

PUBLISHED EVERY WEEK. \$1.50 PER YEAR.

# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE  
SUCCEED  
FOUNDED 1876

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

VOL. XLVII.

LONDON, ONTARIO, NOVEMBER 21, 1912.

No. 1052

## Free to Stock and Poultry Raisers

We will send absolutely free, for the asking, postpaid, one of our large sixty-four page books, with insert, 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 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 cured 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 up 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.

Toledo, Ont., July 1, 1910.  
W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—I have used a part of a package of your "Royal Purple Stock Specific." I fed it to one cow according to directions. She gained six pounds of milk while using part of a package. The rest of my herd reduced in milk while this one gained. I consider it has no equal.

T. G. BELLAMY.

Bondhead, Ont., Aug. 31, 1912.  
The W. A. Jenkins Mfg. Co., London, Ont.

Gentlemen,—After experimenting with a great many stock foods, I was about convinced that there was very little virtue in any of it, but your dealer insisted on me trying Royal Purple Stock Specific, saying it was different from all others. I have since used a great lot of it, as I keep from ten to twenty horses and about the same of cattle. This Specific, in my opinion, is certainly in a class by itself as a conditioner, and is the best I have ever used.

GEORGE MAPES.

Clear Creek, Ont., Sept. 19, 1912.  
W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Your "Royal Purple" Stock Specific is the best stock conditioner I have ever had in my stables, and am never without it. I had a brood sow that had milk fever very bad. Your "Royal Purple" saved her life. Put her on her feet in three days. I had three calves last spring that got scouring very badly. Could not get it stopped until I used "Royal Purple." It did the work O.K.

Yours truly,  
H. B. MOULTON.

Saskatoon, Sask., Sept. 20th.  
The W. A. Jenkins Mfg. Co., London, Canada.

Gentlemen,—Some months ago we bought some of your Royal Purple Stock Specific from Mr. Vogan here. We have been using it ever since, and we find it the best conditioner for driving horses we have ever tried.

H. F. McCALLUM, "The Palace Livery."

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

What we wish to impress on your mind is that we manufacture nothing but pure, unadulterated goods. Our booklet gives over 300 recommendations for our different lines from people all over Canada. While we give you above the names of a few who have used it, our best recommendation is for you to ask any person who has ever used any line we manufacture.

AN ASSORTED ORDER AMOUNTING TO \$5.00 WE WILL PREPAY.

W. A. JENKINS MANUFACTURING Co., London, Ontario

RECEIVED  
NOV 22 1912  
INTERNATIONAL

Scott, Sask., May 22nd, 1911.

The W. A. Jenkins Mfg. Co., London, Ont.

Dear Sirs,—Do you want a man to represent your Royal Purple goods in this district. I am from Ontario, and have fed your Stock Specific—got it from Mr. J. Corbett, of Brownsville. My cows, while using it, made the largest average, and tested five points over average at C.M.P. at Brownsville. I know your goods are the highest class Stock Specific on the market, and take great pleasure in representing you in this district.

NORMAN G. CHARLTON.

### Royal Purple Poultry Specific

will make your hens lay in winter, as well as summer, and yet a 50c. package will last 25 hens 70 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.

Port Colborne, May 11,

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—This is to certify that I have used one \$1.50 tin of your "Royal Purple" Poultry Specific, and there is nothing that can equal it. I wanted yours again and your agent did not have any, so he gave me another brand, and I can assure you it was not worth carrying home, for my hens layed better without it. I have been from 12 to 15 dozen eggs short every week since I have not used your "Royal Purple."

CHARLES RICHARDSON.

## Royal Purple

STOCK AND POULTRY SPECIFICS

A second from Mr. Richardson as follows:—

Port Colborne, Ont., Aug. 24, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—Please find enclosed express order for \$3.00, for which please send me two tins of your "Royal Purple" Poultry Specific.

C. RICHARDSON.

A third letter from Mr. Richardson as follows:—

Port Colborne, Ont., Aug. 29, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—I received two tins of "Royal Purple" Poultry Specific all O.K. I have tried all kinds of specific to make my hens lay, and I find that you are the only ones that manufacture the genuine article. All the rest, I think, is a waste of time and money to bother with. As an egg-producer, I cannot praise your Poultry Specific high enough, for I would not be without it if I had to pay double the money.

C. RICHARDSON.

Sherbrooke, Que., Aug. 1, 1910.

W. A. Jenkins Mfg. Co., London, Canada.

Dear Sirs,—I have used your Specific for one year, and have given it to my birds with good results. See my winnings at the different fairs, which will tell the tale.

MISS GEORGINA CAMIRAUD.

### 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 lameness in a very short time. Mr. John M. Daly, coalman in London, says: "We have nine horses constantly teaming coal, and have all kinds of 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 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 have to send for one of our booklets, as we give you a full history of it there. It will entirely exterminate lice on fowls or animals with not more than one or two applications. It smothers them. Price 25c.; by mail, 30c.

### Royal Purple Disinfectant (Sheep Dip)

In this line we give you the largest value for the money of any disinfectant on the market. A tin containing 1 2-3 qts. Imperial measure will cost you only 50c. Also put up in 25c. tins.

### Royal Purple Roup Cure

Mr. Dulmage, the great breeder, of White Rocks, tells us that he has never used a Roup Cure that will give relief so quickly to hens suffering from Roup or kindred diseases. Our book tells you all about it. 25c. per tin; 30c. by mail.

### Royal Purple Worm Powders

For animals. 25c. per tin; by mail, 30c.



**Buy a Wagon You Can Depend On!**

For convenience, strength and durability—get a T-A Handy Farm Wagon. Designed especially for farm work, will give everlasting service under the roughest usage to which a wagon can be put. And besides—it is easy on horses.

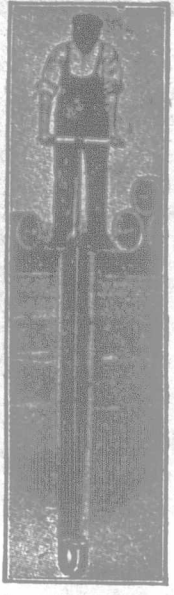
**T-A Wide-Tire Steel Wheels & Handy Farm Wagons**

Carefully and strongly built, of the highest grade material, these T-A Wide-Tire Steel Wheels will carry 25 to 50 per cent. heavier loads without the least danger of breaking down or getting stuck.

We will be pleased to send you descriptive catalogue. Write for it.

**Tudhope-Anderson Co., Ltd.**  
Orillia, Ontario

**You can dig 40-foot Wells Quickly through any soil with our Outfit at \$12.00 delivered**



Write us today, and learn how you can start a profitable business digging wells for others on an investment of but \$12.00.

100-ft. outfits, \$25.00.

Works faster and simpler than any other method.

**WRITE TO-DAY**

**Canadian Logging Tool Co., Ltd.**  
Sault Ste Marie, Ontario.

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**Unexcelled Train Service**

Fast Time to

WINNIPEG	SASKATOON
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NELSON	ROSSLAND
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VICTORIA	SEATTLE
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Standard and Tourist Sleeping, also Compartment Observation Cars, via Canada's Greatest Highway.

**General Change of Time October 27th, 1912**

**THE HARVEST TIME**

Should always find the successful husbandman with a surplus on hand. Make use of a portion of this by investing in a short term Life or Endowment Policy. Make your future independent and certain.

**The Federal Life Assurance COMPANY**  
HAMILTON, ONTARIO

MENTION FARMER'S ADVOCATE

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.

**Reliable Help for the Farmer**

Farm labor is scarce. Wages are high. All the more need for a **BARRIE ENGINE**. Soon pays for itself in time and labor saved. Grinds grain, shells seed corn, pumps water, cuts straw, threshes beans, saws wood, drives churns, separators and washing machines. Does many other things, too.

**BARRIE ENGINES WORK LONG**

hours without getting tired. Very simple in construction. Reliable in operation. 3 to 100 h.-p. Stationary or portable. For gasoline, distillate, natural gas, producer gas. Write for catalogue. Agents wanted.

**The CANADA PRODUCER & GAS ENGINE CO., Limited**



Distributors:



James Rae, Medicine Hat; Canada Machinery Agency, Montreal; McCusker Imp. Co., Regina; The Tudhope Anderson Co., Ltd., Winnipeg, Calgary, Edmonton, Lethbridge, Saskatoon and Regina.

**RAW FURS**

Are you a trapper? Are you a dealer? Are you seeking a reliable firm to ship to? Many thousands of shippers say we give best returns, good reasons—we pay as we quote, give a square grade and send your money as quick as the return mail can bring it to you. We post you reliably.

No Commissions. No Express Charges.  
Write at once for price list, tags, envelopes, invoices, etc.

**BENJAMIN DORMAN, Inc.**  
RAW FURS, GINSENG, GOLDEN SEAL  
147 West 24th Street, New York. (Mention this paper.)  
References: Greenwich Bank, N. Y. East River National Bank, N. Y.

**Saves Clothes**

The Connor Ball-Bearing Washer saves clothes. It washes them without any rubbing on the wash board. And unlike other washers, there is no post or obstruction in the Connor around which clothes might wind or tear.

**Connor Ball-Bearing Washer**

is the SAFE washer. Nothing about it that can injure the most delicate fabric or loosen a button. Has new improvements and conveniences found on no other washer. No risk in getting one, because fully guaranteed by one of Canada's largest washing machine corporations. Look for the "money back guarantee" on the washer.

Ask for booklet giving complete description. It will open your eyes. Such a convenient, easy-running, time-saving washer was never thought possible three years ago.



**J. H. Connor & Son Limited**  
Ottawa, Ont.

A quiet dependable Gasoline Engine of mighty power, improved cooling, and ignition systems. Perfect, economical carburetor. The Gilson Engine is approved by the foremost authorities and mechanical engineers. All sizes. Write for catalogue. Founded 1890.

**GILSON MFG. CO. LTD.**  
29 York St., Guelph.

**GILSON ENGINE**  
"GOES LIKE SIXTY"



**GRAND TRUNK RAILWAY SYSTEM**

Winter Tours to **California, Colorado, Mexico and Pacific Coast Points**

The Grand Trunk Railway is the most direct route from all points East through Canada via Chicago.

**FEATURES:**

Double Track, Fast Service, Finest Roadbed, Modern Equipment, Unexcelled Dining Car Service.  
All elements of safety and comfort.

**TO THE SUNNY SOUTH**

No more desirable route than via Grand Trunk to Detroit, thence via Cincinnati to Jacksonville, Palm Beach, Nassau, etc.

Round trip tickets, giving choice of all the best routes, together with full information and reservations, may be obtained from nearest Grand Trunk Agent, or write A. E. DUFF, D. P. A., Toronto, Ont.

Send your Raw **FURS** to **John Hallam**

Sixty Thousand trappers now send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada.

**FREE** Our "Up to the minute" Fur quotations and the last Edition of **HALLAM'S TRAPPERS GUIDE**, a book of 96 pages, mailed FREE.

Write to-day to John Hallam, Mail Dept 31 TORONTO, 111 Front St. E.

**RAW FURS**

Ship your furs to a reliable firm, where you can depend on receiving good assort and highest market prices. Write at once for price list, tags, etc.

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72 Colborne Street Dept. A  
TORONTO, ONT.

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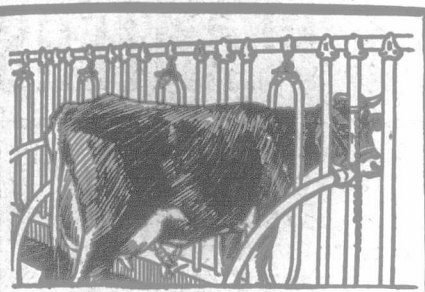
We are the largest buyers of raw furs in Canada, and we pay the highest cash prices. **WRITE AT ONCE FOR PRICE LIST AND OTHER PARTICULARS.**

**A. & E. PIERCE & CO.**  
500 St. Paul St., cor. St. Peter, Montreal, P. Q.

**Snow Plows Snow Plows**  
For Township Roads. For Side Walks.

**Stone and Stump Pullers. Bob-sleighs.**

**A. LEMIRE, PROP., WOTTON, QUE.**



### Cow Profits

**C**OW comfort and cow sanitation result in more cow profits, and this alone should induce any farmer or dairyman to install our Sanitary Steel Stalls and Stanchions. They allow free passage of light and air in a stable and ensure perfect sanitation and ventilation—a result impossible with any wooden equipment.

#### Louden's Stalls and Stanchions

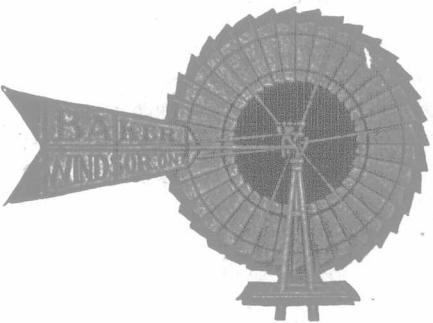
are actually cheaper than wood. Louden Stalls of heavy tubular steel with malleable fittings, have no flat surfaces for dust to accumulate and no rough or sharp corners to injure or chafe the cows. Louden Stanchions give cows the greatest possible comfort and freedom, yet keep them perfectly lined up. Latch easily, opened or closed with gloved hand yet is completely "cow proof."

**Louden's Barn Equipments** include Feed and Litter Carriers, Hay Tools and Louden's Bird-Proof Barn Door Hanger. Send for complete catalogue. It is cheaper to put LOUDEN QUALITY into your barn at first than to experiment with inferior equipment.

Write to-day for our Catalogue of modern labor- and money-saving equipment.

**LOUDEN MACHINERY CO.**  
Dept. 71 GUELPH, Ont.

## "BAKER" WINDMILLS



"BAKER" Back Geared Engines are so constructed that the gears cannot wear out of mesh, must necessarily work in mesh, as our wheels are built on a hub which revolves on a long independent steel spindle. The wheel cannot sag or become out of line. The hub revolving on the cold rolled steel spindle maintains the gears absolutely in position. In the construction of the "BAKER" back geared mills the small gear or pinion on the hub is below the large gear carrying the pitman. This position of the gears further prevents same from wearing out of mesh, and gives them the fullest wearing surface, and greatly increases the life of the machine.

H.-A. Pumps of various designs, Pine, Cypress, and all sizes of GALVANIZED STEEL Tanks. Write for catalogue No. 28. We invite correspondence from dealers in territory where we are not represented.

**THE HELLER-ALLER COMPANY**  
WINDSOR, ONTARIO

## TELEPHONES

For information and estimates for local telephone systems,—

For guaranteed construction material and telephone equipment,—

Write :

**Canadian Independent Telephone Co., Limited**

20 Duncan Street, Toronto, Ontario

Ask for No. 3 Bulletin.

## One man less to run this Dain Press

Pull Power and Self-Feed

**C**OMBINE more features that will lessen labor, increase capacity and make hay baling more profitable than any other press on the market.

**Pull Power** enables you to set the press at middle of stack—the easiest point to pitch to. This does away with at least one man on the stack and also with the necessity of having to move press.

There is no pitman shaft on Dain Pull Power Press, so there is no high, dangerous obstruction for horses to step over and slow up speed. This also makes light draft and helps to make a larger day's work.

**Self-Feed** lessens hand work and so makes capacity larger. Power of team is used for feeding hay into press chamber. It is automatic and positive in action.

No chains, springs or complicated parts are found on the Dain self-feed. It is composed of few parts, so it is simple and prac-

tically impossible for it to get out of order. All hay is carried well down into hopper and is not strung out on withdrawal of feeder arm. This is essential to evenly packed bales.

**Patent Tucker** automatically folds each charge of hay and insures top price bales—neat, smooth, square-ended.

Press can be quickly telescoped for convenience in transportation.

No feature has been overlooked in making this the most profitable and satisfactory hay press to operate.

WRITE US FOR FREE CIRCULAR NO. M 119

Address **John Deere Plow Company Ltd., Welland, Ont.**



Three Sizes: 14x18, 16x18 and 18x18

## Toronto Steel Tanks

Are Reliable

Good mechanics provide good out-put. The best skilled labor is employed in making TORONTO STEEL TANKS. Consequently we get the best tanks. Tanks that last a lifetime.

The material is the best Apollo galvanized steel. It won't—it can't rust. The design is perfect. It will stand every strain for which it is intended.

It is thoroughly braced, so that it can't bulge and then start breaking.

It pays to pay a reasonable price for tanks. "Cheap" tanks are really "dear" tanks, for they soon rust, bulge out and leak.

**THE ONTARIO WIND ENGINE & PUMP CO., LTD.**  
Winnipeg TORONTO Calgary

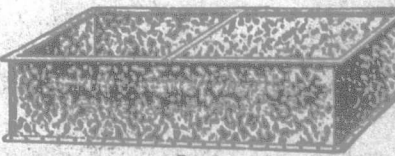
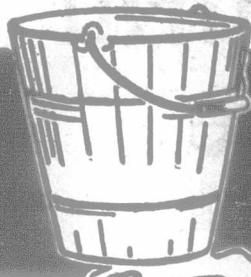


Fig. 3

Get Our Scale Booklet

## STOP THE LEAKS ON THE FARM



Every farmer is a large buyer and seller—and whether he is buying feeding stuffs, fertilizers, seed, etc., or selling live stock, grain and potatoes—unless he has a Scale on the Farm he cannot tell whether or not he is the victim of short weight.

Short weights on purchases and sales soon take the cream off the farm profits. But a Wilson Scale places the Farmer's business on a business-like foundation.

Every farm will pay a profit if all the profit is received—but what farm can stand constant leakage of a few pounds here and a few pounds there? Is it any wonder that profits are sometimes considerably less than they ought to be.

We make two Scales which are specially suited to the varied requirements of a Farm.

The first is No. 66—2,000 lbs. capacity—a good reliable scale—of which we have sold hundreds to Farmers, who usually fit to it a rough platform for weighing live stock.

The other farm scale is our No. 208—4,000 lbs. capacity. This is a larger and more expensive Scale, and is supplied with a cattle platform. It is in our estimation the ideal scale for all farm purposes, and is especially useful on stock or dairy farms.

Both Scales are of the best materials, solidly made and accurately adjusted. They have all the features which have made Wilsons supreme in scale manufacture. Government certificate free with each Wilson Scale.



THIS BOOK FREE

Perhaps this "leakage" thought is new to you. Perhaps you have grown accustomed to letting others do the weighing for you. But you can see that this is not good business—you are not sure of getting your share of profits. You will be interested in our book "How to Stop the Leaks," which we are willing to send free to Farmers. Do not let another season pass. Stop the leaks now. Send for your copy to-day.

**C. WILSON & SON · SCALES**  
90 ESPLANADE EAST TORONTO

## SAVE HALF THE WORK IN YOUR BARN!

You can lower the BT Manure Carrier right down to the gutter—pitch on half-a-ton of manure and run out the load in a minute. One big load cleans your stable. It's all done in a jiffy, and no heavy work on your part.

Mail Free Coupon



### BT MANURE CARRIER

A boy can handle it. With the splendid hand-wheel windlass on the BT he can lift 1,000 lbs. of manure and run it out to the pile—easy. You need a BT Manure Carrier in your barn. Put in your outfit this fall. Use it to clean your horse stable, your cow stable and your hogpen. You'll be glad when you see how much disagreeable work it saves you.

Write for catalogue and prices to-day.

ADDRESS :

**BEATTY BROS., Ltd.**  
351 Hill St.  
FERGUS, ONTARIO

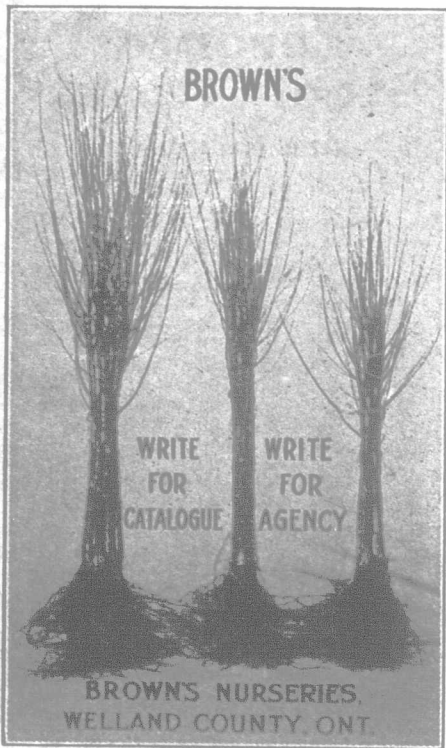
P.O. ....

Province .....

Name .....

**BEATTY BROS., Limited**  
351 Hill St., Fergus, Ont.

Please send me your catalogue on Manure and Feed Carriers, and give me a price on an outfit. I will need about ..... feet of track.



QUALITY AND EFFICIENCY ARE MAIN ESSENTIALS IN A PIANO

YOU GET THESE IN A BELL PIANO

We take the time and pains to build them right. There are many good features in the BELL never found in other makes. Information in our (free) catalogue No. 40. Send for it.

The BELL PIANO & ORGAN CO., Limited GUELPH, ONTARIO

STUMP EXTRACTOR

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

WRITE US FOR DETAILS.

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

4 1/2% Guaranteed Mortgage Investments

This Company offers the above form of investment for those requiring a profitable rate of interest together with absolute security. Moneys so invested are doubly secured—they are invested only in first mortgages, which are earmarked and set aside to offset the liability; and the repayment of principal and interest on their due dates is guaranteed by the company to the full extent of its assets. Write for booklet.

THE FIDELITY TRUSTS COMPANY OF ONTARIO, LONDON, ONT.

MENTION "FARMER'S ADVOCATE."

Education

In the up-to-date practices of Agriculture makes successful farmers

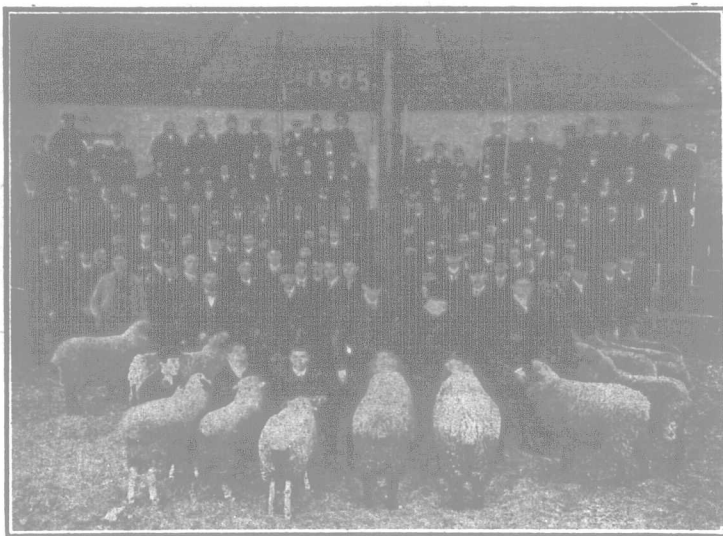
Fruit growers, grain growers, poultry raisers, stock raisers, dairymen and beekeepers cannot afford to miss

THE FREE SHORT COURSES

AT THE

Ontario Agricultural College

GUELPH, ONTARIO



Stock and Seed Judging: January 7th to 18th

Poultry Raising: January 7th to February 1st

Dairying: January 2nd to March 21st.

Fruit Growing: January 21st to February 1st

Apple Packing: (Courses of one week) Beginning February 1st and 8th

Beekeeping: January 7th to 18th

Special railway rates. Moderate charges for board. No tuition fees. Send for Short Course Calendar.

G. C. CREELMAN, B.S.A., LL.D., President

To PLANTERS

Making arrangements for Fall and Spring (1913) Planting

ORDER NOW AND SECURE FRUIT TREES

The finest stock grown in Canada.

BY

E. D. SMITH

Helderleigh Nurseries WINONA, ONT.

Whose practical experience is at your service

SPECIALITY:

Suitable stock for any locality, any soil, any situation in the Dominion. About 150 varieties of Apples, over 50 varieties of Pears, over 80 sorts of Plums, over 40 sorts of Cherries, over 50 sorts of Peaches, and equally large collections of Grapes, Currants, Gooseberries, Raspberries, etc.

850 ACRES

of the best of everything for farm and garden, for profit and pleasure.

Ornamental Trees and Shrubs, Hedge Plants, Roses, Lawn Specimens, Vines for Climbing, Borders and Rockeries.

Spring, Summer and Autumn Flowering Plants

Expert advice on fruit culture and horticultural operations. All orders valued. Correspondence solicited. Visitors courteously received. Catalogue, descriptive and illustrated, mailed free. Testimonials (unsolicited), copies mailed, originals shown at offices.

DE LAVAL CREAM SEPARATORS

Make Fall and Winter Dairying More Profitable

THERE are special advantages in using a good cream separator during the fall and winter months.

The milk from cows long in lactation is hardest to cream, and likewise hardest to separate with an inferior separator.

Moreover, cream and butter prices are highest, so that the waste of gravity setting or a poor separator counts for most.

Then there's the sweet, warm skim-milk for stock feeding, alone worth the cost of a separator in cold weather.

There is surely no reason to delay the purchase of a separator or to continue the use of an inferior one. A De Laval machine will save its cost by spring, and may be bought on such liberal terms if desired as to actually pay for itself meanwhile.

See your local De Laval agent.



BUILD CONCRETE SILOS Any size with the London Adjustable Silo Curbs. Send for Catalogue. We manufacture a complete line of Concrete Machinery. Tell us your requirements. LONDON Concrete Machinery Co'y. Limited, Dept. 5, London, Ont. Largest manufacturers of Concrete Machinery in Canada. 1

Nineteen subduing w surveying year will a

Our sch much of th too much velopment studying ;

Question and post labels, oth regarded. commodate rules.

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# The Farmer's Advocate and Home Magazine

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## EDITORIAL.

Nineteen-eleven was an extraordinary year for subduing weeds, but one would never realize it by surveying the growth of 1912. The fight next year will again be on in earnest.

Our school systems are characterized by too much of the abstract; too little of the practical; too much wearisome memorization; too little development of thinking capacity; too much mere studying; too little doing.

Questioners should not forget to sign full name and post office address as appearing on their labels, otherwise their inquiries are promptly disregarded. It taxes our editorial resources to accommodate subscribers who comply with the rules.

The civilized world, remembering the fanatical atrocities perpetrated by "The Unspeakable Turk," has little sympathy with him in his disastrous struggle against the Balkan allies. Perhaps, however, we understand him no better than he understands us. Much depends upon the point of view. We rather suspect there must be some pretty fine qualities in the despised Turk.

For insipid drivel the colored illustrated comic section of the average modern newspaper would be hard to beat. With neither art, humor nor even bright imagination, it spreads its hideous blotches of red and blue before the reader's eye, more offensive than a bill-board advertisement in a city landscape. How much longer will it continue to deprave the taste for what is beautiful and good?

An American investigator nails the once familiar calumny that farm women were especially prone to insanity—a statement for which there is no statistical authority in the United States any more than there is in Canada, according to enquires made by "The Farmer's Advocate" not many years since. The American referred to says there are indications that it originated where many other forms of current errors have their rise, viz., in the lurid fancy of a popular writer.

In the course of an address on Education, Dr. David Soloan, Principal of the Nova Scotia Normal College, remarked that this year the federal revenue of Canada would amount to \$170,000,000, equal to \$24 per head for every man, woman and child in Canada, or say \$100 a year for the head of an average family. This money is paid by Canadian citizens as taxes without knowing it, because the tax is levied indirectly by customs duties on imports and by other means. We pay it not as taxes but as innumerable extra charges here and there tacked on to the cost of living. In addition we pay another large sum to manufacturers and middlemen for goods made in Canada and sold at prices equal to the value of imported articles plus the duty. Then we wonder why the cost of living is high.

A first-class basis for a Nature-study lesson we commend the installment of "Nature's Diary," which appeared in our Farm Bulletin department last week.

It has been a trying summer for getting farm work done. August disappointed the expectations of July; September disillusioned the hopes of August; October failed to justify the faith preserved through September, and November started out by upsetting the calculations of those who builded on a dry, late fall. Still hope springs eternal, and we yet have confidence that somehow, somewhere, a few weeks of uninterrupted nice weather will be experienced. Better hope than worry.

City-people are prone to a habit of truculent criticism of "the farmers'" lethargy in road improvement, but according to our observation, the township and county roads, leading to almost any town or city in Canada, are pavements compared to the jolting, rutted, pitch-holed streets in the suburbs of said urban communities. The London Advertiser has performed a public service in drawing attention to the condition of the outlying highways in its home city. Other newspapers might well do the same. The numerous and varied forms of foolishness manifested on rural road improvement are more than matched by the records of many city engineers.

It should be kept in mind that heat is lost from a winter stable in two ways, (1) by conduction through the wall without exchange of air, (2) by displacement of warmed inside by cold outside air. The former loss is always great through a thin tight wall composed of material like concrete, which is a good conductor of heat. It secures no ventilation and represents a sheer loss of warmth. The second process is a necessary incident of ventilation, whether accidental or systematic, and can be avoided only by the expensive and questionable expedient of warming the incoming current of pure air. Some lowering of temperature due to free ventilation is ordinarily necessary and is not to be worried about, but waste of heat through walls should be guarded against by reasonably thorough insulation.

Railways have a very direct interest in promoting agriculture for the reason that, as shown by reports to the Interstate Commerce Commissions, ten per cent. of the total freight revenue of the railways of the United States was derived from carrying grain, hay, cotton and live stock. Demonstration farms and plots are among the means employed. Railroads were conducting experimental or demonstration farms in 1911 in Maine, New York, Delaware, Virginia, North Carolina, Montana, and Texas. Some of these farms were conducted to show the possibilities of raising vegetables in certain regions along the Atlantic coast; one farm, located up on the Blue Ridge Mountains, was devoted to fruit, and others served as examples of other branches of agriculture. Sometimes the railroad companies may select one or more private farms along the line of its road and refer to them as models, or at least as worth the consideration of a farmer who wishes to be progressive. A favorite plan of railroad agriculturists to show farming methods is by use of a plot, under their direction, on a private farm.

## Ventilate.

With the advent of winter comes the temptation to shut stables up tightly to keep them warm. As a rule, this means depriving the inmates of adequate ventilation. Very few stables are so constructed as to provide proper ventilation and at the same time prevent manure ever freezing in the stable. As a rule, stables kept close enough to prevent this are too close for the good of the stock. While low temperature in a stable is not desirable, it is far less undesirable than impure air and less uncomfortable. Close observation and experimental evidence afford grounds for believing that cattle in a freezing temperature with plenty of pure air feel better and do better than cattle in a stable ten degrees warmer with vitiated atmosphere.

Generally the attendants, accustomed as they are to high living temperatures, mind the cold of a stable much more than do the animals, which have wonderful inherent powers to withstand climatic extremes, as must be the case when we consider how comparatively few are the fatalities among, say, young calves, even when born under quite rigorous conditions. Of course, it is not wise or profitable to subject animals to violent extremes, but coddling is not so necessary nor so much appreciated as is often supposed and this is particularly true in the matter of temperature. More attention to ventilation and somewhat less to the thermometer would reduce the ravages of tuberculosis and preserve a degree of vigor necessary for best returns in production of milk, meat, wool or work. Protect or tear out exposed water pipes, ventilate the stables, avoiding the strong drafts, of course, and don't worry if the manure freezes now and then. It is a good healthy sign."

## Reluctance to Invest.

The environment of a life time produces certain psychological effects—certain habits or attitudes of mind. Perhaps it is the inevitable uncertainty of agricultural conditions, operations and results which has begotten in us an unconscious habit of thought that nothing is sure or safely to be counted upon until it has been secured "in the mitt" so to speak. The proverbial injunction against counting chickens before they are hatched has been emphasized to farmers time upon time by unexpected forms of mischance. The lesson of thrift and prudence thus enforced has been of great importance to us in prosecuting our occupation. Sternly and soberly it has brought air-castle builders down to the stubborn facts of life and experience. The life-long lesson has been needed and has been good.

But good tendencies sometimes run to extremes, developing ill balance. With farmers this very habit of caution has often held judicious enterprise in check, rendering us hesitant to step out where progress has been proven safe and wise. Our skepticism, born of personal experience, leads us to doubt the verities of science, and the facts of other people's experience. It brings us finally to a point where we can scarcely see past our bank books.

This is one reason why so many men accumulate goodly savings accounts while their farms go down in fertility, and suffer plainly for lack of improvements. They would rather draw three per cent from the bank than ten or twenty per cent in the form of returns from land drainage or from a silo. They would rather sell most of their grain and hay than feed it to live-stock, and

## THE FARMERS ADVOCATE AND HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL  
IN THE DOMINION.

PUBLISHED WEEKLY BY  
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JOHN WELD, MANAGER.

Agents for "The Farmer's Advocate and Home Journal,"  
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1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
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build up their soils with manure. No matter how much they may have read or seen of other people's experience or even their own, they are afraid that, after all, perhaps it may not come back, though experience proves that with good management it will come back many fold, after several years, if not at once.

There is such a thing as investing beyond one's means, but there is also such a thing as starving the goose that lays the golden egg. Nine cases out of ten, the best place to invest farm savings is on the farm, and this becomes increasingly true as years pass on, and values of farm produce, and consequently of farm fertility steadily rise. But the habit of a life-time makes us often over-cautious. We do well to remember the Proverb "There is that scattereth and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty."

### HORSES.

Sudden changes are dangerous.

It is not what is fed so much as whether the horse is accustomed to the feed or not.

Brood mares should get only clean, choice feed.

Avoid mold silage. Silage, if fed at all, must be fed very carefully.

Try to arrange the stabling so as to provide a box stall for the brood mares.

Let the in-foal mare do her share of the light work of the farm during the winter.

If hay must be sold from the farm sell the timothy. It will bring more money and contains less fertilizing value than the clover.

With many the care of the horse ends with the busy season. A little attention during the idle days of winter will bring the horse through in better condition for the spring work.

How often do you clean out your horse stable? Twice each day is not too often, and many scrape it out three times.

There is no fat so valuable to the colt as the "colt fat." Once lost it is almost impossible to replace it. Thin weanling colts are difficult to fatten, while fat colts are easily maintained.

The horse digests rough feed with less ease than do cattle or sheep, therefore the farm horses should get a larger proportion of easily-digested or non-fibrous feed than cattle, provided all are on a maintenance ration.

Never lose sight of the fact that the using of the muscles of the colt develops them and ensures great powers of endurance, while disuse means flabby muscular development and a weaker animal.

Remove all wet bedding at each stable cleaning. The whiff of ammonia, arising from old straw saturated with the horse's urine, should be enough to convince one that such a condition should be avoided by carefully removing all this material regularly.

Colts properly fed make rapid growth. During the period the colt is with its dam the average increase is said to be over two pounds daily, and during the second year of life they increase about one and one-third pounds daily, gradually decreasing, until at the beginning of the third year of life it falls to less than a pound, and finally ceases.

Ontario has two winter fairs of which she may well feel proud. Each of these has sections for horses, and the horse classes have come to be recognized as one of the features, if not the crowning feature, of these exhibitions. The time is near at hand for the Guelph Fair and the Ottawa Fair comes in January. Plan to attend one or both, and if possible take along a horse or two to the competition.

### Coat and Constitution.

A writer in one of our contemporaries, speaking of the relation of color to constitution in horses, says:

The coat color has no direct bearing upon the question of constitution, although it is true one often speaks of a horse being a good "hard" color, the implication being that it is a sign of a stout constitution, although in reality there probably exists very little, if any, justification for making any such deduction. But an exception must be made in the case of roan, and also in that of dun. Roan undoubtedly deserves to rank as a specially hardy color, for it is well known to be associated with a tough constitution and hard-wearing nature in most cases. That, however, is not to be ascribed to any intrinsic quality connected with this particular color, but is entirely due to the fact that most roan-colored horses—particularly so as regards Hackneys and cart horses—are descended from certain old strains which were noted for their great stoutness of constitution, and in which a roan color was an hereditary and distinctive characteristic.

The commonly held view that dun-colored horses are generally of a hardy sort is also largely justified. When this color crops up in horses and cobs it is usually derived from a cross of pony blood present in the animal's ancestry, dun being a color specially associated with some of our native pony breeds; and there is nothing more calculated to impart constitution and stoutness than the fact of there being a dash of such wiry and extremely hardy blood in a horse's composition. Some of our best and toughest strains of hunters and half-bred nags are originally descended on the maternal side from the pony, and in the west country especially, the home of the Exmoor and Dartmoor ponies, great store is set by a cross of pony blood for light horse stock. The Welsh breed of light, active cart horses, which have a wide reputation for their excellence, also owe something of their merits to the Welsh pony cross, infused into the stock in past generations.

### Our Draft Fillies.

High offers are tempting, no matter what the stock in trade is. It is hard to turn down a bid which seems to be really more than the animal is worth. Sometimes when an owner does so he regrets it later when something befalls his mare, but this is the exception, not the rule. The mare owner is generally induced to sell seeing only the cash offered, when if he would hold the mare and use her for breeding purposes he could make far larger returns in the long run.

Good draft mares are scarce, and the only way to make them more plentiful is to keep the young fillies and put them to breeding. Eastern Canada has been the buying ground for horsemen of the West and other districts, and at the present time while many good mares have been retained, too many have been sold to go out of the district for the good of the horse business in this part of the country. Long and strong are the strings of stallions at our large exhibitions, but not so the filly classes. A few real choice individuals are out in each, very often being recent importations, which, as soon as some distant buyer gets his eyes upon them, depart to some Western or other part of the country at what the seller deems a long price. He must get and keep more of the real good mares or what is to come of our horse industry? Without good mares we will soon be without good geldings, and Canadian-bred stallions must also deteriorate. Two hundred dollars, yes, three hundred or five hundred, is a poor price for a young mare which during the next ten years may raise six foals each, at three years of age worth as much as the dam ever was, and she at the same time doing work enough to more than pay for her feed and care.

Of course there is a limit to the number of horses or brood mares which may be kept on each farm, but few of our Eastern farmers are living up to the limit in this respect. Many, too many, are the holdings upon which not a single brood mare is kept. Many more have one where they might as easily have two or three, and some have two or three, which could as easily and profitably support four or six. Why are they not kept? Chiefly because they have departed elsewhere with the wise buyer who offered an attractive price.

It costs no more to keep a good brood mare than a poor one. Is your buyer so keen to offer high or even fair prices for your common mare? Not often. He leaves her with you and takes the good one, because he realizes that there is more money in the good one for him. If there is more in her for him, is there not more for you if she is kept? Let the other fellow have the common mare, and keep the high-class individual to raise the standard of your own stud. It is a matter which our horsemen should feel proud of to have it said that we have one of the best buying grounds for high-class draft horses in America, and it behoves them to keep it such. Good stallions are imported annually and are doing their part (more are needed in some localities) to keep up the standard in many districts, but they must get good mares with which to mate. If Eastern Canada had a large supply of these some could be sold, but until such is the case breeders would do well to hold fast to their best mares, and keep them breeding regularly.

### LIVE STOCK.

Give the recently weaned litter the warmest part of the pigpen.

Clover, alfalfa, rape and corn help the pig feeder make a profit.

Try the calves on pulped mangels or turnips upon which a little chopped oats has been placed.

Clover or alfalfa hay is almost indispensable in calf feeding.

Some of the lambs may not take to eating dry feed very readily. A little coaxing will help.

For every ten pounds that a sheep weighs a square foot of housing space is rutable.

Henry says: "The flock should be so divided into groups that all the members of each group are of the same age, sex, strength, and general characteristics."

Care is necessary in the feeding of the steers. Increase the feed very gradually or "stalling" may result. Once a steer goes off his feed it is no easy matter to get him back again, and for a time he loses rather than gains in weight.

To grow crops, and better systems of stock.

A delicate grass received had tried hay in hogs, and pounds a more than get the t days.

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To grow more live stock we must have better crops, and to get better crops we must have a better system of farming, which means more live stock.

A delegate stated at the Dry-Farming Congress recently held in Lethbridge, Alta., that he had tried alfalfa tea, made by soaking alfalfa hay in hot water for a few hours, for feeding pigs, and found that with pigs weighing 46 pounds at the start they gained 15 pounds each more than those from the same lot which did not get the tea, the increased gain being made in 72 days.

In summing up the question of feeds, says a writer in The Farmer's Advocate and Home Journal, Winnipeg, Man., whether as grains, meals or fodder, it should be remembered that no one feed or ration is, when continued without change, judicious feeding. Every beast or bird requires variety, and a change of rations occasionally. True enough, that many a horse and beast works without much variety of feed, yet when it is possible the rations can be changed with very little trouble. It is a good policy for any farmer to provide for such, especially when the results obtained from the change will more than offset any extra trouble and labor expended on a few small fields of various grains.

### Carrying Cows through the Winter Economically.

One thing which has worked against beef production is the difficulty with which beef cows may be economically maintained during the winter months. It has been a problem just how to carry cattle through winter at a minimum of expense. As a bulletin of the Pennsylvania Station says: "The demand for hay has increased so rapidly during the past few years that many farmers would sell it rather than feed it to cattle were it not for the fact that they realize the necessity of keeping roughage on the farm in order to maintain the fertility of the soil."

To find a solution for the problem the station mentioned conducted experiments to ascertain what crop, if any, would produce a larger amount of food nutrients per acre than hay and be equally as well adapted to the feeding of breeding cattle, supplemented with a minimum amount of concentrated feeds, which would furnish the digestible nutrients not provided by the farm-grown crop. Corn silage was selected as most nearly meeting these conditions. It is adaptable to a wider range of soil conditions than any other crop except grass, it produces a large amount of food nutrients per acre, is palatable, succulent, easily grown, harvested with comparative ease and can be stored at less expense for buildings than any other forage crop. In addition to these advantages there is no other form in which the corn crop will be entirely consumed by live stock, thus it increases in value by being placed in the silo. Cottonseed meal was used as a supplement because of the fact that protein, in which corn silage is quite deficient, could be secured in this form cheaper than from any other source and because of the large percentage of protein that could be fed in very small quantities, thus reducing the expense for transportation and labor in feeding. Previous investigation has also shown that the laxative tendency caused by heavy feeding of succulent feeds is materially reduced by the addition of cottonseed meal to the rations.

Ten pure-bred Shorthorn cows and ten pure-bred Angus cows were used in the test. Each group of ten cows was allowed to run loose under an open shed used for steer-feeding purposes, adjoining which was an open lot. The floor space in each shed, exclusive of that occupied by mangers and feeding alley, was 420 square feet. The area of the open lot was 780 square feet. The cattle were confined in these lots from the beginning of the experiment on December 1, 1911, until the close, April 19, 1912, a period of 140 days. While the housing and shelter were ample, as shown by results secured, a greater area in the open lot would be desirable.

As beef cattle are maintained largely for the purpose of producing manure to be used in increasing the yield of crops, a record of the amount of bedding and manure produced in the Shorthorn lot was secured. During the 140-day feeding period, 9,851 pounds of straw were used in bedding the ten cows, and from this lot 88,405 pounds of manure were removed. It would require, under these conditions, the straw from approximately one acre of small grain to bed each individual and this would result in the production of 8,840 pounds of manure. A larger amount of straw could have been utilized to ad-

vantage where cows were closely confined as in this test, though under farm conditions where the cows were permitted to run in pasture during suitable weather, the required amount of bedding could be materially reduced.

The following summary gives a good idea of the value of silage for beef cows:

Length of experiment	140 days
Initial weight of 20 cows	21,438.7 lbs.
Final weight of 20 cows	24,729.66 "
Total gain	3,290.84 "
Average daily gain per cow	1.17 "
Total feed consumed	
Corn silage	16,039.75 "
Cottonseed meal	2,800.00 "
Average daily feed per cow	
Corn silage	57.64 "
Cottonseed meal	1.00 "
Cost of feeding 20 cows	
Corn silage @ \$3.50 per ton	\$280.69
Cottonseed meal @ \$30.00 per ton	42.00
Total	322.69
Average cost of feed per cow	16.13
Bedding used per cow	
985 lbs. wheat straw @ \$3.00 per ton	3.94
Labor in feeding	2.00
Total expenditure	22.07
Value of manure per cow	
8,840 lbs. @ \$1.50 per ton	6.63
Value of increase in weight	
164.5 lbs. @ 5c. per lb.	8.22
Total value	14.85
Net cost of wintering cow	8.22

The data presented in the summary is based upon prevailing local (Pennsylvania) prices of feeds during the winter of 1911-12. Corn silage is valued at \$3.50 per ton, which is equivalent to 70 cents per bushel for corn, thus allowing a very material profit in its production before charging it as feed. It required four tons of silage to winter each cow.

