is a light, gravelly soil, with the exception of one corner where the water lies in the spring. Would this kill the clover? Would it be good for pasture for more than one year?

2. The line fence between A and B has been in poor repair for several years. It has been patched up several times but never made safe or satisfactory. B's landlord will not put up a new fence. What steps can A take in the matter?  
T. C.

Ans.—1. Sweet clover could be sown early in the spring, and it will make very good pasture that fall and also the next year. Unless it re-seeds itself it will only last one year after seeding, the same as red clover.

2. A should put up his share of the fence and then B will be liable for damages should his stock break through his portion of the fence. B would have to make an agreement with his landlord regarding the building and keeping of fences in repair. A might call in the local fence-viewers, appointed by most municipalities, to decide on the construction of the fence for the place.



**tion Sale**

**HERD OF  
RSHIRES  
9th, 1920**  
Sale 2 p.m.)

alls for a division of the estate,  
shires by public auction, to be  
ed date. These comprise 30  
have semi-official records or  
ies of the breed.  
also be sold. No reserve.

**Beachville, Ont.**

**ire Bulls**

4.7 butter-fat; price, \$150.  
4.8 butter-fat; price, \$175.  
5.8 butter-fat; price, \$175.  
s old—same dams.

**Farm, Renfrew, Ont.**

**d Sire (Priced right)**

of Rose of Montrose, 8,881 lbs. of milk  
—her dam again. Rose of Verchovitz,  
5%. The sire of this calf is a son of  
34 lbs. of milk, 590 lbs. of fat in one  
8,072 lbs. of milk and 2,270 lbs. of fat  
Cup winner (mature class) 1915.

**, BALLANTRAE, ONTARIO**

**TWO YOUNG BULLS SPECIALLY PRICED and special individuals.**

Fairview Milkman and out. of Milk  
Champion). The dam of this calf is

ady of Craigielea 2nd, 11,700 lbs. of  
P. breeding cows.  
safely bred. Give us a call.  
(T.R.) **MARKHAM, ONT.**

s to conduct experiments in a  
in the different fields. This is  
t to do, and it will give an idea  
and amount of fertilizer  
soil responds to.

**Book on Feeding.**

re can I procure a book on  
ck, entitled "Feeds and Feeding"  
enry. What will it cost?

is a person not allowed to  
underground cistern in an in-  
city? J. F.

"Feeds and Feeding" is a  
on the subject of feeding  
l kinds. It may be secured  
his office for \$2.75.

id not know that a person was  
o have an underground cistern.  
a good many in the City of

**Clover for Pasture.**

e a field of fall wheat which I  
ck down for pasture. Would  
t to sow sweet clover on it in  
What time should the seed

The field is a light, gravelly  
he exception of one corner  
ater lies in the spring. Would  
e clover? Would it be good  
or more than one year?

ine fence between A and B  
poor repair for several years.  
atched up several times but  
safe or satisfactory. B's  
l not put up a new fence.  
can A take in the matter?  
T. C.

Sweet clover could be sown  
spring, and it will make very  
t that falls and also the next  
s it re-seeds itself it will only  
after seeding, the same as

ld put up his share of the  
n B will be liable for damages  
ck break through his portion

B would have to make an  
with his landlord regarding  
and keeping of fences in  
ight call in the local fence-  
ointed by most municipali-  
e on the construction of the  
place.

**Cream Wanted**

Ship your cream to us. We  
pay all express charges.  
We supply cans. We re-  
mit daily. We guarantee  
highest market price.

**ONTARIO CREAMERIES  
Limited**  
LONDON ONTARIO

**Maple Shade Farm**

Imported Shropshire ewes  
served by best imported  
rams, very desirable  
for foundation  
flocks.

**W. A. DRYDEN**

Brooklin - Ontario

**Kent or Romney Marsh Sheep**

The hardiest and best grazing mutton  
and wool sheep of Great Britain  
Successfully acclimated wherever  
grazing sheep are required. Des-  
criptive pamphlet, list of breeders,  
and all information from

**A. J. BURROWS, Ashford, Kent, and  
16 Bedford Square, London, England.**

**Shropshire Yearling Ewes** bred to Bibby's  
84 (imp.) ram and  
ewe lambs sired by him. Two Shorthorn bulls  
Two Clydesdale stallions.  
**W. H. PUGH, Myrtle Station, Ont.**

**Pine Grove Stock Farm**

The Home of the Berkshires

Offers for sale boars fit for service, sows bred and  
ready to breed, younger ones coming on. The  
Crompton and Wandsworth strains, the best  
strains of the breed.

