

PUBLISHED

11 + 18 weekly 74-15
\$1.50 PER YEAR.



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

ENTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

Vol. XLVII.

LONDON, ONTARIO, JANUARY 4, 1912.

No. 106

Free to Stock and Poultry Raisers

We will send, absolutely free, for the asking, postpaid, one of our large sixty-four page books on the common diseases of stock and poultry. Tells how to feed all kinds of heavy and light horses, colts and mares, milch cows, calves and fattening steers; also, how to keep and feed poultry so that they will lay as well in winter as in summer. No farmer should be without it.

NOW is the time to use Royal Purple Stock Specific. At a cost of only two-thirds of a cent per day per animal, it will increase it 25 per cent. in value. It permanently cures Bots, Colic, Worms, Skin Diseases and Debility. Restores run-down animals to plumpness and vigor. It will increase the milk yield three to five pounds per cow per day and make the milk richer.

Royal Purple is not a stock food. There is no filler used in its manufacture, and we import from Europe all the seeds, herbs, barks, etc., and grind them on our own premises. Therefore, we can guarantee it to you as being absolutely pure. We do not use cheap filler to make up a large package. We give you the best condition powder ever put on the market in a concentrated form.

A tablespoon, levelled off, once a day, is sufficient for a full-grown animal. It prevents disease, keeps your animals in perfect health, and is absolutely harmless. It makes six-weeks-old calves as large as ordinary calves at ten weeks. You can develop six pigs ready for market in just one month's less time than you can possibly do without it, at a cost of only \$1.50, saving you a month's work and food.

A 50c. package will last a horse 70 days. A \$1.50 pail or air-tight tin, containing four times as much as a 50c. package, will last an animal 280 days.

If you have never used it, try it on the poorest animal you have on your place, and watch results. If it does not produce better results than anything you have ever used, or give you satisfaction, we will refund your money. Andrew Wegrich, of Wainfleet, Ont., says that he tried it on one cow, weighed her milk on the 16th—17 pounds; on the 29th she gave 22 pounds. Dan McEwen, Canada's greatest horse-trainer, says: "I have fed Royal Purple to The Eel and all my race-horses for four years. They have never been off their feed. Your cough powder works like magic."

Mr. Tom Smith, trainer for the Hon. Adam Beck, says: "We had a mare in our stables

last fall belonging to Miss Cleuston, of Montreal. We could not feed her any bran on account of scouring. We commenced using your Royal Purple Stock Specific. The results were wonderful. We found, after using it three weeks, we could feed her bran or any other soft feed, and she actually took on 25 pounds during that time."

Royal Purple Poultry Specific

will make your hens lay in winter, as well as summer, and yet a 50. package will last 25 hens 75 days, or a \$1.50 pail or air-tight tin containing four times as much as a 50c. package, will last 280 days. It prevents poultry from losing flesh at moulting time, cures and prevents all the ordinary diseases, makes their plumage bright, and keeps them in prime condition.

Royal Purple

STOCK AND POULTRY SPECIFICS

Mrs. Wm. Burnham, of Sandford, Ont., says: "I fed your Poultry Specific to 32 hens during the winter, and sometimes got as many as two dozen eggs per day in February and March."

Mr. Andrew Hicks, of Centralia, Ont., says: "I used your Stock Specific on 20 milk cows. They have increased 30 per cent. in their milk, and I got even better results from your Poultry Specific. We had 60 hens, laying age. When we commenced using Poultry Specific we were getting five or six eggs a day. In less than five days we got 150 eggs. These were the coldest days last winter." You can see the results at once after you commence using this material. When farmers get acquainted with Royal Purple brands, they will never be without them.

ROYAL PURPLE COUGH SPECIFIC

During the last four years there has been an epidemic cough going through every stable in Canada, which has been a great source of annoyance to horsemen. Our Royal Purple Cough Cure will absolutely cure this cough in four days, will break up and cure distemper in ten days. Absolutely guaranteed. 50c. per tin, by mail, 55c.

Royal Purple Gall Cure

will cure all sorts of open sores on man or beast. Will absolutely dry up and cure scratches in a very few days. Mr. Sam Owen, coachman for the Hon. Adam Beck, says: "By following directions, I find your Royal Purple Gall Cure will cure scratches and make the scabs peel off perfectly dry in about four or five days." Price 25c.; by mail, 30c.

Royal Purple Sweat Liniment

will reduce any lameness in a very short time. Mr. John M. Daly, Coalman in London, says: "We have nine horses constantly teaming coal, and have all ly trouble with them being lame at times. I have used your Sweat Liniment for a year back, and have never known it to fail to cure all sorts of sprained tendons, etc." Price 50c., 8-ounce bottles; by mail, 60c.

Royal Purple Lice Killer

This is entirely different from any lice killer on the market. In order for you to understand the process of manufacture of this lice killer, you will be to send for one of our booklets, as we give you a full history there. It will entirely exterminate fowls or animals with but more than two applications. It smothers them 25c.; by mail, 30c.

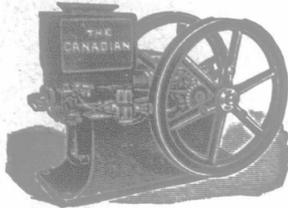
In using our Stock Specific, we guarantee you better results by using the ordinary food grown on your farm, such as good oats and bran, and so forth, than you can possibly obtain by using any of the many patent foods on the market. In the percentage of nutrition is usually very small for the amount of money paid for same. You know exactly what hay, oat chop or any farm products cost you, and ROYAL PURPLE makes animals digest these foods properly.

An assorted order amounting to \$5.00 we will prepay.

What we wish to impress on your mind is that we manufacture nothing but pure, unadulterated goods. Our booklet gives 400 recommendations for our different lines from people all over Canada. While we give you above the names of a few who used it, our best recommendation is for you to ask any person who has ever used any line we manufacture.

Send To-day for Free Booklet

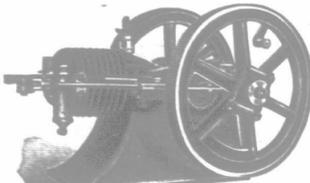
W. A. JENKINS MANU'F'G CO., London, O



HOPPER COOLED ENGINE

THE Value of a Gasoline Engine is Measured by the Service Performed and Satisfaction Secured

The Canadian Engine will give you full measure of value above all others.



AIR COOLED ENGINE

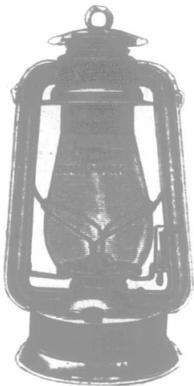
A Canadian Engine will perform with greater ease, simplicity and economy what is required of it than other engines. Write for catalogue. Agents wanted to represent us in your territory.

We are Selling Agents for the Merrill May Press

CANADIAN-AMERICAN GAS & GASOLINE ENGINE CO., LIMITED, Dunnville, Ontario

"BANNER" Cold Blast LANTERN

Patent Lift Lock. No Jammed Fingers.



Send coupon for calendar. Costs no more than inferior lanterns.

Ontario Lantern & Lamp Co., LIMITED, Hamilton, Ontario.

FERRY'S SEEDS

Good gardeners are those who raise good flowers and vegetables. Good flowers and vegetables come from good seeds. We produce good seeds—the inference is obvious. For sale everywhere.

1912 SEED ANNUAL Free on Request D. H. FERRY & CO. Windsor, Ont.

MR. FARMER, LISTEN!

Would you like to receive one of **WILSON'S GOLD MEDAL SCALES**

delivered right to your nearest station?

Freight Paid by Wilson

That's our offer! 100 different sizes of Hay and Scales.



GOES LIKE SIXTY SELLS LIKE SIXTY \$65
GILSON GASOLINE ENGINE
For Pumping, Cream Separators, Churns, Wash Machines, etc. Write for catalogue all sizes
S. CO. Ltd. Dept 150 QUELPH. ONT.

"FARMER'S ADVOCATE."

THE SINGED CAT



Those who have paid dearly for the use of cheap cream separators, through many unhappy experiences, know now what they doubted then.

Their unanimous testimony—

THE DE LAVAL FOR MINE

Tells the story.

Better get a Catalog.

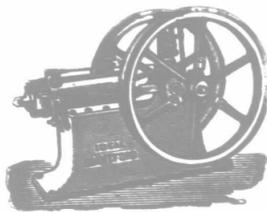
Agents everywhere.

The De Laval Separator Co.
173-177 Williams St.
MONTREAL
VANCOUVER—WINNIPEG

IDEAL GASOLINE ENGINES

1/2 TO 50 HORSE-POWER

Windmills
Grain Grinders
Pumps
Tanks



Water Boxes
Concrete Mixers
Etc., Etc.

SEND FOR CATALOGUE.

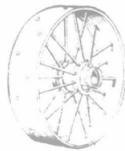
Goold, Shapley & Muir Co., Limited
BRANTFORD, CANADA

Buy a Wagon That Will Last a Lifetime!

It is not an uncommon thing for a T-K Handy Wagon to be used 20 years without a cent of expense for repairs. But up-keep cost is the least of its virtues, for this wagon combines more practical adaptability, convenience, durability and actual earning power per dollar invested than any other wagon on the market. It makes farm work easier and more profitable. Investigate!



Handy Farm Wagons and Wide Tire Steel Wheels



Equip your wagons with T-K Wide-Tire Steel Wheels and eliminate all possibility of accidents on rough and rocky roads, delays and need of lightening the load over sandy and muddy stretches. These wheels are flawless in design and strong as a steel bridge, yet weigh no more than wood. They lighten the draft on horses from 25 to 50 per cent, and are the greatest savers of time and labor that a farmer can own. Write for catalogue containing pictures and prices. Address:

TUDHOPE-KNOK CO., LTD., Orillia, Ontario.

METALLIC CEILING

Both clean and fire-proof—no dust and dirt falling, as from plaster ceilings. Costs no more, but looks thrice as artistic. The life of a plastered or papered ceiling is short and nearly every year needs repairs. Our **Metallic Ceiling** will last as long as the house—always fresh and clean. We can send you hundreds of pretty designs to select from for both ceilings and walls.



Our beautiful free booklet tells you all about Metallic Ceilings and Walls. Send for one.

"Really I don't know how people can stand the constant drudgery necessary to keep the ordinary ceilings and walls clean. Metallic is so clean and sanitary."—The Philosopher of Metal Town.

MANUFACTURERS 1749



GRAND TRUNK RAILWAY SYSTEM

WINTER TOURS

—TO—

California, Mexico
Florida, etc.

AT LOW RATES

The Grand Trunk is the Popular Route.

The Attractive Route to WINNIPEG and WESTERN CANADA is via Chicago.

Full particulars from GRAND TRUNK AGENTS.

160 Acres of Land for the Settlers

Large areas of rich agricultural lands, convenient to railways, are now available for settlement in Northern Ontario. The soil is rich and productive, and covered with valuable timber.

For full information regarding home-stead regulations and special colonization rates to settlers, write:

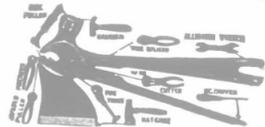
The Director of Colonization
DEPARTMENT OF AGRICULTURE
TORONTO.

TO HUNTERS AND TRAPPERS

Having large orders to fill and considering the advance in market prices, we are now paying from 20% to 25% above the quotations given in our November price list for Raccoon, Skunk and Rats. Ship your furs to us and get the full benefit of the advance.

A. & E. PIERCE & CO.
500 St. Paul St. Montreal, P. Q.
The Largest Raw Fur Dealers in Canada.

Agents Are Coining Money



selling this Combination Tool. Sells at sight. Farmers, farmers' sons and others having time at their disposal this winter should write to-day for our Agents' offer!

MAY MFG. CO.
ELORA, ONTARIO.

INVENTIONS Thoroughly protected in all countries. EGERTON R. CASE, Registered Patent Attorney, DEPT. E., TEMPLE BUILDING, TORONTO. Booklet on Patents and Drawing Sheet on request.

Sold Over 850,000 Acres
in Five Years

WESTERN LAND FOR SALE

In areas to suit purchasers, from
160 acres upwards, situated on or
near railways in the

Best Wheat, Oat and
Stock - growing
Districts of

SASKATCHEWAN

AND

ALBERTA

450,000 ACRES TO CHOOSE
FROM

Prices low. Terms most gener-
ous and helpful.

Special Inducements
Given Actual Settlers

Our crop payment plan requires no
payment on land bought until the
purchaser sells his first crop. He
can use all his capital for cultivation
and improvements.

Write for particulars.

RELIABLE AGENTS WANTED IN
EVERY COUNTY.

F. W. HODSON & CO.,

Room 102, Temple Building
Toronto, Ontario, Canada.

Branch Office: North Battleford, Sask.
Also Agents Canadian Pacific and.

**SUGAR
MAKERS'
ATTENTION**

Many producers of Maple
Syrup think it does not
pay to make syrup. Of
course it don't, the kind
they are producing by using
pots and old pans, consum-
ing a lot of fuel and time
making black-strap. Invest
in a "Champion" Evaporator
and make a syrup that is clean,
pure and wholesome. A little of
your assistance, and you have the
best paying proposition on your
farm. Made in 22 different sizes.
Write to-day for our latest catalogue.

The GRIMM MFG. CO., Ltd.
58 Wellington St.
MONTREAL, QUE.



BOYS FOR FARM HELP The managers of
Dr. Barnardo's
Homes invite applications from farmers, or others,
for the boys who are arriving periodically from
England to be placed in this country. The young
immigrants are mostly between 11 and 13 years
of age; all will have passed through a period of
training in Dr. Barnardo's English Institutions, and
will have been carefully selected with a view to
their moral and physical suitability for Canadian
life. Full particulars as to the terms and conditions
upon which the boys are placed may be obtained
upon application to Mr. Alfred B. Owen, Agent
Dr. Barnardo's Homes, 60-62 Peter St., Toronto.

The Rayo Lamp



**The Lamp That
Saves The Eyes**

Children naturally never think of
possible strain on their eyesight when
poring over a fascinating book.

It is up to you to see they do not ruin
their young eyes these long evenings
by reading under a poor light.

The Rayo Lamp is an insurance
against eye troubles, alike for young
and old.

The Rayo is a low-priced lamp, but it is constructed on the soundest
scientific principles, and there is not a better lamp made at any price.

It is easy on the eye because its light is so soft and white and
widely diffused. And a Rayo Lamp never flickers.

Easily lighted without removing shade or chimney; easy to clean and rewick.
Solid brass throughout, with handsome nickel finish; also in many other styles and finishes.

Ask your dealer to show you his line of Rayo lamps; or write for descriptive circular
to any agency of

The Queen City Oil Company, Limited

Are you anxious to save time and money on the work you are
doing on your farm at present, and to get larger crops
from your farm or orchard? If so, let us send
you, **FREE OF CHARGE**, our
pamphlets on the use of

Stumping Powders

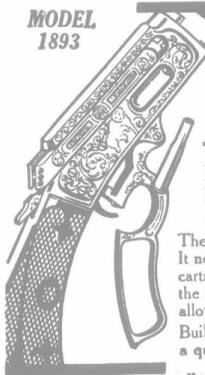
USED FOR

**Removing Stumps and Boulders
Digging Wells and Ditches
Planting and Cultivating Orchards
Breaking Hard Pan, Shale or Clay Subsoils
Etc., etc., etc.**

Figure yourself what clearing your farm is costing now, or what
you are losing in crops through not clearing. Write
us about arranging demonstrations.

CANADIAN EXPLOSIVES, LIMITED
Montreal, P. Q.

**MODEL
1893**



**Marlin^{Big}
Game
REPEATING RIFLES**

The Special Smokeless Steel barrel, rifled deep on the
Ballard system, creates perfect combustion, develops
highest velocity and hurls the bullet with utmost
accuracy and mightiest killing impact.

The mechanism is direct-acting, strong, simple and perfectly adjusted.
It never clogs. The protecting wall of solid steel between your head and
cartridge keeps rain, sleet, snow and all foreign matter from getting into
the action. The side ejection throws shells away from line of sight and
allows instant repeat shots always.

Built in perfect proportion throughout, in many high power calibres, it is
a quick handling, powerful, accurate gun for all big game.

Every hunter should know all the Marlin characteristics. **The Marlin Firearms Co.**
Send for our free catalog. Enclose 3 stamps for postage. 113 Willow Street New Haven, Conn.

**Fruit and Ornamental Trees, Evergreens,
Shrubs, Roses, etc.**



Just the kind wanted. O. K.! Busy, yes, always!
Now booking up for Spring delivery. We sell direct
to planters. Get our Priced Catalogue if you have
none, and let us book your order while the varieties are
good and complete, at the

CENTRAL NURSERIES, A. G. Hull & Son, St. Catharines, Ont

"Good as Gold"

ARE THE
POLICIES
OF THE

London Life Insurance Company

Head Office:
LONDON, CANADA

Endowments at Life Rates

It is not necessary to die to win.
This Company issues Endowment
Policies maturing about the ex-
pectation of life for the same
premium usually charged for
Whole Life or 20 Payment Life
Policies.

Unexcelled profit results, strong
financial position and clean repu-
tation are a guarantee of satis-
factory results in the future.

Ask for pamphlets, "Press Com-
ments," and "Endowment at Life
Rate."

Do You Want a Reliable Man?

**THE SALVATION ARMY
Immigration & Colonization
DEPARTMENT**

For several years recognized as the
leading Immigration Society in
Canada, will, during next season,
1911-12, continue its efforts to sup-
ply the demand for

FARM HELP

and Domestic Servants. Con-
ducted parties are now being or-
ganized to sail early in the spring.
Apply at once for application forms
and information to

BRIGADIER GEO. BURDITT
Head Office: James and Albert Sts.
TORONTO, ONT.

or Major J. M. McGillivray,
Office for Western Ontario,
396 Clarence St. London, Ont.
Correspondence Solicited

BE SOMEBODY

The boy or girl, man or woman, who ex-
pects to be anybody must do something. If
you are going to do anything worth while in
this world, you will need the best education
you can get.

We can help you to get an education at
your own home. We teach: Complete
commercial (bookkeeping, arithmetic, pen-
manship, business correspondence, com-
mercial law), shorthand and typewriting, jour-
nalism, special English, mechanical draw-
ing, engineering (stationary, traction, gas
and gasoline), marine, locomotive, beginner's
course, agriculture, civil service, teachers'
certificates (any grade in any province),
university matriculation (any university), or
almost any subject you wish to study.

Write for particulars.
**Canadian Correspondence
College, Limited**
Dept. E Toronto, Canada

FURS

Troopers, Hunters
and Dealers in any
kind of Raw Furs,
cannot afford to dis-
pose of their collec-
tions without first
obtaining our quote-
request, we specialize in the following:
RIGHT PRICES. LIBERAL ASSORTMENT.
And remittance forwarded same day goods
received, express and mail charges on all
shipments paid by us, no shipments too large
or too small. **Canada's Largest Fur Op-
erator. "There's a Reason" your business
and correspondence solicited.** DEPT. A
JOHN HALLAM, TORONTO

CHURCH BELLS

CHIMES AND PEALS
MEMORIAL BELLS A SPECIALTY
FULLY WARRANTED
McSHANE BELL FOUNDRY CO.,
BALTIMORE, Md., U. S. A.
Established 1866



VLADIMIR
DE PACHMANN
THE GREAT RUSSIAN
Pianoforte Master

is making a farewell tour of the United States and Canada. He will give fifteen recitals in all the principal cities of Canada, and, like nearly all of the great Artists who tour this country, he has selected the

NEW SCALE WILLIAMS
CANADA'S
GREATEST **PIANO**

to be used exclusively by him in this country.

His decision to use this instrument is a glowing tribute to the makers, and simply shows the high position the New Scale Williams occupies in the musical world.

Mme. Sembrich, after using this instrument on both of her Canadian tours, said: "It has one of the most beautiful tones I ever heard, and I will advise all of my artist friends who tour this country to insist on having a New Scale Williams Piano for their recitals."

Other celebrities like ELMAN, GERALDINE FARRAR, SCOTTI, FREMSTADT, HOMER, SLEZAK, and many others agree with MME. SEMBRICH, and all have pronounced it perfect.

If you would have the piano that is used by the world's Greatest Artists, simply on account of its magnificent tone quality, purchase a NEW SCALE WILLIAMS.

The WILLIAMS PIANO CO., LIMITED
OSHAWA ONTARIO D.P.

RELIABILITY A feature you can count on when you buy a "BAKER" WIND ENGINE.



ball-bearing turntable and self-regulating device. All working parts covered with a cast iron shield, thus protecting same from ice and sleet. We make a full line of steel towers, galvanized steel tanks, pumps, etc. Write for catalogue.

THE HELLER-ALLER CO., WINDSOR, ONTARIO

EUREKA
SANITARY CHURN



There's no comparison between the ordinary wooden churn and the "EUREKA". Barrel is stoneware—top is clear glass. Besides being absolutely sanitary, the glass top enables you to see how the churning is coming along without opening the churn. Also made with Aluminum top. The "EUREKA" is the easiest churn on the market to operate. By tilting back the frame until the weight rests on the wheels, the churn can be quickly and easily moved—while the barrel remain upright. If your dealer does not handle the "EUREKA," do not take a substitute but write us for catalogue. **EUREKA PLANTER CO. LIMITED, WOODSTOCK, ONT.**

When Writing Advertisers. Please Mention "The Farmer's Advocate."

WINDSOR DAIRY SALT

"Expect to get the prize for the best butter, this year?"

"Of course I do."

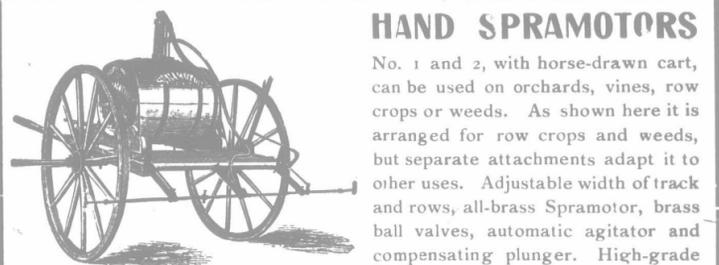
I have the best cows in the country—and here's my Windsor Butter Salt.

You can't beat that combination.

You know, I have won first prize for the best butter ever since I began to use Windsor Butter Salt"

"Hope you win"

"Thank you, so do I"



HAND SPRAMOTORS

No. 1 and 2, with horse-drawn cart, can be used on orchards, vines, row crops or weeds. As shown here it is arranged for row crops and weeds, but separate attachments adapt it to other uses. Adjustable width of track and rows, all-brass Spramotor, brass ball valves, automatic agitator and compensating plunger. High-grade throughout. For one horse only.

PRICE, \$47 to \$54

Awarded Two Gold Medals at National Horticulture Congress

SPRAMOTOR, LIMITED, 1360 King Street LONDON, CANADA

Do You Want the Cheapest and Most Durable Roofing?

USE DURABILITY BRAND
Mica Roofing

For steep or flat roofs; waterproof; fireproof; easily laid. We pay the freight on all orders of five square and over to any railroad station in Ontario or Quebec. Send stamp for sample, and mention this paper.

Hamilton Mica Roofing Co.,
101 Rebecca St., Hamilton, Can.



Big Money in a Potato Crop
WHEN HANDLED ECONOMICALLY

Accurate
Simple

You can handle your crop economically—and properly—by using the Aspinwall planter, the first and best self-operating Potato Planter in the world—without an equal anywhere.

The Aspinwall Potato Planter No. 3

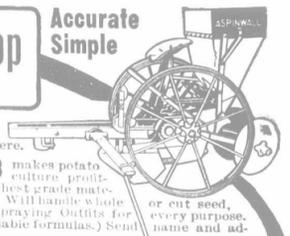
able. One man can run it. Built on honor, of highest grade materials. Works perfectly under all circumstances. Will handle whole large or small. (We also make efficient Spraying Outfits for Ask for our sprayer catalog including valuable formulas.) Send address now.

ASPINWALL MANUFACTURING COMPANY

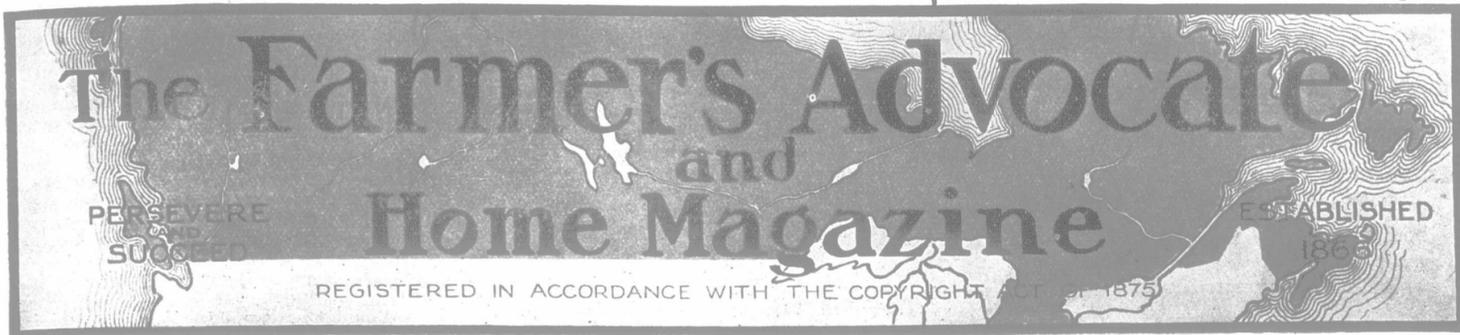
301 Sabin Street, Jackson, Mich., U.S.A.—Canadian Factory, Guelph, Ont.

World's Oldest and Largest Makers of Potato Machinery, Cutters, Planters, Sprayers, Diggers, Sorters

Write for descriptive circular of the entire Aspinwall Line, and FREE BOOK—"The Potato"



missing Jan. 11. 18. Pa. 15



Vol. XLVII.

LONDON, ONTARIO, JANUARY 4, 1912

No 1006

EDITORIAL.

Have you commenced keeping books?

Is your cropping system planned for 1912?

Why are you farming—to die rich or to live well?

Are warm stables an advantage in feeding steers?

What does it cost you to produce a hundred-weight of milk?

How is the silage turning out? Was it tramped well at filling?

Have you done everything economically profitable to get the chickens laying?

Can any money be made raising two-year-old stockers for sale? How much, and how?

What can you make barnyard manure worth to you per load? Are you wasting any of it?

Have you commenced weighing and recording every cow's night and morning yield of milk?

About what acreage of your farm is non-productive—or worse—through small, irregular fields or "snake" fences?

Are there any adequate reasons why there should not be more sheep kept in your district, and if so, what are they?

What advantages has your neighborhood as a place in which to live and farm over any other with which you are acquainted?

How many pounds of hay and straw are your horses eating per day? How do their rations correspond with recognized standards?

What is the most serious obstacle you have encountered in making your farming operations and farm life satisfactory and financially profitable?

What crop or farm produce paid you best during 1911? Is a specialty being made of any crop or product in your district, and with what result?

Reviewing the past for lessons it teaches, and welcoming the future for the hope it holds, what valuable experience have you gleaned from the season of 1911?

In view of the high prices of all kinds of feeding stuffs, what extra precautions are you taking with your feeding operations, that they may yield the most profitable returns?

Is the breeding of good horses receiving the attention which it merits in your district. If not, what do you consider the best possible means of improvement in existing conditions?

What percentage of the farm implements and machinery in your neighborhood is wintering without suitable shelter, and what do you estimate the yearly deterioration in value from such neglect?

In what condition are the highways in your locality? Does it pay you to use them in their present state? What are you going to do this season to improve them? What use has been made of the split-log drag?

Chores.

Chores are the most regular and the most important work on the farm—at least, on one where stock is maintained. On an ordinary hundred acres, carrying, say, four horses and twenty-five cattle, besides pigs, chickens, and perhaps a flock of sheep, it pretty nearly keeps one man busy during the short winter day doing chores, hauling out manure, and looking after the hundred odd jobs which require attention from time to time. As a rule, the chores are done cheerfully, or, at the worst, in a matter-of-course manner, but occasionally, on a Sunday afternoon, when one has to don his overalls three or four hours after "dressing up," or on some week day when one is visiting and has to leave at three or four o'clock, or when he wants to take a trip and feels tied down by chores, or on a stormy January morning when the bed feels warm, and, most of all, during "spring-fever" days, just before the cattle have been turned to grass, one experiences an impulse of impatience at it all, and wonders if he isn't a fool to go through this humdrum day after day, feeding crops to make manure to grow bigger crops to feed more stock to make more manure. At such times, too, if he pursues his train of thought very far, he begins to wonder what there is in it, anyway, and perhaps has visions of a job in town, where the chores consist in shaking down the furnace, throwing in more coal, shovelling walks, and filling the teakettle from a tap at the sink. It is very alluring—in prospect—and even the most resolute devotee of country life is subject to these moods.

It is nature's periodic rebellion against incessant grind. She calls for change and rest with a call so loud that only a money-grubber or a person supremely in love with animals and farm life can fail to recognize the imperious demand. It is true that an unlettered person who has never known much of intellectual culture or social intercourse can content himself stolidly as a companion of the animals under his care, and be it understood that many of these herdsmen possess fine traits of character, but, all the same, they dwarf some of the best elements of their nature. It is not well for man to live continually as a companion of the beasts, and one is foolish to do it voluntarily. Human nature and human character make diverse demands, which should be met so far as reasonably possible.

There is argument in the foregoing, not against farm life, but against making farm life unnecessarily monotonous. Unbroken routine is deadening to ambition, destructive of keen mental edge, and physically enervating. Routine tapers quickly into Rut. Chores we must have on stock and dairy farms, but they should be expedited by every practicable convenience one can afford. Milking we cannot get around, but stable-cleaning can be shortened and rendered easier by litter carriers; feeding by silos, silage carts, and trough mangers (dropping from feed-alley floors). Hay, straw and meal should be easily accessible through chutes, and feed chests conveniently placed. Young cattle and steers should be fed loose, and their pens cleaned once a week or twice a month. Pigs should have raised sleeping places, and poultry should be fed grit, bran and oyster-shell from hoppers. By these and other means, mostly inexpensive, the routine work can be greatly lightened; and if one keeps a man by the year, purposely providing some winter employment in the way of teaming and improvements, so that the employee may earn his wages and occasionally relieve his

employer of routine work, the chores will be divested of their most objectionable features.

Attending to thrifty stock in a well-arranged barn, where the work is not unduly onerous, is a pleasure with which the city man has no diversions that can compare. It has its exacting side, of course, but what has not? It is really not harder to get up at 5.30 than at 8 a. m., and a morning's chores in overalls are not more formidable to a farmer than attending to the furnace is to his city cousin. We speak from experience of both. In either instance, it is a case of getting at it. And there are compensations. Compared to the town man's hollow holidays and leisure hours, what keen pleasure to really study the care and feeding of a herd of cows, to feed them faithfully and watch the ultimate response, some of it not realized until the feed has begun to tell on the system of a run-down herd! What music is the grunt of a well-podded steer! What satisfaction the gambols of a hearty, growing calf, the tight curl of a thrifty pig's tail, the sleek coat of a stout farm team, or the well-satisfied singing of a busy flock of laying pullets! Money cannot measure the gratification of these things, and no painstaking is accounted too great to achieve them.

For, after all, painstaking does it. One may throw feed to his stock like water, but unless intelligence, interest and watchfulness go with the feed, results will fall short of the mark. "The eye of the master fattens his cattle," as the German adage hath it, and what nationality apply this better than the Teutons? What is the use of spending much time and money growing crops, unless one makes the value out of them by careful feeding? In the extra lies the profit every time. The manure, if cared for properly, pays for the labor, usually, and often more. The profit consisteth in the extra gains or yields obtained by intelligence, interest and care.

Chores, then, while they should be lightened where possible, are to the true stockman, who makes pets of his charges, a labor of pride and love, and of all farm work the most important, involving, as they do, a cashing in of the summer's crops. By regularity, system and convenience, the load of routine may be lightened, and profits at the same time increased. Look well to the chores.

Give the Old Orchard a Chance.

In previous issues we have discussed certain points suggested by the results of our demonstration orchard work. We have endeavored to point out the decided advantage possessed by an enterprising farmer with an orchard on his own farm over a company depending upon precarious, inefficient and sometimes untrustworthy hired help to care for its widely-scattered propositions. We have also sought to emphasize the trend of market demand towards superior-quality fruit, referring in this connection to the universal preference of our own customers for that peerless general-purpose winter apple, the Northern Spy.

A word remains to be spoken regarding the possibility of rejuvenating the many abandoned and many more near-abandoned orchards which cumber the ground and render landscapes unsightly in so many vicinities. Will it pay to take these in hand, prune, cultivate, spray, and try to produce paying crops of fruit? Upon this point our own work cannot yet be cited as conclusive evidence, seeing that neither of our abandoned-orchard propositions has yet been placed upon a paying

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 or 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.—Single insertion, 25 cents per line, agate. Contract rates furnished on application.
4. THE FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrearages must be made as required by law.
5. THE LAW IS, that all subscribers to newspapers are held responsible until all arrearages are paid and their paper ordered to be discontinued.
6. REMITTANCES should be made direct to us, either by Money 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. WEEKLY A REPLY BY MAIL IS REQUIRED to Urgent Veterinary or Legal Enquiries, \$1 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. 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.

basis, thanks, in part, to a very exceptional combination of adverse seasonal conditions, and in part to the inferior commercial merit of the varieties. But that both these orchards, and particularly orchard No. 3, will be put upon a paying basis, we have no reasonable doubt. Already they have shown conspicuous improvement in health and vigor of growth; also in the cleanness and quality of fruit, and every additional year's work will count in the development of bearing top. When it is stated that from six or seven acres of Orchard No. 3 over seventy big sleigh-loads of brush (much of it dead wood) were removed last spring, besides a good many taken off during the summer of 1910, it will be realized how disastrously this decadent orchard was hit by the blighting May and June frosts of 1910. It takes time to repair such ravages. But the time is well employed, as hundreds of private growers' experiences go to prove. We lay down the postulate that, if it pays to leave these old orchards at all, it will pay to take care of them, and we are convinced that there are very few, indeed, which it will not pay to leave and care for. It is simply astonishing what transformation two or three years' care will effect.

There is, of course, the question of variety to consider. Many old orchards are filled with poor commercial sorts. Top-grafting offers a more or less satisfactory solution here. These old trees are good ones to practice on, doing a little at a time. Before sacrificing these trees, then, which represent so many years of growth, see what one year's care will do. Prune the orchard this winter, preferably about March. Winter pruning is best to invigorate old trees. If you have a few loads of manure to spare, spread it over the orchard area—not under the trees, merely, as so often done. Also, broadcast any good wood ashes that can be obtained, at the rate of thirty to fifty bushels per acre. Plow shallowly as early in the spring as possible, rolling and harrowing each day's plowing as finished, and disk-harrow

three or four times at intervals until late in June or early July. Then sow a cover crop of mammoth clover, vetches, oats, rye, or something of the kind, and plow down the following spring. Spray the orchard three times, according to directions in our annual spray calendar, and watch results. If not encouraging, write us to find out why. Give the old orchard at least one fair chance.

The Immigrant Problem.

By Peter McArthur.

I am getting about tired of co-incidences. To join the crusade against level crossings, and then be caught on a level crossing, is enough of a coincidence to last me for the rest of my life. But it is only one of a series. Some time ago I wrote an article on "How to Introduce the Christmas Spirit into the Homes of the Thrifty and Money-making Classes," only to find that the Ladies Home Journal for Christmas had a story which covered admirably every point I had raised. I had to throw my article away. A little later I grappled with an article on "economic conscription" (it isn't nearly so hard as it sounds), and I thought I had brought out a number of points that were impossibly in advance of the times. I also flattered myself that it was original, for I had never seen anything printed on the subject. But the co-incidence happened once more. While the article was still lying on my desk, waiting to be mailed, the Rev. C. H. P. Owen, of Glencoe, came to see me, and, after a few minutes conversation, began to explain in detail an immigration scheme he had in mind. It touched on every argument I had used in my article, and gave a local application to the scheme that had not occurred to me. As Mr. Owen's plan would solve the hired-man problem, and the problem of the unfit immigrant, I think it should furnish excellent food for thought to the readers of "The Farmers' Advocate."

Mr. Owen takes the stand that the Government has a perfect right to see that all immigrants who come to this country to earn their living, should know how to do it. The great need of Canada at the present time is a full supply of farm laborers, and of men capable of taking up farms of their own. Instead of these, we are getting men from the great cities of the old world who know nothing about farm work, and are practically useless to the farmer with whom they hire. After a few weeks that are unpleasant to the men and to the farmers, they pack up and go to the cities that are now overcrowded with people who are accustomed to city work. Mr. Owen contends, and rightly, that as these men almost invariably try country life and country work to begin, they are not wholly to blame if they fail. Even though the farms are the places where so-called unskilled labor has its greatest opportunities, there is often a physical difficulty that few people recognize. Very few of the city-bred laborers who go to the country have the physical strength to stand the heavy work, no matter how willing they may be. Even if they have the strength, farm work calls into play a different set of muscles from those used by the city-bred man, and the result is a man tired to death by some such simple work as hoeing corn or pitching hay, which the farmer does as part of his day's work without feeling much effect from it. If the man works willingly, he is soon sore to the last fibre of his body, and if the farmer is inclined to be irritable because a sufficient amount of work is not being done, a break soon occurs, and the man hurries to town to hunt for work such as he has been accustomed to doing. I know that this is sound sense, for I have tried farm work after spending years at a city desk. In the first day's hoeing I discovered about twenty muscles that I had forgotten, made every one of them as sore as a burn, and if I hadn't been working for myself I would have fired my boss in less than a week. And I was not nearly so much handicapped as the average city man, for I was thoroughly familiar with the kind of work I had to do, though it was years since I had done it. This point in itself is one of the most important in the whole trouble. If the hired man understood the kind of work he had to do, and could do it without suffering physical torture, he would be much more willing to stay on the farm, where he is needed, and where he would be much better off.

Mr. Owen's scheme is to have the Government provide work for every laborer who comes to the country, so that he can get the necessary physical development and training before trying his luck on a farm. In Ontario, at least, there are thousands, perhaps millions, of acres that are only useful for reforestation, and the new arrivals could be put to work at planting trees under competent and sympathetic foremen. In the northern part of Old Ontario there is a vast stretch of land that will ultimately become a desert, unless the Government takes action and plants trees.

Throughout this district there are occasional small, fertile stretches that could be made into Government farms, and on these the immigrants could be taught farm work of all kinds when not busy at tree-planting. Properly handled, the scheme could be put on a paying basis, and the men, having their difficulties understood could be put at work that would enable them not only to earn their livings, but to put by some money that would help them to make a decent start when they graduated from the Government farms. Immigrants who come to the country with the honest intention of working for their living and becoming citizens should have no objections to make to a course in farming of this kind which would make things so much easier for them. In a sense they would be wards of the Government, and the Government might find it advisable to keep them under supervision for some years after giving them their training, to see that the unforeseen difficulties with which they would have to contend did not discourage them and drive them back to the city.

While no disgrace would attach to this system of fitting men for citizenship, there is another phase of it that has already been taken up with great success by Mr. Hanna in his Prison Farm scheme. Instead of treating the unfortunates of the world as enemies of society, his aim is to make men of them, so that they will be useful to themselves and to the country.

In Mr. Owen's opinion, the only fault with Mr. Hanna's scheme is that it doesn't begin soon enough. A man has to matriculate to Mr. Hanna's excellent institution by committing a crime. Would it not be much better to have farms to which men could go to get the necessary strength and training as soon as they found they could no longer keep up the pace in the city. From letters that I have received since moving back to the land, I know that there are many in the cities who would do the same if they had the faintest idea of how to go about it. It is absurd for the Government to be spending good money in bringing immigrants to the country who are unfit for the work they will have to do. Personally, I am of the opinion that the Government has a right to demand of every man in the country that he know how to make his living from the raw materials of nature, just the same as in some countries they force every man to be trained as a soldier. It is much more important to have people trained to make their living than to have them trained to destroy their fellow men in battle. The question of food production is becoming much more important to the world than the question of conquest or defence, and I do not think that it trenches in any way on a man's personal liberty to compel him to take the necessary training to be able to make his living. It is only an extension of our present compulsory education.

Judging from the correspondence there has been in "The Farmer's Advocate," a very considerable part of the trouble between hired men and employers has been due to the difficulties pointed out by Mr. Owen. The men were not physically capable of doing the work they attempted, did not know how to do it, anyway, and if it dawned on the farmers at all why the men were so unfit, they could not see that it was any part of their business to fit the men for their work, and then have them probably go and hire out with someone else for larger wages. Every city housewife is perfectly familiar with this phase of the servant problem. She employs a newly-landed immigrant, teaches her how to do the work, paying her at the same time a fair wage, only to have her pack up and leave as soon as she is able to command the highest wages. With such a scheme as Mr. Owen has in mind, the Government might be able to take over this phase of the servant-girl problem on its broad back, without much inconvenience to itself, and perhaps with profit.

Of course, I am only able to give an outline of Mr. Owen's scheme, but I think I have given enough to induce those who are interested in the problem to give it some serious thought.