With pasture at \$1.00 per head per month the total cost of maintenance throughout the year will be \$15.22 per head, or with pasture at \$2.00 per head it will amount to \$22.22, either of which estimates allow ample profit from the growing of crops and a reasonable rate of interest on land kept in permanent pasture. The writer of the bulletin, W. A. Cochel, concludes that this system of farming will permit a uniform distribution of labor throughout the year, a maximum profit in the production of crops, the maintenance of soil fertility at a minimum expense and the utilization of all rough and broken land capable of producing grass. It will also solve the problem of securing feeding cattle at less cost than they can be purchased on the central markets of the country, eliminate loss in transit and insure a better bred lot of cattle in those sections where the system is followed.

### Digestibility of Red Clover and Alfalfa.

Experiments have been carried on at the Massachusetts Agricultural College to determine the relative digestibility of red clover and alfalfa. The alfalfa hay used was cut in early blossom, and was quite free from weeds and grass. The red clover was taken from a field which yielded well, was in early blossom when cut, and was cured in cocks. It was not well-cured, owing to bad weather. The amount of digestible matter is called the digestion coefficient. Four trials were made with each fed to sheep.

The coefficients obtained with the alfalfa varied considerably, but the average for all trials is believed to be a fair average for eastern-grown alfalfa.

The most noticeable difference in the four single trials with clover hay consisted in the variation in the digestion coefficients obtained for the fiber. This was evidently due in part at least to the individuality of the several animals. The fiber in the second cutting was apparently not as digestible as the first cutting.

When the average of the clover coefficients was compared with the average of the coefficients for alfalfa, it was noted that in case of the total dry matter the former showed to advantage, although the reverse was true in a comparison of the experiments reported for all trials. The protein in the clover was shown to be substantially 12 per cent. less digestible than in the alfalfa; in case of the average for all trials the difference was 16 per cent. In case of the fiber the conditions were reversed—differences of from 5 to 8 points being noted in favor of the clover. The comparative digestibility of the extract matter was about the same, although the average figures show 7 points in favor of the alfalfa. In making a comparison of the two plants from the standpoint of digestibility, two important differences were noted: (1) the protein in the alfalfa was noticeably more digestible than in the clover (12 to 16 points), and (2) the fiber from 5 to 8 points less so. In total digestibility the two plants approach each other, showing an average of about 60 per cent., as against 55 per cent. for timothy, 60 per cent. for early cut fine hay, 65 per cent. for rowen, 70 per cent. for the entire corn plant, and 85 per cent. for corn meal.

It is evident that the relative value of the two crops cannot be determined from their digestibility alone; other important factors to be considered are cost of production and yield and adaptability to other conditions. Taking all the evidence into consideration it would appear that although the cost of seed and preparation of land is somewhat against the alfalfa, yet its much greater length of life, its larger average yearly yield, and its rather superior nutritive value are all in its favor. The conditions governing its



First-prize Pair.

In class open to Clydesdales or Shires, Western Fair, London, 1912. Owned and exhibited by G. A. Attridge, Muirkirk, Ont.

successful cultivation must be carefully studied by all interested in its production. To the lack of attention to these conditions by the average farmer is due, in no small measure, the failures reported.

### Silage for Steers.

Silage is recognized as one of the main roughage feeds for farm stock. Bulletin No. 118 of the Pennsylvania Experiment Station says: "As the value of hay, corn and other feeds generally used for fattening beef cattle has shown a tendency to increase very rapidly, many who consider it necessary to finish steers for market, in order to keep up the fertility of the soil, are tempted to abandon the making of beef, to sell the grain and roughage produced, and depend upon restoring the plant food to the soil in the form of green manures and commercial fertilizers. Experiments at this and other stations have shown that the addition of corn silage to the rations that are usually fed to fattening animals results in cheaper and more rapid gains in the feed lot, and that its succulent nature causes cattle to shed the hair early and to look more attractive than those fed exclusively on dry feeds. The purpose of this particular experiment was to determine to what extent silage could be profitably used in steer feeding, and the following summary shows the results.

	Lot 1 (12 Steers) 126 days	Lot 2 (12 Steers) 126 days
Length of feeding period	126 days	126 days
Initial value per cwt. in feed lots	\$5.07	\$5.07
Initial weight	10,615 lbs.	10,560 lbs.
Final weight	13,425 "	13,360 "
Total gain	2,810 "	2,800 "
Average daily gain per steer	1.86 "	1.85 "
Total feed consumed:		
Ear corn	20,892.5 "	11,377.5 "
Cottonseed meal	3,167 "	3,167 "
Corn silage	34,087.9 "	50,397.2 "
Air-dry matter consumed	31,403.4 "	30,037.9 "
Average daily feed per steer:		
Ear corn	13.81 "	7.52 "
Cottonseed meal	2.09 "	2.09 "
Corn silage	22.54 "	33.33 "
Average air-dry matter consumed per steer daily	20.76 "	19.86 "
Total cost of feed*	\$319.25	\$252.64
Cost of feed per 100 lbs. gain*	11.36	9.02
Total cost of cattle and feed	857.43	788.03
Cost per cwt. at close of expt.	6.39	5.90
Selling value per cwt. in Pittsburgh	7.20	7.00
Selling value at home	6.52	6.32
Net receipts	875.58	844.35
Total profit*	18.15	56.32
Price received per bushel of corn fed after paying for other feeds*	.761	1.046
Price received per ton for silage after paying for other feeds*	4.65	5.73

\*Based upon ear corn at 70c. per bushel; cottonseed meal at \$32.00 per ton and corn silage at \$3.50 per ton.

This shows that the feeding of corn silage as the only roughage resulted in satisfactory gains in each lot, and that while there was a profit in feeding ear corn throughout the entire feeding period, a greater profit was secured when light plain feeders averaging 880 pounds at the beginning of the feeding period were carried for two months on a ration consisting entirely of corn silage, followed with a grain ration toward the end of the feeding period. In estimating profits, full market value has been allowed for all feeds so as to cover the labor of feeding. No credit is given for manure or for pork produced from the droppings of the cattle. It is generally estimated that hogs following steers will gain 2 pounds for each bushel of ear corn fed to cattle. If this additional increase were allowed the profit in Lot 1 would be increased \$47.84, and in Lot 2, \$26.80 over and above that indicated in the summary. A record of bedding used and manure produced in Lot 1 was kept, which shows that 25,675 pounds of sawdust and 2,762 pounds of straw were used for bedding.

The manure weighed out amounted to 101,560 pounds. Allowing \$1.00 per ton for sawdust (the cost delivered at barn), \$8.00 per ton for straw and \$1.50 per ton for manure, there was an additional profit of \$31.24 to that made from direct feeding of steers and production of pork from droppings in Lot 1 during the 126 days of feeding. This shows that in cattle feeding, the profits secured from the by-products of feed lots may amount to more than the direct financial gain on the cattle. The test shows conclusively that silage can be used as roughage even in the coldest of winters when fed in an open shed; that there was a considerable saving of corn by the exclusive use of silage during the first part of the feeding period, and that the value of feeds utilized in the production of beef during the winter of 1911-12 was much greater than their market value.

Great improvement in yield of crops is possible through careful selection.

Silage corn should at least reach the milk stage in an average season.

Elms are said to thrive better in pastures and lawns than in mowings, and they are usually benefitted by application of fertilizers and cultivation.

### Clover under Corn Silage.

Editor "The Farmer's Advocate":

I have been a constant reader of your paper for several years, and get much valuable information from it. After reading your article on clover ensilage in the issue of October 3rd, and "Mac's" letter in October 24 on that subject, I concluded to give you the results of our experience on clover silage.

Whenever we have clover ready to cut, when we cut the corn we put it in the bottom of the silo. We select a dry day and cut the clover in the forenoon, rake and put it into small coils in the afternoon, and cart it to the barn any time within a week. Our silo being in the barn with

a high drive floor we can conveniently drop it into the silo without cutting. The only object in cutting it down during fine weather is the convenience in handling. Once it is in the silo we would prefer it wet, and if it gets much dried we wet it in the silo. The best clover silage we ever fed was raked and carted with about all the water it would hold.

We have never tried cutting it up, but think this would be necessary for summer feeding if it can be safely carried over until then.

We have a corn cutting outfit so that we can fill our silo whenever we wish, and when the clover is in we cut in our corn, the whole job taking from a week to ten days to complete. A delay of three or four days after the clover is in before cutting in the corn will make no difference with the quality. The clover, however, should be carefully distributed and tramped as it goes in.

A cubic yard of this clover silage will go much further than the same volume of corn silage, and we have found it should be fed out faster than the corn needs to be, or it will spoil on top by heating. We also think it should be fed during cold weather, as it has a greater tendency to heat during the warm weather in May than during the winter. We have never ventured to carry it over into summer.

Cattle are very fond of this clover silage, and give good returns from it.  
Compton Co., Que.

MACK.

### Best on the Market.

I have taken your paper for a number of years and have always enjoyed reading it. It's pages are always full of hints and helps, and conveniences for the farmer. It is the best agricultural paper on the market.  
Middlesex Co., Ont.

JOHN. W. HODGSON.

### A Useful Rack.

Editor "The Farmer's Advocate":

Hay racks, as everybody knows, should be built in the busiest time in haying or harvest, so this article should be cut out and preserved till that time, as I'm afraid I shall forget to write when the time comes.

Having made my excuses for writing out of season, I will proceed.

The flat, solid-bottom rack I am writing about has been in use on this farm since the middle of last harvest, and has given the most complete satisfaction in every way.

The rack is made with spruce sills and spruce bottom; the bottom should be made of one inch spruce boards; if tongued and grooved it will be more satisfactory. A narrow strip one inch high by two inch wide should be put round the edge of the rack, which will keep the grain from sliding off. Four rock elm cross-pieces should be sufficient. The edging should be bolted on, one bolt for each cross-piece for the sides, and three bolts for the hind and fore edge. The bottom now needs very few nails; one or two for each board in the centre cross-pieces should be ample. Two uprights should be placed at the hind end, and three cross-pieces, the width of the rack, should be bolted to them; this will do away with building to a great extent on the hind end. The same could be done to the fore end, but it gets somewhat in the way when handling the lines. A centre stake is, in my opinion, a clumsy, unnecessary affair, and should be done away with.

During harvest there was no risk of a leg dropping through a hole.

The slings, when laid down on the rack, are there, and not down through and caught on something underneath, so that the danger of lifting the rack is done away with. If the same happens to bolt you have solid footing to stand on. Any grain which threshes out of the sheaves is there when you finish for the day and not scattered between the barn and the field.

As a corn-rack, ours has been to every silo-filling around here, and I can safely say that a better rack has not been seen on the job, and it has had the entire approval and praise of all who saw it. For drawing in roots, we can put a load on which will stick the team and not a beet roll off. For drawing grain to the mill, you can put all the load on your team can draw and not lose a bag, and if a bag bursts the grain is there. For hauling sawdust for bedding, etc., a board or two raised on each side and the ends will give you all the team can draw if you fill it. For cut straw, sides are not hard to make; anyway, a couple of good wooden gates, with a few short boards tacked on to make them the right length, is all that is required. As a pig or sheep rack, sides can easily be put on, and you could not wish a roomier or better rack. For hauling out manure in winter, what more do you want?

Of all the improvements on this farm this year, there is one thing which now we have we would not be without, and that is the above-mentioned rack.  
Gray Co., Ont.

R. W. C.

### Reducing the Cost of Production

The full utilization of equipment is an important means of reducing the cost of production, since it reduces the amount of equipment necessary. The average farm horse in the Northern States works only three hours a day. This is because the system of management on the average farm is so poorly planned that at certain times the work is very heavy, while at other times there is nothing to do. It is necessary to keep horses enough to meet the needs of the farm when the work is heaviest, but at other times these horses are idle. The average cost of horse labor on the farm under these conditions is about 10 cents an hour. With a well-planned cropping system that distributes the farm labor equally throughout the season it is possible to get six hours' labor per day out of the horses. When this is done the cost of horse labor per hour is reduced to 5 cents.

Many a \$12 plow is used to plow not more than 10 acres a year. At this rate the cost per acre for the use of the plow is about 18 cents. When the same plow is used to plow 40 acres a year the plow cost per acre is reduced to about 5 cents, or less than one-third what it is when the plow is used on only 10 acres. Approximately the same thing is true of all other items of equipment. On poorly planned farms the equipment cost is excessive because each item of equipment is used to less than its capacity. For the reason that the equipment must be sufficient to do a great deal of work in rush periods the amount of equipment on poorly managed farms must be much larger than on well-managed farms where there are no rush seasons. On the latter type of farms the work is well distributed, so that no great amount of it must be done at the same time, thus making possible a minimum of equipment.—U. S. Bulletin 359.

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**American Crops.**

The Crop-Reporting Board of the Bureau of Statistics of the United States Department of Agriculture, estimates, from the reports of the correspondents and agents of the Bureau, as follows:

	Yield Per Acre.		10-yr	Production		Price Nov. 1.	
	1912.	1911.		1912.	1911.	1912*	1911.*
Corn, bu. ....	29.3	23.9	26.7	3,169,137	2,531,488	58.4	64.7
Buckwheat, bu. ....	22.9	21.1	19.3	19,124	17,549	65.5	73.0
Potatoes, bu. ....	112.3	80.9	94.3	414,289	292,737	45.5	76.3
Flaxseed, bu. ....	9.9	7.0	8.8	29,755	19,370	133.4	210.6
Tobacco, lbs. ....	803.4	893.7	825.2	959,437	905,109		
Wheat, bu. ....	16.0	12.5	14.0	720,333	621,338	83.8	91.5
Oats, bu. ....	37.4	24.4	29.5	1,417,172	922,298	33.6	43.8
Barley, bu. ....	29.7	21.0	25.4	224,619	160,240	53.8	84.9
Rye, bu. ....	16.9	15.6	16.1	35,422	33,119	68.8	83.1
Hay, tons ....	1.47	1.14	1.43	72,425	54,916	11.80	14.62

The production of other crops in 1912, expressed in percentages of the averages of recent years, is estimated as follows:

Apples 136, peaches 130, cabbage 117, pears 114, cloverseed 112, strawberries 112, grapes 109, onions 109, millet hay 107, millet seed 106, cranberries 106, alfalfa hay 105, watermelons 105, tomatoes 105, broom corn 104, clover hay 102, beans (dry) 101, raspberries 100, blackberries 90.

The average farm prices of important crops (corn, wheat, oats, barley, rye, flaxseed, potatoes, buckwheat, cotton and hay, which represent about three-fourths of the value of all crops) declined 8 per cent. from October 1 to November 1, which compares with a decline of 1.7 per cent. in the same period of last year, and an average decline of 3.6 per cent. during October of the last four years. On November 1 the average of farm prices of the above named crops was about 12.8 per cent. lower than on like date of 1911, 3.2 per cent. lower than in 1910, 8.5 per cent. lower than in 1909, and 1.1 per cent. lower than in 1908 on November 1.

VICTOR H. OLMSTEAD,  
Chief of Bureau.

**Where Soil Never Loses Fertility.**

We often hear of farms being "run down," "poor," or "cropped to death." We have all too many of them now. Many people believe it is impossible to maintain a cropping system which will not deplete the fertility of the soil, even if manure is applied at frequent intervals, yet it can be done. Dr. Cyril B. Hopkins, speaking at the Dry Farming Congress at Lethbridge, cited the case of the land at the Rothamstead Experiment Station (England), where with a rotation of crops including turnips, barley, clover and then wheat, they were able to get even greater production after a number of years of judicious cropping. In 1840 they obtained 10 tons per acre of turnips, and after 60 years on the same ground 19.9 tons of turnips were taken off, and where the food consumed had not been returned less than seven tons per acre were secured.

With the barley which followed the turnips in the rotation in 1849 46.5 bushels per acre was obtained and in 1909 33.4 bushels were taken off, whereas on a separate plot where the fertilizing material was not returned but 10 bushels per acre was produced.

The clovers in the rotation pointed to similar results, there being 2.5 tons in 1849 and 4.5 in 1910 off the same piece of soil, and from unfertilized soil less than one ton per acre was secured. The wheat crop which followed the clover brought out the same viewpoint showing the value of a proper rotation to the land.

**Chemicals to Preserve Manure.**

Those who have made any study of the composition of barnyard manure know that a considerable portion of the soluble nitrogenous matter is likely to be lost both by volatilization and leaching. Chemical methods for the preservation of manure have been extensively experimented with, and J. B. Lindsey, of the Massachusetts Experiment Station, cites a few of them in his annual report.

Bacteria, he says, destroy the nitrogenous matter of manure by converting it into the volatile ammonia compounds and nitrates and then reconvert a small portion of the ammonia and nitrates back into protein; they also destroy the nitrates and set the elementary nitrogen free.

If manure is allowed to remain in loose piles, exposed to the air for months, about 35 per cent. of its total nitrogen is likely to be lost. The extremes are said to be from 20 to 50 per cent. Fully one-third of the total nitrogen lost has been ascertained to be in the elementary form, i.e., uncombined. No method is known for preventing the loss of the uncombined nitrogen.

Gypsum or land plaster was tried for this purpose, but the results showed that the plaster actually hastened the decomposition of the manure.

Precipitated gypsum was found of no particular value. Gypsum-superphosphate and superphosphate used in sufficient quantity were found to hold fast some of the ammonium carbonate present in the manure and checked the further action of the bacteria. This was due to the action of the

free phosphoric acid. Because of the cost of these materials, however, their use was not advised. Sulphuric acid was tried, but it was found that great care must be taken or the feet and udder of the animal would be injured, and the resulting manure had a bad effect upon the physical character of heavy soils, which required the addition of lime to correct. These disadvantages, together with the cost of the acid, rendered its use inadvisable. Kainit was also found to be of no particular value for the purpose, and German investigations have concluded that keeping the manure moist and well-packed is the best method of preservation.

**Wages of Farm Labor in United States.**

The wages of farm labor is the subject of a bulletin recently issued by the U. S. Department of Agriculture. It was prepared by direction of Secretary Wilson by George K. Holmes, Chief of the Division of Production and Distribution. It contains the details of the latest of a series of 19 investigations covering a period of 44 years, and a summary of the preceding investigations is included in the bulletin.

In contracts of hiring by the year, with board, the wage rates of men per month increased from \$10.09 in 1866 to \$18.05 in 1909, or a gain of



First-prize Shropshire Ram Lamb and Shearling Ewe. Champion at Toronto, 1912. Exhibited by J. & D. J. Campbell, Woodville, Ont.

78.9 per cent. The gain from 1890 to 1909 was 35.8 per cent.

In contracts of hiring by the season, with board, the wage rates of men per month increased from \$12.69 in 1866 to \$20.80 in 1909, or 63.9 per cent.

The wage rates of men per day, with board, for day labor, were ascertained throughout the period, and were found to increase from \$1.04 for harvest work in 1866 to \$1.43 in 1909, or 37.5 per cent. From 1890 to 1909 the increase was 32.4 per cent., and from 1899 to 1909, 30.0 per cent.

For labor other than harvest, with board, the wage rates of men per day increased from 64 cents in 1866 to \$1.03 in 1909, or 60.9 per cent. The percentage increase from 1890 to 1909 was 43.1, and from 1909 it was 37.3.

Among the geographic divisions of States in 1909 the highest rate of wages per month in hiring by the year, with board, is found in the Western group, where the average was \$31.30. Next in order was the North Central division with \$22.22; third in order was the North Atlantic division with \$20.73; the South Atlantic States had an average of \$14.25; and lowest of

all was the average of the South Atlantic States, \$13.10.

Rates of wages do not express the real wages received by the farm laborer in this country. Apart from the changes in the purchasing power of money wages there are various extras that supplement wage rates. In this investigation an attempt was made to get information with regard to the value of supplementary allowances. It appears that the average monthly value of the dwelling, garden, and other appurtenances, the use of which was a part of the real wages paid, without board, in 1909, ranged from \$1.75 to \$5, throughout the United States, and the amount when wages were paid, with board, ranged from \$1.00 to \$4.50.

The average value of feed for cow, horse, swine, or poultry, per month, ranged from \$1.11 to \$3.11; the value of pasturage for cow, horse, or swine ranged from 65 cents to \$1.61; the value of firewood for family use, and the team to haul it ranged from \$1.06 to \$2.39; the occasional use of team for hauling was valued at 48 cents to \$1.70, and the occasional use of horse and buggy, probably reaching as high a frequency as weekly use, ranged from 87 cents to \$2.37.

The estimated value of the fruit given to the family of the laborer was reported to be worth 80 cents to \$1.64 per month; the value of the stabling for the laborer's horse, if he had one, was estimated to be 45 cents to \$2 per month; and the laundry service for the laborer was estimated to range from 75 cents to \$2 a month.

The increase in the purchasing power in the wage rates of farm laborers as compared with that of working men was ascertained by the Bureau of Labor. The purchasing power of wages, in terms of retail prices of food from 1890 to 1898, is regarded as being 100.0. For the period 1899 to 1907, the purchasing power in the case of working men increased only to 101.4, but, in the case of farm laborers, the purchasing power of wages per month in hiring by the year and season increased to 110.1; the purchasing power of day rates of wages for harvest work increased to 111.5, and of day rates for other than harvest work to 115.2. Notwithstanding the increase of retail prices of food, the rates of wages of farm labor have increased in degrees sufficient to make as a new result a substantial rate of increase.

The wages of women for domestic labor on farms receives attention. This subject was first investigated in 1902.

In hiring by the season, the wage rates of the domestic labor, of woman on the farm are higher than in hiring by the year. The monthly rate by the season was \$9.71 in 1902; \$11.95 in 1906; and \$12.02 in 1909. The Western division of States has an average rate for above the average for the United States in 1909, namely, \$21.55; the rates for the North Atlantic and North Central divisions, are a little above the national average, while in the South Central division the average is \$9.92; and in the South Atlantic division, \$8.25. The foregoing rates are with board.

When the domestic labor of women was employed by the day, the day rate of wages was 62 cents in 1902; 76 cents in 1906; and 77c. in 1909.

The report declares that in farm household matters the situation is acute with regard to the supply of hired labor. Country girls as well as city girls seem to regard household labor for hire as undesirable. Joined with this fact is the other one that the women of the farmer's family are neither able nor willing to repeat the manual labor performances of their grandmothers on the farm. Besides this, the farmer's standard of living has risen, certainly on the medium and better sort of farms in the North and West; and in a perceptible degree the women of the farmer's family have engaged in social functions which are beginning to be incompatible with the performances of household labor without the aid of a servant. The social obligations undertaken by them are for the Grange, the women's clubs, the Macabees, the Women's Christian Temperance Union, the local church, the farmer's clubs, and a list that might be much extended.

The old-time domestic industries are all but forgotten. The women of the farm make no more soap, candles, or lye, and so on with a long list of domestic products of former days; it is rare that one of the younger of the women knows how to knit. Throughout large areas the pride

of the old-time housewife's great store of preserves, dried, and pickled fruits, berries, and vegetables exists chiefly in history, and dependence is placed mostly upon the local store for the products of the cannery and the evaporator.

It is protested that the frequently published statement that farm life has made the women of the farm especially prone to insanity is a calumny. There is no statistical authority for the assertion, and the author of this bulletin has endeavored for nearly a score of years (as did "The Farmer's Advocate" some years ago) to discover the originator of the fabrication, with indications that the irresponsible author was for many years a popular writer on domestic subjects.

## THE DAIRY.

### Toasting Mr. Ruddick.

J. A. Ruddick, Dominion Dairy and Cold Storage Commissioner, was to have been one of the speakers at the big banquet of the National Buttermakers' Association which was held at the Congress Hotel, Chicago, on October 30th. Although Mr. Ruddick was obliged to cancel his engagement at the last minute, the Toast Master referred to his name on the Toast List in the following words:

We have a man with us who comes from the North,  
Where every night and morning the milkmaid goes forth,  
Where prosperity reigns because they know how  
To get the best results from the dairy cow.

He comes from a country where dairy products are pure,  
Of Canada, butter and cheese you can always be sure,  
He comes from a land where farms are small,  
He comes with a message of interest to all.

We welcome Mr. Ruddick to this interesting meeting,  
And through him to his people we send a warm greeting,  
The beacon light of welcome will always burn,  
Please tell the Canadians on your return.

### Contest Milk and Cream.

"Milk and Cream Contests" is the subject of an interesting bulletin by Ernest Kelly, Dairy Division, Department of Agriculture, Washington, D. C. Following are some of the suggestions worked out for the production of good contest milk, particularly in relation to clean milking:

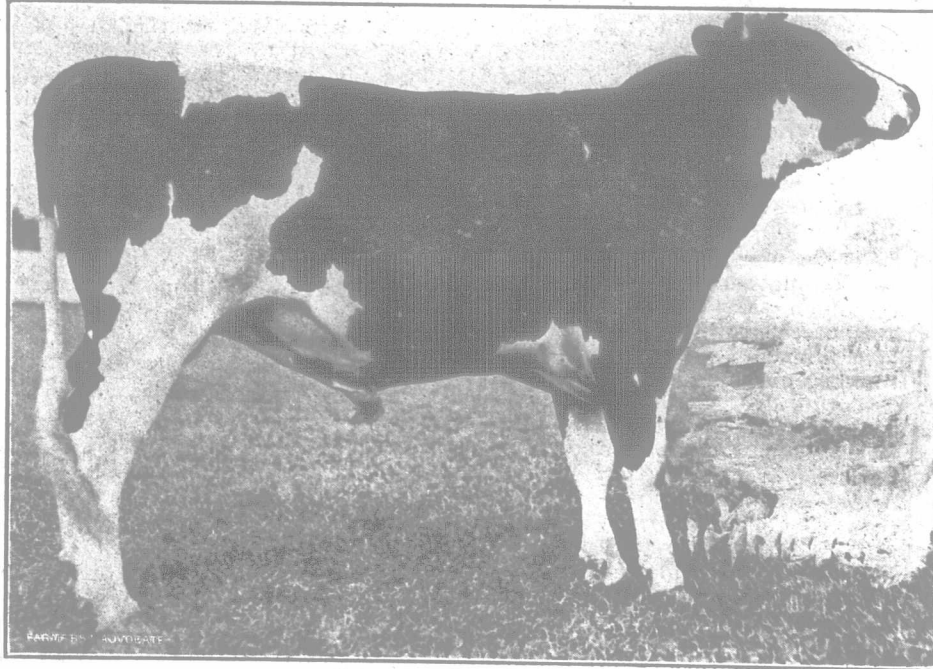
"First of all, it is necessary in the production of milk which will have a low bacterial count to have absolute cleanliness in every branch of the work. The barn itself and the barn air must be free from dust at the time of milking. This can be accomplished by keeping the walls, ceiling, and floors scrupulously clean, and some producers have even gone so far as to sprinkle the air in the barn, and also the bedding with a fine spray of water to lay the dust just before milking time. The cow herself is a very dangerous source of bacterial contamination. She very often carries on her hide dust, dried manure, loose hair, and other impurities, and these fall into the milk pail during the process of milking. To produce milk of the highest grade it is necessary to have the cows thoroughly groomed with the currycomb and brush, so that there will be no accumulation of manure or other filth upon the cow's body. Just before milking is commenced the cow's udder and flanks should either be wiped with a damp rag or the parts thoroughly washed and then dried with a clean towel so that no water can drip from the body into the milk pail. Better results are secured if the cow's hair is slightly moist, however, and not entirely dry during milking. This method will wash out of the cow's hide much dust and dirt which would not be removed by currying. The hands of the milker should be thoroughly cleaned and he should milk dry-handed to secure the best results.

"It has been demonstrated that a large number of the bacteria which find their way into the milk can be kept out provided a small-top milk pail be used. Such a pail protects the surface of the milk from dust and germs which may drop from the cow's body during milking. All utensils which come in contact with the milk, such as pails, strainers, bottles, dippers, etc., should be sterilized with either live steam or boiling water. Many dairymen make the mistake of thoroughly washing the bottles and then rinsing them with water which is only warm. This does not kill the bacteria which may be on the surface of the utensils, and considerable contamination ensues. Many successful competitors in the past have been in the habit of discarding the first few streams of milk from each teat, because they are

known to contain much larger numbers of bacteria than the milk which follows. Milking should be done as quickly as possible and with as little agitation to the cow's udder as is possible, as such a disturbance is very apt to shake bacteria from the cow's hide into the milk pail.

"Take the milk as soon as it is drawn to a clean, convenient milk house, where it can be cooled immediately. The milk house should be well protected against flies and should be scrupulously clean. As bacteria grow in warm milk very fast, prompt cooling is an absolute necessity. Fresh milk containing 100 bacteria per cubic centimeter if not cooled down will in the course of time contain the offspring of the original bacteria, which may amount to millions. While this method does not cool the milk quite as quickly, it saves it from any possible contamination due to exposing it in a thin sheet to the air. Bottles should be kept in ice or ice water until ready for shipment; then they should be packed in a durable shipping case surrounded with ice and forwarded without delay.

"Certain feeds also contribute to the flavor and odor. In several competitions milk has been cut heavily because of a pronounced garlic flavor. Silage flavor is very often in evidence, especially during the cold spells in the winter when the barns are kept tightly closed. If the silage is fed directly after milking instead of either before or during milking there should be no trouble with silage flavor in milk. There is one thing, however, that must be remembered: If the cows leave any silage in the mangers it must be cleaned out and taken from the barn when they are through, as the warm milk very readily absorbs the odor of the silage if it is in the air. The stable air, if close or "cowy," is another source of bad odors which are absorbed by the milk. Sometimes flavors are detected in milk which are



Homestead Abbekerk Prince.

First-prize yearling Holstein bull, and champion at Ottawa, 1912. Owned by L. Stackhouse, Kinburn, Ont.

due to foreign substances. Bottles have been submitted which had rubber parts in contact with the milk, and the milk had absorbed the flavor of the rubber. The use of improperly paraffined caps is very apt to give rise to a "brown paper" flavor in the milk.

"With proper care in milking, or even with proper care in straining, there is no excuse for large amounts of sediment in milk. As a matter of fact, however, very few samples even in the certified milk class have been scored perfect on this point, and some samples have been so extremely dirty as to have been given a zero on the score card. The sediment usually found is a fine dark-brown or black precipitate, which is the result of dust and dried manure finding its way from the cow's hide into the milk. Some of this fine sediment, in a state of temporary suspension in the milk, may pass through coarse strainer cloths, if such are used, and settle to the bottom of the bottle after the milk is allowed to stand for any length of time. Very often large pieces of foreign matter have found their way into the milk. In some cases it is almost unbelievable that such matter could get into contest milk, and escape the observation of the producer. Bits of straw and hay sometimes an inch or an inch and a half long have been found in the bottom of the bottle. Cow hairs and bristles have very often been found in the sediment.

Sometimes the sediment is due to the fact that pails or bottles after being sterilized are allowed to stand uncovered. If there is any wind stirring, chaff, dust, etc., are almost sure to be blown into the pails or bottles, and will thus ap-

pear as sediment in the milk. Coarse strainers should be avoided if the producer wishes to get all of the fine dirt out of the milk. The best results in the past have probably been secured with the use of cotton as a straining medium. Various forms of cotton are on the market, some in bulk and some prepared in thin sheets especially for straining. In the answers to questions on the production of milk for contests there does not seem to be any special advantage in milking onto a strainer over the milk pail. Unless the strainer cloths are changed with every cow, such a practice is liable to result in worse contamination than if the milk were simply milked into an open pail and then strained into the can."

## GARDEN & ORCHARD.

### Visit to an Apple Evaporator.

Editor "The Farmer's Advocate":

Great quantities of apples were stored in large bins without the building. These were carried into the paring-room in bushel boxes or crates.

Each paring-machine was attended by two women, standing on opposite sides of a long table. The "peeler" fixes the apple on the "corer," which is constantly revolving, and carries its load to the knife, where after four or five revolutions of the apple, it drops the pared fruit to the table below.

This table inclines toward the trimmer, which facilitates the movement of the apple toward the edge of the table, where it is easily picked up by the trimmer, who, by two or three deft turns of a knife, trims off all paring missed by the paring-machine, and trims flat both ends of the apple to ensure its proper slicing on reaching the slicer.

The trimmer places the prepared apples in a trough, through which runs an endless belt, and thus the apples are carried up stairs and into a very long bin, through which sulphur fumes are passing. In this bin the apples spend an hour, whence they emerge, beautifully whitened, and drop into the slicing-machines, the knives of which are so arranged that the flattened condition of the apple facilitates the presentation of one of the flattened surfaces of the apple to the

knives, which ensures the slicing of the fruit from stem to blossom end, or vice versa, hence the finished product is a flat, circular ring of apple. The sliced apples next go into the huge drying kilns. The floors are of slats, heated from below by gas furnaces. The apples are spread out five to six inches deep and turned every few hours at first: then less frequently. It takes 12 hours to complete the drying. The finished fruit is stored in the store-room. We saw many tons of fruit awaiting packing and shipment.

In the packing department, girls were busy arranging the apples in layers for facing in the shipping boxes. Two girls could make facing for 100 boxes per day.

The evaporated apples are exported to France, Germany and other European countries and to distant Canadian markets. Prices vary from year to year with the supply.

The peelings and waste from the slicers are bleached and evaporated and exported to France, where it is used in making that light, sparkling wine known as champagne.

The factory employs mostly women and girls. Peelers and trimmers earn 5c. per hour for their work.

F. M. CHRISTIANSON.

Welland Co., Ont.

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## Vegetable Growers Discuss Transportation and Co-operation.

Transportation and co-operation were the two dominant themes of discussion at the eighth annual meeting of the Ontario Vegetable Growers' Association held in Toronto last Wednesday. Co-operation by growers in selling the crop and purchasing supplies, co-operative buying by city consumers, where feasible, and government assistance in redressing transportation grievances were the fundamental suggestions toward bridging the barrier of middlemen's charges and profits which now keep producer and consumer apart, depressing returns to the former, while making living excessively dear to the latter. A resolution favoring the free importation of ditching machines received hearty support. In addition to the consideration of these business and economic questions the convention found time to hear many experienced hints on details of vegetable culture, and green-house management. The meeting was well attended and brisk. The Association is flourishing, and a visitor could not but feel that the vegetable growers' business is by no means a small one. Certainly there is nothing small about the people engaged in it. They are wide awake business men, many of them operating on a very considerable scale. Their industry is a profitable and a growing one. Their convention is well worth attending.

Touching the question of the high cost of living, President Thos. Delworth in his opening remarks laid a large part of the responsibility on the consumer's hand-to-mouth method of purchasing. By buying in large quantities, especially for a winter's supply, as they used to do years ago, a great saving would be effected with less work, less handling, and consequently less expense to the middleman.

The report of the Secretary, J. Lockie Wilson, surveyed the progress of the year. In spite of the fact that weather conditions were not very favorable in 1912, germination being retarded by the cold weather in spring and summer, crops had been bountiful and prices were on the whole satisfactory. The large percentage of thick necks in the onion crop in many sections was ascribed to the abnormal season.

The vegetable field crop competitions inaugurated this year were quite successful.

Twenty-five thousand dollars in prizes was offered this year for garden products (exclusive of flowers) at the Canadian National, Central Canada, and Western fairs. Improvement in quality and number of exhibits of roots and vegetables at local fairs has been marked.

### NEW ONTARIO SEED PEAS AND POTATOES.

The Association is continuing experiments in New Ontario to determine the possibility of producing seed peas and potatoes for use in the older parts of the province. Through the offices of L. H. Newman, Secretary of the Canadian Seed Growers' Association, a quantity of the Gradus variety of peas was secured in Germany, and distributed among farmers in Northern Ontario. Results were not specially encouraging, owing to the cold, wet weather that prevailed, and to lack of drainage. However, a quantity of seed was produced, and a sample exhibited at the meeting. President Delworth pointed out that the crop produced by one Northern grower, Mr. Stephenson, cost the Association only two dollars per bushel, or counting the cost of the expensive seed supplied him, \$6.00 per bushel. Last year the price of these Gradus peas as purchased by vegetable growers was \$15.00 and \$16.00 a bushel—nine or ten dollars per bushel more than the cost of the peas grown by Mr. Stephenson. The Gradus, though not a canning factory pea, is an excellent early market sort.

Early Ohio potatoes were grown for the Association, by farmers in New Ontario, but, here again the heavy rains interfered with seeding and growth, and the tops of some of the crops were severely set back by a couple of frosts. Stem rot and stem blight were prevalent, and the Colorado beetle is beginning to be troublesome in the Southern edge of the clay-belt, though neither blight nor beetle has yet reached the government farm up at Monteith. In spite of these drawbacks some of the results were good, and would have been better had the soil been underdrained. The New Ontario seed potatoes grown for the Association (amounting to about 400 bags) are to be stored by J. W. Bush, and shipped out as required. Owing to the large crop the executive reduced the price to members from \$2.00 to \$1.75 per bag, the latter figure being sufficient to cover cost of growing, transportation and storage.

Reporting later on these New Ontario plots of potatoes and peas, T. G. Raynor remarked that the potatoes would have been a great crop but for the excessive wet. Previous to his visit it had rained in New Liskeard every day for six weeks. New Ontario, he said, also is a great pea country

though the settlers make their land hardly level enough for convenience in harvesting. He saw a nice piece of new-seeded alfalfa, indicating adaptability of the soil to growth of legumes.

### UNFAVORABLE SEASON AT MONTEITH.

The written report of Chas. A. Galbraith, in charge of the government farm at Monteith, near Cochrane, described the season as far from satisfactory. The yield of potatoes in that district has been far from satisfactory. Weather was cold and backward, and the tops were nipped by frost early in the season, then killed outright on August 21st at the height of the growing season, still the yield on the farm was 150 bushels per acre. There were no bugs and no blight except a little stem blight. The best plot of turnips produced 500 bushels per acre, the average being 375. There are no large clearings near the farm to modify the climate, and ordinary conditions are preserved.

### WANT TARIFF OFF DITCHING MACHINES.

In the course of his report Mr. Wilson strongly urged the need of drainage in the fields of vegetable growers and farmers. This has been made more apparent than ever in 1912, but scarcity and high cost of labor has rendered it almost impossible to carry on this necessary work. If the volume of production is to be kept up more up-to-date and cheaper methods must be employed. In the forefront of this comes a well planned system of drainage. There is on the market a ditching machine made in Ohio said to be capable of digging a trench three feet deep at the rate of 100 rods a day. The price of a machine runs from \$2,000 upwards at the place of manufacture, but with several hundred dollars of freight and duty added, Canadian farmers are seriously handicapped in competition with those on the other side of the line. On motion of W. J. Kerr, seconded by W. J. Robb, a resolution was passed asking for free import of ditching machines.

The annually heightening barrier of transportation tolls and middleman's charges between producer and consumer was sharply revealed in the forenoon session, being especially emphasized in the case of apples, which, though not vegetables, occupied an hour or so of the vegetable growers' attention. An Elgin County delegate told of having shipped some nice Snows to Toronto two weeks ago, and not hearing from them had called at the Toronto house to see the fruit. He was told that it had arrived lately, having been ten days on the road from Port Stanley. When seen, half the apples were standing beside a furnace, and the dealer was disposed to fault the quality and condition. It was questionable whether anything would be realized from them, yet apples inferior to what they had been were retailing in Toronto at a good round price. Lockie Wilson recited some of his experiences as a member of the Civil Service Co-operative Association of Toronto. Some potatoes had been bought at Bracebridge. In addition to the price there was freight and cartage to pay. Not only so but because the house set back thirty or forty feet from the kerb the expressman absolutely refused to carry the potatoes past the kerb until Mrs. Wilson paid him an extra fee of 25 cents. If it had been raining hard the bags would have been dumped off and left there just the same. It was either on this or another occasion that the expressman called with goods, knocked lightly instead of ringing the bell, and because he was not heard went away and called again later demanding an extra twenty-five cents for the second call. These were cited as instances of the way Toronto residents are "held up."

W. J. Kerr, of Ottawa, though not disagreeing with what had been said reminded the meeting that the government couldn't do everything to abolish the barriers of cost and profits built up by railroads and middlemen. A good deal could be accomplished by co-operation. He would like to see his local Association undertake co-operative selling, sending out a representative to find a market for fruit and other produce. Along this line another delegate reported that the co-operative Onion Growers' Association at Scotland, Ont., had paid its members 92 cents for onions, whereas the buyers had only offered 70 cents. At this point "the old fire commenced to burn" in John Hyatt, as he himself expressed it. He favors co-operation, though pointing out that the advantage in co-operative selling is largely with car-lots. But the big trouble as between producer and consumer is to "get across the devil's strip." He told of tomatoes taken from the farmer at 25 cents a bushel—less than half a cent a pound, then after sustaining charges of 50 cents express, 15 c. cartage and 10 per cent. commission, retailing in Toronto at 40 cents a peck, or in a smaller way at 6 cents a pound!

The discussion was closed by passing a resolution moved by W. J. Robb, of Elgin Co., requesting the government to find a solution for

the apparent lack of a market for apples and other farm produce.

### CO-OPERATIVE PURCHASE OF SUPPLIES.

In a paper on this subject W. J. Kerr, Secretary of the flourishing Ottawa Branch of the Association, told how a few successful ventures in the purchase of berry boxes, baskets, and seeds, had galvanized that organization into vigorous life animated by a progressive and fraternal spirit. The vegetable growers throughout America are forming many co-operative associations, and the Ottawa Branch seems to be setting an excellent example. Three years ago the Secretary gave his services free, and paid some of the running expenses out of his own pocket. This year after paying out \$160.50 in prizemoney there was a nice little surplus left over. Co-operative purchase of supplies was the chief factor in working the change. As for the direct gain, Mr. Kerr estimated that by co-operative purchase of supplies the members could save in original cost more than \$1,000, and could make from the extra crop, due to high quality seed, several thousand dollars more on the average each year. For some examples of saving in prices we refer our readers to a letter by Mr. Kerr in "The Farmer's Advocate" of October 31st, page 1889. Another paper on the same subject, prepared by Geo. Philp, of St. Thomas, was read in his absence. For their association of 200 members, comprising farmers and fruit growers as well as gardeners, \$35,000 worth of supplies had been handled last year, comprising Paris green, binder twine, etc. One member claimed to have saved \$7.00 on two barrels of concentrated lime sulphur.

President Delworth recalled some unsatisfactory experience which the Toronto Vegetable Growers' Association had with co-operative buying years ago, and enquired as to the system of collection practiced. Mr. Kerr explained that in their branch two or three members stood individually responsible for the orders. So far there had been no losses and no delays in settlement. Seedsmen often gave the grower time, but charged ten per cent. Their Association now proposes to carry accounts for its members at a similar advance. Vice-President Baker remarked that as a rule in co-operative associations the work of a tradesman falls on the officers, who also carry the risk, and sometimes get left in the lurch. He thought co-operative purchasing should be done on a cash basis. The manager of an onion growers' association reported that he had paid for the bags supplied the members, and charged them 7 per cent. interest until the bags were returned.

### TRANSPORTATION.

The transportation problem as affecting the interests of vegetable growers was discussed by E. E. Adams, of Leamington, who instanced some grievances, and stated that growers in the Western part of the province proposed to lay before the railway commission a number of injustices with a view of having them righted. One trouble is that cars shipped out day by day often arrived at their destination in bunches, glutting the markets. One car of tomatoes shipped to Toronto by C. P. R. was hung up three days in West Toronto, and half the value of the carload was lost. One shipment despatched to Montreal on Thursday arrived Sunday bunched with other cars, and entailing a loss of several hundred dollars. Refrigerator cars were desired for shipment, but it was found impossible to get one from the G. T. R., C. P. R., or M. C. R. Freight rates were keeping them out of the Winnipeg market, which was theirs by right. Minnesota was putting onions into Winnipeg at 80 to 90 cents a bag, in the face of a 30 per cent. duty. After some discussion the President, Secretary, Mr. Reeves, and Mr. Adams were appointed a committee to act with a similar committee from the Ontario Fruit Growers' Association to appear before the Railway Commission in Toronto, and press the claim for remedial measures for the transportation of our produce to market.

### COMPETITION, CULTURAL AND SHIPPING HINTS.

Reporting on the standing crops of vegetables which he judged in competition, A. H. McLennan, of the Ontario Agricultural College, offered a few hints on shipment of exhibition vegetables. One lot of the very finest of celery was spoiled for exhibition purposes by being contained for three days in an air-tight box. The best celery came out of an old berry or orange crate affording good ventilation.

The vegetable growers who are making the most out of their crops are the men who are selecting their seed. A tomato plant from seed grown on your own soil on a plant fulfilling every point of your ideal will do better than any you can likely import. One plant which two years ago produced 40 pounds of fruit in the

progenitor of their line of Wealthy, practically as early as the Earliana.