**W. W. Brownridge, Georgetown, No. 3, Ont.  
Milton C. P. R. Georgetown G.T.R.  
Milton Phone.**

"Pedigreed Pure Blood Stock"

**Berkshire Swine**

and Grades for sale, all ages

Pure-bred sows to farrow early this spring, also  
grade sows. Some of both for sale. Orders taken  
now for young pigs. Holstein bulls for sale, fit for  
service. Pure-bred Leicester lambs. Order now.  
**CRYSTAL BROOK STOCK FARM**  
Hudson Heights - Quebec

**YORKSHIRES**

Pigs of different ages, both sexes,  
from large litters.

**WELWOOD FARM**

Farmer's Advocate, London, Ontario

**Berkshires**—Boars ready for service and boar  
pigs, rich in the blood of Lord  
Premier's Successor 161500, Grand Champion,  
1914, Champion Sire of 1915, 1916, 1917. His de-  
scendants have won Grand Champion honors at the  
largest and strongest shows of 1919. The Cham-  
pion Berkshire barrows of 1918 International were  
double grandsons of Lord Premier's Successor.  
We have shipped many Berkshires to Canada with  
satisfaction to customers. Prices on request.

**HOOD FARM, INC., Lowell, Mass.**

**TAMWORTHS**

Young sows bred for May and June farrow, and  
boars for sale. Write or phone.

**JOHN W. TODD - Corinth, Ontario**

**Big Type Chester Whites**—We cleaned up at  
London and Toron-  
to Exhibitions, 1919. Now offering pigs from our  
805-lb. sows, and sows bred to our 1,005-lb. boar  
**JOHN ANNESSER, Tilbury, Ont.**

**Invergie Tamworths**—Sows carrying second  
litters for March farrow,  
a few choice 200-lb. boars, gilts bred for April far-  
row; a splendid lot, either sex, 3 to 5 months old.  
Wee lads and lassies just weaned.  
**L. Hadden, Box 264, Sunderland, Ont.**

**Meadow Brook Registered Yorkshires**

Ten choice young boars fit for service, from prize-  
winning stock. Prices reasonable for quick sale.

**G. W. MINERS, R.R. No. 3, Exeter, Ontario**

**Lakeview Yorkshires**

If you want brood sows of any age, stock boars of  
any age, or young pigs, write me. All bred  
from prize-winners for generations back.

**JOHN DUCK, - Port Credit, Ont.**

**For Sale—Pure-bred Sow**

Eight months old, Large English Black  
breed. Priced to sell.

**S. O. RUNNALLS Clarke P.O., Ont.**

**Questions and Answers.  
Miscellaneous.**

**Muskrat.**

1. Is it lawful to trap muskrat on a  
beaver dam, as long as this does not  
interfere with the dam? Is it necessary  
to have a license?

2. At what age can a boy collect his  
own wages?  
E. N.

Ans.—1. Provided a license is ob-  
tained, a person may trap muskrat during  
the muskrat season, which is from the  
first day of March to the twenty-first  
of April for parts of the Province lying  
south of the French and Mattawa Rivers.

2. Unless otherwise arranged with the  
parents, a boy cannot legally collect  
wages until he is twenty-one years of age.

**Price of Wheat.**

On February 2, I delivered to the local  
elevator marquis wheat and received  
the cash price that was being paid.  
Should I have received the 25 cents raise  
which took effect on the last of January?

2. I intend sowing 1918 oats this  
spring. Will they require treating for  
smut?  
W. J. R.

Ans.—1. We understand that a  
voucher is given with each delivery of  
wheat, and when the final adjustment  
is made the producer will receive his  
portion of the excess price at which the  
wheat was marketed. This is to be  
adjusted by the Wheat Board. This  
raise which took effect the last of January  
will be received later on, although we  
noticed that market quotations from the  
first of February gave this increased price.