In view of Mr. McArthur's painful experience with coincidences, it seems almost heartless to state that in this week's article he has stepped into another. Nearly two years ago we reviewed in these columns a book by Emerson Hough, called "The Sowing," in which he suggested the establishment of farm training stations by the Dominion Government, financed by Great Britain. Here, newcomers were to remain a year or two on a semi-self-supporting basis while learning farming and being prepared in some measure for citizenship. It looks good, and may contain the germ of an idea for someone to work out, but we have grave doubts. Would the men remain at their training station, and would they develop at a Government institution that grit and fibre requisite in an efficient farm hand? Few city men know what a day's work should accomplish on the farm, and we doubt whether they would learn it at a public training farm.

Hot Lunches at Schools.

The introduction of some appetizing dish, hot from the stove or "fireless cooker," is an improvement on the old-time cold lunch at noontide, which is finding quick appreciation in the country schools of Minnesota. The suggestion of such a hot lunch, elaborated by Miss Mary L. Bull, in Extension Bulletin No. 19, has led to numerous experimental trials, and the results have been so satisfactory that the hot lunch bids fair to establish itself as a permanent feature of the noon hour in our schools. It recommends itself not only as promoting the health and enjoyment of the boys and girls, but as affording daily a practical lesson in Domestic Science, the benefits of which accrue not only to the pupils, but to "the folks at home," as well.

Superintendent T. A. Erickson, of the Douglas County Schools, is enthusiastic over this "new departure." He says: "We have never tried a new plan which has taken so well, with children and parents alike. Where a teacher shows a little tact and common sense in working it out, there is absolutely no objection on the part of parents. It is something that appeals to them at once." One teacher tells him "it is the greatest help to discipline that she has." The work of preparing the meal is attractive to boys and girls alike; and they are quick to apply their new culinary requirements at home. "On cold days, the noon hour becomes of unusual interest." Several teachers have introduced the home made fireless cooker, wherein oatmeal, cream of wheat and soups are finished and kept hot. The menu is undoubtedly more wholesome than the ordinary cold lunch. Add to this the fact that the common human interest in "good things to eat" draws pupils, parents and teachers together; that good-fellowship, democracy and refinement of behavior are promoted, and that all, after the noon hour, are in the best possible frame for carrying on the ordinary work of the school—and the beneficence of the "hot-lunch plan" is easily perceived.—[C. R. Barns, Minnesota.

New Brunswick is Advancing.

Editor "The Farmer's Advocate":
I have just read Mr. McPhail's article, "New Brunswick Needs Farming," in the Christmas Number of "The Farmer's Advocate," and perhaps I have no right to comment on what he says, but I don't think he gave it full justice as an agricultural country, since, to my mind, it is not second to any Province in the Dominion. I have lived for quite a number of years in King's Co., N. B., and might also speak for Queen's, St. John Co., and several others. While I quite agree that it needs more intensive farming, the farmer of to-day is on the right tack; he is using more up-to-date machinery, following a good crop rotation, and is going into pure-bred stock and winter-feeding and dairying. Let any man get off the train at Sussex, in King's, on the main line of the I. C. R., and drive in any direction, and what does he see? Why, splendid farms, in high state of fertility, splendid barns and buildings, etc. Quite a large number of the farmers now own pure-bred herds of cattle—Holsteins, Ayrshires, Jerseys and Guernseys, and many more are improving their herds by keeping pure-bred sires and raising only the calves from their best cows. Then, along with the dairy, they keep hogs and poultry, and in the summer and winter time, milk shipped to St. John and other towns fetches good prices, and the farmers in the settlements take their milk to the cheese and butter factories which are dotted all through the country, nearly every settlement having a factory of its own, where cash is received for milk, and in winter the milk is separated and the cream taken to the largest factories and made into butter, and again the farmer is paid cash. While there may be a fair percentage of farmers who still sell their hay and grain, the general rule is to feed it on the farm, and large quantities of turnips are now grown and put in cellars or pits to be fed in the winter time. The writer knows of many farms where herds of from 10 to 50 and 100 head of pure-bred and grade cattle are now wintered on the produce grown on the farms where hay, from 50 to 150 tons, is grown every year, along with from 1,000 to six or seven thousand bushels of turnips, besides grain and potatoes. Now, Mr. McPhail said that only in large towns was cash paid for farm produce, and that the farmer had to trade everything at the store. While I am ready to agree, and have made the statement myself many times, that the trading at the store is a curse to New Brunswick, it is, I think, gradually and surely dying out. Large firms are now paying cash for all kinds of farm produce delivered in small lots, to make up carloads, which are shipped to the larger towns and cities. The New Brunswick farmer now, if he is awake, receives cash for his milk and cream, and is usually paid by the test, and prices average from 50 cents to one dollar per hundred for milk, and for pork, during the last three years, prices have been from 8½ cents up to

11 cents per pound, by the carcass, delivered; and potatoes always have a ready market for cash from \$1.00 up to \$2.00 per barrel, and so on through all kinds of produce. Then, again, farmers are now growing corn, and here and there you see a silo, not many, but the silo is coming slowly and surely, and coming to stay. Then, take fruit-growing. New Brunswick is not behind in this industry, and is awaking to the splendid possibilities of apple-growing. Take, for instance, the splendid apple show held in St. John only this fall, and also the splendid exhibit at the Ontario Horticultural Exhibition, recently held at Toronto. Apples will grow in almost any part of the Province, and New Brunswick apples are second to none in quality. The Province is practically a country of hill and dale, and is particularly adapted to sheep-raising, and many farmers are now making good money in the sheep industry. As a mixed-farming or fruit-growing country, New Brunswick is unexcelled in the Dominion. What she wants is advertising and more intensive farming, with a systematic crop rotation. The writer has lived several years in New Brunswick, also on the prairie, and in British Columbia, and, in his opinion, comes away ahead of the prairie as a place for the homeseeker and settler, for farms of fifty acres and upwards, with good house and buildings, can be bought almost anywhere for prices ranging from one thousand to several thousand dollars, for cash, on reasonable terms, and there are good schools and churches in every settlement, good roads, and the rural mail delivery in some places, and a very large number of farmers now have the telephone installed, and are in touch with the towns and markets, and doctor, in case of sickness, etc. New Brunswick certainly needs better farming, but the New Brunswick to-day is advancing slowly, though surely.

"NEW BRUNSWICK."

King's Co., N. B.

Once a man gets into the spotlight, the press does its best to keep him there. A recent newspaper item, credited to the Detroit Free Press, stated that J. W. Flavelle, of Toronto, had been quietly buying up lands near Chatham, with the purpose of supplying his string of stores in Toronto, Hamilton, Montreal, and other points. The alleged plan was to bring over Scotch crofters and place them on the land, with the view of going into intensive farming. Interrogated as to the truth of this report, Mr. Flavelle informs "The Farmer's Advocate" that neither he nor the Wm. Davies Company has bought nor intends

buying any lands in Western Ontario, or any other Province. The whole thing he characterizes as a newspaper creation.

Moral.—Be careful what papers you trust.

HORSES.

The present-day drafter must have size and substance, yet, from watching the work of the judges at recent exhibitions, it is still evident that quality figures very materially in the eye of the heavy horsemen.

Good stallions find ready sale, and are usually quickly picked up. Prospective buyers should lose no time in making their selection in order to secure the best horse for service in their locality. Buying early insures greater satisfaction.

Care of the Colt.

The ideal way of raising colts is not to wean them until they have learned to eat well, said John Bright, of Myrtle, in his address at Guelph Winter Fair. While the colt is nursing, it is usually able to look after itself. It is after this that most of the mistakes are made. The first winter is the most important six months in the colt's life. He should be fed liberally on good clover hay, oats, bran and roots, and also a little skim milk. Avoid getting the colt too fat. If fed in this way, he will shed his coat before he goes on the grass, and when he is put on the pasture will continue to grow as he did in the winter. When the flies get bad, it will pay well to look after the colt in the day time, by providing a box stall and some good hay, with plenty of good pure water.

Too many colts are ruined in their first year. Many are weaned before they have properly learned to eat, and so receive a setback at the start. These same colts are often poorly fed all the first winter, are kept in poor quarters, and not given the proper amount of exercise, so that it takes them all spring, until the flies appear, to recover from the setback they received the previous fall and winter. Then the feed grows scarce, and when it comes time to enter winter quarters again the colt is finally no larger at two years old than he should have been at one. Thus we have so many undersized draft horses to-day.

Others, again, receive just the opposite treatment. They are promising colts at birth, and are rushed for show purposes; the feed is increased, but exercise is often neglected, and so we have many of our best colts ruined by building up



Proportion (imp.).

Shire stallion, foaled in 1907. First in class and champion, Canadian National, Toronto. First, Winter Fair, Guelph, December, 1911. Exhibited by Porter Bros., Appleby, Ont.

the body and neglecting the care of the feet and legs. These, however, are in the minority, for there are far more colts ruined every year by receiving too little attention than by receiving too much. G.

LIVE STOCK.

B. C. Live Stock Sells High.

From a statement of the prices obtained at an auction sale of live stock in British Columbia, the property of Captain Erskine, recently received at this office through the courtesy of Dr. J. G. Rutherford, it would seem that the Pacific Province is as deeply interested in the live-stock industry as in horticulture and the various other enterprises. Dr. S. F. Tolmie, the representative of the Live-stock Branch in British Columbia, states that good milch cows were never so scarce in the history of the Province, and judging from the sale statement, the prices correspond with the scarcity. At this sale, a filly rising five years old brought \$500, a yearling entire colt \$330, a brood mare eight years old \$445, and another mare \$375. Nineteen head of horses, including colts, ponies and light horses, brought \$4,239.50, an average of \$223.13. The horses sold high, but the cattle went higher. Pure-bred cows sold up to \$302 each, several being bid in at almost the three hundred mark. Grade cows and heifers were in great demand. A three-year-old grade heifer sold for \$190, and \$211 was paid for a grade cow due to calve in April. The 75 head, including both grade and pure-bred cows, heifers, bulls and calves, brought \$8,899.50, an average of \$118.66. When it is considered that by far the largest proportion of these animals were grades, and a very large number were young heifers, this is a high average. Hay sold at \$15.50 per ton, and chickens brought nearly a dollar each, and the total proceeds of the sale, including implements and produce, amounted to \$16,666.70. Such a result cannot fail to be gratifying to stockmen not only in British Columbia, but throughout the Dominion, and it is just one more proof that the live-stock business is a paying business, and that it is on a sound basis in this country.

Buildings for Swine.

From J. H. Grisdale's address to stockmen at the Winter Fair.

The pig's requirements, in the way of shelter, are peculiar to himself. He can endure low temperatures, but shivers in the least air current. He can stand the most severe cold, but pines and sickens in damp quarters. He can withstand the most sudden changes in weather, but must have lots of sunlight and plenty of fresh air. He will always thrive with no shelter save a single-board cabin, but often sicken and waste away in the steam-heated, porcine palace. In short, the pig in captivity has not, like practically all other domestic animals, developed the ability to endure the common combination of warmth, humidity, impure air and inactivity that falls too often to his lot.

What the pig requires in his home is an abundance of fresh air, plenty of sunlight, protection from winds, and a well-littered, dry nest. Give him these, and success is certain, even though rations be poor. With right shelter conditions, no farm animal suffers less from disease than the pig, with uncongenial surroundings, no animal can think of more ways to die in one short winter.

The recognition of the above principles may seem easy, and their application a matter of routine, but it seems to take more than ordinary intelligence for the one, and untiring watchfulness for the other. Over twenty years' experience with pigs, in numbers varying from 25 to 500, at the Central Experimental Farm, has taught us a few things in connection with these principles and their application that are of interest, and should be of value to the farmer.

SUMMER HOUSING.

The less housing in summer, the better, but provide, if possible, a cool, shady spot and a good wallow. For feeders, as contrasted with breeding and growing stock, less yard room or pasture is required, but some way of assuring moderately cool conditions is necessary. Usually one side of the piggery is cool, and may be used. The cabin on legs about three feet high is the thing for breeding stock.

WINTER HOUSING.

Here, again, conditions must be considered from three standpoints: the sow with the litter, the in-young sow, and the stocker or feeder.

The sow in young does best outside, in board cabins for nests. The cabins need not be warmly constructed, but must be well bedded, and not expected to accommodate too large a number; from three to five is about right. So housed, and fed on some succulent food, as roots, and suitable meal, as bran, shorts and a small proportion of oats or barley or corn, success is certain.

This suits the pregnant sow, but not the sow and litter. The newborn pig needs more warmth. He cannot endure the rough winds of winter, nor its deep snows. Here is where skill in piggery construction may get full play. The piggery recently built at the Central Experimental Farm would seem to comply with all the requirements and to exemplify all the principles mentioned or discussed. It is too soon yet to know how it is going to work out in practice, since it was completed only last winter. It is at present giving satisfaction with pigs ranging from eight weeks to eight months old. Described briefly, it consists of nineteen or twenty pens averaging about 10 by 12 feet, in two rows, on either side of a six-foot passage. Windows stand as close as the requirements of strength will allow. Fresh air enters each pen, by an inlet on the Rutherford-ventilation-system plan. The floor of every pen slopes to one point, and so drains off all fluids into a tank. The floor is cement, save in the nest, where wooden floors are laid with an air-space underneath. Cement troughs, litter-carriers, chutes for straw over each nest, double windows outside, doors hung to open from passage, and various other conveniences, combine to make it easily kept clean, bright and, one would think, perfectly sanitary.

For stockers and feeders, this piggery is certainly practicable and satisfactory. For farrowing sows and raising young pigs, experience being largely lacking, time alone can tell the tale.

THE FARM.

Special Seed Plots Profitable.

During the year 1911 there were about 110 seed plots in connection with the Canadian Seed-growers' Association, reported upon by T. G. Raynor, who has been for six years engaged in inspecting these plots. In giving an account of his work to the Seed-growers' meeting, held at Guelph during the Winter Fair, Mr. Raynor pointed out that the success of the plans of mass selection adopted by the Association depended upon the men engaged in making the selection. Some men who commenced the practice six years ago are still at it, and making a greater success than ever, while others have lost interest and dropped the practice. The work, said Mr. Raynor, is a matter of selection of men, as well as of seed, and is a survival of the fittest. Besides being a paying proposition, the plots are a source of real, genuine pleasure.

Mr. Raynor pointed out that the past season was not favorable to large crop production in several parts of Ontario, particularly in Western Ontario, where dry weather was pronounced. Spring frosts also injured the clover in many districts. As a result, some of the plots were not so good as others. The weather conditions, however, made it possible to pick out the good soil, and the good and poor soil well worked. Several cases of good results obtained on farms where seed selection is practiced were cited.

C. R. Gies, of Waterloo Co., manures his meadow after hay or pasture, plows and works up a good seed-bed, and seeds with winter wheat, and during the last six years he has never had a crop of less

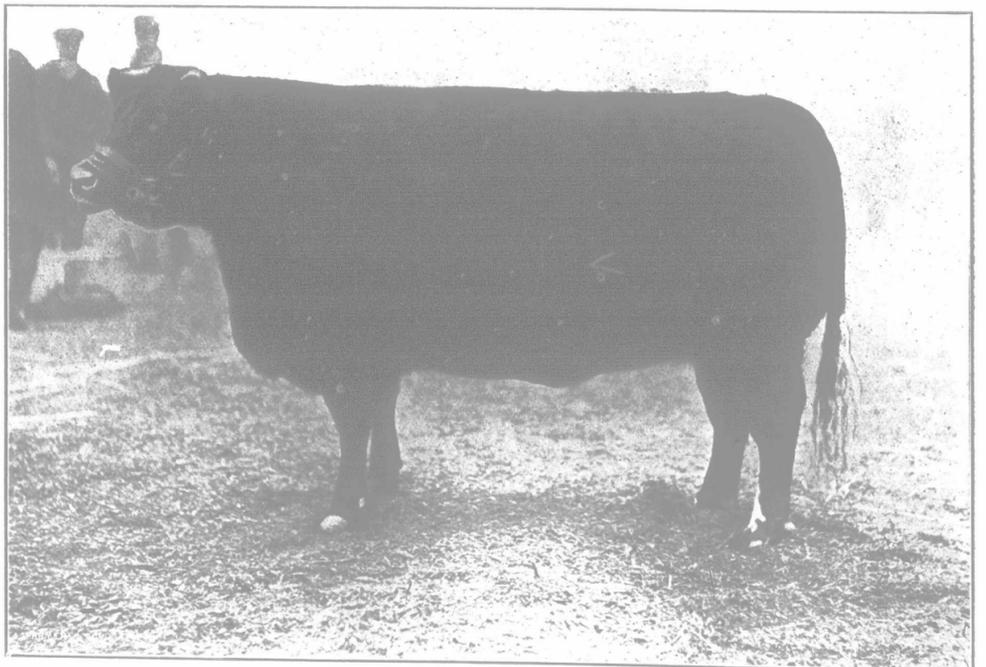
than 40 bushels per acre. Wm. Lewis, of Dunsford, succeeded in getting a yield of about 10 bushels per acre more of barley, and from 10 to 30 bushels per acre more oats than the average of his neighborhood. Alf. Hutchinson's potatoes yielded 200 bushels per acre under unfavorable conditions. The corn men had much the same results. J. H. Coatsworth, of Kingsville, had a field of his new hybrid corn, "Coatsworth's Hybrid," which yielded 120 bushels of corn in the ear per acre, while A. H. Woodbridge had five acres of Reid's Yellow Dent, which yielded 115 bushels per acre, and Robert Thompson, of St. Catharines, had a field of Salzer's North Dakota which yielded 116 bushels per acre. Chas. Pierce, of Wellington, with his new variety, Pierce's Evergreen, a selection from Stowell's Evergreen, produced two and a half tons of green sweet corn per acre; while T. G. Shepley had phenomenal results with his Reid's Yellow Dent and Wisconsin No. 7. This shows that good seed counts for a great deal. When the good qualities of a seed become fixed, they are transmitted even in adverse seasons. There is room for many more farmers to take up this seed-selection work, and that it pays is easily seen from the results obtained by those practicing it.

Our Scottish Letter.

(Held over from last week's letter.)

We are now well into December. This will be my last letter for 1911. It has been a wonderful year. The weather was of the best, and one has to go back to 1868 for a parallel in respect of the long continuance of brilliant sunshine. Many farmers in Scotland have done well. Prices for barley have seldom touched as high a level, and, speaking generally of Scottish farmers, they will have no reason to complain when they balance up results. It is not so, however, in every case, and the season was strangely unequal. The English farmer has been very badly hit. A drouth is much worse for him than for us, and several of the smaller dairy farmers have had to give up altogether, while others have been sadly crippled. It is estimated that the mangel crop in the south will be 11,000,000 tons short of the normal. On what grounds the estimate has been based, we do not know, but when Mr. Runciman announced it at a recent farmers' dinner, there were indications of disapproval. Those who gave these indications did so because the estimate was too low. At any rate, it is going to be a very costly business carrying stock through this winter, and much capital will be lost by English farmers, in particular. Grass was quite as scarce as roots, and the outlook is not at all rosy for those who have a heavy head of stock to winter.

In spite of the high price of grain, there are indications that the breadth of winter wheat being sown will be short. The weather during the past six weeks has only been moderate for such work. We have had exceptionally heavy rains, and it has not been possible to do much on the land. Those having potatoes to sell are doing a good business. Even in spite of the tariff wall, a big lot are being shipped to America, and it is long since potatoes were marketed of such excellent quality. Indeed, the season has been altogether a splendid



Village Lassie.

Shorthorn heifer, grand champion as best beef animal, any breed or cross, Smithfield Show, 1911.

one for potatoes. They love the sun, and, to get the full benefit of them, they must be cooked in their jackets. Cooking them without the skins is a hazardous undertaking, on account of their mealy condition. Referring to potatoes naturally suggests the retreat of James Hope, Eastbarns, Dunbar, without doubt the most extensive potato-grower in Scotland. Mr. Hope has been farming on his own account for over sixty years, and he and his goodwife are still hale and hearty. They have two sons, members of Parliament, one representing his native county of East Lothian, the other representing the western county of Bute. The latter, Harry Hope, is himself a tenant-farmer, and has taken over his father's large holding in addition to his own, so that he is now one of the most extensive occupiers of arable land in Great Britain. He takes an active part in the work of Parliament, in so far as it affects agriculture, and his sound, first-hand, practical knowledge is useful when rural subjects are in hand. His brother is in business, and the two sit on opposite sides of the House. John D. Hope has more than once done an excellent piece of work for farmers in the House. He is by no means so keen a Parliamentarian as his brother. He has been longer in Parliament, and understands the game better. He does not take it so seriously. However, both brothers are doing useful service, and, so far as agriculture is concerned, the fact that they are on opposite sides is rather an advantage than otherwise.

The closing year sees many places vacant in the counsels of those entrusted with the public management of agricultural affairs. The premier Board is that of the Highland & Agricultural Society, and at its monthly meetings one misses the genial presence of the Rev. Dr. Gillespie, the sound judgment of James Macdonald, its secretary, and the quiet strength of William Taylor, Park Mains, Renfrew. These gentlemen have all been laid aside by serious illness, and there is not much likelihood of them resuming work. All three gentlemen were zealous and faithful in the discharge of public duty, and their views and opinions on any subject were always welcome. That each of them may have recovery to a measure of health and strength, is the earnest desire of all who knew them. Another well-known figure, also absent from agricultural meeting-places for the past six months is that of David Young, editor of the North British Agriculturist. He was struck down in July, and still lingers unconscious, or nearly so. The passing of such men from active service is fitted to have a solemnizing effect on those of us who are still active in the fight.

"SCOTLAND YET."

Hardy Strains of Alfalfa for Ontario.

An address by C. A. Zavitz, Professor of Field Husbandry, O. A. C., Guelph, at the Ontario Winter Fair, 1911.

From correspondence which I have had recently with seedsmen in Ontario, it is learned that the demand for alfalfa seed has doubled in the last two or three years. In regard to this great increase in demand, there appears to be a great danger of securing tender strains of alfalfa which will not prove very successful in Ontario. I therefore consider it my duty to bring before you the best results which I can in regard to the different strains of alfalfa, and to draw particular attention to those which have been found to be the most hardy in this climate.

My address three years ago dealt with alfalfa from the standpoint of its large yields of nutritious feed for farm stock, its perennial character of growth, its beneficial influence on the soil, and its method of cultivation. In that address, the results of experiments conducted at the Ontario Agricultural College were presented and discussed.

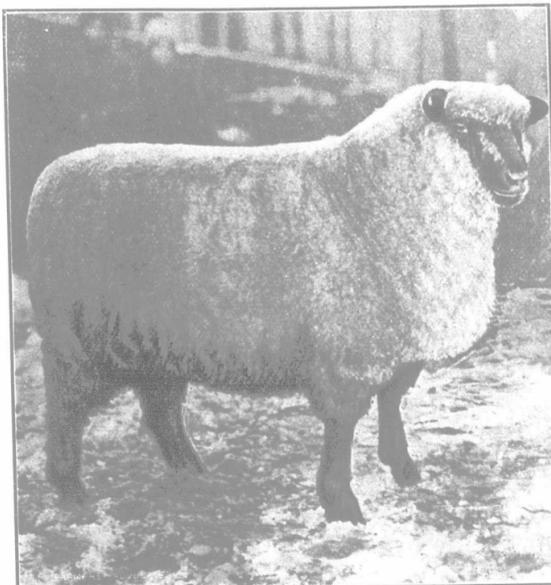
In the address presented last year, the production of alfalfa seed in Ontario was given attention. It was stated that alfalfa seed production in this Province was becoming more and more an important industry, especially in a few districts which seemed to be admirably suited to seed production. In nearly all instances the farmers converted the first crop of the season into hay, and obtained seed from the second growth. The average yield of seed per acre was slightly over two bushels, and the average price realized by the farmers, over a series of years, was about \$9.00 per bushel, or \$18.00 per acre.

The information which is furnished in the address this year has been obtained from experiments which have been conducted at the Ontario Agricultural College and elsewhere, and also by recent visits and correspondence with a large number of practical alfalfa-growers in the Province of Ontario.

CLASSIFICATION OF ALFALFA.

The whole number of species of alfalfa is quite limited, and for our present consideration only two need to be mentioned, viz., the common alfalfa (*medicago sativa*), and the yellow-flowered

alfalfa (*medicago falcata*). The common alfalfa has been grown extensively in many of the countries of the world in which the climate is not too severe. It possesses plants of an upright growth, flowers which are violet in color, and seed-pods which are in the form of coils or spirals. The yellow-flowered alfalfa grows wild in a number of the countries of Europe and Asia. Its use as a cultivated crop has been limited. The plants have a spreading habit of growth, and are considered to be quite hardy. The flowers are yellow in color, and the pods are in the form of a crescent or a sickle.



Yearling Oxford Wether.

Champion of the breed at the Ontario Provincial Winter Fair, 1911. Bred and exhibited by Peter Arkell & Sons, Teeswater, Ont.

VARIEGATED ALFALFA.

Alfalfa plants are naturally cross-fertilized; hence, if plants of the yellow-flowered alfalfa are grown in the midst of or in near proximity to the common variety, there is a natural crossing or mixing of the two kinds of alfalfa. The apparent ease with which natural cross-fertilization takes place explains the reason for the existence of different kinds of alfalfa plants, which vary more or less in their characteristics, particularly in their color of flowers and in their evident hardiness. Some of these hybrids which have received distinct names have been grouped into a general class, which is now known as variegated alfalfa. The United States Department of Agriculture has imported several lots of variegated alfalfa from Europe and from Asia for experimental purposes. Besides these, we have in America the sand lucerne of commerce, the Grimm alfalfa of Minnesota, and the Canadian variegated alfalfa of Ontario, each of which has made high records in experiments conducted in Canada and in the United States. It is probably safe to say that the Grimm alfalfa of Minnesota and the Canadian

alfalfa of commerce, however, of which fully a dozen different lots imported from Europe, and obtained mostly from Brand and Westgate of the Department of Agriculture at Washington, are under experiment at the Ontario Agricultural College at the present time, possesses much less variation in plant characters than is found in the pure sand lucerne. The plants from the commercial seed more closely approximate the common alfalfa. This has likely been brought about by the sand lucerne and the common alfalfa being grown in near proximity to each other, and thus permitting additional cross-fertilizations to take place. It is a question if, in some instances, the samples which are now offered through the American seed trade as sand lucerne are not identical with the common alfalfa. The sand lucerne is advertised by only a few of the seedsmen on the American continent, and its sale appears to be quite small.

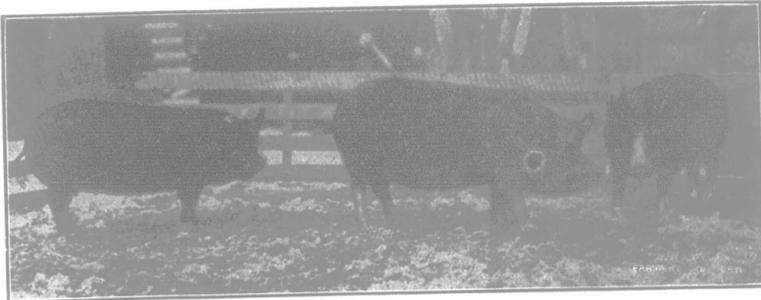
The Grimm alfalfa was brought from Baden, Germany, to Minnesota, in 1857, where it has been grown since that time. It shows variegated characters, and has proven very hardy and well suited to northern conditions. The hardiness is probably due, in part, to the natural crossing of the yellow-flowered alfalfa with the common variety, and partly to the natural selection which has been brought about by the continuous growing of this alfalfa in the cold climate of Minnesota.

It is known that the Canadian variegated alfalfa is grown by farmers in certain parts of the Counties of Lincoln, Welland and Haldimand, and it is probably grown to a limited extent in some of the other counties of Ontario. In many sections of the Province, however, the common and more tender variety from the Western States has been introduced in recent years. The common alfalfa of the South-western and Central Western States traces its history largely to South America, from which country it was brought to California about fifty years ago. The early history of alfalfa-growing in Ontario is both interesting and important, as it has a direct bearing on the future production of alfalfa in this Province.

In 1871, the late Nehemiah Bethel, who was a noted farmer and stockman living near Thorold, Ont., secured two pounds of alfalfa seed from Lorraine, France. This he sowed with great care on his farm in Welland County. From seed which he grew, he increased his acreage from year to year, and it is stated that in 1877 he had 70 bushels of seed from a little less than ten acres of land. In that year he forwarded a sample of his alfalfa seed to the exhibition in Paris, France, for which a diploma was granted. This strain of alfalfa is still being successfully grown in Welland County, where a number of old fields are to be found.

In 1875, Dr. J. W. Colver, Wellandport, Lincoln County, imported from Baden, Germany, 50 pounds of alfalfa seed. Of this amount he sowed 20 pounds on his own farm, and gave the rest to farmers in at least four different counties. Some of the farmers near Wellandport are now growing alfalfa of the strain introduced by Dr. Colver. It is interesting to note that the seed imported by Dr. Colver came from the same part of Germany as that brought out by Mr. Grimm, and which was sown by him in Minnesota.

Although a few of the Ontario seedsmen began to introduce alfalfa seed in a limited way from the years 1875 to 1885, no information has been secured showing any connection between the crops which are being grown at the present time and the



First prize pen of three Berkshire pigs, of one litter, bred by exhibitor, Ontario Winter Fair, Guelph, bred and owned by E. Brien & Son, Ridgetown, Ont.

variegated alfalfa of Ontario are the two hardest and most important varieties of alfalfa, the seed of which can be bought in Canada and in the United States.

Sand lucerne has been recognized in Europe as a distinct variety for more than half a century. It received its name from the supposition that it was particularly suited to the sandy lands of Germany. According to the early descriptions of sand lucerne, and the examinations which have been made more recently of what is supposed to be the original type, there are marked variations in the character of growth and in the color of flowers of the individual plants. The sand lu-

seed which they introduced.

It seems evident that the introductions of both Mr. Bethel and Dr. Colver were those of variegated alfalfa, and that these two introductions have had a marked influence in the successful growth of this important crop in the Niagara Peninsula, where there are now numerous fields which have produced crops of alfalfa continuously for from ten to twenty or more years, without re-seeding.

A few years ago, J. W. Colver, of the Department of Agriculture, at Washington, obtained some samples of Canadian alfalfa which gave high results in experiments which were conducted under

his supervision. These samples he traced back to Putman & Son, Silverdale, Ont., and found that the alfalfas had been grown in that vicinity. Mr. Westgate visited the Niagara district in each of two years, and there he found fields of variegated alfalfa which were giving excellent satisfaction. He obtained samples from three different farms, two of the samples being the variegated variety, and the other the common violet alfalfa.

Experiments have been conducted in a few places in the United States, in which Canadian variegated alfalfa has been compared with other varieties. The Canadian variegated alfalfa gave the highest results of the different kinds which were under experiment at Great Falls, Montana; Walhalla, North Dakota, and at the Michigan Agricultural College Sub-station. At Dickinson's Sub-station, North Dakota, however, the Canadian variegated alfalfa was surpassed by four other varieties. Mr. Brand, of the Department of Agriculture, at Washington, explains, in Bulletin 185, that the Canadian alfalfa did not have as good a chance as the other varieties at the Dickinson Sub-station, owing to unfavorable conditions of the soil where the Canadian alfalfa was grown. Other experiments are being conducted in the United States, and results will likely be available in a short time.

RESULTS OF EXPERIMENTS CONDUCTED AT THE ONTARIO AGRICULTURAL COLLEGE.

Several series of experiments with different varieties and strains of alfalfa are at present being conducted in the experimental grounds at the Ontario Agricultural College. One series has been running for seven years, another for four years, and another for three years. As all of the particular varieties and strains which we are considering at the present time are included in the experiment, which was started in the spring of 1909, the results here presented will be confined to that experiment. In this experiment, 19 plots of sand lucerne, 4 plots of Grimm alfalfa, and 2 plots of Canadian variegated alfalfa were included. The average results of the different plots of each of these three varieties show the following yields of hay per acre in each of the past two years:

Varieties.	No. of plots.	Tons of hay per acre.		
		1910.	1911.	Av'ge.
Sand Lucerne	19	3.2	2.3	2.75
Grimm Alfalfa	4	3.3	2.4	2.85
Canadian Variegated Alfalfa	2	3.5	2.1	2.80

Owing to severe weather conditions, the yields of alfalfa hay were comparatively low in each of the two years, the acreage for the past fourteen years being about 5 tons of hay per acre per annum at the Ontario Agricultural College. It will be seen that the three noted varieties of hardy alfalfa have given very similar results. When we take into consideration the results of the variegated alfalfa in both the United States and Canada, it will be seen that it has made an excellent record.

Another table is here presented which gives the detailed results of the different kinds of alfalfa obtained in the United States, of the three Canadian alfalfas the exact sources of which are known, and of the one sample of alfalfa from South America.

ALFALFA OR LUCERNE, O. A. C., 1911.			
Country.	Strain.	1910.	1911.
Peru—Peruvian		2.6	.0
United States—Grimm, Minnesota		3.6	2.7
Texas		2.1	.5
Utah		2.6	.6
Colorado		2.1	.4
U. S. Common—Nebraska		2.5	.6
Montana		2.4	1.0
U. S. Special—Variegated, Kansas		2.2	1.2
Wheeler, S. Dakota		3.1	2.5
Canada—Variegated, Ontario		3.4	2.0
Common Violet, Ontario		3.2	.8
Variegated, Ontario		3.6	2.2

In the tabulated results here presented, we see the great difference in yields between the Peruvian and the Grimm varieties of alfalfa. Here we have a comparison in the results of a tender southern alfalfa and a northern hardy variety. The Peruvian alfalfa, with the exception of a few plants, was all killed out in the severe winter of 1910-1911, while, under similar conditions, the Grimm alfalfa survived the winter with almost a perfect stand of plants.

Of the five different lots of common alfalfa obtained in the United States, from Texas in the south, to Montana in the north, the results show the influence of the winter killing to a very marked degree. The Montana alfalfa, which withstood the winter the best of these five lots, is considered to be one of the very hardiest of the commercial strains of the common western alfalfa.

The two lots of alfalfa from Kansas and South Dakota have been noted for their hardiness in those States in which they have been tested. The sample from South Dakota gave particularly good results at Guelph, displaying hardiness to a marked degree.

The three lots of alfalfa from Ontario show very interesting results, the two variegated lots coming in the same class for hardiness as the Grimm alfalfa of Minnesota and the Wheeler alfalfa of South Dakota. The two most important points, however, in connection with this experiment appear to be the superiority in hardiness of, first, the Canadian variegated alfalfa over the common violet alfalfa of the United States and, second, the Canadian variegated alfalfa over the common violet alfalfa of Ontario.

Taking into consideration the results both in the United States and in Ontario, we have much evidence to show that the variegated Canadian alfalfa is very hardy, and is worthy of special attention in the Province of Ontario.

A Study in Rural Economics.

Prof. J. F. Snell, Macdonald College.

III.—DIVERSIFIED FARMING VS. SPECIALIZATION.

For the conditions obtaining in Tompkins County, the results of the survey leave no room for doubt that the farmer who devotes all his attention to either dairying or crop-raising alone, reaps less profit than the man who aims to sell both dairy products and crops. This is a matter in which local conditions may be a very important factor, but the reasons given for the superior efficiency of the diversified farm furnish food for thought to every farm manager, and will doubtless find some application in every locality.

The farming in the locality is classified into three general types:

1. General crop farming.
2. General farming, combined with dairying.
3. Dairy farming.

Of the three types, it is the second which is the most profitable. There are, of course, no distinct lines of division between the three types. Between the two extremes of those who sell very little stock products, and those who sell only stock products, there are all degrees of variation. However, of the farmers of these townships—

31 per cent. derive more of their income from crops than from stock.

47 per cent. derive their chief income from crops, but sell considerable crops; and

22 per cent. derive nearly all their income from stock, and chiefly from the dairy.

CROP FARMS.

Of those farmers who derived more from crops than from stock, thirty-three made labor incomes of over \$600.

Of eighty-eight farms operated by owners who derived over twice as much from the sale of crops as from stock, thirty-three made labor incomes of over \$600, twelve made over \$1,000. Hay was the chief product on nine of the twelve farms yielding over \$1,000, potatoes on one, grapes on one, and grain on one. Apples and grain were important on most of the crop farms.

The largest labor income made by a farmer who derived at least two-thirds of his receipts from crops was \$2,305. His crop sales were: Hay, \$910; grain, \$871; apples, \$569; potatoes, \$113—a total of \$2,463 from crops; while of stock products he sold: creamery milk, \$685; eggs, \$80; hogs, \$123, and colts, \$120—a total of \$988. The farm in question is No. 8, the successful freehold farm, cited above by way of explanation of definitions.

Upon this farm the following comments are made:

"The crop yields are 11 per cent. above the average. The receipts per cow are just equal to the average on farms selling milk to creameries. This is a general hay and grain farm. The large profits come from the sale of crops. The large labor income is made in spite of the cows. Only 13 cows are kept. If more were kept, the receipts per cow would have to be much better, or the profits would be reduced."

Another farmer of this class made a labor income of \$1,702. His crop sales were: Hay, \$915; grain, \$587; potatoes, \$300; apples, \$80.

A third made a labor income of \$1,649. His crop sales were: Potatoes, \$1,170; grain, \$409; hay, \$350.

Higher labor incomes than any of these were made upon the farms of the diversified class.

Summarizing the survey of the crop-growing farms, the authors say:

"It is possible to make a success of farming in this country without keeping much stock. Apparently, it is also possible to keep up the productivity of the land by the use of fertilizers. With proper rotation and fertilization, it is possible to maintain the fertility of the land for many years, and probably permanently. This has been done for over half a century at Rothamsted, England, and for twenty-five years at State College, Pennsylvania. The trouble with the practice of such a system is that the rotation and fertilizers are often forgotten."

LIVE-STOCK FARMS.

It will come as a surprise to many that the class of farms devoted exclusively, or almost exclusively, to live-stock products make a much poorer showing than the crop-growing farms. "Of the 29 farmers who grew crops for feed only, selling nothing but stock and stock products, a number kept good-sized dairies, but only three made more than a hired man's wages. The highest labor income was \$430. Of those who derived less than one-fifth as much from crops as from stock, less than one-eighth made over \$600."

A special study is made of the farms producing market milk. Of these farms, those from which practically no crops were sold yielded an average labor income of \$312, while those which derived more receipts from crops than from stock averaged \$768 labor income. Of 14 farms that derived over 80 per cent. of their income from market milk and cattle, only four yielded labor incomes of over \$500. The largest labor income was \$881, of which \$242 came from the sale of eggs and crops. "It is, of course, possible to make a living and some profits when selling little but market milk. The last farmer mentioned above ought to save money, but a few of his neighbors, with no better cows, are making labor incomes of nearly \$3,000 by combining cash crops with milk. It is often possible to make a fair profit with extreme specialization, but larger profits can nearly always be secured by combining other things with the specialty."

DIVERSIFIED FARMS.

The record of one of the most successful diversified farms is given in the bulletin for the two years ending April 1, 1907, and April 1, 1908. The labor income in the latter year was \$3,551. This year, however, was the best the farmer had experienced, both crops and prices being good. In the preceding year, which was more normal, the labor income was \$2,750, which is 550 per cent. more than the average. We give below the details of this farm for the more normal one of the two years:

Farm No. 1 (year ending April 1, 1907); 211 acres, 160 tillable:

CAPITAL.

Farm	\$10,550
Machinery	400
Five horses	500
Thirty-one cows	2,480
Twenty-five sheep	175
Other stock	332
All else	113

Total capital

Crops: Yield per acre.—10 acres corn for silo; 11 acres wheat, 30 bushels; 26 acres oats, 41 bushels; 12 acres potatoes, 200 bushels; 2 acres of apples; 55 acres hay, 1.51 tons.

Soils.—Volusia loam, Dunkirk clay loam.

Receipts per Cow.—From milk, \$111; from stock, \$8. Holstein and Holstein-grade cows; Holstein bull.

RECEIPTS.

Wheat	\$ 264
Hay	25
Potatoes	1,050
Apples	145
Milk (New York)	3,449
Cattle	245
Sheep and lambs	151
Wool	53
Eggs	106
All else	29

Total Receipts

EXPENSES.

Labor and board	\$1,100
Feed concentrates	511
Fertilizers	100
Seed	53
All else	276

Total Expenses

Farm income

Interest on capital at 5 per cent.

Labor income

The farm has two main sources of income and many minor sources. "Milk alone or crops alone would not have given these profits. To produce such a large income required the combination of a diversified farm, larger area, larger capital, better crops and better stock than the average. Many farms combined two or three of these points, and did fairly well, but a combination of all of them is essential for the largest profits."

This farm is also exceptionally well systematized. "The area of each crop is practically constant from year to year. A definite rotation is followed. Corn and potatoes are planted on sod. These are followed by oats. Part of the

oat field is seeded, the remainder is followed by wheat and seeding. The grass that follows oats remains down three years; that which follows wheat remains two years. There is always corn enough to fill the silos, and hay enough to feed. In exceptionally favorable years there is hay to sell. Wheat is sold. The manure is hauled daily.

"Like most of the profitable farms in the county, this one raises its own cows, and sells the poorest ones to farmers who do not raise their own. Also, like all of the most profitable farms, more feed is purchased per animal. It often pays better to raise crops to sell and buy mill products than to raise all of the grain feed for cows."