Their comparative freedom from onion maggot at the College he could not explain, unless due to the abundance of hardwood ashes used on the land. A year ago they had a piece of which three quarters was treated with ashes. The remaining quarter was the only section that had no maggot. The late blight of celery came this year in the season of the early blight. At the College they held it fairly well in check with Bordeaux.

Endorsing the advice on seed selection, Mr. Kerr observed that two or three melon growers down East had developed strains of melons superior to anything that could be got from seedsmen. One had a crop better by 100 per cent. than could have been got from purchased seed.

**GREENHOUSE DISCUSSION.**

Lettuce, tomatoes and cucumbers are about the only three vegetable crops profitable to grow in a greenhouse, said J. J. Davis of Middlesex Co. In order to operate profitably it is necessary to have the soil immensely rich. Ventilation must be very carefully attended to. All gardeners know that a muggy, humid atmosphere favors blight. We have to avoid that by ventilation. Better burn a little coal for nothing than endanger a crop. Air may be cold without being fresh.

The production and marketing of head lettuce was discussed. It seems there is some enquiry for head lettuce, but not enough demand to make its production profitable. Mr. DeKorth stated that in the Eastern States the Boston head lettuce is grown for forcing. In the Middle Districts they use the Grand Rapids. Mr. McLennan who has grown a little head lettuce, claimed that without an elaborate system of sub-irrigation it could not be made a success. Overhead water is fatal. One method of growing was thus outlined. Dig eight inches of black rotted manure into the sand to a depth of two or even three feet, then saturate with enough water to carry through a crop or a crop and a half.

**FORCING CUCUMBERS.**

Roy Ellis, of Leamington, an extensive grower of cucumbers and hot-house tomatoes was asked to discuss his methods. He grows principally the White Spine, planting seed about March 1st in 2-inch pots, resetting from 2 to 4 inch and from the 4-inch pots to permanent beds, planting here about four weeks after sowing the seed.

Re pruning, cucumber vines ordinarily produce a fruit at the first joint on a lateral, and may then grow three feet of barren stalk. By pinching back to a point just past the first joint we get another branch thrown out, and a fruit at its first joint, and avoid having so much barren wood. He keeps bees with the White Spine for pollenization. The bees play out under greenhouse conditions and have to be renewed each year. He uses steam heat, and maintains a night temperature of 70 degrees. Likes the Skinner system of irrigation for cukes, but not for tomatoes, preferring to keep the vines as dry as possible. Sterilization of the soil with steam he found profitable for cucumbers. It also forced lettuce forward remarkably. Couldn't see much advantage with tomatoes though Mr. McLennan had reported success. The steam was put through lines of tile two feet deep, and left in until the whole was steaming hot. Mr. Davis' method of steaming was to use inverted galvanized iron pans three or four feet wide and seven or eight feet long. The steam was turned in through a central nipple with a T underneath to direct the steam both ways. Steam was left on 30 minutes, then the pans were shifted by handles gradually from end to end of the base. With Mr. Ellis' method and a permanent "header" one could sterilize his soil from side to side of the greenhouse as the crop was removed, following the crop with steam as it were.

The use of sulphur was discussed. It is not considered entirely safe to burn sulphur in a greenhouse, though it may be safely fused. It is difficult, however, to do this without a chance of burning some of it, and thereby injuring or destroying vegetation. Where steam is employed the sulphur may be placed on steam pipes. Mr. Davis reported that he burned it with safety to the extent of a handful for each double house putting it on coals a little at a time, and walking slowly through the houses. He does this frequently, and has never noticed any harm.

**WHAT BUYERS WANT.**

Amid much comment, J. W. Rush told of watching Mr. Davis sell on the London market "a little lot of head" of lettuce, green onions, lettuce and other things in the smallest bunches he could get. He sold a bunch for \$42, while a bunch of the same size would longer time to sell for \$10.00. He said that for three or four dollars. He said that he had a number of anticipating customers who would buy just what they want.

**MANURE FOR GREENHOUSES.**

Mr. Adams was the speaker.

enough to state the quality of manure used in greenhouse work. For each acre he used 15 car-loads of Chicago Stock-yards manure at \$50 a car, amounting to \$750.00 per acre.

According to experiment the soil best adapted to roses is one which contains from eight to twelve per cent. of clay, and is well supplied with silt and the finest grades of sand. The proportion of these three classes of material should exceed 75 per cent.

**POULTRY.**

**A Year's Balance with Poultry.**

Editor "The Farmer's Advocate":

On Jan. 1st, to find out how much profit there was in the poultry business, I decided to keep track of all receipts and expenditures. I had on hand 100 hens, and as I have a small farm of 50 acres I do not thresh, and all feed for the hens, except some of the scraps from the table, must be purchased. I therefore had to buy all the feed. The following is an account of my receipts and expenditures for ten months:

**RECEIPTS.**

Jan.—30 doz. and 2 eggs, sold at 50 cents a dozen .....	\$ 15.08
Feb.—14 and 1/2 doz., 50 cents a dozen .....	7.25
Mar.—127 doz., 28 1/2 cents .....	36.19
Apr.—141 1/2 doz., 34 1/2 cents .....	48.73
May—152 doz., 33 cents .....	49.12
June—123 1/2 doz., 31 1/2 cents .....	38.90
July—77 doz., 28 cents .....	21.56
Aug.—71 2-3 doz., 30 cents .....	21.50
Sept.—83 doz., 33 cents .....	27.39
Oct.—27 1/2 doz., 40 cents .....	11.00
<b>Total receipts for eggs .....</b>	<b>\$276.72</b>
Poultry sold .....	34.00
Poultry sold .....	7.00
Poultry sold .....	5.00
Young stock on hand, 68 pullets, 78 cockerels; these are worth \$1.00 each.....	118.00
<b>Making a total of receipts .....</b>	<b>\$440.72</b>

I paid out for feed, etc., as follows:

Jan. 1st .....	\$ 12.00
Jan. 3rd—Corn, bran, rolled oats .....	15.00
Feb.—Wheat, oyster shell .....	18.00
Mar.—Corn .....	10.00
Mar. 13th—Oyster shell, grit .....	2.00
Apr. 27th—Wheat, bran .....	7.00
Apr. 28th—Chick food .....	3.00
Apr. 5th—4 gal. coal oil .....	1.00
Apr. 26th—4 gal. coal oil .....	1.00
June 3rd—Wheat, etc. .....	11.85
June 5th—Cracked corn .....	4.20
June 11th—Wheat .....	7.50
July 1st—Wheat .....	2.00
July 15th—Feed .....	7.75
Aug. 1st—Corn .....	1.85
Aug. 3rd—Wheat .....	11.10
Sept. 2nd—Wheat .....	7.55
Oct. 1st—Wheat, etc. .....	6.40
<b>Total expenditure .....</b>	<b>\$129.20</b>
<b>Making a credit balance of .....</b>	<b>\$311.52</b>

As I was going on a lecture tour, the present account is for only ten months. I expect that when I have sold my cockerels and the eggs which are being laid at present the profit will be increased slightly, making a profit for the year of slightly over \$3.00 per hen. I have on hand at the present time 94 old hens, six having died during the year. This makes a profit of 71 per cent. These eggs were all sold to a retail grocer in the city of Ottawa. Eggs were shipped once a week in good clean boxes, holding one dozen each, and guaranteed fresh.

I live 25 miles from the city, seven miles from an express office, and ship my eggs by express. The dealer pays this, and allows me one cent per dozen extra to pay for boxes, as these make a very handy package for delivery.

You will see by my distance from the city and railroad that I am no more favorably situated than any farmer in the eastern parts of Canada, and I found that I could not possibly supply the demand of this grocer, consequently any farmer could get the same prices I am getting for my eggs. J. C. STUART.

Shelton Co., Ont.

If you are troubled with windows frozen up during the winter, try sprinkling a little salt along the run-way; doors snap, or any ice comes to that, except in pipes.—R. W. C.

**THE FARM BULLETIN.**

**One Hundred to One Failures.**

Editor "The Farmer's Advocate":

The libraries are filled with volumes of boys and young men stranded in cities, and who, directed by some kind policeman to a place where they can secure a job, succeed in a wonderfully short time to become general manager or superintendent. All these stories are very interesting, but the sad part is it gives the youths of our country entirely a wrong impression of the actual conditions existing in cities. While there are a good few who do succeed wonderfully, there are by far the great majority who are slaves their lives through, and who are by no means less ambitious or energetic than those who have succeeded.

The school libraries often contain books which give to the youthful reader longings to go to the city, where success is greater and the chances better than on the lonely farm, or at least appear to be greater. But how many find it so? Is it not, therefore, but fair that the country boy should hear both sides of the story, and he better can this be done than through The Farmer's Advocate? May I be allowed to speak of my own experiences, because I can speak the truth only, and not be obliged to use imagination. Besides my case is no exception. I meet almost daily with men who tell of the same things.

Influenced by vivid illustrations of how others have succeeded, I decided to leave the good old farm and become one of the city array whose success in life was made in a remarkably short time. If my brothers wanted to plod along, I was not. Pitching hay when the thermometer registered 92 degrees in the shade was no joke. In fact, there was little work that was not hard work, and all this hard work for a very small bank account at the end of the year. I did not blame the neighbors' boys for going to the city.

To the city I did go; part of the old homestead was sold for there did not remain the help to work it all. I did not realize what this meant then; I do now. I took a course of training. It cost money, but I was assured that I would be well repaid. Harder and harder I worked. I was doing fine. I was on my feet and could see a way clear to be independent.

In the great struggle to gain wealth, or the way to wealth, I almost forgot my parents at home. They had offered to help me on at home and get me started on a farm of my own when a thought of doing so, but no such thoughts ever entered my head. I had my way and evidently was "doing fine."

From home there came many invitations to come home to see, father and mother again. I had not been home for a long time and did not care to go. I was too busy; besides I had other friends and dinners to go to. It would have been a treat to taste some of mother's apple pies, and that gravy, such as I have never tasted since, but then I must keep in touch with more prominent people. All would help in the end to reach my desired goal.

My conscience often told me that I was neglecting my people at home, but I got considerable rest by mailing some present at Christmas-time. I was too busy to run home, and I knew that a gold watch would just suit my brother fine. He had been carrying that old Ingersoll for ever so long. A set of silver tableware would please my mother more than if I were to come home—but it didn't. I could not fathom the inward feelings of a mother to a far-away son. My business took me quite close to my old home, and having a day off I went to see them. That day I shall never forget. My father had aged wonderfully; so had my mother; my brothers had grown up, and as we walked through the old pastures and woods I saw that my brothers and sisters envied me in my latest cut clothes and off-hand way of talking. They spoke shyly, in fact. In the middle of the corn-field, we stopped; my old father remarked, "Well, John, we have not had a corn-field or potato-patch as we used to when you worked the land. You always took first at the fair, no matter how poor the season." I recalled having been very successful in growing corn and roots, and no one in the district ever had a better crop than we did. And he continued, saying, "I am getting old; I cannot follow the scuffer as I used to, and to leave all the work for George and little Willie is too much for them." He asked me if I would not care to come back, and again offering to do all he could to get me started, but no, I would not dream of such a thing. Again I bade good-bye, and as I stepped on the train I looked back at the man in overalls, my brother, poor fellow, I thought, but the confusion of the city with all its sidelines again let me forget those

**THE FARM BULLETIN.**

**One Hundred to One Failures.**

on the farm night to get a chance, but this ladder in my line of and mangle strove for sleeping alone, but it was, ye desired res the other. ous, enem and less I however. resort. I long rest. unstrung. man, and to the effe I knew w other idol nice little the village man as is cled with had, but mingle wit

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on the farm. Not alone did I work day and night to gain the one end which was independence, but also to win a young woman who was an idol in my eye. I lacked but one thing in this latter end of it, that was education. In my line of work I was doing well without this and mingled with the best men of the city. I strove for more than I could gain at once. Working and scheming took so much time, that sleeping and eating were forgotten. Not that alone, but I made an investment, a doubtful one it was, yet, if well managed, would bring the desired result. To gain one thing was needing the other. In the meantime I had aroused jealousy, enemies were working; harder I worked and less I took of rest and food. Not for long, however. The physician ordered me to a quiet resort. I had to go. I was obliged to take a long rest. Every nerve, through anxiety, was unstrung. It was months before I felt like a man, and in the meantime I received a telegram to the effect that my investment was a failure. I knew what this meant. It meant that the other idol was not now to be had. I had a nice little doctor's bill, a fairly large bill at the village inn, and I realized I was as poor a man as is in the country. I said I had mingled with some of the best men in the city. So had, but after this collapse I could no longer mingle with them, nor did I want to.

Not till now could I see the folly of going to the city to become successful. Never before could I see or realize what it means to live the life of many of the successful business men in our cities. True, many have started at the bottom and have worked themselves to the top, but many more are at the bottom still, and further down than when they started.

It is now my turn to envy my brother in his overalls. It is now that I will speak shyly to him that feedeth the cattle and sheep and the swine and that tendeth to the horses these cold, damp days. Nor is it so easy to again find a situation at this season of the year. I have tried it for a week now and with the same result. One look at a sheet-white face and a furrowed brow and skeleton frame satisfies the help-seeker. "The situation is filled" is the "kind" answer, or "We want a strong, experienced man" says another. The farmer says, "We just employ hired help in summer," etc.

Unlike the farmer's son, strong and healthy, when meal-time comes enjoys his feast, though it be boiled turnips and mush and milk, occasionally the one out of employment in the city pays for a room, and if his finances so let him, he will indulge in something hot, probably toast and hot beef-tea for ten cents, and that will keep him for the day. The young man on the farm has no idea what life in the city really is. There is no other life more deceiving than that of the city. If we trace many of the street-walkers, in fashionable attire, to their habitation or homes, we will find disgusting conditions there. It is well that all is not known, and yet it would be well if some did know what they are sure to discover later; they would never think of giving up country life.

I did go to the city to make my fortune. I should have done all right probably had I not speculated, and in doing so lost all. But every city business man speculates. He has to do so in one way or the other, and I am satisfied that one hundred city people fail utterly before one farmer does so. Others I have known have failed just as much so as I have. Their story is different probably, but I know of only three farmers who have failed, and I know of at least three hundred in the city. The cry of the city man is "Money, more of it. Make it honestly or dishonestly." On every hand, on either side of the street, and on the very street, are the coin-takers. Daily they are coming in from the farms and country and try to keep pace with the "city folk." Boys and young men who have no need of working in the city readily find city-life fascinating. Theatres and other houses claim many a dollar. No, they would not exchange for the lonesome country-life again, but in all cases a day will come when the mistake made will appear a serious matter and will grow in seriousness. To go back to the land after years is not such an easy thing as it may appear to be. It is much easier to leave the farm than return to it. The best way is to stick to it. After seeing what I have seen, and knowing what I know to be true, I can not too strongly say, "Stick to the farm, boys."

There is a growing restlessness among many of the farm boys at this time of the year. They determine to go to town to brighten up, probably spend a winter in the city. Not only taking work from some who are brought up in the city, but also in many cases find a liking to the past-times there, and finally stay there. If from my own and others experience I have learned anything, I have learned that in the majority of cases it is not the polishing they receive, but alas, the very opposite.

May I sound a kindly word of warning to the young men who contemplate going to the city. First look before you leap. Make sure of the place, and know if it is a permanent job you have secured. To be laid off in mid-winter, with chances of not getting work for a month or so, is no pleasant dream after having once experienced such. Make sure of your companions and associates. How very easy it is to be led astray, even for a man brought up in a good home. The downward path is ever so much easier in the cities than anywhere else. The pool-rooms, theatres and other houses welcome the newcomer—not the man, but his money, of course. It will mean being on the lookout continually. A mother's love, a father's counsel and a sister's influence are missing, the result is often disastrous.

But why think of making the city your future home? What would many a prominent man tied to the city give were he able to be back on the farm again? What would I give had I never seen the city? We know that the very country is known for one thing mainly. It is known for its agriculture, for the men who have made it so. The men who made it so are not those who go about in automobiles alone. Farmers and farmer's sons, tillers of this soil have made it what it is to-day, and these very men are the most honored and important men of to-day, only they don't know it.

If you are restless do not think rest can be found in the city. A fortnight's visit to the city will probably satisfy you, and a short course at the O. A. C. will no doubt be a great benefit to you, but if you will take my advice, and I have had experience, you will stick to the farm. J.A.

Some Problems.

By Peter McArthur.

While sawing wood in the wood-lot my attention was attracted by a myriad of little moths that began to flutter over the dead leaves as soon as the sun had warmed the air. Everywhere I looked they were fluttering a few inches above the ground, and there were from one to a dozen over every square yard. I cannot remember having seen this particular kind of moth before—at least I am sure I never saw them in such numbers. Of course, I began to wonder about them and to feel suspicious. I have met so many bugs, moths, worms and insects that are injurious that I am becoming inclined to view them all with suspicion. As the log we were cutting was about two feet in diameter, and the saw was none too sharp, I felt I had a good excuse to take a rest by starting a scientific investigation. But though the moths were very plentiful, they were surprisingly lively when pursued, and it took some trouble to get my hat over one. When captured it did not look very dangerous, but one never knows, and I made up my mind to send the specimen I had caught to the expert of The Farmer's Advocate so as to find out more about it. Placing it carefully in a glove, I went back to the sawing, and at noon when I got to the house I opened the glove with much caution—and the moth was not there. I explored the thumb and fingers without success. It had managed to escape. In the afternoon I captured another and imprisoned it more securely. It is to be enclosed in this letter, and as it is dead it should not escape. I shall be obliged if the official entomologist of the staff appends a note telling what the little creature is. It is probably harmless, but its surprising numbers attracted my attention rather than its appearance. It seems impossible that a little, filmy, ashy grey creature like this could be harmful, but one never knows. And, anyway, capturing the moth and taking care of it broke the monotony of sawing wood and made it possible for me to take a rest. I like to rest whenever I can find a decent excuse for doing it.

The tree we were cutting had much about it to interest me, and I wished that I had a scientist along to answer a lot of questions that I wanted to ask. It was the big maple I told about last spring. It came crashing down one morning when not a breath of air was stirring. Apparently it had reached the fulness of its years. When we began to cut it we found that some kind of borer had been tunnelling through it. I wonder if that hastened its end. When I examined it after it fell there was not a dead limb on it and every twig was covered with leaves and winged seeds. As far as the outward appearance of the trunk was concerned, it was as healthy as any tree in the woods, except for a "shake" near the stump. It was, perhaps, through this crevice that the borers found an entry. While we were sawing, a chip of bark came loose, and under it there was a smoothly-cut little cavity, and in it a large black ant fully an inch long. It was all alone and was the only specimen I found. On looking at the

roots where they had been torn from the ground, I found that all the central roots were decayed, and only those on the outer rim were fresh and alive. A professor of forestry could no doubt have given me an interesting lecture on this old tree, and I would have listened with interest, for I am much concerned about the preservation of this bit of the virgin forest. I noticed with some disquiet that many of the largest trees have dead limbs in their tops, and I could not help wondering whether they would mature and die before the young trees have made a proper showing. As the cattle have been kept out of this bit of woods for several years, young maples are pushing up plentifully, but it will be many years before they will make much of a showing. One thing that excited my curiosity, and perhaps a trifle of wrath, was to find beside the log some of the little pine-trees that I planted with so much labor in the neighboring lot. Evidently some hunter or visitor to the woods had pulled them up by the roots and carried them this far, but why I cannot imagine. It was a bit of wanton destructiveness for which I could see no excuse. I was glad to find on going to look at the planted trees that they are looking thrifty, and that there was no signs of many of them being tampered with. But why were these pulled and carried away. No animal could have done it, and I fail to see why anyone boasting ordinary intelligence would in this way undo a piece of work that could not possibly be hurtful to anyone else. Human beings are strange creatures.

A correspondent has raised an interesting question, and I am going to pass it along for wiser heads than mine to answer. In reading an article in The Farmer's Advocate by a contributor who had driven from Leamington to London, he noticed that mention was made of the large number of farms that have been abandoned or turned over to pasture in this district. In following on a map the course taken by the writer of the article, he stumbled on Elfrid, and decided to ask me to solve the riddle. All I can say is that I have been puzzling over the same problem for the past three years. The land is the best farming land in the Province. The district has excellent railroad facilities and everything seems to point to progress and prosperity, yet every year more farms are being allowed to run to pasture. In most cases it is found that the owner has moved West to try his fortune, but I fail to understand why he should do that. If he still intends to farm there is no place better for that than Ontario. I cannot go farther in explaining the riddle than to tell why one farm is going to pasture. It is going to pasture because I cannot hire the necessary help to work it properly, and because I can get more fun out of pounding the keys of a typewriter than out of harvesting crops in the rain. Of course there is another explanation of the abandoned farms, but I hate to offer it for fear of being thought a crank on one subject. But, come to think of it, I can shoulder the explanation on another man, so I may as well give it. About a year ago, J. Malcolm MacDonald, of Aylmer, wrote me a letter attributing the whole trouble to our banking system. As soon as the farmers get any money they put it in one of the branch banks, and it is at once sent away to Montreal or Toronto to be employed in great enterprises in various parts of the world. Where the carcass is there will the eagles be also. Those who sell their labor must follow the money, and the young men and the laborers are leaving the country to crowd to the cities and to the West, where money is being spent lavishly on new enterprises. By our branch bank system all the surplus money is being drained out of the rural districts of Ontario and the labor is going with it. Little or none of the money earned in the country is seeking local investment or being used to promote local enterprises. Because of this one of the finest farming districts in the country is being turned over to pasture, and is becoming, every year, more and more like prairie land. I agree entirely with Mr. MacDonald's explanation, but I quite realize that I have been paying so much attention to the banking system lately that there is some danger of attributing to it every evil that I see in the country. I shall be glad if some readers will favor me with their explanations of the mystery. Instead of being on the increase, productive farming in this district is going back, even though all the natural conditions seem to be in favor of the best kind of farming. Perhaps if the true cause of the change could be discovered something could be done to set things right.

A reader of the Farmer's Advocate, West Nissouri Township, Middlesex Co., Ont., reports his recent oat threshing of 1,000 bushels from 26 acres, a good sample of a white variety resembling Banner from Western-grown seed.

**Breeders' Meetings at Chicago.**

The following meetings of U. S. National Association will be held in Chicago during the International Live Stock Exhibition:

Saturday, Nov. 30.

American Society of Animal Nutrition, Breeders' Hall .....1.00 p.m.

Monday, December 2.

Percheron Society of America, Congress Hotel .....8.00 p.m.

Tuesday, December 3.

American Shetland Pony Club, Sherman House .....3.30 p.m.

Continental Dorset Club, Wool Office .....3.00 p.m.

American Milch Goat Rec. Assn., Breeders' Hall .....2.00 p.m.

American Cotswold Rec. Assn., Galloway Hall .....7.30 p.m.

American Shire Horse Assn., Assembly Hall .....7.00 p.m.

International Live Stock Exposition, Saddle & Sirloin Club .....8.00 p.m.

American Oxford-Down Rec. Assn., Breeders' Hall .....8.00 p.m.

American Cheviot Sheep Society, Exposition Hall .....8.00 p.m.

Hampshire Swine Rec. Assn., Wool Office .....8.00 p.m.

American Aberdeen-Angus Breeders' Association, Grand Pacific Hotel .....8.00 p.m.

American Berkshire Assn., Stock Yards Inn .....8.00 p.m.

Wednesday, December 4.

American Shropshire Association, Assembly Hall .....10.00 a.m.

Red Polled Cattle Club of America, Breeders' Hall .....2.00 p.m.

American Poland-China Record Assn., Wool Office .....2.00 p.m.

American Hampshire Sheep Assn., Exposition Hall .....7.30 p.m.

National Lincoln Sheep Breeders' Assn., Wool Office .....7.30 p.m.

American Association of Imp. & Br. of Belgian Draft Horses, Assembly Hall .....7.30 p.m.

Chester White Congress, Breeders' Hall .....8.00 p.m.

American Shorthorn Association, Grand Pacific Hotel .....8.00 p.m.

American Yorkshire Club, Stock Yards Inn .....8.00 p.m.

Thursday, December 5.

American Galloway Breeders' Assn., Galloway Office .....8.00 p.m.

American Southdown Breeders' Assn., Breeders' Hall .....8.00 p.m.

American Suffolk Horse Assn., Breeders' Bldg. ....8.00 p.m.

American Rambouillet Sheep Breeders' Assn., Wool Office .....8.00 p.m.

Polled Durham Breeders' Assn., Grand Pacific Hotel .....8.00 p.m.

American Tamworth Swine Record Assn., Exposition Hall .....8.00 p.m.

**Sell Stock or Buy Hay.**

At present some of our farmers are reducing their stocks, on account of the light hay crop in Antigonish and the eastern part of the Province this year. The stock is being sold at low prices, to avoid buying hay next winter at high and out-of-the-way prices, or holding their stock and paying high prices for hay and expecting big returns from their animals next season.

Last year there were poor crops in some districts, the Gulf Shore in particular, and farmers there suffered a good deal, had to haul high-priced hay long distances and over bad roads.

For some time the executive of the Antigonish County Farmers' Association have been considering the situation, with a view to discovering measures to help out the situation.

Committees have been appointed to ascertain where a quantity of hay could be got at a reasonable price, and also to find out, approximately, the quantity needed.

It has been reported that hay can be got in Quebec under fifteen dollars a ton; about a thousand tons or so would be needed; transportation charges on it from Quebec to the East would be very heavy.

L. Girroir, M. P. P. (Antigonish), left recently for Ottawa, and will interview the Minister of Railways for the purpose of getting low rates of transportation on hay from Quebec to Antigonish over the Intercolonial Railway.

A good crop of potatoes has been reported. One person had a lot of large potatoes, some weighing as much as 2 1/2 lbs. each.

Recently Antigonish potatoes have been shipped to Halifax to private customers at 50c. per bushel.

The fall being so wet, oats and other grain in some cases failed to ripen evenly. A great deal will be used for green feed. At present writing there is still grain out yet.

The price of oats is fifty to fifty-five cents per bushel, according to quality, which, in some respects, is very good.

Milk.—The milk factories are overcrowded with orders for milk. The Sydneys (C. B.) will consume more milk than can be got out. The Antigonish Farmers' Pasteurizing Milk Factory is doing a rushing business. The milk is rushed on the express trains, and conveyed to different Cape Breton towns, through the excellent work of the Canadian Express Co., and sold for good prices.

The wooden floor of the above-named factory has been extracted and a concrete floor laid in its stead.

As has been stated, the demand for milk being so large, butter-making has been greatly diminished. As a consequence butter has been imported from Ontario, and is retailing for 30c. per lb. (dairy). J. M.

Antigonish Co., N. S.

**The P. E. Island Black Fox Boom.**

Another season with its strenuous toil is over, crops are all garnered in, and the last of the stock is housed for the winter. The farmer now has comparative leisure to enjoy the fruits of his labor. This is a good time to review the past season with a sharp eye to see where we have succeeded and where we have failed in the different lines of our agricultural effort. Not all of the varied branches of our system of mixed farming have succeeded up to our expectations. Now is the time to take a backward glance, noting our failures and successes, and lay our plans for the future, with an eye to improved methods and more intelligent effort all along the line for another season. If we can thus discover what particular line in crop-growing and stock husbandry has given us the best returns for our labor, we will have taken a long step forward in our agricultural education, and be in a position to work to future advantage and profit. Though as farmers we have great opportunity to study our calling, through excellent agricultural literature, issued by agricultural institutions and the agricultural press, still if we are observant farmers, a great deal of education that profits us most comes from our own failures and successes.

Though a favorable season is our biggest asset in getting a good return from the land, still the skilful farmer can do a very considerable to overcome adverse conditions, in any season. Notwithstanding the somewhat peculiar growing season of 1912, with its overabundance of moisture and low temperature, our farmers have had a good return for their labor. Following, as we do, a system of mixed husbandry, we are always pretty sure of fair returns. In some sections, there was loss from hailstorms, and the exceedingly wet season for the hay and grain harvest detracted somewhat from the value of these crops. Still there is plenty for man and beast, and the farmer enters the winter season satisfied with the provision for the present and hopeful for the future. Prices are greatly in his favor, and there is a brisk demand for all produce. During the closing days of October, and the first week in November, we have been favored with ideal weather for gathering the root crops, and finishing up the fall plowing. Returns from dairying will be the best yet. Cheese-factory patrons are looking for over a dollar per hundred for milk, and patrons' accounts are larger than usual. Cheese has averaged higher in price than ever before. Butter-factories are paying record prices. The best farmers here get almost all their revenue from sales of stock, and returns from butter- and cheese factories, and eggs and poultry. This leaves the farmer every succeeding year with increased capital, from added fertility in his soil.

Our new industry, "fox farming," has eclipsed all other efforts during the last year. Breeding foxes here have been more than doubled in price within the year. Some of the best pairs have been sold recently for as much as \$16,000. A conservative estimate places the increase in value of our stock of black foxes during the year at \$2,800,000. This big sum is the result of the enormous increase in the price of breeding foxes and also the natural increase for the year. Still the boom goes on. The biggest financial transaction that ever took place here was consummated a short time ago, when the oldest fox ranch was sold to a syndicate for the enormous sum of \$600,000. The tendency of the business now is towards large stock companies, and it will be well for would-be investors to beware, as the promoters of these big concerns will likely have a lot of water to sell to the unwary with the stock they are offering. Still the boom keeps up, and is likely to for some time yet, as the demand is broadening every day for breeding stock. It is claimed that Prince Edward Island has a monopoly of the fox business by having about 75 per cent. of all the black foxes in the world that are in captivity.

Many fox men here have become rich in a few years, and these great successes have given this little island the biggest advertisement it ever had. A buyer from Russia was here recently offering big monies for some of our select breeding foxes. Though this is a little different from ordinary stock husbandry, still it is production from the soil, and it is up to Prince Edward Islanders to breed what brings most money for their expenditure of skill and labor. There is still room for all our other industries.

W. S.

**South Kent Notes.**

November is here with rain following a rainy October, September, August and July. It has been the worst fall for getting work done in a dozen years. On low land corn is yet to be cut, (Nov. 11th) so wet it cannot be cut with a machine, it will have to stand till it freezes up. Potatoes are rotting badly. Looks like dear seed again next spring. Beans are an uneven crop, some which were harvested without rain picking 1 lb. and 2 lbs., those which got rained on picking 5 to 15 lbs. Two pound pickers are the standard, and there is 5 cents a lb. dock on all over that. They are worth \$2.40 a bushel. At present a few of our public-spirited citizens have started a Publicity Association to be known as the Blenheim and District Publicity Association. Anyone on payment of one dollar may become a member. We hope to see this Association spread out and take up other things in the future, as good roads transportation, and larger and better markets for our produce. There is no question but we can grow the stuff, what we need most of all is a better system of putting it on the market; a more uniform product and a more steady supply. This Association can help a great deal along these lines. It is the intention to issue a pamphlet in the near future describing this part of Kent and its products in detail. There is also some talk of a winter show to be held at Chatham. Why not? The corn show is held at Windsor this year, and this leaves an opening for something to be done along this line this year.

Kent Co., Ont.

A. L. JAMES.

**P. E. I. Crops and Prices.**

According to the Prince Edward Island November circular, harvest was generally completed about October 15th, although a field here and there remained out till November. Oats are turning out much better than were expected. "More than a bushel to the stook" is the general report of correspondents. The quality is excellent. The potato crop is light in Prince County, being about 70 per cent.; in Queen's it is about average, and in King's much above average, being about 150 per cent. The quality also bears a close relation to the quantity, being very superior in King's County. The root crop is much below average, most correspondents reporting from 50 per cent. to 70 per cent. Early seeding proved much better than late. Pastures are still green, and are supplying quite a lot of succulent feed for stock. Farm work is well forward and a lot of produce has been marketed. The following are the market prices for November 11th, 1912:

Oats, per bushel .....	\$ .44
Hay, per ton .....	13.50
Straw, per ton .....	5.00
Eggs, per dozen .....	.30
Butter, per pound .....	.26
Potatoes, per bushel .....	.25
Turnips, per bushel .....	.18
Lambs, per pound .....	.04 1/2
Chickens (undrawn) per pound .....	.15

**Milk Powder for France.**

Dr. Roy, Commissioner General for France, states that the demand for milk powder in France and Belgium, which has been steadily increasing for the past two years, has now reached a stage where Canadian exporters would find a ready market. The varieties of milk powder consumed are classified as: whole milk, half skimmed and skimmed. The duty, according to the Franco-Canadian Convention, is approximately \$3.80 per 50 lbs., providing that the percentage of sugar is less than 40 per cent. If Canadian firms interested would submit quotations, including freight charges, which could be obtained from lines plying between Canada and Havre, the Department would forward them to the Commissioner General for Canada in Paris, who is in communication with importers of this commodity.

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# The Flower, Fruit and Honey Show in Its New Quarters.

A great commercial exhibit was that of fruit at the 1912 Flower, Fruit and Honey Exhibition, held in the Horticultural Building in Exhibition Park, Toronto. The new home of the show is a very good place to stage an exhibit of this kind, but some of the effect of the masses of box-packed apples, and the displays of flowers was lost, by the fact that the building is divided into several wings, not permitting of a general view of the entire exhibit at one time. It was a great horticultural show, the greatest ever opened to the public in Eastern Canada. Apples formed the greater part of the exhibition from a commercial viewpoint, there being considerably over three thousand boxes of choice fruit in competition, besides over sixty barrels and about six hundred plates of five apples each. Pears, grapes, a few peaches, vegetables galore, honey in all its forms, and all the most beautiful of the blossom world were there as well. It was a glorious combination of beauty and utility.

Down the center of the middle wing were arranged the plate exhibits, on either side of which were placed the vegetables. In the center were the two large exhibits of the products of the apiary, one made by the Middlesex County Beekeepers' Association and one by the Ontario Beekeepers' Association. These displays were very creditable.

The barrelled apples were never of so high quality as was the case at this year's show. Color, size, shape, uniformity and pack were remarked by all present. The winning barrel of Spies was composed of better apples than most of those in the plate exhibits. Imagine, if you will, sixty barrels of such ideal apples together.

Box-packed fruit, of course, attracted most attention, and rightly it should, for it formed the bulk of the quality of the fruit exhibit. The packing was better than on any former occasion, but there is still room for improvement, some of the lots being a little slack. Along the sides and ends of the main wing of the building, and up to the center, reaching to the height of many tiers, were stacked the boxes laden with their blushing treasure. Never a spot was there on this fruit. It shows what is possible with good care, even in an unfavorable season, as the present has been.

The counties are gradually pulling out of the county display work and entering the competition. Norfolk County had about one-third the fruit out, but it was all entered in competition.

Northumberland and Durham had about seven hundred boxes all told, and captured first and second on their half-car load (300 boxes) exhibit with an entry of Spies and one of Baldwins. Norfolk got third on a fine class of fruit (Baldwins), not so uniform in pack and a little slack, owing to a shaking in transit. Northumberland and Durham deserve great credit for the quality of their entries. Counties still making a display exhibit were Lambton, with 352 boxes, outlining the county, as last year, with red apples in the center representing land, green apples representing Lake Huron, and wrapped fruit the end boundary of the county. Brant, with eighty boxes of choice fruit and a few barrels; Essex and Huron, with very fine exhibits of about 150 boxes each.

There were, in the open classes, about 250 entries in single-box exhibits, five in the 100-box exhibit, three in the 300-box exhibit, and, as before stated, over 600 plates. Entries were large in all the other classes, and the fruit shown made a new record.

Homestead Orchards, of Oakville, had a fine one-hundred box exhibit, consisting mainly of Golden Russets and Spies.

Power-spraying outfits, apple-sorters, nursery firms and fertilizer companies made suitable exhibits.

The Department of Education had their model of a country school and grounds on exhibition, with Prof. McCready in charge. More interest was manifest in this exhibit than at the Canadian National.

Space does not permit of a full list of awards, but the main winnings are given.

The exhibition should impress upon the people the opportunities of Ontario as a fruit-growing Province. The fruit can be produced with careful cultivation, pruning and spraying. The exhibit shows that better methods of production are being practiced and that better packing is being done, but there is still room for more work in this connection. Education in packing and marketing of fruit is the need of the business today, and by carefully studying the best packs at the show much could be learned, and the packing should improve as a result of the great educational exhibit.

Prize-winners in fruit sections follow:  
Single barrel ready for shipment.—Baldwin: 1, P. Walker, Norfolk; 2, C. McNally, Simcoe; 3, Blayney Bros., Norfolk. Ben Davis: 1, J.

Howe, Norfolk; 2, R. R. Sloan, Porters' Hill; 3, E. F. Augustine, Cairo. Blenheim: 1, S. Waddle, Norfolk. Golden Russett: 1, Fred Doan, Norfolk; 2, C. Deming, Norfolk; 3, Hastings Co-operative Assn. Greening (R. I.): 1, P. Walker, Norfolk; 2, Arkona F. G. A.; 3, W. H. Bunting, St. Catharines. King: 1, J. Howe; 2, John Winter, Norfolk; 3, M. Crawford. Spy: 1, P. Walker; 2, C. McNally; 3, A. Pow, Norfolk. Stark: 1, W. D. Dyer; 2, G. H.

H. Bunting, King; 1, John Winter; 2, J. Howe; 3, J. W. Clark, Cainsville. McIntosh: 1, C. Woolley, Norfolk County; 2, H. Youmans, Norfolk County. Ontario: 1, John Watson, Ontario County; 2, W. H. Westney; 3, M. G. Burner, Olinda. Ribston: 1, Fred Doan; 2, W. L. Hamilton, Collingwood; 3, A. Pow. Spy: 1, P. Walker; 2, Northumberland & Durham A. G. A.; 3, W. H. Bunting. Tolman: 1, W. Prior, Norfolk County; 2, Arkona F. G. A.; 3, G. S.



Flowers, Fruit, and Vegetables.

The plate fruit exhibit, some of the "mums," and part of the vegetables, at the Flower, Fruit, and Honey Show, Toronto, Ont.

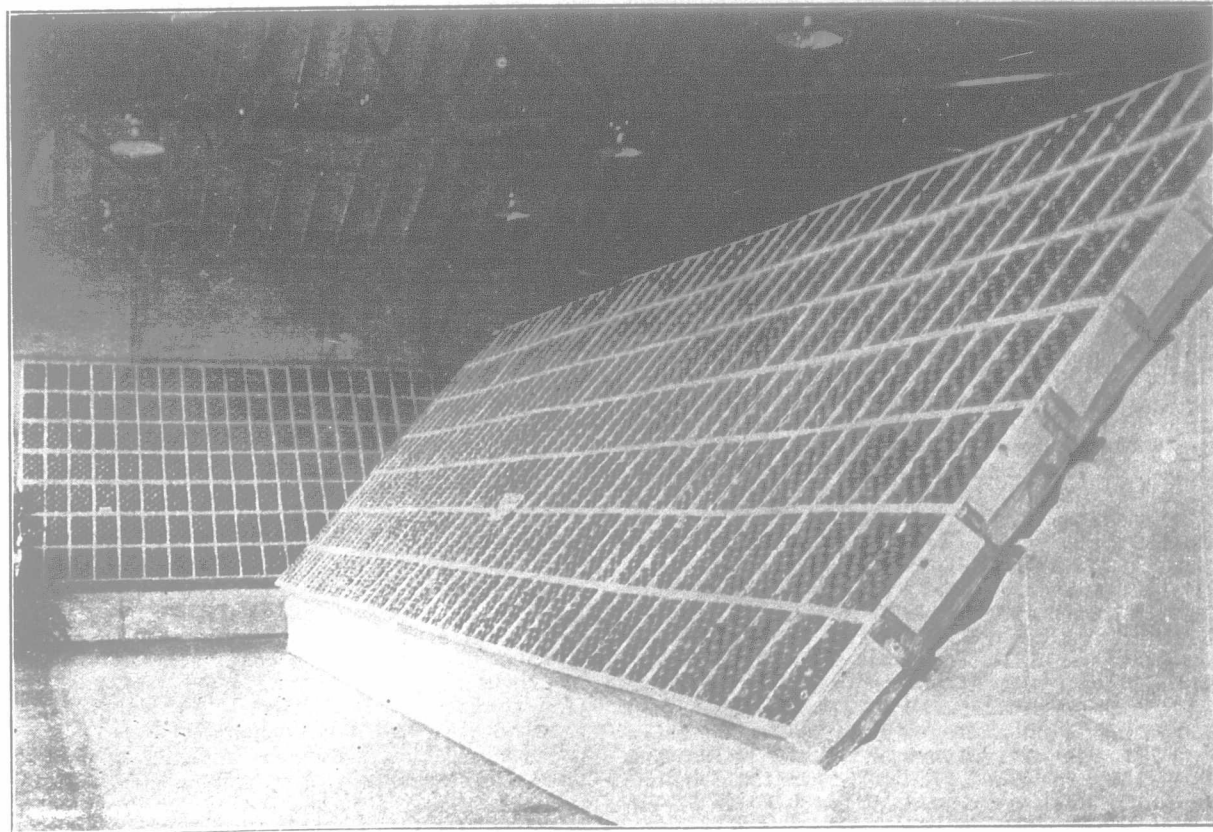
Martyn & Son, Port Hope. A. O. V.: 1, J. Howe; 2, C. Deming; 3, Elmer Lick, Oshawa, and Hastings Co-operative Assn. equal.

Single box ready for shipment (fruit unwrapped).—Alexander: 1, R. B. Scripture, Brighton; 2, J. B. Guttrey, Dixie; 3, Geo. Duncan, Norfolk County. Baldwin: 1, Northumberland & Durham Apple Growers' Assn.; 2, T. Cunningham, Norfolk County; 3, P. Walker, Norfolk County. Blenheim: 1, T. Cunningham; 2, W. C. Bunker, Ontario County; 3, W. H. Westney, Ontario County. Cranberry: 1, G. H. Martyn & Son; 2, Jos. Gilbertson, Norfolk County; 3, Pennington Bros., Norfolk County. Fameuse: 1, John King, Norfolk County; 2, S. Preston, Clarkson; 3, G. Goring, St. Catharines. Golden Russett: 1, Fred Doan; 2, H. Beckett & Sons, Hamilton; 3, Arkona F. G. A. Greening (R. I.): 1, Arkona F. G. A.; 2, G. Goring; 3, W.

Peart, Freeman. A. O. V.: 1, F. G. Stewart, Homer; 2, Frank Shearer, Norfolk County; 3, W. L. Hamilton.

Single box ready for shipment (fruit wrapped).—Fameuse: 1, John King, Norfolk County; 2, G. Goring; 3, S. Preston. Gravenstein: 1, St. Catharines Cold Storage Co.; 2, F. G. Stewart; 3, E. Lick. King: 1, John Winter; 2, C. Deming; 3, W. H. Bunting. McIntosh: 1, H. Youmans; 2, R. Hill, Norfolk County; 3, L. A. Parisien, Summerstown. Spy: 1, R. H. Johnson, Norfolk County; 2, A. Pow; 3, Northumberland & Durham A. G. A. Wealthy: 1, E. F. Augustine; 2, Geo. Bannister, Collingwood; 3, W. L. Hamilton.

Standard Winter Varieties—5 boxes of each (fruit unwrapped).—Baldwin: 1, P. Walker; 2, J. Howe. Greening: 1, H. Beckett & Sons; 2, W.



Commercial Pack.

Showing three hundred boxes of choice Baldwins and part of another three-hundred-box exhibit at the end.

H. Bunting. Spy: 1, A. Pow; 2, Northumberland & Durham A. G. A.

Standard Winter Varieties—10 boxes each (wrapped).—Fameuse: 1, John King; 2, W. H. Bunting. King: 1, J. Howe; 2, C. Deming. McIntosh: 1, C. Woolley; 2, L. A. Parisien. Spy: 1, R. H. Johnson; 2, Bathenbrick Orchards Ltd., Hamilton.

Standard Winter Varieties—20 boxes each (unwrapped).—Baldwin: 1, Wm Burt, Norfolk County; 2, W. H. Bunting. Greening: 1, J. Howe; 2, P. Walker. Spy: 1, Northumberland & Durham A. G. A.; 2, A. Pow.