2. It is advisable to treat oats for  
seed each year, as one never can tell  
when smut is going to be bad.

**Damp Piggery.**

We built a wall 12 inches thick and  
8 feet high, under a barn 60 by 30 feet,  
to be used entirely for pigs and hens.  
As soon as the weather turned severe  
a thick coating of frost appeared on  
the inside of the wall. Little pigs did not  
thrive. The barn seemed damp and  
chilly. What was the cause of pigs  
not thriving. Was it from the dampness?  
What would be the best method of pre-  
venting it?  
W. L. M.

Ans.—Undoubtedly the dampness was  
to a large extent responsible for the  
unthriftiness of the pigs. The trouble  
could be partially remedied by boarding  
up the inside of the wall and leaving an  
air space. For ventilation, the ceiling  
could be of loose boards or poles, covered  
with straw. This will allow the foul air  
to escape and will absorb a good deal  
of the moisture. Ventilator shafts may  
be run from the ceiling to the roof. We  
have seen the dampness partially over-  
come by replacing the glass on the south  
side with cotton. It has generally been  
found that little pigs do best in a stable  
with cattle. There is usually a drier,  
warmer atmosphere than where a large  
number of pigs are running together.

**Miscellaneous.**

1. Is a postmaster permitted to have  
a child of eight years sign the register  
for registered mail?

2. Is the treasurer of the school  
board supposed to deposit the surplus  
funds in the bank, or may he use them  
for his own purpose? Should he pay  
interest for the use. Provided he deposits  
them in the bank, can he claim the interest  
on same?

3. If a teacher does not try to get to  
school on a stormy day, can the trustee  
dock her a day's pay?  
G. S. H.

Ans.—1. He is not supposed to unless  
there is written permission from the  
person to whom the mail is address to  
have the child get the letter and sign for  
it.

2. The only business way is to deposit  
the surplus funds in the bank and the  
interest belongs to the school section.  
A school board which permits the treasur-  
er to use the money is rather lax in their  
duties.

3. If the day is stormy which would  
possibly endanger the health of the  
teacher, we cannot see that the trustees  
would be justified in docking her a day's  
pay. Most teachers get little enough  
as it is for the work they perform.

**Carrots  
For Feed**

Less than a cent per pound

NO WASTE      NO DIRT

We have a quantity of dried shredded  
carrots for sale. The ideal cattle feed.  
200 lbs. of these dried carrots equal a  
ton of fresh carrots. Just soak in  
water, and they come back with the  
same appearance and flavor and other  
properties of the fresh article. Frost  
cannot hurt them. You add the  
water. Try a sample bag.

**Graham's Limited**  
Belleville      ::      Ontario

**BRAMPTON JERSEYS**  
The Largest Jersey Herd in the British Empire

At Toronto Exhibition, 1919, we won twenty-five of twenty-seven first prizes. We now have for sale  
first-prize young bulls from R. O. P. dams, as well as females of all ages.

**B. H. BULL & SONS - Brampton, Ontario**

**Laurentian Producing Jerseys**—The oldest bull we have at pres-  
ent is a year old youngster, sired  
by our herd sire, Broadview Bright Villa, No. 5630, and from Brampton Astoria, one of the best im-  
ported cows in the herd. We also have others younger of similar breeding, as well as a few bred  
heifers for sale. **FREDERICK G. TODD, Owner, 801 New Birks Bldg., Montreal, P.Q.**  
Farm at Morin Heights - **F. J. WATSON, Manager**

**Edgeley Bright Prince**—A son of Sunbeam of Edgeley, R. O. P  
champion, sired by a son of Viola's Bright  
Prince, is for sale. He is 3 years old, sure  
and active. Won third prize in aged class at Toronto and London, 1919. Write for price.  
**JAMES BAGG & SONS (Woodbridge C.P.R., Concord G.T.R.) EDGELEY, ONT.**

**Woodview Farm** CANADA'S MOST BEAUTIFUL JERSEY HERD  
**JERSEYS** Herd headed by Imported Champion Rower, 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  
**JNO. PRINGLE, Prop.** cows and show our work cows.