Farm No. 3 was similar to No. 1, but larger. It had 266 acres, of which 236 were tillable land. The larger area allowed for the growing of hay for sale. Hence, instead of two, there were three chief sources of income—milk, hay and potatoes. The number of cows (Holsteins) kept was almost exactly the same as on Farm No. 1—33, as against 31. These cows were decidedly inferior to the Holsteins on Farm No. 1. They produced an average of \$91 worth of products—\$20 less than those of Farm 1. Nevertheless, the proprietor's labor income for the year ending April 1st, 1907, exceeded that of the owner of Farm No. 1.

Farm No. 3 realized a labor income of \$2,920. The receipts from the products of this farm were \$5,969, divided as follows:

Oats	\$ 200
Hay	1,232
Potatoes	963
Apples	20
Milk (New York)	3,000
Cattle	175
Eggs	300
All else	79
Total Receipts	\$5,969

\$600 was spent for concentrated feeds.
\$150 for fertilizers, and \$100 for seeds.

As examples of successful diversified farms, smaller and different in type from the above, we may cite Nos. 10 and 9. In No. 10, although milk and other stock products are sold, the garden yields about two-thirds of the total receipts. The complete record of this farm is given below:

Farm No. 10 (Year ending April 1st, 1910); 93 acres owned, 25 acres on shares, 25 acres pasture rented.

CAPITAL.	
Farm	\$ 9,700
Machinery	1,000
Eight horses	1,225
Twelve cows	1,200
One bull	75
One hundred and fifty hens	150
Other stock	403
All else	1,090
Total capital	\$14,843

Crops.—Yield per acre: 30 acres corn, 48 bushels; 10 acres corn fodder; 30 acres hay, 1.4 tons; 5 acres sorghum, 1 acre millet, 2 acres oats and peas; 2 acres tobacco, 1,800 pounds; 10 acres berries, 2 acres apples.

Soils.—Dunkirk loam; Dunkirk clay loam; Dunkirk stony clay.

Receipts per cow, from milk, \$107.
Holstein cows; Holstein bull.

RECEIPTS.	
Asparagus, 1½ acres	\$ 200
Green peas, 6 acres	800
Sweet corn, 3 acres	350
Muskmelons, 3 acres	700
Potatoes, 2 acres	63
Lima beans, ¼ acre	150
Tobacco	720
Fruit and berries	1,500
Total from Garden	\$4,483
Milk	1,281
Cattle	373
Horses	150
Lambs	156
Wool	102
Poultry	100
Eggs	80
Total from live stock	\$2,245
Total from garden	\$4,483
Total Receipts	\$6,728

EXPENSES.	
Labor and board	\$1,200
Seeds	175
Pasture	25
Straw	60
Feed, concentrates	400
Manure	160
Machinery and repairs	50
Fences and repairs	65
All else	183
Total Expenses	\$2,348
Farm income	\$4,410
Interest on capital at 5 per cent	742
Labor income	\$3,668

"This is perhaps the most diversified farm in the list, and, with one exception, is the best-paying."

Farm No. 9, although a live-stock, is absolutely a non-dairy farm. Sheep, swine and calves are the chief products, and apples are an important secondary source of income. The total area is about the same as that of Farm No. 10, and the labor income is only a little less.

Farm No. 9 (Year ending April 1, 1908); 145 acres, 110 tillable.

CAPITAL.	
Farm	\$ 7,800
Machinery	500
Eight cows	400
Eight horses	1,000
Two hundred and fifty sheep	1,625
Sixteen hogs	320
Other stock	593
All else	311
Total Capital	\$12,549

Crops.—Yield per acre: 16 acres corn, 38 bushels; 20 acres oats, 50 bushels; 1 acre potatoes, 200 bushels; 30 acres hay, 1½ tons; 35 acres apples.

Soil.—Volusia loam.
Rambouillet-grade sheep. Receipts per sheep, \$8.36.

RECEIPTS.	
Potatoes	\$ 105
Apples	800
Calves	855
Sheep and lambs	1,603
Wool	486
Hogs and pigs	1,240
Total Receipts	\$5,089

EXPENSES.	
Labor and board	\$ 450
Feed, concentrates	200
Seeds	50
All else	300
Total Expenses	\$1,000
Total Expenses	\$4,089
Interest on capital, at 5 per cent	627
Labor income	\$3,462

"The owner has raised sheep many years, and knows how to handle them. His receipts per sheep were 61 per cent. above the average for the county. He raised winter lambs for fifteen years, but was raising spring lambs when this record was taken.

"Few farmers have made very much in the veal calf business, but this man has done exceedingly well with calves, having received \$107 per cow from the sale of calves above the price paid for calves. Each cow raises about eight calves per year. The calves do the milking. The apple orchard on this place is also a very profitable investment. In some years it has been the chief source of income."

"The absence of dairying apparently enables this farmer to get along with very little outlay for labor.

WHY DIVERSIFIED FARMING PAYS.

By way of explanation of the advantages of diversified, as compared with specialized farming, the following observations are offered: "By combining two or more leading products, the receipts are greatly increased, without much increase in expenses. For example, milk, potatoes and hay may be raised for sale with little more labor than is required for producing milk. The combination of all three requires little more horses or equipment than is required for any one. Other combinations are equally efficient. The minor enterprises, as eggs, colts, etc., also help."

Subscriber Since 1866.

Enclosed please find \$1.50 for the renewal of my subscription. My father commenced to take "The Farmer's Advocate" 46 years ago—that would be with the first volume. We have taken it continuously since, and have nearly all the numbers on file. We consider it the foremost agricultural journal of Canada.

Hastings Co., Ont. D. W. KETCHESON.

The Fertilizers of the United States.

At the last session of Congress an appropriation of \$12,500 was made to the Department of Agriculture for the purpose of investigating the fertilizer resources of United States. At the same time, \$20,000 was given to the Geological Survey, who are drilling at Dallan, Nevada. The report of Secretary Wilson has just been transmitted to Congress by the President in a special message.

Both appropriations were the outcome of a desire on the part of Congress, at the last session, to become, if possible, independent of foreign sources of supply. The United States possesses the largest phosphate fields in the world, and not only supplies all that is required for home consumption, but also exports large quantities to foreign countries. All of the potash, however, required for our fertilizers is imported from Germany, the annual importation being about \$15,000,000. Germany has shown a disposition to limit the amount sent to America, and, as the use of fertilizers is increasing rapidly, the need for a home supply becomes every year more apparent.

The present report shows that the United States Department of Agriculture has been successful in its search, and that country may shortly not only be able to supply its own needs of potash salts, but even possibly export to foreign markets. A few difficulties of an engineering character are still to be overcome, but they are not of a serious nature. A new industry will be established, and if the by-products are wisely used, many millions per annum should be added to the wealth of this country.

The Department experts have covered a wide range in their investigation. Some of the desert basins were examined; brines and the mother liquors from salt wells were tested, and experiments have been carried on with the object of extracting potash from silicate rocks, and minerals, such as alunite, which contain it. The work is still under way, and potash in limited amounts undoubtedly will be derived from some of these sources. Up to the present, none of them give promise of satisfying the country's needs.

But in the giant Kelps of the Pacific Coast a satisfactory source of potash has been found. The kelp groves along less than one-fourth of the coast line have been mapped, and yet these should yield from two to three times as much potash as the present importations. These sea weeds are able to extract, by selective absorption, the potash salts from the sea water, and, on drying, these salts are very largely exuded on the surface. The dried plants contain from 25 to 35 per cent. of their weight of potassium chloride, and the latter can very readily be extracted. The kelps also contain iodine, and many other by-products can be obtained from them. It is possible that these by-products will more than pay the manufacturing expenses, leaving the potassium chloride free from cost. The Japanese have already shown considerable ingenuity in working up these by-products. Not only do they use some of the waste material for cattle food, but the Japanese themselves use it as a staple article of diet. Glue, shellac, paper and other useful products can also be made.

Some of the Pacific groves are five miles long and two miles wide, and the growth in these groves is exceedingly dense. The two principal species that would be available are *Nereocystis luetkeana*, in the north, and *Macrocystis pyrifera*, in the south. Both these plants reach a length of 100 feet or more, and grow in strong tides or where they are exposed to the full force of the open sea. All of the groves are within the three-mile limit, and should be easily harvested. The heaviest groves are south of Point Sur, but large ones extend as far north as Seattle. If properly harvested and protected, these groves will yield an annual harvest indefinitely; it is even possible that, in the case of *Macrocystis* two such harvests may be obtained. On a conservative basis, upwards of a million tons of potassium chloride, worth nearly \$40,000,000, should be obtained each year. No estimate can be given at the present time of the value of the by-products.

POULTRY

Case-Count versus Loss-Off.

Farmers and those handling eggs commercially, as well as the housewives and other consumers of eggs, will be interested in United States Secretary Wilson's remarks on two systems in vogue in the egg trade.

The system of marketing eggs in general use in the Middle West, known to the trade as the "case-count" system, has proven detrimental to quality. Briefly, case-count buying consists of the payment of the fixed price which happens to be current at the time for each and every dozen which may be offered for sale, regardless of whether the eggs themselves are good, bad, or indifferent. The only

requisite in most cases to consummate a sale is for each egg to have an intact shell. No more practical step can be taken in improving quality than to discard this system of buying and replace it by the one known to the trade as "loss-off."

Where the "loss-off" system is in use the eggs, as bought, are "candled"—that is, subjected to a test which shows quite definitely their condition and quality. By this test, it is possible to detect "rots," "spots," and other deteriorated eggs, such as shrunken, weak, watery, and heated eggs. In paying for eggs bought on this basis, the rots and usually the spots and blood-rings are thrown out entirely, so that they become a dead loss to the person responsible for them. Such a classification and method of payment is a distinct step forward, and results in a great improvement in the eggs.

Housing Poultry.

Perhaps no other branch of the poultry business requires and is deserving of more attention than the housing of poultry. A few years ago it was believed that, above all things, the poultry house must be warm, and buildings were built on the hothouse plan. As pointed out by Prof. W. R. Graham in his illustrated address to poultrymen recently gathered at Guelph, it is not heat that is essential to good results from poultry-keeping, but the essentials to a good poultry house are plenty of light, good ventilation, cleanliness, and freedom from drafts and dampness. Prof. Graham has made an extensive study of poultry houses in several districts, especially Norfolk County, and from the excellent number of slides which he showed there are many different styles of houses giving good results at the present time. Many of the houses illustrated in his lecture were very cheap, yet they were so built and so situated as to make them very useful. One house, in particular was a very common structure, yet it was so arranged as to admit the morning and afternoon sun, and the hens were permitted to run in a yard to the east of the building in the mornings, so as to insure the best use of the sun's light and heat, and in the afternoon they were allowed out through another opening in the pen into the barnyard, which gave them the benefit of the afternoon sun to scratch in the barnyard litter. There is no better place for laying hens to scratch than in a dry, well-littered barnyard, and, where possible, the poultry house should be situated close to it. Expensive houses are not absolutely necessary. The open-front house is still in favor, as it insures an abundance of fresh air, and the low-caved type recommended by Prof. Graham is remarkably free from drafts, and is a well-lighted, dry house, which can be erected at reasonable cost, a house 20 feet square, with cement floor and all complete not costing over \$100.

Marketing Poultry.

Prof. F. C. Elford gave an interesting and instructive address at the Poultry Meeting in connection with the Winter Fair, recently held at Guelph. He stated that agricultural colleges have recently done considerable work in demonstrating how best to market poultry produce, and that there is nothing in marketing poultry that pays as well as the "Finishing Touch," but in a great many cases this part is overlooked. The reasons why they are not given the proper finishing, in a great many cases, are indifference, ignorance, and wilful neglect.

The poultry business has now grown to such proportions that it must be properly taken care of. There is \$50,000,000 worth of poultry produce marketed in Canada in one year, yet the great majority of people do not know what a fresh egg is. In calling on a produce merchant in Montreal not long ago, said Mr. Elford, he showed me a case of thirty dozen eggs which he had bought as strictly fresh. Out of the whole case, there were only eighteen dozen which candled as fresh eggs. The time will come—and the sooner the better—when people will get their desserts who market what really are stale eggs as strictly fresh. To keep up prices, there must be honesty all the way through. When low prices prevail, it is because we put on the market such a poor quality of produce. If one case of stale eggs is put on the market and sold as strictly fresh, it has a tendency to lower the market value of the produce. If a man has a bad egg for breakfast, the chances are he won't eat eggs again for some time.

Poultrymen must see that the trouble is remedied, and, to do this, a better system of marketing is necessary. Egg-peddlers going through the country get fresh eggs from one place, and from the next eggs that have probably been kept two or three months. The system of egg-peddling, or the country-store system, must be done away with to eliminate bad eggs from the market. There must be co-operation among the producers to get the eggs on the consumer's table as soon as possible.

The system just referred to causes too much expense in marketing. It now costs \$10,000,000 to market \$15,000,000 worth of eggs produced, or

10 cents to market a 15-cent article. If we can work out some system whereby middlemen can be done away with, then the producer will get better prices. At present, the people that handle the eggs from the time they leave the producer until they get to the consumer, receive a large share of the profits. The middlemen are also partly to blame for the bad eggs. Eggs kept in a store where the temperature is quite high are fresh for only a very short time.

The marketing of poultry ought to be spread over the whole twelve months to keep up good prices all the year round. At some seasons so much poultry is rushed on the market that the prices become very low. Poultry should be marketed at the right age to get best prices. Do not keep your chickens until they are old hens. In the spring they are worth 22 cents a pound, and at this season old hens only bring about 5 cents a pound.

"What we need in the poultry business is honesty, co-operation, and standardization, and, if necessary, legislation to enforce it," said Mr. Elford, in conclusion.

GARDEN & ORCHARD.

Topical Fruit Notes.

Another milestone is passed, and we are off to a good start in the race of 1912. With a good year behind us, we are in excellent condition, and there are many signs to indicate that the present year will be a successful one for the fruit-growers of Ontario.

At present the orchards are in excellent condition; the trees look fresh and healthy, and there is evidence, from the formation of fruit buds, that the next crop will be up to the average. This is not saying very much, but it means that we are at least hopeful, and willing to lay heavy stakes against the weather obstacles of 1912. Fruit-growing is at best very much of a gamble, and to have something at stake adds vim to the race.

The nurserymen are flooded with orders. In some lines, such as Elberta and St. John peaches, many of them are already sold out, and have to refuse to take further orders. This means heavy planting and rush work for the growers in the spring. It also means heavy shipments for the nurserymen, and great temptation for them to send out inferior stock, which in slacker years would be culled out and burned. The grower should get after his nurseryman early, and should see to it that he gets good healthy stock. Buy from a reliable nurseryman, and you will be most likely to get your stock true to name; but in a rush season use greater care, for the temptation is greater. Rather get a small, healthy tree that will grow than a big, shrivelled one that is dead before it is planted. This is particularly applicable to peaches and sweet cherries.

Does this heavy planting mean overproduction at some near time in the future? The district from Hamilton to Niagara Falls is becoming nearly one continuous orchard, but there are thousands of acres available for planting yet. Norfolk, Essex, Lambton claim to have large areas suitable for growing tender fruits. Nearly the whole of Old Ontario can grow apples. And all these districts are planting with a vengeance. A fruit boom is certainly around us. Now, overproduction is evidenced by shortage of markets and a consequent drop in prices. We have known this before, and may know it again, but it is not so probable as in the past. Why?

First.—Our markets are larger, and are increasing at a rapid rate annually, due to our wonderful growth in population; they are wider, due to increased facilities of distribution; they are coming to extend over a longer season, due to improvements and extension of cold-storage facilities, to which we hope soon to see added the pre-cooling of fruit.

Secondly.—Our fruit is being given better attention in growing and in preparing for market, due to cumulative teaching of Government officials and the more progressive growers; due to the efforts of co-operative societies, and also due in a great extent to the natural demands of the markets. Good fruit, put up in good style, will undoubtedly increase the consumption.

Thirdly.—and of most importance to growers in the Niagara Peninsula, at least, the wonderful impetus given to jam manufacturing in the last few years, has resulted in the erection of numerous jam factories, whose demands at present seem insatiable, especially for certain kinds of fruit. We have apparently taken the contagion from England and gone mad over jams and marmalade. And not a bad form of madness, either for the consumer or the producer, so long as the jam manufacturers are required by law to put up pure jams.

For these reasons, especially, I think the fruit industry is safe for a few years to come. When the vast areas of new orchards come into bearing, it will be time for us to consider the

changed conditions. It would show a poor spirit of sportsmanship to shake hands with the devil so early in the race. * * *

W. R. D.

A special meeting of the Niagara District Fruit-growers' Association was called for December 20th at St. Catharines, and was well attended by representative growers from the whole district. The main topic of discussion was "Little Peach," that insidious disease of peach trees which has already caused the district serious loss, and bids fair to remain a menace of considerable proportion, unless the present system of inspection is adhered to and probably more rigorously enforced in some of the townships. All the growers present were convinced that drastic measures must be maintained to get the disease under control, and, if possible, to wipe it out of the peninsula altogether. The trend of opinion was that the inspection work should be thoroughly organized and placed under the charge of an officer of marked administrative ability. At the same time, a scientific investigation should be conducted, inquiring into the cause and nature of the disease. Prof. Caesar was suggested as the best man available for the position, and there seems not the least doubt but that the fruit-growers would do a very good stroke of business for themselves and the Province if they could secure Prof. Caesar's services to begin a systematic study of the diseases affecting fruit trees. Why not attach such a position to the Jordan Experimental Farm? We are certainly woefully lacking in such investigators at present, and but for the officer named would be unable to report the least progress.

Wentworth Co., Ont.

Tolman Sweet Stocks for Spies and Kings.

In apple-growing, as in almost everything else, there are many ideas urged that look better in prospect than they pan out in practice. As a rule, it is best for the amateur not to rely upon plausible theories which do not accord with common practice. One should be sure that he understands all the ins and outs of a question before staking much upon his own or anyone else's judgment. There is nothing like discussion to expose the weaknesses of inexpedient plans, to bring out in bold relief the merits of a good idea, and to make for sane decision.

The planting of Tolman Sweet apple trees as stocks upon which to top-graft Spies and other varieties, is a suggestion which has merits and demerits. These are practically discussed by A. McNeill, Chief of the Dominion Fruit Division, in a letter to "The Farmer's Advocate," from which we quote:

"I have my doubts about the practicability of setting out an orchard of Tolman Sweets and grafting to Spies. The advantages are these: The Tolman Sweet crotch is much stronger and in better form than the Spy crotch. The process of grafting has a tendency to throw the scions into bearing somewhat sooner than the original growth. A third advantage is that you are enabled to select your scions from the more prolific trees. To counterbalance these advantages is the difficulty and uncertainty of getting the top-grafting done properly, and the almost absolute certainty of having a great many poor trees as the result of imperfect top-grafting, and as the result of the grafts not taking, and the original Tolman Sweet developing.

Again, the early-bearing qualities of the top-grafts may be offset by skillful pruning and management in the original tree. One could, too, if he gave his order two years ahead, offset the advantages of selecting scions from good stock. If he would select these scions and give them to a trustworthy nurseryman to use for his particular stock, he could then have his selected stock on their own root. The bad crotch of the Northern Spy can be improved, if not altogether corrected, by putting a bolt through the base of the limbs just before the tree comes into bearing. Probably 25 per cent., if not more, of all Spy trees go bad at the crotch. Under the circumstances, I have always recommended to the ordinary farmer not to depend upon top-grafting, but to plant the original trees. There is no doubt, however that, for the skilled fruitman and the careful fruitman, the top-grafting would in all probability be the better.

"As you will see, there is much to be said on both sides of the question. Personally, I am planting the original trees in every case, as I cannot feel sure that I will get the top-grafting done properly, and I know I will not be able to do it myself, or even give it daily personal supervision.

"There is an advantage in using Tolman Sweets as a stock for Kings that does not apply in the case of the Spy. The Spy has a splendid root system itself, but the King makes rather a weakly growth as a nursery tree, and really has not an extra good root-growth until it is an aged tree. By using the Tolman Sweet you get a good root system, and if the work is done carefully and promptly, you also get a good head."

Orchards of Five or Ten Acres.

Editor "The Farmer's Advocate":

I quite agree with you that there is likely to be a heavy planting of fruit trees in the coming season, and, as the apple thrives over such a large extent of country, that fruit will, of course, receive chief attention. This does not apply to Essex County, particularly along the lake shore, where I am located, as no apples are grown here for commercial purposes, and it is not likely that there will be many planted in any part of this county.

In reply to your second question, I would say that I consider five to ten acres of commercial apple orchard would be about right for the average one-hundred-acre farm, where properly handled. No doubt many could handle much more to advantage, but, with the heavy plantings being made in all apple-growing sections on the continent, I question the advisability of recommending a larger acreage. There is no doubt but that, with the rapid filling up of the Western Provinces, and with increasing prosperity throughout that immense territory, great quantities of apples will be used there, and in increasing quantities from year to year, but, in my estimation, Ontario will not continue to supply that market to the same extent that she is doing at the present time. It was my privilege to spend several weeks during last August and September in the fruit-growing district of British Columbia, and, as they are making very heavy plantings throughout all the fruit-growing districts of that Province, and their trees grow very rapidly and come into bearing very early, bearing very heavy crops in a few years, there will be immense quantities of apples exported from British Columbia, whereas at present they have not nearly enough to supply their own market. As the Western Prairie Provinces are their natural markets, undoubtedly they will supply a great proportion of their requirements.

For soil, I would recommend a sandy loam on a clay subsoil, and next to this a porous clay loam. Either one I would consider ideal land for apples, but fairly good results can be obtained on any soil that will grow potatoes or other root crops. It is more important, however, to have land that is more or less rolling, or with considerable elevation for apple cultivation, but any soil that will retain water on the surface, for say twenty-four hours after a storm, should be underdrained. Drains should be placed half way between the rows of trees, and there will be no danger that the drains will be choked by the roots of the trees, except, possibly, on springy land, where there would be water continually during the growing season.

If the land is in good condition to produce a crop of wheat or potatoes, it will do for apples; if not, it should be seeded to clover, and brought into good condition before planting, as it is important to get good growth from the start. While growing fruit on clay land, a number of years ago, I used a subsoil plow, loosening up the soil to a depth of five or six inches in the bottom of the furrows made with the ordinary plow, but this soil should never be brought to the surface. I think this is a decided advantage where the subsoil is inclined to be solid, as it usually is where the land is of a clayey nature. The root system is established at a better depth, and trees and plants resist drouth and other trying weather conditions much better. This also adds considerably to the drainage. I am not partial to wind-breaks for an apple orchard, but do consider some protection from the prevailing winds an advantage.

To my mind, the commercial apple orchard should not contain more than five or six varieties, and less might be better. It is an advantage, however, to have several varieties, as it gives a longer season for harvesting, which is the chief labor in connection with this crop. There are many good varieties that thrive remarkably well in some localities, and not so well in others. In my opinion, those best adapted for universal planting would be Duchess, Hubbardston, Baldwin, Stark and Spy, and, where it succeeds, McIntosh Red should be included.

A great objection to the Spy is that it is late coming into bearing, but this could be largely overcome if the growers would plant Tolman Sweet's or Russets, and, when a few years old, top-graft to Spy from good-bearing trees. By running the rows of varieties the long way of the field, there need not be more than three or four rows of any one variety; and, when there is not, there will not be any difficulty about pollenization.

I much prefer two-year-old trees in apples and other seed fruits, and would certainly advise dealing directly with a reliable nursery. If intending planters would place their orders early in the season with some reliable nurseryman, we would hear much less complaint about stock being untrue to name and of poor quality. I much prefer to have my trees delivered in the fall, heeling them in proper shape, then they can be planted as

soon as the weather and the land is suitable in the spring, and a much better stand secured. Where there is danger of mice attacking them, make a wall of wide boards, placed on edge, about the plot where the trees are heeled.

I would by all means plant trees at right angles. I think a good distance to place permanent trees would be 35 x 40, and between the trees spaced at 40 feet fillers could be used. The Duchess is particularly well adapted for this purpose, as it comes into bearing so early, and bears heavily, and does not make so large a tree. The Hubbardston is also a good filler, being an early and abundant bearer. Where it succeeds, the Wealthy also makes a good filler.

By spacing the rows at this distance, and growing roots and vegetable crops for a few years in the thirty-five-foot space, there is little waste of land while the trees are growing. When fillers are used both ways in the rows, they begin to crowd too early, and before they have attained sufficient size to have produced fruit in good paying quantities. I do not like using other varieties of fruits as fillers in an apple orchard, as the different types of fruit require different treatment.

J. L. HILBORN.
Essex Co., Ont.

Select Only Varieties of High Quality.

Prof. J. W. Crow, of the O. A. C., Guelph, in replying to our questions re orcharding, lays great stress on the quality of the fruit, and upon the slope of the land, and the need for great care in orcharding. His letter follows:

This particular locality is not an apple-growing district, and is not likely to become so. I know of two or three cases only in which plantings are being made. Ten acres is the profitable limit of size.

I notice that you use the adjective "enterprising," and I may say that I wish to distinguish very carefully between the "enterprising" farmer and the "average" farmer. I have come to the conclusion that the "average" farmer has no use for an apple orchard of any size as a commercial proposition. An "enterprising" farmer, who can and will give the necessary attention to the orchard, can handle anywhere from five to ten acres. My reason for making this statement is that, in my opinion, the apple industry is becoming to a large extent a specialized business. I believe, of course, that an orchard has a place on a good farm, under a good system of management, but, unless the orchard receives proper care at the proper time, the owner might better devote his attention to something else.

Personally, I believe that the character of the surface soil is not a matter of great importance, because it can be put in proper condition if rightly handled. I am convinced, however, that the character of the subsoil is a matter of decided importance. All tree fruits require thorough underdrainage. If the natural subsoil permits of this, it would be, I believe, an ideal condition. Almost the only requirement one could specify for the surface soil itself is that it should not be too difficult to work. If the underdrainage is not good, artificial underdrains should be used.

The site should be sufficiently elevated, so that all frost pockets should be avoided. In level districts there is, of course, no choice in this matter, but it is safe to say that hollows or low spots, from which there is no possibility of air-drainage, are almost certainly to be avoided.

I should like to put in a word regarding aspect or slope of land. You do not ask regarding this, but I believe it is an important matter. I am firmly convinced that the best slope for an orchard, where there is a choice in the matter, is a northerly one. I believe there is much more frost injury at blossoming time on southerly slopes than on northerly ones, and I believe that the difference is sufficient to establish the general rule that south-west, south and south-east slopes are to be avoided, in the order named. The best slope is northerly, provided adequate wind protection can be had. The next best slope is north-easterly and usually a north-easterly slope is better protected from the sweep of strong winds than any other. These remarks concerning slope of land apply to all that part of Ontario lying outside the immediate influence of the large bodies of water.

Land should be as well prepared for fruit trees as for a crop of corn or roots. If the land is not in good agricultural condition, I should certainly advise delaying planting for one year, or longer, in order to properly fit the ground.

I would select varieties from the following list. They are placed here in order of ripening, but each individual will have to decide for himself regarding the growing of summer and early fall fruits. Winter varieties are considered standard. My own opinion is that fall and early winter sorts pay better, on an average, than the standard winter varieties, provided they are given

proper care. The late summer varieties require, of course, careful handling, but there is no lack of a market for first-class apples of this season. The ripening period of apples should be arranged to suit as nearly as possible other work on the farm. Unless help is abundant, it is well to distribute the picking season over a lengthened time, rather than to attempt harvesting a large acreage of one variety within a few days. The list given contains nine varieties. If one wishes to concentrate on winter apples, no better selection can be made than Greening, Baldwin and Spy. On an average, the most profitable winter apple is Baldwin, but it is being very heavily planted at the present time, and is, moreover, an apple of only ordinary quality. Its commercial value lies in its great productiveness, in its good handling qualities, and its attractive color. It is not an apple which, as ordinarily grown, would appeal to a fancy trade, and I am of the opinion that the best money to be made in the apple business is in the growing of better class varieties than Baldwin, and putting these up in such a way as to make them sought for by a high-class trade. In fall apples, Alexander, Wealthy and McIntosh are all being planted. Alexander is early, and sells on account of its large size and handsome color, but it is only a second-rate cooking apple, at best. Wealthy is a good cooker and a good dessert apple, but unless extremely well grown, cannot be packed as a fancy variety. I may be wrong in this matter, but am glad to advance this statement concerning the most profitable varieties, for the sake of seeing it discussed in your columns. My own choice would be Gravenstein, Snow, McIntosh and Northern Spy, with Wagener as a filler. These are all high-class dessert varieties. Spy is a tardy bearer, but I believe this could be overcome with proper handling. McIntosh is only a moderate bearer, although it bears annually. The other varieties are all decidedly productive.

I expect, within a very few years, to see ordinary Baldwins a drug on the market, and the same may be said of a number of other varieties which are extensively grown in this Province at the present time, for instance, Stark and Ben Davis. Spy and McIntosh are both largely or entirely self-sterile. Snow is an excellent pollinizer for McIntosh, and either Baldwin or Greening is satisfactory when planted with Northern Spy.

If I were selecting for my own purposes, I would choose strong, one-year-old trees, at least four feet high from the ground. I know I am at variance with a large number of planters and with the nursery firms on this matter, but I am persuaded that an intelligent planter taking trees of this age and quality can make of them better trees than can be made from the two, three or four-year-old stock ordinarily supplied by nurseries. A two-year-old, unbranched whip would not be objectionable, provided it has a good strong root, but I believe that a tree which makes four feet the first year in the nursery row is a better tree.

I should certainly advise dealing direct with responsible nursery firms. I should advise any person investing in any quantity of stock to see the same before purchasing, so that he may specify precisely what he wants, and be sure of getting the same.

With regard to ordering early, some of our nurseries have been sold out of certain varieties a year ahead, and one would require to place an order at least a year, or sometimes two years, in advance.

Winter apples should be set not closer than 40 x 40 feet; in the southern counties, 45 x 45 is not too far; fall varieties, 35 x 35 feet, on an average. Duchess and Wealthy could go as close as 30 x 30, or 25 x 25, but the latter distance would give rather too much crowding.

I should plant permanent varieties in solid rows, running them, if possible, north and south. Two, three or four rows of each variety would be placed together. Those which blossom close together would be placed in proximity to each other for the sake of procuring adequate inter-pollination. I should certainly advise against planting any variety in solid blocks. Northern Spy is notoriously a poor cropper when planted in this fashion, and the best testimony on the matter is that any variety is benefited by abundant inter-pollination. My reason for running the varieties in rows north and south is that spraying is done mostly from east or west. This arrangement gives the best possible opportunity for spraying each variety at the proper time.

With regard to the use of fillers, I may say that I should grow as fillers whatever fruits could be successfully marketed. In apples, Duchess, Wealthy and Wagener make the most desirable varieties for use as fillers. Wagener is a high-class winter dessert variety which is not sufficiently known, and should be much more widely planted. Peaches, sour cherries, plums or dwarf pears can be used as fillers. If I could afford it, I should, however, prefer planting these in orchards by themselves, rather than using them as

fillers in a permanent apple orchard; but, of course, the necessities of the individual case would determine this matter.

Pollenizing Spies—Scions—Tender Fruits.

Editor "The Farmer's Advocate":

My curiosity was aroused some years ago by observing the difference in pollenization of apple trees. I found, by observation, that some varieties were better for having been grown under the influence of other varieties. I found that apples may bloom well and produce no fruit, due to the fact, I was told, that the blossoms are imperfectly pollenized. This aroused my curiosity, and a study of the matter has directed my planting and handling young fruit trees different from some people's ideas.

I found Tolman Sweets, planted near Spies, to be beneficial to the Spies. I want some person to show me a Spy tree next to a Tolman that is not a good cropper. The only fault is it does not improve the color. I have seen a Spy a dark red from the influence of the Wagener. I have also seen Twenty-ounce Pippins influenced by the color of the King. The Ben Davis, a poor pollenizer, will be influenced in color by those varieties coming in contact with it. The questions I wish to ask are: Four years ago I planted about seven hundred apple trees. I placed them so that the varieties would be mixed, placing a Mann with a Spy, a Baldwin with an Ontario, and grafted Steel Red on most all Spy trees. This is a good pollenizer, but blooms much earlier than the Spy. Of last year's planting of four hundred trees, one-half Spies, I intend to graft one limb on each tree with Tolman Sweet; also our planting of seven hundred trees of this year, nearly all Spies, with the exception of fillers.

Are we right in our idea of pollenization? Is the bearing of fruit affected by using buds or grafts taken from unbearing trees? Do you think we are too far north to grow cherries and peaches? I might say we are two miles from Lake Huron. I heard an old settler state that he never saw fruit destroyed by frost here in spring, while, one mile farther from the lake it has been destroyed. This rule works the same in the fall—the farther you get from the lake, the more frost you get. It is very seldom our corn and potatoes are frozen before the first of November, and we get our share of moisture, which is a frost preventive. We have over twenty varieties of grapes all maturing well. Several peach orchards are being planted, one of 2,000 trees. Several more will be planted out this spring, one of 1,000 trees. This belt of land will become valuable for fruit-growers are just beginning to realize its advantages. The flavor of our Spies has been tested by the writer with that of Spies of other fruit districts, including the Western States and British Columbia, without finding a rival. When land here advances from fifty and seventy-five to two and three hundred dollars per acre, farmers will turn their attention to fruit-growing. Several farms have changed hands, being sold to horti-

RENEWAL OFFER EXTENDED!

Thousands of our subscribers have taken advantage of this Special Renewal Offer, but we want to see a great many more take advantage of it, and to this end are making the offer good till JANUARY 31st.

The offer is: For one new yearly subscription and your own renewal for 12 months we will accept \$2.00. For each new name in addition to the first one, we will accept from you \$1.00, the balance of 50c. being retained by you as commission. Or, if preferred, you may send in the new names, accompanied by the full subscription price of \$1.50 each (United States subscriptions \$2.50 per year) and have your choice of some of our splendid premiums.

culturists who are preparing to plant fruit trees in the spring.

GEO LAITHWAITE.

Huron Co., Ont.

Your observations in regard to the effect of the pollen of one variety of apple on the flowers of another are confirmed by others. Some varieties of apples are self-fertile, and do not require the pollen from other varieties to insure a good crop of fruit, but even with these the crop is probably better where several varieties are grown near one another. In the case of Northern Spy, McIntosh and other varieties of apples which are more or less self-sterile, at least in some parts of Canada, it is very important to have other varieties near which bloom at the same time, for, although bees will doubtless carry the pollen several miles (and it is important to have bees to insure quick pollination in unsettled weather), it is very desirable to have the different varieties comparatively close. Unfortunately, Northern Spy is a very late bloomer, and there are few good commercial varieties blooming at the same time to pollenize it. Tolman is one of the most reliable, but, as there is not a great demand for sweet apples, one cannot plant large quantities of this variety. I believe your plan to be a good one, namely, of grafting a

limb on each Northern Spy tree to Tolman Sweet, Cranberry Pippin, Westfield-Seek-no-Further, and Grimes' Golden, bloom at the same time as Northern Spy, also. American Golden Russet is usually a light cropper, but I have seen good crops where planted among other trees; the blooming season of it overlaps Northern Spy.

While it is more reasonable to take wood from bearing, rather than from young trees, for grafting, there is not sufficient evidence yet to show that there is a marked advantage in using wood from bearing trees, so far as time of fruiting is concerned, but there is a great advantage in using scions from bearing wood, in that one can take scions from trees which bear good crops of highly-colored apples, as there is a great difference in the yield of individual trees of the same variety.

Sour cherries should succeed well near Goderich, but we should advise planting peaches with caution far from the lake.

W. T. MACOUN,
Dominion Horticulturist.

THE FARM BULLETIN.

Thousands of tons of potatoes from Ireland and Scotland have been imported to supply the shortage of last season's United States crop. They come in burlap sacks containing 2-4-5 bushels each, and pay a duty of 25 cents per bushel.

To Prevent Lantern Glass Breaking.

Editor "The Farmer's Advocate":

In the December 14th issue of "The Farmer's Advocate," a subscriber asks about his lantern-glass breaking. If you would kindly publish this letter, I am sure it would be a benefit to a good many readers. Lantern-glasses are generally broken by the intense heat being held in through improper ventilation. The heat from the blaze rising in the glass causes a circulation of air to pass upwards, entering through the perforated piece at the bottom, and passing out at the top of the lantern. By rimming out a row or two of the holes a little around the outside of the perforated base on which the glass rests, and also a row or two at the top of the lantern, just above the glass, it will allow a greater circulation of air to pass through the glass, which will keep it from becoming too warm. A little judgment must be used in drilling out the holes, for too much air circulation will cause the lantern to blow out in a wind.

W. J. LYCETT.

Durham Co., Ont.

Profit Is Not All.

Editor "The Farmer's Advocate":

I am a subscriber of your admirable paper, and gather many valuable hints from it re farming, but it strikes me at times that your statements are rather "couleur de rose," on the condition of the farmer and his family.

To come to business, where, may I ask you, is the profit to the farmer on feeding hogs, to be sold at the present price of \$5.75 per hundred on the hoof. What feed can he use to put a pound of meat on a hog's ribs for 5¢ cents, if feed is to be handled by the hired man?

In the matter of sweet corn for the canning factory, where is the profit, at \$7.00 per ton, after deducting the price for the preparation of the land, looking after the crop, pickling, and teaming the produce to the factory?

With regard to dairying, what can you say does the average cow yield in profit, when you have to feed her from five to six months under cover?

Of course, we have big profits in hens when eggs are 35 cents a dozen, but that is when the hens do not lay eggs.

From a business man's standpoint, taking the principal invested in 100 acres of good land, with barns and dwelling, which would usually be seven or eight thousand dollars, a hardworking farmer, with his horses, hired man, or men, his machinery or his stock in trade, should have a much larger percentage of profit than he does, for in nine cases out of ten he does not make more than decent wages, to say nothing of the profit he should make on the work done by his machinery, horses and men, besides the dividend that a business man would expect on his capital invested.

It galls me, sir, to read of the canner's and meat-packer's profits on watered stock, when I think of the drudgery the farmer has to submit to to fill the coffers of these gentlemen; but nevertheless, the stupidity of my brother farmer prevents him from taking any steps to make himself independent of the corporations who would make him work for less than nothing.

Does the farmer ever stop to think what it costs him to produce his crop, that he could get six or seven per cent. on the capital he has invested in his farm, which would amount, in the majority of cases, to four or five hundred dollars a year, and does he realize that, in comparison



Macdonald College Judging Team.

The first team to represent this College at the International Stock-judging Competition at Chicago, succeeding in winning the highest honors in competition with nine other colleges, including Manitoba and Ontario. Prof. Barton, trainer of the team, stands at the right.

to men in other businesses, he has a pretty small allowance for his own and his family's year's work?

Would the average business man, with a similar amount invested, working short hours, be satisfied with the same returns, and would that same business man be willing to skimp himself and his family as the farmer does, and do without the conveniences that he enjoys in his city home.

It takes just as much ability to run a hundred acre farm as it does to run the average business, and I say, Mr. Editor, that, in the face of the bright pictures you paint, that there is something radically wrong, and that the farmer's life and remuneration is far from what it should be in comparison to that of his brother in the city.

Hastings Co., Ont.

ROBERT FRASER.

[Note.—Just such questions as those asked we are seeking to answer at "Weldwood," but it will take the average outcome of a few years' work to arrive at reasonably satisfactory replies, although results, as annually reported, should be helpful so far as they go. Meantime, we must ask our friend not to attribute to us statements that we do not make. We do not recall having stated that, with feed at present prices, the average hired man could make for his employer profit feeding hogs at \$5.75 per cwt., though we do believe that if one arranges to market his pork at some other period than October, November or December, he has a fair chance of coming out all right on the sum total of the year's operations. Of course, the average farmer works for a smaller wage than the average business man, and, of course, he has grounds for demanding economic justice; but, all the same, farming to-day, while promising but moderate profits, offers the sanest, most satisfying occupation and about the surest livelihood of any business we know. This is about all we have claimed.—Editor.]

On Cottonseed and Linseed Meal.

Editor "The Farmer's Advocate":

In your issue of Dec. 21st, in reply to A. E. R., you give an excellent answer, on the whole, in regard to the query, "Cottonseed vs. Oil Meal for Dairy Cows," but in one particular rather misleading. I refer to what you said about "cotton seed making more milk, but no more butter-fat than oil meal." This finding is contrary to all the experiment stations on both sides of the Atlantic, I believe, and it would have been interesting if you could have given us the details of the experiment in question. If it were possible to feed fat into milk, I think that some of the Dairy School bulletins would have put it on record, either by feeding oil meal or anything else. If you know of any, would you kindly give a record of the same in your next issue.

I think that, provided a man has silage or roots, there is a great advantage in using cottonseed over oil meal, at present market prices. Our local price for oil meal is \$43 per ton, and for cottonseed \$33 per ton—that is for choice No. 1, going 41 to 44 per cent. of protein. In the O. A. C. Bulletin 143 we find it stated that there is in oil meal 28.2 pounds of protein; in cottonseed, 37.2 pounds of protein. Here is a saving of 9 pounds of digestible protein in each cwt., or 180 pounds more in each ton.