Cooking Varieties—plates of 5.—Alexander: 1, Geo. Duncan, Norfolk County; 2, J. B. Gutthrey; 3, C. H. Wills. Baldwin: 1, J. Howe; 2, W. H. Bunting; 3, H. Beckett & Sons, Blenheim: 1, S. E. Wallace, Norfolk County; 2, G. S. Peart; 3, T. Cunningham. Cayuga: 1, Geo. Boughner; 2, Harvey Johnson, Norfolk County; 3, G. Goring. Greening: 1, H. Beckett & Sons; 2, G. Goring; 3, John Burdy, Port Dalhousie. King: 1, A. T. Stewart, Norfolk; 2, John Winter; 3, R. R. Sloan. Ribston: 1, G. S. Peart; 2, Fred Doan; 3, Geo. Bannister. Spy: 1, A. Pow; 2, T. Cunningham; 3, H. Beckett & Sons. A. O. V.: 1, John Winter; 2, R. Winter; 3, Frank Shearer. Plate of 5 largest apples: 1, Jas. Schuyler; 2, C. Woolley; 3, M. G. Brumer.

Standard Winter Varieties—10 plates of 5.—Ben Davis: 1, R. Stork, Ontario County; 2, Hastings Co-operative Assn.; 3, Edwin Peart, Nelson. Baldwin: 1, Blaney; 2, W. H. Bunting; 3, C. H. Wills. Blenheim: 1, T. Cunningham; 2, Brown Bros., Humber Bay. Fallawater: 1, G. S. Peart; 2, E. F. Augustine; 3, J. B. Gutthrey. Fameuse: 1, W. H. Bunting; 2, J. B. Gutthrey; 3, Hastings Co-operative Assn. Greening: 1, G. Goring; 2, F. G. Stewart; 3, Arkona F. G. A. King: 1, A. T. Stewart, Cainsville; 2, W. H. Bunting; 3, G. Goring. McIntosh: 1, J. B. Gutthrey; 2, P. A. Parisien. Ontario: 1, Arkona F. G. A.; 2, W. D. Dyer; 3, Edwin Peart. Spy: 1, A. Pow; 2, W. H. Bunting; 3, Hastings Co-operative Assn.

Standard Winter Varieties—50 boxes each (unwrapped).—Spy: 1, Norfolk F. G. A.; 2, Bathenbrick Orchards Ltd.

100 boxes, not more than 2 varieties (unwrapped).—1, A. Pow; 2, Norfolk F. G. A.

Half car load—300 boxes, not more than 3 varieties (unwrapped).—1, Northumberland & Durham Apple Growers' Assn.; 2, Northumberland & Durham Co-operative Assn.; 3, Norfolk F. G. A.

Best box of any variety on exhibit in any section.—1, R. H. Johnson.

Desert Varieties—plates of 5.—Fameuse: 1, W. H. Bunting; 2, Hastings Co-operative Assn.; 3, G. Goring. Golden Russett: 1, H. Beckett & Sons; 2, C. Deming; 3, H. H. Brown, Beamsville. Gravenstein: 1, Wilber Kniffen, Norfolk County; 2, Chas. Trinder, Norfolk County; 3, W. Lick. King: 1, G. Goring; 2, The Biggs Fruit & Produce Co., Burlington; 3, W. H. Bunting. McIntosh: 1, C. Woolley; 2, Wm. Eager, Morrisburg; 3, H. Youmans. Wealthy: 1, E. F. Augustine; 2, Geo. Boughner, Norfolk County; 3, H. Beckett & Sons. Spy: 1, A. Pow; 2, W. H. Bunting; 3, The Biggs Fruit & Produce Co. Spitzenburg: 1, R. Thompson, St. Catharines; 2, F. G. Stewart; 3, G. Goring.

Plates of 5.—Anjou: 1, R. Thompson; 2, F. G. Stewart; 3, J. B. Gutthrey. Bosc: 1, G. S. Peart; 2, L. Haynes; 3, R. Thompson. Clairgeau: 1, J. R. Gutthrey; 2, R. Thompson; 3, St. Catharines Cold Storage Co. Keiffer: 1, G. Goring; 2, St. Catharines Cold Storage Co.; 3, W. H. Bunting. Duchess: 1, St. Catharines Cold Storage Co.; 2, R. Thompson; 3, F. G. Stewart. Lawrence: 1, Lewis Haynes; 2, G. S. Peart; 3, R. Thompson. Winter Nellis: 1, G. S. Peart; 2, St. Catharines Cold Storage Co.; 3, R. Thompson. A. O. V.: 1, R. Thompson; 2, St. Catharines Cold Storage Co.; 3, F. G. Stewart.

Ten plates of 5 each.—Anjou: 1, F. G. Stewart; 2, J. B. Gutthrey; 3, R. Thompson. Clairgeau: 1, J. B. Gutthrey; 2, R. Thompson; 3, F. G. Stewart. Duchess: 1, R. Thompson; 2, F. G. Stewart.

Export Varieties—boxes ready for shipment.—Anjou: 1, F. G. Stewart; 2, W. H. Bunting; 3, R. Thompson. Bosc: (no entries). Clairgeau: 1, R. Thompson; 2, St. Catharines Cold Storage Co.; 3, F. G. Stewart. Duchess: 1, F. G. Stewart; 2, R. Thompson; 3, St. Catharines Cold Storage Co. Keiffer: R. Thompson; 2, F. G. Stewart; 3, G. Goring. Lawrence: 1, R. Thompson; 2, F. G. Stewart. Winter Nellis: 1, St. Catharines Cold Storage Co.; 2, R. Thompson; 3, F. G. Stewart. A. O. V.: 1, F. G. Stewart; 2, R. Thompson; 3, St. Catharines Cold Storage Co.

Grapes.—Agawam, three bunches: 1, St. Catharines Cold Storage Co.; 2, R. Thompson; 3, F. G. Stewart. Concord: 1, W. H. Bunting; 2, R. Thompson; 3, F. G. Stewart. Lindley: 1, W. H. Bunting; 2, G. Goring; 3, R. Thompson. Niagara: 1, W. H. Bunting; 2, G. Goring; 3, F. G. Stewart. Vergennes: 1, R. Thompson; 2, G. Goring; 3, F. G. Stewart. Wilder: 1, St. Catharines Cold Storage Co.; 2, F. G. Stewart;

3, R. Thompson. A. O. V.: 1, W. H. Bunting; 2, F. G. Stewart; 3, G. Goring. Black grapes, 9 lb. basket: 1, G. Goring; 2, W. H. Bunting; 3, F. G. Stewart. Red grapes, 9 lb. basket: 1, G. Goring; 2, F. G. Stewart; 3, W. Bunting. White grapes, 9 lb. basket: 1, G. Goring; 2, W. H. Bunting; 3, St. Catharines Cold Storage Co. Black grapes, fancy package: 1, F. G. Stewart; 2, R. Thompson. Red grapes, fancy package: 1, St. Catharines Cold Storage Co.; 2, F. G. Stewart. White grapes, fancy package: 1, R. Thompson; 2, F. G. Stewart; 3, St. Catharines Cold Storage Co. Display of grapes in fancy packages: 1, R. Thompson; 2, F. G. Stewart.

Collections.—Display of fruits other than apples: 1, R. Thompson; 2, F. G. Stewart.

Packing.—Commercial packages, unwrapped apples: 1, R. Thompson; 2, G. Goring.

Commercial package, wrapped apples: 1, Northumberland & Durham Co-operative Assn.; 2, Homestead Orchards, Oakville.

The show of vegetables was the best seen at the autumn exhibition. Among the largest prize winners were Chas. Plunkett, Woodbridge; W. Harris Jr., Humber Bay; J. B. Gutthrey, Dixie; Brown Bros., Humber Bay; J. J. Davis, Byron; J. Creighton, Weston; J. Dandridge, Humber Bay; H. Hachborn, Brantford; F. F. Reeves, Humber Bay, and J. R. Helliwell, Humber Bay.

### Farmers' Institutes and Farmers' Clubs.

Every meeting of the Convention of the Farmers' Institutes and Farmers' Clubs, held in St. George's Hall, Toronto, November 12th and 13th, was well attended, and these two organizations are very live factors in agricultural progress at the present time. Institute work has been said to be on the wane, but judging from the large audiences present throughout the convention it is being revived as never before, and the Farmers' Club, working in conjunction with it, is making for the good of both, and the uplift of the agricultural calling.

The primary objects of Farmers' Institutes, said Geo. A. Putnam, the superintendent, in his review of the work, are the dissemination of agricultural knowledge and the development of local talent. That progress had been made no one could deny. Dairy herds are being carefully weeded out, special crops to lessen the cost of milk production are now grown, more up-to-date stables are being built, a higher class of horses, cattle and other stock has resulted from the work, scientific methods are being followed, and the Institute has had a great influence in bringing about all this.

Mr. Putnam pointed out that agriculture is not yet in a very high state, and that Institute meetings should be made a more prominent factor. There is still much to be done in the educating of fruit-growers in the packing of fruit. Fertilizers are only in the experimental stage, and the bulk of the land is not being farmed on intensive lines. There is still plenty of work for the Institute and the Club.

There has been a slight falling off in the attendance at some of the local Institute meetings, owing to lack of farm help and the migration of the young to the cities and to the West. The meetings are not novelties. The people attend to learn something. It is difficult to obtain membership, owing to the improvement of the agricultural press and the wide circulation of farm journals, so that farmers do not feel so great a need of Institutes, but no farmer, said the speaker, can afford, for the sum of \$1.00 per year, to be without the yearly Departmental reports. He pointed out that it was very hard to interest the indifferent farmer, and also to induce local men to speak, through lack of training.

The superintendent urged that a keener interest be taken by all officers, directors and members, that there be a hearty co-operation of all connected with the Clubs and Institutes, and between the two organizations that new blood be introduced from time to time, that officers be changed frequently, and that short-course work be increased.

Mr. Putnam realized the difficulty of changing the system, but urged that great interest be taken in the local Club, as in Waterloo County, where the local Club is the basis of all district organization.

With an effective central management and active permanent co-operating local associations, there is needed only the connecting link, a capable corps of field workers, to make the organization complete and effective. The need of workers who have had a large amount of practical experience on the farm was emphasized, and the agricultural college graduate, with a large amount of the practical knowledge at his back, is considered a valuable man as an Institute worker.

C. F. Bailey, Assistant Deputy Minister of Agriculture, outlined the work of the district re-

presentatives, of which Ontario has upwards of thirty at the present time. He pointed out that it was necessary for these men to have some organization at their backs in order to have something to work in and through to reach the farming community. The Farmers' Institute, as at present organized, does not lend itself to the work. He urged that local Institutes make more use of their district representative, in getting his assistance in the selection of officers, speakers and places of meeting. The representative should attend all Institute meetings, and he believed that, as the Farmers' Club is an excellent medium through which to work, the Institutes should encourage these Clubs. The representatives should attend all the organization meetings of Clubs and new Institutes, but these organizations should not be "spoon fed" by them. All responsibility should rest with the members of the association. The young mind should be trained, and to do this school fairs and short courses were highly recommended.

At the evening meeting, W. B. Roadhouse, Deputy Minister of Agriculture, presided, and in his opening remarks said that there were at the present time two hundred Farmers' Clubs in Ontario, all an offshoot of the Farmers' Institutes.

F. C. Hart, District Representative in Waterloo County, the county where much Club work has been accomplished, said that Clubs are popular because they are strictly a local organization, depending entirely upon local talent. He believed that too many of our farm organizations depend too much upon Government aid. Farmers are quite capable of doing for themselves. Educational work in the past has been intended to show the people how to produce more, but the need now is to solve the marketing problems, which the Clubs are accomplishing. Clubs are keeping the boys and girls on the farm.

Hugh Duff, Representative in Grey County, where eleven Clubs are running at present, with 500 members, outlined the method they adopted in his county of solving the labor problem by the members of Clubs co-operating and finding out how many men were needed and applying to the immigration officials and getting the men brought directly from the Old Land.

J. H. Hare, Representative in Ontario County, gave the convention an idea of the value of egg circles. In Ontario County there are seven circles at present with from 30 to 135 members each. The output the past year of these circles was \$20,608, the product being sold at an advance of from one to three cents per dozen in summer, and four to fifteen cents in fall and winter over the price paid by local egg dealers. The members realize that they should keep a better strain of poultry, and on this basis orders for sixty bred-to-lay cockerels have been placed.

Prof. R. W. Graham, of the O. A. C., impressed upon the meeting the necessity of putting out a uniform product (eggs or poultry) as it was essential in marketing co-operatively. We must have a uniform package in unlimited quantity, and this is impossible through individual effort. We must learn to grade our eggs. He believed that the establishing of breeding stations, as is done in Great Britain, would be a great thing, and he also favored selling eggs by weight, as is done in Ireland. "It costs farmers of Ontario \$50,000 every year to listen to roosters crow during June, July and August," was the graphic way in which he described the folly of keeping male birds with the flocks during this season. Better feeding is also necessary, as good eggs cannot be produced from grasshoppers, grass, and water.

Institute Finances, Excursions and Local Assistance formed the basis of most of the discussions which took place. Some favored keeping money in the treasury, and others believed it should be spent. In connection with the matter of excursions, it was pointed out that owing to the Railways raising the guarantee to a prohibitive amount, in many cases it was necessary for the Institutes to abandon their trip to the Agricultural College. A committee is to be appointed by the Superintendent to confer with the Railway Association with a view to obtaining a lower guarantee.

It was brought up in discussion that the man in demand for meetings is the successful, practical farmer with a scientific training, if possible the local man preferred, but he should be taken from township to township in his own county, and not speak in his own neighborhood. Practical demonstration by short courses was looked upon as the most important feature of the work now. There is more value in showing the people "what" and "why," than in telling them. Better advertising of meetings is needed, and in this a lesson might be taken from the Women's Institutes.

Several Institute workers including Dr. H. G. Reed, Georgetown; F. H. Silcox, Iona, and Anson Groh, Preston, addressed the meeting as did also Hon. J. S. Duff, Minister of Agriculture.

At the evening meeting on the second day

Anson Groh, Farmers' Putnam, and fob efforts in of Ontario chosen re

The Ju at Guelph classes up as follows

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Anson Groh and Henry Grose, on behalf of the Farmers' Institutes of Ontario presented G. A. Putnam, the Superintendent, with a gold watch and fob as a token of their appreciation of his efforts in promoting the work of the Institutes of Ontario. Mr. Putnam replied in a few well chosen remarks.

**Winter Fair Judges.**

The Judges for the Winter Fair, which opens at Guelph on Monday, December 9th, and the classes upon which they will place the awards are as follows:

- Clydesdales and Shires.—George Charlton, Duncraig; Wm. McKirdy, Napinka, Man.; A. G. Gormley, Unionville. (To be balloted for).
- Percherons.—Robert Graham, Bedford Park.
- Hackneys, Thoroughbreds, Standard-breds and Ponies.—Dr. F. C. Grenside, Guelph; Dr. G. A. Routledge, Lambeth.

- Beef Cattle.—Robert Miller, Stouffville; James Smith, Rockland; R. J. Mackie, Oshawa.
- Cotswolds.—John Rawlings, Forest; (Reserve) J. V. Snell, Snelgrove.
- Leicesters.—James Douglas, Caledonia.
- Lincolns.—John Rawlings, Forest.
- Oxfords.—J. E. Cousins, Harriston; (Reserve) Prof. G. E. Day, Guelph.
- Shropshires.—H. N. Gibson, Delaware; (Reserve) W. H. Beattie, Wilton Grove.
- Long-wool Grades.—John Rawlings, Forest; James Douglas, Caledonia.
- Southdowns, Dorsets, Hampshires and Suffolk.—W. H. Beattie, Wilton Grove.
- Berkshires.—S. Dolson, Norval Station; (Reserve) T. A. Cox, Brantford.
- Yorkshires and Tamworths.—D. C. Flatt, Millgrove.
- Bacon Hogs.—Prof. G. E. Day, Guelph.
- Chester Whites, Any Other Breed, Grade or Cross.—G. B. Hood, Guelph.
- Dressed Carcasses.—Wm. Jones, Zenda.

- Dairy Test.—Prof. H. H. Dean, Guelph.
- Seeds.—Prof. C. A. Zavitz, Guelph.
- Plymouth Rocks.—H. P. Schwab, Irondequoit, N. Y.
- Leghorns.—Geo. H. Burgott, Lawton, N. Y.
- Wyandottes and Rhode Island Reds.—J. H. Dervenstedt, Buffalo, N. Y.
- Hamburgs and Clean-Legged Varieties of Bantams.—Wm. McNeil, London.
- Minorcas, Andalusians, Spanish, Anconas.—J. H. Minshall, Brantford.
- Asiatics, Orpingtons, Feather-Legged Varieties of Bantams.—R. Oke, London.
- Javas, Dorkings, Red Caps, Dominiques, French Varieties excepting Houdans, Sale Class.—George Robertson, Ottawa.
- Games and Game Bantams.—James G. Glasgow, Mahwah, N. J.
- Polands, Houdans, Turkeys, Water Fowl, A. O. V. Fowl.—L. G. Jarvis, Grimsby.
- Dressed Poultry and Utility Pen.—A. W. Tyson, Guelph; Wm. Barber, Toronto.

**Transportation, Markets, Etc., Discussed at Fruit Growers' Meetings.**

Successful fruit growers are keen business men, and the annual meeting of the Ontario Fruit Growers' Association held last week in Toronto clearly demonstrated this point. Scarcely a speaker in the hall held a more enthusiastic audience than that which was present at each meeting of the convention, and never were the problems confronting the growers "threshed out" more satisfactorily. President Donald Johnson, of Forest, in a short paper reviewed the work of the fruit growing industry during the year which is now closing. He pointed out that the area of the plantings had increased this year, and that to avoid over-production we must grow the varieties which the consumers want, viz., such varieties as Snow, Spy, McIntosh Red and King. In a year like this such varieties as Ben Davis and Greening are more or less a drug on the market.

There is also a great need of better work in connection with the packing of the fruit, and Ontario apples have been to a large extent driven off the Western market by the superior packing of the fruit from British Columbia and Western fruit growing districts.

The greatest need of the industry at the present time is a better knowledge of marketing. Losses are great from this cause each year, and have been very marked in 1912. More co-operation is needed.

**DISEASES AND PESTS**

Our most troublesome orchard insects and diseases was the subject of a very valuable address by L. Caesar, Provincial Entomologist. Among the chief insects of the orchard Mr. Caesar mentioned oyster-shell scale, San Jose scale, blister mite, aphids, bud moth, codling moth and plum curculio, and of diseases black rot canker, apple scab and pear blight were considered. A fuller account of this paper will be published later, but it might be well to state here that to control oyster-shell scale ordinary good spraying is effective, and for San Jose scrape off the old rough bark, prune carefully, and spray well with lime sulphur one to seven on dormant wood. For blister mite give the ordinary spring spraying of lime sulphur before the buds burst. Apple aphids are very difficult to keep in check. Nature must be depended on to a great extent. For bud moth add three pounds of arsenate of lead to 40 gallons of diluted lime-sulphur or Bordeaux mixture and spray just before blossoms burst. For codling moth a single thorough spraying with two pounds of arsenate of lead added to commercial lime-sulphur, 1 to 40 will if properly applied control the insect. Remove all rubbish and spray with poisoned Bordeaux or lime sulphur for plum curculio. Thorough spraying will control apple scab. Cut out and burn pear blighted areas, and for black rot canker careful spraying was recommended to keep the trees in a healthy condition, and all affected areas should be cut out with a draw-knife or thoroughly scraped out, and the parts washed with spring strength of lime-sulphur or with a solution of one pound of bluestone dissolved in 16 gallons of water.

**LAYING OUT AND PLANTING.**

One of the main points in connection with orchard work is the laying out and planting of the land. P. E. Angle, B. S. A., of Simcoe, Ontario, outlined the method followed by him in the planting of some 30,000 trees the past season. It is necessary to have the trees in an absolutely straight line, diagonally in all directions. His method is the use of a long wire stretched across the field, and having a drop of solder attached to it where every tree is to go at regular spaces, the distance apart it is wished to plant the trees. The solder is most suitable because it can be easily put on and melted off if the wire is found at any time to have stretched. This is a far quicker method than either the stake or

the planting board methods. In laying out the field it is necessary to have a base line, and Mr. Angle suggested that the road fence or line fence be taken as this rather than an inside field fence. If the trees are planted according to these permanent fences, further plantings may be made at any time without the inconvenience of gores. He recommended that outside rows be placed 30 feet from the fence. Stretch an ordinary black wire along this base line, and place a permanent stake where each row is to come. Use a straight-edge in measuring. Have a short hinged section on each end of the straight-edge so that it may be carried without having to stoop to pick it up at each juncture. Run another line parallel to the base at some distance from it, and at the opposite end of the field and stretch the wire at right angles to the rows of stakes. Stretch the wire taut but not too taut, and measure it and put on the solder. It is ready for operation. As soon as a row is planted move the wire and stretch so that a knot of the solder comes opposite a permanent stake, and all trees planted by lumps of solder must be in their right place. Fifteen men will by this method plant 50 trees in 15 minutes, or 1,800 to 2,000 a day. The wire used is composed of six strands wound around a straight seventh strand. It is pliable, about the size of ordinary clothes-line wire and stretches very little, one wire being satisfactory for planting 100 acres. One thousand feet is about the limit of the length of wire to use. When the wire becomes stretched melt off the solder and put on fresh.

**CARE AND SELECTION OF NURSERY STOCK.**

Prof. J. W. Crow, of the O. A. C., led a very lively discussion upon nursery stock. He is in favor of low-headed trees, about one foot of trunk in place of the two or two and one-half foot trunk of the average nursery tree. To get low-headed trees under existing conditions it is necessary to buy one-year-old trees, and the nurserymen do not care to dig these. He believed that nurserymen should head their trees lower. Some nurserymen present pointed out that nine-tenths of the people demand high-headed trees, and buy according to size. Prof. Crow suggested that all co-operate to educate the public to the planting of low-headed trees.

**NURSERY LEGISLATION.**

Dr. Gordon Hewitt, Dominion Entomologist, outlined the recent outbreak of San Jose scale in Nova Scotia. On 1910 stock 3 properties were found affected, on 1911 stock 71 properties, and on 1912 stock 711 properties, and all the infected trees came from Ontario nurseries. Nova Scotia growers asked their Provincial Government to prohibit the importation of Ontario trees or those from any infected Province. The Dominion Government has, however, succeeded in preventing the embargo on Ontario stock, and the outbreak has caused the appointment of Provincial entomologists in Nova Scotia and Ontario. The United States regulations require that before stock may be imported into that country the nursery from which it comes must be inspected and a certificate sent to the Department. The Dominion regulations require that the buyer must send a detailed account of the shipment to the Department five days previous to the entry of the plants. He urged better fumigation and the greatest care.

**A NO. 1 APPLE AND BOX-PACKING.**

P. J. Carey, Dominion Fruit Inspector, speaking on the No. 1 apple, said that he was not in favor of defining a minimum size. Color and quality were a big factor. He said: "You cannot get a No. 1 apple in a No. 2 orchard." A slightly hail-pecked apple should pass as a No. 2 if it has no material waste, but is never a No. 1. We must have more No. 1 apples, and for a Spy he considered 2 1/4 in. to 3 1/4 in. none too large.

Prof. Crow pointed out that nothing but a No. 1 apple should go into boxes, and that the box is the package for the high-class trade in such varieties as Snow, McIntosh and Spy. The box will be used more largely in future than ever before for our Northwest trade, but the barrel package will continue to hold the European trade.

**VARIETIES TO PLANT.**

J. R. Anderson, of Lucknow, recommended the following six varieties in order of maturity—Wealthy, Snow or McIntosh, King, Golden Russet, Baldwin and Spy. The latter he considered our best and our worst apple, as a good Spy is ahead of all, while a poor one was worthless. Several other varieties were suggested by those present as Rhode Island Greening, Ribston Pippin, Stark, Blenheim and Duchess.

Speaking of peaches, Wm. Armstrong, of Queenston, recommended as commercial varieties—Yellow St. John (handsome, large, early and a good bearer), New Prolific Elberta.

Of pears, M. C. Smith picked Bartlett, Keiffer, Duchess, Anjou, Bosc and Clapp's Favorite.

Six varieties of plums were named by W. Dewar, of Fruitland, in the following order—Burbank, Bradshaw, Reine Claude, Lombard, Monarch and Shropshire Damson.

F. G. Stewart, would select the following six grapes—Concord, Warden, Niagara, Moore's Early, Vergennes and Agawam.

Much interest was taken in the naming of varieties, and for commercial plantations they are undoubtedly among the very best.

W. T. Macoun, Dominion Horticulturist, did not attempt to cover the small fruits, placing his report on the table. He said that during the past 25 years 600 named varieties of strawberries had been tested, but the past ten years none of the new ones had been found to excel the older kinds. He recommended Bederwood, Splendid, Warfield, Senator Dunlap, Sample, Buster and Parson's Beauty.

**TRANSPORTATION PROBLEMS.**

The great question of transportation was discussed by G. E. McIntosh, transport agent of the Association, Forest, Ont. Steamboats and Railroads he pointed out could make or break the fruit industry, and the matter of transportation was a life study. The rate at which fruit cars travelled to their destination is very slow indeed, far less than ten miles an hour. Mr. McIntosh cited the case of a shipment from Ontario to Moosejaw, 1,630 miles which made less than 3 miles an hour; one to Calgary, 2,071 miles, a little over 4 miles an hour; one to Saskatoon, 1,714 miles, 3 1/2 miles an hour; one to Regina, 1,591 miles, 6 miles an hour; one to Winnipeg, 1,234 miles, 8 and one-third miles per hour; an average for 14 carloads of less than 7 miles per hour. One shipper sent eleven cars to Winnipeg, and one car took seven days; two, eight days; one, nine days; one, ten days; one, thirteen days; one, fourteen days; one, fifteen days, and one sixteen days, and the losses averaged from \$125 to \$330 per car owing to delays. The only remedy suggested was acting co-operatively. There is not likely to be much improvement until fruit growers and shippers can prove to the Railway Board the necessity of an investigation. If the Railroads fail to furnish properly equipped refrigerator cars within three days after ordered Mr. McIntosh suggested that they should bear the loss, if any resulting. The greatest trouble is found in getting service at non-competitive points.

Mr. McIntosh believed that fruit shippers should be allowed to complete carloads in transit. At the present time for the sum of \$3.00 cars partially laden with poultry, grain, canned goods, lumber and poles, horses, cattle, hogs or sheep, may be stopped, and the cars filled to their capacity. The law says, "no company shall make

or give any undue or unreasonable preference, or advantage to or in favor of any particular person or company, or any particular description of traffic in any respect whatever." In view of these facts the speaker thought fruit shippers should get the privilege.

The number of properly equipped refrigerator cars has not increased nearly so fast as the amount of fruit to be carried during the past few years. The number of refrigerator cars in 1908 on the C. N. R., C. P. R., and G. T. R. was 2,040, and in 1911 only 2,409, while the number of tons of fruit and vegetables in 1908 was 429,930, while in 1911 it had reached 607,478 tons. There is no comparison in the increases, and more cars are urgently needed.

Claims settlements are not made promptly, and in many cases the shipper must, to place the car ready for the trip, make extensive repairs at his own expense. Mr. McIntosh believed that the Board of Railway Commissioners should have their powers extended by legislation.

Excessive freight and express charges are a factor which works against satisfactory marketing. The speaker pointed out that during the past summer apples from Lyons, N. Y., were placed on the Sault Ste. Marie market for 42 cents per bbl., while Ontario apples were shipped to the same market at 60 cents per barrel. From Minnesota to the American Soo, 494 miles, the rate per 100 lbs. was 30 cents, while from Forest, Ont., to the Canadian Soo, 325 miles, 169 miles less, 54 cents. From Chicago to the American Soo, 673 miles, onions went at 22 cents per cwt., while from Forest, 348 miles shorter distance, the charge was 26 cents. From Grand Rapids to the Soo, 415 miles, vegetables were carried at 25 cents per cwt.; while from Forest to the Soo, 90 miles shorter distance, the rate was 26 cents. American rates are, as is readily seen, much lower than ours.

A carload of apples can be shipped from St. Catharines, Ont., to Winnipeg, 1,234 miles, for \$127.20, but to carry it 480 miles further to Saskatoon the additional charge is \$91.20.

A carload of fresh fruit shipped by express from Niagara district to Winnipeg would cost (20,000 lbs. min.) \$530.00, and to haul the extra 480 miles to Saskatoon the charge is \$880 or \$350 extra. Western rates are very excessive.

Mr. McIntosh urged that the growers and shippers insist upon more careful handling at Montreal, and recommended that a government official be appointed to look after their interests.

FERTILIZERS FOR THE ORCHARD.

This subject, which has resulted in much controversy in the minds of fruit-growers and experimenters, was very ably discussed by Prof. J. P. Stewart, Experimental Pomologist, State College, Pennsylvania. He reviewed the work of some of the experiments which he has carried out. Basing the results on a planting of 35 trees per acre, producing 14 bushels each annually, he compared the draft on the soil with that of growing 25 bushels of wheat per acre. The following table from American and German analysis shows the comparison very well:

Relative draft of apples and wheat per acre:

	Wheat lbs.	Wood lbs.	Leaves lbs.	Fruit lbs.	Total lbs.
Annual weight	4,200	3,500	3,500	24,500	31,500
Nitrogen	43.7	11.3	25.6	16.2	53.1
Phos. acid	15.8	3.6	5.3	6.4	15.3
Potash	26.8	6.6	15.9	41.5	64.0
Lime	8.0	29.1	29.5	3.0	61.6
Magnesium	6.1	4.4	8.9	3.4	16.7
Iron		.5	1.5	.8	2.8

The leaves return to the soil carrying back the amounts indicated.

Other experiments carried on in different sections of the State with 2,000 trees, bearing 1,700,000 lbs. of fruit, seven of the experiments running for six years and three for five years have given some interesting results, but go to show that fertilizer experiments only apply to local conditions and cannot be used as a general criterion. Good yields and good growth have gone together. Color is not improved by soil application.

As a general fertilizer for apple orchards Prof. Stewart recommended the following:

General fertilizer for apple orchards—amount per acre for bearing trees:

Nitrogen, 30 lbs.	Phosphoric acid, P <sub>2</sub> O <sub>5</sub> , 50 lbs.	Potash, 25 to 15 lbs., K. O.
Carried in 100 lbs. nitrate and 150 of dried blood, or in 150 lbs. of ammon- ium sulphate.	Carried in 350 lbs. acid phosphate, or in 200 lbs. of bone meal, or in 300 lbs. slag.	Carried in 50 to 100 lbs. of mur- iate, or in 100 to 200 lbs. of low grade sul- phate.

For a young orchard reduce the amounts.

Young orchards or any orchard growing or bearing satisfactorily is less likely to need fertilization.

As the only method of finding out what your orchard needs is by experiment, and as the results of experiments only apply to the orchard in which they are made, the following plan for local orchard fertilization test was outlined:

No. of pounds for mature tree in bearing:

1. Check.
2. Niter, 2½ lbs.; dried blood, 3½ lbs.; acid phosphate, 10 lbs.
3. Niter, 2½ lbs.; dried blood, 3½ lbs.; potash, 2 lbs.
4. Acid phosphate, 10 lbs.; potash, 2 lbs.
5. Check.
6. Niter, 2½ lbs.; dried blood, 3½ lbs.; acid phosphate, 10 lbs., and potash, 2 lbs.
7. Same as 6, with 12 to 25 lbs. lime added.
8. Manure, 400 lbs.
9. Check.

The results with fertilizers on the yield have shown that it will scarcely pay to add phosphates in any form alone. It was also noticed that where manure did well, nitrate and phosphate also gave good results. Nitrate retarded ripening three weeks, but if the fruit was left on the trees for this length of time longer than the unfertilized fruit it had 10 per cent. added to its color. Potash gave good results on heavy soil. Potash in manure is not so readily available as in commercial form.

The influence of fertilizing elements on yield, color, size and growth is shown from the following table:

	Yield 1908-11	Color 1909-11	Size 1909-11	Growth 1908-11
Nitrogen in comb	94.05	-13.3	-5.60	24.20
Phosphates in comb	36.65	-1.10	4.83	-4.16
Potash in comb	-4.65	.5	12.42	4.56
Commercial fertilizer	122.50	-16.0	5.93	28.30
Manure	144.10	-14.3	30.8	39.44
Lime alone	19.50	-2.9	23.4	25.62

These figures show the per cent. of benefit of these materials as compared with a check plot. Manure seems to have an advantage with commercial fertilizer, also giving good returns. All decrease the color and nearly all increase size and growth.

A short discussion followed, led by Prof. R. Harcourt, of the Ontario Agricultural College.

INVESTIGATION WORK ON YELLOW AND LITTLE PEACH.

L. Caesar, Provincial Entomologist, outlined the work with these two diseases as he has carried it on during the past year. No microscope shows any organism to be present in the diseased trees and none grow in culture media. The work he has done has been to ascertain in what way or ways the diseases spread and at what time of

year it takes place, also how long a tree may be inoculated before the diseases show in the foliage. Five methods are being tested for spreading the disease, viz., pits, buds, bees or other insects, rubbing or injuring of the bark, and pruning tools. Pits from diseased trees have been planted and the trees are growing, healthy stocks have been budded with buds from diseased trees, blossoms have been pollenized with pollen from diseased trees, healthy trees have been inoculated by rubbing with diseased wood, and pruning tools have been used on diseased trees and then upon healthy wood. These experiments have been carried on at different seasons, so that they will prove at what season the disease spreads and how long a period elapses before it is apparent on the leaf. No results have been noticeable yet, but next year will likely bring out some indications of the progress of the diseases. Mr. Caesar urged a more thorough inspection and the necessity of promptly destroying diseased trees.

W. E. Biggar, Winona, chief inspector, said that there were this year about 25,000 diseased trees marked, or about one-half as many as last year. The inspectors are now appointed and paid by the municipality, and there is no uniformity in salary, some getting \$2.00 per day, others \$1.00, and one district paying \$15.00 yearly, or about 25 cents per day. He believed that the appointments should be made by the Department of Agriculture, and impressed upon

the growers the necessity of destroying trees as soon as marked.

J. B. Fairbairn, of Beamsville, gave a short account of his inspection work during the summer. He pointed out that the symptoms were easiest to detect in August and September, and urged the growers to watch their trees closely. He also showed how easy it is for the grower to overlook the disease in his own orchard and believed in thorough inspection and more inspectors. He marked some 500 trees out of 55,000 trees inspected.

CULTURAL METHODS.

Prof. Stewart discussed the various methods of orchard cultivation and gave the results of several experiments which he has carried out, and the outline of which show that cultural methods of any sort are not equal to fertilization.

Culture vs. Fertilization on Yield Annual Yield per Acre last 4 years.			
An. Yield bus. per Ac.	An. Gain over Sod bus.	An. Gain with Fertilizers bus.	
Sod	190.2		
Mulch	266.4	76.2	22.0
Cover Crop	312.9	122.7	100.0
Nitrogen and Phos.	542.0	351.8	451.0
Manure	637.0	446.8	390.0
Phosphates and Potash	277.6	103.4	123.0

A mulch of 3 tons per acre by itself is not sufficient. The fruit farm trees in sod is first in color. Mulch gives greatest size. Do not till too deeply. Four inches should be about the limit, and do not plant too close together.

With trees just coming into bearing the following table gives an idea of the effect of cultural methods on yield.

CULTURAL METHODS ON YIELD.

	An. yield per acre last 5 years.			
	Tillage bus.	Cover Crop bus.	Mulch bus.	Sod bus.
Without Fertilization	96.0	121.0	174.3	140.1
Average per Acre	21.9	23.6	55.5	19.9
With Manure	167.1	151.5	213.0	260.5
Average per Acre	52.3	30.2	59.1	35.0
With Commercial Fertilizer	170.4	195.3	218.2	187.7
Average per Acre	182.3	133.9	115.3	126.6
Three experiments in each case.	47.5	53.7	44.4	33.5
	133.4	127.6	129.3	115.9

The mulch system interferes with young trees. Mulch and cover crop, better on light soils. On mature trees the following table shows the results.

CULTURAL METHODS ON YIELD AND GROWTH.

	An. Yield 4 Years.		Growth 5 Years.	
	Cover Crop bus.	Cover Crop bus.	Sod Mulch ins.	Sod Mulch ins.
With fertilizer	345.9	322.8	4.57	3.13
Gain per acre	23.1		1.44	
Relative gain	7.2%		46.00%	
With manure	382.5	513.5	5.73	3.51
Gain per acre		131.0	2.22	
Relative gain		34.2%	63.20%	
With fertilizer	372.5	438.9	4.52	3.68
Gain per acre		66.4	.89	
Relative gain		17.8%	24.5%	

It will be noticed that cover crops have not given as good results as one would expect, but we must remember that these experiments are local, and in a district where it is necessary to ripen up the wood for winter the cover crop has a value.

A JOINT SESSION.

At an open meeting of all the Associations held in Convocation Hall, Wednesday evening, Dr. C. C. James presided, and in looking the large audience in the face said that in his opinion no gathering had ever convened in Toronto which was concerned about greater questions than those discussed at the meetings of the various Associa-

tions. President a very i Norwich Institut Hon. for the listened were be life tha that th such a Only pe in the this cov tion, fo tion is country politica safegua that th charact Canada Hon owing brielly. Lambt barrels 35,000 \$2.25 000 be an Ass market RECO W. Preside Ontari ern ma taken demand packin grower incenti advise ment s for On ers to the Fr better pushed the Pr campa be app tion, of fru fruit s at po offered inspect Transp for in recom Res Marks Gover Inspect which had s indust John consid ing in in the trol c ing th McInt Fo There tives Whyte Demp J. B. ton; Catha son, Lewis J. W tary- dent meeti Spe A Ontar secret for th prize crease bitors tiona three ducks collect to cc dition for t for p secon

tions. Rev. A. H. Scott, M. A., of Perth, and President of the Horticultural Association, read a very interesting paper, and Miss E. Stover, of Norwich, spoke more particularly to the Women's Institutes.

Hon. Martin Burrell, Minister of Agriculture for the Dominion, in an address which was listened to with much interest, said that people were beginning to realize that there is more in life than clothes and food. He does not believe that the State should "pap" the people, as such a course does away with all individuality. Only people decayed and imbecile place themselves in the hands of the State. The problem facing this country is a development of a rural civilization, for the condition of the agricultural population is a true criterion of the entire life of the country. We must have economic development, political stability and desirable social life, must safeguard what we produce, and must realize that the strength of the State depends upon the character of the rural population. The need of Canada is a wider agricultural education.

Hon. W. J. Hanna, Provincial Secretary, owing to the lateness of the hour, spoke very briefly. He urged more co-operative effort citing Lambton County as an example, where 50,000 barrels of apples were produced this year, and 35,000 have already been marketed at prices of \$2.25 to \$3.00 and over per barrel. Of the 15,000 barrels which went to waste none were in an Association. Co-operation is growing, and marketing is the key-note of success.

RECOMMENDATIONS AND RESOLUTIONS.

W. F. Fisher presented the report on the President's address. In view of the fact that Ontario apples were being crowded off the Western market, it was recommended that steps be taken to encourage box packing, this package is demanded on that market. To accomplish this packing schools in connection with the fruit growers associations were recommended, and as incentives prizes should be offered. He also advised the appointment of an Ontario Government specialist to prosecute a vigorous campaign for Ontario fruit in the West. He urged growers to raise the grade above the standard set by the Fruit Marks Act, in other words to put up better fruit. An educational campaign must be pushed. A strong deputation should wait on the Provincial Government to see that such a campaign was carried out. A committee should be appointed to investigate production, distribution, transportation, and marketing. The staff of fruit inspectors should be increased, and the fruit should be inspected and a certificate given at point of shipment. Fruit should not be offered over or under ripe, and the sphere of the inspectors should be enlarged to cover this point. Transportation companies should be prosecuted for injury to fruit through bad handling. These recommendations were carried unanimously.

Resolutions were passed asking that the Fruit Marks Act be amended so that the Provincial Government take over the appointment of Fruit Inspectors, expressing appreciation of the interest which Hon. Martin Burrell and Hon. James Duff had shown in the welfare of the fruit growing industry, expressing regret at the death of Prof. John Craig and Major Sheppard, and asking the consideration of the Toronto City Council looking into the matter of better marketing facilities in that city, also asking for more stringent control of fumigation of nursery stock, and expressing the value of retaining the services of G. E. McIntosh as Transport Agent.

OFFICERS ELECTED.

Four of the directorate retire each year. There are thirteen divisions and the representatives in order for the coming year are: R. B. Whyte, Ottawa; C. W. Beaman, Prescott; W. H. Dempsey, Trenton; Wm. Stainton, Oshawa; W. J. Bragg, Bowmanville; H. G. Foster, Burlington; J. W. Smith, Winona; R. Thompson, St. Catharines; Jos. Gilberston, Simcoe; D. Johnson, Forest; R. R. Sloan, Porter's Hill; F. M. Lewis, Burford; W. J. Saunders, Owen Sound; J. W. Crow, O. A. C.; P. W. Hodgetts is Secretary-Treasurer, and the President and Vice-President are elected by the Directorate at their first meeting.

Special Poultry Prize List for the Winter Fair.

A meeting of the Poultry Committee of the Ontario Provincial Winter Fair was held in the secretary's office on Wednesday, October 29th, for the purpose of arranging the poultry special prize list for the coming fair. In order to increase the advertising value of the fair to exhibitors and to make the exhibit of greater educational value to visitors, it was decided to offer three special prizes of fowl, turkeys, geese and ducks, as follows: Best collection, second best collection, third best collection. Collections are to consist of five or more birds shown. In addition to the ribbons, there will be a cash prize for the best bird in each class. In the classes for pigeons there will be ribbons for best and second best collection, consisting of four or more

birds, and a cash prize for the best bird in each class. The special prize list will be further supplemented by cups, trophies, etc., from former years, also medals donated by admirers of the respective breeds. These specials will be open to all exhibitors, and no contribution will be required from exhibitors for the special prize fund.

Poultry specialty clubs have largely supplemented the prize list in cases where they are won by members of the club.

A Big Meeting of Bee-keepers.

The largest Bee-keepers' Convention ever held in the city of Toronto was the 33rd annual meeting of the Ontario Bee-keepers' Association, Nov. 13th to 15th.

There were many more young men in attendance than in former years, showing that bee-keeping is being looked upon as good, perhaps, as any business that a young man can go into, if he is looking for a money-maker. As this feature of bee-keeping becomes more prominent, the fear of stings grows less.

In the discussion that followed Mr. Farr's address, several speakers advocated carrying combs from each out-yard to one centre or home-extracting house. This was objected to on account of the likelihood of breaking combs.

Mr. Dunn, of Ridgeway, dealt with the subject of preparing bees for wintering out-of-doors, and Mr. Harkness discussed the subject of winter and spring management of bees wintered in cellar.

J. W. Clark, of Cainsville gave a very interesting address on combining bees, poultry and fruit, and showed how the three branches could be worked by the same individual.

A very interesting point for the consideration of bee-keepers was brought by the address of A. D. McIntosh, B. S. A., Stirling, on the subject of District Representative, and how he could help the bee-keeper. He showed that a District Representative's office can be of great service to the bee-keeper in his locality, by employing a bee-keeper to do part of the agricultural work of the district.

P. W. I. Sladen, Assistant in Apiculture, Experimental Farm, Ottawa, gave an interesting address on bee-breeding. He told of a bee paralysis, that is quite prevalent in England, that attacks all breeds of bees in that country, and advised against importing bees from England.

A return to the old plan of giving to everyone the opportunity of asking his own particular question in the question drawer, was welcomed by many as just what is wanted in a convention of this kind.

The bee-keepers of Ontario put up an excellent display at the Ontario Horticultural Exhibition this year. The Ontario exhibit, situated under the large dome in the Horticultural building in Exhibition Park, was a creditable showing of all kinds of bee products most tastefully arranged.

The Middlesex county display, situated in close proximity to the other, was an even greater credit to those who contributed to it, as it was all supplied by bee-keepers of that county.

Root and Fodder Crops.

A Bulletin issued Nov. 16th by the Dominion Census and Statistics Office contains estimates of the yield, quality and value of the root and fodder crops of Canada during the past season, based upon returns from agricultural correspondents at the end of October. Upon total areas for potatoes, turnips, mangolds, etc., hay and clover, alfalfa, fodder corn and sugar beets, amounting to 8,732,000 acres as compared with 9,160,000 acres last year, the total value of the products is \$192,500,000 compared with \$223,790,000, a decrease in value of \$33,290,000. This decrease is caused by the diminution, both in area and yield, of the hay and clover crop, which is less than last year in area by 426,000 acres, in yield by 2,000,000 tons, and in value by \$28,380,000. All the other crops show increases, except alfalfa, the area of which in Canada is relatively small. The yield of potatoes is 81,343,000 bushels, of the value of \$32,173,000, of turnips and other roots 87,505,000 bushels, value \$20,713,000, of fodder corn 2,853,900 tons, value \$13,529,000, of sugar beets 204,000 tons, value \$1,020,000 and of alfalfa 310,000 tons, value \$3,610,000. A word of caution is necessary with regard to potatoes, for whilst yield and quality are generally good at harvesting, there are numerous reports of rotting in the cellars, the produce of the heavier soils having been considerably affected by the constant rains.