**DON HERD OF PRODUCING JERSEYS**

We have three young bulls of serviceable age—good individuals and priced right. Could also spare  
a few choice bred heifers. Visitors welcome. **TODMORDEN, ONT.**

**D. DUNCAN & SON,**

**Pure-bred Yorkshires**

We have a number of sows due to  
farrow in March.


**F. W. DARBY,      FERGUS, ONT.**

**BERKSHIRES**—My Berkshires for many years have won the leading prize  
at Toronto, London and Guelph. Highcleres and Sallies,  
the best strain of the breed, both sexes, any age.  
**ADAM THOMPSON, R. R. No. 1, Stratford, Ont.**  
Shakespeare Station, G.T.R.

**Berkshires**—At the great Smithfield Show, London, England, in December, the Berkshires won  
the Grand Championship for fairs, and made the remarkable showing in the four classes  
of the Carcass Competitions for pigs of all breeds by winning all the four prizes in the four classes; all  
sixteen pigs being pure-bred except one. We have over eighty head of splendid stock. Come and see  
them, or send for our breeding list.  
**J. B. PEARSON, Manager. CREDIT GRANGE FARM, Meadowdale, Ont.**


**ELMHURST LARGE ENGLISH BERKSHIRES**  
From our recent importation of sows, together with the stock boar, Sudden 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.





**She's Daddy's Girl**  
Make sure that after you are gone, she will receive as long as she lives, a monthly cheque to provide for her every need

**The IMPERIAL LIFE ASSURANCE CO.**  
OF CANADA  
HEAD OFFICE TORONTO



As fresh from the package as from the oven.

**McCormick's**  
Jersey Cream Sodas

Factory at LONDON, Canada.  
Branches at Montreal, Ottawa, Hamilton, Kingston, Winnipeg, Calgary, Port Arthur, St. John, N.B.

**Take Your Time, Don't Hurry!**

There is no need for so much rushing on baking days, hurrying to get your cakes in the oven—such exhausting exertion adds baking to the list of household drudgeries.

You can take your time yet do more with

**EGG-O**  
Baking Powder

than with other brands because the leavening action of Egg-O only ceases when your cakes are properly baked—No matter if you do have to wait several hours for your oven.

And don't worry if your oven does cool off. Egg-O will leaven your baking with less heat than most other brands.

And above all, don't worry about fallen cakes, follow the directions on the label. You will use less Baking Powder, and have better baking.

**Egg-O Baking Powder Co.**  
Limited  
Hamilton, Canada



## Our School Department.

### A School Progress Club.

BY PERCY P. MCCALLUM, ESSEX CO., ONT.

In this day, when the little red brick school on the country side road is coming more and more into prominence, when the farmers are called upon to govern the country, there is need for laying a firm foundation in the lives of these school products. The day of consolidation is at hand, but shall we wait until it actually arrives before giving the country child every available opportunity in literary work as well as the three "R's"?

By organizing a "Progress Club" in the school much may be accompanied in this line. For those who may be interested, I shall outline a plan I have followed with considerable success. In the first place, a nomination is held; here we have an opportunity to teach civics. The older classes will learn and learn readily what is meant by nomination, candidate and other such terms. It is well to allow not over three nominations for each office of hon. president, president, vice-president, secretary, treasurer and librarian. Two or three days after nomination, the election may be held. It is well to have ballots made with name of all candidates on them. These may be made by a copy pad or the teacher may outline one on the board and have the older pupils make several ballots. The teacher will appoint a scrutineer, poll clerk, and returning officer, explaining to the whole school the duties of each. Use an old chalk box with a hole cut in the lid for a ballot box. Have pupils take their turn at balloting, allowing the candidates to canvass for votes. Try to impress pupils to vote for those best fitted for the offices, and not for their friends.

After the election the officers will fill their respective offices at the club meetings, which are usually held Friday afternoons from three o'clock till four. The club will choose an opening ode such as "The Maple Leaf Forever." It is well to also have a name chosen as "Uplifters," "Busy Bees," or whatever they wish. Outline on a sheet of paper for the president the mode of procedure as:

(1) Opening ode; (2) Minutes of last meeting; (3) Adopting minutes; (4) Old business to deal with; (5) New business and so on. This outline will vary.