So much for the feeding value. Now for the manurial value, after the cow is finished with it, and here is where cottonseed wins easily; indeed, it is a case of cottonseed first, and the rest nowhere. In one ton of cottonseed meal there are 135 pounds nitrogen, 61 pounds phosphoric acid, 36 pounds potash—a total of 232 pounds, worth \$25.95. In one ton of linseed meal there are 115 pounds nitrogen, 36 pounds phosphoric acid, 38 pounds potash—a total of 189 pounds, worth \$21.65. I reckon nitrogen at 20 cents per pound, phosphoric acid at 6 cents, and potash at 5 cents, and have deducted one-fifth for maintenance (desh. milk, etc.). One gets 180 pounds more protein in cottonseed, worth, at 75 cents per pound (that is the cost in oil meal) \$13.50; extra manure value, \$4.30; cost is \$10 less per ton—a total of \$27.80 saving in favor of cottonseed meal.

I was careful to say at "present market prices," and if fed with "silage or roots."

York Co., Ont.

CHAS. W. GANE.

[Note.—It was not intended that the answer referred to should convey any misleading ideas. The percentage butter-fat is generally understood to remain the same, regardless of feed, though small differences in fat content may occur following a change of feed. These differences are not permanent. The experiment referred to was carried on by Waters and Hess at the Pennsylvania Experiment Station, and is recorded in Henry's "Feeds and Feeding." Nine cows were used, and when fed linseed meal, 15.1 pounds of milk containing .78 pounds fat was produced daily per cow. These same cows, with cottonseed taking the place of the linseed, produced 16.2 pounds of milk containing .77 pounds of fat per cow daily. One experiment does not prove anything, but this was cited as one bit of evidence in favor of

the linseed meal, and not to show that the percentage of butter-fat may be increased or decreased in milk. There is at the present time a wider difference than usual in the price of the two meals, due largely to the demand for linseed meal, which proves that it stands in favor as a safe and wholesome feed when moderately used for almost any class of stock. In figuring the values for food and manure, our correspondent has reckoned the extra 180 pounds protein contained in cottonseed meal twice. This would make some difference, but, on the whole, for feeding over a length of time, considering wholesomeness, digestibility, etc., the linseed would likely prove preferable.—Editor.]

January Short Courses in Seed and Stock Judging.

The Institute Branch of the Ontario Department of Agriculture conducted ten Short Courses in seed and stock-judging during December, and arrangements have been completed for courses to be held in January as follows:

Table listing locations and dates for January Short Courses in Seed and Stock Judging, including Fenelon Falls, Omenee, Newmarket, Essex, Kent Bridge, Orono, Wooler, Walkerton, Woodville, Grand Valley, Thornton, New Lowell, Chatsworth, Brigden, Lakefield, Lansdowne, Bolton, Hagersville, Uxbridge, Norwood, and Metcalfe.

Arrangements will soon be made for a number to be held in the month of February.

At those places where a suitable building cannot be secured, the Department furnishes tents 30 x 50 feet, or 40 x 60 feet, to be used as judging arenas. A representative of the Department arranges with leading stockmen in the locality to furnish representative classes of three or four kinds of stock. These are used by specially qualified judges sent out by the Department in instructing those in attendance, as to the desirable characteristics of the classes under consideration. The farmers and their sons are given an opportunity of placing the animals in accordance with their judgment, then the lecturer in charge gives his reasons for the placing which he makes. In this manner the farmers of the Province are being instructed in the judging of live stock in a way which cannot but result in greater uniformity and excellence of quality in our live stock. No line of work undertaken by this Department in recent years has appealed more favorably to the "hard-headed, practical farmers" of Ontario.

Among the instructors engaged for this work are such well-known men as John Bright, of Myrtle; J. E. Brethour, of Burford; John Gardhouse, of Highfield; Col. McEwen, of Byron; C. M. MacRae and T. G. Raynor, of the Dominion Department of Agriculture; R. Stevens, of Lancaster; C. F. Bailey, of the Provincial Department of Agriculture.

GEO. A. PUTNAM.

Plank Frame on Low Wall.

Editor "The Farmer's Advocate":

In "The Farmer's Advocate" of December 21st I see "W. M. W." inquiring about a plank-frame barn. I might say that, having been burned out in April last, and having no timber handy, I decided to build plank-frame. It is 36 x 80 feet, built on as low a wall as possible; it is about 6 inches high at the south end, and about 2 feet at the north, owing to the unevenness of the ground. In regard to doors, there are double doors at the south end, where the cow stable is, and a pair at each side 30 feet from the south end, and a pair going out of horse stable in on barn floor. There is one going out of alley in front of horses on to barn floor. The barn doors are on rollers, and work well. The doors mentioned above are all on hinges.

I would like to know what the carpenters meant when they said they were not satisfactory without basement, on account of doors. S. A. Dundas Co., Ont.

Few Writers Discuss Their Mistakes.

A Canadian newspaper recently quoted a Canadian humorist who has marketed his literary product abroad as saying that we have not yet learned to laugh at our own foibles—we take ourselves too seriously, in other words. Corroboration of this charge is to hand in the somewhat meagre response in our recent essay competition, "My Most Profitable Mistake." It is evident that we still have few readers willing to dilate cheerfully upon their own errors, although, as one competitor confessed, he could write freely enough of his neighbors'. But this would not do. The neighbors would not like it, and the essayist would reap no salutary effect of the exercise. It is a fine thing to reach that point of candor where one can laugh at himself freely and impersonally. It denotes a sanity of mind. Touchiness is really a form of insanity. A sense of humor is closely akin to, if not an essential part of common sense. As time goes on, we trust Canadians will come to laugh at themselves, and more, and more freely.

Of the contestants in this competition, only one or two really got down to "profitable mistakes"; that is, mistakes through which valuable lessons were learned, which enabled them to improve on past practice and win where they had failed before. Some told of things they did which turned out better than they seemed likely at one stage to do, but this was hardly the thing. Some told of experiences from which they drew half a dozen inferences, but which failed to enforce strongly any one point. One competitor pointed a moral lesson in respect to prompt action, but the mistake made was hardly a profitable one in the sense in which "profitable" was intended to be understood.

The prizewinners are: 1, Jas. McKenzie, Bruce Co.; 2, Geo. V. Anderson, Norfolk Co.; 3, Thos. Kerr, Prescott Co.

MY MOST PROFITABLE MISTAKE.

First-prize Essay.

In the autumn of the year nineteen hundred and seven, I had some twenty-five pigs feeding to finish. My sow was not pregnant at this time, and I was short of hog feed, so I came to the conclusion that I would not keep her; although she was a good type of sow for bacon purposes. One of my neighbors, who is something of a dealer, asked me to buy three calves he had raised that summer. I told him that I had a sow to sell, so he thought for a while, then said, my brother wants to get a sow of that kind, so I will just trade with you, and sell him the sow.

I went back to the edge of his bush where the calves were. They were very small and thin, but he said they were from extra good cows, and that they were very young; besides they had such poor pasture. Well, I thought they don't look much like our own; but I had got the notion of selling my sow; and starved though the calves looked, I decided to take them home and be rid of the sow, as she would eat considerable grain by spring, and I had several cattle fattening. I thought I would trade even deal. I took the calves home; they got a run on good grass before going into the stable, but they seemed to keep by themselves, and in some far corner where there was very little for them to eat and drink. Stabbling time came, but I could see no improvement in them. They showed the wedge shape from almost every point you would view them. My stable that winter was well filled, and being ashamed of them standing beside my own, I decided to put them in a barn on an adjoining farm, where I kept nothing but sheep. This place was warm, having a stone wall on three sides, and the front well boarded. Here I fed and attended to them very regularly, but the feed seemed to have no value to them. I began to see my mistake. These calves had been starved when young; they had no constitution, and more than ordinary feeding was necessary, but I decided to give them a fair chance, and if they died I would say nothing.

The long days in March came, when the sun is so bright, and two of them wilted beneath its beautiful rays. I had one left; he lived to go out on the grass, but was as poor as wood. I left him in the bush till fall, then stabled him a while, and sold him for twenty-eight dollars. In the spring of that year, sows such as I had traded, if in pig, sold for thirty-five dollars. If I had kept the sow and bought a little feed, I could have had her spring litter marketed in the fall, and the sow and her fall litter to the good. In this case, suppose I had bought feed, I would have been one hundred dollars ahead. This fall, pigs were selling very cheap, but I did not try dealing them off. I am feeding them all, and I believe it pays me. This is my own experience, and I hope it will help someone else who may read it. Bruce Co., Ont. JAMES MacKENZIE.

THE CANADIAN BANK OF COMMERCE

ESTABLISHED 1867

Capital paid-up, \$11,000,000.
Rest, \$9,000,000.

The Canadian Bank of Commerce extends to farmers every facility for the transaction of their banking business, including the discount or collection of sales notes. Blank sales notes are supplied free of charge on application.

Accounts may be opened at any branch of The Canadian Bank of Commerce to be operated by mail, and will receive the same careful attention as is given to all other departments of the Bank's business. Money may be deposited or withdrawn in this way as satisfactorily as by a personal visit to the Bank.

MARKETS.

Toronto.

LIVE STOCK.

At West Toronto, on Monday, January 1st, receipts of live stock numbered 52 cars, comprising 1,028 cattle, 82 hogs, 472 sheep and lambs, 26 calves, 31 horses; quality of cattle medium; trade brisk, with prices 25c. to 40c. per cwt. higher; no cattle bought for export. Butchers' best quality, \$6.25 to \$6.65; loads of good, \$5.90 to \$6.25; medium, \$5.50 to \$5.85; common, \$5 to \$5.50; cows, \$3 to \$5.25; bulls, \$5 to \$5.50; calves, \$4 to \$8. Sheep, \$3.50 to \$3.85; lambs, \$6 to \$6.65. Hogs, \$6.20 fed and watered at market.

REVIEW OF LAST WEEK'S MARKETS

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

	City.	Union.	Total.
Cars	50	67	117
Cattle	779	590	1,369
Hogs	484	2,138	2,622
Sheep	593	1,642	2,235
Calves	39	2	41
Horses	—	60	60

The total receipts at the two yards for the corresponding week of 1910 were as follows:

	City.	Union.	Total.
Cars	46	99	145
Cattle	678	1,602	2,280
Hogs	805	700	1,505
Sheep	202	150	352
Calves	20	18	38
Horses	—	35	35

The combined receipts of live stock at the two markets show a decrease of 28 carloads, 911 cattle; but an increase of 1,117 hogs, 1,883 sheep and lambs, 3 calves, and 25 horses, in comparison with the same week of 1910.

On Christmas week there has in the past always been light receipts, and it will be seen by the above figures that this season has not been an exception to the rule, only prices were higher for stock than on any previous holiday week in our past fourteen years on the Toronto markets, especially for cattle of good quality. Trade in all classes of live stock was fairly active, except export cattle, none being bought for shipment abroad.

Butchers'.—The best quality of cattle were 15c. to 25c. per cwt. higher than for the previous week, but common cattle were not so much wanted. Prime picked cattle sold up to \$6.50; that is, or steers 1,100 to 1,150 lbs. each; loads of good sold from \$5.75 to \$6.25; medium, \$5.40 to \$5.65; common to medium, \$5 to \$5.30; inferior, light steers and heifers, sold at \$4.25 to \$4.50.

Milkers and Springers.—Only a few common and medium quality cows were on sale, and \$60 was the highest price we heard of being paid.

Veal Calves.—Few calves were offered. Prices were unchanged, at \$3.50 to \$8.

Sheep and Lambs.—Sheep sold from \$3 to \$3.75; lambs, \$6 to \$6.50.

Hogs.—Prices for hogs at both markets were the same. Selects, fed and watered at the market, sold at \$6.20, and \$5.90 to \$6 for hogs f. o. b. cars, at country points.

BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, 87c. to 88c., outside points; Manitoba No. 1 northern, \$1.09; No. 2 northern, \$1.06; No. 3 northern, \$1.02, track, lake ports. Oats—Canadian Western, No. 2, 46½c.; No. 3, 45c., lake ports; Ontario, No. 2, 43c. to 43½c.; No. 3, 42½c. to 43c., outside. Rye—No. 2, 93c. to 94c., outside. Buckwheat—60c. to 61c., outside. Barley—For malting, 75c. to 80c.; for feed, 60c. Corn—No. 3 yellow corn, all rail, Chicago, 68½c., track, Toronto. Peas—No. 2, \$1.05 to \$1.10, outside. Flour—Ontario winter, 90-per-cent. patents, \$3.50 to \$3.60, at seaboard. Manitoba flour—Prices at Toronto were: First patents, \$5.50; second patents, \$5; strong bakers', \$4.80.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, \$16 to \$17 for No. 1, and \$14 to \$14.50 for No. 2.

Straw.—Baled, car lots, track, Toronto, \$6.50 to \$7.50.

Bran.—Manitoba, \$23 in bags, track, Toronto; shorts, \$25; Ontario bran, \$24 in bags; shorts, \$26.

COUNTRY PRODUCE.

Butter.—Market firm. Creamery pound rolls, 33c. to 35c.; creamery solids, 32c.; separator dairy, 32c. to 34c.; store lots, 25c. to 26c.

Eggs.—Case lots, 28c.; new-laid, 45c. to 50c.

Cheese.—Large, 15½c.; twins, 16c.

Honey.—Extracted, 12c.; combs, per dozen sections, \$2.50 to \$3.

Potatoes.—Ontario, in car lots, \$1.25 to \$1.30 per bag, track, Toronto; New Brunswick Delawares, \$1.35.

Beans.—Market firm, at \$2.20 to \$2.25 for primes, and \$2.30 to \$2.35 for hand-picked.

Poultry.—Dressed prices are as follows: Turkeys, 20c.; geese, 12c.; ducks, 12c. to 13c.; chickens, 11c. to 12c.; hens, 10c. to 11c. Alive—Turkeys, 17c.; geese, 10c.; ducks, 9c. to 10c.; chickens, 10c. to 11c.; hens, 8c. to 9c.

HIDES AND SKINS.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 12½c.; No. 2 inspected steers and cows, 11½c.; No. 3 inspected steers, cows and bulls, 10½c.; country hides, cured, 11c.; green, 10c.; calf skins, 12c. to 15c.; sheep skins, 60c. to 85c. each; horse hides, No. 1, \$3.25; horse hair, per lb., 33c. to 35c.; tallow, No. 1, per lb., 5½c. to 6½c.

TORONTO SEED MARKET.

The William Rennie Seed Company report seed prices as follows: Alsike No. 1, per bushel, \$9.50 to \$10; alsike No. 2, per bushel, \$8.50 to \$9; red clover, No. 1, per bushel, \$11 to \$12; red clover, No. 2, bushel, \$9.75 to \$10.50; timothy, No. 1, per cwt., \$15 to \$16; timothy, No. 2, per cwt., \$13 to \$14.

FRUITS AND VEGETABLES.

The Dawson-Elliott Company, wholesale fruit, produce and commission merchants, corner West Market and Colborne streets, Toronto, report Canadian vegetables and fruit as follows: Apples—Spies, \$3.50 to \$4.50; Greenings, \$2.50 to \$3.25; Baldwins, \$2.25 to \$3; Snows, \$4, \$5 and \$6; Russetts, \$2.75 to \$3.25; onions, Canadian, per bag, \$1.75; parsnips, 85c. per bag; turnips, 45c.; carrots, 75c.; beets, 65c.; cabbage, per dozen, 50c. to 65c.; celery, per dozen, 25c. to 35c.; lettuce, 40c. to 50c. per dozen.

Buffalo.

Cattle.—Prime steers, \$7.70 to \$8; butcher grades, \$3 to \$6.75.

Calves.—Common to prime, \$6 to \$10.

Sheep and Lambs.—Choice lambs, \$6.50 to \$6.55; cull to fair, \$5 to \$6.25; yearlings, \$4.50 to \$5; sheep, \$2 to \$4.

Hogs.—Yorkers, \$6.50 to \$6.55; pigs, \$6 to \$6.45; mixed, \$6.55 to \$6.60; heavy, \$6.55 to \$6.60; roughs, \$5.50 to \$6; stags, \$5 to \$5.50.

Montreal.

Live Stock.—The mild weather, and the fact that it was Christmas week, had a bad influence on the Montreal market. Butchers seemed well filled up, and they showed a lax enough interest in what was being offered. There was some fine stock offered, and it is said that some of this brought 6½c. However, 6c. was a good average price for fine stock. Some very good cattle were bought at 5½c. to 6c., and from this the price ranged down to 4c. for medium to common stock. Common canners' stock was 2c., and lower. Lambs were in moderate demand, and prices were steady, being 6c. to 6½c. per lb., ewes being 3½c. to 4c., and bucks and culls, 3½c. to 3¾c. Calves ranged from \$5 to \$12 each, and select hogs at around 7c. per lb., off cars.

Horses.—The snow still holds off. The weather is mild, and rains fall every few days. Occasionally there is snow and some frost, but for the most part the weather has been little, if at all, below freezing point for a few weeks past. Under the circumstances, the carters are not able to haul ice—there being no ice. Also, the coal trade shows a heavy falling off in activity, and as a result the deliveries are much smaller, and less horses are required to deliver it to consumers. Altogether, there is a poor demand for horses, only a few having been sold, and these being for the country. Prices are as follows: Heavy draft horses weighing from 1,500 to 1,700 lbs., \$300 to \$350; light draft, 1,400 to 1,500, \$225 to \$300; light horses, 1,000 to 1,100 lbs., \$100 to \$200, and broken-down animals, \$50 to \$100. Finest saddle and carriage animals, \$350 to \$500.

Dressed Hogs.—A good demand for dressed hogs at recent prices; 9½c. to 9¼c. per lb for abattoir-dressed, fresh-killed hogs; country-dressed, 8½c. to 8¼c. per lb.

Poultry.—The market for poultry is anything but encouraging. Dealers are reviling the mild weather, and are glad that there seems a chance of lower temperatures. Prices for choice stock, however, are no lower, although the range is wider than previously. Finest turkeys quoted at 18c. to 20c. per lb., chickens being quoted at 10c. to 14c. per lb., ducks being 13c. to 16c., and fowl 8c. to 12c. per lb. Geese are very scarce, for some reason, and in good demand, at high prices, being 13c. to 15c. per lb.

Potatoes.—The market continues to advance, and Green Mountains could hardly be laid down on track at less than \$1.40 per 90 lbs., carloads. They are being sold in half-dozen-bag lots at \$1.50 to \$1.60, delivered into store, single bags being \$1.60 to \$1.65.

Honey and Syrup.—Prices steady, at 11c. to 11½c. per lb. for white clover comb, extracted being 9c. to 10c. per lb. Dark comb, 8c. to 10c., and extracted, 7½c. to 8c. Maple syrup, 7c. to 7½c. in wood, and 70c. to 80c. per gallon in cans. Sugar, 8½c. to 9½c. per lb.

Eggs.—The winter is now getting well started, and stock is scarce. Prices are higher, being 33c. per dozen for selects, in a few cases at a time, 28c. for No. 1, and 60c. for new-laid. The latter are costing 45c. to 50c. in the country.

Butter.—Stocks of butter continue to decline gradually, and prices are holding quite firm, and even advancing. Grocers are now paying about 33c. per lb. for choicest stock. In the country, prices are 28c. to 30c., as to quality. Dairy is 25c. to 27c. per lb. for finest.

Grain.—The market for oats showed a slight decline. No. 2 Canadian Western oats sold at 46½c. to 47c. per bushel, carloads, ex-store; extra No. 1 feed oats, 45½c. to 46c. per bushel; No. 3 Canadian Western, 45c. per bushel; No. 2 local, 46½c.; No. 3, 45½c., and No. 4, 44½c.

Millfeed.—Supplies continue light, and demand good; prices are on the firm side. Bran, \$23 per ton; shorts, \$25 per ton; middlings, \$27 to \$28 per ton; pure grain mouille, \$32 to \$34, and mixed mouille, \$26 to \$29 per ton.

Flour.—There is a very good demand for export, it is claimed, and millers are getting good prices. Manitoba spring-wheat patents are quoted at \$5.60 per barrel in bags, for firsts, and at \$5.10 for seconds, strong bakers' being \$4.90. Choice Ontario winter-wheat patents are quoted at \$4.75 to \$5 per barrel, ninety-

THE Bank of Toronto

Head Office: Toronto, Can.

Record for Year Ending 30th November, 1911, Being the 56th Year of Business.

Deposits, - - - \$41,126,664
Increase for year, \$4,140,944

Loans and Investments, \$45,609,222
Increase for year, \$5,003,692

Total Assets, - - - \$57,067,664
Increase for year, \$6,753,267

Capital Paid Up, \$4,600,000
Rest, - - - 5,600,000

INCORPORATED 1855

per-cent. straight rollers being \$4.25 to \$4.40.

Hay and Seed.—The market for hay holds about steady. No. 1 hay, \$16 to \$17 per ton; No. 2 extra good, \$15 to \$15.50; No. 2 ordinary, \$13.50 to \$14 per ton; No. 3, \$11 to \$11.50, and clover mixed, \$10.50 to \$11. Travellers are going out for the seed houses immediately after the New Year, and conditions will then be known. The bulk of the alsike and timothy seems to have been received here, but red clover is scarce. Seeds are very dear all round.

Hides.—The market is very dull during the holidays, and prices are absolutely unchanged.

Chicago.

Cattle.—Beeves, \$4.75 to \$8; Texas steers, \$4.25 to \$5.75; Western steers, \$4.40 to \$6.60; stockers and feeders, \$3.25 to \$5.85; cows and heifers, \$2 to \$6.40; calves, \$5.25 to \$8.

Hogs.—Light, \$5.85 to \$6.20; mixed, \$5.95 to \$6.35; heavy, \$6 to \$6.40; rough, \$6 to \$6.15; good to choice hogs, \$6.15 to \$6.40; pigs, \$4.80 to \$5.85.

Sheep and Lambs.—Native, \$2.75 to \$4.50; Western, \$3 to \$4.50; yearlings, \$4.65 to \$5.60; lambs, native, \$4.25 to \$6.50; Western, \$4.75 to \$6.50.

British Cattle Market.

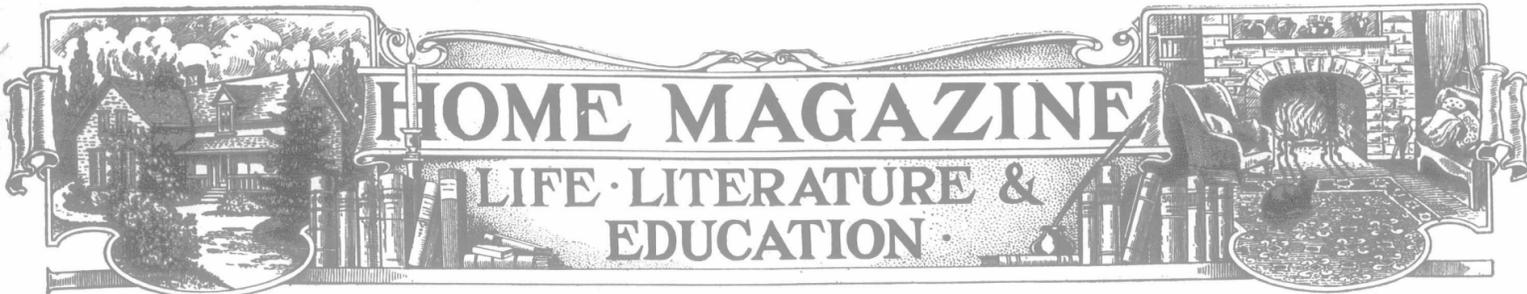
John Rogers & Co., Liverpool, cabled quotations for steers in the Birkenhead markets, from 13½c. to 14½c. per pound for both States and Canadian steers.

TRADE TOPIC.

STOCK FEEDING AND SOIL FERTILITY.—Men are discovering that fertility must be restored to the soil. What were once rich soils must be fed to produce a crop, and men are learning that the best and cheapest way to compass this lies in stock feeding, which serves to hand back to the impoverished soil fresh humus, rich in plant food and elements of growth. Farmers and stockmen are learning the value of stock feeding, and they are also learning the value of right and economic feeding. It is the claim of the manufacturers of Dr. Hess' Stock Tonic that this preparation aids the digestive function of stall-fed animals, and this prevents food waste, that it is not given as a ration nor to take the place of a ration, but to make the ration more available, and that it is a tonic which gives tone, vigor and snap to the animal's organs, and is thus valuable mixed in the daily feed of the stall-fed steer or dairy cow, stimulating milk production and giving a sleek, well-fed appearance, as well as shortening the time necessary to fatten steers, sheep or hogs, or to put the horses in the pink of condition.

"I suppose you will miss your boy while he is at college?"

"Yep," replied Farmer Cornfossel. "I dunno what I'll do without him. He got the live stock so they wouldn't move unless he gave 'em the college yell, an' I can't remember it."



Mrs. W. F. Stephen, née Miss Laura Rose, Guelph.

The photo was taken while Miss Rose was following her chosen work as instructor in dairying.

A Tale of the West.

(By Mrs. W. F. Stephen.)

There is nothing like a true story for real interest, and talking about special people, rather than people in general.

When in the West some years ago, I made my home with a farmer and his young wife—Eileen had just left an old-settled community in Ontario to go away West to live on a prairie farm. The country was new, the people were new, the house was new, the husband new—everything new to the poor, dear girl. I could see the shock she got from the newness and crudeness of it all. Then the homesickness came over her, and the shadows grew longer each day.

The color left the cheeks, and the eyes took on a hollow, haunted look. She was sick, body and spirit, but no word of complaint crossed her lips. She was git clean through. I used to think if she would only complain it would be a relief all round. The tension she was under would find relief, and we would have had an opportunity of showing our sympathy.

Do you know, I believe, had it not been for the kind of a husband she had, she would have died of melancholy, or lost her reason, or up and left for home—but that husband—I can see him yet, weary from plowing all day, hurrying with his cnores so that he and Eileen might have a little walk together in the twilight. There was no special place to walk, only the desolate, treeless prairie stretching ever before and behind, and to the right and to the left.

Once Eileen said, "The willows in the marsh will be covered with soft, downy catkins now, and the boys will be finishing up the syrup in the maple bush. Can't they get trees to grow out here?" As Bob and Eileen would get a little distance from the house—they never could get out of sight—a great disadvantage the prairie has I have seen Bob's arm slip under Eileen's shawl, and he would draw her close to him, and they would slowly walk, and I knew he was whispering in her ear words of love and comfort and hope—for I'd heard him—the partitions in prairie shacks are not noise proof—after they had gone to rest, softly saying, "Never mind little woman, you're feeling blue, I know, but cheer up, the worst is yet to come. There now, I didn't mean to make you cry; just you

hold your horses and wait a spell. I'll not be able to drive you off this farm before long, you mark my words, little one." I could only hear a gentle whisper in response, but I felt Bob was keeping the head above the deep waters, and if he kept on, the shore of happy contentment would be reached by the little wife.

One day the wind was blowing as it can only blow over the plains—and this new-comer made on an extra-good fire to cook the dinner—a spark from the chimney lit on the strawy manure covering the garden, and it was but the work of a minute before the haystack on the north side of the barn was in flames. Bob was in the field harrowing when he saw the smoke, and unhitching his team, came on the run home.

Fortunately, the wind was blowing from the south, and with the assistance of neighbors, the fire was kept in check.

Poor Eileen, she was white with fear, and afterwards grew more homesick than ever, and still no complaint escaped her lips.

I remember we all went in a wagon to the river some miles distant, to a school picnic. It was a sultry day in July. The few trees that fringed the river banks seemed to stretch out their arms to welcome us to their shade. Eileen was like a delighted child, and she laughed as I knew she used to laugh in the woods on the old home farm when she went berrying.

Covered buggies were rare in those parts at that time, and a lady asked Eileen to sit and rest in hers, but, alas! as she was getting out, her skirt caught, and she fell forward on her arm. She was ten days in bed, with an arm and shoulder as black as a stove pipe. Do you know, Eileen has since told me she was glad at the time it happened—glad, for it gave an excuse for her to get a rest and be shut in from the sight of the hateful prairie.

Christmas came, the first Christmas of her life to be spent away from her mother and father. Oh, the awful loneliness of the Christmas season when separated for the first time from the family circle. It is a different loneliness to any other. Would we could find out and share our feast with some lonely away-from-home boy or girl.

That year Christmas came on a Tuesday. Bob had gone for the mail Saturday, but there were no home letters for the little woman. Trains had been blocked. She hopefully said it would be there next mail day (mail three times a week). We were invited to Christmas dinner at a neighbor's some six miles away. It was bitterly cold, and the roads drifted up full. Bob said, "I'll hitch to the jumper and go for the mail (three miles distant, mind you), while you get into your finery. Her smile showed she was grateful, as well as hopeful.

When Bob came in I could see he had had no luck. Eileen was in her room and he went in. When he came out there was a wet spot on the lapel of his coat collar, and his face had a pinched look as if of pain. After a while Eileen opened the door. She was bundled up, and had a heavy veil over her face ready for the drive. Fortunately, there were children in the home where we went, and their excitement over what old Santa had brought, and the merry laughter and good turkey dinner, banished the thought, for a while, at least, that the loved ones were two thousand miles away.

Winter wore on, and with the first balmy breath of spring came a little stranger to the home—a dear baby girl. 'Twas the tie that broke the old cords that bound the heart to the East and knitted it to the West. The sighing

and crying in secret of the homesick girl gave place to the crooning and cooing of the fond mother and child.

Good crops and good prices supplied the necessaries, and in time many comforts. The wagon, apart from the saddle, ceased to be the only means of conveyance. The four-roomed shack was enlarged to keep pace with the requirements of a growing Western family.

Eileen played the organ in the church, trained the children for the Christmas cantatas, organized a reading club; in fact, she became the leading spirit of that genial neighborhood.

The prophecy of her Bob has been more than fulfilled. To her there is no place like the West. The wind-break of cotton woods that rustle in the breeze do not make her sigh for the pussy-willows in the home marsh. The wide expanse of prairie, with its waving stretches of golden grain or native grass, presents itself no longer as a monotonous waste, but as a land of fruitful promise and great possibilities.

A sympathetic, devoted husband, and four girls and one boy, have filled Eileen's life with a loving, absorbing interest, out of which has grown a happy contentment: for "where your treasure is, there will your heart be also."

The Roundabout Club

One of the Prize Essays.
WILL THE EARTH EVER BECOME OVER-POPULATED?—WHAT WILL HAPPEN THEN?

The thought that this world may some time, in the dim future, become over-populated, comes with a startling suddenness to a mind accustomed to a country whose thirst for more and more of a population has never yet been satisfied; whose disappointment over the recent census returns was only too obvious. What will happen, or be the result of this over-population, is a question bound to bring elusive arguments.

Shall we have another world discovered for us, or shall another method of living, suited to the needs of that day, be revealed to us? Assuredly not; for, in that event, there would be no surplus population.

If, then, there is more land to be discovered, and if, as has thus far been true, the birth rate exceeds the death rate, then we may assume that at some remote period the earth will be over-populated. What, then, shall become of the surplus population?

In the natural course of events the earth will become impoverished, and, therefore, less able to sustain life.

Every bushel of grain taken from the earth leaves it a little poorer. Every mineral mined takes from its wealth. When the earth has become so impoverished that it cannot provide food for its people, when the fuel has all been exhausted, when the source of the sun's strength has at last become enfeebled and that mighty body can give us no more heat, then shall the earth be as the moon now is, a body wherein no life can exist?

These thoughts would be most appalling were it not for the belief we entertain that, somehow, e'er all these things can take place, things will somehow adjust themselves just as, so far, they always have been adjusted to present needs. This thought brings with it such a feeling of relief that we turn, instinctively, to look for the natural causes which would tend to make over-population of the world impossible.

We find that war has long been credited with keeping down the population; to be sure, the signs of the times are all for a more peaceful method of settling

disputes, but each delay means the sacrifice of many lives. Then, the number of lives taken each year by railway accidents, automobiles, etc., etc., bids fair to rival the death roll of many a famous battle.

Each new invention seems to demand its awful toll of lives, and new inventions will continue while mankind inhabits the earth.

Perhaps the most serious reason of any may be found in the decreasing birth rate. Statistics tell us that the death rate is encroaching more and more upon the birth rate. There is every reason to believe that this tendency will increase, and that, eventually, the deaths may even equal, if not exceed, that of the birth rate.

There is also, at the present time, enough land, were it fairly distributed, to keep millions of people in easy circumstances. Land that is now kept solely as pleasure resorts, as the population increases, inevitably will be forced from the present owners and sub-divided. Intensive farming will be more practiced, and where it now takes one hundred acres for the maintenance of one family, five acres may then be sufficient.

Much land which is now considered useless will then be cultivated. Every inch of land was intended for some purpose; nature permits no waste. As the years advance, science also advances, and means will be found for using those lands now considered valueless.

In the years to come, free trade will be established between all the different nations. This will bring forward more competition, with the natural result that the costs of the necessaries of life will be lowered. Though any or all of these conditions may make fewer millionaires amongst us, still the average wealth will be greater.

Perhaps, after all, it might be just as well to adopt, for this most elusive problem, a motto used with effect in the recent Dominion elections, and let well enough alone, trusting in the Providence who has promised that all things shall work together for good.

SHERARD McLEAY.

Perth Co., Ont.

New Year's Thoughts.

Let us walk softly, friend;
For strange paths lie before us, all untrod;
The New Year, spotless from the hand of God,
Is thine and mine, O friend!
Let us walk straightly, friend;
Forget the crooked paths behind us now,
Press on with steadier purpose on our brow,
To better deeds, O friend!
Let us walk gladly, friend;
Perchance some greater good than we have known
Is waiting for us, or some fair hope
Shall yet return, O friend!
Let us walk humbly, friend;
Slight not the heart's-ease blooming round our feet;
The laurel blossoms are not half so sweet,
Or lightly gathered, friend.
Let us walk kindly, friend;
We cannot tell how long this life shall last,
How soon these precious years be overpast;
Let love walk with us, friend.
Let us walk quickly, friend;
Work with our might while fasts our little stay,
And help some halting comrade on the way;
And may God guide us, friend!
—Lillian Gray, in The Young Idea.

Something About Simple Rules for Health and Courtesy.

Early in 1911, Dr. Helen MacMurchy, Medical Officer to the Board of Education, Toronto, and Mr. Henry W. Andrew, M.A., Principal of Upper Canada College, published, in collaboration, a small pamphlet of only sixteen pages, entitled, "Simple Rules of Health, and Courtesy for Those at School," which was dedicated by special permission, to His Excellency Earl Gray, the late Governor-General of the Dominion of Canada. The little book was compiled in language intelligible to every boy and girl, as well as to their parents, no essentials being omitted, which, if conscientiously attended to, could help to aid in the development physically, mentally, and morally, of the rising generation of Canadians, always a matter of the deepest importance, not only to the present generation, but to generations to come. The writers appeal to the sense of duty which should influence every Canadian to give of his or her best towards equipment for good citizenship, and, as purposefulness is an outstanding characteristic of Young Canada, these simple rules, accepted and made use of in the spirit in which they are offered, should prove of inestimable value, not only to the teachers and scholars in our schools, but to the fathers and mothers in the homes of the Dominion.

The publishers are Cassell & Company, of Toronto, and the booklet is of a cost so trifling that it should be in the hands of all. Indeed, already school trustees, and others interested in the welfare of the young Canadians of to-day, are manifesting their sense of its value by ordering copies for distribution.

Very definite instructions are given under the headings of "The School-day," "Sleep," "Clothing," "Food and Drink," "How to Hold the Baby," "Work, Recreation, Exercise," "First Aid," in accidents, or other emergencies, but out of these I will only cull here and there some general hints from which we all alike may derive profit.

I. "Put in a good day's work every working day. Every part of the body and mind benefits by good work. Apportion your time according to a good plan, and do not work immoderately, or by fits and starts. Allow a time margin. Do not hurry yourself unduly. Get to your work in good time. Do not let any work or recreation deprive you of proper food, sleep, or exercise. Take all the interest you can in your work, for that is the way to make it interesting and easy."

Perhaps the following may apply more especially to boys:

II. "Never play with firearms. Always handle a gun as if it were loaded. Do not smoke, at any rate till you are twenty-one years old. Infinite harm is done to heart and nerves by premature smoking. Never touch alcoholic liquor, except under a doctor's orders. Do not chew gum. Do not spit. Notice danger signals. A rail track is practically a danger signal. In games, never dispute an umpire's decision, etc."

III. Under the head of "First Aid," and as introductory to practical instructions, follow some words of sound advice:

"Almost all accidents are preventable. An ounce of prevention is better than a pound of First Aid. Take no chances with life and limb except to save others. You will notice that experts and other wise people run no risks.

Do not keep poisons or explosives in the house.

Keep matches in a safe place.

Look where you are going.

Think what you are doing.

Never use gasoline, benzine, ether, etc., at night, or in the day time with an open light or fire anywhere near.

Never light a fire with coal oil.

GENERAL RULES.

1. Keep cool.
2. Be quick.
3. Send a smart, sensible person for a doctor.
4. Do the most needful thing first, judging by the patient's condition.
5. Give the patient air and space. Keep people from crowding round.
6. Lay patient down with head low.

loosen clothing, straighten the limbs, make him safe and comfortable. If able to swallow, give a little water or liquid food or stimulant, unless the face is very red.

7. Assist doctor, nurse, or person in charge, and if no better person offers, take charge yourself.

8. Never get in a panic about contagion or any other danger, but do not go into danger except on duty."

The pages of the little red book are filled with most helpful hints as to what to do and what to leave undone in the matter of health, many more of which I should like to quote, but I must reserve all my remaining space for its second and equally important subject, treated perhaps with more direct reference to the training of the young.

THE ESSENTIALS OF COURTESY.

"There are only a few essentials of courtesy and good breeding. There are only a few things that really matter. Any clothes will do for a real man or woman to wear if only they are clean, neat and suitable. But make the most of yourself, and do not buy an ugly or tawdry thing. You owe it to yourself and others to look your best always. A perfectly healthy person is always

gling in company, and other things which well-bred people do not do.

"It is polite to look at anyone to whom you are speaking, and to rise to receive anyone who comes to speak to you.

"Little things like these show true courtesy and politeness, and the true reason for them is rooted in our own self-respect. Be courteous to everyone, but servile to no one. Servility is not politeness. You may be courteous without losing your self-respect.

"The world belongs not to us alone, but to all. We are constantly coming in contact with others, not only in the house and at the table, but in public conveyances, in churches, halls, school-rooms, theaters, and other places where many people are found, and where all have equal rights. Do not take up more room than your share of room, and make as much room as you can for other people. Allow those who are much older or much younger or not so strong as you to precede you and to be seated first. Keep to the right in passing, and be careful of other people's property and of public property. Handle books carefully, never turning the leaves with soiled or wetted fingers.

"Avoid noise. Use a clear and pleas-

sure that you are a real person, if you can lose and feel just as cheerful, courteous and generous as when you win. That is the British way."

And now, by way of winding up, let me offer, as a message to the mothers who read our Home Magazine, the following child-poem, which forms the last page of this excellent little book, with the suggestion that their tiny tots may learn the words, and sing them to a merry tune in their hours of play:

SCHOOL HYGIENE FOR THE LITTLE ONES.

If I want to be happy
And quick on my toes,
I must bite my food slowly
And breathe through my nose.

I must press back my shoulders,
And hold up my head,
And not close my window
When going to bed.

I must soap my bath-flannel,
And scrub all I know;
I must then take a towel
And rub till I glow.

I must never be idle,
And lol in my chair;
Or shout like a demon,
And act like a bear.

I must play and not fidget,
Read books and not flop;
Begin all with a purpose,
And know when to stop.

I must love what is noble,
And do what is kind;
I must strengthen my body
And tidy my mind.

Yes, if I would be healthy,
And free from all cares,
I must do all I've told you,
And mean all my prayers.

—Harold Begbie.

All of which is respectfully submitted
by your sincere friend,
H. A. B.

Hope's Quiet Hour.

With Dr. Grenfell.

It is the middle of the week before Christmas—you probably know what that means.—Even if I had time to sit down quietly and think about a Quiet Hour, my mind is too distracted by Christmas preparations to work properly. So I am going to pass on to you some bits out of a book which is going away very soon in the sleigh of good old Santa Claus. The book is called: "Down North on the Labrador," and is written by that heroic Christian adventurer—Doctor Grenfell. In it are described some people who have been living gloriously for Christ in the cold North. One of these he calls "Uncle Malcolm," a man given to hospitality. He kept open house on the Labrador coast, feeding all who came to him. At first he was prosperous, but hard times came, and, as a neighbor said, "half the shore took to cruising, and them that brought up at Uncle Malcolm's fairly ate him out of house and home." The good wife died and his boys were scattered, except Anthony, the youngest. The Doctor noticed that each season the house looked more bare, though it was scrupulously clean, and at last the old man broke through his reserve.

"It's this way, doctor," he exclaimed: "The cupboard is bare at last. There has been hard times these three years. The neighbors got that numerous they have driven most of the fur away. I got ne'er a skin last winter, and how I'm going to get through this winter I can't tell. No, I owes no man anything, thank God, and what bit o' flour Anthony and the maid eats don't amount to anything. But you see how it is, doctor, it isn't ourselves we have to look for only. There isn't a family to the westward what isn't in debt to the company, nor to the eastward either, this side the big river, and when them's hungry in winter, what's them to do? They can't get no more credit. Lots o' them haven't got no credit now, and more o' them has got children in plenty. What's them to do? They can't go away wi'out a bite, when them is hungry



Le Bûcheron (The Wood-chopper).