The area estimated to be sown to fall wheat in five provinces of Canada this season aggregates 1,086,000 acres as compared with 1,156,900 acres the area sown last year. This represents a net decrease of 70,100 acres, or 6 per cent. In Ontario the acreage sown is 696,000 acres compared with 797,200 acres, a decrease of 101,200 acres or 12.6 per cent.; in Alberta, the figures show a decrease of 11,300 acres or 3 1/2 per cent.; and in Saskatchewan an increase of 19,000 acres or 36 per cent.

ARCHIBALD BLUE, Chief Officer.



Clipper Rose. Shorthorn heifer; sold for 500 guineas, the highest price in the King's sale at Windsor.

Women, too, are beginning to show greater interest in bee-keeping by increased attendance at these conventions.

This year much care and good judgment were shown in getting up the programme, every part of which was chosen with a definite end in view.

The address by E. B. Tyrell, of Detroit, Michigan, tended to show that upon the bee-keeper himself as a pushing, enterprising salesman, depended much of the success of the financial end of the honey business, and this sentiment, expressed in the discussion following the address, seemed to leave no room for the co-operative selling that was so strong a feature of last year's convention.

This year's weather conditions have never been met before by the bee-keeper to the same degree in one season. Floods and extremely long-continued cold weather were responsible for the destruction of many colonies in the spring. Continued wet weather towards the end of the season prevented the bees from storing anything for winter use, consequently great expense was incurred in feeding an unusually large amount of sugar, but, as President Nolan remarked at the end of a rather pessimistic opening address, "Every cloud has its silver lining," and the profuse growth of clover this fall augurs well for the honey crop of next year.

Losses by American and European foul brood are still heavy enough to warrant great care and expense being employed to stop their ravages.

An instance of the ravages of European foul brood was that of one of our most experienced bee-keepers, who had one of his yards wholly destroyed by the disease. He described the conditions in this yard as a "rotten mess of bees and brood." Previous to this he was a strong advocate of black bees, but to-day is a convert to universal Italianizing.

The automobile is now being employed to great advantage in running out yards. H. G. Sibbald has used one for the first time this year in going between his many apiaries, and claims that the time economized when reduced to money saves him from \$6 to \$25.00 in the time of his men and himself in each round trip.

Mr. Farr, of Low Banks, uses a motor truck in moving his extracting and other outfits from one yard to another, instead of having these appliances at each yard. He has an extracting house in each yard.

MARKETS

Toronto.

REVIEW OF LAST WEEK'S MARKETS  
 At West Toronto, on Monday, Nov. 18, receipts of live stock numbered 67 cars, comprising 1,217 cattle, 479 hogs, 1,119 sheep, 40 calves, and 6 horses. No business being transacted. Looks like steady prices all round. Hog prices, we think, will be firm, as drovers are paying in the country, \$7.65. The total receipts of live stock at the City and Union Stock-yards last week were as follows:

	City.	Union.	Total.
Cars	74	468	542
Cattle	1,084	7,978	9,062
Hogs	780	5,784	6,564
Sheep	907	5,555	6,462
Calves	55	527	582
Horses	3	30	33

The total receipts of live stock at the two markets for the corresponding week of 1911 were as follows:

	City.	Union.	Total.
Cars	289	236	525
Cattle	3,911	2,588	6,499
Hogs	5,400	6,947	12,347
Sheep	5,175	3,665	8,840
Calves	856	74	930
Horses	—	10	10

The combined receipts of live stock at the two markets, show an increase of 17 carloads, 2,508 cattle, 152 calves, and 23 horses; but a decrease of 5,783 hogs, 1,378 sheep and lambs, compared with the corresponding week of 1911.

Receipts of cattle were very large, at the Union yards especially. Tuesday furnished a record delivery of 264 carloads, 5,429 cattle, 1,166 hogs, 2,852 sheep, and 311 calves, the largest in the history of the yards for one day, and also the largest in the history of the live-stock trade of Toronto. And on Wednesday, this was followed up with another run of 130 cars, 2,398 cattle, 1,178 hogs, 1,847 sheep and lambs, and 174 calves. The yards were overflowing with cattle, every available pen was filled, and many were placed in the sheep and hog barns wherever space could be found. Nearly every Township and County sent its quota, some coming from as far east as Lanark, which is much nearer to Montreal than Toronto. The quality of the bulk of the cattle was anything but desirable. Many of them came from the northern and far-eastern townships of Ontario. Seemingly, there had been a grand round-up of all the ill-bred cattle of the Province, and, strange to say, they were nearly all sold. Considering the heavy delivery, there was a fair trade, as there were more drovers, farmers, and cattle-dealers on the market than we ever saw in one week in the past sixteen years. Prices, however, for the undesirable classes were lower, but the good to choice cattle remained about steady all week.

Exporters.—There was no demand for export cattle, and the few of this class of cattle that came on the market were taken by the abattoirs for local killing. The best prices paid were around \$6. about 130 cattle during the week having reached \$6.10. On Tuesday, one enterprising farmer paid \$6.40 for a choice load of steers, 1,250 lbs., to go back to the country to be fed. This man has faith in the future.

Butchers.—Good to choice butchers', 1,150 to 1,250 lbs., sold at \$6 to \$6.10; good butchers' of less weights sold from \$5.50 to \$5.80; medium butchers', \$5 to \$5.40; common, \$4.50 to \$4.80; inferior, \$3.75 to \$4.25; cows, \$3 to \$5; canners and cutters, \$1.75 to \$2.50; bulls, \$2.75 to \$3.50 for bologna purposes, and \$4 to \$5 for good to choice butchers' bulls.

Stockers and Feeders.—The buyers for distillery purposes having got their quota, prices have declined for the best quality heavy steers. Steers that cost \$5.25 to \$5.60, were bought for from \$5 to \$5.40; steers that cost \$4.75 to \$5.25, were got at \$4.50 to \$5; stockers sold from \$2.75 to \$4.25.

Milkers and Springers.—Trade in milkers and springers was good, with a scarcity of the choice kinds, and sales higher than \$75 were not as numerous as for some weeks. A very few high-class cows of Holstein or Shorthorn blood, and extra good size, sold up to \$90, and one passed the \$100 mark, and

three or four sold at the even \$100, most of the good sold at \$60 to \$75, and a few late springers and old, worn-out cows, sold from \$40 to \$50 each.

Veal Calves.—The rough, Eastern, grass calves were again plentiful and cheap, or at least sold at low prices, from \$3 to \$4.25; but the good to choice veal calves were none too plentiful, and sold at firm prices, ranging from \$7.50 to \$9 per cwt., and a few of extra new-milk-fed quality brought \$9.25 and \$9.50.

Sheep and Lambs.—Receipts were large. Prices ruled steady to firm. Sheep—Light ewes sold at \$4 to \$4.40; heavy ewes and rams at \$3 to \$3.50; lambs, during the early part of the week, sold from \$6 to \$6.25, but at the close, \$6.15 to \$6.40 was paid.

Hogs.—The packers tried to lower prices at the commencement of the week, but failed, as a rule. The bulk of the hogs sold at \$8, fed and watered, and \$7.65 f. o. b. cars at country points. On Thursday, prices for hogs were \$8 to \$8.10 fed and watered, and \$7.65 f. o. b. cars at country points.

Horses.—Trade in horses is reported quiet at all the different sale stables in Toronto, and in fact all over the Province. There were few horses came forward, but enough, and more, to supply the demand. Prices were reported as follows: Drafters, \$250 to \$300; general-purpose, \$225 to \$250; expressers, \$160 to \$225; drivers, \$100 to \$150; serviceably sound, \$25 to \$75 each.

BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, 95c. to 97c., outside. Inferior grades down to 70c. Manitoba No. 1 northern, 93c.; No. 2 northern, 91c., track, lake ports; feed wheat, 70c., lake ports. Oats—Ontario, 39c. to 40c., outside. Manitoba, No. 2, 42c.; No. 3, 41c., lake ports. Rye—No. 2, 78c. to 80c., outside, nominal. Peas—No. 2, \$1.10 to \$1.15, outside, nominal. Buckwheat—52c. to 53c., outside, nominal. Barley—For malting, 60c. to 65c. (47-lb. test); for feed, 48c. to 60c., outside. Corn—No. 3 yellow, old, 66c., all rail. Toronto. Flour—Ontario ninety-per-cent. winter-wheat flour, \$4.10 to \$4.25, delivered. Manitoba flour—Prices at Toronto are: First patents, \$5.70; second patents, \$5.20; in cotton, 10c. more; strong bakers', in jute \$5.

HAY AND MILLFEED.

Hay.—Baled, in car lots, track, Toronto, \$14 to \$14.50 for No. 1; No. 2, \$12 to \$12.50. Straw.—Baled, in car lots, track, Toronto, \$10 per ton. Bran.—Manitoba bran, \$22 to \$23 per ton; shorts, \$26; Ontario bran, \$23, in bags; shorts, \$25, car lots, track, Toronto.

COUNTRY PRODUCE.

Butter.—Receipts have been larger than usual at this season of the year, grass being plentiful in many districts of the Province. Prices have remained about steady. Prime creamery pound, rolls, 31c. to 32c.; creamery solids, 29c. to 30c.; separator dairy, 28c. to 30c.; store lots, 24c. to 26c.

Cheese.—Market unchanged. Large, 14c.; twins, 15c. Eggs.—New-laid, 40c.; cold storage, 28c. to 30c.

Honey.—Choice, extracted clover honey, 12c. per lb.; combs, per dozen sections, \$2.75 to \$3.

Beans.—In broken lots, prices steady, at \$2.90 to \$3 for primes, and \$3.10 for hand-picked.

Potatoes.—Ontario potatoes, in car lots, track, Toronto, 85c. per bag; New Brunswick potatoes, in car lots, track, Toronto, 90c. per bag.

Poultry.—Live poultry prices were as follows: Turkeys, 16c. to 18c. per lb.; geese, 10c. to 12c.; ducks, 12c. to 14c.; chickens, 12c. to 14c.; hens, 9c. to 10c.

HIDES AND SKINS.

No. 1 inspected steers and cows, 15c.; No. 2 inspected steers and cows, 14c.; No. 3 inspected steers, cows and bulls, 13c.; country hides, cured, 13c. to 14c.; country hides, green, 11c. to 12c.; calf skins, per lb., 14c. to 17c.; lamb skins, 60c. to 85c.; horse hides, No. 1, \$3.5 each; horse hair, per lb., 37c.; tallow, No. 1, per lb., 5c. to 6c.

WOOL.

Unwashed, coarse, 13c.; unwashed, fine, 14c.; washed, coarse, 19c.; washed, fine, 22c.; rejects, 16c.

TORONTO SEED MARKET.

Alsike No. 1, per bushel, \$11.50 to \$12; alsike No. 2, per bushel, \$10.50 to \$11; alsike No. 3, per bushel, \$9.50 to \$10; timothy No. 1, per bushel, \$1.90 to \$2.25; timothy No. 2, per bushel, \$1.25 to \$1.60.

FRUITS AND VEGETABLES.

Grapes are still on the market, and sold at 20c. to 25c. per small basket, and 40c. to 45c. for large basket; tomatoes, 35c. to 45c. per small basket; cabbage, \$1.25 per case; Canadian onions, 75-lb. bag, 90c. to \$1; apples, per basket, 15c. to 35c.; per barrel, \$1.50 to \$2.50.

Montreal.

Live Stock.—Quite a few choice steers were offered, but butchers did not seem eager to secure them at the price asked. The top price was 6c. per lb., while fine stock was bought at 5c., good at around 5c., medium down to 4c., and common down to 3c. per lb. Some common bulls sold as low as 2c., these being for canning purposes. Small meats were in fair demand. Lambs sold at 6c. to 6c. per lb., while sheep were quoted at 4c. per lb., and calves ranged from \$8 to \$10 each, in a general way, with \$12 for specials. Hogs were fairly steady, being around 8c. per lb., with the tone indicating a lower market in the near future.

Horses.—Market dull here at present. Likely to be so till sleighing. Prices steady, being \$300 to \$400 each for horses weighing from 1,500 to 1,700 lbs.; \$225 to \$300 for those weighing from 1,400 to 1,500 lbs.; \$125 to \$200 for light horses, 1,000 to 1,100 each; \$75 to \$125 for broken-down animals, and \$350 to \$500 for choice saddle and carriage horses.

Dressed Hogs.—Sales of fresh-killed, abattoir-dressed hogs were being made at 12c. to 12c. per lb.

Potatoes.—Market firming up now that the cold weather is approaching, and the very poor stock is disappearing. Prices, 80c. to 85c. per 90 lbs., carloads, track, Montreal, for Cobblers; add 10c. per bag for smaller lots.

Eggs.—Practically no fresh-laid stock obtainable. Selects were quoted at 32c.; No. 1 at 28c.; this being the price to retail merchants. Supplies light.

Syrup and Honey.—Demand light. Maple syrup, 8c. to 8c. per lb., in tins, and 6c. to 7c. in wood. Sugar, 8c. to 9c. per lb. Honey steady, being 16c. to 17c. per lb. for white-clover comb, and 12c. to 12c. for extracted. Dark comb, 14c. to 14c., and extracted 8c. to 9c. per lb.

Butter.—Market for butter last week was a little easier. Creamery sold in the Townships at 29c., being a cent lower, due partly to depreciation in quality.

Grain.—Market for oats steady; prices were 46c. to 47c. per bushel, carloads, ex store, Montreal, for No. 2 Canadian Western, and 46c. to 46c. for extra No. 1 feed; barley, 78c. to 80c. for Ontario malting; No. 2 buckwheat, 55c. to 56c.; No. 3 yellow corn, 68c. to 69c.

Flour.—Flour steady, being \$5.90 per barrel for Manitoba patents, in wood, \$5.40 for second patents, and \$5.20 for strong bakers'. Ontarios, \$5.25 to \$5.35 for patents, and \$4.95 to \$5 for straight rollers. Flour in jute, 30c. less.

Hay.—Demand more active, and prices were \$14.50 to \$15 per ton for No. 1 hay; \$13.50 to \$14 for No. 2 extra; \$11 to \$12 for No. 2 ordinary; \$10 to \$10.50 for No. 3 hay, and \$9 to \$9.50 for clover mixed.

Milfeed.—Feed in better demand. Bran steady, at \$23 per ton; shorts, \$26 to \$27 per ton; middlings, \$26 to \$30; mixed mouille, \$34 to \$35, and pure grain mouille, \$36 to \$38.

Hides.—Beef hides were a cent up, being now 13c., 14c. and 15c. per lb.; calf skins, 15c. and 17c., and lamb skins, 85c. each; horse hides, \$1.75 and \$2.50 each. Tallow, 11c. to 3c. per lb. for rough, and 6c. to 6c. per lb. for rendered.

Cheese Markets.

Woodstock, Ont., 12c.; Brockville, Ont., 11c.; Picton, Ont., 12 to 16c. to 12c.; Napanee, Ont., 12c.; London, Ont., bidding 11c. to 12c.

Buffalo.

Cattle.—Prime steers, \$9 to \$9.25; butchers', \$5.75 to \$8.50; bulls, \$4.25 to \$6.25; stock heifers, \$4.25 to \$4.50; shipping, \$7.50 to \$8.75; heifers, \$4.65 to \$7.50; cows, \$3 to \$6.50; stockers and feeders, \$4.50 to \$7; fresh cows and springers, \$35 to \$75.

Veals.—\$4 to \$11. Hogs.—Heavy, \$8.20 to \$8.25; mixed, \$8.10 to \$8.20; Yorkers, \$7.50 to \$8.10; pigs, \$7.40 to \$7.50; roughs, \$7.10 to \$7.25; stags, \$5 to \$7; dairies, \$7.75 to \$8.

Sheep and Lambs.—Lambs, \$4.50 to \$7.60.

Chicago.

Cattle.—Beeves, \$5.25 to \$11; Texas steers, \$4.20 to \$5.60; Western steers, \$5.50 to \$9; stockers and feeders, \$2.75 to \$7.40; calves, \$6.50 to \$10.40.

Hogs.—Light, \$7.40 to \$7.85; mixed, \$7.35 to \$7.90; heavy, \$7 to \$7.90; rough, \$7.30 to \$7.50; pigs, \$5 to \$7.25. Sheep.—Native, \$3.50 to \$4.65; Western, \$3.75 to \$4.60; yearlings, \$4.80 to \$6; lambs, native, \$5.50 to \$7.70; Western, \$5.75 to \$7.60.

British Cattle Market.

John Rogers & Co. reported Irish steers making 11c. to 12c. per pound.

GOSSIP.

Stockmen planning to exhibit at the Toronto Fat-stock Show, to be held in the Union Stock-yards, Toronto, are reminded that entries close November 30th.

DATES OF ENTRY FOR WINTER FAIR.

The Secretary of the Ontario Provincial Winter Fair writes a correction of the dates appearing in the advertisement for the closing of entries for live stock and poultry, which should read: "Live-stock entries close Nov. 23rd. Poultry entries close Nov. 25th."

Shipments of Clydesdales from Glasgow to Canada, the last week in October, were consigned to D. C. Flatt & Son, Hamilton, Ont.; H. H. Roberts, Simcoe, Ont.; J. W. Mussen, Niagara-on-the-Lake; J. L. Martin, Binbrook; John Graham, Carberry, Man.; Adam Watson, Cobourg, Ont.; J. Wilcox, Morris, Man., and John J. Miller, Gowrie, Ont.

THE SPOT FOR SHORTHORNS.

By a typographical error, the advertisement of Dr. T. S. Sproule, on page 2043 of this issue, his address was given as "Markham," Ont., instead of Markdale. Luckily, would-be-purchasers of good Shorthorn cattle know where to go for Dr. Sproule's stock, even if the printer tries to lead them astray. Markdale is the place.

SALE DATES CLAIMED.

Nov. 21, 1912—Dr. McEachran, Orme-town, Que.; Clyde fillies.  
 Nov. 27, 1912—D. C. Flatt & Son, Hamilton, Ont.; Clyde fillies.  
 Dec. 5, 1912—Porter Bros., Appleby, Ont.; Shires.  
 Dec. 17, 1912—W. G. Wilson, Goring, Ont.; Shorthorns.  
 Dec. 18, 1912—W. A. Bryant, Cairngorm, Ont.; Holsteins and Oxfords.  
 Dec. 31, 1912—C. R. Gies, Heidelberg, Ont.; Holsteins.  
 Jan. 1, 1913—Geo. Rice, Tillsonburg, Ont., manager; Holsteins.

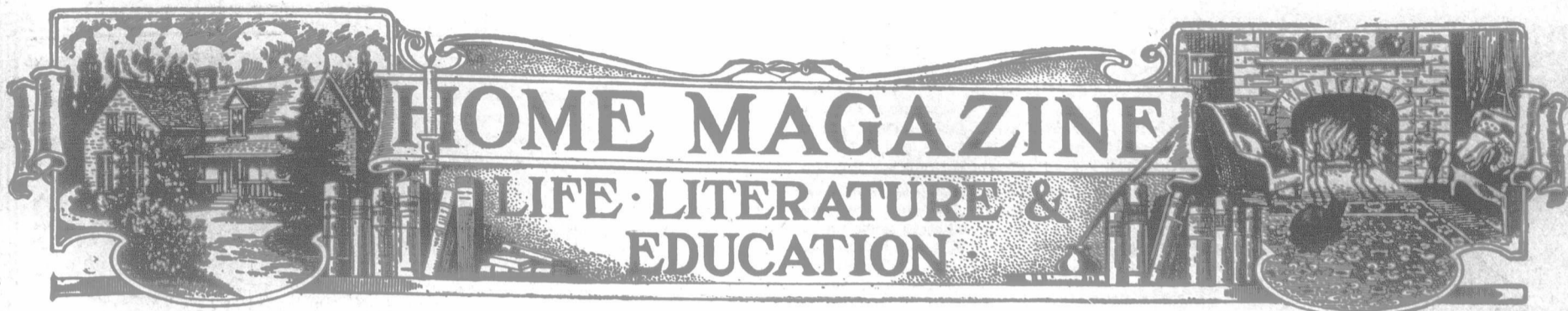
LAST CALL FOR HAMILTON CLYDE SALE.

See the advertisement on page 2038, of an important auction sale of fifty Clydesdale fillies recently imported by D. C. Flatt & Son, of Hamilton, Ont., to be sold to the highest bidder at the Dominion Hotel in the city of Hamilton, on Wednesday, Nov. 27th. This is one of the largest consignments of Clydesdales ever offered at auction in Ontario, and we are assured their breeding and make-up is high-class, twenty-two of the fillies being strong in the blood of that greatest of sires, Baron's Pride. Sixteen have been served by noted sires in Scotland. There is an unflagging demand for drafters, at good prices, and this sale affords a rare opportunity to secure good bargains.



A Child

[A paper at a meeting Branch of t One chara of the two interest sho be seen in cation. E the advisab rejecting wung from R's, to a it is a won carry all h know. Th schools, tea ing and do others?—all child for h day schoo hope, and J His physic numerous a grounds,—fa spade in th the wood-p the cadet guides! V forts to tr should go courts and all these th the best th him in law respect for in him a c are pure, w to make o abiding, pu In lookin one thing the home o Our moderi plicated th to their others a v their traini his child t competent caps him f is a qu start h early age. The Bible part of the ly the wor er. It is things. T rule, show of respect disregard is regrette that civiliz day is the if true, is the parent neglect ou to others highest pr same outsi child's wel tinting th home by c is necessa training sh committed tent hands been reach there is or tion where wise and that is, hi beginning ture, is im father and by school fughes is last Conver Association hoped the child woul



**A Child and Its Reading.**

[A paper given by Mrs. G. A. East, at a meeting of the Horning's Mills Branch of the Women's Institute.]

One characteristic of the opening years of the twentieth century is the active interest shown in child-welfare. It is to be seen in the changing system of education. Educationists are questioning the advisability of teaching this subject, rejecting that. The pendulum has swung from teaching the child the three R's, to a curriculum so crowded that it is a wonder "that one small head can carry all he knows," or is supposed to know. Then there are agricultural schools, technical schools, manual training and domestic science, and how many others?—all endeavoring to educate a child for his life's work. His religious side is looked after by numerous Sunday schools, mission bands, bands of hope, and junior societies of many kinds. His physical side is appealed to by numerous athletic clubs, supervised playgrounds,—far more interesting than the spade in the back garden, or the axe at the wood-pile! There are boy scouts, the cadet corps, and even the girl guides! When these praiseworthy efforts to train up a child in the way he should go fall, there are the juvenile courts and the reformatory schools. In all these there is the desire to bring out the best there is in the child, to train him in laws of health, in obedience, in respect for law and authority; to create in him a desire for "whatsoever things are pure, whatsoever things are lovely"; to make of him a God-fearing, law-abiding, public-spirited, patriotic citizen.

In looking over this great movement, one thing is noticeable—it begins outside the home and works outside the home. Our modern method of life is so complicated that the parents are, in justice to their children, compelled to allow others a very large and active part in their training. Unless a parent sends his child to school to be taught by competent teachers, he seriously handicaps him for the battle of life, though it is a question whether it is necessary to start him at the present extremely-early age.

The Bible training that was sacredly part of the parent's duties, is now largely the work of the Sunday-school teacher. It is much the same with other things. The present-day children, as a rule, show a pertness in manner, a lack of respect for age and authority, and a disregard for the rights of others that is regrettable. One writer has said that civilizing influence in Canada today is the public-school teacher, which, if true, is certainly no compliment to the parents. But if some of us do neglect our parental duties, and leave to others the work it should be our highest privilege to perform, then these same outside influences working for the child's welfare are the means of continuing the good work begun in the home by conscientious parents, when it is necessary that his education and training should, to a large extent, be committed into other and more competent hands. But before this age has been reached, and for a long time after, there is one branch of the child's education where the parent should exercise a wise and authoritative supervision: that is, his reading. The very earliest beginning in reading, in love for literature, is implanted in the baby mind by father and mother, supplemented later by schools and libraries. Dr. Jas. L. Hughes is reported to have said at the last Convention of the Ontario Teachers' Association held in Toronto, that he hoped the time would come when no child would be taught to read till it

reached the age of ten years. If the writer dare express an opinion contrary to such an eminent authority, she would say that a child brought up in an atmosphere of books and reading, would learn to read just to satisfy its own curiosity, long before it had reached the age of ten years. The love for reading, like that for music or art, may be an inheritance from parents or grandparents, but it is a love that assuredly can be cultivated. It is quite possible for a child to be as much interested in reading as in talking. The foundation for a love for reading must be laid in youth. Habits and impressions formed in childhood are the most lasting. The first seed should be sown by the mother's own hand, and the first, best seed that can be procured, is that which has been used by mothers for generations—the old mother-goose rhymes, with the thrilling adventures of Tom the Piper's Son, who stole the pig, or Peter, the pumpkin eater, who kept his wife in

these classics of childhood—that "see a pin and pick it up," really means, "see an opportunity, and, by seizing it, bring good luck to yourself." That sounds very plausible, though we would rather pin our faith on picking up the pin. In the fascinating "Hi, diddle, diddle, the cat and the fiddle," the housewife thinks possibly the cow did jump over the moon, and forgot to come down, when she considers the present high price of beef!

After Mother Goose come the fairy stories—favorites, unailing in their charm,—stories told at bed-time before the lamps are lighted, and only the fire-light dances on the walls. How very real become the fairies and the giants. Couldn't you just imagine you saw Cinderella there in the ashes, and the fairy god-mother slipping down and changing all her fortune in an instant. Didn't you have delightful, shivery feelings, when Silverlocks got into the bear's house and heard Father Bear booming

the story will not be spoiled by interruptions for explanations of words, or expressions not understood. Unless you suit your language to your audience, you may call down upon your head the verdict pronounced by one small child upon her father: "Papa doesn't know how to tell a story—he can't talk plain." Though some fairy stories are exquisite, there are others not to be recommended at all for children's use.

Then there are the Bible stories, which are "almost like fairy stories," and can be re-told as often. Some few years ago, when the Sunday-school lessons were in the Old Testament, my little daughter remarked that she "didn't like the Bible at all, that it was just full of killing." Unwittingly she had fallen on a great truth—that of sacrifice. Yet it seems that for small children, a good many of those stories of "killing" might be omitted. There are so many others that are so beautiful, so bright, so hopeful. Aside from the influence of these stories in the formation of character, the Bible is of the highest literary value, and is the foundation of the best and noblest literature in the world. Then there are stories of different people and countries—an immense field to draw from—all fascinating. Just think of little children that have a skin real black, and some that have eyes slanted in their heads, and some dress in furs the whole year round, and some wear hardly any clothes at all.

The stories of our nation and its great men should receive particular attention. Children are born patriots. We, as a nation, have an unlimited fund of the most fascinating and inspiring stories to draw from—stories of great heroes on land and sea, discoverers, inventors, religious teachers. These sound rather formidable words to use in connection with children, but tell the story of Nelson, for instance, in simple language, and see if their eyes do not sparkle at the inspiring words, "England expects every man to do his duty." Tell the story of the pioneers of our beloved Canada, of Madeline of Vercheres, of Laura Secord, Wolfe, Tecumseh, and many others. If these have been told and made interesting, no child will call history a "dry old subject" when he comes to read it for himself. Furthermore, there will be fostered a love and admiration for the glorious nation of which he is a small but most important unit, and he will grow up "One with Britain, heart and soul."

One important means of interesting children in reading is by the use of pictures. All children love pictures. It is to be regretted that the most beautifully-illustrated books are so expensive that they are out of the reach of most of our pocketbooks, but it is money well spent in the end. Some of the larger public libraries are placing pictures in the children's reading-rooms, with the hope of interesting the little readers in the books they illustrate.

The physical life and strength of the child is built up day by day by such food and exercise as is suitable for its best development. So in the mental life. After the child has reached a certain point in his mental development, he will, of his own accord, desire to read. He has found out what interesting things are to be found in books. After he has learned to read with ease comes the most difficult task. So far the reading material has been entirely in the parents' own hands. Now, to some extent, it is taken out of their hands. Now it requires watchfulness and care to select suitable books. It is exceedingly important that the parents know what books their children read. We make it our business to know their companions



Good Farm Products.  
Sons of Mrs. W. H. Dykes, Middlesex Co., Ont.

the pumpkin shell, or Jack Spratt, who always licked his plate, though no really nice little child would do such a thing! Look back over the years to when you were little, and mother used to tell you the stories out of your new picture book. Weren't they all wonderfully interesting to you? Children are the same to-day. Watch their intent little faces as they study the pictures or listen to the jingling rhymes, and see whether Mother Goose has lost her hold on childish hearts. Some wise man has attempted to attach a metaphorical meaning to

out, "Who's been sleeping in my bed?" or when the wolf knocked at the door of little pig's house, "Little pig, little pig, will you let me come in?" Didn't you wish your cat was as smart as Puss in Boots, and that your old goose would lay golden eggs?

Do not read the stories to the children, tell them to them. Tell them with all the elocutionary power you are capable of. Forget you are a grown-up; see the story as they see it; live the adventure; make it real. Tell it in the simplest, most vivid language, so that

### Diamond Dyes Spell Economy for These Women



Made over from tan broadcloth dyed black.

"I am sending you photographs of my sister and myself, to show you what we have been able to do with Diamond Dyes. The gown that I have on I made over from material we had in a tan broadcloth Russian blouse that we never liked. We dyed this black. My sister's suit we made according to . . . . . pattern, from a grey homespun suit which we dyed navy blue. I think you can see from these photographs of my sister and myself how much Diamond Dyes mean to us."

Mrs. J. R. Raymond, New York City.

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

### Diamond Dyes

There are two classes of Diamond Dyes—one for wool or silk, the other for Cotton, Linen, or Mixed Goods. Diamond Dyes for Wool or Silk now come in Blue envelopes. And, as heretofore, those for Cotton, Linen, or Mixed Goods are in White envelopes.

#### Here's the Truth About Dyes for Home Use

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

There are two classes of fabrics—a natural fibre fabrics and vegetable fibre fabrics: Wool and Silk are animal fibre fabrics. Cotton and Linen are vegetable fibre fabrics. "Union" or "Mixed" goods are 60% to 80% Cotton—so must be treated as vegetable fibre fabrics. Vegetable fibres require one class of dye, and animal fibres another and radically different class of dye. As proof—we call attention to the fact that manufacturers of woolen goods use one class of dye, while manufacturers of cotton goods use an entirely different class of dye.

#### Do Not Be Deceived

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

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

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

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

### Just out—Sent Free New Edition, 1912, 1913 Diamond Dye Annual

This book is full of dress secrets, how to do almost magical things about the home, etc., etc.

Send us your dealer's name and address—tell us whether or not he sells Diamond Dyes. We will then send you this famous book of helps, the Diamond Dye Annual, a copy of the Direction Book, and 36 samples of Dyed Cloth—Free.

THE WELLS & RICHARDSON CO., LIMITED  
200 MOUNTAIN ST., MONTREAL, QUEBEC



Made over from grey homespun. Dyed navy blue.

and where they spend their time. It is just as important to know their books, and with what literary characters they are spending their time. Read the book yourself before you allow your child to read it, if you are unacquainted with it or its author. Children are influenced by their reading more than we imagine. I know of three boys, coming from highly-respected families, who had read sensational adventure stories to such an extent that they tried to imitate the "heroes" (so-called), with the result that they only succeeded in falling into the hands of the police, and brought a great deal of sorrow and anxiety to their homes. The average child must read, and if the poorer books are kept from him, and the better ones given, he will develop a taste for good literature, and will, after a time, detect what is trashy and untrue.

Books that give a wrong idea of life, that harrow up the feelings, where "the good die young," and so on, are not healthy books. The same story will, of course, frequently affect different children in different ways. My experience has led me to the conclusion that "The Babes in the Wood," for instance, is not a good story for children. Yet it is an old stand-by. A man remarked once, that when he was little the story never worried him at all. Well, by the time the pupils of his day went through the old set of Readers, where, in the First Book, all the pet dogs died, on to the Second Book, where Nellie Gray got lost in the snow, and the Little Match Girl was frozen, and where Somebody's Darling died in the Third, and Sir John Moore was buried (not to mention several other obsequies), till they graduated to the Fourth, in time to be present at the Death of Little Nell, Wolfe, and Montcalm, and finished their literary careers in a Country Churchyard, with an epitaph at the end—is it any wonder their feelings had become so hardened they had completely forgotten all about two little children dying alone in a deep forest, and being covered up with leaves from the cold winds by "those kind birds, the robins"!

To be a really good book does not mean that a moral should be tacked on at the end as plain as a label on a medicine bottle. Nor does it mean that all novels and stories should be condemned,—they hold a very important place,—but history, biography, travels, should also be given a prominent place. The mind grows by what it feeds on. Life is too short for a child to discover all truth for himself, therefore teach him that a "great book that comes from a great thinker, is a ship of thought, deep-freighted with truth and beauty."

Young people should form the habit of reading the newspapers. It is a matter for regret that so many of our newspapers display in the most prominent places such repugnant and degrading items that it is undesirable to place the paper in a child's hands. Yet they should be taught the proper use of these important means of education. They should become acquainted with the current thought and the public questions of the day. Education is not received alone through schools and universities. Every man is, to a certain degree, self-educated. On leaving school, a good deal of the knowledge acquired there is dropped and forgotten as being of no practical value. Then begins the self-education, part of which is received from reading books, magazines, and papers—for, as Carlyle says, "A collection of books is a real university."

This habit of reading will keep many a youth from temptation by filling his leisure hours with pleasant and profitable entertainment, where he may associate with the greatest men and women, and learn from the greatest teachers. Emerson says, "Many times the reading of a book has made the fortune of a man—has decided his way of life." But this habit of reading cannot be acquired in old age, nor in middle life—it must be acquired in youth. "Books are a guide to youth, and an entertainment for age."

"He that loveth a book will never want a faithful friend, a wholesome counsellor, a cheerful companion, an effectual comforter. By study, by reading, by thinking, one may innocently divert and pleasantly entertain himself, as in all weathers, so in all fortunes."

### Hope's Quiet Hour

#### A Marvellous Thing.

The man answered and said unto them, Why herein is a marvellous thing, that ye know not from whence He is, and yet He hath opened mine eyes.—St. John ix.: 30.

The Good Physician saw a man who had been groping in absolute darkness all his life. Apparently the blind man was too hopeless of recovery to even ask to be cured; and yet he had enough faith to obey unquestioningly a command which probably seemed unmeaning to him. He could not see the face of JESUS, but he felt His tender touch on the poor useless eyes, and recognized the authority of the command so gently spoken: "Go, Wash in the pool of Siloam." Hope sprang up in the sad heart where despair had long reigned. "Since the world began, was it not heard that any man opened the eyes of one that was born blind," whispered Despair. But the heart of the blind man had caught the ring of absolute truth in the voice of his unseen Friend. The bystanders might jeer at him; but he longed with all his strength for the blessing of sight, and would not throw away this one possible chance. Hoping against apparent hopelessness, trusting in the only One Who even dared to offer a sure, he obeyed; without arguing that the water of Siloam could not possibly cure blindness. We can imagine how faith and doubt struggled within him. Perhaps he would be forced to return as blind as before, and meet the ridicule of those who would laugh at him for his credulity. Perhaps—perhaps—it seemed too good to be true, but this Prophet had healed other people, and it might be that his life-long darkness would be rolled away. With trembling eagerness he made the experiment, and a new world dawned on his astonished consciousness. There was the glorious sky and the golden sunshine, the beauty of the waving trees, the grass, and flowers, and birds, and the wonderful mystery of human faces. These things had been around him all the time. The world was not new, but it was like stepping into heaven to be able to see it. His parents and neighbors could not understand how the change had been wrought; but they could not deny that it was the same man who had been blind, who now walked fearlessly about his business instead of sitting helplessly to beg. But the Pharisees hated the Master, and tried to convince this poor ignorant man that he owed his Healer no thanks. "Give God the praise," they said, "we know that this man is a sinner. . . . We know that God spake unto Moses: as for this fellow, we know not from whence he is."

Their arguments might sound very convincing to their ignorant followers, but they carried no weight at all with a man who had lived for years in the blackness of hopeless blindness, and now enjoyed the wonderful gift of sight. No wonder, he exclaimed in amazement:

"Why herein is a marvellous thing, that ye know not from whence He is, and yet He hath opened mine eyes." They had declared that his Saviour was not from God, but he knew better. He did not yet know JESUS by sight, but his heart and mind were convinced. Then the Master heard that this loyal but ignorant disciple had proved his loyalty by open confession of faith in Him, and by endurance of scorn and persecution for the honor of His Name. Little wonder that He sought him out and revealed Himself, not only as the Great Healer, but as the Son of God.

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"Ah, men! ye may not drone it like an old wife's song; It is not ready-lipped and loose on tongue— But ye may see the light, and seeing, silent, feel Firm the first ladder rung."

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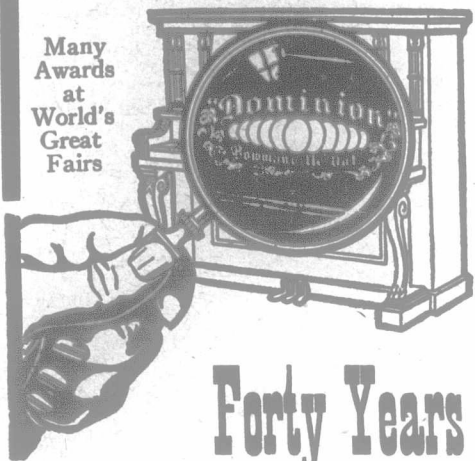
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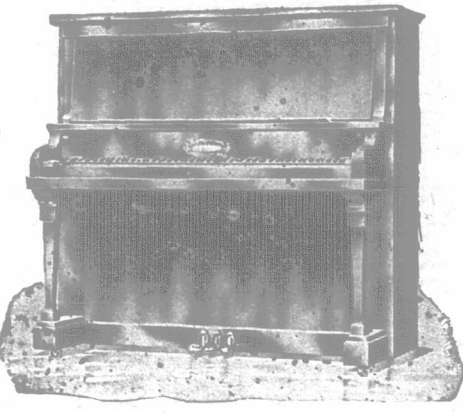
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Some are poor and ignorant, some are cultured and learned, but all know that the Light of the world is infinitely more precious than any earthly good. As the multitudes in every age declare unhesitatingly that this Man alone, of all the world's teachers, has been able to give light and peace to sin-sick, troubled souls, they are filled with amazement that anyone can doubt His authority and commission. The arguments of unbelievers can never convince those who can see. Why, a blind man could as easily convince us that there was no sun in the sky! He might say that it was impossible for it to hang unsupported in space and go on burning for ages without being burned up. His arguments might be very learned, and perhaps we could not explain how these mysteries were performed; but our faith in the sun would not be shaken. We might answer, in amazement, at the blindness of unbelievers to facts. "Why herein is a marvellous thing, JESUS has brought countless individuals and many nations out of the darkness of savagery and open crime, into the light of righteousness and civilization, and yet you are still doubting whether He is from God."

Credes rest upon reasonable proofs, or they are not fit to guide us through life.

The atheist's creed is short, but tremendous. He says—I almost tremble as I write the words—"There is no God." Let him prove that hopeless assertion if he can. Has he searched through all space, with eyes that are able to see things invisible? If not, how can he be sure? He may be daring enough to press recklessly into the midst of a plague-stricken district, unafraid of death-dealing germs, because he cannot see them; but it is far more dangerous to live in reckless disregard of God, only because he cannot see Him. The

atheist may venture to live out the belief which he professes; but death lies ahead! It may come to-day, or next year, or ten years from now. Has he any proof whatever of his terrible creed? After death, he knows it is possible that he may have to answer for his blindness before the God he has disowned. Has he, with honest, patient determination, tried to find out the truth? Has he studied the proofs, with a strong purpose, to follow obediently the God of Righteousness, if he is able to follow Him? If not, then his ignorance of God is his own fault, and his blindness is his own choice. Doubts of his unprovable creed must sometimes disturb his soul. His conscience must sometimes cry out: "Perhaps, after all, there is a God!"

The agnostic's creed is as little capable of proof. He talks vaguely about an "Ultimate First Cause" for all this visible universe, of which we form an intelligent part. His creed is that the First Cause is not only "unknown," but "unknowable." Can he prove that statement? It is rash, as well as conceited, to be sure that if we are ignorant of anything, no one else can possibly know it; if we don't know a particular person, no one else can know him. The agnostic says, in effect: "We don't know whether there is a Personal God, and no one else can know." That is simply an assertion, unproved, and unprovable; and a multitude, which only God is able to number, answers it with the counter assertion: "God is a Person, and we have a personal knowledge of Him." Certainly, we do not know everything there is to know about God. We must be infinite in knowledge to perfectly understand the Infinite. The knowledge of God is eternal life (St. John xvii.: 3), and it is a knowledge which must grow stronger within us, as we come out of the dimness of dawn into the

perfect day, when we shall know, even as also we are known.

We study history, both past and present, and we see the men and women who really obey Christ—obey Him in act and word, and also in the secret thoughts of the heart—grow steadily in beauty of heart and life. We see that many who seemed to have made utter shipwreck of life have been restored to righteousness and joy. Ask them Who worked the miracle of healing, and gave them back the purity and happiness which they had thrown away so recklessly. If they answer: "JESUS!" then you may be sure that One Who can heal despairing souls is more than a man, that He is God Himself.

Any thinking person must be convinced that love is a greater thing than a towering mountain or a huge star. Where did love come from? We all value it as infinitely precious. Are we foolish enough to think that it evolved itself from lifeless dust. If we love—as we all do—and if God does not love, then we must be higher in the scale of being than God; the creature must be above the Creator. That is an unthinkable idea.

It is a marvellous thing that people can have love in their own hearts, and can recognize the love which is such a mighty force in men, women and children, in bird and beast (perhaps in the vegetable kingdom also), and yet can doubt that the Source of this glorious sunshine of love is God Himself. They know not Whence it is—do they imagine it has come from below, that light is streaming constantly from darkness?

Our creed may be concentrated into three wonderful words—words which give light enough for heaven itself—"GOD IS LOVE." We are ignorant of His plans, but we can always trust His Love. Our Lord has proved over and over again that He can and will give rest, joy and

peace to the weary and heavy laden, if they come to Him. He has made good His tremendous claim to be the Light and Life of the world. If God is not Beauty, where does beauty come from? "The secret joy of one small, perfect flower, Were proof enough of God,—His love, His power,— And beauty fills the world." DORA FARNCOMB.

### Star-Led to the Heights.

A Christmas story, by Dora Farncomb, author of "Hope's Quiet Hour" and "The Vision of His Face." Price 35 cents, postpaid (or three copies for a dollar). The William Weld Co., London, Canada.

### The Windrow.

A movement is afoot to suppress opium-eating and smoking in India. It has been recommended and approved by the Government, that all saloons, clubs, etc., established as meeting-places for the use of opium, be suppressed.

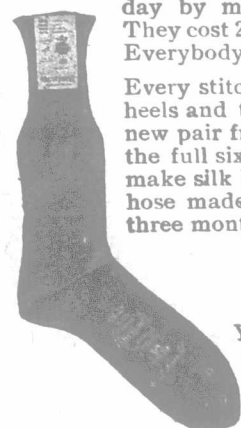
An extraordinary light, which sometimes extends almost to the zenith, has been appearing, of late, above the crests of the Chilean Andes. It is thought to be "the result of a copious issue of electricity."

In Michigan, Kansas, Arizona, and Oregon, constitutional amendments were recently adopted permitting the women to vote. There are now ten States in the Union in which women may exercise the franchise.

"We must have some methods of settling issues between nations, and if we do not have arbitration we shall have

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war. The awful results of war, with its modern armaments and frightful loss of life and treasure, and its inevitable shaking of governments and dynasties, have made nations more chary of resort to the sword than ever before, and therefore have rendered the present an excellent time for pressing the substitution of courts for force."—Mr. Taft, in The Independent.

By January, the great Assuan dam that is being built to store up the Nile, will be completed. The result will be of enormous practical benefit to Egypt, but with the rising of the waters, the wondrously beautiful ruins of the ancient temples, veritable art-galleries, of Philae, will be submerged for the greater portion of each year. In order to preserve the ruins as much as possible, the Egyptian Government has gone to considerable expense to strengthen the walls and underpin the foundations, but it is inevitable that the wondrously painted walls and beautifully carved pillars face imminent decay.