It will require a few meetings to have pupils understand what is meant by a motion, the seconding of a motion, an amendment or an amendment to the amendment, also to instruct the president how to put a motion. These matters will be guided by the teacher, but after two or three meetings they will soon understand. The duty of this club will be to look after all matters about the school-room and yard, such as keeping seats clean, paper off the floor, to see that all pupils keep their books packed neatly in their seats, to introduce new games in the yard, new songs in the room, keep the yard clean, and look after the school garden. Of course, the executive will not do all this, but will appoint committees at their meetings to do this business. The librarian's duty is to look after the books of the library.

Much interest can be added to these meetings by having a little concert every two weeks in which the pupils have a debate. The fourth class debating one week, third the next, and even the second the next. After one or two debates invite the parents in on these Friday afternoons, also invite some older ones in the section to come with musical instruments or come and sing. The club appoints a committee to provide the program for next meetings. It is well not to have the same ones on this committee who are debating. The concert idea can be worked well every two weeks.

The idea of raising funds in the club may be arranged as best suits the teacher. In some cases a membership fee of one cent a week for each pupil may be charged

or one cent every two weeks. The funds may be used to purchase small necessities about the room or pictures.

The above idea if worked out will give wonderful results, but too much must not be expected of the pupils at first. Through the winter concerts may be held on Friday as outlined, and in summer you will find a very business-like little club, and while you are teaching civics, also how to conduct a public meeting, you give the pupils confidence to stand on their feet and express their thoughts, all these points aid in making good citizens.

### Every Calf is a Factory.

There are so many of you young farmers, not only in name but in reality and very successful at that, in bringing your calves, lambs and pigs to early maturity, that you have much to interest you even though it is winter with all the broad expanse of nature locked up in frost and snow. Could we not be co-workers together for a few months until seeding time comes round, when all will be opened up and nature once more demands our labor elsewhere?

What a fine machine or little factory you have in your calf. Let us make a little examination of it, using no big names or technical terms, that we need to go and see what they are before we understand them. The head is the first place we look to, and it is there all the work begins. In the mouth are the teeth that grind the food and there is the saliva that first mixes with the food. There are four stomachs which the food passes through and at each stomach other juices mix with the food.

The first stomach is the largest and the animal uses it first for a bag to hold the food until it has time to chew it properly. The cattle eat their food hurriedly then rest, either standing quietly or lying down if they have a good bed to lie on. They chew their cud, that is they take up the food from this first stomach and chew it over again more thoroughly, mixing it again with more saliva, for two purposes, more especially extracting the nourishment from it and in changing the starch in it to sugar. This extracting and changing cannot all be done in the mouth, and in the passage of the food through the different stomachs it meets other supplies of juices all tending to take the most that is in the food to build up the body.

Next we find a very fine drainage system carrying all that extracted matter to the blood, which carries building material to every part of the body, some to build flesh, some muscle, some bone, and some where it can be stored for future use as in fat to be used up in heat when needed.

The blood has two systems, one, the arteries, going from the heart from where it is pumped to all parts of the body, and the other the veins that convey the blood back to the heart.

There are thus several systems of drainage in the calf's body. The saliva and kindred juices, the lactiles, conveying the extracted matter from the food to the blood, the two systems of the blood itself, and the system that carries the food through the stomachs and intestines until it passes off the refuse as dung.

When we look at all this fine structure need we wonder that we can choose and blend foods to build it up, even in a commercial way with an eye to profit, to take all out of the natural food we get ready to our hand or from that we may grow or purchase? Growth and health must be two of the goals we keep ever before us, and profit is another goal we cannot lose sight of and the greater number of us are aiming for the three.