Bronze figure by A. Laliberte, Montreal. Royal Canadian Academy Exhibition, Toronto, November-December, 1911.

good to look at, so is a neat and tidy person, with no lost buttons or soiled or stained clothes.

"Do not obtrude yourself on other people. Forget yourself. Do not be telling what you did, said or thought, when nobody asked you. Do not try to impress people."

"Eat your meals so that you do not disturb anyone or draw any special attention to yourself. Do not use the knife except for cutting. Pay attention to others, and see that they do not want for anything to which you can serve them or help them. Always make any necessary preparation for meals, such as washing the hands and face, changing the dress, arranging the hair, etc. Do not leave the table before the rest of the family if you can possibly help it, and if you cannot, ask to be excused.

"Make your own manners at the table and everywhere you go, especially at home, as good as the best you have seen, or better if you can, and avoid all forms of bad manners, such as chewing gum, using slang, whispering and gig-

ant tone in speaking. Never be noisy in a public conveyance. Do not speak loudly, but only so that you can be easily heard by those you are addressing. Do not interrupt people. Go away from people who use vulgar or coarse language or bad words, and stay away from them.

"Never quarrel, and never say or do anything that will make people unhappy if you can help it. Do not lose a chance to help people. Do not be 'touchy,' and never mind if people seem to under-value you. What difference does that make? They will soon find out better, or perhaps you will.

"Everybody is meant to be happy, and the only way to have happiness is to make it. No matter what we lose, we have enough or can find enough to make ourselves happy. Few people really appreciate what they have. And to be happy and cheerful is one of the great courtesies of life. Play the game of life bravely, and no matter how it goes with you, remember that while the winner's smile is easily worn, you are more

and comes here. He wouldn't do that, would He? And He wouldn't 'low His friends to, either?'

There was no gainsaying the difficulty. There was no denying that the Christ would have fed them. In my own mind, I couldn't help fearing I should have somehow avoided the issue; possibly by moving off the komatik track each winter, as many I knew had already done. I even ventured to suggest this. But Uncle Malcolm stood firm.

'No, no, doctor, as long as God gives me a bit, I stay right here and share it with 'em. What I'm afeared of is it won't go round this time. Still, if the Master fed thousands with a few fishes them times, I got that many anyhow, and He can make it go round. It wouldn't be much trusting Him now after all these years if I just ran away up the bay wi' them fishes. . . . I knows the Lord'll be true to His promises; but we got to do our part.'

The doctor found him some work to do, hauling wood for the mission ship, and the difficulty was tided over for that time. But two years afterwards he was again in trouble. 'His failing strength made him realize that to haul logs, which got ever further from his door, and to cut billets enough to supply his needs, had become impossible.

'Fourteen barrels of flour I used last winter, doctor,' he began, as he saw my eyes roaming about the great kitchen that outrivalled a Mother Hubbard's for bareness. Not a bone either of beef or of pork would the neediest of visitors have found; no, nor a speck of dirt either; the place was swept and garnished like a great skeleton.

'Fourteen!' I replied. 'Four you mean. Four is more than enough for you and Anthony.'

'Every ounce o' fourteen,' he said, 'and but for what you bought for me in the south, every barrel at \$8.50 a barrel.'

'Who ate them, Uncle Malcolm?'

'Well, we had as many as twenty-seven staying here one week end, and they with ne'er a bite or sup at home. Isn't us told to be given to hospitality, and that isn't feeding them as 'll pay us back, is it?'

'It's you that is the real relieving officer down here,' I answered.

'Thank God,' he replied, somewhat piqued, 'I've not had to come to the Government yet for help, though we has been on dry flour all summer.'

'What, you are without any fats in the house for yourself? Is that true?'

'Well, you see, doctor, they comes round first one and then another, for just a bit to grease the pot, till there's none left for our own pot. I thank God I doesn't have to take none till I catches what to pay for it with, but I haven't seen a bit o' butter this three months.'

'You'll simply have to shut your door to them this winter, whatever happens now, Uncle Malcolm.'

He stood and looked at me and said, simply: 'I'll not last much longer anyhow, doctor, and please God it'll never come to that. I doesn't want to hear Him say, I was hungry and you did not feed Me, a stranger and you took Me not in.'

Then he brought out sixty dollars, all his savings, and asked the doctor to buy with the money flour and molasses, and some butter.

'But, Malcolm, you are getting old, and you shouldn't cut the last plank away yet.'

'He'll take care, doctor. I guess I'll trust Him. It wouldn't do not to have used that sixty dollars and have sent folks away hungry, would it, doctor? It would look as I didn't have much trust in Him. Doesn't the Book say, I was hungry and ye gave me nothing to eat?'

What could be said. I mechanically took the sixty dollars and put them in my pocket and was silent. It certainly seemed to be the Master speaking. I had once imagined I knew what hospitality meant.

Doesn't a story like that make our small attempts at ministering to Christ seem pitifully shabby? But it is grand to know that there are such noble men in the world. I have heard people speak dolefully about the wickedness of human nature, giving one the impression that mankind is swiftly going downhill; but I think that as Christ marvelled over the faith of some people in Palestine long

ago, so He must still gaze in glad amazement at a soul that has climbed as high as Uncle Malcolm. And such souls are not only in Labrador, they are growing beautiful in His service in many a quiet home.

Doctor Grenfell describes the coming of a beautiful yacht, among the fishing fleets of Labrador, on one occasion. On board were gaily-dressed ladies and gentlemen, seeking pleasure, on a fishing expedition. The doctor was invited to lunch with them, and says: 'To the table, laden with Southern delicacies of fruit, fresh from her ice-lockers, was added all the attraction that the best of silver and cut glass could afford.' But these people, who had spent so much money and energy in the pursuit of pleasure, were very discontented. They grumbled 'ar more about their 'bad luck' in fishing than the men who depended on the fish for their necessary food. Just as the doctor was leaving the yacht a fishing boat came up, and the fisherman pleaded for a sick girl who was in his boat, asking the pleasure-seekers to take her to the hospital, which they would pass before night. But the ladies were afraid there might be infection, and the gentlemen were afraid the fishing-boat would scratch the glossy sides of the yacht. So the doctor decided to ask the skipper of a schooner that was not far off if he would take the girl. The owner of the yacht was greatly relieved, and offered \$100 to pay the skipper for leaving his important work of fishing. The doctor said: 'The skipper wouldn't take the money, I can assure you, for carrying any sick person along, unless his sharemen will lose by it. I know his men are on shares, and it might give them cause to complain, as they wouldn't feel they were asked in the matter, and therefore they wouldn't have the pleasure of doing the kindness. We never pay on the coast for this kind of brotherliness. It is the only wealth they have to give away much of, and they know the value of the joy of service.'

When Doctor Grenfell told the story to his colleague on the mission hospital steamer, the latter remarked: 'I hope they won't have anything more to interrupt their enjoyments, but it sort of makes one feel not desirous to change places with them.'

It certainly takes more than riches, fine clothes, and 'a handle to one's name,' to make anyone great. Those 'cultured' pleasure-seekers must have felt very small beside God's noblemen—

but it is good for us to realize our smallness sometimes, don't you think so? DORA FARNCOMB.

The following verses were sent to me by one of our English readers, and I gladly pass them along to you.—Hope.

'At Thy feet, our God and Father
Who hast blessed us all our days,
We with grateful hearts would gather,
To begin the year with praise.

'Every day will be the brighter
When Thy gracious face we see,
Every burden will be lighter
When we know it comes from Thee.

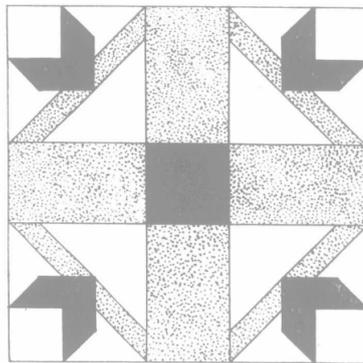
'Spread Thy love's broad banner o'er us,
Give us strength to serve and wait
Till the glory breaks before us
Through the City's open gate.'

The Ingle Nook.

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

Quilt Patterns.

I am very sorry that we could not insert sooner the quilt patterns which so many of you have been kind enough to



'Fly-by-night' Pattern.

Sent by Miss Annie Jameison.

send us. However, the winter is still young, and no doubt there will be plenty of time yet for quilt-making. A few patterns still remain to be inserted at a later date. D. D.

One of the "Quilt" Letters.

Dear Dame Durden,—I notice in a recent "Advocate" that someone wished a pattern for a tulip quilt. I have a beauty, made many years ago by my husband's grandmother. Mine is green,



Tulip Pattern.

Sent by Mrs. R. Boyes, Churchill, Ont., and "Muggins," Brant Co., Ont.

red and orange on white, and certainly wins the admiration of all who see it. The tulips on mine are all sewn on by hand, not pieced, and it is all double cross quilted. Much more labor than the ladies of to-day care to spend on work of that kind

With best wishes for this department, I remain, yours, "MUGGINS," Brant Co., Ont.

Oatmeal Cakes—Laundering Collars.

Dear Ingle Nookers,—Here is a good recipe for oatmeal cakes:—2½ cups flour, 2½ cups oatmeal, 1 cup shortening, 1 cup white sugar, 1 small teaspoon salt, 1 small teaspoon soda dissolved in ½ cup warm water. Filling:—2½ cups raisins, ½ cup sugar. Cover raisins with water and let boil until softened, then thicken with two dessertspoons cornstarch. Dates may be used instead of raisins if desired.

Can any of the Nookers tell me how to launder linen collars and cuffs, to



The Field Oak.

From a painting by Homer Watson, R.C.A. Exhibited at the Royal Canadian Academy Exhibition, Toronto, November-December, 1911.

make them smooth and glossy? Thanking you in advance.

SWEET SIXTEEN.
Wellington Co., Ont.

Many thanks for the "tulip" pattern. As we had had several cuts made before



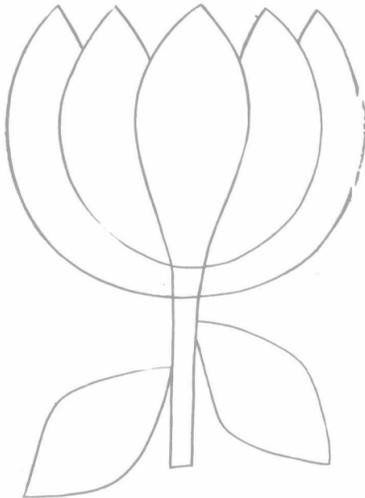
Tulip Pattern.

Sent by Miss Annie Hall, Williamstown, Ont.

yours arrived we are not using it at present. Many thanks also for the recipe for oat-cakes. They certainly "sound" fine.

In one of my treasure-books I find the following directions for laundering collars and cuffs:

Take two ounces of the best white starch and pour over it, without stirring, 1 cup cold water. Dissolve as much borax as will lie heaped up on a quarter in 1 cup boiling water. Stir until the borax is dissolved, and when the mixture is cold add it to the starch. Pour into the starch 1 tablespoon turpentine and stir well. This is enough



Tulip Pattern.

Sent by Mrs. McGurk, Ealing, Ont.

for 4 pairs cuffs and 7 collars. Add a little borax water if it becomes too thick.

Roll the articles in a clean cloth and let stand 20 minutes or more, then stretch and rub well and iron, running the iron first over the wrong side.

Fancy Apron.

Dear Dame Durden,—Would it be too much trouble to tell me in next week's issue how to make a fancy apron of two silko handkerchiefs? They are neat and pretty. Perhaps some time you would tell me how to crochet a fascinator. Thanking you.

EVELYN E.
Brant Co., Ont.

I am sorry that the answer to your question could not appear as soon as requested. Will you kindly read the standing heading to Ingle Nook?

I saw an apron lately made of two large bandana handkerchiefs. Possibly the pattern was the one you refer to. One point was cut off each and the two raw edges joined to a belt with strings, one of the handkerchiefs thus serving for the apron part, the other, on the opposite side of the belt, for a bib. A hole for the neck was cut in the bib portion to slip over the head, and the raw edge faced all round. This apron was chiefly red, the strings and neck-facing (the facing was turned to the outside) being al-

so of red. . . Fancy aprons are also made of handkerchiefs joined together with insertion, but I do not know just how. Perhaps one of our readers will come to the rescue.

Directions for making a crocheted fascinator appeared in our issue for November 30th.

About Entertaining.

Would you please answer a few questions for me and publish the answer?

A nice way to entertain a young lady in the afternoon, that is a friend whom you have invited in for the afternoon and for tea?



Master Leslie Frost and His Pony.
Stockdale, Ont.

A few nice games and contests?

A nice way to pair off couples for a contest or to take to tea?

Could you arrange a programme for an evening which would be interesting and entertaining for a number of young people whom you have invited in for the evening?

Is it proper for the hostess to be dressed in white, or anything expensive, or for her to wear any jewelry when she is entertaining in her own home?

AN INTERESTED READER OF
"THE FARMER'S ADVOCATE."
Hastings Co., Ont.

I should say that the very nicest way to entertain the young lady would be to just chat with her. You might suggest that she bring her fancywork with her, and the two of you could work as you talked. If you have a piano music, of course, would suggest itself.

Several "games and contests" appeared

in two, and proceed as before. Very often, no such device is resorted to, the hostess merely seeing to it quietly, should occasion arise, that no young lady is without a partner.

The hostess may, of course, wear white, or anything that she chooses, provided that she is quite careful not to be dressed any better than the most plainly dressed of her guests is likely to be.

Mince Meat.

Dear Dame Durden,—I am asking you if you could inform a writer what Mr. Andrew Carnegie's address is?

Here is a recipe for mince meat: 4

lbs. pork head after being cooked and drained through colander, 3 large apples, $\frac{1}{2}$ lb. raisins, $\frac{1}{2}$ lb. currants, 2 teaspoons cinnamon, 2 of cloves, and sugar and salt to suit the taste. Add more seasoning if liked.

Mr. Carnegie's address is Skibo Castle, Sutherland, Scotland.

Here is a fine recipe for mince meat without meat: 3 lbs. chopped suet, 3 lbs. raisins, 3 lbs. currants, 2 chopped lemons, 2 chopped oranges (rind of both is used as well as the inside); chopped apples, peel and spice to suit taste; 25 cents' worth brown sugar.

How Balzac Worked.

In twelve years, Balzac wrote seventy-nine novels, besides an abundance of tales and newspaper articles. When in full swing he led the life of a recluse, refusing to see even



Shelling Corn for the Hens.

Elsie S. Moore, Lakeview, Ont.

in our Christmas number. You have probably seen the directions for them before this.

One way of "pairing-off" couples is to cut so many pictures, clipped from magazines, in two, fill two baskets with the fragments, then let the boys draw from one the girls from another. The boys then search for the girls who have the corresponding parts of the pictures. Another way is to put questions in one basket, answers in another; yet another to divide well-known proverbs or quota-

his most intimate friends. He usually went to bed at eight o'clock, after a light dinner, and got up at two in the morning to resume writing. At 6 he took his tub, lying in the water one hour, after which he drank a cup of coffee. Werdet, his editor, was then admitted to bring proofs, take away corrected ones, and wrest, if possible, fresh manuscript from him. From 9 he wrote till noon, when he breakfasted on two boiled eggs and some bread. From 1 to 6

he continued his writing. For six weeks or so he would keep this up then he would mysteriously disappear for months.—[Selected.]

The Beaver Circle.

Our Senior Beavers.

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

The Months of the Year.

The New Year comes in with shout and laughter,
And, see, twelve months are following after!

First, January, all is white,
And February, short and bright,
See breezy March go tearing round;
But tearful April makes no sound.
May brings a pole with flowers crowned,
And June strews roses on the ground.
A pop! A bang! July comes in.
Says August, "What a fearful din!"
September brings her golden sheaves,
October waves her pretty leaves,
While pale November waits to see
December bring the Christmas tree.
They join their hands to make a ring,
And, as they dance, they merrily sing:
"Twelve months we are; you see us here.
We make the circle of the year.
We dance and sing; and, children dear,
We wish you all a glad New Year!"

—Picture Lesson Paper.

Lunch Counters for the Birds.

Have any of you, Beavers, ever tried to form acquaintance with the birds by feeding them in winter? Cracked corn, cracked nuts, hay seed, crumbs, and table scraps, and bits of meat, especially suet, are what they like best.

If any of you intend to begin this good work this winter, in order that you may study our little feathered friends more closely, you may find the following suggestions for making bird lunch-tables useful. The extract has been taken from that delightful little paper, "Our Dumb Animals."

"A board, six inches wide and two feet long, should be fastened to a tree, or on a high post out of the reach of cats; or against a convenient window-sill. One trouble that will immediately present itself is the English sparrow. It will be difficult to keep these little nuisances away from the lunch-counter. One would like to be merciful and let them feed with the others, were it not for increasing the troubles of springtime nesting.

"A suggestion that the writer received from one of the Audubon Societies in a small town, and that is reported to have worked well, is worth trying:

"A board the usual size is hinged at one end to a window-sill in such a way as to allow the outer end of the board to drop. The board is held about level by a string fastened to its outer end and to the top of the window. In this string,—that is, forming a part of it,—a thin or light spiral spring is fastened. The food and water dishes are placed at the outer end of the board. When a bird alights, the feeding-board teeters up and down. The report states that other birds will feed at the table, but that the English sparrow will not visit it a second time. If this simple scheme is effective in dealing with the English sparrow, then one of the problems of bird lovers has been solved.

"If the lunch-counter proves attractive, and it undoubtedly will, many birds may be studied at close range. Among the visitors will be the chickadee, the red-breasted nuthatch, white-breasted nuthatch, downy and hairy woodpeckers, blue jay, junco, and an occasional robin.

"Some birds, who are accustomed to search for their food close to the ground, are not so likely to find the table,—notably the juncos; the white-throated sparrows; the white-crowned and the tree-sparrows. For these birds a better way is to spade up a bit of ground, if the frost is sufficiently out; or keep it clear of snow if there are late storms, and place the food upon it.

"All winter, birds must have a good supply of heat-producing food. Most of them are very fond of suet, and the best way to furnish it is to fasten a piece

about three inches long to the trunk of a tree near the house. "The observations by the pupils will be of greater value if they are required to give systematic reports of their work. "Every boy and girl should co-operate heartily with those who are endeavoring to save the birds. Energetic measures are necessary for the danger is great."

Competition on "Home Work".

The best essays in the competition, "Should Home Work be Abolished?" will be published next week.

Senior Beavers' Letter Box.

Dear Beavers,—I enjoy reading your letters so much that I was tempted to write. We skate and sleigh-ride at our school in the winter time, but we have done but very little sleigh-riding yet. We have a man teacher at our school. I would like very much to join your corner. I know quite a few kinds of birds, but I saw one this morning that I don't know. It was running up the side of the wall (on the wood) and hopping on the ground. It had a black stripe from the top of its head to its neck. Then, its wings were gray, and its breast a light gray. It had a long bill. Would you kindly tell me what kind it was?

A creek runs right back of our house. We go fishing on the 24th of May. Two years ago there were some Indians camping down on the flats; they used to go down the creek in boats. We have eight horses, four horses and four colts. We are going to break in two of our colts this winter. We have a dog which we call Bob.

I saw in your paper where you wanted someone to tell the comical sayings of little sisters or brothers. My little sister and I were going up the road, and the sun had just gone down. She asked me where the light had gone, and I said it had gone down. Then she said, "Why, I guess mamma must have blown it out." We have taken "The Farmer's Advocate" for nine years, and like it very much.

GRACE GIDNEY (Age 11, Sr. III. Book). Alford Junction.

We cannot be sure of your bird, Grace, without a closer description. If you can find us four new subscribers to "The Farmer's Advocate," we will send you one of our lovely, large bird-books.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. My father is an old subscriber to "The Farmer's Advocate," and finds it a very interesting magazine. I enjoy reading the letters of the Beaver Circle very much.

I want to tell you about my pony, which I am sending a picture of. She is a pure-bred Shetland. She is six years old, and only stands 38 inches high, and weighs 322 pounds. I call her Babe, because she is so small. My sisters and I drive her to Sunday school every Sunday. I have a little cart and cutter, with harness to match. My sister and I drove to my cousins to spend our midsummer vacation, a distance of 22 miles. We can drive her any place, as she is not afraid of anything. She is very fond of sugar, candy, and apples.

We live about two miles from Frankfort, where the Trent Valley Canal is being built. They have built six dams between Frankford and Trenton, a distance of eight miles. They have built one big power-house, and have started another one near Frankford.

Hoping this will escape the w-p. b., and wishing the Circle every success, I will close.

LESLIE FROST (Age 12, Book Sr. III.). Maple Lane Farm, Stockdale, Ont.

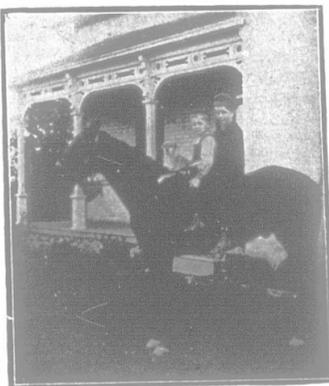
Dear Puck and Beavers,—I live on a farm at a small village called The Maples. This was not always its name, for about fourteen years ago, its name was changed from Vanateer to The Maples. It well deserves its name, for every way you look are maple trees. We have a grove of five acres containing more than five thousand five hundred maple trees. These trees are six feet apart, and are planted in rows. Well,

I guess I should change the subject. "The Maples" contains two churches, school, blacksmith's shop, a post office, and four or five houses.

I see you don't date your letters, Puck, when you print them, so I won't date this one.

I have a camera, but I am not able to send you a picture this time, as I only have about six left, and I want to keep them, but I will try and have one to send you the next time I write. Well, I will close now, wishing the Circle every success.

GORDON W. HUNTER (Age 13, Book IV.).



Alex. and Wilbur McKague. Teeswater, Ont.

Dear Puck,—This is my first letter to the Beavers. For pets I have a cat, two dogs, and some pigeons. One of the dogs is a water dog; he will go and get birds when they are shot. The other is a collie. I go to school every day and like it fine. I live about five miles from the town of Aurora. It is a very nice place. The electric cars run through it. My father has taken "The Farmer's Advocate" for a long time and likes it very much. I will give a riddle: Around the house and around the house, and only makes one mark. Ans.—A wheelbarrow.



Peace Palace at the Hague. Now nearing completion.

As my letter is getting too long, I think I will close, hoping this will escape the monster w-p. b.

STEWART ALLEN (Age 12, Book IV.). Oak Ridges, Ont.

Dear Puck and Beavers,—As this is my first letter to the Beaver Circle, I will try not to make it too long. My father has taken "The Farmer's Advocate" for many years, and likes it fine, and I like it nearly as well, on account of the Beaver Circle. I live about four

miles east of Simcoe. I have one sister. She passed her Entrance this year, and goes to High School.

We have eleven horses and colts. I enjoy watching them running about. I guess this is getting pretty long. Hoping that this letter will escape the w-p. b.

MURIEL ROBERTS (Age 12, Book IV.). Simcoe, Ont., Box 418.

Our Junior Beavers.

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

Junior Beavers' Letter Box.

Dear Puck,—May I join your Circle? I live on a farm near Springfield, and it is a pretty place. We have a lot of pretty cows, and some nice horses, and a pretty little colt named Sandy.

There is not much snow here, but there is some ice, and my brother and I go sleigh-riding. I go to school, and am in the Second Book. We got a real nice new teacher this summer, and we all like her.

DAISY LAWRENCE (Age 11, Sr. II.).

Dear Puck and Beavers,—As I have no little sisters to tell you the funny things they say, I thought I would tell you about a cat we had. We used to keep her in the barn. One morning we went out and she had four kittens, and before they had their eyes open, the old cat carried them over to the house and put them down at our feet. We took them back to the barn, but she only brought them back when their eyes were open.

EDNA MUIR (age 11, Jr. III.). Montreal, Que., 86 Knox St.

Dear Puck and Beavers,—This is the first time I have written to your Circle, so I hope it will escape the waste-paper basket. I have a pony; her name is Nora. She is three years old, and is not broken in. We live on a farm of

News of the Week.

The Canadian Northern Railway extension into the Peace River country has now reached the vicinity of Athabasca Landing.

The work on the first section of the Hudson Bay Railway, from the Pas to Split Lake, will be begun immediately.

It is stated that the Japanese Government will, in future, send no emigrants to Canada.

India is in the grasp of another famine.

General Reyes, leader of the recent revolt in Mexico, surrendered after his defeat near Linares.

Ex-President Roosevelt declined to attend the "Peace" dinner in New York last Saturday. The breach between him and President Taft becomes more and more evident.

Dr. Sun Yat Sen has been elected by the delegates of the eighteen Provinces of China proper, as first President of the Chinese Republic.

Collisions between Russians and Persians in the North of Persia, and between Persians and British Indian troops in the South, have again taken place, with much loss of life, notwithstanding the fact that the Persian Cabinet had met the full demands of the Russian ultimatum of November 29th, including the dismissal of the American Treasurer-General, Mr. Shuster.

Each member of the Australian Coal Trust has been fined \$2,500 by the Federal Court for violation of the anti-trust law.

The Laird o' Cockpen.

The Laird o' Cockpen he's proud an' he's great,
His mind is ta'en up wi' things o' the State;
He wanted a wife his brow house to keep,
But favour wi' wooin' was fashious to seek.
Doon by the dyke-side a lady did dwell,
At his table-head he thocht she'd look well,
M'Cleish's ae dochter, o' Clavers-ha' Lee,
A penniless lass wi' a long pedigree.
His wig was weel pouter'd, as gude as when new;
His waistcoat was white, his coat it was blue;
He put on a ring, a sword, an' cocked hat,
An' wha' could refuse the Laird wi' a' that?
He took the grey mare, he rode cannille,
An' rapped at the yett o' Clavers-ha' Lee,
"Gae tell Mistress Jean to come speedily ben,—
She's wanted to speak wi' the Laird o' Cockpen."
Mistress Jean she was makin' the elder-flow'r wine;
"An' what brings the Laird at sic a like time?"
She put aff her apron, an' on her silk goon,
Her mutch wi' red ribbons, an' gaed awa doon.
An' when she cam' ben he bowed fu' low,
An' what was his errand he soon let her know;
Amazed was the Laird when the lady said, "Na!"
An' wi' a laigh curtsie she turned awa'!
Dumfounder'd was he, but nae sigh did he gie—
He mounted his mare, an' he rode cannille;
An' often he thocht, as he gaed through the glen,
"She's daft to refuse the Laird o' Cockpen!"
—Lady Nairne.

Re Alexander Anderson.

Mrs. W. B. Grey Co., Ont., kindly informs us that the word "surfaceman," in Scotland, means one who works on the railway. This explains, then, what Alexander Anderson meant when to his delightful poems he gave the signature, "Alexander Anderson, Surfaceman."

BRYSON W. W. HUNTER (age 9). The Maples, Ont.

"The Farmer's Advocate" The Scarlet Pimpernel. Fashions.

A STORY OF ADVENTURE.

By Baroness Orczy.

(Serial rights secured by "The Farmer's Advocate.")

(Continued from last week.)

CHAPTER II.

Dover: "The Fisherman's Rest."

In the kitchen Sally was extremely busy—saucepans and frying-pans were standing in rows on the gigantic hearth, the huge stock-pot stood in a corner, and the jack turned with slow deliberation, and presented alternately to the glow every side of a noble sirloin of beef. The two little kitchen-maids bustled around, eager to help, hot and panting, with cotton sleeves well tucked up above the dimpled elbows, and giggling over some private jokes of their own, whenever Miss Sally's back was turned for a moment. And old Jemima, stolid in temper and solid in bulk, kept up a long and subdued grumble, while she stirred the stock-pot methodically over the fire.

"What ho! Sally!" came in cheerful if none too melodious accents from the coffee-room close by.

"Lud bless my soul!" exclaimed Sally, with a good-humoured laugh, "what be they all wanting now, I wonder!"

"Beer, of course," grumbled Jemima, "you don't 'spect Jimmy Pitkin to 'ave done with one tankard, do ye?"

"Mr. 'Arry, 'e looked uncommon thirsty too," simpered Martha, one of the little kitchen-maids; and her beady black eyes twinkled as they met those of her companion, whereupon both started on a round of short and suppressed giggles.

Sally looked cross for a moment, and thoughtfully rubbed her hands against her shapely hips; her palms were itching, evidently, to come in contact with Martha's rosy cheeks—but inherent good-humour prevailed, and with a pout and a shrug of the shoulders, she turned her attention to the fried potatoes.

"What ho, Sally! hey, Sally!" And a chorus of pewter mugs, tapped with impatient hands against the oak tables of the coffee-room, accompanied the shouts for mine host's buxom daughter.

"Sally!" shouted a more persistent voice, "are ye goin' to be all night with that there beer?"

"I do think father might get the beer for them," muttered Sally, as Jemima, stolidly and without further comment, took a couple of foam-crowned jugs from the shelf, and began filling a number of pewter tankards with some of that home-brewed ale for which "The Fisherman's Rest" had been famous since the days of King Charles. "'E knows 'ow busy we are in 'ere."

"Your father is too busy discussing politics with M. 'Empseed to worry 'isself about you and the kitchen," grumbled Jemima under her breath.

Sally had gone to the small mirror which hung in a corner of the kitchen, and was hastily smoothing her hair and setting her frilled cap at its most becoming angle over her dark curls; then she took up the tankards by their handles, three in each strong, brown hand, and laughing, grumbling, blushing, carried them through into the coffee-room.

There, there was certainly no sign of that bustle and activity which kept four women busy and hot in the glowing kitchen beyond.

The coffee-room of "The Fisherman's Rest" is a show place now at the beginning of the twentieth century. At the end of the eighteenth, in the year of grace 1792, it had not yet gained that notoriety and importance which a hundred additional years and the craze of the age have since bestowed upon it. Yet it was an old place, even then, for the oak rafters and beams were already black with age—as were the panelled seats, with their tall backs, and the long polished tables between, on which innumerable pewter tankards had left fantastic patterns of many-sized rings. In the leaded window, high up, a row of pots of scarlet geraniums and blue larkspur gave the bright note of color against the dull background of the oak.

That Mr. Jellyband, landlord of "The Fisherman's Rest" at Dover, was a pros-

perous man, was of course clear to the most casual observer. The pewter on the fine old dressers, the brass above the gigantic hearth, shone like gold and silver—the red-tiled floor was as brilliant as the scarlet geranium on the window sill—this meant that his servants were good and plentiful, that the custom was constant, and of that order which necessitated the keeping up of the coffee-room to a high standard of elegance and order.

As Sally came in, laughing through her frowns, and displaying a row of dazzling white teeth, she was greeted with shouts and chorus of applause.

"Why, here's Sally! What ho, Sally! Hurrah for pretty Sally!"

"I thought you'd grown deaf in that kitchen of yours," muttered Jimmy Pitkin, as he passed the back of his hand across his very dry lips.

"All ri! all ri!" laughed Sally, as she deposited the freshly-filled tankards upon the tables, "why, what a 'urry, to be sure! And is your gran'mother a-dyin', an' you wantin' to see the pore soul afore she'm gone! I never see'd such a mighty rushin'!"

A chorus of good-humored laughter greeted this witticism, which gave the company there present food for many jokes, for some considerable time. Sally now seemed in less of a hurry to get back to her pots and pans. A young man with fair curly hair, and eager, bright blue eyes, was engaging most of her attention and the whole of her time, whilst broad witticisms anent Jimmy Pitkin's fictitious grandmother flew from mouth to mouth, mixed with heavy puffs of pungent tobacco smoke.

Facing the hearth, his legs wide apart, a long clay pipe in his mouth, stood mine host himself, worthy Mr. Jellyband, landlord of "The Fisherman's Rest," as his father had been before him, aye, and his grandfather and great-grandfather too, for that matter. Portly in build, jovial in countenance and somewhat bald of pate, Mr. Jellyband was indeed a typical rural John Bull of those days—the days when our prejudiced insularity was at its height, when to an Englishman, he be lord, yeoman, or peasant, the whole of the continent of Europe was a den of immorality, and the rest of the world an unexploited land of savages and cannibals.

There he stood, mine worthy host, firm and well set up on his limbs, smoking his long churchwarden and caring nothing for nobody at home, and despising everybody abroad. He wore the typical scarlet waistcoat, with shiny brass buttons, the corduroy breeches, the grey worsted stockings and smart buckled shoes, that characterised every self-respecting innkeeper in Great Britain in these days—and while pretty, motherless Sally had need of four pairs of brown hands to do all the work that fell on her shapely shoulders, worthy Jellyband discussed the affairs of nations with his most privileged guests.

The coffee-room indeed, lighted by two well-polished lamps, which hung from the raftered ceiling, looked cheerful and cosy in the extreme. Through the dense clouds of tobacco smoke that hung about in every corner, the faces of Mr. Jellyband's customers appeared red and pleasant to look at, and on good terms with themselves, their host and all the world; from every side of the room loud guffaws accompanied pleasant, if not highly intellectual, conversation—while Sally's repeated giggles testified to the good use Mr. Harry Waite was making of the short time she seemed inclined to spare him.

They were mostly fisher-folk who patronized Mr. Jellyband's coffee-room, but fishermen are known to be very thirsty people; the salt which they breathe in, when they are on the sea, accounts for their parched throats when on shore. But "The Fisherman's Rest" was something more than a rendezvous for these humble folk. The London and Dover coach started from the hostel daily, and passengers who had come across the Channel, and those who started for the "grand tour," all became acquainted with Mr. Jellyband, his French wines and his home-brewed ales.

It was towards the close of September, 1792, and the weather which had been brilliant and hot throughout the month had suddenly broken up; for two days torrents of rain had deluged the south of England, doing its level best to

ruin what chances the apples and pears and late plums had of becoming really fine, self-respecting fruit. Even now it was beating against the leaded windows, and tumbling down the chimneys, making the cheerful wood fire sizzle in the hearth.

"Lud! did you ever see such a wet September, Mr. Jellyband?" asked Mr. Hempseed.

He sat in one of the seats inside the hearth, did Mr. Hempseed, for he was an authority and an important personage not only at "The Fisherman's Rest," where Mr. Jellyband always made a special selection of him as a foil for political arguments, but throughout the neighbourhood, where his learning and notably his knowledge of the Scriptures, was held in the most profound awe and respect. With one hand buried in the capacious pockets of his corduroys underneath his elaborately-worked, well-worn smock, the other holding his long clay pipe, Mr. Hempseed sat there looking dejectedly across the room at the rivulets of moisture which trickled down the window panes.

"No," replied Mr. Jellyband, sententiously, "I dunno, Mr. 'Empseed, as I ever did. An' I've been in these parts nigh on sixty years."

"Ay? you wouldn't recollect the first three years of them sixty, Mr. Jellyband," quietly interposed Mr. Hempseed. "I dunno as I ever see'd an infant take much note of the weather, leastways not in these parts, an' I've lived 'ere nigh on seventy-five years, Mr. Jellyband."

The superiority of this wisdom was so incontestable that for the moment Mr. Jellyband was not ready with his usual flow of argument.

"It do seem more like April than September, don't it?" continued Mr. Hempseed, dolefully, as a shower of rain-drops fell with a sizzle upon the fire.

"Ay! that it do," assented the worthy host, "but then what can you 'spect, Mr. 'Empseed. I says, with sich a government as we've got?"

Mr. Hempseed shook his head with an infinity of wisdom, tempered by deeply-rooted mistrust of the British climate and the British Government.

"I don't 'spect nothing, Mr. Jellyband," he said. "Pore folks like us is of no account up there in Lunnon, I knows that, and it's not often as I do complain. But when it comes to sich wet weather in September, and all me fruit a-rottin' and a-dyin' like the 'Guptian mother's first-born, and doin' no more good than they did, pore dears, save to a lot of Jews, pedlars and sich, with their oranges and sich like foreign ungodly fruit, which nobody'd buy if English apples and pears was nicely swelled. As the Scriptures say—"

"That's quite right, Mr. 'Empseed," retorted Jellyband, "and as I says, what can you 'spect? There's all them French devils over the Channel yonder a-murderin' their king and nobility, and Mr. Pitt and Mr. Fox and Mr. Burke a-fightin' and a-wranglin' between them, if we Englishmen should 'low them to go on in their ungodly way. 'Let 'em murder!' says Mr. Pitt. 'Stop 'em!' says Mr. Burke."

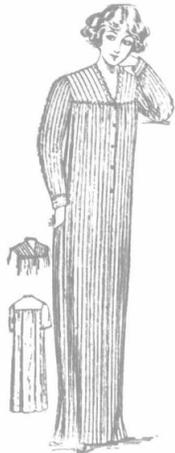
"And let 'em murder, says I, and be demmed to 'em," said Mr. Hempseed, emphatically, for he had but little liking for his friend Jellyband's political arguments, wherein he always got out of his depth, and had but little chance for displaying those pearls of wisdom which had earned for him so high a reputation in the neighbourhood and so many free tankards of ale at "The Fisherman's Rest."

"Let 'em murder," he repeated again, "but don't let's 'ave sich rain in September, for that is agin the law and the Scriptures which says—"

"Lud! Mr. 'Arry, 'ow you made me jump!"

It was unfortunate for Sally and her flirtation that this remark of hers should have occurred at the precise moment when Mr. Hempseed was collecting his breath, in order to deliver himself of one of those Scriptural utterances which had made him famous, for it brought down upon her pretty head the full flood of her father's wrath.

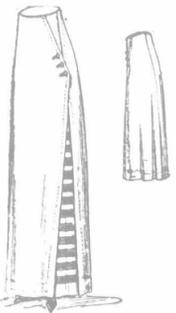
"Now, then, Sally, me girl, now then!" he said, trying to force a frown upon his good-humoured face, "stop



7245 Square Yoke Night Gown, 36 to 46 bust.



7248 Work or Studio Apron for Misses and Small Women, 14, 16 and 18 years.



7222 Three-Piece Skirt with Side Panels, 22 to 30 waist.



7238 Four-Piece Skirt, 22 to 30 waist.

Please order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Price, ten cents per pattern. Address, Fashion Dept., "The Farmer's Advocate," London, Ont.

that fooling with them young jackanapes and get on with the work."

"The work's gettin' on all ri', father." But Mr. Jellyband was peremptory. He had other views for his buxom daughter, his only child, who would in God's good time become the owner of "The Fisherman's Rest," than to see her married to one of these young fellows who earned but a precarious livelihood with their net.

"Did ye hear me speak, me girl?" he said in that quiet tone, which no one inside the inn dared to disobey. "Get on with my Lord Tony's supper, for, if it ain't the best we can do, and 'e not satisfied, see what you'll get, that's all."

Reluctantly Sally obeyed. "Is you 'specting special guests then to-night, Mr. Jellyband?" asked Jimmy Pitkin, in a loyal attempt to divert his host's attention from the circumstances connected with Sally's exit from the room.

"Aye! that I be," replied Jellyband, "friends of my Lord Tony hisself, Dukes and duchesses from over the water yonder, whom the young lord and his friend, Sir Andrew Pfoulkes, and other young noblemen have helped out of the clutches of them murderin' devils."

But this was too much for Mr. Hempseed's querulous philosophy.

"Lud!" he said, "what they do that for, I wonder? I don't 'old not with interferin' in other folks' ways. As the Scriptures say—"

"Maybe, Mr. 'Empseed," interrupted Jellyband, with biting sarcasm, "as you're a personal friend of Mr. Pitt, and as you says along with Mr. Fox: 'Let 'em murder!' says you."

"Pardon me, Mr. Jellyband," feebly protested Mr. Hempseed, "I dunno as I ever did."

But Mr. Jellyband had at last succeeded in getting upon his favourite hobby-horse, and had no intention of dismounting in any hurry.

"Or maybe you've made friends with some of them French chaps 'oo they do say have come over here o' purpose to make us Englishmen agree with their murderin' ways."

"I dunno what you mean, Mr. Jellyband," suggested Mr. Hempseed, "all I know is—"

"All I know is," loudly asserted mine host, "that there was my friend Peppercorn, 'oo owns the 'Blue-Faced Boar,' an' as true and loyal an Englishman as you'd see in the land. And now look at 'im!—'E made friends with some o' them frog-eaters, 'obnobbed with them just as if they was Englishmen, and not just a lot of immoral, God-forsaken furrin' spies. Well! and what happened? Peppercorn 'e now ups and talks of revolutions, and liberty, and down with the aristocrats, just like Mr. 'Empseed over 'ere!"

"Pardon me, Mr. Jellyband," again interposed Mr. Hempseed, feebly, "I dunno as I ever did—"

Mr. Jellyband had appealed to the company in general, who were listening awe-struck and open-mouthed at the recital of Mr. Peppercorn's defalcations. At one table two customers—gentlemen apparently by their clothes—had pushed aside their half-finished game of dominoes, and had been listening for some time, and evidently with much amusement at Mr. Jellyband's international opinions. One of them now, with a quiet, sarcastic smile still lurking round the corners of his mobile mouth, turned towards the center of the room where Mr. Jellyband was standing.