There is little in the way of laughter to be derived from the tragic condition of Turkey. But the Pall Mall Gazette war correspondent tells a tale about the Ulster Covenant that will bear repetition: "One amusing incident occurred to relieve the general atmosphere of tragedy which pervades the capital. An English Press photographer, in search of pictures, attempted to gain admittance into a sacrosanct mosque, hitherto unpolluted by the presence of an unbeliever. The Mollah in charge, who wore the green band round his turban denoting his direct descent from Mahomet, indignantly refused him admittance, whereupon the photographer put his hand in his pocket and produced a copy of the Ulster Covenant, which he had carried away from Belfast as a souvenir of his photographic exploits during Sir Edward

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Carson's campaign. The Covenant is printed in ancient characters on parchment, and stamped with a blood-red hand, which is, incidentally, a sacred Mahomedan symbol. The Mollah was so impressed by this imposing document that he salaamed profoundly, and, after inviting the photographer to enter, personally conducted him round the mosque."

**THE TURNING POINT.**

A young lady, with a trim and pretty figure, was making her way with considerable difficulty around the Flatiron Building one very windy day. Mr. Stone and Mr. Wood stood nearby in conversation. When the young lady passed them, Stone turned to Wood, Wood turned to Stone, and both turned to rubber.

**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.]

**Care of the Teeth.**

Most adults, in these days of civilization, take at least some care of the teeth. Visits are made to the dentist for scraping and filling, and a regular brushing, with some antiseptic paste or powder is given every morning. Not all adults, however, understand that for the proper removal of food particles from between the teeth, the brushing should be done with a rotary motion from the gum towards the edge of the teeth,—not crosswise of them; and not all know that brushing the teeth at night just before going to bed, is even more important than brushing them in the morning. During the day there is some chance that stray food particles may be removed, even though one may not have the opportunity of rinsing out the mouth after each meal; but during the night the mouth is at rest, and any extraneous matter within it has a fine chance to set up bacterial action, causing decay of the teeth and, perhaps, stomach trouble.

The teeth, then, should be brushed morning and evening, and the mouth rinsed out after meals. When brushing, use tepid water if possible, and a rather small brush that may be easily forced to all parts of the teeth, inside and out. A fairly stiff-bristled brush is best, and one with the bristles in rather widely-separated clusters will be found to be the most easily kept clean. Peo-



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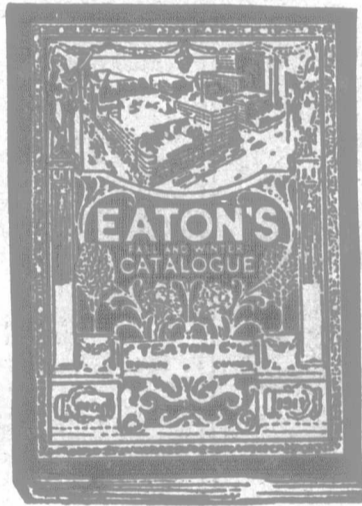
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ple who are very careful of their teeth use a tooth-powder at night and an antiseptic paste in the morning. If there is a tendency to great acidity in the mouth, a mouth-wash of listerine and water every night will be found beneficial.

It is not, perhaps, as well understood as it should be that the first teeth of little children should be taken care of just as faithfully as those of the older ones. Not only should they be brushed every day,—they should also receive dentist's attention whenever a trace of decay appears. If they are permitted to decay, stomach trouble may ensue. If they are pulled, the likelihood is that the jaw-bones of the child will not be properly developed; his "good looks" will be impaired. Moreover, experiments in all parts of the world have shown that children whose teeth are bad do not develop as well either in body or in mind as those whose teeth are kept in good condition. They have a tendency to "bolt" their food; as a result comes indigestion, the little bodies are not sufficiently nourished to make full development, and there is a general lassitude and dullness that greatly affects keen, eager work at school. In Germany, dental inspection of schools has been the rule for many years.

While touching upon this point of improper development of the jaw-bones, it may be in place to note that another frequent cause of unequal development of these bones, also the nose frame, is mouth-breathing, which has thus ruined the good looks of many a child. Children should be taught to keep their lips closed and to breathe through the nose. If there seems to be any obstruction, they should be taken to a good doctor,—to a throat and nose specialist, if possible. The chances are that the difficulty is caused by adenoids, an exceedingly common affliction of children, and, indeed, of young folk up to twenty years of age or more. It is safe to say that half of the home-diagnosed "chronic colds" and "catarrh" cases are nothing but adenoids.

Adenoids are simply lumps that grow in the lower part of the nose passages and the back of the throat. They cause difficulty in breathing at all times, but especially if one has taken cold, as they then become inflamed and swollen. Occasionally the patient "grows out of them," but often the persistent mouth-breathing causes serious bronchial and lung trouble. The risk of leaving them is too great to run, and the excrescences should be removed by a skilful physician or surgeon. The operation, although bloody, is, in the hands of a careful operator, attended with very little danger, the patient usually being about as usual in a few days.

#### JELLY ROLL—HAIR DRESSING.

Dear Junia,—I have long been an interested reader of your helpful Nook, but never ventured to write until now. I am coming, like many others, with my troubles, and asking for your help.

I have had considerable trouble in baking lately. The first question I would like to ask is how to make a jelly roll? I have tried to make one several times, but have always failed. I have either mixed it so thick that it would break in rolling, or else so thin that it would not come off the pan. I would like to know the exact amount of flour to put in it.

2. I am seventeen years old, and have some trouble in "doing up" my hair to look becoming. I have tried it in coils at the back, but it is so heavy it sags down. It is fair, and very thick. If you could give me some information along these lines, I would be very grateful. I know you have been answering questions about hair-dressing lately, so hope mine will not trouble you too much.

As this is my first letter, I guess I will close, thanking you in advance for your kind information, and wishing the Nook every success. I will sign myself Grey Co., Ont. "CHERRY."

Here are two recipes for rolled jelly cake, the second of which was given us at cooking school.

(1) Stir together 1½ cups brown sugar and 3 eggs. Add 1 cup sweet milk and 2 cups flour with which have been mixed 1 level teaspoon soda and 1 of cream tartar. Beat in 1 teaspoon essence of lemon, and bake in a long, thin sheet.

(2) One egg (do not beat), ½ cup sugar, ½ cup sweet milk, 1 cup sifted flour with which has been mixed 1 teaspoon baking powder. Put all in a bowl and stir (not beat) until smooth. Grease a pan, then dust it with flour. Put on the batter and bake a few minutes. The tin should be so large that the batter will spread out in a thin sheet. When done, turn the cake out at once on a cloth, spread quickly with jam or jelly, and roll up at once while it is still hot. Last of all, roll the cloth around it to make it keep its shape, and leave until cool. Remember that this cake cooks very quickly, and do not let it burn.

If you pin a small "rat" firmly to your hair as a foundation upon which to pin the coils, they will not likely sag. But you are not compelled to wear it that way. Very heavy hair often looks beautiful in a coronation braid around the head, or in a coil of braids covering the back of the head. There is a great latitude in styles nowadays, and people are at liberty to do almost as they choose in regard to clothes and hair-dressing. The one essential is that the styles chosen be becoming.

### The Beaver Circle. OUR SENIOR BEAVERS.

[For all pupils from Senior Third to Continuation Classes, inclusive.]  
Dear Beavers :-

The following are the results of the competition on "The Work I do at Home."

Prize-winners:—Enoch Arden, Bruce Co., Ont.; Winnifred Baker, Elgin Co., Ont.; Anna Brownlee, Lambton Co., Ont.; Loyd Grose, Peel Co., Ont.; Edith Bates, Wolfe Island, Ont.

Honor Roll:—James Atchison, Louise Shales, Ida Buchanan, Winnifred Colwell. Winnifred Colwell, by the way, wrote a delightful little composition which we will publish later, but she did not keep to her "text," as very little of it was about the "work" she does.

We are glad to see that so many of our boys and girls are not afraid of work, and that so many say they really "like" to do it. A fair amount of work always helps to make manly men and useful women, such as all our boys and girls should aim to be.

#### The Prize Essays.

No. I.

When the winter months set in, my work, as a farmer's boy, lies chiefly in doing chores—feeding and attending to live-stock and getting up wood. As we do not do much teaming, this season of the year is comparatively easy.

After the snow has all gone and the ground is dry enough I commence spring work. With the exception of looking after the team I work, I do not have many chores to do then. Fortunately the horses are rather soft and must not be worked too hard, or I do not know what I would do. I get pretty hungry as it is. As I am the oldest boy at home I have the most of the heavy part of spring work to do.

There comes a short breathing spell after seeding, when we fix up fences or do some chores of that nature. Then haying starts. I do most of the cutting and help to coil up and pitch on. We unload with a hay fork, and I help in the mow. Fall-wheat harvest comes in after haying, and hoeing roots. Of course we hoe roots before this, but the bulk of it is done at this time.

The next work is the oat and barley harvest. I do not do any cutting, but do most of the stooking. I build most of the loads also, and as we have no slings I have to pitch the grain off again. We do not have a great deal of this crop, and it does not take long to complete it.

After harvesting there is a time for fixing up stables, and making different improvements about the place before fall ploughing starts. With the exception of taking up the roots, fall ploughing continues, then without any interruption till the snow flies again. I do most of it.

As I do not think I would like to be a farmer, I will not state an untruth by saying I really love this kind of work. One pleasing feature about a farmer's life is that his work is not monotonous. It is not the same daily routine. Of course there are things I like in a farmer's work, to say nothing of his surroundings.

Whatever I may think when I am working it is a well-known fact that work is one of the greatest forces in character building. With few exceptions our great men and women of the past and to-day can trace their lives back to the day when they had to work for what they got. More than that it is a pleasant reflection to think that a great many of them did that work on the farm.

ENOCH ARDEN.

There is nothing like being honest, Enoch. I do not for a moment think that all boys born on farms should be farmers. It quite stands to reason that some born there may have marked talent for other things, and surely each boy and girl in the world should do just what he or she is best fitted for. At the same time everyone who takes up anything else as a life-work must expect to come upon hard places in that as well as farming. There is no occupation that has not its hardships and difficulties, and perhaps it is well that this is so. We grow strong by overcoming.

By the way, Enoch, why do you choose a nom-de-plume? We like real names best in the Beaver Circle, and, as a rule, insist upon them. Is it because you are sixteen years old and so

## Insist on the plain facts --- know them before buying any piano

THINK for a moment! You are not likely to buy a piano more than once during your life. See then, that you buy a first-class instrument—one that an expert should rise from ten years after this and be able to honestly declare "This is a superb piano."

Here are the inside facts—the real reasons why the

### Sherlock-Manning 20th Century Piano

## "Canada's Biggest Piano Value"

should be your choice. Study them carefully and write to us direct asking how we can sell this beautiful instrument at such a moderate price. But—study the main facts before writing, then you'll be anxious to know how we manage to save our customers about \$100.00.

The appearance of the Sherlock-Manning makes friends of people, who appreciate excellency in design and finish, at the first glance. Every Sherlock-Manning 20th Century Piano has

- 1st, The famous Otto Higel Double Repeating action—
- 2nd, Polihmann Wire—the best imported—
- 3rd, A strong, full-iron plate—
- 4th, Welckert Felt Hammers—they are the best money can buy.
- 5th, Billings Brass Action Flange—the flange that is impervious to weather conditions.

In short—all Sherlock-Manning Pianos are guaranteed to possess every feature making for piano perfection. Our factory is modern in every respect—equipped with the latest labor-saving machinery and our employees are all specialists in their particular departments. But—it's our different way of doing business that effects the substantial saving so pleasing to our customers. Write direct to us for full particulars regarding the initial economy and lasting value of

Sherlock-Manning 20th Century Piano.

**The Sherlock-Manning Piano & Organ Co.**  
London (No street address necessary) Canada



Louis XV. Design  
Style 105  
Many others to choose from.



Why not have a good Coon Coat?  
Why our Coats are in demand. They are made from perfect full furred skins.

They are cut on a generous pattern with large full skirt. When you sit down you have something to wrap around you that will keep you warm. Lined with the best quality quilted farmer's satin, leather shields, hanger protector, etc.

Prices range from \$75.00 up.

Send chest measure when ordering.

Our Coats are sent express paid, subject to being satisfactory to purchaser, or money refunded in full.

Any Furs purchased from McKay are subject to the above guarantee. Write for catalogue and full information.

**JOHN McKAY**

THE FUR HOUSE

Kingston, Ont.

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BEST RESULTS ARE OBTAINED FROM ADS. IN "ADVOCATE."

### 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.

**A** SNAP—Twenty S.C. Black Minorca cockerels; grand birds, bred from exhibition matings; \$2 each. M. H. Peterson, Norham, Ont.

**C**HOICE White Wyandotte cockerels, from good laying strain; two dollars each. Randolph Webber, Woodstock, Ont., R.R. No. 2.

**E**XTRA Choice S.-C. Brown Leghorn cockerels (Becker strain), \$2 each. David A. Ashworth, Maple Grove, Ont.

**F**OR SALE—A number of extra good single-comb white Leghorn cockerels; \$1.25 apiece. William Facey, Tavistock, Ont.

**F**OR QUICK SALE—A number of guinea-fowl at one-fifty a pair. E. Malyon, Uzbridge, Ont.

**F**OR SALE—Single-comb White Leghorn cockerels and pullets. Good birds, \$2 a pair and up. Eggs for hatching. R. Hughes, Ideal Poultry Yards, Collingwood, Ont.

**F**OR SALE—Prizewinning Mammoth Bronze turkeys and African geese. Write: Jos. Black, Donville, Ont.

**H**OUNDANS for sale—5 extra fine trios properly mated at \$7 a trio; satisfaction or your money back. One fine yearling cock bird, a dandy at \$4. Write me: W. V. Charlton, W. London, Ont.

**M**ONEY in Poultry—Our bred-to-lay strains are putting poultry keeping on a paying basis for hundreds of farmers. Write for illustrated catalogue and Summer Sales List. They are free. L. R. Guild, box 16, Rockwood, Ont.

**M**AMMOTH Bronze Turkeys—strong vigorous birds, large flock, full range; get first choice. Mrs. W. R. Armstrong, Importer and Breeder, New Market, Canada.

## Dorset Ewes

In lamb. Ewe lambs. Chester White Boars about five months old. One Holstein bull 12 months old. All of the choicest breeding, and will be sold at a bargain to make room.

R. H. HARDING, THORNDALE, ONTARIO  
Mapleview Farm.

# BABY'S OWN SOAP



To help the tender skin of an infant is the Baby's Own Soap standard.

For four generations, it has won unstinted praise and today Baby's Own is the recognized leader for nursery and toilet.

Its pure, creamy, fragrant lather softens and heals, and its daily use is a renewed delight.

**It's Best for Baby and Best for You.**

Sold almost everywhere—  
but insist on Baby's Own.

ALBERT SOAPS, LIMITED, Mrs., - - - MONTREAL. 4-12



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock.  
TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

ALL kinds of Farms—Fruit Farms a specialty. W. B. Calder, Grimsby.

AGENTS wanted—Good reliable agents wanted in every locality to sell and erect the best lightning rods made. Only responsible parties need apply, as we have an interesting, good paying proposition to the right parties. Apply Box B, Farmer's Advocate, Toronto.

BRITISH Columbia Ranches, Vancouver Island. Ideal climate, no cold weather; no hail, frost or bad storms; abundant crops assured; richest of soil, unsurpassed for growing grain, fruit and vegetables. The poultryman's paradise. Best market in the world. Improved and partly improved ranches, 5 acres and upwards. Easy terms of purchase. Come to the Pacific where life is worth living. Abundant sport, finest of hunting, fishing and boating. For further information and full particulars write Dept. F., Stuart, Campbell, Craddock & Co., 521 Fort Street, Victoria, or 425 Pender Street West, Vancouver, B.C.

CREAM WANTED—We guarantee highest prices, correct weights, accurate tests, prompt returns. Write for free cans and try a few shipments. Toronto Creamery Co., Limited, Toronto.

EXPERIENCED working manager wants job. Mixed farming; also expert hens and incubators. Good references. Box L61, Melbourne.

FARM and town properties for sale in the Garden of Ontario. A. W. Ross, Box 181, Blenheim.

FARM HANDS—single; also married couples require work, farm and domestic. Employment Agency, 140 Victoria St., Toronto.

FARM FOR SALE—150 acres good clay loam, good orchard, spring creek, first class buildings, silo, convenient to station, churches and schools. For further particulars apply, Box 64 Princeton.

VANCOUVER ISLAND, BRITISH COLUMBIA, offers sunshiny, mild climate; good profits for men with small capital in fruit-growing, poultry, mixed farming, timber, manufacturing, fisheries, new towns. Good chances for the boys. Investments safe at 6 per cent. For reliable information, free booklets, write Vancouver Island Development League, Room A, 23 Broughton St., Victoria, British Columbia.

WANTED—Cash paid for Military Land Grants in Northern Ontario. Please state price and location. Box 88, Brantford.

WANTED—Position as farm manager. Experienced all branches. Scotsman, married, references if required. Geo. Lillie, care Goodfellow Bros., Macville, Ont.

WANTED—An experienced girl for general housework on a farm. Apply: Mrs. Albert Wallace, Puce, Essex Co., Ont.

WANTED—First-class dairy farm hand; must be capable and ambitious; no others need apply. Wages \$325 per year and board. Box 90, Farmer's Advocate, London, Ont.

WANTED—CUSTOM TANNING—Send me your cattle and horse hides, and have them tanned and made into robes and coats. Deerskins tanned for buckskin, also made into mitts and gloves. We tan all kinds of hides, skins and furs. Send them to me and have them dressed right. B. F. BELL, DELHI, ONT.

## HAPPY THOUGHT



### Why Bread is Better Baked in Some Ranges Than in Others

It is all a matter of the way the heat gets into the oven. Some stoves have ovens that heat easily and quickly and remain very hot.

Others have ovens that require a wasteful amount of fire in the fire-box before baking heat is reached.

These are the two extremes. For some things each type has advantages. But for *all* your requirements neither is really satisfactory.

"Happy Thought" Ranges give you the heat in the oven that exactly corresponds with the fire in the firebox.

So a little fire means a light heat and a big fire means a perfect hot-blast in the oven.

In baking bread, this feature enables you to secure the benefit of every

ounce of heat—to make every lump of coal pay for itself—to continue the heat steadily for as long as you wish in order to have the bread baked uniformly all the way through.

More than a Quarter Million Canadian women use the "Happy Thought" every day.

HAPPY THOUGHT RANGES

Are sold in your locality. Ask your hardwareman.

THE WILLIAM BUCK STOVE CO., LIMITED, BRANTFORD, ONT.

BEST RESULTS ARE OBTAINED FROM ADS. IN "ADVOCATE."

nearly out of the Beaver Circle? Thinking that this may be the reason we have let your pen-name stand. Do you intend to graduate to the Roundabout Club this winter? We think you should do fairly good work there.

No. II.

Seeing the competition for Senior Beavers I thought I would try, as my last description of the weeds was published. I don't want you to think me greedy for trying both competitions, for I do not mean to be.

I think that boys and girls (those that do not like work) should try to like it. I have often seen ones who would rather do almost anything than work. Our fathers and mothers generally expect us to be able to help them in their work, and if we prove not to be willing they will be disappointed if they do not show it. We should try to follow these lines of poetry, "Serve faithfully others, our pleasure comes next." These are not the exact words, but this is what they really mean in my words. Some girls and boys may work just for the sake of working because their mother has told them to. Children with this thought in mind are very liable not to do the work right. But we should count the number of things our parents have done for our good, feed, clothe, and buy us toys and school supplies, give us money when we want it for something necessary, and many more things. Now if we would stop a minute and see if our parents are worthy of our help I am sure that we all would say "of course." Don't you think so Puck? I myself like to work. I do not know if all the rest have the same opinion or not, but I do not see any reason why I should not want to work.

I like to work and hear my mother or father say, "Well done! Why I did not know I had such a little helper," and many other kind words.

I will tell you about the work I really do. Some may think my work very small compared to what they have to do, but I am just telling you what I do just in this season.

In the morning when mamma or papa calls me I get up and dress. I go in to my small brother's room and see if he is all right, then I come downstairs and set the table. When I have finished that I help mamma make the porridge, etc. When breakfast is over I clear up the dishes, leaving things for my small brother who does not rise very early. Then I clean the lamps and fill them with oil if needed. By this time my brother will come toddling downstairs. I dress him right away and give him his breakfast. Now I clear up the dishes and wash them, then get some water and wash the separator. When most of my work is finished, I call Albert, my older brother, and help him get ready for school. As soon as he is ready, I get myself ready while mamma gets our lunches. Maybe it will be rather early, so I put on my big work apron and peel enough potatoes for dinner, which helps mamma very much. Then when my schoolmates come along I go with them to school.

At night when I come home I go and get the cows (written in autumn), then I help get the supper. When the cows are milked I feed the cats and hunt the eggs. When I come in, I put the separator together and help with the rest of the work. I generally light the lamps when darkness comes, for I like to do this. Then when my brothers get tired I take the lamp and put them to bed. Then I come down and put all the newspapers, books, etc., away, so that they will be out of the way for the morning. Now when I begin to get drowsy, I put the cats out in the back kitchen and go to bed, and have a good rest for the next day.

As my composition is getting lengthy, I will close, and if this is printed I hope that it will not take up too much room of the Beaver Circle corner.

I remain your friend,  
WINNIFRED M. BAKER.  
Southwold Sta. (Age 11, Jr. IV.)

No. III.

Dear Puck and Beavers:—  
As this is my first attempt at writing to the Beaver Circle, I hope my letter won't fly into that terrible w.-p. b. I am now going to tell you what I do for my parents, and how I like it. This is written without help of any kind.

I get up in the morning and get the cows, and then I help milk them. After I get done milking I have my breakfast, and then help with the pails and dishes. When this is done I practice my music lesson, and then comb my hair and go to school. I get home at five o'clock at night. I help milk, help do the dishes and then have fun. This goes on the same until Saturday, and then I am always ready for a big day's work.

Mother and I get up and do the usual morning work, and then I clean the upstairs while mother does the baking. Sometimes I mop, but it does not agree with me very well. I go for walks on Sunday in the forenoon, and to church in the afternoon. Somedays I stay home and pick potatoes and apples. I like doing this and I also like girls' and boys' work. If we try we can all help our parents. In the summer I drive the horses on the hay fork.

EDITH M. BATES.

Allen, Wolfe Island. (Age 13, Sr. IV.)

No. IV.

Dear Puck and Beavers :-

This is a letter for the competition about the "Work I do at Home." We have a large barn which makes lots of room to work. When I come home from school I go straight to the barn and attend to my calves, such as bedding them and feeding them; then I go and get the cows and tie them in ready to milk after supper. After supper I come down and clean a couple of horses and bed them. In the morning I do not go down to the barn before breakfast very often, but after breakfast I go to the barn and feed my chickens, and help to clean out the stables.

I have not told you anything about haying and harvest. In haying I drive the horses on the hay-loader and rake all the hay-fields, and I drive the horses on the hay-fork when they are in the barn. In harvest I pitch sheaves in the mow and rake all the grain fields. When we are taking up our roots I help to pick the mangels and turnips. I think if girls and boys would work a little more they would be stronger, and I like it fine. I have done this without any help. I thought I might get in the "Honor Roll" anyway.

LOYD GROSE.

Goldstone, Ont. (Age 11, IV.)

P. S. I cannot enter the garden competition, because a frost came before I got my picture taken.

No. V.

Dear Puck and Beavers :-

I am now taking the opportunity of writing to you about "The Work I do at Home." You say that you think more boys than girls will write on this topic. Well, I am not a boy, but I consider myself just as good as a great number of boys my age, at outside chores.

When I was eight years old, I used to drive the horses on the hay-loader, during the haying, for my father as well as help milk, feed the calves, wash the separator, etc.; but as we have been living in town since a year ago last February my work is not the same as it was on the farm.

First thing in the morning after I have my breakfast I go and practice my music lesson an hour. If I get this done a few minutes before school time, I go and feed the chickens. I go to school at nine o'clock in the morning, and come home for dinner from twelve until a quarter past one; after four I do all the little errands my mother wants me to, and besides this I go down town for the mail every evening. After I have my supper I sometimes help with the dishes and then do my home work.

My father has two horses, they are both very quiet, and, as he is away nearly every day with one of them (on fire insurance business) I have the other one to feed hay, oats, and give him a drink of water. I can clean either one of them if it is necessary.

In the winter time a large number of the boys and girls go to the rink to skate, and I, quite often, am among the number.

I think that all the boys and girls should have a course of work to do each day, so as to prepare them for manhood and womanhood.

ANNA GERTRUDE BROWNLEE.

Alvinston P. O., Ont. (Age 13, Sr. IV.)



'CAMP' SAVES TIME!

Get a bottle to-day—start it breakfast to-morrow, and you'll be in good time for your train. Saves trouble, too—and cost; puts you on good terms with yourself—makes heavy work seem light.

Just 'Camp' and boiling water—ready in a tick

YOUR GROCER SELLS 'CAMP.'

'CAMP' COFFEE

Sole Proprietors:  
R. Paterson & Sons, Ltd.,  
Coffee Specialists, Glasgow.



Take A Handful Of "St. Lawrence" Sugar Out To The Store Door

—out where the light can fall on it—and see the brilliant, diamond-like sparkle the pure white color, of every grain.

That's the way to test any sugar—that's the way we hope you will test

St. Lawrence Sugar

Compare it with any other sugar—compare its pure, white sparkle—its even grain—its matchless sweetness.

Better still, get a 20 pound or 100 pound bag at your grocer's and test "St. Lawrence Sugar" in your home.

ST. LAWRENCE SUGAR REFINERIES LIMITED, MONTREAL.

67A

Winter Protection



Protect your face as you would your hands and feet, and the worst blizzard will lose half its terrors.

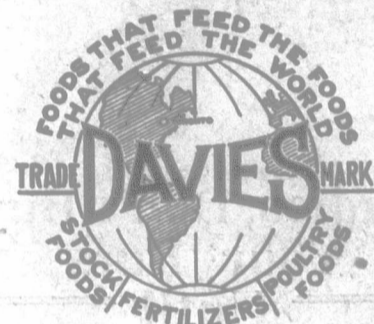
THE DYSTHE FACE PROTECTOR

is a wonderful boon to Doctors, Liverymen, Railway Employees, Farmers, and others compelled to face all kinds of weather.

PRICE \$1.00. POSTPAID

Made of flannel, with cloudless goggles. Perfectly sanitary. Recommended by all medical authorities. Write to-day for one.

M. DYSTHE, 302 Toronto St., WINNIPEG, MAN.



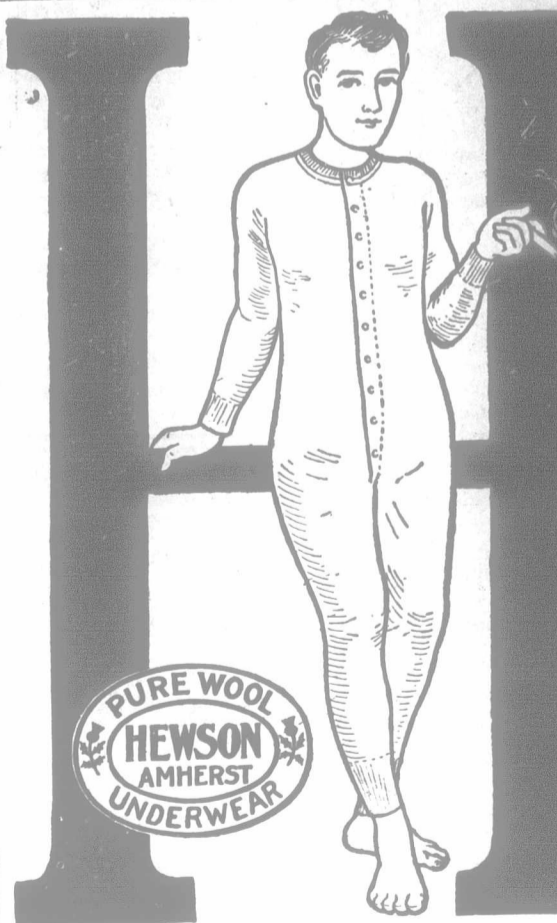
Information from our local agent, or write:  
The William Davies Co., Limited  
Commercial Fertilizer Department,  
Toronto, Canada.

Butter! Butter!! Butter!!!

Why make butter during the winter months when you can ship your cream weekly, and get the highest market price? If within one hundred miles of London we can guarantee you, for your butter-fat for November, 30c. per pound f. o. b. your nearest express office, and supply cans for shipment (6, 8 or 10-gallon to suit your requirements). We remit immediately each shipment is tested. A postcard will bring a can (specify size suitable), and enable you to give this system a fair trial.

SILVERWOODS, LIMITED,  
Successors to Flavell-Silverwood, Limited  
LONDON, ONTARIO.

When writing mention Advocate



HEWSON'S UNSHRINKABLE UNDERWEAR

A delightful sense of comfort and warmth—a feeling of being well clad is experienced the moment you don a suit of Hewson's Unshrinkable Combinations. Made from choicest wools—fits smoothly and snugly to every line and curve of the figure—yields freely to every movement. Then too—there are no rough seams to irritate the skin—each seam being bound neatly by special machinery.

The next time you want underwear, don't just ask for underwear, ask for Hewson's Unshrinkable

Hewson Pure Wool Textiles, Limited  
AMHERST, N.S. 64





**Ladies, Don't Buy  
Your Furs  
Until**

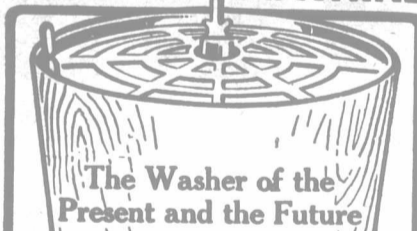
you have seen our handsome fur catalogue. We will send one to you absolutely free. And you will surely find in it just the coat or the muff, or the stole that you have set your heart upon getting for this season. You will find, too, that the cost is exceedingly reasonable.

This catalogue is, without doubt, the most attractive and complete of its kind in Canada, and every lady reader of the Farmer's Advocate should certainly get one if she intends to buy furs for this season.

Send for it to-day. A postal card is all that is necessary.  
Address:

**DEPARTMENT F.A.  
HOLT, RENFREW & CO.  
Yonge St., TORONTO**

**NEW CENTURY  
WASHING MACHINE**



**The Washer of the  
Present and the Future**

Scientists tell us that some day no person will do hard manual labor—machines will do it all! The first great step has already been accomplished, as far as household work is concerned. The New Century Washer, not only takes all the hard manual labor away from washing, but it washes clothes better than such work has ever been done before. The water tap furnishes the power, the New Century does nearly all the rest.

Washing machines are not new but the New Century is. The other kinds did some of the work, the New Century does *all* the work. The others gave trouble, the New Century saves trouble. The difference is in the patented and exclusive features of the New Century. Ask your dealer about them or send to us for full information.

**CUMMER-DOWSWELL, LIMITED  
HAMILTON, ONTARIO**

**COLD IN HEAD  
CATARRH  
INSTANTLY RELIEVED BY THE OLD  
DR. MARSHALL'S  
CATARRH SNUFF  
25¢ AT ALL DRUG STORES OR SENT PRE-PAID BY L.H. KEITH, CLEVELAND OHIO**

**REBECCA OF SUNNYBROOK FARM.**

By Kate Douglas Wiggin.

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

CHAPTER VI.

SUNSHINE IN A SHADY PLACE.

The little schoolhouse on the hill had its moments of triumph as well as its scenes of tribulation, but it was fortunate that Rebecca had her books and her new acquaintances to keep her interested and occupied, or life would have gone heavily with her that first summer in Riverboro. She tried to like her aunt Miranda (the idea of loving her had been given up at the moment of meeting), but failed ignominiously in the attempt. She was a very faulty and passionately human child, with no aspirations towards being an angel of the house, but she had a sense of duty and a desire to be good,—respectably, decently good. Whenever she fell below this self-imposed standard she was miserable. She did not like to be under her aunt's roof, eating bread, wearing clothes, and studying books provided by her, and dislike her so heartily all the time. She felt instinctively that this was wrong and mean, and whenever the feeling of remorse was strong within her she made a desperate effort to please her grim and difficult relative. But how could she succeed when she was never herself in her aunt Miranda's presence?

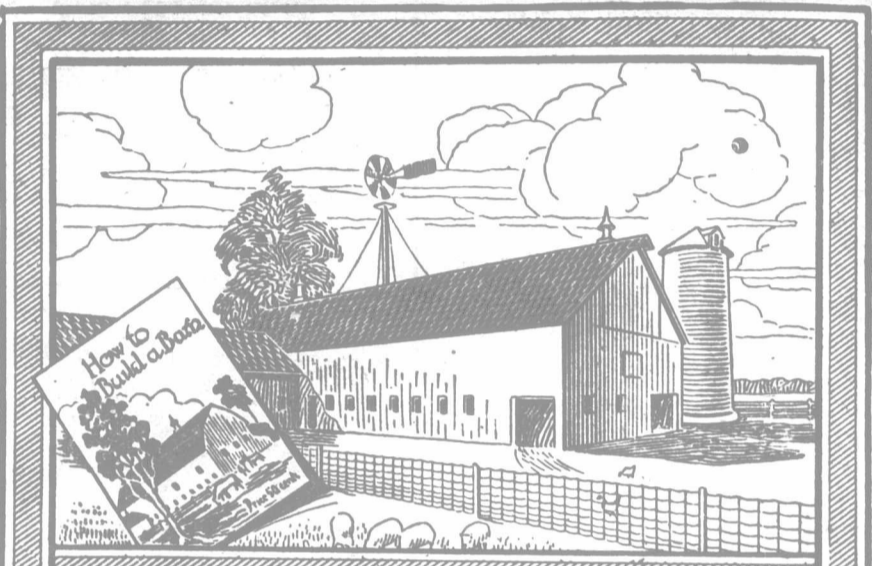
The searching look of the eyes, the sharp voice, the hard knotty fingers, the thin straight lips, the long silences, the "front-piece" that didn't match her hair, the very obvious "parting" that seemed sewed in with linen thread on black net,—there was not a single item that appealed to Rebecca. There are certain narrow, unimaginative, and autocratic old people who seem to call out the most mischievous, and sometimes the worst traits in children. Miss Miranda, had she lived in a populous neighborhood, would have had her doorbell pulled, her gate tied up, or "dirt traps" set in her garden paths. The Simpson twins stood in such awe of her that they could not be persuaded to come to the side door even when Miss Jane held gingerbread cookies in her outstretched hand.

It is needless to say that Rebecca irritated her aunt with every breath she drew. She continually forgot and started up the front stairs because it was the shortest route to her bedroom; she left the dipper on the kitchen shelf instead of hanging it up over the pail; she sat in the chair the cat liked best; she was willing to go on errands, but often forgot what she was sent for; she left the screen doors ajar, so that flies came in; her tongue was ever in motion; she sang or whistled when she was picking up chips; she was always messing with flowers, putting them in vases, pinning them on her dress, and sticking them in her hat; finally she was an everlasting reminder of her foolish, worthless father, whose handsome face and engaging manner had so deceived Aurelia, and perhaps, if the facts were known, others besides Aurelia. The Randalls were aliens. They had not been born in Riverboro nor even in York County. Miranda would have allowed, on compulsion, that in the nature of things a large number of persons must necessarily be born outside this sacred precinct; but she had her opinion of them, and it was not a flattering one. Now if Hannah had come—Hannah took after the other side of the house; she was "all Sawyer." (Poor Hannah! that was true!) Hannah spoke only when spoken to, instead of first, last, and all the time; Hannah at fourteen was a member of the church; Hannah liked to knit; Hannah was, probably, or would have been, a pattern of all the smaller virtues; instead of which here was this black-haired gypsy, with eyes as big as cartwheels, installed as a member of the household.

**COMFORT SOAP**

**IT'S ALL RIGHT**      It's as Pleasing as Its Name  
Comfort Soap

POSITIVELY THE LARGEST SALE IN CANADA



**Here is a Book  
of Facts About  
Barns. It is FREE**

**T**HERE never was a book like this before. There never was such a book published to which you could turn for all the information you require about the planning, building or equipment of a barn.

This book shows complete and practical plans of several splendid barns, drawn from experience by practical men. It also contains many pages devoted to barn equipment—to numerous handy features which can be installed at small cost in your spare time, to make your present barn more valuable, convenient and healthy.

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Even though you do not intend to build a new barn right away, you should have this book.

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how to install labor saving devices and important conveniences that will make the work around the barn easier.

It shows you how to select the right materials—those that will serve your purpose best and cost you the least.

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**THE GALT ART METAL CO., Limited  
156 STONE ROAD, GALT**

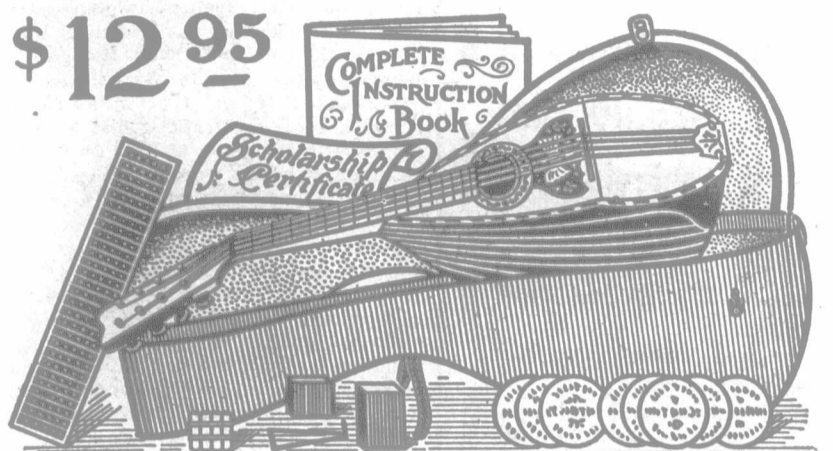
BRANCHES—General Contractors Supply Co., Halifax, N.S.; Ealey & Co., St. John, N.B.; R. Chestnut & Sons, Fredericton, N.B.; J. L. Lachance, Ltd., 253 St. Paul St., Quebec, Que.; Wm. Gray Sons-Campbell, Ltd., 583 St. Paul St., Montreal, Que.; Montague Sash and Door Factory, Montague, P.E.I.; Fife Hardware Co., Fort William, Ont.; Galt Art Metal Co., Ltd., 839 Henry Ave., Winnipeg, Man.; Gorman, Clancy & Grindley, Ltd., Calgary, Alta.; Gorman, Clancy & Grindley, Ltd., Edmonton, Alta.; D. R. Morrison, 714 Richard Street, Vancouver, B.C.

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BEST RESULTS ARE OBTAINED FROM ADS. IN "ADVOCATE."

\$12.95



**A Magnificent Mandolin Outfit \$12.95**

This is a superb instrument, and never before has a Mandolin of this description been offered at anything like so low a price.

**Look at the Completeness of this Outfit.**

- One special Mandolin—as described.
- One leather bound Canvas Case, durably constructed and flannel lined.
- One set of Tuning Pipes.
- One lettered Fingerboard Chart.
- One complete Instruction Book.
- One extra set of good strings.
- One Pick.
- One Complete Scholarship Certificate in the United States School of Music—one of the best institutions of its kind in North America. Such a course of expert tuition is itself worth more than we are asking for the whole outfit.

Mandolin Outfit Complete \$12.95.

An instrument of similar excellence is regularly sold by Music Dealers at double the price we are asking for complete Mandolin Outfit.

This special Mandolin is of American Manufacture. It has twenty-one ribs with white wood strips between; a rosewood veneered head; beautiful fingerboard of solid pearl inlaid with pearls of contrasting colors; and round the edge a splendid binding of alternate inlays of ebony and pearl. The sound-hole is bordered with a beautiful inlay of pearls of contrasting colors in fancy designs, and the celluloid guard plate is inlaid with a butterfly in varicolored pearl.

Truly an extraordinary instrument, and one that will command the admiration of all, both for beauty of design and richness of tone.

**Players and learners alike, should take this opportunity of getting a splendid instrument at a very low price.**

**We sell musical instruments of every kind and up to the highest prices. Violins up to \$500.00 each.**



**Our Big Musical Encyclopedia FREE**

"Claxton's Musical Treasures."



EVERYTHING IN MUSIC CANADA'S LARGEST MUSICAL PAUL ORDER HOUSE.

TORONTO, CANADA.

Address Dept. 18 for your copy—it's free.

This delightful book is of the greatest value to all lovers of Music. Those who play a musical instrument, or who would like to play, will find this book a mine of interesting and useful information. It shows some marvellous musical bargains, and is very handy as a shopping guide. The Mandolin and Outfit described above is only one of many bargains to be found in "Claxton's Musical Treasures."

What sunshine in a shady place was aunt Jane to Rebecca! Aunt Jane with her quiet voice, her understanding eyes, her ready excuses, in these first difficult weeks, when the impulsive little stranger was trying to settle down into the "brick house ways." She did learn them, in part, and by degrees, and the constant fitting of herself to these new and difficult standards of conduct seemed to make her older than ever for her years.

The child took her sewing and sat beside aunt Jane in the kitchen while aunt Miranda had the post of observation at the sitting-room window. Sometimes they would work on the side porch where the clematis and woodbine shaded them from the hot sun. To Rebecca the lengths of brown gingham were interminable. She made hard work of sewing, broke the thread, dropped her thimble into the syringa bushes, pricked her finger, wiped the perspiration from her forehead, could not match the checks, puckered the seams. She polished her needles to nothing, pushing them in and out of the emery strawberry, but they always squeaked. Still aunt Jane's patience held good, and some small measure of skill was creeping into Rebecca's fingers, fingers that held pencil, paint brush, and pen so cleverly and were so clumsy with the dainty little needle.

When the first brown gingham frock was completed, the child seized what she thought an opportune moment and asked her aunt Miranda if she might have another color for the next one.

"I bought a whole piece of the brown," said Miranda laconically. "That'll give you two more dresses, with plenty for new sleeves, and to patch and let down with, an' be more economical."

"I know. But Mr. Watson says he'll take back part of it, and let us have pink and blue for the same price."

"Did you ask him?"

"Yes'm."

"It was none o' your business,"

"I was helping Emma Jane choose aprons, and didn't think you'd mind which color I had. Pink keeps clean just as nice as brown, and Mr. Watson says it'll boil without fading."

"Mr. Watson's a splendid judge of washing, I guess. I don't approve of children being rigged out in fancy colors, but I'll see what your aunt Jane thinks."

"I think it would be all right to let Rebecca have one pink and one blue gingham," said Jane. "A child gets tired of sewing on one color. It's only natural she should long for a change; besides she'd look like a charity child wearing the same brown with a white apron. And it's dreadful unbecoming to her!"

"Handsome is as handsome does," say I. Rebecca never'll come to grief along of her beauty, that's certain, and there's no use in humoring her to think about her looks. I believe she's vain as a peacock now, without anything to be vain of."

"She's young and attracted to bright things—that's all. I remember well enough how I felt at her age."

"You was considerable of a fool at her age, Jane."

"Yes, I was, thank the Lord! Only I wish I'd known how to take a little of my foolishness along with me, as some folks do, to brighten my declining years."

There finally was a pink gingham, and when it was nicely finished, aunt Jane gave Rebecca a delightful surprise. She showed her how to make a pretty trimming of narrow white linen tape, by folding it in pointed shapes and sewing it down very flat with neat little stitches.

"It'll be good fancy work for you, Rebecca; for your aunt Miranda won't like to see you always reading in long winter evenings. Now if you think you can baste two rows of white tape around the bottom of your skirt and keep it straight by the checks, I'll stitch them on for you and trim the waist and sleeves with pointed tape-trimming, so the dress'll be real pretty for second best."

Rebecca's joy knew no bounds. "I'll baste like a house afire!" she exclaimed. "It's a thousand yards around that skirt, as well I know, having hemmed it; but I could sew pretty trimming on

**They Have Won Their Place**

Would White Swan Yeast Cakes have such an enormous sale in Canada if they did not make the best bread? Your grocer sells White Swan Yeast Cakes for 6-5c. FREE sample from

White Swan Spices & Cereals, Ltd.

TORONTO - ONTARIO

**Best Cough Syrup is Easily Made at Home**

Costs Little and Acts Quickly. Money Refunded If It Fails.