Hang on! cling on! no matter what they say,  
Push on! sing on! things will come your way,  
Sitting down and whining never helps a bit,  
Best way to get there is by keeping up your grit."



partment.

cent every two weeks. The funds are used to purchase small necessities about the room or pictures. Above idea if worked out will give useful results, but too much must be expected of the pupils at first. Through inter concerts may be held on days as outlined, and in summer just meetings. After the first winter all find a very business-like little and while you are teaching civics, how to conduct a public meeting, the pupils confidence to stand on feet and express their thoughts. These points aid in making good

ry Calf is a Factory.

are so many of you young men not only in name but in reality successful at that, in bringing calves, lambs and pigs to early market, that you have much to interest in though it is winter with all the expanse of nature locked up in ice and snow. Could we not be together for a few months until the time comes round, when all is opened up and nature once more our labor elsewhere? A fine machine or little factory is in your calf. Let us make an examination of it, using no big technical terms, that we need not see what they are before we mend them. The head is the eye we look to, and it is there all begins. In the mouth are the teeth that grind the food and there is a first mixer with the food. The four stomachs which the food passes through and at each stomach mixes with the food. The largest and the first for a bag to hold the food it has time to chew it properly. They eat their food hurriedly then standing quietly or lying down they have a good bed to lie on. They chew their cud, that is they take food from this first stomach and pass it over more thoroughly, again with more saliva, for the purpose, more especially extracting the nutriment from it and in changing it into sugar. This extracting process cannot all be done in the first passage of the food. In the different stomachs it needs the help of juices all tending to the most that is in the food to build up the calf.

find a very fine drainage system trying all that extracted matter from the food, which carries building material to every part of the body, build flesh, some muscle, some fat, some where it can be stored for use as in fat to be used up when needed. The calf has two systems, one, the circulation from the heart from where it goes to all parts of the body, the other the veins that convey the blood to the heart. There are thus several systems of circulation in the calf's body. The saliva, the juices, the lactics, conveying the matter from the food to the two systems of the blood itself, a system that carries the food to the stomachs and intestines, and the refuse as dung. Look at all this fine structure and wonder that we can choose and build it up, even in a winter way with an eye to profit, out of the natural food we have on our hand or from that we can purchase? Growth and profit are two of the goals we keep in sight of, and the greater profit is aiming for the three.

ing on! no matter what they are doing on! things will come your way and whining never helps a thing, get there is by keeping up



**"I Would Not Take a Thousand Dollars For the Resulting Improvements"**

So writes a farmer at Aultsville, Ontario. "Since getting 'What the Farmer can do with Concrete' I have used over \$200 worth of cement—and would not take \$1,000 for the resulting improvement."

These men now realize that Concrete is the material that enables them to have their buildings weather-proof, water-tight, vermin-proof, permanent and sanitary—and they have found between the covers of our free book the knowledge needed to make all kinds of modern farm improvements at small cost. Tells how to build a silo, a root cellar, a water trough, a culvert, a retaining wall or a gate post. It is all in clear, simple language—and contains many photographs as well as diagrams which anyone can understand.

Ask for Canada Portland Cement, the uniformly reliable brand. It can be secured from more than 2,000 dealers throughout Canada. If your dealer cannot supply you, write our nearest Sales Office.

**Canada Cement Company Limited**  
406 Herald Building Montreal  
Sales offices at  
Montreal Toronto Winnipeg Calgary

Send me your Literature

NAME \_\_\_\_\_ 406

ADDRESS \_\_\_\_\_

**It's a Fact-You Know Every Farm Needs Fertilizers**

Try as you will, you cannot get bumper crops from your soil if you don't fertilize it. There is no mystery about this. It simply means that, as soil gets worn out, Fertilizers must replace the elements that have been used up.

**"Best-by-Test" FERTILIZERS**

Best-by-Test Fertilizers have full analysis strength—guaranteed. Write us for particulars and we will advise the kind of Fertilizer to order. We are exclusive Fertilizer experts and can supply all and every chemical required. Farmers can club together and buy in car-load lots. Prices on application.

Write for interesting book on Fertilizers—FREE.  
**CANADIAN FERTILIZER CO., LIMITED**  
"12" Market Chambers, Chatham, Ont.

**Are You Planning a Home?**

Thousands of people are making plans for the home which they intend to build—in the near future. Are you one of that number? **WE CAN ASSIST YOU** by supplying Plans and Materials to build your Home complete at a considerable saving in cost.

**Better Homes at Lower Cost**

Our New Catalogue—The Open Door to BETTER HOMES AT LOWER COST is now ready. It contains over fifty illustrations of artistic modern Homes, together with a plan of the interior design and the left, right and rear elevations. If you are planning to build a Home, this book will give you excellent advice and many helpful suggestions. Write to-day, ask for Catalogue No. 64 "C". It will be sent free to every intending Home Builder.