"You seem to think, mine honest friend," he said quietly, "that these Frenchmen—spies I think you called them—are mighty clever fellows to have made mince-meat so to speak of your friend Mr. Peppercorn's opinions. How did they accomplish that now, think you?"

"Lud! sir, I suppose they talked 'im over. Those Frenchies, I've 'eard it said, 'ave got the gift of the gab—and Mr. 'Empseed 'ere will tell you 'ow it is that they just twist some people round their little finger like."

"Indeed, and is that so, Mr. Hempseed?" inquired the stranger politely.

"Nay, sir!" replied Mr. Hempseed, much irritated, "I dunno as I can give you the information you require."

"Faith, then," said the stranger, "let us hope, my worthy host, that these clever spies will not succeed in upsetting your extremely loyal opinions."

But this was too much for Mr. Jellyband's pleasant equanimity. He burst into an uproarious fit of laughter, which was soon echoed by those who happened to be in his debt.

"Hahaha! hohoho! hehehe!" He laughed in every key, did my worthy host, and laughed until his sides ached, and his eyes streamed. "At me! hark at that! Did ye 'ear 'im say that they'd be upsettin' my opinions?—Eh?—Lud love you, sir, but you do say some queer things."

"Well, Mr. Jellyband," said Mr. Hempseed, sententiously, "you know what the Scriptures say: 'Let 'im 'oo stands take 'eed lest 'e fall.'"

"But then hark'ee, Mr. 'Empseed," retorted Jellyband, still holding his sides with laughter, "the Scriptures didn't know me. Why, I wouldn't so much as drink a glass of ale with one o' them murderin' Frenchmen, and nothin' 'd make me change my opinions. Why! I've heard it said that them frog-eaters can't even speak the King's English, so, of course, if any of 'em tried to speak their God-forsaken lingo to me, why, I should spot them directly, see!—and forewarned is forearmed, as the saying goes."

"Aye! my honest friend," assented the stranger cheerfully, "I see that you are much too sharp, and a match for any twenty Frenchmen, and here's to your very good health, my worthy host, if you'll do me the honour to finish this bottle of mine with me."

"I am sure you're very polite, sir," said Mr. Jellyband, wiping his eyes which were still streaming with the abundance of his laughter, "and I don't mind if I do."

The stranger poured out a couple of tankards full of wine, and having offered one to mine host, he took the other himself.

"Loyal Englishmen as we all are," he said, whilst the same humorous smile played round the corners of his thin lips—"loyal as we are, we must admit that this at least is one good thing which comes to us from France."

"Aye! we'll none of us deny that, sir," assented mine host.

"And here's to the best landlord in England, our worthy host, Mr. Jellyband," said the stranger in a loud tone of voice.

"Hip, hip, hurrah!" retorted the whole company present. Then there was loud clapping of hands, and mugs and tankards made a rattling music upon the tables to the accompaniment of loud laughter at nothing in particular, and of Mr. Jellyband's muttered exclamations:

"Just fancy me bein' talked over by any God-forsaken furriner!—What?—Lud love you, sir, but you do say some queer things."

To which obvious fact the stranger heartily assented. It was certainly a preposterous suggestion that anyone could ever upset Mr. Jellyband's firmly-rooted opinions anent the utter worthlessness of the inhabitants of the whole continent of Europe.

(To be continued.)

Is It Love?

E. L., in the Spectator, London.
Is it love, is it hate, this clasp by the sea of land,
Entangling, swaying, revolving, escaping on to the strand,
Escaping, yet never escaped, never utterly gone from reach,
Which is it? I fain would know, as I watch at hand,
Here on the beach.

To-night they seem weary of warfare, these ancient foes,
Weary of love as of hate, of eddying kisses or blows,
Even as we, as I, grow weary of eddying thought,
Of the waves of the mind, of the soul, and its bubble-like woes,
Rising unsought.

The sea's mood to-night has changed, has grown simple and mild,
It draws in the land to its breast as a nurse draws a child,
It sings it a song wrought out of the moan of the beach,
Of the sigh of the wind, of the tales of the waste and the wild,
Older and stranger than speech.

TEA SETS

We have just received from Europe a shipment of Austrian China Tea Sets. The Tea Set contains 21 pieces, and would retail in the stores from \$2.50 to \$3.50, depending on locality. Present subscribers can secure one of these beautiful sets for sending in

Only Two New Subscribers

to THE FARMER'S ADVOCATE at \$1.50 each.

Send in the new names as soon as possible.

THE WILLIAM WELD CO., LTD.
London, Ontario

Joseph Rodgers & Sons, Limited
SHEFFIELD ENGLAND

Avoid Imitations of Our

CUTLERY

By Seeing That This



EXACT MARK IS ON EACH BLADE

Sole Agents for Canada

JAMES HUTTON & CO. Montreal

EASTERN ONTARIO Live Stock & Poultry Show

WILL BE HELD AT

Ottawa, Jan. 16th to 19th, 1912

EXHIBITS CONSIST OF

HORSES. DAIRY AND BEEF CATTLE. SHEEP. SWINE. SEEDS AND POULTRY.

\$11,000.00 in Prizes

PRACTICAL LECTURES will be given on subjects relating to the various classes of live stock; also to seeds, poultry and alfalfa. **Single fare rates on the railways.** For programme of judging and lectures, apply to the Secretary.

On Friday afternoon, Jan. 19, 1912, there will be held an Auction Sale of 50 Pure-bred Beef and Dairy Cattle

PETER WHITE, Pres., Pembroke D. T. ELDERKIN, Sec'y, Ottawa.

The Canadian Apple-Growers' Guide
By LINUS WOOLVERTON, M. A.

This book is invaluable to Apple-Growers, as it deals thoroughly with the work—Planting, Culture, Harvesting and Marketing, etc. The price of the book is \$2.25, postpaid, but for a short time we are making a special rate with renewal subscriptions to THE FARMER'S ADVOCATE.

The offer is a year's renewal of your subscription and a copy of The Canadian Apple-Growers' Guide for \$2.75. The regular price of the two is \$3.75.

If you send in two new names with a remittance of \$3.00 covering the same, the book will be sent as a premium. **ORDER AT ONCE.**

THE WILLIAM WELD CO., LIMITED, London, Ontario

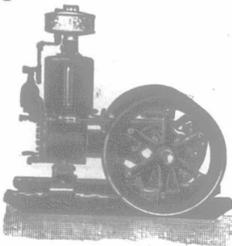
TRAPPERS AND SHIPPERS
We Pay Highest Market Prices for all kinds of FURS.
We guarantee you honest and liberal assortment, and prompt payments. References, any bank or mercantile house in America. You will be money in pocket if you ship your Furs to us. Fur List giving prices on all grades of furs mailed free.
Traugott Schmidt & Sons, Detroit, Mich.
Established 1853. Capital and Surplus, \$400,000

You don't have to be an engine expert to run a

STICKNEY Gasoline Engine

It is so simple that it almost runs itself. The engine that any man can depend on always, for all kinds of work about the farm

Our catalogue, sent free, shows why the STICKNEY is the best engine for YOU. Write:



**Ontario
Wind
Engine
&
Pump
Co., Ltd.**
Winnipeg
TORONTO
Calgary

Your Appearance



We mean your looks, the condition of your skin, hair, scalp, etc. Is it satisfactory? If not, why not? We make a specialty of treating skin troubles of all kinds, and invite your communications. Consultation free by mail. Twenty years' experience. Don't go about with a pimpled, blotched or discolored face when you can have your trouble cured at home at trifling cost.

Superfluous Hair

Moles, etc., permanently removed by the only satisfactory treatment—Electrolysis. Booklet "F" mailed free.

Miscott Dermatological Institute
61 College St., Toronto, Ont.

FARMS FOR SALE

Choice stock, grain and fruit farms for sale. We specialize in high-class properties, and aim at offering good value only. We have a special department devoted to listing and selling Ontario farms. Write for list.

UNION TRUST CO., LTD.
Real-estate Department,
201 Temple Building, Toronto.

84-acre Farm for Sale

FARM FOR SALE—84-acre farm, clay loam, belonging to the estate of the late William Farmer, 1/2 mile from the Village of Ancaster, 7 miles from Hamilton; school, churches and electric railway at Ancaster. This farm is in a high state of cultivation; hay, straw and grain, excepting wheat, being fed back to the land, with 10 acres of summer-fallow for the past 25 years; well drained and watered, hydraulic ram supplying both house and barns, 10 acres fall wheat, 10 acres plowed, 20 acres hardwood bush and 8 acres of orchard. The barns are in first-class shape, and consist of large barn, 84 ft., horse stable, cow stable, sheep pen, implement barn, root cellar, hen-house and pigpen, with accommodation for 80 to 100 pigs, cement floor. The house is a 7-roomed stone cottage, with good cellar, hard and soft water, telephone, woodshed or workshop, all under one roof. Price, \$10,000. This is a good farm, and worth all we are asking. Apply to

THOS. W. FARMER, Ancaster, Ontario

Plank Barn Frames

as designed by me are cheapest and strongest in existence. Expert advice on all kinds of farm buildings, ventilation, etc. When in doubt write:

ALF. A. GILMORE, The Farmer's Architect,
Box 189, Huntingdon, Que.

When writing mention this paper

The Calf Path.

By Sam Walter Foss.

One day through the primeval wood
A calf walked home as good calves should,
But made a trail all bent askew,
A crooked trail, as all calves do,
Since then three hundred years have fled,
And I infer the calf is dead.

But still he left behind his trail,
And thereby hangs my moral tale.
The trail was taken up next day
By a lone dog that passed that way,
And then a wise bell-wether sheep
Pursued the trail o'er vale and steep;
And drew the flock behind him, too,
As good bell-wethers always do,
And from that day, o'er hill and glade,
Through those old woods a path was made.

And many men wound in and out,
And dodged and turned and bent about,
And uttered words of righteous wrath
Because 'twas such a crooked path;
But still they followed—do not laugh—
The first migrations of that calf,
And through the winding wood-way
stalked,
Because he wobbled when he walked.

This forest path became a lane
That bent and turned and turned again;
This crooked lane became a road,
Where many a poor horse with his load
Toiled on beneath the burning sun,
And travelled some three miles in one,
And thus a century and a half
They trod the footsteps of that calf.

The years passed on in swift feet,
The road became a village street;
And this, before men were aware,
A city's crowded thoroughfare.
And soon the central street was this
Of a renowned metropolis!
And men two centuries and a half
Trod in the footsteps of that calf.

Each day a hundred thousand rout
Followed the zigzag calf about,
And o'er his crooked journey went
The traffic of a continent.
A hundred thousand men were led
By one calf near three centuries dead.
They followed still his crooked way,
And lost one hundred years a day;
For thus such reverence is lent
To well-established precedent.

A moral lesson this might teach
Were I ordained and called to preach;
For men are prone to go it blind
Along the calf-paths of the mind,
And work away from sun to sun
To do what other men have done.

They follow in the beaten track,
And out and in, and forth and back,
And still their devious course pursue.
To keep the path that others do.
They keep the path a sacred groove,
Along which all their lives they move;
But how the wise old wood-gods laugh,
Who saw the first primeval calf.
Ah, many things this tale might teach—
But I am not ordained to preach.

Clouds.

My Fancy loves to play with clouds
That hour by hour can change Heaven's
face;
For I am sure of my delight,
In green or stony place.

Sometimes they on tall mountains pile
Mountains of silver, twice as high;
And then they break and lie like rocks
All over the wide sky.

And then I see flocks very fair;
And sometimes, near their bodies white,
Are small, black lambs that soon will
grow
And hide their mothers quite.

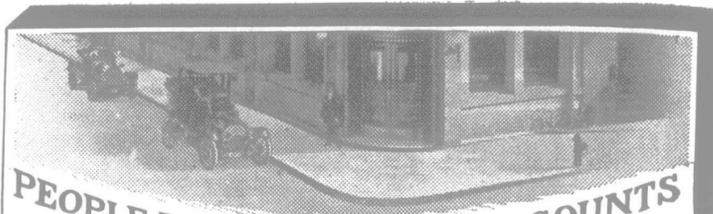
Sometimes, like little fishes, they
Are all one size, and one great shoal;
Sometimes they like big sailing-ships
Across the blue sky roll.

Sometimes I see small cloudlets tow
Big, heavy clouds across those skies—
Like little ants that carry off
Great motils ten times their size.

Sometimes I see at morn bright clouds
That stand so still! they make me
stare;

It seems as if they had trained all night
To make no motion there.

—William H. Davies.



unconsciously acquire a keen desire to add to their balance. This is the psychology of saving. It does not necessarily imply that a person becomes close-fisted or that one need deny oneself of anything.

UNDOUBTEDLY there is a great satisfaction in seeing a steadily growing balance in your favor as shown by the savings pass-book and it becomes a positive pleasure to make each deposit which moves the figures up a notch in the credit column.

With even fifty or a hundred dollars at your disposal in an emergency, you may feel extremely comfortable, and a like amount will often enable you to seize an opportunity at which your less provident friend can only cast longing eyes.

THE MAIN THING IS TO START. BEGIN NOW.

Our depositors receive $3\frac{1}{2}\%$ compound interest.

The Ontario Loan & Debenture Company

A. M. SMART, MANAGER

LONDON - ONT.
Corner Dundas Street and Market Lane

PEERLESS - PERFECTION



MEANS FENCE PROTECTION

Peerless Wire Fence does not serve only as a mere boundary line for your farm and pastures but gives real fence service as a permanent barrier to trespassing and wandering of stock.

You Should Fence Your Land With PEERLESS

We use high grade fence wire well galvanized. The joints are united by the non-slippable Peerless Lock, making a fence that will stand up against the most severe and sudden shocks without damage. The horizontal wires are all crimped, making ample protection for contraction and expansion, keeping the fence always tight even under extreme variations of temperature.

Write for our Illustrated Booklet at Once

We also manufacture a wonderful line of poultry fencing and farm gates. Agencies almost everywhere. Agents wanted in all unassigned territory.

The Banwell Hoxie Wire Fence Co., Ltd.
Winnipeg, Man., Hamilton, Ont.

GOSSIP.

Part 2, of Volume 57 of Coates' Herdbook (the British Shorthorn Herdbook), cows with produce, to December 31st, 1910, has been issued from the office of the Shorthorn Society. This section of Volume 57 contains 985 pages of pedigree records, while part 1, bulls, issued in June last, contained 417 pages.

The name of the wagon manufacturing firm, Tudhope-Knox Co., Ltd., Orillia, whose advertisement appears in "The Farmer's Advocate," has been changed to Tudhope-Anderson Company. A specialty is wide-tire steel wheels, which are claimed to be easier on teams and roads than the ordinary narrow wheels, and more convenient to load. Look up the advertisement and write for catalogue.

STOCK SALE DATES CLAIMED.

January 17th.—John Racey, Lennoxville, Que.; Shorthorns and Berkshires.
February 7th and 8th.—At Union Stockyards, Toronto; consignment sale of Shorthorns.
February 9th.—James Russell, Richmond Hill, Ont.; Shorthorns, dispersion.
Day after annual meeting of Holstein-breeders' Association.—At Eglinton, Ont., on Yonge street, north of Toronto; consignment sale of Holsteins.
March 6th.—Provincial pure-bred cattle sale, in Winter Fair Building, Guelph, Ont.
April 3rd.—Holstein-breeders' Club; second annual consignment sale, Belleville, Ont.

United States Government Meat Inspection.

Interesting information about the United States Federal meat inspection is contained in the annual report made to Secretary Wilson by Dr. A. D. Melvin, Chief of the Bureau of Animal Industry of the United States Department of Agriculture. During the fiscal year, ending June 30th, the inspection was conducted at 936 establishments in 255 cities and towns, both of these numbers being the highest in the history of the service. The number of animals inspected before slaughter was 53,002,304, comprising 7,807,712 cattle, 2,214,127 calves, 29,920,261 hogs, 13,005,822 sheep, and 54,382 goats. There were inspected after slaughter 7,781,030 cattle, 2,219,908 calves, 29,916,363 hogs, 13,005,502 sheep, and 54,145 goats; a total of 52,976,948 animals. Of these there were condemned for disease or other unwholesome condition 117,383 entire carcasses and 1,009,672 parts of carcasses, making a total of 1,127,055 carcasses and parts condemned. Tuberculosis was the cause of by far the greater part of these condemnations, nearly 47 per cent. of condemnations of adult cattle and over 96 per cent. of condemnations of hogs being due to this disease. The total number of animals inspected was 7½ per cent. greater than during the preceding year.

The meats and meat food products canned, cured, or otherwise prepared under official inspection amounted to nearly seven billion pounds, of which there were condemned on inspection subsequent to the inspection at time of slaughter over 21 million pounds.

Inspection certificates were issued for export of meats and meat food products aggregating 975,066,006 pounds, this being an increase of over 150 million pounds compared with 1910.

Laboratory examinations were made of 25,818 samples with a view to detecting prohibited preservatives, prohibited coloring matter, adulterants, or other unwholesomeness, and to determine the quality of salt, spices, condiments, etc., and the sanitary condition of water supplies. It was found that the use of prohibited preservatives and coloring matters was not practiced at inspected establishments.

The Federal inspection is applied only to meats and meat food products prepared at establishments that do an interstate or export business, but the Government inspects the entire product of such establishments regardless of whether it is intended for local, interstate, or export trade. The provisions of the meat-inspection law do not apply to animals slaughtered by farmers on the farm, or to retail butchers and dealers. Establishments doing business entirely within a State cannot be reached by the Federal inspection, and must be looked after by the State or local authorities.

TRADE TOPIC.

HOW TO SAVE FEED.—A marked difference exists between individual animals as regards the returns which they yield for the feed consumed—some have greater digestive powers than others. The power of assimilation of the one animal is superior to that of the other, and the advantage of the better type of animal lies in its ability to produce more flesh or milk from a unit of feed than could the poorer one. It is also an established fact that young growing animals not only make actually larger gains than more mature ones, but likewise more economical gains. That pure-breed animals are more economical to keep than scrubs is well known. Few farmers can boast of wholly pure-bred herds, but every farmer can greatly increase the milk yield of his cows. The manufacturers of Pratt's Animal Regulator claim that it will increase the economical utilization of feed, protect cattle from disease and prove a great help to dairy profits if used daily. They state that it is a most efficient tonic and aid to thorough digestion and assimilation, and that it has been used regularly for many years by some of the successful farmers, breeders and dairymen in the United States and Canada.

QUESTIONS AND ANSWERS. Miscellaneous.

CASEIN AND CASEIN TESTS.

1. Is there any system in vogue for the testing of milk for both fat and casein that is being successfully carried on in any one or more cheese factories in Ontario?

2. Can you give the relative value of fat and casein for the manufacture of cheese?

3. Could you give any idea as to the cost to the patrons of conducting such a test?

4. Is the fat test a fair way for the paying of milk for the manufacture of cheese?

J. N. T.

Ans.—1. The fat in milk has been successfully tested in Ontario cheese factories for a number of years. During the season of 1911 the Ontario Agricultural College successfully tested the casein in milk at ten cheeseries of the Province in an experimental way. From these experiments we conclude that casein can also be tested at factories, where suitable apparatus is provided and a competent man is employed to do the work. The casein tester used by us is known as the Hart Casein Tester. It can be purchased in six and twelve bottle sizes, costing, respectively, \$30 and \$40. It may be operated by hand or by electric motor. We have used both methods with satisfaction in the O. A. C. Dairy Department.

2. For the manufacture of cheese, we consider fat and casein in milk to be of equal value, pound for pound.

3. We have not as yet made any calculations as to the cost of conducting casein tests at cheese factories. The cost for fat testing is pretty well known, and averages about one dollar per patron for the season.

Dr. E. B. Hart, of the Wisconsin Experimental Station, and inventor of the Hart Casein Test, has made the following estimates as to cost of testing casein in Wisconsin cheese factories. They are probably, approximately, correct for Ontario. However, they are given with reserve for Ontario, until the matter has been more fully investigated.

"In a factory having 30 patrons, and making casein tests twice a month, there would be 720 tests to make in a year. The cost of reagents for these would be \$2.52. Adding the price of the tester, the total cost for the first year would be \$42.50, but as a pound of chloroform and a quart of 10-per-cent. acetic acid are furnished with the tester, the cost for the first year would be less than \$42, including the tester. This would make the cost of operation for each succeeding year about \$2.50. For a five-year period, the cost of tester and chemicals would be \$10.52 per year, including the first cost of the tester."

"Labor, and breakage of glassware, should also be considered, as for any test. At Sheboygan Falls, during July and August, only one bottle was broken in making over 100 tests, so that, barring carelessness, the cost for breakage would be almost nothing."

"To run 30 tests, it will take a cheesemaker from 1½ hours to 3 hours, depending upon the skill of the maker, and local conditions. More time might be required if the composite samples had to be warmed or cooled, but if properly cared for, very much of this extra labor would be unnecessary. Two hours would be a fair average of the time required to test the 30 samples. At \$2 per day, the cost of labor would be less than \$1 per month, or \$12 per year. Counting reagents and labor, the cost of operating the test would be about \$15 per year. Adding the initial cost of the machine, \$40, the total annual cost for the five-year period would be about \$23 per year."—Bulletin 197, Wisconsin Station.

4. There is a difference of opinion as to whether or not milk fat is a fair measure of the cheese value of milk. My own opinion is that fat alone is not a correct measure of the relative cheese values of milk. It is much better than paying by weight of milk alone, but both casein and fat should be tested if we wish to pay for cheese milk on a just basis.

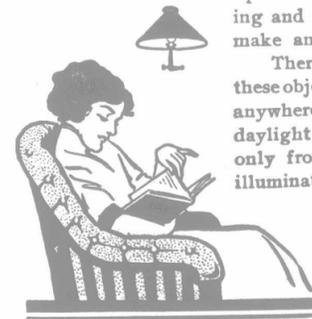
H. H. D.

ACETYLENE

Lightens Housework

I guess you sometimes get pretty sick of those old oil lamps, don't you? Unevenly trimmed wicks—dirty chimneys—the oily smell that clings to your hands every time you touch a lamp—the constant danger that one will be upset—not to mention the dirty job of cleaning, trimming and filling every day—these things are enough to make any woman long for a better lighting system.

There is a light which is free from every one of these objections—a light which may be had in any home, anywhere—a light which is whiter, softer, nearer to daylight than any other—a light which actually costs only from ½ to ¾ as much as coal oil for the same illumination.



It's ACETYLENE.

Would you like to know how to install Acetylene, how to use it, and how much it costs? Then write us,—we'll be glad to tell you.

7

ACETYLENE CONSTRUCTION CO., LIMITED

604 POWER BLDG., MONTREAL.
Cor. McTavish and 6th Sts., Brandon, Man. — 422 Richards St., Vancouver.

Judge

Quaker Oats by the flavor. Taste tells you the difference when you get the cream of the oats.

Choice oats are sifted 62 times to pick out the rich, plump grains. We get but 10 pounds of Quaker Oats from a bushel. These choice grains, when prepared by our process, supply the utmost in oatmeal.

This richness and flavor, found in no other brand, has made Quaker Oats the world's breakfast.

It is worth your getting. For Quaker Oats, despite this quality, costs but one-half cent per dish.

Quaker Oats

Family size, with a piece of china beautifully decorated, 25c.
Regular size for city trade, 10c.

Except in extreme West

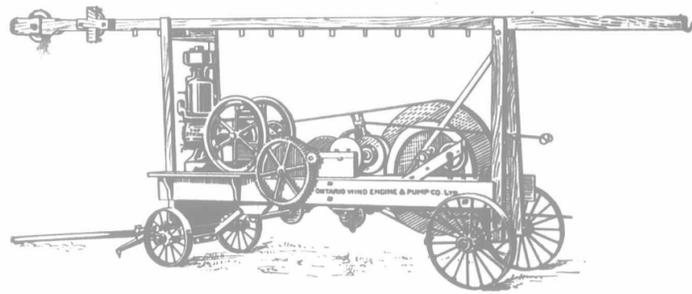


Look for the Quaker trademark on every package.

The Quaker Oats Company

PETERBOROUGH, ONT.

This Well-Drilling Machine



Earns Big Money for the Man Who Owns One

Why not be the "well-driller" in your neighborhood. The driller pays for itself very quickly, then keeps on earning easy money for you. Drills either deep or shallow wells in any kind of soil or rock. Get our free proposition and full particulars before your neighbor gets busy. Write today.

ONTARIO WIND ENGINE & PUMP CO., LIMITED
Winnipeg TORONTO Calgary

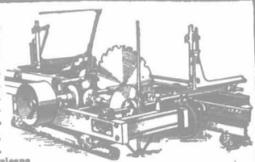
We supply Well Casings and General Deep Well Supplies or all kinds. Write for prices.

Money in Your Wood Lot

Turn your wood lot into lumber with an "American" Saw Mill. What you don't need yourself sell at present high prices. Cut your neighbor's trees. Keep your farm engine and teams busy this winter with an "American" Mill. "Making Money Off the Wood Lot" is a book you ought to get. Write nearest office for it today.

American Saw Mill Machinery Co.
115 Hope St., Hackensack, N.J.

1564 Terminal Bldg., N.Y. Chicago, Savannah, New Orleans



QUESTIONS AND ANSWERS. Miscellaneous.

CEMENT—HOLE IN TEAT.

1. Will you please tell me how much cement it takes for one cubic yard, making it one to five?

2. I have a four-year-old cow with a hole in the side of the teat. Is there any remedy?

D. M. K.

Ans.—1. A little over a barrel of cement. To be exact, 1½ barrels.

2. It is doubtful whether you can succeed in closing the hole while the cow is milking. It may close during her dry period.

FERRETS.

Kindly state information in breeding and raising ferrets, as to:

1. The time of year to be bred.
2. How long they carry their young.
3. How they should be fed and cared for.

ONE INTERESTED.

Ans.—The ferret should be kept in dry, clean, well-ventilated hutches, and fed twice daily on bread, milk and meat. They are fond of rabbit's meat, rats, etc. If used to hunt rabbits they should be muzzled in order to prevent their killing the rabbit and then eating their fill and going to sleep in the hole. The female brings forth two broods annually of from six to nine in a brood. Someone who has had experience with ferrets might write us an interesting article upon their habits, management and utility.

WHEN TO BUY STOCKERS.

At what time, from March 15th to April 30th, would you consider best time to buy stockers, about 800 lbs. weight, considering one has feed but places market value on same?

F. W.

Ans.—This depends somewhat upon the price of feed. When feed is cheap early buying would likely be profitable. There would be something to gain in the better choice possible at this period, and, besides, the use of the extra feed on the farm would add to its fertility. Of course, when feed is cheap or dear to one man it is usually much the same to his neighbor, and therefore one cannot generalize too broadly, for high cost of feed tends to depress prices of stock, and vice versa. One should watch local opportunities. Broadly speaking, however, it is probably true that there is generally more money in feeding stock when feed is cheap than when it is dear. Indeed it sometimes pays to sell some hay in seasons when it is abnormally high.

LAW COSTS AND BILLS.

1. What will it cost to issue a writ in Bruce County and serve in Toronto?
2. Can a lawyer charge more than \$1, by law, for writing a letter for his client?
3. Must a lawyer give a lump sum as his bill, or must he itemize his account?

BRUCE.

Ans.—1. Much depends upon the nature of the writ, and the court out of which it is to be issued. We could not give even an estimate without considerable more information being furnished us regarding the case; for instance, the kind of relief desired, the amount involved, the number of defendants, etc.

2. Yes, in many cases; the fee proper to be charged being regulated by the circumstances of the particular case.

3. He may render his account in either way; but if his client desires he must furnish an itemized bill.

LANDLORD AND TENANT.

1. A takes B's farm on shares. Can A claim half of the straw?
2. If so, can he sell and draw it off the farm?
3. A rents B's farm, the writings being drawn between the parties interested, each party signing his name and having one witness. B gives A permission to do fall's plowing. A does so, and now has to feed his team over winter. A also lost his winter's work by staying to plow. Can A compel B to leave said farm on date appointed?
4. If B ruses bargain, what claim has A against him?

SUBSCRIBER.
Quebec.

Ans.—1. Yes, if their sharing generally is equal.

2. Yes, provided there is nothing to the contrary in their agreement.

3. He is legally entitled to do so, if necessary, and provided the "writings" are regular and adequately cover the point.

4. In the event of B's failing to carry out his contract, A could insist upon specific performance thereof, or damages for the breach, or possibly both.

GOSSIP.

DAIRY AND BEEF CATTLE AT AUCTION.

On Friday afternoon, January 19th, the last day of the Eastern Ontario Live-stock, Dairy and Poultry Show at Ottawa, there will, as advertised in this issue, be fifty head of pure-bred beef and dairy cattle sold by auction; a rare opportunity to secure good stock at the buyer's own price.

H. Smith, Springhurst Farm, Hay P. O., Ont., writes: The quality of the young Shorthorn bulls I am offering in my advertisement in this issue of "The Farmer's Advocate," may be gathered from the fact that two of them were in my calf herd that won over the Carpenter & Ross herd of Ohio, at London, the only place where I exhibited, and as the Ohio herd have since won the calf herd at the Chicago International, the Springhurst offering must have some quality. Others, we think, are fully as good as those we exhibited, and nearly all are from good milking cows.

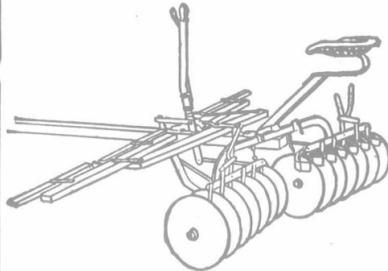
HIGH-PRICED SHIRES.

The auction sale on December 13th and 14th, of Shire horses and mares, property of Truman's Pioneer Stud Farm, at Bushnell, Ill., was a great success, exceedingly good prices being obtained for the bulk of the offering, the average for the fifty-four head sold being \$921. The highest price of the sale was \$6,200, for the four-year-old mare, Billingborough Belle, bought by J. J. Mitchell, Wisconsin. The five-year-old mare, Bollain Lady, went to the same buyer, at \$4,500. The three-year-old filly, Coldham Charm, brought \$4,000, and five others sold for prices ranging from \$1,000 to \$2,700.

TRADE TOPIC.

PROFIT IN FERTILIZERS.—Less than a decade ago, the use of commercial fertilizers was confined very largely to the Maritime Provinces. To-day, their use is spreading over Quebec, Ontario, and British Columbia, and even in the Middle West quite a number of farmers find it profitable to use fertilizers. The cause of this increase in the use of fertilizers is not difficult to understand. Farmers, particularly in the older sections, now realize that maximum crops must be grown if farming is to be a profitable business. Experimental work, carried out both by our Agricultural Colleges and Experimental Stations, and also by enterprising farmers, in conjunction with the Dominion Agricultural Offices of The Potash Syndicate, has shown the profit to be derived by the judicious application of fertilizers, and is making their use more and more a factor in Canadian agriculture. During the last two winters a number of meetings have been attended by representatives of the Potash Syndicate, and this important question fully discussed. So great has the interest now become that numerous requests are already being received to have similar meetings held during the coming winter. So that, in order to have dates arranged as soon as possible, and to prevent disappointment, it is advisable for applications to be sent as soon as possible. These meetings are attended without any cost whatever. Further information and copies of free bulletins on this important subject may be had by writing to German Potash Syndicate (formerly known as The Dominion Agricultural Offices of The Potash Syndicate), 1105 Temple Building, Toronto, Ont.

The "Bissell" has the capacity



Because of its capacity, time after time the "Bissell" Disk Harrow has done DOUBLE THE WORK in field competition against all competitors, under the same conditions.

The special shape of the "Bissell" plates cause them to enter the ground naturally and TURN THE SOIL EASILY. Steel scraper blades meet the

Disk Plates chisel fashion and keep the plates clean of trash by movable clod irons—the only Harrow that has this feature.

Anti-friction balls (40) are used in the bearings, on every "Bissell" Disk.

The seat is placed back on the Harrow so that the weight of the driver when riding balances over the frame and REMOVES NECK WEIGHT. The hitch is well back, MAKING LIGHT DRAUGHT.

Search the Continent over and you will not find a Harrow with such cutting capacity, easy draught and correct proportions as the "Bissell." A postcard to Dept. W will bring you a free catalogue.

T. E. BISSELL CO., LTD., ELORA, ONT.

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

BARRED ROCK and Rhode Island Red Cockerels. Prices very reasonable. W. W. Dods, Alton, Ontario.

Bronze Turkeys—Won at Guelph two first, second, third and two fifths in a class of 40 birds. Choice Toms, weigh 24 to 27 lbs. each, good enough for any show. Chas. Gould, Glencoe, Ontario.

Bronze Turkeys—Choice young birds for sale. My strain have won "championship" at Guelph Winter Fair the past nine years. W. J. Bell, Angus, Ontario.

CHOICE WHITE WYANDOTTES and Rose-comb Rhode Island Reds from prizewinning strains. Satisfaction guaranteed. Alex. McTavish, Chesley, Ont.

FOR SALE—Pure-bred Mammoth Bronze turkeys, fine heavy birds; bred from first-prize-winning stock. Also choice Partridge Wyandotte cockerels. R. G. Rose, Glanworth, Ontario.

FOR SALE—Pure-bred White Leghorns, cockerels and pullets. Eggs for hatching in season. Robt. Hughes, Ideal Poultry-yards, Collingwood, Ontario.

MAMMOTH BRONZE TURKEYS—Large, vigorous birds for sale. Apply to Roy Hammond, Port Dover, Ontario.

PURE-BRED Bronze Turkeys, heavy toms and hens. Prices reasonable. C. A. Powell, Arva, Ontario.

POULTRY SUPPLIES—Send to Geo. Keith & Sons 124 King St. E., Toronto, for their catalogue.

ROSE-COMB BROWN LEGHORNS—Prices reasonable. Write me your wants. W. M. Sproule, Westbrooke, Ontario.

S. C. WHITE LEGHORNS—Big vigorous cockerels cheap, from heavy winter layers. B. W. Linscott, Brantford.

218 AND 220 EGGS PER HEN in one year. 50 B. P. Rock and White Wyandotte Cockerels, bred direct from these hens. 25 S.-C. White Leghorn Cockerels; grand breeders. Write to-day for illustrated catalogue and prices. It's free. L. R. Guild, Box 16, phone 24, Rockwood, Ontario.

WANTED—At the Delhi Tannery, Custom Robe and Fur Tanning. Horse and cattle hides make best Robes and Coats when properly tanned and made up right. Send them to me and have them dressed right, and you will be well satisfied.

B. F. BELL, Delhi, Ont.

SEED GRAIN

If you can sell good clean oats that will test 35 lbs. or more, send ½ lb. sample. State quantity and we shall submit our best offer, f.o.b. your nearest station, and supply bags.

GEO. KEITH & SONS
124 King Street E. TORONTO, ONT.

When Writing Advertisers, Please Mention "The Farmer's Advocate."



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

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

AGENTS WANTED—We have an unusual premium proposition; every person will be interested. No outlay necessary. Apply: B. C. I. Co., Ltd., 228 Albert St., Ottawa, Ont.

BELTING FOR SALE—Over 1,000,000 feet in rubber, canvas, etc.; all sizes and lengths, at 25 to 50% less than regular prices; also large quantities of iron pipe, fencing, etc. Catalogues sent on request. The Imperial Waste & Metal Co., 20 Queen St., Montreal.

CREAM WANTED at the Guelph Creamery. Business run on the co-operative plan. Write for particulars, or call and see us. Stratton & Taylor.

FARMS FOR SALE—30 farms for sale, all sizes, Halton, Peel and Wellington Counties. Write for catalogue. J. A. Willoughby, Real Estate, Georgetown.

HIRED HELP FOR 1912—Married man, age 28, very little experience, with small, well-behaved family, trustworthy and industrious, seeks permanent situation with good farmer; wife can also assist. Also brother of the above, single, age 25, seven years' experience, good with all kinds of stock. Address, with full particulars, to Box G, "Farmer's Advocate," London.

SCOTCH FARM HAND, with Canadian experience, wants situation on stock farm; capable and reliable; married. Apply Box A, Farmer's Advocate, Toronto.

VALUABLE FARM FOR SALE—For sale at once, 128 acre farm, clay loam soil, Ancaster Township, Wentworth County, 6½ miles from Hamilton, convenient to churches, school, electric railway, post office and Ancaster Village. Rural telephone in house, 2 good wells and never-failing spring. 122 acres under cultivation, and about 5 acres of orchard. Good bank barn and other farm buildings; 9-roomed good frame dwelling house, with pleasant surroundings. 16 acres of plowing done this year. Farm suitable for stock-raising, fruit-growing, dairying or general farming. Apply: W. M. McClemont, Barrister, Room 708 Bk. of Hamilton Bldg., Hamilton, Ont.

WANTED—Several good Hardwood Bush Lots. State all particulars and lowest cash price. Box O. S., "Farmer's Advocate," London, Ontario.

WANTED—Bright young man or woman as correspondent in each town. \$5 to \$50 paid for single item of information. Mercantile Assurance Association, Box 317, Halifax, N.S.

WILL SELL OR EXCHANGE FOR FARM, two story brick business building in Ridgetown, Ont.; also ten-room dwelling (with all conveniences), two lots, lawn and good barn. Address: 559 Yonge St., Toronto.

\$7,000 BUYS 100 ACRES—The east half lot 20, 4th con. West Chinguacousy, County of Peel, 100 acres with the following buildings: frame house, 8 rooms, with woodshed, hard and soft water; bank barn, 8x55, with first-class driving house 60x18; two silos and ice house adjoining dairy house. This is an ideal dairy, grain and stock farm; 7 acres wheat, 5 acres alfalfa, 32 acres fall plowing, balance in grass. There is also an artesian well, which supplies stock with an abundance of water. All the grain and hay, besides what has been purchased for the last twenty years, has been fed on the place. Price, \$7,000. Possession given April 1st, 1912. 24 lots to school. Allow post office, 24 lots. 26 miles from Toronto; 7 miles to Brampton; Cheltenham, 4 miles. J. A. Willoughby, Georgetown, Ontario.

200 ACRE FARM FOR SALE—First-class property. For particulars apply to Joseph Robson, Vanneck, Ontario.

GOSSIP.

THOROUGHBREDS SELL HIGH.

At an auction sale of Thoroughbred horses, at Newmarket, England, the first week in December, high prices were realized. The top price, \$18,375, was obtained for the three-year-old chestnut colt, Runnymede, by Voter, and \$15,750 for the black three-year-old filly, Rose Verte, by Elf, while twenty-one others sold at prices ranging from \$5,250 to \$14,700.

CLYDESDALES OF SIZE AND QUALITY.

W. H. Mancell, of Fletcher P. O. and Station, on the M. C. R., Kent Co., west of London, Ont., is just now showing some particularly nice things in Clydesdale stallions, mares and fillies, imported and Canadian-bred. Mr. Mancell is particularly fond of quality in the underpinning, and the big stock with which his stables are filled certainly have quality enough and to spare. This, with the big size and good breeding of his Clydes, makes it a temptation for visitors to buy, especially if they are looking for show material. Prominent among the stallions is the London, Ont., champion, King's Cupbearer (imp.) [9935], a brown four-year-old, sired by the noted breeding horse, Boreland Pride, by Baron's Pride, dam by Last of the Princes, by Prince of Wales (673). This is one of the comely-turned horses of superior quality, up to 1,850 lbs. in weight, with the carriage and style of a Hackney. In 1910, at London, in a strong class, he was first and champion. Lord Laurie 11819 is Canadian-bred, a bay, two years old, by Imp. Whitmoss, by Prince Alexander, dam Imp. Katie, by Imp. Magnet. At the late show in Guelph, he was placed second in a strong class, a placing that was not generally approved by the ringside talent. He is a big, upstanding colt of superb quality from the ground up, and his pedigree shows four registered dams. Several other stallions, yearlings and foals, will be mentioned in connection with their dams, prominent among which is the 1,865-lb. quality mare, Sally of Burnbrae (imp.), a bay seven-year-old, sired by the noted horse, Montrave Ronald, dam by Invincible, grandam by Abbey Prince. This is one of the best mares in the country. Big in size, she is full of the flashiest kind of quality, and remarkably smooth. At Guelph, in the aged class, she was first. Out of her is a choice yearling filly and a horse foal, both sired by Imp. Marchfield Baron. Lady Wallace 26100 is a 1,700-lb. mare of right proper draft character, good in her underpinning, and a great breeder, sired by Bay Wallace 2nd 2387, dam by Ardgon (imp.). Out of her is a right good yearling stallion and a filly foal, both by Imp. Marchfield Baron. Belle of Brackenhill (imp.) is a bay seven-year-old, weighs 1,900 lbs., the ideal of draft character, sired by Cinquivalli, he by Prince of Wales, dam by Prince of Wales; thus, she carries a double infusion of the blood of the breed's most noted founder. Out of her is a yearling stallion, Earl of Kent 11821, by Imp. Marchfield Baron, by Prince Shapely. He shows great scale and strength, has nice, flat bone, and will surely make over a ton horse. Rosie of Drumglass (imp.) is another seven-year-old mare of big scale, the kind that breeds the high-priced ones. She was sired by the famous Springhill Baron, by Sir Everard, dam by William the Conqueror. Out of her is the big, thick 1,500-lb. yearling stallion, Gold Dust [11820], whose sire was Imp. Marchfield Baron. This is one of the great colts of the country, and this year his dam has produced another horse foal, by the same sire, that looks like making the equal of his big brother. Another very choice mare is a half-sister to Sally of Burnbrae. She is a four-year-old, imported in dam, sired by Montrave Ronald. She weighs 1,750 lbs., has lots of style and quality, and a beautiful yearling daughter by Imp. Marchfield Baron. Any or all of these are for sale, and parties wanting something extra should visit this noted breeding farm.