This recipe makes 16 ounces of cough syrup, and saves you about \$2.00 as compared with ordinary cough remedies. It stops obstinate coughs—even whooping cough—in a hurry, and is splendid for sore lungs, asthma, croup, hoarseness and other throat troubles.

Mix two cups of granulated sugar with one cup of warm water, and stir for two minutes. Put 2 1/2 ounces of Pinex (fifty cents' worth) in a 16-ounce bottle, and add the Sugar Syrup. Take a teaspoonful every one, two or three hours. Tastes good.

This takes right hold of a cough and gives almost instant relief. It stimulates the appetite, and is slightly laxative—both excellent features.

Pinex, as perhaps you know, is the most valuable concentrated compound of Norway white pine extract, rich in gualacol and the other natural healing pine elements.

No other preparation will do the work of Pinex in this recipe, although strained honey can be used instead of the sugar syrup, if desired.

Thousands of housewives in the United States and Canada now use this Pinex and Sugar Syrup recipe. This plan has often been imitated, but the old successful formula has never been equalled. Its low cost and quick results have made it immensely popular.

A guaranty of absolute satisfaction, or money promptly refunded, goes with this recipe. Your druggist has Pinex, or will get it for you. If not, send to The Pinex Co., Toronto, Ont.

**The Secret of the Success**



The secret of the success of the Sharples Mechanical Milker lies in the construction of the patented TEAT CUP. It is the one feature that marks the difference between the success and failure of milking machines—the feature that insures complete satisfaction to the owner and makes the Mechanical Milker the most practical and profitable part of your dairy equipment. Read this letter from the owners of one of the highest priced dairy cows in the world: Imported Billy's Lady Frances Gatteler. The Sharples Mechanical Milker is one of the best investments we ever made on this farm. Henry Fielding, Supr., Bradford Farms, Gorton, Conn.

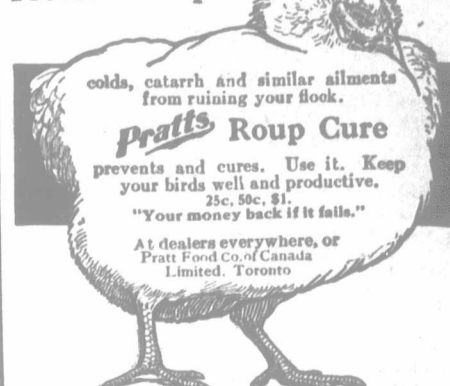
**The Teat Cup with the Upward Squeeze**

Enables the Sharples Mechanical Milker to draw the milk from the udder quickly, gently and without exposing a single drop to stable air. It never causes fevers, congestion or swollen teats. It gently presses the blood back up into circulation after each down stroke. It soothes and quiets the animal and makes her give down her milk, increasing the milk yield. With the Sharples Milker one man can milk 45 cows in one hour.

Write for FREE Catalog, & Let us mail you our catalog, a big free illustrated book of valuable information, tells all about this wonderful machine, shows it at work in many dairies and contains letters from scores of satisfied users. Write for catalog today.

**The Sharples Separator Co.** TORONTO, ONT. WINNIPEG, MAN.

**Prevent Roup**



PLEASE MENTION THIS PAPER.

**"Delays are Dangerous"**

MANY otherwise good farmers are going to find this out next harvest, when they see the results of BASIC SLAG applied to the land this fall. However, don't be ugly with yourself or the Cross Fertilizer Company. We have done our best to put you right in this matter. Give the boys a chance to test the qualities of

**Sydney Basic Slag**

by ordering some now for early spring application. Let them watch the results, it will be interesting, and help to keep them on that worn-out farm. SYDNEY SLAG contains 12.8% soluble phosphoric acid, all available to the plant, and never leaches out of the soil. It also contains a large per cent. of lime, and you know there are few farms that won't benefit by an application of lime. We never get tired telling you of the results of using BASIC SLAG. Write our Ontario representative, who will be pleased to call on you. Purchasing dealers wanted wherever not represented.

**The CROSS FERTILIZER COMPANY, Limited** Sydney, N. S.

ALEX. E. WARK, Ontario Sales Manager, WANSTEAD, ONT.

**Profitable Maple Syrup**

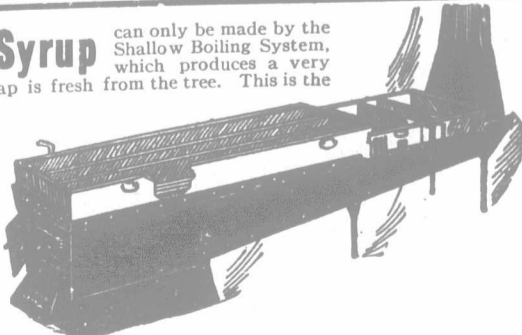
light-colored syrup, providing the sap is fresh from the tree. This is the high-priced syrup—the syrup that makes syrup-making profitable.

The "CHAMPION" EVAPORATOR is a shallow boiler, and has the largest sale of any Evaporator on the market. The "Champion" captured over 90 per cent. of all prizes at the Fall Exhibitions.

The reasons why the "Champion" is the Evaporator you need are given in our free booklet, together with a lot of information that will double the value of your Sugar Bush.

Don't put it off—now is the time to think about your maple syrup business for the coming season.

WRITE US TO-DAY



**THE GRIMM MFG. CO., Limited** 58 WELLINGTON STREET Montreal Quebec

can only be made by the Shallow Boiling System, which produces a very fresh from the tree. This is the



**Your Local Tailor Couldn't Make a Profit if He Sold You a Suit Like This for \$25.00, but We'll Sell It to You for \$12.50, and Make a Profit, Too.**

Learn one of the reasons why. Your local tailor buys his goods in single suit lengths. Four profits come out of the cloth before it reaches his hands. You pay these four profits when you buy from him, You save these profits when you buy from us, because we buy all our suitings direct from the mill, and give you the benefit of our tremendous buying power. Here's a Fair Offer: Send us your name and address, and we will mail you, absolutely free, 72 pattern pieces of the finest English suitings and overcoatings you ever saw. With the patterns will come a booklet telling all about the successful Catesby "made to measure" tailoring system. Read it, and you'll understand why hundreds of shrewd, well dressed Canadians buy their clothes direct from London, and save half of what they would otherwise have to pay their local tailor. Don't put this matter off—you'll soon be needing a suit or an overcoat. Send now, while the thought is in your mind.

Remember, your suit or overcoat comes right to your door, five days after we receive your order in London, all carriage and duty charges paid by us; and that every suit and overcoat is guaranteed by us to give absolute satisfaction.

Address our nearest Canadian office.

**CATESBYS** Ltd. 119 West Wellington Street - Toronto  
Dept. Coronation Building - - - Montreal  
"A" 160 Princess Street - - - Winnipeg

Or write direct to CATESBYS Ltd., Tottenham Court Road, London, England

HERE'S A GREAT TEST.—When you get patterns, take one to your local tailor. Ask him what he will charge you to make a suit of such an imported cloth. Then compare his price with that asked by Catesby.

**\$12.50** buys this elegant MALVERN suit.

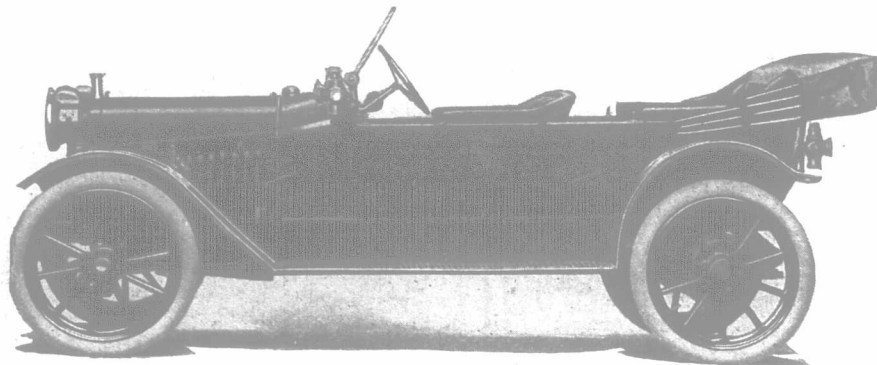
Made to your measure from materials you select. Samples and measurement chart promptly sent free from our Canadian address. Perfect fit and satisfaction guaranteed

if it was from here to Milltown. Oh! do you think aunt Mirandy'll ever let me go to Milltown with Mr. Cobb? He's asked me again, you know; but one Saturday I had to pick strawberries, and another it rained, and I don't think she really approves of my going. It's twenty-nine minutes past four, aunt Jane, and Alice Robinson has been sitting under the currant bushes for a long time waiting for me. Can I go and play?"

"Yes, you may go, and you'd better run as far as you can out behind the barn, so't your noise won't distract your aunt Mirandy. I see Susan Simpson and the twins and Emma Jane Perkins hiding behind the fence."

Rebecca leaped off the porch, snatched Alice Robinson from under the currant bushes, and, what was much more difficult, succeeded, by means of a complicated system of signals, in getting Emma and Jane away from the Simpson party and giving them the slip altogether. They were much too small for certain pleasurable activities planned for that afternoon; but they were not to be despised, for they had the most fascinating dooryard in the village. In it, in bewildering confusion, were old sleighs, pumps, horse rakes, hogsheads, settees without backs, bedsteads without heads, in all stages of disability, and never the same on two consecutive days. Mrs. Simpson was seldom at home, and even when she was, had little concern as to what happened on the premises. A favorite diversion was to make the house into a fort, gallantly held by a handful of American soldiers against a besieging force. Great care was used in apportioning the parts, for there was no disposition to let anybody win but the Americans. Seesaw Simpson was usually made commander-in-chief of the opposing army, and a limp and uncertain one he was, capable, with his contradictory orders and his fondness for the extreme rear, of leading any regiment to an inglorious death. Sometimes the long-suffering house was a log hut, and the brave settlers defeated a band of hostile Indians, or occasionally were massacred by them; but in either case the Simpson house looked, to quote a Riverboro expression, "as if the devil had been having an auction in it."

Next to this uncommonly interesting playground, as a field of action, came, in the children's opinion, the "secret spot." There was a velvety stretch of ground in the Sawyer pasture which was full of fascinating hollows and hillocks, as well as verdant levels, on which to



Hupmobile "32" Touring Car, fully equipped, \$1150. F. O. B. Windsor, including equipment of windshield, mohair top with envelope, jiffy curtains, quick detachable rims, rear shock absorber, gas headlights, Prest-o-lite tank, oil lamps, tools and horn. Three speeds forward and reverse sliding gears. Four cylinder motor, 3 1/4-inch bore and 5 1/2-inch stroke; wheelbase 106 inches; 32 x 3 1/2-inch tires. Standard color, black. Trimming, black and nickel.

- "20" H. P. Runabout, fully equipped, ..... \$850 f. o. b. Windsor
- "32" Delivery, fully equipped, ..... \$1125 f. o. b. Windsor
- "32" Roadster, fully equipped, ..... \$1150 f. o. b. Windsor

**How this Self-Priming Device makes cold weather starting easy!**

The Hupmobile gasoline system—shows many distinctive features of motoring convenience that are well worth your notice.

By the hot-air control and self-priming device, you are enabled to start your motor in cold weather almost as easily as you do in summer.

This device together with the direct fuel feed; the gasoline cleansing screen; the emergency supply; go to make a system as complete as engineering skill can accomplish.

We lay stress on it here because it is characteristic of the thoughtful and pains-taking skill in designing that is evident in every detail of Hupmobile construction.

It is but one of many instances we can show you to justify our belief that the Hupmobile is, in its class, the best car in the world.

HUPP MOTOR CAR CO.,

Desk N. Windsor, Ont.

**Please Mention The Farmer's Advocate**

**How the Automatic Primer Operates**

Gasoline motors need a heavy charge of gasoline to start them in cold weather.

Generally this is obtained by flooding the carburetor. Or, when still more gasoline is needed, by injecting it directly into the cylinders through the relief cocks.

We have done away with both of these troublesome methods by supplying the Hupmobile carburetor with an automatic primer.

The air supply to the carburetor is controlled by a shutter, operated by a handle conveniently placed on the dash. By turning this handle the quantity and temperature of the air passing through the carburetor can be regulated.

For starting in cold weather the air shutter is nearly closed and a mixture very "rich" in gasoline is drawn into the cylinders.

This comes from the carburetor nozzle as a

very fine spray, making it easier for the spark to explode than in the case of ordinary priming with liquid gasoline.

All air passing into the carburetor at starting is drawn through the hot air collector and heated by the exhaust pipe, so that the engine gets under way almost as quickly and smoothly as under more favorable weather conditions.

Another advantage of the Hupmobile gasoline supply is the location of the tank under the dash board, so that gasoline is positively fed to the carburetor by gravity, whether on the level or hill.

On its way to the carburetor, the gasoline passes through a screen so fine that the water and dirt are separated from it.

Just below the screen is a valve, operated by the gasoline outlet handle, which can be set to keep one gallon of gasoline in reserve for an emergency.

build houses. A group of trees concealed it somewhat from view and flung a grateful shade over the dwellings erected there. It had been hard though sweet labor to take armfuls of "stickins" and "cutrounds" from the mill to this secluded spot, and that it had been done mostly after supper in the dusk of the evenings gave it a still greater flavor. Here in soap boxes hidden among the trees were stored all their treasures: wee baskets and plates and cups made of burdock balls, bits of broken china for parties, dolls, soon to be outgrown, but serving well as characters in all sorts of romances enacted there,—deaths, funerals, weddings, christenings. A tall, square house of stickins was to be built round Rebecca this afternoon, and she was to be Charlotte Corday leaning against the bars of her prison.

It was a wonderful experience standing inside the building with Emma Jane's apron wound about her hair; wonderful to feel that when she leaned her head against the bars they seemed to turn to cold iron; that her eyes were no longer Rebecca Randall's but mirrored something of Charlotte Corday's hapless woe.

"Ain't it lovely?" sighed the humble twain, who had done most of the labor, but who generously admired the result.

"I hate to have to take it down," said Alice, "it's been such a sight of work."

"If you think you could move up some stones and just take off the top rows, I could step out over," suggested Charlotte Corday. "Then leave the stones, and you can step down into the prison to-morrow and be the two little princes in the Tower, and I can murder you."

"What princes? What tower?" asked Alice and Emma Jane in one breath.

"Tell us about them."

"Not now, it's my supper time." (Rebecca was a somewhat firm disciplinarian.)

"It would be elegant being murdered by you," said Emma Jane loyally, "though you are awful real when you murder; or we could have Elijah and Elisha for the princes."

"They'd yell when they was murdered," objected Alice; "you know how silly they are at plays, all except Clara Belle. Besides if we once show them this secret place, they'll play in it all the time, and perhaps they'd steal things, like their father."

"They needn't steal just because their father does," argued Rebecca; "and don't you ever talk about it before them if you want to be my secret, particular friends. My mother tells me never to say hard things about people's own folks to their face. She says nobody can bear it, and it's wicked to shame them for what isn't their fault. Remember Minnie Smellie!"

Well, they had no difficulty in recalling that dramatic episode, for it had occurred only a few days before; and a version of it that would have melted the stoniest heart had been presented to every girl in the village by Minnie Smellie herself, who, though it was Rebecca and not she who came off victorious in the bloody battle of words, nursed her resentment and intended to have revenge.

(To be continued.)

**GOSSIP.**

In their new advertisement in this issue, Hickman & Scruby, Court Lodge, Kent, England, exporters of pedigree live stock of all breeds, draft horses being a specialty, intimate that their Mr. Hickman will be at the Stock-yards Hotel, Chicago, during the week of the International Exhibition there, and will be pleased to meet persons interested in the importation of stock, and the best methods of finding and shipping.

Attention is called to the advertisement of John McKay, Kingston, Ont., makers of men's and women's fur coats, and who have been in the business for more than half a century. Men's coon coats and women's muffs are specialties, and now is the time to make selections, before the rush begins. Their catalogue, which is mailed free, gives styles and prices, and goods will be sent to express office, prepaid, for free examination.



**QUESTIONS AND ANSWERS.**  
Miscellaneous.

**HEIFER?**

At our fall fair there is a prize offered for a herd of four females. Aged cow, heifer two years old, heifer one year old, and heifer calf. I claim that a two-year-old giving milk should not be entered in the herd.

Ans.—We know no valid reason why a two-year-old heifer giving milk should not be allowed to compete in such a class. No objection appears in the rules of the Canadian National Exhibition.

**Veterinary.**

**WEAK KNEES.**

At one month of age my colt began to go sideways on his knees. He has gradually got worse, and now is quite lame. He is worse when out in the wet.

Ans.—The question of the advisability of destroying him should be carefully considered, as treatment will be slow and troublesome, and its efficiency doubtful. If you decide to treat, he must be kept as quiet as possible in a comfortable box stall. Splints of either iron or wood, with staples for straps, must be made to extend on the inside of the leg to about the center of the forearm. The leg must be well padded both inside and outside, the splints applied and strapped so that pressure inwards will be upon the knees. The straps will be gradually tightened until the legs are held straight and kept in that condition for some months. Great care must be taken to pad and keep well padded to avoid scarification, and pressure must not be too great at first. Of course, the colt will be unable to lie down, as he will not be able to flex the knee. If he should lie or fall down, he will be unable to get up. It will require several months' treatment, hence we repeat "the advisability of destroying him should be carefully considered."

**Seed Grain and Potatoes from Dominion Experimental Farms.**

By instructions of the Hon. Minister of Agriculture, a distribution of superior sorts of grain and potatoes will be made during the coming winter and spring to Canadian farmers. The samples for general distribution will consist of spring wheat (5 lbs.), white oats (4 lbs.), barley (5 lbs.), and field peas (5 lbs.). These will be sent out from Ottawa. A distribution of potatoes (in 3-lb. samples) will be carried on from several of the experimental farms, the Central Farm at Ottawa supplying only the Provinces of Ontario and Quebec. All samples will be sent free, by mail.

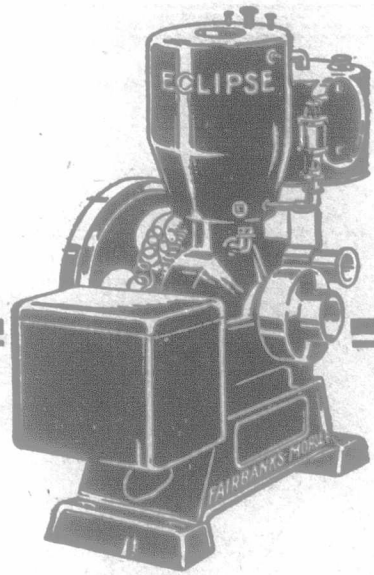
Applicants must give particulars in regard to the soil on their farms, and some account of their experience with such kinds of grain (or potatoes) as they have grown, so that a promising sort for their conditions may be selected. Each application must be separate, and must be signed by the applicant. Only one sample of grain and one of potatoes can be sent to each farm. Applications on any kind of printed form cannot be accepted. If two or more samples are asked for in the same letter, only one will be sent.

As the supply of seed is limited, farmers are advised to apply early; but the applications will not necessarily be filled in the exact order in which they are received. Preference will always be given to the most thoughtful and explicit requests. Applications received after the end of January will probably be too late.

All applications for grain (and applications from the Provinces of Ontario and Quebec for potatoes) should be addressed to the Dominion Cerealists, Central Experimental Farm, Ottawa. Such applications require no postage. If otherwise addressed, delay and disappointment may occur.

Applications for potatoes from farmers in any other Province should be addressed (postage prepaid) to the Superintendent of the nearest Branch Experimental Farm in that Province.

J. H. GRISDALE,  
Director, Dominion Experimental Farms.



**This Fairbanks-Morse Farm Engine Free—**

to the farmer who suggests the greatest number of practical uses for it on his farm—or any other farm.

IT will pump water, saw wood, make electricity, grind feed, cut ensilage, shell corn, pull stumps, run a churn and separator and washing machine and operate a spray-pump.

What else will it do? The engine is offered as a prize for the most complete answer.

This contest is open to every farmer in Canada. You do not have to own an engine, or to buy anything from us, to enter it. There is no entry fee or other condition. All you have to do is to tell us what you could do with the engine if you had it on your farm. We're writing a book—"Uses For a Farm Engine."

Its purpose is to show how our engines can be used to save labor and increase profits. We will do this by describing as many practicable uses as possible. We know already of many different uses for the engine, but we feel sure that you can tell us of others. So we're asking you to help us get information for the book.

**We'll give this engine to the farmer who gives us the greatest number of practical suggestions.**

Mr. C. B. Allardyce, Editor of "The Family Herald and Weekly Star," will act as judge and award the prize.

Now think what you would do with the engine if you had it on your farm. Think of every possible way in which you could use it to do work that now takes the time of expensive hired help. Think how it could make your wife's work easier. Then sit down and write us. We have listed above, some of the uses we know about. You ought to be able to think of many others. As soon as all replies to this advertisement are received, we'll go ahead with the book, and will send one of the first

copies to every farmer who enters the contest. Your answer must be mailed not later than Dec. 15, when the contest closes. The engine will be shipped to the winner as soon as possible thereafter, so that he will have it in time to use all winter. Do not bother about the form of your answer—we want ideas, and practical suggestions, not pretty writing. When your letter is written, cut out the numbered seal in the corner of this advertisement and pin it to your answer.

Address—Farm Engine Booklet Editor

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

444 ST. JAMES STREET, MONTREAL

Remember the Contest Closes December Fifteenth

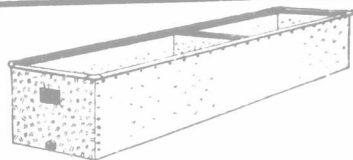


**A CANADIAN SCHOOL FOR BOYS**

**RIDLEY COLLEGE**  
St. Catharines, Ontario

Three separate residences; new, specially built and equipped. 1. Lower School for Boys under fourteen. 2. Dean's House, for Boys of fourteen and fifteen. 3. Upper School, for advanced Pupils. Gymnasium and Swimming Baths just erected. Fine Hockey Rink. Athletic Fields and Playgrounds unsurpassed. Eighty acres. Mild climate. University Scholarship won in 1909 and 1910. Boys prepared for Agricultural College.

REV. J. O. MILLER, M.A., D.C.L., PRINCIPAL



**Water Troughs**  
Galvanized Steel

REPLACE unsanitary and disease-breeding wooden troughs with clean and rust-proof steel troughs. These are made of heavy galvanized steel, thoroughly riveted and soldered so that they cannot leak, and finished on the outside with aluminium. We will send you one on request; if not satisfactory, return it. Prices are reasonable, ranging from \$7.50 to \$20.00, according to size. Send for illustrated folder.

STEEL TROUGH & MACHINE CO., Ltd., 5 James St., TWEED, ONT. 3

**TRADE TOPIC.**

THE CHARMING WINTER RESORTS OF CALIFORNIA, MEXICO, FLORIDA, ETC.

Now is the time to take advantage of a trip to a milder climate and escape the cold winter months. Round-trip tourist tickets are issued by the Grand Trunk Railway to California, Mexico, Colorado, Pacific Coast points, and the Sunny South, at low rates, giving choices of all the best routes. Features in connection with this route: only double-track line to Buffalo and Chicago; fast service; modern equipment; unexcelled dining-car service; palatial electric-lighted Pullman sleeping-cars; all elements of safety and comfort. Ask nearest Grand Trunk agent for full particulars, or write A. E. Duff, D. P. A., Union Station, Toronto, Ontario.

"Ah," she sighed, "for many years I've suffered from dyspepsia."  
"And don't you take anything for it?" her friend asked. "You look healthy enough."  
"Oh," she replied, "my husband has it—not I."

# D. C. FLATT & SON, Hamilton, Ontario

## Will sell 50 imported Clydesdale Fillies

From 2 to 4 years old

BY PUBLIC AUCTION ON

### Wednesday, November 27th, 1912

At 12.30 p.m. sharp (rain or shine)

This is one of the best and largest consignments of Clydesdales offered to the public in years, 22 of which are strong in the blood of the world-renowned Baron's Pride. Sixteen of these fillies have been served by some of the most noted sires of Scotland. Everyone knows the unlimited demand for drafters. Come early and look them over and make your selections at your own price, as every mare will be sold to the highest bidder.

## Monarch Light Touch



The farmer, or any other business man for that matter, who does not keep an accurate and comparative yearly account of every department of his farm or business is soon "out of the running" with the man who does. The greatest aid to record work is the typewriter. The

### MONARCH TYPEWRITER

is a splendid machine for billing, card indexing, loose-leaf work or correspondence, for the following reasons:

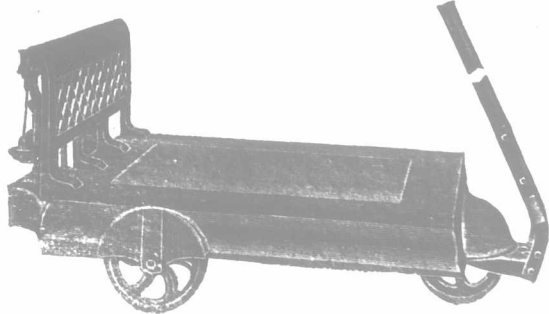
- Construction Simple
- Parts Accessible
- Visibility Complete
- Non-shifting Carriage
- Light Touch
- Easy to Operate
- Easy to Learn
- Long Wearing

Let us give you a demonstration of the Monarch machine in your home. A post card will place literature and full information in your hands immediately. Easy payments. Write now for full particulars.

### MONARCH DEPARTMENT

Remington Typewriter Co., Ltd. 144 Bay St., TORONTO, ONT.

## WAGON AND STOCK SCALE a Money-saver to You Mr. Farmer



So often you lose money because you are not quite sure of the weight of the article that is changing hands, and by just putting it on the scales your eyes are opened, and you are in a position to judge very accurately as to what this or that particular thing is worth.

Write to-day for our illustrated catalogue, telling you about the Three-wheeled Wagon and Stock Scale. Capacity, 2,000 lbs. All material and workmanship first-class and guaranteed.

ADDRESS

The Aylmer Pump and Scale Co. Limited, AYLMER, ONT.

### QUESTIONS AND ANSWERS. Veterinary.

#### SUPPURATIVE MAMMITIS.

Mare raised a colt in 1910. Since then one half of mammary has been hard, and small abscesses form, and pus can be drawn out of the teat. W. McD.

Ans.—All abscesses should be lanced freely, and the cavities flushed out three times daily until healed with a four-per-cent. solution of carbolic acid. All pus should be carefully pressed out of teat three times daily until it ceases to form. Give her four drams hyposulphite of soda three times daily. V.

#### SKIN TROUBLE.

Cow refused food for a week and went nearly dry. I gave her salts and carbolic acid and she got better. She eats and milks well now, but her skin is cracking and falling off about neck and shoulders. Is her milk fit for use? M. McA.

Ans.—The skin trouble is a sequel to digestive derangement. Give her four drams hyposulphite of soda three times daily, and dress the skin three times daily with 1 part carbolic acid to 49 parts sweet oil. Her milk is healthful. V.

#### ENLARGED TENDONS.

Colt slipped and hurt his off hind leg seven months ago. I worked him for three or four weeks longer, when the back tendons swelled and he went very lame. I have not worked him since, and the lameness has disappeared, but the tendons are still large. G. L.

Ans.—Chronically enlarged tendons are very hard to reduce. Get a liniment made of four drams each of iodine and iodide of potassium, and four ounces each of alcohol and glycerine, and rub a little well in once daily. Have patience, and do not look for quick results, but continue treatment for a few months. V.



### Comfort and Convenience perfectly sanitary and odorless CLOSET

without waterworks, plumbing or sewage. Write us for literature. It's free.

Earl Construction Co., Athens, Ont.

### AGENTS \$3 a Day

#### NEW PATENTED AUTOMATIC CURRY COMB

Made of best cold rolled steel. Horsemen delighted. Takes just half the time to clean a horse. Keeps the teeth always clean, no clogging with hair and dirt. A. E. Pott says: "It's a dandy. Sold 14 last night to my neighbors." Easy seller. Big profits. Going fast. Write quick. Free sample to workers. THOMAS MFG. CO., 3744 Wayne St., Dayton, Ohio

### EARN A BIG SALARY

Be An Auto Expert  
Big demand and big pay for chauffeurs, repairmen, and mechanics. Our system of individual instructions by mail enables you to complete the course in 12 simple lessons at home. Send To-day for Free Book, Particulars, and endorsements of 10 leading automobile makers. We assist graduates to get positions. Free Model Furnished Each Pupil. Practical Auto School, 667 Beaver St., N.Y. City.

PLEASE MENTION THIS PAPER.

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Home knitting is quick and easy with any one of our 6 Family Knitting Machines. Socks and Stockings, Underwear, Caps, Gloves, Mittens, etc.—Plain or Ribbed—can be knitted ten times as fast as by hand, and for far less than they cost ready-made.

A child can work our machines. Besides your own family work, you can make good money knitting for others.

FREE—6 illustrated Catalogues—No. 622. Agents wanted in every locality for Typewriters and Home-money-maker knitting machines. Address

CREELMAN BROS. 2  
Box 622. GEORGETOWN, ONT.

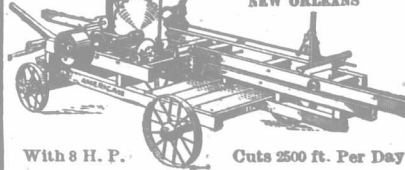
## MAKE THE FARM PAY IN WINTER

You can make winter a harvest time, with money-making crops of lumber, if you have an "American" Portable Saw Mill. Your own wood lot, and your neighbors' await your axe and your saw and your mill, ready to yield a valuable crop of first-class lumber that will find a ready local sale at good prices. You have the team, the time and the engine. Buy an inexpensive "American" mill and you'll have all the outfit you need to do a profitable lumbering business. Start with your own wood lot, then work out into the country around you. Every wood lot has money in it for you. Show its owner how you can make lumber and money for him. Begin by sending to us for our new book No. 32 which tells the story. Write nearest office today.

In the largest mill on or on the farm the American is recognized as STANDARD.

AMERICAN SAW MILL MACHINERY CO.  
113 Hone Street, Hackensack, New Jersey  
1564 Terminal Building, New York

CHICAGO SAVANNAH  
NEW ORLEANS



With 8 H. P. Cuts 2500 ft. Per Day

## VICTORIA, Australia, Bids for Farmers

31½ Years to Pay for a home. Finest of Irrigated Lands Offered on Most Liberal Terms.

THE Victorian Government during the past two years has outlined an enormous irrigation plan, which places on the market as fine lands as can be had anywhere with ample water supply.

These lands are capable of producing citrus fruit and apples in the same orchards. Wheat, corn and alfalfa are staple crops. Dairying is a very successful industry. Lands are now offered to settlers at prices ranging from \$30 to \$100 per acre, and allows 31½ years for payment of purchase price. Excellent climate resembling California.

Reduced steamship passage one way or return. American visitors who recently inspected these lands are wonderfully impressed. For particulars call or write Mr. F. T. A. FRICKE, Government Representative from Victoria, care of Peck-Judah Co., 687 Market St., San Francisco.

FREE  
CANTON  
MUSICAL  
INSTRUMENTS  
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Send for this Book of Musical Instruments  
Five hundred pages, illustrating and describing every kind of musical instrument, with prices. Costs 35c. to mail. Ask for catalogue H4 and send 15c. to help cover postage.

The R. S. WILLIAMS & Sons Co.  
Limited  
143 YONGE STREET  
Toronto

MENTION "FARMER'S ADVOCATE."

## QUESTIONS AND ANSWERS. Veterinary.

### SPINAL TROUBLE.

There is something wrong with the back of my four-months-old colt. He has difficulty in backing, and in doing so drags his hind feet. He can go forward, but when turning around he staggers and nearly falls. He can run, but if he makes a misstep or endeavors to stop quickly, his back sways and swings. When moving forward he gets somewhat stiff.

T. H.

Ans.—This is chronic spinitis, sometimes called in horses locomotor ataxia. A perfect recovery is doubtful, and in most cases, even a partial recovery is slow. In some cases the recovery is perfect. Keep him as quiet as possible in a box stall, feed on laxative food, and give him 10 grains nuxvomica three times daily.

V.

### Miscellaneous.

#### MISCELLANEOUS QUERIES.

1. Want to build, or erect, a tank. What would be best kind to build, cement, wood, or galvanized iron? I was thinking of building a cement tank outside barn. What would be best way to protect it from freezing?
2. Want to build a cement wall under my barn. Barn is 54 x 34 feet. How many loads or yards of gravel would it take, wall to be 8 feet high; also how many barrels of cement?
3. Have a young Durham bull seven months old. Have him weaned. What is the best feed to feed him to keep him thriving well?
4. Have some pigs. They have a kind of a dry, wheezing cough. What would be best to do for them?
5. Have a heavy draft horse, four years old. He has an itch in his legs. They get thick and swollen. What would be best way to fit him up for sale?

G. A. W.

Ans.—1. At Weldwood, we have just completed the erection of a round cement tank ten feet in diameter, inside, and nine feet high, with a two-foot foundation wall. It is built with the adjustable steel silo curbs, wall eight inches thick at bottom, tapered to 6½ inches at the top; proportions, one of cement to about six of gravel. The cement floor is laid on rammed clay, at the level of the ground outside. We are confident that this tank will give first-class satisfaction. Freezing seldom causes any trouble in such tanks, and they are very durable if well constructed and properly reinforced. For reinforcing we have used cables of barbed wire (three strands twisted together). It is not the best reinforcing, but we wanted to get rid of the wire.

2. About 60 cubic yards of gravel and 50 barrels of cement, the cement being used in proportions of 1:8. This does not allow anything to speak of for the foundation footing, which you should provide.

3. Corn silage or fodder, clover hay, crushed oats or mixed chop and bran. A few turnips, too, if you have them.

4. Curative treatment consists in purging with 8 drams aloes and 2 drams ginger, prepared by a druggist, and given as a ball, feeding bran mash till purged. Follow up with 1½ ounces Fowler's Solution of Arsenic twice daily for a week. Local treatment consists in applying warm poultices of linseed meal, with a little powdered charcoal, every six or seven hours for a couple of days and nights, and then applying three times daily a lotion of one ounce each of acetate of lead and sulphate of zinc, and two drams carbolic acid to a pint of water.

5. This is evidently thumps, the result of too much rich food and too little exercise. They should have liberty to get out on the ground for exercise. Feed should consist of a fair proportion of bran or ground oats, or both where stronger meal is used. A teaspoonful each of sulphur given in milk, and greasy swill, is recommended to move the bowels and work upon the blood.

"The man who buys a Feed without knowing its ingredients would buy a 'pig in a poke' any day."

## Publicity versus Secrecy

We are firm believers in the doctrine, that if your goods are right the fact cannot receive too much publicity.

The value of a Feed is equal to the sum-total value of its ingredients.

If the ingredients are valuable and rich in feeding qualities, secrecy is unnecessary and undesirable. **Publicity is the thing, and the more of it the better.**

The proportion of each ingredient entering into the manufacture of Caldwell's Molasses Meal is plainly printed on every tag.

This is for your protection, and we believe it's the main cause of our success.

We are the originators of the Pure Cane Molasses idea in a Molasses Meal, and are the only manufacturers using this ingredient exclusively.

The result is that

## CALDWELL'S MOLASSES MEAL

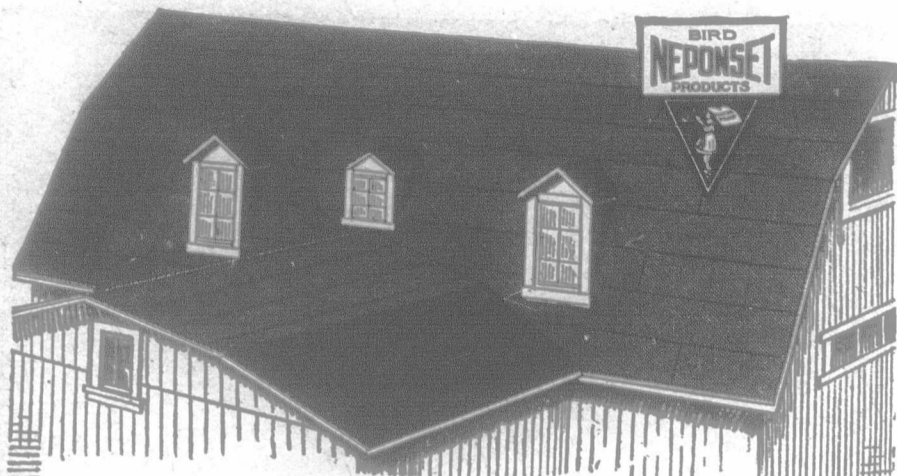
is higher in sugar, and lower in fibre than any of the imported competing varieties.

This statement can be easily proven by submitting samples to the Government analyst.

In Caldwell's Molasses Meal we offer you a Feed scientifically prepared, highly palatable, very nutritious, possessing a certain therapeutic value and of guaranteed composition.

N.B.—If you haven't tried our Meal and your Feedman does not handle it, just drop a card to the mill to-day, and we will be glad to forward you literature and prices.

The CALDWELL FEED COMPANY, Ltd.  
DUNDAS, ONTARIO



**Don't Experiment with Roofing**  
It pays to buy good roofing just as it pays to buy good machinery and to keep good stock. Good roofing has good records behind it, *not claims.*

## NEPONSET PAROID ROOFING

has excelled the records of best shingles. A warehouse built in 1898 was torn down last summer with its NEPONSET Paroid Roof still in good shape. NEPONSET Paroid Systems—by farmers, because it has proved itself the most economical roofing. Buy NEPONSET Paroid next time.

**Blue Print Barn Plans—FREE**

Canadian farm barns are the finest in the world, and these plans are designed especially for your needs. Send today sure.

NEPONSET Roofings are made in Canada

F.W. BIRD & SON, (INC.) 49A Heintzman Bldg., Hamilton, Ont.  
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NEPONSET  
Proslate Roofing  
makes a handsome  
red or green roof  
for houses.

**\$15.95**  
AND UPWARD  
SENT ON TRIAL  
FULLY  
GUARANTEED.

## —AMERICAN— SEPARATOR

A brand new, well made, easy running, 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 WINNIPEG, MAN., 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.



### Stallions — CLYDESDALES — Fillies

I have a big importation of Clyde stallions and fillies just landed; a lot that cannot be duplicated to-day in Scotland, and never was in Canada. Let me know your wants.

ROBT. BEITH, Bowmanville, Ont.

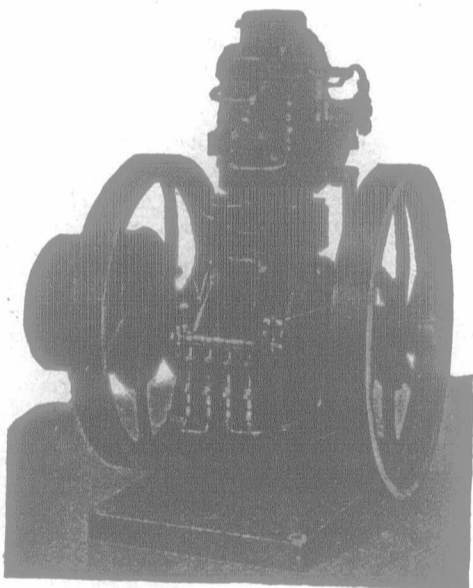
### GOSSIP.

#### CLOVERDELL SHORTHORNS.

L. A. Wakely, of Bolton, Ont., has been breeding Shorthorns for many years, and throughout those years has been endeavoring to breed on the lines of increased milk production, or what is usually termed the dual-purpose cow. Every year is bringing him an increased demand for cattle of his breeding. Where one goes, other orders invariably follow, which can only be taken as evidence that his kind of Shorthorns are in very great demand these days. The majority of them are descendants of Annabella (imp.), and Lady Jane (imp.); others are descendants of Jenny Lind (imp.), with a few Miss Ramsdens. That they are bred right for giving a profitable yield of milk is certain, and their only fair condition, in spite of the rich, luxuriant pasturage of the last few months, is sufficient proof that they do something else with their food than putting it on their backs. The stock bull in service is Prince Rosebud 78375, got by Lavender's Pride, dam a Rosebud-bred daughter of Barmpton Hero. He is proving a splendid sire, as is demonstrated in a particularly nice red ten-months-old bull calf, out of the Annabella - bred cow, Trilby 70294, a daughter of Indian Fame 7th. This youngster is low, and splendidly fleshed, and his breeding should be very attractive to breeders of dual-purpose Shorthorns, as his dam is a heavy and persistent milker. Another one, bred on proper lines for milk production, is a red ten-months-old bull, got by Royal Sovereign (imp.), dam, Rose of Autumn 30th, by Fitz-Stephen-Forrester (imp.). Still another is a roan seven-months-old, out of Miss Ramsden 24th, by Lord Gordon (imp.). These young bulls are for sale, as well as a limited number of heifers.

#### CEDARDALE SHORTHORNS.

A short visit to the old and useful Cedardale herd of Scotch Shorthorns owned by Hon. Dr. T. S. Sproule, of Markdale, Ont., by a representative of this paper, found the herd in prime condition, strictly up-to-date in the heavy-fleshed, good-doing type, and representing on blood lines the ever-popular Clarets, Marthas, and Miss Aberdeens, daughters of such well-bred and successful breeding bulls as Imp. Scottish Pride, Imp. Choice Koral, and the late stock bull, Imp. Lord Fyvie, the Minerva-bred son of the great Primrose Fancy. For very many years this herd has been supplying breeding stock to many parts of the country, and in every

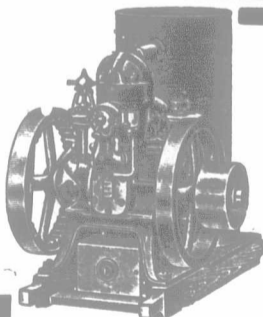


## The Farmers' Power Plant

**BOLINDERS SEMI-DIESEL  
CRUDE OIL ENGINE**

This handy little tool will save you hundreds of dollars. Not alone in replacing labour but in upkeep and running cost as compared with Gasoline engines. A 12 H.-P. Gasoline Engine costs you 30 cents to operate per hour. Our Crude Oil Engine only costs 6 cents per hour. Our engines are designed and built to stand hard work. They will outlive three or four gasoline engines. There is absolutely no risk from fire or explosion as it uses non-inflammable crude oil.

**THE CANADIAN BOVING CO., LIMITED**  
164 Bay Street TORONTO, ONTARIO



## This Engine Runs on Coal Oil

Every farmer can afford an Ellis Coal Oil Engine. They give more power from coal oil than other engines do from gasoline. They are safe, as well as cheap; no danger of explosion or fire.

The strongest and simplest farm engine made; only three moving parts: nothing to get out of repair. Anyone can run it without experience. Thousands of satisfied customers use these engines to grind feed, fill silos, saw wood, pump, thresh, run cream separators, and do dozens of other jobs. Cheaper than horses or hired men. Fill up the tanks and start it running, and no further attention is necessary; it will run till you stop it.

**FREE TRIAL FOR 30 DAYS** You don't have to take our word for it. We'll send an engine anywhere in Canada on Thirty Days' Free Trial. We furnish full instructions for testing on your work. If it does not suit you send it back at our expense. We pay freight and duty to get it to you and we'll pay to get it back if you don't want it.

**Absolutely guaranteed for 10 years.** Write for free catalog and opinions of satisfied users. Special offer in new territory.

3 to 15 horse power We Pay Duty and Freight **Ellis Engine Co.,** 94 Mullett Street, DETROIT MICH.



**Clydesdales and Percherons** Stallions and fillies of either breed. Over forty head to select from. Draft horses in reality as well as in name. Highest types of the breeds. Come and see them. Terms and prices to suit. **T. D. ELLIOTT & SON, BOLTON, ONTARIO**

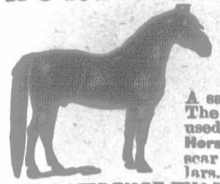
BEST RESULTS ARE OBTAINED FROM ADS. IN "ADVOCATE."

case with entire satisfaction to the purchasers. There never was a time in the herd's history when it was up to so high a standard individually, nor representative of so much fashionable breeding as at present. Any female in the herd is for sale, from the many level-lined, nice-fleshed heifers, to the big, thick, 1,700-lb. cows. In bulls, there is only one on hand for sale. He is a red yearling Stamford-bred son of Imp. Broadhooks Golden Fame. Parties wanting breeding stock in Shorthorns would do well to correspond with Dr. Sproule, as the cattle are right, and the prices are not beaten by any breeder in Canada.