**The Halliday Company, Limited - Hamilton, Ont.**

**BOOK ON DOG DISEASES, And How to Feed**

Mailed free to any address by the Author.

**H. Clay Glover Co. Inc.**  
118 West 31st Street, New York, U.S.A.

America's Pioneer Dog Remedies

**EVER-BEARING STRAWBERRIES, Etc.**

Progressive, American, Superb, Ever-bearing Strawberries; Senator Dunlap, Glen Mary, Parsons Beauty, Dr. Burrill, and nearly 30 other standard varieties. Raspberries, Blackberries, Currants, Gooseberries, Grapes, Asparagus, Rhubarb, Seed Potatoes, Corn, etc.

Send for free illustrated catalogue

**H. L. McCONNELL & SON,**  
Port Burwell, Ontario

**DEAFNESS**

**ITS CAUSES AND TREATMENT**

Write for free booklet and particulars of free trial order offer of Mears' 90-tone Model Ear Phone.

**The Mears Company of Canada, Reg.**  
Dept. A 188a Peel Street, Montreal

**Strawberry Plants**

The best strains of standard varieties: Williams' Improved, Senator Dunlap, Glen Mary, Arnout, Parsons' Beauty, Stephens' Champion, Sample, etc.; \$5 per 1,000 or \$1 per 100. Superb and Progressive, everbearing varieties, \$10 per 1,000 or \$1.50 per 100.

**WM. WALKER** Port Burwell, Ontario

**Choice Seed Grain**

O.A.C. No. 72 Oats, 2nd generation, Imp. O.A.C. No. 21 Barley, both grown from my prize-winning seeds of Guelph, Ottawa and Chatham Fairs, also Marquis Wheat, Alsike and Sweet Clover.

**OSCAR KLOPP** - Seed Grower  
Zurich, Ont., Huron, Co.

**Does God Have a Plan for Your Life?**

Find a vital answer in McConkey's little booklet, "The God-Planned Life." Entirely free. Address **SILVER PUBLISHING CO.** Dept. Y, Bessemer Building, Pittsburg, Pa.

**Try This Horse Stump Puller** Single Horse Operates It!

**30 Days FREE!**

**SEND NO MONEY!**

**Kirstin Horse Stump Puller** Single, Double, Triple Power

PROVE on your own stumps—30 days before you pay a penny—that ONE MAN with boy and SINGLE HORSE operates it! Pulls biggest stumps, Quick! Cheap! Easy! Prove ALL my claims. After 30 days, if satisfied, keep puller. If not pleased, return at my expense. You don't risk a penny. Four easy ways to pay.

Wins Government and University tests for SPEED, POWER, STRENGTH and EFFICIENCY! Used on big Government work. Actually 10 years ahead of its time! No other like it. Single power for fast work. Double and triple power for big, tough ones. Big, broad, machined, anti-friction, easy-running bearings. Finest steel. Develops triple power from one or two stumps. Enables you to clear three times more ground at one setting than old way. Quick "take up" for slack cable. 3-year guarantee against breakage—law or no law. Shipment from nearest distributing point saves time and freight. Write for FREE BOOK and Special Agent's Offer. Today!