HIGH-CLASS IMPORTATION OF CLYDESDALES.

W. B. Annett, Alvinston P. O., Ont., 25 miles west of London, Alvinston Station, G. T. R. and M. C. R., or Watford Station, G. T. R., has lately arrived home from Scotland with a well-selected importation of Clydesdale stallions and fillies, whose pedigrees show them to be exceptionally well-bred, carrying, as they do, the blood of Scotland's most noted sires, and with four and five registered dams. They are a big, growthy, toppy lot, on the choicest of underpinning, of a general excellence that indicates Mr. Annett as among the leading Canadian importers and judges of what the ideal in draft horses should be. Black Baronet is a black three-year-old, sired by the renowned champion, Everlasting, dam by Crown of Scotland, one of the best breeding sons of the noted Cawdor Cup champion, Prince of Carruchan, he by Prince of Wales, grandam by Derby, a grandson of Darnley, thus combining the blood of the two greatest sires of the breed. He is a colt of superior excellence, with size, style and quality. Lord Sherrington is a bay three-year-old, of great scale and draft character. He will easily reach the ton when developed, coupled with which is strong, flat bone, well-sprung ankles, and big feet. He will surely breed well, as his breeding is gilt-edged, sired by the famous champion, Hiawatha, dam by Royal Gartley's Heir, the famous son of the Cawdor Cup champion, Royal Gartley, grandam by Royal Signet, by Prince of Wales. Another big, toppy three-year-old is the bay, Major Brown, a grandson of Baron's Pride, being sired by Baron Gibson, dam by the noted prizewinning and breeding horse, Baron Mitchell, grandam by Good Hope, by Darnley. This is one of the thick, smooth, quality kind that takes well in any locality. The oldest horse of the bunch is the high-class black four-year-old, Lord Young, by the popular breeding horse, Baden Powell, by Sir Everard, dam by the Glasgow first-prize horse, Prince of Millfield. This horse is one of the good ones of this year's entire importation. He is big in size, has exceptional style, and quality from the ground up. He won second prize in a big class in Aberdeen. It will be a lucky section that gets his services. Among the two-year-olds are such big, growthy, and well-bred ones as Duke Rubio, by Ruby Baron, by Baron's Pride, dam by Mc.erieffe Duke, by the renowned champion, Prince of Carruchan. This is a colt of outstanding excellence. Another is the bay, Royalist of Drumlanrig, by Rycraft, by Everlasting, dam by the H. and A. S. prize horse, Baron Beaulieu, grandam by the Glasgow and Royal first-prize horse, Prince Robert. This is a right good horse, with size and quality. In yearling stallions, there is King's Troke, a grand big colt, by Baron Abercorn, dam by Prince Robert. Another that will make his mark in the show-ring is Carruchan's Last, by Prince of Carruchan, dam by Gartley Brand. In mares and fillies, there are several from two to five years of age, the oldest, Jess of Newfield, is a bay five-year-old, of extra size, a stylish, quality mare of superior excellence, sired by Gartley Brand, dam by Neil Gow. Garbity Maggie is a brown two-year-old, by Baron Beaulieu, dam by Baron o' Dee. Grace Leburn is another two-year-old, a brown, by the great Silver Cup, dam by Scottish Topsman. Those mentioned show the superior breeding of the female end of the importation. All are for sale, and Mr. Annett is pricing very reasonable.

TRADE TOPIC.

EVERY FARMER SHOULD OWN A SCALE.—A special price list will be sent to every farmer wanting the well-known Wilson scale. The price list will show the price delivered at any station in Canada. Write at once to C. Wilson & Son, 79 Esplanade Street East, Toronto, Canada.

Men, Like Babies, Cry Out When Hungry

They get cross, irritable, unfit for business. A cup of BOVRIL, or a BOVRIL Sandwich is a wonderful promoter of good temper and business energy.

BOVRIL

CONTAINS ALL THAT IS GOOD IN BEEF

Blow, blow thou wintry wind!

CAMP COFFEE

keeps out the cold. A cup for breakfast puts things right till dinner time and then —'CAMP' again.

It's made in a minute, and a more fragrant, comforting, refreshing, beverage is impossible. Your grocer sells 'Camp' Coffee.

R. Paterson & Sons, Coffee Specialists, Glasgow.



Have You Seen The New "Galt" Shingle?

In justice to yourself, you should at least investigate "Galt" Steel Shingles before deciding on the roof for your new barn or the new roof for your old barn. Present wood shingles are failures and are being discarded—to use them is a step backward. Don't put a fourth-class roof on your first-class barn. "Galt" Galvanized Steel Shingles is the roofing, now and for the future. Roof your new barn with "Galt" Steel Shingles and you won't have to apologise for it now or at any time in the future.

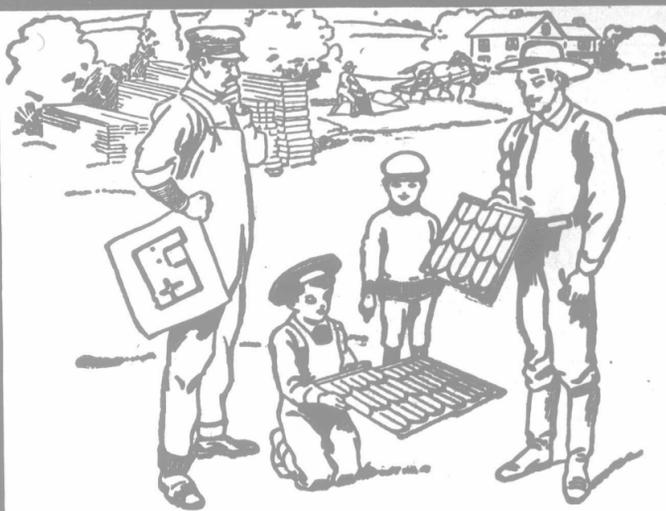
Listen, you won't have time two months hence to investigate this roofing question. And yet the roof of your barn is an important part of your real estate and should be selected carefully. Won't you drop us a card now for our booklet "ROOFING ECONOMY" telling all about "GALT" Shingles?

If you haven't paper and ink handy, tear out this advertisement, write your name on the line at bottom and mail to us. We'll know what you mean. You'll never have a better chance than right now.

Name _____ Address _____

THE GALT ART METAL CO., Limited, - GALT, ONT.

Watch for the advertisements with The Kids from Galt. 4A



When Writing Advertisers, Please Mention "The Farmer's Advocate."

Write for FREE Books

LEARN TO MOUNT BIRDS

We guarantee to teach you by mail with complete success how to mount Birds, Animals, Fish, Game Heads, Tax Skins for rugs, robes, etc. Easy, fascinating work for men, women and boys. **Quickly learned**, by our exclusive system, teaching only the latest and best methods. Make handsome presents for your friends and beautifully decorate your own home, or make big money mounting for others.

Sportsmen and Naturalists everywhere should know this wonderful art. You learn in a few lessons how to mount all your own trophies and specimens as well as a professional.

BIG PROFITS Good taxidermists are scarce and in great demand. Many of our graduates are making \$12.00 to \$20.00 a week in their spare time or \$2,000 a year and more as professionals. You can do as well.

FREE Elegant new catalog and Taxidermy Magazine sent absolutely free. **Write today.**

NORTHWESTERN SCHOOL OF TAXIDERMISTRY
5031 Erwood Building OMAHA, NEB.

HOW TO GET BETTER LIGHT
From **COAL OIL (Kerosene)**

Recent test by Prof. McKergow, McGill University Montreal, on leading oil-burning lamps show the Aladdin Mantle Lamp gives over twice as much light as the Rayo and other lamps tested, and burns less than one half as much oil. It is odorless, safe, clean, noiseless. Better light than gas or electric. Every Aladdin Lamp fully guaranteed and protected by patents in nearly every country on earth. Our burners fit your old lamps.

To introduce the Aladdin, we will give **ONE LAMP or BURNER FREE** in each neighborhood. Send postal with name and address ask for cat **AGENTS** Ball sold over 1000 on money back guarantee; not one returned. Burner sold \$6.00 in 15 days. Ask for liberal agency proposition. Sample lamp furnished.

MANTLE LAMP CO., of America, Inc., 167 Aladdin Building,

You can make Pictures at night.

It's all very simple with a

KODAK

and the Eastman Flash Sheets. There's fun in making the pictures and pleasure afterwards in possessing pictures of your friends.

Ask your dealer, or write us for a copy of "By Flashlight," an illustrated book that tells just how to get the best results.

CANADIAN KODAK CO., LTD.
TORONTO, CAN.

COWAN'S PERFECTION COCOA
(MAPLE LEAF LABEL)

hits the right spot for breakfast, lunch and dinner. It is satisfying, easy to digest and delicious enough to tempt every appetite.

DO YOU USE COWAN'S?

125 Egg Incubator \$10 and Brooder **FOR BOTH**

Freight paid east of Rockies. Hot water, copper tanks, double walls, double glass doors. Free catalog describes them. Send for it today.

Wisconsin Incubator Co., Racine, Wis., Box 173

RINGING IN EARS DEAFNESS
INSTANTLY RELIEVED BY THE OLD **DR. MARSHALL'S CATARRH SNUFF**

25¢ AT ALL DRUG STORES OR SENT PRE-PAID BY C. W. KEITH, 123 CLEVELAND OHIO

SHOEMAKER'S BOOK on POULTRY

and Almanac for 1912 has 224 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chicken-dom. You need it. Only 15¢.

C. C. SHOEMAKER, Box 920, Freeport, Ill.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In Veterinary questions the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Miscellaneous.

PIGS IN CORN.

A's pigs went to B's barn and destroyed B's corn. The barn was a mile from where B was living, and old, with doors and boards off; gates open; nothing to stop pigs. B put in bill of damages: 15 loads corn at \$1.50 per load. How much will A have to pay, or will he pay any? **OLD SUBSCRIBER.**

Ontario.

Ans.—Assuming that pigs are not allowed—by by-law—to run at large, A is liable to B in damages. If the parties cannot agree upon the amount, it can be ascertained by an arbitration, or by suit in the Division Court. It cannot be estimated from the particulars above given alone.

GOSSIP.

The annual Provincial pure-bred cattle sale will be held in the Winter Fair Building, Guelph, on March 6th. Make your entries promptly with J. M. Duff, Secretary Guelph Fat-stock Club. Entries close January 10th.

His Majesty King George's usual annual sale of fat show stock was held at Slough, England, December 5th, and brought fairly good prices. A Short-horn steer sold for \$350, a Devon steer for \$220, a Hereford steer for \$190. The champion hog at the Smithfield, suitable for bacon purposes (a Berkshire), sold for \$150, the highest price for a porker.

W. J. McCallum, of the firm of McCallum Bros., Brampton, Ont., and Brandon, Man., reports the sale of Clydesdales as good, they having sold all their recent importation. W. J. McCallum is now in the Old Country making selections, where his address is Queen's Hotel, Wigton, Cumberland, England, and will arrive with a new importation on or about February 10th. See advertisement later.

THE TORONTO SHORTHORN SALE.

The annual consignment auction sale of high-class Shorthorns at the Union Stock-yards, Toronto, is advertised in this issue to take place January 7th and 8th, 1912, following the annual meeting of the Dominion Shorthorn-breeders' Association, when 100 head of choice animals, 25 young bulls and 75 young cows and heifers of superior type, quality and breeding, selected from seven prominent Ontario herds, will be offered, including representatives of many of the most desirable families of the breed. Catalogues may be had by writing Robert Miller, Stouffville, Ont., sale manager.

Chas. Currie, of Morriston, Ont., a few miles south of Guelph, whose reputation as a breeder of high-class Tamworth swine is an enviable one, is just now offering some exceptional values in Shorthorn heifers: and one seven-months-old bull, out of his heavy milking tribe, a number of which are good for from 50 to 60 lbs. a day for a considerable time after freshening. He is overstocked, and, consequently, is willing to give the buyer a big cut in prices. He also has on hand some particularly nice things in young Tamworth boars and sows, which he is offering at close prices, bred from his prizewinning stock. Parties interested should make a note of it.

\$15.95 AND UPWARD SENT ON TRIAL FULLY GUARANTEED.

AMERICAN SEPARATOR

A brand new, well made, easily cleaned, perfect skimming separator for \$15.95. Skims one quart of milk a minute, warm or cold. Makes thick or thin cream. Thousands in use giving splendid satisfaction. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel and embodies all our latest improvements. Our richly illustrated catalog tells all about it. Our wonderfully low prices on all sizes and generous terms of trial will astonish you. Our twenty-year guarantee protects you on every American Separator. Shipments made promptly from **ST. JOHN, N. B., and TORONTO, ONT.** Whether your dairy is large or small, get our great offer and handsome free catalog. **ADDRESS, AMERICAN SEPARATOR CO., BOX 1200, BAINBRIDGE, N. Y.**



WESTON, ONT. BRANDON, MAN'

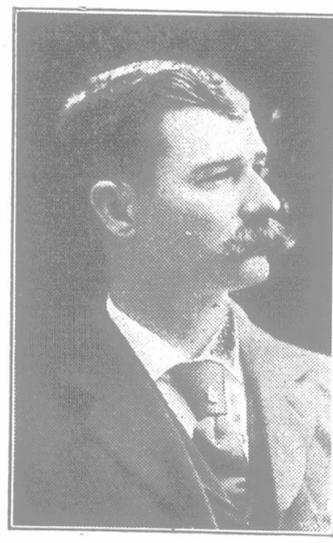
J. B. HOGATE
DIRECT IMPORTER
Percherons and Clydesdales

My barns at Weston and Brandon are full of Percherons—stallions, mares and fillies and Clyde stallions—the very best that money could buy, in both greys and blacks, ages from two to five years. The stallions weighing from 1,700 to 2,200 lbs.; the mares from 1,600 to 1,900 lbs., some safe in foal.

In order to get my Weston barn sold out, so that I may go to my Brandon barn, no reasonable offer will be refused. Write, and come early, and get a bargain in a first-class stallion or mare.

TERMS TO SUIT. For further particulars write:

J. B. Hogate, West Toronto, Ont.



J. B. HOGATE, WESTON, ONT.

Nineteen Imported Clydesdale Stallions For Sale

My importation for November, 1911, are nearly all two or three-year-olds. They are ideal in draft character, with faultless quality of underpinning. They represent the best blood of the breed, being descendants of such horses as Baron's Pride, Hiawatha, Marcellus, Hiawatha Godolphin, etc. They will be priced right and on terms to suit. Farm two miles from end of street car line. Long-distance 'phone. Call me up and I will meet you in Guelph.

O. SORBY, GUELPH, ONT.

CLYDESDALES - Stallions and Fillies - Imported

All ages and sizes up to a ton, good colors and best of breeding. Address correspondence to Glencoe.

DALGETY FRASER HOUSE LONDON, ONT.

16 Clydesdale Stallions and Fillies
5 years and under. Some winning in Scotland and Canada. Bred from such noted sires as Hiawatha, Everlasting, Prince of Carruchan and Baden Powell—horses that will make a ton, with quality. Prices right. **W. B. ANNETT, ALVINSTON, ONTARIO.** Wat'rd station, G. T. R., 30 miles west of London.

POLES OF STERLING QUALITY

Michigan White Cedar Telephone Poles

W. C. STERLING & SON COMPANY
Oldest Cedar Pole Firm in Business
Producers for 31 Years
MONROE, MICHIGAN

1850 1911

IMPORTED
Clydesdales of Quality

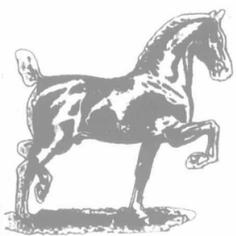


I have now on hand a stock of
**Clydesdale Stallions and Fillies,
Percheron Stallions, Shire
Stallions, Standard-
bred Stallions, etc.**

Totalling over 90 head. I have more size, more quality, more style and better breeding than was ever seen in any one barn in Canada before. If you want a big, ton stallion, or a high-class show stallion, or a big, well-bred quality filly, let me hear from you.

TERMS TO SUIT

T. H. HASSARD, Markham P.O. and G. T. R. Station
Locust Hill, C. P. R. Station. Long-distance 'phone.



Union Horse Exchange

**UNION STOCK YARDS,
TORONTO, CANADA.**

The Great Wholesale and Retail
Horse Commission Market.

Auction Sales of Horses, Carriages and Harness every Monday and Wednesday. Horses and Harness always on hand for private sale. The only horse exchange with railway loading chutes, both G. T. R. and C. P. R., at stable doors. Horses for Northwest trade a specialty.
J. HERBERT SMITH, Manager

Ormsby Grange Stock Farm
ORMSTOWN, P. QUE.

A full stock of **CLYDESDALES**, imported and home-bred, always on hand, at prices and terms to suit breeders. Correspondence solicited.

DUNCAN McEACHRAN, Proprietor.

For Sale Clydesdale Stallion

ONE EXTRA FINE

Four years old, by Benedict. He is a beauty and sure foal getter. AND TWO TWO-YEAR-OLD STALLIONS. VERY CHEAP.

Willowdale Stock Farm, Lennoxville, Quebec

Clydesdale and Shire Stallions and Fillies



If you want a Clydesdale or Shire stallion or filly, or a Welsh pony, let me hear from you. I have the best blood of the breed. Horses over a ton in weight. Colts that will grow to the ton and over, with faultless characters, style and quality. I will not be undersold, and your terms are my terms.

T. L. MERCER, Markdale P.O. and Sta. L.-D. 'phone.

ROSEDALE STOCK FARM HAS FOR SALE first-prize three-year-old, two-year-old and yearling imported Shire stallions at Toronto, 1911. Also first-prize three-year-old Standard-bred stallion at Toronto. A number of imported Clyde and Shire mares in foal. Also a few SHORT-HORN BULLS. For further particulars write:
J. M. GARDHOUSE WESTON, ONTARIO
Eight miles from Toronto by G. T. R., C. P. R. and electric railway. Long-distance telephone.

OFF FOR MORE CLYDESDALES!



We wish to announce to all interested in the best Clydesdales that about Oct. 1st we sail for Scotland for our 1911 importation. If you want a show stallion or filly, watch for our return.

BARBER BROS, Gatinau Pt., Quebec.

Clydesdales, Stallions and Fillies, Percheron Stallions

My 1911 importation have arrived—20 Clyde stallions, 18 Clyde fillies, 6 Percheron stallions. I have many winners at Old Country shows. Big, choice, quality stallions and mares, bred from the champions, and the best Percherons in Canada. Prices right.
T. D. ELLIOTT, Bolton, Ont.
Long-distance 'phone.

Shire Stallions and Mares, Shorthorn Cattle (both sexes); also Hampshire Swine. Prices reasonable.
Porter Bros., Appleby, Ont., Burlington Sta. 'Phone.

Bay View Imp. Clydesdales We have got them home, 11 fillies and 7 stallions, show horses bred in the purple, big in size, and quality all over. If you want something above the average come and see us. Prices and terms the best in Canada.
John A. Boag & Son, Queensville, Ont.
On the Toronto-Sutton Radial Line.

HIGH-CLASS IMPORTED CLYDESDALES
I have Clydesdale stallions and fillies for sale, every one of them strictly high-class in type, quality and breeding; stallions over a ton and very fleshy; fillies of superb form and quality. If you want the best in Canada, come and see me.
JAMES TORRANCE, Markham, Ont.

CLYDESDALES (Imported) CLYDESDALES
SPRING HILL Top Notchers. Stallions, mares and fillies. 65 per cent. guarantee with stallions. Every mare guaranteed in foal. Ages, 3 years old and upwards.
J. & J. SEMPLE Milverton, Ontario, and La Verne, Minnesota

Mount Victoria Stock Farm, Hudson Heights, P. Q.
We have for service this season the Champion Imp. Clydesdale stallions Netherlea, by Pride of Blacon, dam by Sir Everard; a so Lord Aberdeen, by Netherlea, and the Champion of Hackney stallion Terrington Lucifer, by Copper King. For terms and rates apply to the manager.
T. B. MACAULAY, Prop. ED. WATSON, Manager.

QUESTIONS AND ANSWERS.
Veterinary.

ECZEMA.

Dog has skin disease. The skin is hard and scaly. If washed, the scales come off, but next day the skin is cracked and almost bleeding, and very itchy.

Ans.—This is eczema. Instead of washing, use the following ointment. Boracic acid and subnitrate of bismuth, of each 2 drams. Mix thoroughly with 2 ounces vaseline, and apply a little twice daily, or if necessary to check itchiness, apply three times daily.

COW WITH COLD.

In July, cow took a cold in her head. She got better. In October, she had another attack and recovered. Now she has a third attack. She breathes heavily, and blows her nose frequently. She has eaten well all summer, and is in first-class condition now.

Ans.—The symptoms indicate tubercular disease of the glands of the throat. The only means of making a definite diagnosis is by the tuberculin test by a veterinarian. If she is suffering from a cold, the administration of 2 drams chlorate of potash and $\frac{1}{2}$ dram quinine three times daily, and steaming the nostrils daily, should effect a cure. If tubercular, nothing can be done.

ILL-SHAPED HOCK.

1. Filly, now 19 months old, had a peculiarly-shaped hock when foaled. It appeared to be imperfectly developed, and the leg is crooked. Would blistering strengthen it?

2. Is this what veterinarians call cow-hocked?

Ans.—1. It is seldom that congenital malformation that nature does not correct in very early life, can be improved by treatment later on. It is possible that blistering may tend to strengthen the joint; at all events, it is all that can be done, and is worth a trial.

2. No. When a horse stands with the points of his hocks close together, with the legs deviating outwards to the foot, in fact, stands like a cow, he is said to be "cow-hocked."

WARTS—PROMOTING GROWTH OF HAIR AND HOOF.

1. Colt has warts around her mouth.
2. What will encourage the growth of mane and hair on blistered parts?
3. What will hasten growth of hoof?
4. What is the best ointment for scratches and itchy legs?

Ans.—1. Apply butter of antimony once daily with a feather until the warts disappear.

2. Get an ointment made of 1 dram powdered cantharides, mixed with 2 ounces vaseline, and rub a little well in once daily.

3. Get a blister made of 2 drams each of biniodide of mercury and powdered cantharides, mixed with 2 ounces vaseline. Rub well into the coronet. In 2 days apply sweet oil. Oil every day until the scale comes off. Blister this way once every month.

4. In winter, use the oxide-of-zinc ointment.

Miscellaneous.

DOGS AND SHEEP.

I have had part of my flock of sheep worried by dogs. Saw the dogs at them; shot one, the other running away.

1. Should I receive full value for the ones dead?
2. From what source? There are dog taxes collected in the township.
3. Should the owner of the dog that was killed pay any?
4. If so, how much?
5. Can I collect any pay for the ones that were worried and not killed? Three have died; three more were worried. The township council pays two-thirds the value of the sheep killed?

Ontario. SUBSCRIBER.

Ans.—1. Yes.
2. From the owners or keepers of the dogs.
3. Yes.
4. Such proportion of the damages as the judge, or justice of the peace, at the trial, may think fit.
5. Yes. Where owner or keeper of dog is known, it is not a case where application to the municipal council, for compensation, would be in order.

Warranted to Give Satisfaction.

Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for
Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address
The Lawrence-Williams Co., Toronto, Ont.

Rino-Bone

There is no case so old or bad that we will not guarantee

Fleming's Spavin and Ringbone Paste

to remove the lameness and make the horse go sound. Money refunded if it over fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidsbone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of

Fleming's Vest-Pocket Veterinary Adviser

Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durably bound, indexed and illustrated. Make a right beginning by sending for this book.
**FLEMING BROS., Chemists,
75 Church St., Toronto, Ontario**

THICK, SWOLLEN GLANDS

that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be removed with

ABSORBINE

also any Bunch or Swelling. No blister, no hair gone, and horse kept at work. 40¢ per bottle, delivered. Book 3¢ free.

ABSORBINE, J.T., Ointment for manking, Reduces Goitre, Tumors, Wens, Painful, Knotted, Varicose Veins, Ulcers. 4.00 and 2.00 a bottle at dealers or delivered. Book with testimonials free. W. F. YOUNG, F.D.F., 258 Lyman Bldg., Montreal, Ca.

AGENTS SOMETHING NEW

THOMAS ROPE MAKER

Makes any length or thickness of rope out of binder twine, wool twine or any kind of waste twine. Twice as strong as factory made rope. Any one can do it. Saves 50 to 60 per cent. Agents coming big money. Sells like wild fire. No argument necessary. Just show and your sale is made. Big profits. We want good agents in every county. Write for terms and free sample to workers.
**THOMAS MFG. CO.
2344 Barry St., DAYTON, OHIO**

Messrs. Hickman & Scruby

COURT LODGE, EGBERTON, KENT, ENGLAND
EXPORTERS OF PEDIGREE

Live Stock of all Descriptions.

During the spring months we shall be shipping large numbers of Percherons, Shires, Belgians, Clydesdales, Suffolks, etc., and all those who wish to buy imported stock should write us for full particulars.

NOTICE TO HORSE IMPORTERS

GERALD POWELL

Commission Agent and Interpreter
Nogent Le Rotrou, France

will meet importers at any port in France or Belgium, and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking and pedigrees. Many years' experience; best references. Correspondence solicited.

For Sale: Royal Erskine (10699)

Clydesdale stallion, three years old. Will make close to a ton. Apply to:

G. Treleven, Cambray P. O., Ontario.

When Writing Mention Advocate

ASK LEADING FARMERS
THEY WILL TELL YOU

SHARPLES Tubular Cream Separators

get more cream, cost less to run, and last several times longer than any other. No disks. Double skimming force. Wear a lifetime. Guaranteed forever.



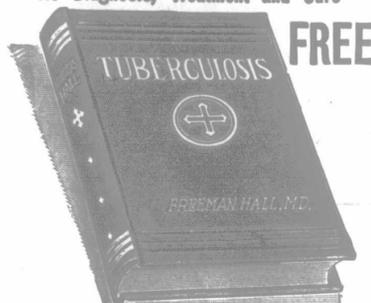
You expect The World's Best from the oldest separator concern on this continent—not from those who try to imitate our low supply can and self oiling system but are prevented by law from imitating the Tubular principle. Write for catalog 193.

31
Yrs

THE SHARPLES SEPARATOR CO.
Toronto, Ont. Winnipeg, Man.

Consumption

Its Diagnosis, Treatment and Cure

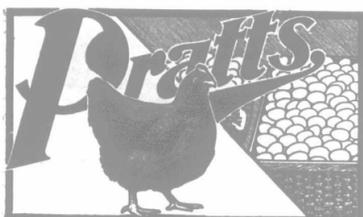


NEW TREATISE ON TUBERCULOSIS

By FREEMAN HALL, M.D.

This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of anyone suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you. Even if you are in the advanced stage of the disease and feel there is no hope, it will instruct you how others, with its aid, cured themselves after all remedies tried had failed, and they believed their case hopeless.

Write at once to The Yonkerman Co., 1703 Rose St., Kalamazoo, Mich., and they will gladly send you the book by return mail Free and also a generous supply of the New Treatment absolutely Free, for they want you to have this wonderful remedy before it is too late. Don't wait—write to-day. It may mean the saving of your life.



Laying Hens Are Money Makers

WE GUARANTEE

that by the use of Pratt's Poultry Regulator you can have plenty of eggs even when prices are highest and busy hens pay big. A small dose of Pratt's Poultry Regulator added to the feed will put more money in your pocket. Try

Pratt's Poultry Regulator

on all your hens. Or if you want to make a more careful test, give it to a few for a month, then compare results. Pratt's Poultry Regulator doubles the nutritive value of the feed by keeping the digestion in perfect condition.

SATISFACTION GUARANTEED
OR MONEY BACK

Our dealers will promptly refund purchase price if you do not find Pratt's Preparations pay a handsome profit. If your dealer cannot supply it, write us.

25lb. pails \$2.00. Also in smaller packages and 100 lb. bags.

Pratt's Rous Cures in 25c. and 50c. packages is economical to use and prevents and cures this terrible disease.

Ask for free copy 1912 edition Poultry Book.

Pratt Food Co. of Canada, Ltd. Dept. 62 Toronto

Pratt's Animal Regulator is
the great stock tonic.

QUESTIONS AND ANSWERS. Miscellaneous.

POTATO SCAB.

Would you please put in the mixture for dipping scabby potatoes before planting?

J. L.

Ans.—Soak for two hours in a solution of liquid formaldehyde, eight ounces or one-half pint of formaldehyde to fifteen gallons of water. It is generally better to soak before cutting.

EXECUTORS AND WITNESSES TO WILL.

1. Can wife and daughters be executors to husband's and father's will?

2. Can a daughter now residing in England act as executor to will made in Ontario, Canada?

3. Can a man and wife be witnesses to a will, or is it necessary to have separate persons?

Ans.—1. Yes.

2. Yes.

3. The man and wife would be competent witnesses, but it would perhaps be better to have another also.

FEEDS TO BUY.

What would be the cheapest and most economical feed to buy to feed with oats and barley, linseed meal at \$5 per cwt., oil cake at \$2.20 per cwt., cottonseed meal at \$1.60 per cwt., wheat at 95c. per bushel? My stock consists of milch cows yielding about 25 lbs. milk per day, early fall calves, horses mostly idle through the winter, brood sows, fattening and also young growing pigs, the growing pigs receiving middlings and a small quantity of skim milk. I have also on hand a fair quantity of roots, chaff, cornstalks, straw, and a small amount of mixed timothy and bluegrass hay.

E. W.

Ans.—Buy chiefly oil cake and cottonseed meal, with a little bran to lighten it up. Bran, even at present prices, should not be wholly dispensed with where milch cows or young stock are kept. Apart altogether from its feeding value, bran has high claims to consideration by reason of the fact that a dollar's worth of it contains more plant-food than a dollar's worth of any other meal which we can call to mind. A little molasses meal might be used as a conditioner for the horses. Do not feed cottonseed to pigs. It is next thing to poison for them. For pigs and calves, use oil cake instead. It is all right for cows in moderate quantity, and is economical at present prices.

PIPING AND PUMPING WATER.

1. I am thinking of laying pipe to carry water to my stock. It will be brought from a brook about one hundred and fifty feet distance, and a raise of about thirty-six feet. Have a gasoline engine to furnish power for it. Will an ordinary suction pump do the work?

2. What would be the best size of pipe to use, and would iron pipe be satisfactory?

3. Would there need to be a check valve in the end of pipe next the brook so as to keep the pipe full of water all the time?

4. Is a "Two Cycle" gasoline engine as good as the "Four Cycle" ones for ordinary farm work, and would a 4-h.-p. be strong enough to run a two-horse separator?

Z. X. C.

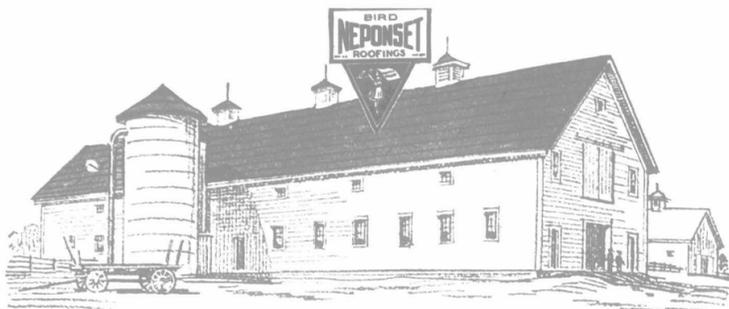
Ans.—1. For an ordinary suction pump to work well, the sucker should be not more than 25 feet above the level of the water in the brook. If you can fulfil this condition an ordinary suction pump would be all right, at the distance from the brook which you mention.

2. It would not be wise to use less than 1 1/2-inch pipe, and the pumping would be easier if a larger one was used, but as you have a gasoline engine, this is not a really important point.

3. There should be a check-valve in the end of the pipe next the brook.

4. "Four Cycle" gasoline engines are more efficient than "Two Cycle"; that is, they develop more power from a given amount of fuel, and they are generally considered as more suitable for farm power. The "Two Cycle" engine is best adapted for marine engines, where the load is uniform and lightness is a prime consideration. A four-horse-power should be strong enough to drive a 2-h.-p. separator.

WM. H. DAY.



Yellow Dale Farm Barn—Roofed with NEPONSET Paroid Roofing.

The Real Rival of Best Shingles

Time was when you could buy old fashioned heart-of-the-log shingles and you *knew* they would *last*. But are the shingle roofs you have been laying in recent years *really* going to *last*? Time will tell you. Time has already shown thousands of farmers that

NEPONSET PAROID ROOFING

Lasts Like Old Fashioned Shingles

Many of its long-wear records have been made on farm barns and farm buildings just like your own. And NEPONSET Paroid costs less than shingles—it costs less to lay, too. You are sure of its quality—every roll is inspected, tested, guaranteed. In addition, NEPONSET Paroid gives real fire-protection.

When are you going to stop buying roofs that you *think* will last and start using NEPONSET Paroid that you *know* will last? Get all the facts. Write for booklet and name of NEPONSET dealer. Learn how other farmers are economizing on their roof problems.

NEPONSET Prostate makes a handsome reddish brown roof for houses.

F. W. BIRD & SON, 491 Lotteridge Street, Hamilton, Ont.

Established 1795. NEPONSET Roofings are made in Canada

Winnipeg Montreal St. John, N. B. Vancouver, B. C.

To Buyers Looking for a GOOD STALLION



I HAVE imported Percheron Stallions for years, always bought them from the best breeders in France, and beg to call the attention of prospect buyers to the fact that I have at the present time a better lot of Percheron Stallions in my barn than any barn in Canada. I have the big kind, the right kind, the kind that good judges are looking for. I won, as usual, more prizes at the leading fairs than all the Percheron importers put together. My horses are beautiful dappled-greys and blacks. Two to eight years old, weighing 1,700 to 2,200 lbs., with feet and legs that cannot be beat. Beautiful heads and necks. The kind that good buyers are looking for. I do not intend, and will not allow, if I can help it, anyone to give more quality and breeding for fixed price than I will. Come to the home of the Champion Prizewinners and judge for yourself.

JOHN HAWTHORNE, Simcoe, Ontario

CHAMPION CLYDESDALES FOR SALE

I am now offering for sale the renowned champion stallions, Baron Gartley Imp. [4789], a bay, 11 years old, and President Roosevelt Imp. [7759], a bay, 9 years old. They are both champions and sires of prizewinners. They will be priced right.

ALEX. GRAHAM, Oro Station P.O.

PERCHERONS AND CLYDESDALES

Full line of prizewinning stallions and mares always on hand.

HODGKINSON & TISDALE, Simcoe Lodge, BEAVERTON, ONTARIO
Long-distance phone.

Peachblow Clydesdales and Ayrshires I am offering some choice young heifers and cows due to freshen in January in calf to the stock bull Sir Favorite of Hemmingford, 27732. In Clydesdales, I am offering for sale the imported horse Harrier, 6123, and the yearling stallion Nessmore, 11032. They are both good animals and will be sold worth the money. For prices write:

R. T. BROWNLEE, Peach Blow Farm, Hemmingford, Que.

CLYDESDALES OF SIZE AND QUALITY

I have for sale Clydesdales, imported and Canadian-bred, toppers and prizewinners, including championships; big flashy stallions from 1 year up to 4; mare and fillies up to 1,900 lbs. in weight; all of them with size, quality and breeding, some with six registered dams.

W. H. MANSELL, Fletcher P.O., Kent Co. M. C. R.

BEST RESULTS ARE OBTAINED FROM ADVOCATE ADVERTISEMENTS.

The Quickest Cough Cure— Cheap, But Unequaled

Sixteen Ounces of It for 50c. Saves You \$2. Does the Work Quickly or Money Refunded.

For quick, positive results the 16 ounces of cough syrup that you make with a 50-cent bottle of Pinex, cannot be equaled. It takes hold instantly and will usually stop the most obstinate deep-seated cough inside of 24 hours. Even croup and whooping cough yield to it quickly.

The user of Pinex mixes it with home-made sugar syrup. This gives you 16 ounces—a family supply—of better cough remedy than you could buy ready mixed for \$2.50. Easily prepared in five minutes—full directions in package.

Pinex soothes and heals the inflamed membranes with remarkable rapidity. It stimulates the appetite, is slightly laxative and tastes good—children like it. Excellent for hoarseness, asthma, bronchitis and other throat troubles, and has a wonderful record in cases of incipient lung trouble.

Pinex is a special and highly concentrated compound of Norway White Pine extract, rich in gualacol and other natural healing pine elements. Simply mix with sugar syrup or strained honey, in a 16-oz. bottle, and it is ready for use. Used in more homes in the U. S. and Canada than any other cough remedy.

Pinex has often been imitated, but never successfully, for nothing else will produce the same results. The genuine is guaranteed to give absolute satisfaction or money refunded. Certificate of guarantee is wrapped in each package. Your druggist has Pinex or will gladly get it for you. If not, send to The Pinex Co., Toronto, Ont.

AUCTION SALE OF 16 PURE-BRED Shorthorn Cattle

Also a number of **BERKSHIRE SOWS**
Wednesday, January 17th, 1912
At **Glenburn Stock Farm, Lennoxville, Que.**
Consisting of eight choice young bulls and eight heifers from a good milking strain of Shorthorns. The sows are bred to farrow in April. Sale at one o'clock. Catalogue on application to:
Edwin Howe, JOHN RACEY,
Auctioneer. Lennoxville, Que.



Reload your rifle, pistol and shotgun shells and save half the cost of cartridges. Modern shells can be reloaded many times. **Ideal Hand Book** tells all about reloading all makes and styles of shells; 140 pages of useful information for shooters. Free for three stamps postage. **Marlin Firearms Co., 113 W St., New Haven, Conn.**

Recently, in a crowded railway car, one of the passengers thought to beguile the tedium and relieve his feelings by descanting on the proverbial slowness of the train. "I've been travelling on this railway at least twenty years now, and 'Twenty years!' exclaimed an inexperienced lady, breaking in. "Good gracious me! and what station did you get in at?"

BACK WAS SO LAME LIFE WAS A BURDEN FOR TWO YEARS.

Mrs. Joseph Throop, Upper Point de Bute, N.B., writes:—"I cannot speak too well of Doan's Kidney Pills. For two years I was so tired life was a burden and I got up more tired than when I went to bed, and my back was so lame I could hardly straighten up. I took different kinds of medicine, but none of them did me any good until a friend advised me to try Doan's Kidney Pills. I did so, and to-day I don't know what it is to be tired, and my lame back is all gone. I can recommend them to any person suffering with lame back, and that terrible tired feeling."

Doan's Kidney Pills are a purely vegetable medicine, realizing quick, permanent relief, without any ill after effects.

Doan's Kidney Pills are 50 cents per box, or 3 boxes for \$1.25, at all dealers or mailed direct on receipt of price, by The T. Milburn Co., Limited, Toronto, Ont.

If ordering direct specify "Doan's."

QUESTIONS AND ANSWERS. Miscellaneous.

SOW INJURED.

Pure-bred Berkshire sow 18 months old, slipped in some manner (we suppose) two weeks ago in her pen, and either fractured or badly sprained hind leg above hock. Have used hot water and embrocation, but does not put foot to the ground. Have just taken last litter from her. She eats well, but has failed. Can you tell us how to determine the injury, and what to do for it?

C. W. T.

Ans.—A close examination should reveal the extent of the injury. If the bone is fractured, it will be necessary to splint and bandage tightly. If only a sprain, the continued application of hot water should help. Rub well with camphorated liniment.

ELEVATED POULTRY HOUSE.

In a two-story building, pigs down and hens up-stairs, will the hens do well, or will it effect their laying ability, being in an elevated house?

P. S.

Ans.—Some hens have been known to do well in an elevated house, but, on the whole, the chances for good results are better when the hens are in a pen on the ground floor. We would not advise keeping hens in a pen over pigs. The moisture rising from the pigs would be likely to make the henhouse damp, and this, with the odor of the pigs, need of light, and liability of drafts, would make such a pen very hard to keep in a sanitary condition for hens. It would require greater care than would be necessary in a separate house.

MUD FEVER—FEEDING ROOTS— INJURED LEG.

1. Have a Clydesdale mare ten years old. Her legs swell up, and are bleeding. The hair is off in places and they are covered with raw sores. Veterinary called it mud fever, and treated her, but she is no better. Would it be advisable to clip hair off her legs? I want to work her in the lumber woods. What do you advise?

2. Are turnips as good for cows whole as when they are sliced or pulped?

3. Have a colt three years old with a scar on hind leg below joint. He was cut in a barb-wire fence. The leg is larger than the other. What would be good to make hair grow on scar. Is there anything to make leg smaller?

J. H. S.

Ans.—1. Your veterinarian was in all probability correct in his diagnosis. Wet increases the irritation in such cases. Give her a purgative of 10 drams aloes and 3 drams ginger. Follow up with 1½ ounces of Fowler's Solution of Arsenic twice daily for a week, after which give 1 dram of iodide of potassium twice daily. Dress her legs three times daily with a lotion made of one ounce each of acetate of lead and sulphate of zinc to a pint of water. Do not wash the legs. If they get wet or muddy, rub dry with cloths, or allow them to dry naturally, and then brush. It will be more difficult to effect a cure if she is worked in the snow or slush of the lumber woods, where her legs will be wet continuously.

2. Some feeders have been known to prefer feeding the turnips whole. Provided the animals teeth are good, and as far as the digestibility and palatability of the turnips is concerned, there is little to gain by slicing or pulping, but for mixing with other feeds which go to make up the ration, the pulped roots are much more convenient, and they do not offer the same danger of trouble from choking as do whole turnips.

3. It is doubtful whether the leg will ever assume its normal condition. Make a blister of 1½ drams each of biniodide of mercury and cantharides, mixed with 2 ounces vaseline. Tie so he cannot bite the part. Clip the hair off around the part and rub well with the blister for two days. On the third day apply sweet oil, and let loose in a box stall. Apply the oil daily for some time. Repeat in a month if necessary. This may reduce the thickening of the leg if it is not of too long standing. Nothing can be done to make hair grow on a scar.

The Great Toronto Sale of Pure Scotch SHORTHORNS

WILL BE HELD AT THE
UNION STOCK YARDS, TORONTO

ON

February 7th and 8th, 1912

**W. C. Edwards & Co., Rockland, Ont.; The Millers (four herds);
J. A. Watt, Salem, Ont., and Capt. Robson, London, Ont.**

Have reserved all or the best of their product for this sale, and the offering will consist of 25 young bulls—better than ever went in a sale ring in Canada—and 75 young cows and heifers, with as good tops and with more merit all round than has ever been offered before. The breeding is absolutely beyond criticism from the viewpoint of those that want pure Scotch Shorthorns, and the animals, without exception, are of the thick, smooth, shortlegged type, so uniform that the best herd on the continent could be selected from them. There are Missies, Lavenders, Brawith Buds, Rosemarys, Butterflies, Blythesomes, Nonpareils, Lancasters, Goldies, Secrets, Emmas, Glosters, Matchlesses, Jilts, Roan Ladys, Rosewoods, Lady Madges, Villages, Lovelys, Rosa Hopes, Mildreds, Crimson Flowers, Bessies, Kiblean Beauties, Ramsdens, Buckingham and Victorias. Not a plain bred one, not many good families but are represented. They are by the greatest sires in the land, many of them served with the best bulls of the breed.

Write for catalogue to:

ROBERT MILLER, Stouffville, Ontario
MANAGER OF SALE



ORCHARD GROVE HEREFORDS

Champions of 1911 shows, winning both senior and junior herds at Winnipeg, Brandon, Regina, Edmonton, Toronto and London; also fifteen championships. Young stock, both sexes, for sale at reasonable prices. Long-distance 'Phone. **L. O. CLIFFORD Oshawa, Ont.**

THE MAPLES' PRIZEWINNING HEREFORDS

Herd headed by Newton Lad (Imp) and Improver, five times champion at Toronto, London and Ottawa. On hand is one yearling bull; also some grand bull calves, herd headers, and a few show heifers. Prices reasonable. **MRS. W. H. HUNTER & SON, The Maples Ont., Orangeville Station, C. P. R.**

SALEM SHORTHORNS Headed by (Imp.) Gainford Marquis, undefeated in Britain as a calf and yearling, and winner of junior championship honors at Toronto, 1911. Have on hand two yearlings and a number of bulls under a year for sale at reasonable prices. **J. A. WATT, Salem, Ont. Flora Sta., G. T. R. and C. P. R.**

Scotch Shorthorn Females for Sale I am offering at very reasonable prices, females from one year to five years of age. The youngsters are by my grand old stock bull, Scottish Hero (Imp.) = 55042 = (90065), and the older ones have calves at foot by him or are well gone in calf to him. Their breeding is unexcelled, and there are show animals amongst them. **A. EDWARD MEYER, Box 378, GUELPH, ONT.**

Scotch Shorthorns FOR SALE: 14 blocky, low-down bull calves, from 6 to 11 months old, all from imported stock. 20 yearling and two-year-old heifers of best Scotch breeding; also one imported bull, an extra sire. Farm ¼ mile from Burlington Jct. Sta. **Mitchell Bros., Burlington, Ont.**

ELMHURST SHORTHORNS & BERKSHIRES I have now a particularly choice lot of young Berkshires; over 50 to select from; bred from imported stock. Strictly high class, from breeding age down. Also choice young Scotch Shorthorns. **H. M. VANDERLIP, Cainsville P.O., Langford Sta., on Electric Road, between Hamilton and Brantford.**

Pleasant Valley Farms Shorthorns—For Sale: 7 good young Scotch bulls high-class bulls; also cows and heifers. Correspondence solicited. Inspection invited. **GEORGE AMOS & SONS, Moffat, Ont.** Farm 11 miles east of Guelph on C. P. R., ½ mile from station.

Shorthorn Bulls—Special offering: Scotch breeding, full of flesh and quality, with plenty of scale and from good milking dams. **H. SMITH, Hay P.O., Huron County, Ontario.** Exeter Station, G. T. R., ½ mile.

1861 - IRVINE SIDE SHORTHORNS - 1911

Three bulls on hand, all from an Imp. bull, one out of an Imp. cow, two whose grand dams are Imp.; also some nice young cows and heifers. Our prices are reasonable, and would be pleased to have you write us for particulars. **Elora, G. T. or C. P. R. J. WATT & SON, Salem, P. O., Ontario**

Shorthorn Bulls—12 to 16 months, reds and roans, Strathallans. A very choice lot of five, considering breeding and extra quality. We offer them at a bargain. The best bunch ever bred at Fairview. **J. & D. J. CAMPBELL, Fairview Farm, WOODVILLE, ONT.**

GEDARDALE SHORTHORNS—Shorthorns of all ages, pure Scotch and Scotch topped, imp. and Canadian-bred, choice heifers, choice young bulls, also the stock bull Lord Fyvie (Imp.); anything for sale. **Dr. T. S. Sproule, M. P., Markdale, Ontario**

Woodholme Shorthorns I have for sale a number of choicely-bred Scotch Shorthorn heifers and several young bulls, all of high-class quality and sired by Imp. Dorothy's King = 55092 =, a Lady Dorothy. I am also offering this bull for sale. **G. M. FORSYTH, North Claremont P. O. & Sta**

Lump Jaw



The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure and it remains today the standard treatment with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or how long the lump has been there. It will disappear and your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser. Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy. FLEMING BROS., Chemists, 75 Church St., Toronto, Ontario

MAPLE SOIL STOCK FARM

Holstein yearling heifers with A. R. O. testing over 20 lbs. got by Idalin's Paul Vee nan, his dam testing 24.798 lbs., served by King Segis Pietertje, his dam 30.51; also a few bull calves from 3 to 6 months old.

Belmont Stn., C. P. R.

J. C. Holtby, Belmont, P.O., Ont.

WELCOME STOCK FARM HOLSTEINS

We have direct descendants of these unequalled performers, Pietertje Hengerveld Count 1 e Kol, sire of three daughters above 32 lbs.; Pontiac Korn-dyke, two daughters above 37 lbs.; Hengerveld De Kol, with the longest list of A. R. O. sons and daughters; Bla ch Lyons, dam of two daughters above 33 lbs.; Colantha 4th Johana, whose yearly production of butter and milk stands unequalled. Our main stock bull, King L ons Netherland, is a fine individual, whose two grand-dams and dam's sister average 34.22. Both sexes for sale. C. B. LLERT & J. LEUSZLER, Tavistock, R. R. No. 6.

A GREAT COMBINATION

Bulls eight months old for sale, combining the blood of Pontiac Korndyke and Hengerveld De Kol, with five 30-lb. cows in their pedigree, whose milk contains over 4 per cent. fat. These are the two greatest Holstein-Friesian bulls in America.

A. A. Farewell Oshawa, Ontario

Purebred Registered HOLSTEIN CATTLE

The most profitable dairy breed, greatest in size, milk, butterfat and in vitality. Send for FREE illustrated descriptive booklets. Holstein-Friesian Assoc., F. L. Houghton, Sec'y, Box 127, Brattleboro, Vt.

Riverside Holsteins

Herd headed by Prince De Kol Posch; dam was champion two years in succession at Guelph dairy test. King Johanna Pentica Korndyke; the record of dam and two nearest dams on sire's side average 32.12. Young bulls and females for sale.

J. W. Richardson, Caledonia, Ont.

Evergreen Stock Farm

offers a choice lot of bulls ready for service, from high testing, deep-milking Record of Merit ancestors. Also a few females for sale. Herd headed by Francis Sir Admiral; dam's record 26.71, sire Sir Admiral Ormsby. Write for prices.

F. E. PETTIT, Burgessville, Ont.

Choice Ayrshires

Good tests, heavy producers and high testers. Prices low considering quality. White Wyandottes, \$2 each. WILLIAM THORN, Trout Run Stock Farm, Lynedoch, Ont. Long-distance phone in house.

A passenger on a New York and Chicago limited train, upon looking under his berth in the morning, found one black shoe and one tan shoe. He called the porter's attention to the error. The porter scratched his woolly head in bewilderment.

"Well, and don't dat beat all!" he said. "Dat's de second time dis mawn-in' dat dat mistake's happened!"

Your wife certainly will appreciate it when you bring home a can of SNAP

Soap won't clean her hands, after filling the lamps, milking the cows, peeling potatoes and onions. SNAP banishes dirt and every odor without hard rubbing. SNAP is soothing and healing — keeps the skin smooth and free of "chaps". Bring home a can — 15c.



QUESTIONS AND ANSWERS. Miscellaneous.

ALFALFA ON RYE IN SPRING.

Can alfalfa be sown in the spring on fall rye, and dragged in, and be a success? F. H. S.

Ans.—Sometimes. We have had good reports from this practice, but are not convinced that it would be uniformly successful.

OX-EYE DAISY—COLT'S MANE—CASTRATING LAMBS.

1. One field of hay I had this last season had a lot of ox-eye daisy in it. The field I intend to put the manure on is clean. I am told not to take manure out till next fall, when all the seeds will have perished. Is that so; or do you know of a better plan? How long does the seed of the daisy retain its vitality?

2. I have a pair of colts that have split manes. What is best way of keeping them to one side?

3. Was reading in an old copy of "The Farmer's Advocate" about castrating lambs by clipping of scrotum when a week or two old. Can you recommend it, as it looks simple? J. F. D.

Ans.—1. Ox-eye daisy does not give much trouble on lands worked under a short rotation of crops. Hay containing the seed should always be cut early, before the seeds, which have a fairly strong vitality, ripen. Allowing the manure to heat in a pile would likely kill the germs of the seeds, but could this not be accomplished without holding the manure over summer? If the manure is placed upon a field for a cultivated crop, no hesitancy in applying is needed, as the cultivation will destroy the young plants. This seed is troublesome in old meadows.

2. Constant application of the comb and brush.

3. It is good practice in castrating lambs to do it at the age stated, and to clip the end off the scrotum and remove the testicles through the opening.

FRUIT QUERIES.

1. When should slips be cut from gooseberries and currants for propagating? Can they be cut either in the fall or spring? If in the fall, how should they be kept till spring?

2. Do the Industry and Victoria gooseberry do well in Ontario? Which is the most liable to mildew, and which do you consider the better?

3. At what age, on an average, do the following apples come into bearing: Duchess, Ontario, and Wealthy?

4. Do dwarf pears come into bearing earlier than standard trees? J. A. T.

Ans.—1. Cuttings may be taken either in fall or spring. In nursery practice, they are taken about September 1, or a little later. The cuttings may be planted at once, or be buried with two or three inches of soil. At the approach of cold weather, they may be planted in nursery rows and covered with a mulch, which must be raked off the tops in early spring. If cuttings are kept until spring, planting must be done early, as growth begins at a low temperature. Many growers favor planting in the fall, especially of gooseberries. If held over winter, the cuttings can be kept in a little soil in a cool cellar.

2. These two are both English varieties. It is a well-known fact that English varieties do not do as well in Ontario as the American varieties. There is much more danger of mildew. There is little to choose between these varieties, as they are the best of the English varieties. The fruit is large and red when ripe. English varieties should not be planted on light soil. Pearl Downing and Red Jacket are good American varieties.

3. All three of these varieties are early bearers. It depends to a considerable extent upon the care the orchard gets as to what length of time it will take for trees to come into bearing. Under good care, apples should be borne in considerable quantity on these trees in from five to ten years after planting. Of course, they would not be in full bearing at this time.

4. Yes.

Summer Hill Holsteins

The only herd in Canada where there are 7 cows averaging almost 28 lbs. butter each in 7 days. Every record made on the farm. Present offering: 15 yearling heifers in calf; 10 imported heifers, some bred; 1 bull calf from a 31½ lb. dam; 1 bull calf from a 29½ lb. dam; 1 bull, 8 months old, from a 25½ lb. Junior, 4 years old; 1 bull, 8 months old, from a 25½ lb. Junior, 4 years old. Come and make your selections now. Prices are right. Trains met when advised.

D. C. FLATT & SON, R. F. D. No. 2, Hamilton, Ont. Telephone 2471.

LAKEVIEW HOLSTEINS

Young bull, sired by Count Hengerveld Favne De Kol, and out of Rose Rattler, 24.19 pounds butter in seven days. This calf was born 25th March, 1911, is well marked, about one-half black. Another, by the same sire, calved March 24th, 1911, out of Inka Sylvia 4th De Kol, 21 pounds butter in seven days, and 88 pounds in 30 days. Send for prices on these and several others equally good.

E. F. OSLER, Bronte, Ontario Telephone

FAIRVIEW FARMS HERD STILL LEADS ALL OTHERS.

We own the world's champion cow, Pontiac Pet, 37.67 lbs. butter in 7 days. We have here her sire and over 50 of her sisters. We can offer you young bulls that are more closely related to her and to Pontiac Clothilde De Kol 2nd, 37.21 lbs., than you can get any place else in the world, and our prices are right. Nearly see head in herd. Come and look them over.

E. H. DOLLAR, (near Prescott) HEUVELTON, NEW YORK

Centre and Hillview Holsteins

—We are offering young bulls from Sir Ladie Cornucopia Clothilde, the average of his dam sire dam and grand dams is 662 8 lbs. milk and 30.58 butter, 7 days, and 2,790.89 milk and 114.5 butter in 30 days; also Brookbank Butter Baron, who is a proven sire. Our females, the dams of these calves, are equal to the best in the country. Bell phone in house. Long-distance phone.

P. D. EDE Oxford Centre P.O. Woodstock Stn.

Evergreen Stock Farm Holsteins

Herd headed by Prince Abbekerk Mercena, whose eight nearest dams average over 25 pounds butter in seven days, and whose dam produced \$150 worth of milk at Toronto—wholesale prices—in four months. We have taken a milk contract, and don't want to feed many calves, consequently we will sell young calves, heifers and bulls, at attractive prices. Our females, the dams of these calves, are equal to the best in the country. Bell phone in house. A. E. HULET, NORWICH, ONTARIO.

MAPLE HILL HOLSTEIN-FRIESIANS

Bull calves, eight to eleven months, by great sires and from official record dams. A few first-class cows and heifers.

BELL TELEPHONE G. W. CLEMONS, St. George, Ontario

NOTICE!

We are offering at the great sale on Jan. 2nd, males and females from sweepstakes winners; high % butterfat; for herd headers or foundation stock. Write, or come and inspect.

M. L. HALEY, M. H. HALEY Springford, Ont.

When writing please mention The Advocate

Woodbine Holsteins

—Herd headed by King Segis Pontiac Lad, whose sire's dam is the champion cow of the world. Sire's sire is the only bull that has sired five four-year-olds that average 30 lbs. each. Dam's sire is the bull that has sired two 30-lb. three-year-olds. His two great grand sires are the only bulls in the world that have sired two 37-lb. cows. Bulls and bull calves for sale.

A. KENNEDY, Ayr, Ontario.

Maple Line Holsteins and Yorkshires

Herd headed by Homestead Colantha Sir Abbekerk 2nd, whose dam, sire's dam, g. dam average 29 61 lbs. butter 7 days. For sale at bargain prices, choice bull calves from R.O.P. cows.

W. A. BRYANT, Middlesex Co., Cairngorm, Ont.

IMPERIAL HOLSTEINS

I can supply bulls ready for service and younger ones, also heifers out of R. O. M. cows, and sired by Tidy Abbekerk Mercena, whose seven nearest female relatives have records averaging 27.19 pounds.

W. H. SIMMONS, New Durham P.O., Oxford Co.

FAIRMOUNT HOLSTEINS

Herd headed by Aaggie Grace Cornucopia Lad, whose dams for four generations have averaged 21.30 lbs. butter in 7 days, and whose great grand dam on his sire's side has a record of 34.32 lbs. butter in 7 days. Both males and females for sale. Owing to scarcity of feed, young bulls will be sold for less than half their value.

C. R. GIES, Heidelberg, Ont.

SPRINGBANK AYRSHIRES

The world's leading herd of Record-of-Performance Ayrshires. Contains more champion milk- and butter-producers than any other herd. Also big cattle, big udders and big teats a specialty. A few bull calves, true to color and type, from R. O. P. dams, for sale at reasonable prices. A. S. TURNER & SON, Ryekman's Corners, Ont. Three miles south of Hamilton. Visitors welcome. Trains met by appointment.

Holsteins and Tamworths

—For sale: One yearling bull and several bull calves. Two bears fit for service (prizewinners); sows bred to farrow in January; pigs ready to wean. Phone connection, via Cobourg.

BERTRAM HOSKIN, The Gully P. O.

AYRSHIRES AND YORKSHIRES

—We have still some good young bulls. Now is the time to buy for the coming season, before the best go. We have females any age, and can fill orders for carlots of Ayrshires. Pigs of either sex on hand.

ALEX. HUME & CO., Menie, Ont.

CHERRYBANK AYRSHIRES!

Imported and Canadian bred, with R. O. P. official records, headed by the renowned champion, Imp. Netherhall Milkman. Richly-bred females and young bulls for sale.

P. D. McArthur, North Georgetown, Que.

Burnside Ayrshires

Champions in the show ring and dairy tests. Animals all ages and both sexes for sale. Long-distance phone in house.

R. R. NESS, Howick, Quebec

CITY VIEW AYRSHIRES

Several R. O. P. cows and others just as good, 2-year-old heifers, one yearling bull and six 1911 bull calves, with one to three crosses of R. O. P. blood. Prices reasonable. Write or phone.

JAMES BEG, R. R. No. 1, St. Thomas.

STONEHOUSE AYRSHIRES

Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers.

HECTOR GORDON, Howick, Quebec.

HEADACHE

Seems To Be Habitual With Many People.

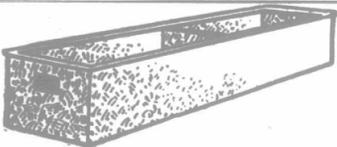
Some are seldom, if ever, free from it, suffering continually and wondering why they can get no relief.

Headaches are generally caused by some derangement of the stomach or bowels, or both.

Burdock Blood Bitters removes acidity of the stomach, improves digestion, regulates the constipated bowels, and promotes a perfect circulation of pure blood to all portions of the body, thereby curing the headaches by removing the cause.

Mrs. L. Maguire, Kinmount, Ont., writes:—"I am writing you a few lines to tell you what your Burdock Blood Bitters has done for me. I used to be greatly troubled with headaches, but after using two bottles of Burdock Blood Bitters I was completely cured. This was two years ago and I have had no return of headache since."

Burdock Blood Bitters is manufactured only by The T. Milburn Co., Limited, Toronto, Ont.



Steel Water Troughs

Made of heavy galvanized steel, our Troughs and Tanks are strong, compact and durable. So successfully have they stood the test during the past five years that we are willing to ship any size you select to your station on the understanding that you can ship them back at our expense if not first-class in every detail. Write for catalogue H. We will build any size or style to order. Ask for quotations. Agents wanted.

STEEL TANK CO., TWEED, ONTARIO

Spruce Lodge Leicesters
Just now I am making a specialty of flock-heads and show stock, shearings and ram lambs, shearings, ewes and ewe lambs, the best type of the breed. Phone. W. A. Douglas, Tuscarora, Ont.

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs—Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Buena Vista Farm, Harriston, Ont.

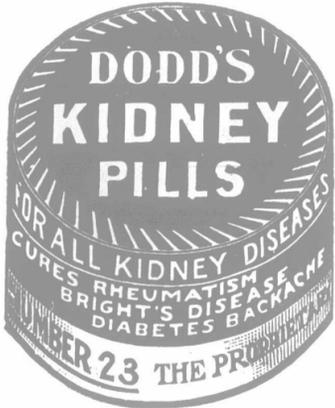
WHY HE COULDN'T REMEMBER.
A kindergarten teacher tells a good joke on herself. She has been very strict in requiring written excuses from the mothers in case of absence. The morning of the big snowstorm only a few of the babies made their appearance. The next day they all came with written excuses except one tot, named Willie. When asked for his, he said: "I did ferdit it."

He was cautioned to bring it the next day.

Willie's mother was quite disgusted. It seemed to her that any one with the slightest pretensions to gray matter ought to know the reason for his absence.

The next morning he arrived all rosy with the cold, and handed the teacher his excuse. It read:

"Dear Miss C—: Little Willie's legs are fourteen inches long. The snow was two feet deep. Very truly yours, Mrs. J.—."—Columbus Dispatch.



QUESTIONS AND ANSWERS. Miscellaneous.

ARTICHOKES — FEEDING AND WEANING PIGS, ETC.

1. Can you tell me how to plant artichokes, and if they make good hog feed; also how long will they remain in the earth if hogs are turned in the patch?

2. What is a good ration to feed young pigs right after weaning; also give an estimate of cost to raise one pig from time of weaning till the weight of 200 or 250 lbs.?

3. How old should pigs be to wean; also how old, on an average, is a pig which weighs 200 to 250 lbs.?

4. A dog has killed a number of chickens; owner of dog lives about one mile away. Dare I kill the dog, or can you tell me what to do? The chickens are pure-bred.

5. If A hires to B to drive team for a term of months, can B hire C to drive A's team by the day, and order A to do other work which needs no team, providing A looks after his team?

A. H. L.
Ans.—1. Jerusalem artichokes are recommended by many as an excellent feed for hogs, being more especially suited for light, sandy soils. The tubers may be planted in late fall or early spring in rows two or three feet apart, spaced a foot or eighteen inches apart in the rows. In planting, the tubers may be cut like potatoes, one eye in a set. Plant like potatoes, and cover about two inches deep. The crop, if planted early, should be ready to feed early in September, the hogs being turned in to help themselves. Cultivate much as you would for potatoes or corn. Frost does not injure artichokes, and usually enough tubers are left in the ground to insure a crop the following season. To eradicate, turn hogs on in the spring, and plant the plot to a hoe crop. Would advise planting on a small scale. The feeding value is a little higher than that of potatoes, and hogs are very fond of them in moderate quantity.

2. Give as much skim milk as they will take, and feed liberally on shorts. Shorts make a good combination with almost any kind of meal for young pigs, and can be profitably used in from one to two-thirds proportion of the meal ration. The remainder can be made up of finely-ground grain, oats, barley, peas, or corn, mixed or separate. If feeding corn or peas alone with the shorts, it would be necessary to use the higher percentage of shorts.

It is next to impossible to estimate the cost of producing pork, owing to the great diversity of conditions, feeding, individuality of the pigs, etc. From three to five pounds of meal is generally supposed to make a pound of pork. From this you can get some idea of the cost. Pigs weighing less than fifty pounds have been found to make a gain of 1 lb. on a trifle less than 3 lbs. of grain. The amount required to make a pound of increase gradually increased with the age of the pig until it was found in the same experiment that it required upwards of 5 lbs. of meal to make a pound of increase in a pig weighing over 250 lbs. and up to 300 lbs. A safe average would appear to be about four pounds of meal to a pound of increase in pigs up to the weight stated in the question.

3. This depends somewhat upon conditions. If skim milk is available, six weeks old is a good age at which to wean. If no skim milk can be had, it is better to defer weaning until the pigs are eight weeks of age. If the pigs are for showing purposes, they may be left with the sow until ten or twelve weeks old, but from a feeder's view-point, six to eight weeks is a better age. A pig six months old should weigh about 200 pounds.

4. It would likely be better in the long run to consult the owner of the dog, and he will, in all probability, do away with him, or see that he is kept confined at home. He is responsible for the damage done by the dog.

5. If there is a written agreement stating that B is to do nothing but drive team, he cannot be made to do other work. Ordinarily, however, a man is supposed to do whatever work needs doing. Under the circumstances stated, where teaming is to be done, B should have the privilege of driving the team, subject to the employer's discretion.



Maple Villa Oxford Downs and Yorkshires

Are ideal in quality and type. Present offering is a grand lot of ram lambs for flock headers, also a number of shearing ewes and ewe lambs, sired by imp. Hamptonian 22nd, who is also for sale. Yorkshires of both sexes and all ages. Right good ones. Satisfaction assured.

J. A. CERSWELL Bond Head P. O., Ont. Bradford or Beeton Station.

Suffolk Down Sheep—Shearing rams and ewes; also lambs.

Aberdeen-Angus Cattle—Extra good young bulls, the best in Canada.

James Bowman
Elm Park
GUELPH, ONTARIO

Shropshire and Cotswold Ewes

At bargain prices, shearing ewes and a few aged imported ewes, bred to a first-class ram. In Cotswolds, shearing and two shear ewes, bred to the best rams of the breed; also ewe lambs, both breeds.

JOHN MILLER, Brougham, Ont. Claremont Stn., C. P. R.

Cattle and Sheep Labels

Metal ear labels with owner's name, address and any numbers required. They are inexpensive, simple and practical. The greatest thing for stock. Do not neglect to send for free circular and sample. Send your name and address to-day.

F. G. JAMES, Bowmanville, Ont.

BLAIRGOWRIE STILL TO THE FRONT

Present offering: Shropshire and Cotswold ewes bred to high-class rams; also ewe lambs. In Clydesdales I have choice young mares and filly foals. In Shorthorns are several young bulls of serviceable age. Herd headers of quality.

Myrtle, C. P. R. Stn. L.-D. Phone. JOHN MILLER, JR., Ashburn, P.O.

Shropshire Sheep, Shire Horses and Poultry

I have bred very many winners in Shropshires, and never had a better lot of both sexes for sale. Order early. Also a big quality shire filly and White Wyandotte poultry. W. B. MONKMAN Bond Head, Ont. Phone connection.

When writing please mention this paper

Farnham Farm Oxfords and Hampshire Downs

We are offering very reasonably a number of first-class yearling and ram lambs, by our imported champion ram; also fifty ewes of both breeds. Long-distance phone in house; ask Guelph for 152, two rings.

HENRY ARKELL & SON, ARKELL, ONTARIO

Southdown Ewes

A few good shearings, and two-shear ewes in lamb to my Toronto champion ram.

Angus Cattle

Buy an Angus bull to produce steers that feed easily and top the market.

Colliers

that win at the shows and make excellent workers.

ROBT. McEWEN, Byron, Ont.

Poplar Lodge Southdowns and Berkshires

I can supply Southdown sheep, rams or ewes, ram or ewe lambs, Berkshires, from youngsters up to breeding age, of both sexes; the highest types of the breeds in proper fit. SIMEON LEMON, Kettleby P.O., Schomberg or Aurora Stns. Phone.

Newcastle Tamworths and Cotswolds

For sale: Choice young sows, bred and ready to breed; boars ready for service; beauties, 2 to 4 months old, by imp. boar, dam by Colwill's Choice, Canada's champion boar 1901, 2, 3 and 5. Several choice ram lambs and ewes, all ages, and one 3-shear ram. Prices right. Bell phone.

A. A. COLWILL, NEWCASTLE, ONTARIO.

Woodburn Berkshires

We are offering for sale 100 head of young Berkshires of both sexes and any sizes required. We can supply pairs or trios not akin; our Berks are noted for strength of bone, length, depth and quality, conforming to bacon type. Snow and breeding stock a specialty.

E. BRIEN & SON Ridgetown, Ont.

SUNNYSIDE CHESTER WHITE HOGS

I am now offering some very choice young things of both sexes, of breeding age. A few Shropshire sheep of both sexes. Also Mammoth Bronze turkeys. W. E. WRIGHT, Ganworth P.O., Ont.

For Sale—Ohio Improved Chester Hogs

Sired by first-prize hog at Toronto and London. Also reg'd Jersey Bulls, from 8 to 10 months, from high-testing stock. Write: CHAS. E. ROGERS, Ingersoll Ont.

Pine Grove Yorkshires

orders for young pigs, not akin, for spring delivery. Descendants of imported stock. Property of Joseph Featherston & Son, Streetsville, Ont.

FAIRVIEW BERKSHIRES

Ontario's banner herd. Prizewinners galore. For sale are: Young sows bred and others ready to breed, and younger ones. A number of young boars coming on. JOHN S. COWAN, Donegal, Ont.

LARGE WHITE YORKSHIRES

Have a choice lot of sows in pig. Boars ready for service, and young pigs of both sexes supplied not akin, at reasonable prices. All breeding stock imported, or from imported stock, from the best British herds. Write or call on: H. J. DAVIS, Woodstock, Ont. C. P. R. and G. T. R. Long-distance phone.

O.I.C.

We have those fine Chester White boars for sale, 1-5 mos. old, 1-6 mos. old, 1-2 years old, and four sows over one year old; none are better, few as good; all are registered.

GLEN ATHOL FRUIT RANCH

ST. CATHARINES, ONT.

Hampshire Pigs

Get acquainted with the best bacon hog in existence. Both sexes for sale from imported stock. Write for prices. Long-distance phone. J. H. RUTHERFORD, Box 62, Caledon East, Ont.

Elmwood

Ohio Improved, Chester White pigs, largest strain, oldest-established registered herd in Canada. Choice lot of young sows, bred; young pigs, 6 weeks to 6 months; pairs not akin. Express prepaid. Safe delivery guaranteed. E. D. GEORGE & SONS, Putnam, Ontario.

Hampshire Hogs

We have the highest-scoring and greatest prizewinning herd of Hampshire swine in Canada, bred from the best strains of the breed. Stock of both sexes and all ages. HASTINGS BROS., Crosshill P.O. Linwood Sta., C. P. R.; Newton Sta., G. T. R.

Monkland Yorkshires

I am making a special offering of 30 young bred sows. They will average 200 pounds in weight, and are from 6 to 7 months of age. An exceptionally choice lot, full of type and quality; also a limited number of young boars. MATTHEW WILSON, FERGUS, ONTARIO

Duroc - Jersey Swine.

Largest herd in Canada. 100 pigs ready to ship. Pairs and trios not akin; also a few sows ready to breed. Bell phone at the house. MAC CAMPBELL & SONS, NORTHWOOD, ONT.

Improved Large Yorkshires FOR SALE

A lot of fine young boars and sows of different ages. Full strength. Correspondence solicited. SENATOR F. L. BEIQUE Lachne Lecks, Que. P.O. Box 106

PINE GROVE BERKSHIRES

Boars fit for service; sows ready to breed; younger ones coming on. Show stock a specialty. Price right for quick sale. Milton, C.P.R. Georgetown, G.T.R. W. W. Brownridge, Ashgrove, Ont.

Morrison Tamworths

Bred from the best blood in England; both sexes for sale, from 10 months old; young sows, dandies, in farrow to first-class boars. Chas. Currie, Morrison, Ont.

Spring Bank Yorkshires

For two weeks, at reduced rates, a few choice young sows, registered, four months old. Long-distance phone. WM BARNEI & SONS, Living Springs, P.O., Ontario. Fergus Station C.P.R. and G.T.R.

Livingston's Cake and Meal

have from 1/5 to 1/4 more real flesh-forming food value than other feeds. This has been proved by actual tests on the Livingston Farm. From the very first they fatten the cattle and better the milk.

Made by skilled experts, with every up-to-date manufacturing aid to help them—by the Old Patent Process, which cooks the food, insuring its keeping for any length of time and making it more easy to digest.

Neither too soft (which means waste), nor too hard (which hinders digestion)—the animal gets the full strength of each particle. Suppose you try them at once—they both

Save and Make Money

Talk to your dealer to-day about Livingston's Cake and Meal—or write us direct. Address: The Dominion Linseed Oil Co., Limited, Baden, Ontario.

THE "BARRIE" ENGINE

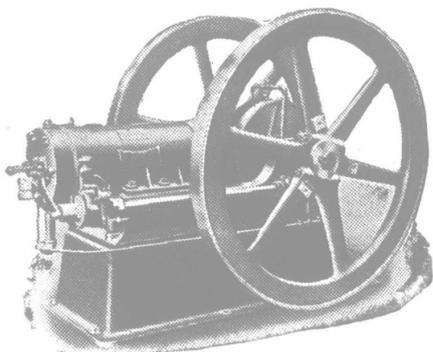
Stationary and portable, from 3 to 100 horse power. For gasoline, distillate, natural gas, city gas, or producer gas. It is a perfect running engine. Notice the balance and few moving parts. It is reliable and economical. Guaranteed to give entire satisfaction.

Good reliable Agents Wanted. Write for our terms.

BUILT BY

The Canada
Producer & Gas
Engine Co.

BARRIE, ONTARIO
CANADA.



Farm and Garden Handbook FREE!

The PLANET JR 1912 catalogue is an *instructive* and valuable handbook of short cuts to best results for farmers and gardeners *everywhere*—not simply a list of implements. It illustrates 55 latest-improved Planet Jr tools, showing many in *actual use*. 64 big, helpful pages. Write for it.

S L Allen & Co
Box 1108F Philadelphia Pa

Send postal today!

No. 11 PLANET JR Double Wheel Hoe, Cultivator, Plow and Rake works both sides of plants thoroughly and rapidly at one passage, until crops are 20 inches high. This fine tool has indestructible steel frame and steel leaf lifters.

No. 4 PLANET JR Combined Hill and Drill Seeder, Wheel Hoe, Cultivator, and Plow sows seed accurately and works quickly, easily, thoroughly. Wonderful all-round garden tool and money-saver.

WRITE FOR NAME OF OUR NEAREST AGENCY.



Perfect Maple Evaporator

Price low—quality high—product the best possible—the kind you like syrup—it retains its maple taste—all unnecessary expense and middlemen's profits cut out. Sold at a price the poorest man can buy. Every one guaranteed. Write for pamphlets and recommends. Do it now.

Steel Trough & Machine Co., Tweed, Ont.

OUR ENGINES PAY FOR THEMSELVES

IN FUEL SAVING and IN TIME SAVING!

They burn gas, gasoline, kerosene and distillates. They have no great cumbersome base and consequently are easily and quickly moved from one job to another about the farm. Write for information about new Free Trial Offer of our latest improved

GASOLENE ENGINES

Note the compactness for ease in handling! Note the pulleys on both sides! Write for facts regarding our new Slow Speed, High Duty Engine, the engine that gets up-to-date power from every quart of fuel—one that has the record for lowest upkeep cost—that is the quickest and easiest starter—has least vibration—perfect lubrication, steadiest power, least wear and tear. Mail us your name and address on a post card, today, giving us the size of engine you need and the use you will put it to. We make 1 1/2 to 5 1/2 h. p. single cylinder engines; 6 to 25 h. p. two cylinder; 30 to 50 h. p. four cylinder. Quick action on your part is demanded to get this free offer. Don't buy or order an engine until you investigate the TEMPLE MAKE. This is our 60th Year.

1 1/2 to 5 1/2 H. P. Single Cylinder TEMPLE PUMP CO., 448 W. 16th St., CHICAGO 6 to 25 H. P. Two Cylinders

Cleanliness is next to godliness

That's why our Fibreware, Butter Tubs, Pails and Wash Tubs are so popular.

They are so easily kept clean, outlive many times ordinary Woodenware and are so tight, that once used always used.

THE E. B. EDDY COMPANY, LIMITED
HULL, CANADA

MR. FARMER!

Do you know EXACTLY what you are selling?

Is it your knowledge or the other man's word?



Why not know as much as the buyer?

Don't give away your profits.

"The Profit in the last ounce."

**RENFREW
SCALE
CO.**

**RENFREW
ONT.**

SEND FOR OUR BOOKLET

Name.....

Address.....

Dealer.....

Address.....

Please Mention The Farmer's Advocate

LET US SHOW YOU HOW EASILY YOU AND YOUR NEIGHBORS CAN HAVE A TELEPHONE SYSTEM OF YOUR OWN

YOU—you and your neighbors—would have a telephone system for your own community, if you only realized how easily you yourselves could construct it and get it going. If you knew, in detail, how you and the people around you could form, own and control a local, self-maintaining company, for your own use and convenience, you would have such a system. There would be a telephone system in your community to-day if you knew how easily you and your neighbors could build every foot of the line and install every instrument yourselves—and especially if you realized that you do not need very much capital to do it either. Now, there is no reason why you should not know all these facts; for we stand ready to give you, for the mere asking, every bit of this information, provided only that you are sufficiently interested in the subject to write and ask us for it.

We
Send
This
Book

FREE

But
Only
On
Request

HOW to Build Rural Telephone Lines," is an illustrated, cloth bound book of one hundred pages, full of a carefully indexed mass of information on rural telephones. This book tells everything; with it before you, you can organize your own company and construct your own line. It tells you absolutely everything you need to know, step by step, as you go along. There is no other book in existence that deals so thoroughly with every vital, essential fact. Remember, this book has cost a lot of money and careful study to prepare. We really ought to charge for it. However, we send it free on request—but ONLY on request. To get it you have to send us the coupon and thus signify that you are really interested. The book is too valuable to distribute haphazard.

Send
Us The
Coupon
Now

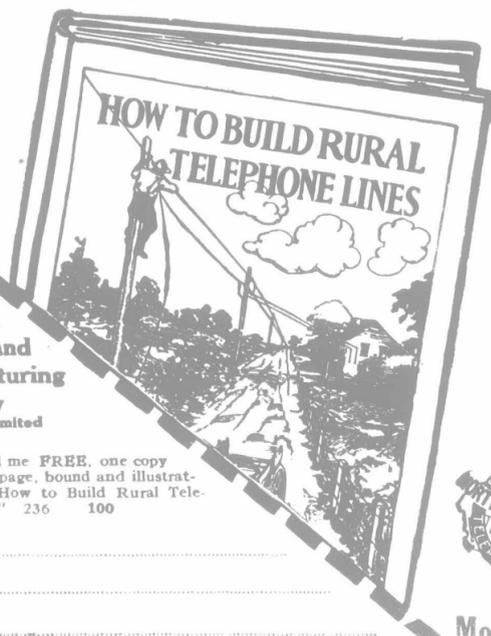
The
Northern
Electric and
Manufacturing
Company
Limited

Gentlemen:
Please send me FREE, one copy
of your 100 page, bound and illustrat-
ed book on "How to Build Rural Tele-
phone Lines." 236 100

Name.....

Post Office.....

Province.....



Montreal Toronto Winnipeg Regina Calgary Vancouver



The Northern Electric is the instrument on the wall of nine out of every ten telephone users in Canada.

We Will Explain All About Rural Company Organization

YOU do not need experience to organize a telephone company in your own community, when you have our book. It tells you exactly what you have to do and how to do it. All you need to do is to follow the instructions that the book gives and then get out and interest your neighbors. Whether you want to organize a mutual or a stock company, the book will tell you how.

You And Just Your Own Friends Can Build Every Foot Of Line

BUILDING your own line keeps down construction costs. With the help we give you, you do not need to employ expert linemen. The book explains the last word in line construction and contains, in this one chapter alone, thirty-seven diagrams and illustrations, showing how to make every kind of connection necessary, how to route the line, how to put the fittings on the poles, how to guy the poles, how to place the insulators and string the wires—in fact, how to handle every detail as well as an expert lineman can. On request, we will also tell you of your provincial regulations, what your government requires and what it will do to help you.

The Cost To Operate Your Own Line is Low

YOU can readily understand that when you and your friends have the entire management in your own hands, you can regulate the cost of running the line. In the book we explain just exactly what is necessary and you can take your pencil and figure out how little it will cost you to have a telephone on the wall in your own house.

Let Us Explain To You How To Interest Your Neighbors

THE first step in getting started, is to enthuse your neighbors and get them all in with you. When you have read "How to Build Rural Telephone Lines," you will have a mass of information at your finger ends that will enable you to place positive, definite facts before your friends, to enthuse them with the idea of a self-maintaining, community-owned system and to make everybody around you anxious to help. All it needs to get a telephone system started, is for some one progressive man to start the ball rolling. With the information that we will place at your command, you can get everything organized in short order.

There Will Be A Telephone System In Your Locality — Get Posted

SOONER or later someone is going to start a telephone system in your community, just as systems are being started every day in farming centres throughout the Dominion. When this subject comes up, you will want the full particulars before you. Now is the time for you to post yourself. The book tells you everything and, if you are interested, we will be glad to send it to you free. Do you care to sign the coupon and send it to us now?

THE Northern Electric
AND MANUFACTURING CO. LIMITED

Manufacturer and supplier of all apparatus and equipment used in the construction, operation and maintenance of Telephone, Fire Alarm and Electric Railway Plants. Address our nearest house

236