**A. J. KIRSTIN CANADIAN CO.** 526 Dennis St., Sault Ste. Marie, Ont.

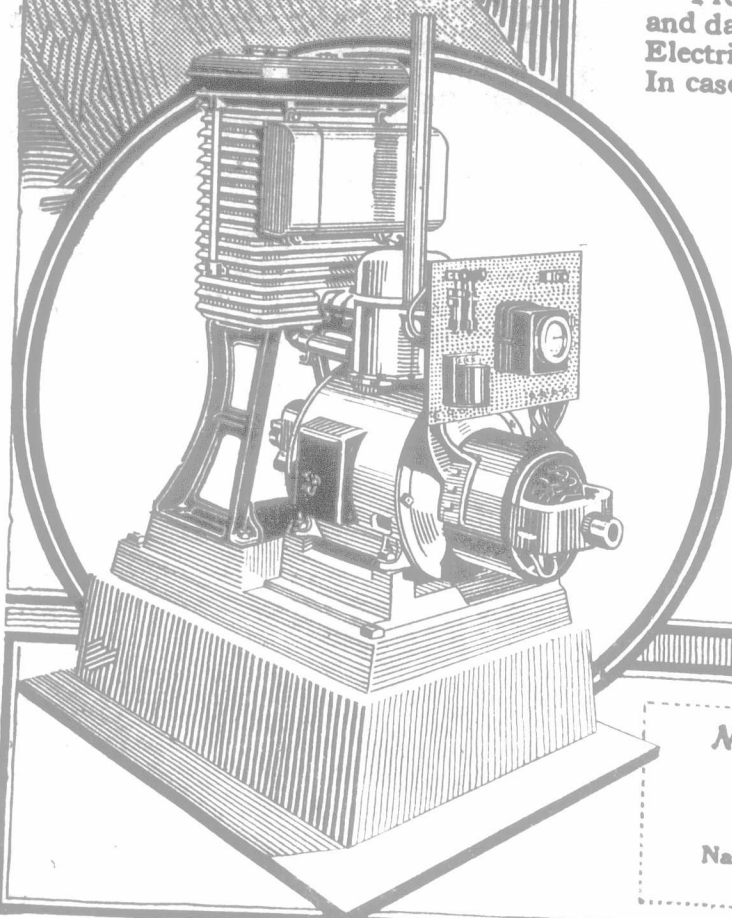
**Bissell Silos**

A Silo is almost as necessary on a farm as a pasture. It gives cattle green feed in the winter and when drought dries up the meadows in the summer. A Silo filled with green feed while it is fresh and succulent preserves it and improves it and it gives cattle an appetizing and stimulating ration. Bissell Silos are of pine or spruce staves preserved in creosote oil, steel splined, steel hoops, doors and staves are air-tight. Made in popular sizes. Prices have been made attractive. Consult us freely as to your requirements. Illustrated folders on request.

**T. E. BISSELL CO., LTD.,**  
10 MILL STREET, ELORA, ONT.



# THIS PLANT SAVES- TIME LABOR MONEY



*It would save you all this and more each year*

Pumping Water	260-hrs
Grinding	26
Separating	26
Churning	52
Cutting Roots	26
Cleaning Lamps	26
Washing	156
Washing-machines	52
	156
<b>780 hrs at 30¢ on hour \$234.00 per year</b>	
	<b>780-hrs</b>

THINK, \$234 a year saved on only nine of the necessary chores about the farm. Picture the many other jobs that could be time and labor lessened.—Picture the convenience of an electrically lighted house and barns. Figure how much more money you could bank yearly if you farmed with the twenty-four-hour-a-day help of

## Northern Electric POWER AND LIGHT

From a dollar and cent viewpoint—electrifying your farm is the most far-sighted investment you could possibly make—your yearly production jumps immediately. Your live-stock increases in value, for clean, sanitary surroundings make contented cattle.

Fresh running water is a boon to any farm.—Not only in the barns and dairy, but for sanitary purposes in the household, the Northern Electric Plant will cheaply and efficiently pump all the water you need. In case of fire it is ready for immediate service.

Power milking and dairying will enable you to keep more cattle. The demand for milk, cream and butter offers you rare opportunities.

The women folk on the farm find in electric power the solution to health-breaking tasks. All the labor-saving of modern electrical appliances is theirs with Northern Electric Power and Light.

You can electrify your farm with Northern Electric Power and Light for less than your hired man costs you for one year's work, and what you now pay for coal oil will maintain and operate it.

There is a Northern Electric Power and Light Plant in the size your farm needs. Our nearest house will send you interesting literature upon request. Write to-day.

### Northern Electric Company LIMITED

- MONTREAL
- TORONTO
- WINNIPEG
- CALGARY
- HALIFAX
- LONDON
- REGINA
- VANCOUVER

Northern Electric Company LIMITED (Address Nearest House)  
 Please send me free and without any obligation, copy of booklet entitled "Farmer's Power and Light Handbook."  
 Name \_\_\_\_\_ L.F.A. 118  
 Address \_\_\_\_\_

Mail the Coupon