#### MEADOW LAWN SHORTHORNS.

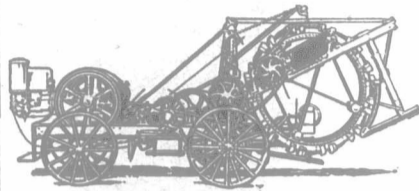
When on a recent visit to Meadow Lawn Stock Farm, the property of F. W. Ewing, Salem P. O., Ont., a profitable and interesting hour was spent in looking over the splendid herd of Scotch Shorthorns. As to individuals of immense scale and heavy flesh, there are not many herds that have anything over this lot, up to 1,800 lbs. in weight, and this great weight evenly distributed, they can certainly put up a show that is mighty interesting to Shorthorn admirers. Among them are such great cows as Mildred 15th, sired by Imp. Scottish Peer. She carries her 1,800 lbs. with the style of a yearling. At foot she has a proper good four-months-old white bull calf that should make a show bull sure. He is sired by the present stock bull, Proud Monarch 78792, a roan son of the great bull, Imp. Blood Royal, and out of Imp. Floretta, a Brawith Bud, by Clifton. Proud Monarch is one of the few great bulls in Canada, a show bull from the ground up. He is also a great sire, and will certainly be among the bulls of fame some of these days. Another splendid breeding cow is Victoria Stamford, by Royal Victor, one of the greatest sons of Imp. Royal Sailor. This cow has a grand ten-months-old red bull calf, by the stock bull. Whoever gets this young bull will get a good one sure. Martha 13th, by Imp. Jilt's Victor; English Lady 18th, by Imp. Scottish Beau; Donside Claret, by Mildred's Royal, are a few of the big, thick cows in breeding, and are representative of the herd's royal breeding. Mr. Ewing is offering for sale a few right nice heifers, and several young bulls, all sired by the stock bull, and out of the cows mentioned above, and others equally as good. Write Mr. Ewing your wants to Salem P. O., or visit the herd, Elora, C. P. R. and G. T. R., is the station, or call him up by long-distance 'phone from Elora.

**HORSE OWNERS! USE**



**COMBAULT'S CAUSTIC BALSAM.**

A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all bunches from horses. Impossible to produce scurf or blenish. Send for circular. Special advice free. THE LAWRENCE-WILLIAMS CO., Toronto, Canada



**Digging Ditches for Profit**

SINCE farming has been put upon a scientific basis, there has been a big and growing demand for machine-made ditches. It's up to you to supply this demand with a

**BUCKEYE TRACTION DITCHER**

You don't have to convince the farmer of the value of machine-made ditches, he already knows that drainage ditches made with a BUCKEYE mean better crops and bigger profits.

There is enough business in your neighborhood to keep you busy 9 or 10 months in the year, and this means a daily profit of from \$15 to \$18.

The BUCKEYE TRACTION DITCHER is built to give the most service for the least expense. It will cut the hardest ground finely, and will dig 100 to 150 rods a day.

It is built with either gasoline or steam power. One man can operate the gasoline machine, or two men the steamer.

Let us tell you what others have accomplished with this machine.

Ask for Catalogue T.

**THE BUCKEYE TRACTION DITCHER CO.**  
Findlay, Ohio.

**Stallion Inspection**

**UNDER THE ONTARIO STALLION ACT**

Inspection points and dates now arranged.

Persons wishing stallions inspected should apply for particulars to:

**A. P. WESTERVELT,**  
Secretary Stallion Enrolment Board,  
Parliament Buildings, Toronto.

**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

**Shires and Shorthorns**

In Shire stallions and fillies, from the best studs in England, we are offering some rare animals at rare prices. Scotch Shorthorns of either sex or age of highest breeding and quality. John Gardhouse & Son, Highfield, Ont. L.-D. Phone.

**MUST BE SO.**

A grapefruit is a lemon that has had a chance.

**QUESTIONS AND ANSWERS.**  
Miscellaneous.

**SWEENEY.**

I have a mare nine years old. Her shoulder has fallen in just in front of the blade. It is about two months since I first noticed her lame, and she is getting worse. What is wrong, and give cure?

A. C.

Ans.—The mare is suffering from sweeney, or shoulder-slip. In order to restore her to full usefulness, you will have to give her at least six months' rest, and blister the front of the shoulder, and also over the shoulder blade once monthly with the following: One and a half drams each biniodide of mercury and cantharides, mixed with two ounces vaseline. Clip the hair off the parts. Tie so she cannot bite them. Rub the blister well in, and in 24 hours rub well again, and in 24 hours longer wash off and apply sweet oil. Let her loose now in a box stall and oil every uay until the scale comes off. Repeat the blister every month as long as necessary.

**TOY ENGINE—GRAIN RATION FOR COWS.**

1. Is it possible to make a toy engine out of one dry battery and magnet-wire. I saw one given away for selling post cards. Could an ingenious person construct one with little expense if he had the secret of the making of the toy? Please describe how it is done.

2. Which is the most profitable feed to give cows for milk, wheat, barley, or oats, when wheat is 1½c. per lb.; barley, 1¼c. per lb., and oats, 1¼c. per lb.?

JOHN.

Ans.—1. This question is hardly one which we could be expected to take the time and space to answer, especially as it has nothing to do with practical agriculture.

2. It will depend upon what else you are feeding. With corn silage as the main roughage, oats might give as profitable results as either of the other grains. With clover hay, the barley or the wheat might be more profitable. The chances are that a chop mixture consisting of all three grains would prove more profitable than any one of them alone.

**SECRETARY VEGETABLE-GROWERS' ASSOCIATION—MANURING FOR CORN.**

1. Can you give me the name and address of the Secretary of the Ontario Vegetable-growers' Association? I wish to find out how a branch of it is organized and operated.

2. Most of our best farmers here prefer to haul their manure direct from yard to field in spring, and plow under for roots and corn as soon as possible. This means a lot of work at a busy season. Would you consider top-dressing a clover sod in spring of 1913, for corn in 1914, a wasteful plan?

3. Don't you think the lighting of the gas from calcium carbide with a match rather dangerous? Would not a fuse be safer? Hope the calcium-carbide idea is effective, as I have tried bisulphide of carbon and gun-powder with only partial success, even with two ounces of former placed in hole and all entrances closed.

Am very much interested in your practical test of whether the purchase of a farm is a good financial proposition. Wishing you success, I remain,

R. D. N.

Ans.—1. J. Lockie Wilson, Parliament Buildings, Toronto.

2. Not necessarily, if the meadow were to be mown for hay in the meantime. But why not manure the sod during winter, thus saving valuable time? As a rule, we think this a good way to economize fertility as well. Manure spread on sod is usually in as good a condition to be preserved with a minimum of loss as it would be in any other place.

3. We are not sure that the calcium-carbide treatment is safe. We are making enquiries about it.

**Imported and Canadian Bred Shires**

**BY AUCTION**

PORTER BROS. OF APPLEBY, ONT., will hold, at their farm, their first Annual Sale of Imported and Canadian bred Shire Horses, Stallions, Mares and Fillies, on

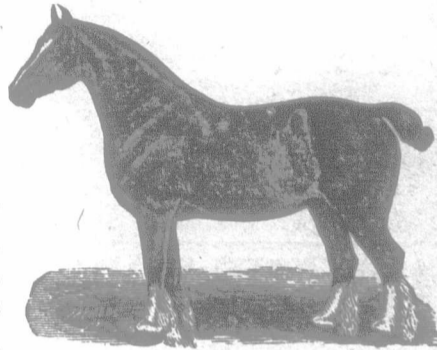
**THURSDAY, DECEMBER 5TH, 1912**

16 head, including the noted sire Baron Kitchener (356) = 6031 =

Among them are first and second prize winners and champions at Toronto, Ottawa, London and Guelph. The choicest lot of big quality Shires ever sold by auction in Canada.

There will also be sold 3 Short-horn bulls and several Hampshire pigs.

Conveyances will meet morning trains at Tansley, G.T.R., which connects with trains from Hamilton, Guelph, Toronto and north of Georgetown. Also at Bronte, G.T.R., at 12 o'clock noon.



Radial cars from Hamilton stopping at Appleby Crossing.

TERMS CASH, OR 6 MONTHS WITH 6%.

GEO. ANDREWS Auctioneer MILTON, ONTARIO  
Catalogues on application. PORTER BROS, Appleby P. O., Ontario.

**IMP. CLYDESDALES**

**AND PERCHERONS.**

I have 65 head of Clydesdales and Percherons in my barns to choose from, a great many of them are prizewinners in Canada, Scotland and France, and other extra show horses that have not yet been shown. I have never had so many good horses at one time before. Intending purchasers would do well to see through my barns before buying. My horses are all for sale and at right prices.

MARKHAM P. O., G. T. R., and LOCUST HILL, C. P. R., three miles.  
Long-distance Phone. **T. H. HASSARD**

**Union Stock Yards of Toronto, Ltd.**

**HORSE DEPARTMENT**

Auction Sale Every Wednesday Private Sales Every Day

Railroad Loading Facilities at Barn Doors

**W. W. SUTHERLAND,** In Office. **J. H. ASHCRAFT, JR.,** Manager.



**Just Arrived—Clydesdale Stallions and Fillies**

Bigger and better than ever before in our 1912 importation just arrived. Stallions with size, character, quality and breeding. Fillies of high-class breeding and quality for show or breeding purposes. Come and see them. Terms and prices right. JOHN A. BOAG & SON, Queensville P.O. and Sta., on Toronto to Sutton Electric Line L.-D. Phone.



**PERCHERON STALLIONS**—Our 1912 importation of Percheron stallions are now in our stables at Simcoe, Ont. We can supply the trade for ideal draft character flashy quality of underpinning, stylish tops and faultless moving. Let us know your wants. Any terms arranged.  
**RAID & PORTER, Simcoe, Ontario**



**IMPORTED CLYDESDALES**

A few choice young stallions always on hand and for sale. Frequent importations maintain a high standard. Prices and terms to suit.

**BARBER BROS., Gatineau Pt., Que., near Ottawa.**



**MT. VICTORIA STOCK FARM, Hudson Heights, P. Q.**  
We have some very choice young stock for sale, both sexes. Clydesdales and Backsneys from champion sire- and well bred dams, at reasonable prices.

**T. B. MAULAY, Prop.** **E. WATSON, Mgr**



**QUALITY AND SIZE IN CLYDESDALES** For the best the breed produces in the combination of size, character, quality, breeding and action, see my 1912 importation of Clyde Stallions and Fillies. Prices and terms unequalled.

**JAMES TORRANCE, MARKHAM,** Locust Hill, C. P. R. **P. O. and Sta., G. T. R.**  
**L. D. Phone**



**CLYDESDALES --- A NEW IMPORTATION**

We have lately landed a shipment of Clyde stallions and fillies, several Scotch winners among them. Their breeding is unsurpassed. Comparison with any others in the country will make you a buyer from us. Our prices are as low as the lowest. L.-D. Phone. **GOODFELLOW BROS., MACVILLE P. O., ONT.; BOLTON STATION, C. P. R.**



**CLYDESDALES OF CANADA'S STANDARD**

My second importation for 1912 has arrived, my third will be here in six weeks. In stallions or fillies I have the farmers' kind at farmers' prices. Come and see me.

**GEO. A. BRODIE, Newmarket P. O.**  
Newmarket or Stouffville Stns., G. T. R.; Gormley, C. N. R. L.-D. Phone from either



**A Few Choice Clyde Fillies**—I am offering several choice and particularly well-bred Clydesdale fillies from foals of 1911 up to 3 years of age, imp. sires and dams. Also one stallion colt of 1911, imp. sire and dam. These are the kind that make the money  
**HARRY SMITH; Hay P.O., Ont. Exeter Sta. L.-D. Phone,**

# Fistula and Poll Evil

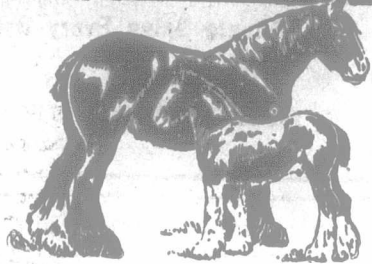
Any person, however inexperienced, can readily cure either disease with Fleming's **Fistula and Poll Evil Cure**—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Adviser. Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durably bound, indexed and illustrated. **FLEMING BROS., Chemists, 75 Church Street, Toronto, Ont.**

# SAVE-THE-HORSE



**Gets Advice; Sells Horse for \$800.**  
Ogden, Ia., April 18, 1912. Troy Chemical Co., Binghamton, N. Y. Gentlemen—I have used Save-The-Horse for years, and I never found any case but it would do just what you claim for it. I have a horse I want to race and I want your advice and another book. I lost or mislaid mine. The last time I bothered you your advice and treatment did the work. I sold the horse for \$800.  
Yours truly,  
E. S. HELFERTY.  
Every bottle of Save-the-Horse is sold with an iron-clad contract that has \$50,000 paid-up capital back of it, guaranteeing to permanently cure or refund the money! no matter whether it is Bone or Hog Spavin, Tendon disease or Pull—no matter how aged, severe or complicated the lameness or bleed may be.  
**OUR LATEST Save-The-Horse BOOK**—is our 17 Years' Experience and DISCOVERIES—Treating over 100,000 horses for Kingbone—Thrombosis—Spavin—and ALL Lameness. It is a Mind Settler—Tells How to Test for Spavin—What to Do for a Lame Horse, Covers 58 Forms of Lameness—Illustrated. MAILED FREE.  
Just write, describing your case, and from Breeders and business men the world over, on every kind of case, and advice—all free to horse owners and managers.  
Write! AND STOP THE LOSS.  
**TROY CHEMICAL CO., Commerce Ave., Binghamton, N. Y.**  
Druggists everywhere sell Save-the-Horse WITH CONTRACT or sent by us Express Prepaid.  
Canadian Office:  
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# INSURE YOUR HORSES



**FOALING INSURANCE.**  
A small premium will secure a policy in our Company by which you will be fully insured against any loss resulting from the death of your mare or its foal, or both. All kinds of insurance on Live Stock. Transit Insurance covering horses on board cars for 5, 10, 15, 20 or 30 days.  
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OTTAWA BRANCH:  
No. 106 York Street, Ottawa  
Toronto Agency: J. A. Caesar, Room 2, Jones Building, Toronto, Ont.

# You Can't Cut Out A BOG SPAVIN, PUFF OR THOROUGHPIN, but

**ABSORBINE**  
will clean them off permanently, and you work the horse same time. Does not blister or remove the hair. \$2.00 per bottle, delivered. Book & E free. **ABSORBINE, J.H.** Ligament, for mauling, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Gout, Wens, Cysts, Allays pain quickly. Price \$1.00 and \$2.00 a bottle at druggists or delivered. Will tell you more if you write. Manufactured only by **W. F. YOUNG, P.D.F., 278 Lyman's Bldg., Montreal, Can.**

**Aberdeen-Angus of Show Form and Quality.** For this season my offering in young bulls and heifers are toppers every one. Showing form and quality, and bred from show winners. **T. B. BROADFOOT, Fergus, Ont. G. I. R. and C. P. R.**

**Aberdeen-Angus**—A few females to sell yet; also females. Come and see them before buying. **Drumby Station, Walter Hill, Washington, Ont.**

## GOSSIP.

R. O. P. AYRSHIRES.

Records of Ayrshire cows and heifers that have qualified for the Record of Performance since last report:

**Mature Class.**  
Amy 30017—Geo. A. McMillan, Ontario: Lbs. milk, 12,187.2; lbs. fat, 443.62; per cent. fat, 3.64; number of days in milk, 340.  
White Floss 18652—Wm. Thorn, Ontario: Lbs. milk, 10,635.95; lbs. fat, 421.27; per cent. fat, 3.96; number of days in milk, 365.  
Cygnnet of the Willows 20937—G. H. Montgomery, Quebec: Lbs. milk, 9,547.5; lbs. fat, 374.16; per cent. fat, 3.91; number of days in milk, 365.  
Daisy Dean 17289—Geo. A. McMillan, Ontario: Lbs. milk, 9,462.25; lbs. fat, 350.29; per cent. fat, 3.70; number of days in milk, 317.  
Julia 23580—Wooddisse Bros., Ontario: Lbs. milk, 9,114.25; lbs. fat, 449.37; per cent. fat, 4.93; number of days in milk, 365.  
Bess of Glenora 16747—Geo. H. Montgomery, Quebec: Lbs. milk, 9,064.5; lbs. fat, 346.32; per cent. fat, 3.81; number of days in milk, 325.  
Nancy 2nd 19780—John McKee, Ontario: Lbs. milk, 9,035.3; lbs. fat, 311.74; per cent. fat, 3.45; number of days in milk, 300.  
Lessnessock Grace Darling 20691—Wm. Thorn, Ontario: Lbs. milk, 8,832.55; lbs. fat, 384.42; per cent. fat, 4.35; number of days in milk, 365.  
Chief's Buttercup 30388—Collier Bros., Ontario: Lbs. milk, 8,554.3; lbs. fat, 389.61; per cent. fat, 3.97; number of days in milk, 341.  
**Four-year-old Class.**  
Polly 2nd Fernbrook 34631—Collier Bros., Ontario: Lbs. milk, 9,920.6; lbs. fat, 416.2; per cent. fat, 4.20; number of days in milk, 354.  
Ruby 27701—Dr. E. Flath, Ontario: Lbs. milk, 9,723.35; lbs. fat, 383.44; per cent. fat, 3.94; number of days in milk, 345.  
Floss 2nd of Hillview 24016—Collier Bros., Ontario: Lbs. milk, 8,729.5; lbs. fat, 327.17; per cent. fat, 3.74; number of days in milk, 365.

**Three-year-old Class.**  
Queen of Bryn Mawr 29565—H. W. Vanderhoof, British Columbia: Lbs. milk, 8,644.5; lbs. fat, 279; per cent. fat, 3.22; number of days in milk, 305.  
Edith of Hickory Hill 32645—Geo. H. Stokes, Ontario: Lbs. milk, 8,451.25; lbs. fat, 352.81; per cent. fat, 4.17; number of days in milk, 349.  
Watt's Favourite 28115—W. E. Tummson, Ontario: Lbs. milk, 8,140.45; lbs. fat, 365.98; per cent. fat, 4.49; number of days in milk, 330.  
Annie Laurie 3rd 27957—W. W. Ballantyne, Ontario: Lbs. milk, 8,096.8; lbs. fat, 321.44; per cent. fat, 3.96; number of days in milk, 299.

**Two-year-old Class.**  
Bright Lassie 30016—Wm. Thorn, Ontario: Lbs. milk, 9,830.95; lbs. fat, 370.39; per cent. fat, 3.76; days in milk, 365.  
Lady Betty 2nd 32231—Jas. Begg, Ontario: Lbs. milk, 9,775.8; lbs. fat, 452.28; per cent. fat, 4.62; number of days in milk, 365.  
Violet 2nd 32377—William Briton, Ontario: Lbs. milk, 8,930.5; lbs. fat, 366.87; per cent. fat, 4.11; number of days in milk, 364.  
Alfalfa 32274—Wooddisse Bros., Ontario: Lbs. milk, 8,271.25; lbs. fat, 414.59; per cent. fat, 5.01; number of days in milk, 365.

Barcheskie Viola 2nd 28174—Robert Meharey, Ontario: Lbs. milk, 7,504.3; lbs. fat, 325.55; per cent. fat, 4.33; number of days in milk, 365.  
Pansy 32273—Wooddisse Bros., Ontario: Lbs. milk, 7,266.5; lbs. fat, 328.94; per cent. fat, 4.52; number of days in milk, 365.  
Princess of Tanglewyld 31272—Wooddisse Bros., Ontario: Lbs. milk, 7,137.75; lbs. fat, 323.43; per cent. fat, 4.53; number of days in milk, 365.  
Easter 32760—Wooddisse Bros., Ontario: Lbs. milk, 6,757.25; lbs. fat, 288.65; per cent. fat, 4.27; number of days in milk, 365.

June Morning 31187—Alex. Hume & Co., Ontario: Lbs. milk, 6,716.5; lbs. fat, 341.17; per cent. fat, 5.07; number of days in milk, 365.

(Continued on next page.)

# Do You Feed Oil Cake

IMPROVES THE STOCK IN EVERY WAY

We recommend the Fine Ground for cattle, horses and pigs, and the Pea Size Grinding for sheep. Coarse Ground, if preferred by the feeder.

Can be fed with your silage or roots. If your dealer cannot supply you, write us for prices.

## THE DOMINION LINSEED OIL CO., LIMITED

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NOW FOR THE INTERNATIONAL! Greatest and Best

# LIVE STOCK SHOW

of the year

November 30th to December 7th, 1912

At Union Stock Yards, CHICAGO

Many new improvements. New features. Thirty National Conventions. Daily sales of all breeds, etc., etc. A season of learning, entertainment. Brilliant evening shows, and

## A TRIP TO CHICAGO

LOWEST RATES ON ALL RAILROADS



TRADEMARK

## The National Stock Food Company

GENTLEMEN:—I am so pleased to write you, with reference to a very bad colic case I had. Although the horse was almost dead and hopeless I drenched him with two bottles of your "ANTI-COLIC"; he made a fine and quick recovery. I obtained as good results as this one with any of your other preparations I used. Yours truly, O. Yelle.

The National Stock Food Co., whose products are famed all over the Dominion, always carry a stock of pure Veterinaries' medicines. Our expert Veterinarians are at your disposal for free consultation. Just write and give all details possible on the disease your animal is affected with, when you will receive the answer strictly free of charge. Write at once.

The National Stock Food Company, Ottawa, Ont.  
NOTE.—For shanty horses, special medicines. Write before you go.

## THE AULD HERD

A. F. & G. AULD, Proprietors, Eden Mills, Ontario SHORTHORN BREEDERS

We have ten high-class senior and junior bull calves for sale, Toronto and London winners. Out of imported and Canadian-bred cows and by Scottish Signet, Bud's Emblem and others. Prospective buyers met at either Guelph or Rockwood. Correspondence invited. A. F. & G. AULD, Eden Mills, Ont.

## I Have SHORTHORN Bulls and Heifers, SHROPSHIRE and COTSWOLD Rams and Ewes, CLYDESDALE Fillies and Colts

that are as good as I have ever had, and that I will sell for prices within the reach of all. We have been in the business 75 years, always in the front rank, and propose to keep that position. You cannot afford to buy without writing us for prices. **ROBERT MILLER, STOUFFVILLE, ONTARIO**

## 1861 Irvine-Side Shorthorns 1912

Offering for sale young bulls and heifers that are the result of over 50 years successful breeding. Pure Scotch, and carrying the best blood of the breed. Few good Oxford Down rams. **John Watt & Son, Salem P. O., Ont., Elora Station, G. T. and C. P. R.**

## SALEM SHORTHORNS

Headed by Gainford Marquis, undetested bull of three countries. See our show herd at the leading fairs, starting at Winnipeg. **J. A. WATT, SALEM, ELORA STA., G. T. and C. P. R.**

**Shorthorns** of breeding and quality—Our offering this year in young bulls and heifers, out of Scotch cow, and sired by our great Mildred Royal, are put up on show lines, and strictly first-class. **GEO. GIER & SON, Grand Valley, Ont., P. O. and Sta.**

**SCOTCH SHORTHORNS** At prices that defy competition. I am offering a big, choice and royally-bred selection of females from calves up. Also a few right good herd headers, including my great stock bull, Lord Lavendar. **A. J. HOWDEN, COLUMBUS P. O., ONT. Brooklin Sta., G. T. R.; Myrtle Sta., C. P. R.**

**SCOTCH SHORTHORNS** For sale: One good imported yearling bull, a Marr Flora, recently imported; 16 bull calves 8 to 14 months old; also 30 cows and heifers in calf. Farm 1/4 mile from Burlington. Some Toronto and London winners among these. **MITCHELL BROS., Burlington, Ont.**

**Orchard-Grove Herefords** I have lately made a big importation of the leading herds of Illinois. In my herd you now have 25 Bulls to select from; a big range of Heifers and Cows. High-class show and breeding stock a specialty. **L. O. CLIFFORD, Oshawa, Ontario, G. T. R. and C. N. R.**

**KITCHEN TINS**  
 DISH-PANS  
 COLANDERS ETC  
 KEPT DAZZLING-  
 BRIGHT & CLEAN BY  
**Old Dutch Cleanser**  
 Full directions and many  
 uses on Large Sifter-Can, 10¢



5 times more light  
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200 candle power of  
 pure white brilliant  
 light costing less than  
 1/2 cent per hour. No  
 smoke, or odor. No  
 greasy oil lamps. No  
 wicks to trim. So simple  
 a child can operate it. Cannot explode  
 —absolutely safe—fully guaranteed  
 five years. An ornament in any home.  
 Write to-day for circular A  
**RICE-KNIGHT Ltd.**  
 Toronto or Regina

**Shorthorns, Cotswolds, Berkshires**

For sale: 5 yearling bulls, 12 bull calves, cows, heifers and heifer calves. In Cotswolds: Lambs and shearing ewes. Will book a few orders for Berkshires, fall litters.

Chas. E. Bonnycastle,  
 P. O. AND STA., CAMPBELLFORD, ONT.

**1854 Maple Lodge Stock Farm 1912**

Have some **SHORTHORN HEIFERS** two years old from cows giving 50 pounds milk per day, and in calf to my stock bull, Senator Lavender. Grand young **LEICESTERS** from imp. Wooler of Sandy Knows, champion at Toronto, and imp. Royal Connaught.

A. W. SMITH, MAPLE LODGE, ONTARIO  
 Lucan Crossing G. T. Ry., one mile.

**OAKLAND 50 SHORTHORNS**

Herd header for sale, Scotch Grey = 72692 =, still in his prime, a beautiful roan and a grand handler, straight lined, quiet, active and allright, and one of the choice bulls in Ontario; also five other good bulls, one year and over.

JOHN ELDER & SON, HENSALL, ONTARIO

**SPRING VALLEY SHORTHORNS**

Herd headed by the two imported bulls, Newton Ringleader, = 73783 =, and Scottish Pride, = 36106 =. The females are of the best Scottish families. Young stock of both sexes for sale at reasonable prices. Telephone connection.

KYLE BROS. - - Ayr, Ontario

**Fletcher's Shorthorns**

Our herd of Pure Scotch Shorthorns (imp.) or direct from imported stock, is headed by the grandly-bred Bruce Mayflower bull, Royal Bruce (imp.) = 55035 = (89909) 273853. Choice young stock for sale.

GEO. D. FLETCHER, R.R. No. 2, Erin, Ont.

**Shorthorns for Sale—Three strong-boned**

bulls of serviceable age, two large cows with calves by side; choicest breeding and heavy milking strain.

STEWART M. GRAHAM, Port Perry, Ont.

**SHORTHORNS**

Nine bulls and a number of heifers for sale at very reasonable prices.

Robert Nichol & Sons, Hagersville, Ont.

**CEDARDALE SHORTHORNS**

To make room for newcomers, I am now offering some rare value in Scotch-bred cows and heifers, beautifully bred and high-class in type; also 1 yearling bull.

Dr. T. S. Sproule, Markham, Ont.

**Spruce Lodge Shorthorns & Leicesters**

Present offering: Young bulls and heifers from grand milking dams. Also a choice lot of Leicester rams and ewe lambs, and ewes of all ages bred to imp. rams. W. A. Douglas, Tuscarora, Ont.

**Clover Dell Shorthorns**

Choice young stock of both sexes. Dual purpose a specialty. L. A. WAKELY, BOLTON, ONT. Bolton Station C. P. R.

**SHORTHORNS & POLAND-CHINAS**

Am offering choice young bulls 8 to 14 months, and heifers of all ages. Fall pigs by Victorious Invader and Missouri Meddler, the best of the breed. Pairs not akin. Geo. G. Gould, Edgar's Mills, Ont.

fat, 272.75; per cent. fat, 4.06; number of days in milk, 343.

Lady G 30015—Wm. Thorn, Ontario: Lbs. milk, 6,619; lbs. fat, 285.10; per cent. fat, 4.30; number of days in milk, 365.

Pansy 30214—S. R. Cairns, P. E. I.: Lbs. milk, 6,507.25; lbs. fat, 267.28; per cent. fat, 4.17; number of days in milk, 365.

Oakland Lass 29800—Geo. H. Stokes, Ontario: Lbs. milk, 6,418.35; lbs. fat, 255.61; per cent. fat, 3.98; number of days in milk, 349.

Pearl 31516—Geo. Annear, P. E. I.: Lbs. milk, 6,200.75; lbs. fat, 277.01; per cent. fat, 4.30; number of days in milk, 342.

Up to date, 254 Ayrshire cows and heifers have qualified in the Record of Performance test.—W. F. Stephen, Sec.-Treas., Canadian Ayrshire-breeders' Association, Huntingdon, Que.

**GOSSIP.**

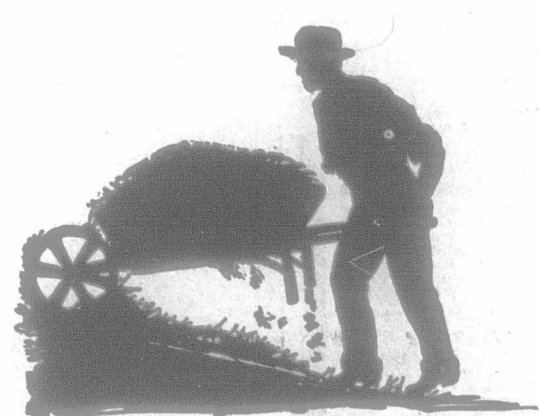
**PORTER BROS.' SHIRE SALE.**

Among the prizewinning Shires to be sold at Porter Bros.' sale, at Appleby, Ont., on Thursday, December 5th, is the noted sire, Baron Kitchener (356) =6081=, a gray, twelve years old, bred by Lew Cochrane, Crawfordshire, Ind., sire Winona Mark, dam Star, by King Charles. As a yearling, he was second at Chicago, and as a two-year-old was second at Toronto. He is a horse with size, and remarkable quality, and a proven sire of champions. Among the older mares are the two big, grand, brood mares, Rose (145), by Pride of Hatfield (imp.), and Viola (185), by Pride of Morning. Both these mares are Toronto winners, and the dams of winners. Among the three-year-olds is the bay, Tuttlebrook Sunflower (imp.) (685), by the noted Wagenor Harold. She is a filly of outstanding merit, with big size, and splendid quality. In 1911 she was first at Toronto, and first and champion at Ottawa and Guelph. This year, at Toronto, she was third, and at London, first and champion. Another three-year-old is Tuttlebrook Ladylike (imp.) (695), also a bay, by The Hook King. She, too, is a filly of quality. Last year she was second at Toronto and Ottawa, and this year was second at London. Among the two-year-olds is Tuttlebrook Flirt (imp.) (684), a black filly of splendid quality, sired by Finstall Landmaster. In 1911, as a yearling, she was third at Guelph, and this year, as a two-year-old, was first at London. Another two-year-old is the bay, Wilsford Sophio (imp.) (693), by Lorahurst Squire. She was never exhibited, but has big size, and the kind of underpinning Canadians like. Tuttlebrook Bloom (imp.) (694) is another bay two-year-old, by The Black King, a big, nice filly. Hattie Kitchener (698) is Canadian-bred, got by Baron Kitchener, and out of Rose (145). She is a filly that will please the most exacting; a bay yearling. Another, same age, is Viola Queen, got by the Toronto and Ottawa champion, Proportion (imp.) (582), and out of Viola (185). Those mentioned will give a little idea of the high-class type and quality of the offering. All but one old enough to breed are in foal to Proportion, that one is in foal to Baron Kitchener.

At the same time there will be sold three Shorthorn bulls, along about a year old, all sired by the Jilt-bred bull, Imp. Heather King, and all of the popular Princess Royal tribe. Besides these, there will be sold a number of Hampshire pigs, about six weeks of age, sired by the several-times Toronto champion boar. This offering all through is an essentially high-class one, and will be offered in proper selling condition. Everything offered will be sold, as the Messrs. Porter intend this to be an annual sale. Don't forget the date. Conveyances will meet all incoming trains at Tansley, G. T. R., and the noon train from Hamilton, at Bronte.

Mr. Henpeck—"Well, anyhow, you've had the last word!"

Mrs. Henpeck—"Liar!"



Some farmers are like Gladstone. You will remember he got his exercise by chopping down trees.

Some farmers—a good many of them—are getting theirs like the man in the picture above.

Trundling one wheelbarrow-load after another for half a day from stable to yard is exercise all right. And what a "plug" it is to get a well-filled wheelbarrow up the plank gangway on to the manure heap—especially in winter.

But have you time for this exercise? Then why do it?

You wouldn't think of sowing or reaping in the old-fashioned way. Then don't make cleaning out stables the exception.

DILLON'S LITTER CARRIER lightens the labors of farmer's boy or hired man. It enables him to finish the stables in a fraction of the time before required.

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**MEADOW LAWN SHORTHORNS** of richest and most fashionable Scotch breeding, and of high-class type and condition. I can supply young bulls and heifers—Clarets, Roan Ladys, Mildreds, Stamfords, etc. F. W. EWING, SALEM, ONTARIO L.-D. Phone. Elora Station.

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Herd established 1855, flock 1848, have a special good lot of Shorthorns of either sex to offer of various ages; also grand lot of Leicester sheep of either sex—a few imported ones to offer. JAMES DOUGLAS, Caledonia, Ont.

**10 SHORTHORN BULLS**

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### SYNOPSIS OF DOMINION LAND REGULATIONS.

ANY PERSON who is the sole head of a family, or any male over 18 years old, may homestead a quarter section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-agency of the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

**Duties**—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price, \$3.00 per acre.

**Duties**—Must reside upon the homestead or pre-emption six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

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Deputy of the Minister of the Interior.  
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For information as to terms, homestead regulations, special railway rates, etc., write to

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TORONTO, ONTARIO.  
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A clergyman, after a sermon of seventeen heads, remarked, "Brethren, we cannot avoid conclusion?" "Thank heaven for that!" remarked a visitor. "I've been afraid for the past hour he was going to."

### Live Stock Judges for the International.

Following is a list of judges at the forthcoming International Live-stock Exposition, Chicago. The list includes a noteworthy representation of Canadian judicial talent:

- CATTLE.—SHORTHORNS.**  
(Breeding and Fat Classes.)  
Harry Smith.....Hay, Ont.  
James Thompson.....Dover, Kansas  
Chas. E. Marvin.....Paynes Depot, Ky.
- ABERDEEN-ANGUS.**  
(Breeding and Fat Classes.)  
Chas. Escher, Jr.....Botna, Iowa  
H. J. Hess.....Waterloo, Iowa  
M. A. Judy.....West Lebanon, Ind.
- HEREFORDS.**  
(Breeding Classes.)  
J. E. Robbins.....Horace, Ind.  
(Fat Classes.)  
Thomas Clark.....Beecher, Ill.
- RED POLLED.**  
(Breeding and Fat Classes.)  
Prof. R. S. Shaw.....Lansing Mich.
- GALLOWAYS.**  
(Breeding and Fat Classes.)  
E. T. Davis.....Iowa City, Iowa
- POLLED DURHAMS.**  
(Breeding and Fat Classes.)  
E. M. Hall.....Carthage, Mo.
- GRADE AND CROSS-BREDS AND CHAMPION STEERS.**  
Robert H. Keene.....  
.....Westfield, Medmanham, Marlow, Eng.
- CARLOAD FAT CLASSES.**  
(Yearlings.)  
Timothy Ingwersen.....Chicago, Ill.
- CARLOAD FAT CLASSES**  
(Two- and Three-year-olds.)  
Henry B. Duplan.....Chicago, Ill.
- SHORT-FED SPECIALS.**  
J. G. Imboden.....Decatur, Ill.
- CARLOAD FEEDER CATTLE.**  
Carl Marshall.....Ipa'va, Ill.
- CARLOAD CATTLE CHAMPIONSHIPS.**  
Henry B. Duplan.....Chicago, Ill.  
Timothy Ingwersen.....Chicago, Ill.  
William Leavitt (Referee).....Chicago, Ill.
- STEERS ENTERED FOR SLAUGHTER.**  
John Gosling.....Kansas City, Mo.
- SHEEP.—SHROPSHIRE.**  
(Breeding and Fat Classes.)  
J. G. Hammer.....Burford, Ont.  
Prof. J. H. Skinner (Alternate).....  
.....Lafayette, Ind.
- HAMPSHIRE.**  
(Breeding and Fat Classes.)  
H. Noel Gibson.....Delaware, Ont.
- SOUTHDOWNS.**  
(Breeding and Fat Classes.)  
H. Noel Gibson.....Delaware, Ont.
- OXFORD-DOWNS.**  
(Breeding and Fat Classes.)  
Dr. B. F. Miller.....Flint, Mich.
- LINCOLNS.**  
(Breeding and Fat Classes.)  
Graham Walker.....Chazy, N. Y.
- COTSWOLDS.**  
(Breeding and Fat Classes.)  
D. C. Lewis.....Camp Point, Ill.
- DORSETS.**  
(Breeding and Fat Classes.)  
J. B. Henderson.....Hickory, Pa.
- CHEVIOTS.**  
(Breeding Classes.)  
J. C. Dumeau.....Lewiston, N. Y.
- (Fat Classes.)  
David McKay.....Pt. Wayne, Ind.
- LEICESTERS.**  
(Breeding and Fat Classes.)  
James Snell.....Clinton, Ont.
- RAMBOULETS.**  
(Breeding and Fat Classes.)  
W. H. Cole.....Spring Grove, Ill.  
John E. Webb.....Southport, Ind.  
E. L. Davis.....Flint, Mich.
- (Continued on next page.)

## GOVERNMENT EXPERT Chooses SHARPLES Tubular Cream Separators for His Three Farms



Like other shrewd farmers, Mr. Anson Groh, widely known agricultural lecturer employed by the Government, knows the money to be made in dairying. He has succeeded because he knows profit is of far greater importance than first cost. Mr. Groh is seen sitting in this picture, with his family and assistants, before his country home. Like others making most money from dairying, Mr. Groh selected the Tubular in preference to all others because the Dairy Tubular contains no disks or other contraptions, has twice the skimming force of other separators, skims faster and twice as clean, and pays a profit no other can pay. Mr. Groh says:

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## THIRD ANNUAL Toronto Fat Stock Show AND SECOND ANNUAL EXHIBIT Union Stock Yards Poultry Breeders' Association Union Stock Yards, TORONTO

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to clear, before going into winter quarters, on three fine spring bull calves, sons of Auchenbrain Good Gift, first prize aged bull at Dominion Fair, 1912; also a few spring calving cows. Tuberculin tested. McMILLAN & LEGGAT, TROUT RIVER, QUE. Bell Telephone, Huntingdon 81-21. Carr's Crossing, G. T. R.; Huntingdon, N. Y. C. R.

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Bonnie's Messenger 32762 at head of herd, both dam and gr. dam R. O. P. cows. One yearling bull and calves of either sex. Will sell a few cows.

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One and a half miles from all stations.

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At head of herd in Ivanhoe of Tanglewild, a son of the champion Ayrshire cow, Primrose of Tanglewild, R. O. P. test 16,195 lbs. milk and 625.00 lbs. fat; 60 head to select from. Inspection invited.

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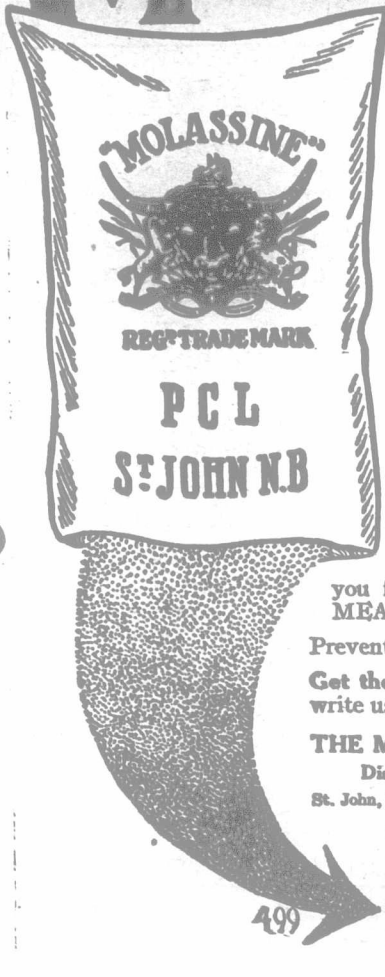
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Would you like your next bull to be from the same sire as the heifer that holds the world's record for yearly work, and the same sire as the Champion Cow of Canada in the thirty day work, of this breeding to offer whose dams have records of over 27 lbs. We have also some extra choice heifers bred to our junior herd bull whose dam has a record of 34.60 lbs. butter in seven days and 111 lbs. milk a day. Yorkshires of all ages. D. C. FLATT & SON, R. R. No. 2, Hamilton, Ont.

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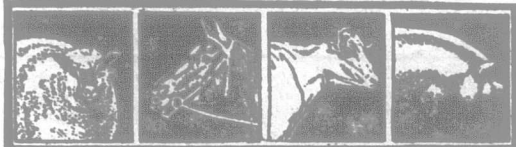
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To make room for the coming crop of calves, we are offering bulls of the richest breeding at farmers' prices. Grandsons of Pietertje Hengerveld Count De Kol and of Colantha Johanna Lad, all out of Record-of-Merit dams. Come now and get your choice.

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25983, the greatest sire that ever lived, and the only bull that ever sired 12 daughters that have made 7-day records above 30 pounds each. Do you want your next bull to be a brother to such cows as Pontiac Lady Korndyke (38.02), Pontiac Pet (37.67), Pontiac Clothilde De Kol 2nd (37.21), Sadie Vale Korndyke (36.20), and eight others above 30 pounds? If you do, write me for price on a son of Pontiac Korndyke. I also have sons of Rag Apple Korndyke and Sir Johanna Colantha Gladi. E. H. DOLLAR, HEUVELTON, NEW YORK. Near Prescott.

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(Continued on next page.)

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Write us for samples and the Good Roof Guide Book—free.



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PURE-BRED REGISTERED Holstein Cattle The most profitable dairy breed, greatest in size, milk, butter-fat and in vitality. Send for FREE illustrated descriptive booklets. HOLSTEIN-FRIESIAN ASSOCIATION, F. L. Houghton, Sec., Box 127, Battleboro, Vt.

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Write us to-day for our proposition, telling you how any good dairyman may own a registered Holstein bull from a Record-of-Performance cow without investing a cent for him.

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Offers a splendid lot of bull calves, all sired by Prince Laggie Mechthilde and all from record of merit dams. For pedigrees and prices write WALBURN RIVERS, Falden, Ontario

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No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample. Mailed free. **F. G. JAMES, Bowmanville, Ont.**

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20 Ram Lambs and 20 Ewe Lambs, born April, sired by a DRYDEN Ram. Price \$10 to \$12 each, including Pedigree. Also Ewes from one to six years old \$10 to \$15 each; also pure St. Lambert Jerseys, all ages. Prices moderate. For particulars write, **H. E. Williams, Sunnyside Farm, Kewilton, P. O.**

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Prof. J. C. Fuller.....Madison, Wis.  
Prof. Andrew Boss.....University Farm, St. Paul, Minn.  
A. E. Whittaker.....Chicago, Ill.  
**BEST GENERAL EXHIBIT.**  
Robert H. Keene.....Westfield, Medmanham, Marlow, Eng.  
Prof. Smith.....Laramie, Wyo.  
Prof. J. G. Fuller.....Madison, Wis.  
**COMMITTEE ON JUDGES OF THE EXPOSITION.**  
Thomas Clark.....Beecher, Ill.  
G. Howard Davidson.....Millbrook, N. Y.  
R. B. Ogilvie.....Chicago, Ill.  
A. J. Lovejoy.....Roscoe, Ill.

### GOSSIP.

**ANOTHER NEW LOT OF IMPORTED CLYDESDALES.**  
Goodfellow Bros., of Maceville, Ont., whose farm lies about two miles from Bolton Station, C. P. R., and whose reputation as breeders of high-class Shorthorn cattle is an enviable one, have made a new departure in their pure-bred stock operations by visiting the land of their forefathers, and importing an exceptionally good lot of Clydesdale stallions and fillies. The lot includes six stallions and nine fillies, and if the gilt-edged breeding and superior type, character and quality of this lot is an indication of the quality of their future importations, then some, or all, of the old importers will need to look to their laurels, for 'tis certainly many a day since such royal breeding and right good representatives of the breed have been landed in Canada. Any numbers used in this review of their breeding, will be their Canadian registration number. Kirkcubright Baron 14055 is a bay, rising three years, by the great Baron's Pride, dam by the H. & A. S. champion, Prince Thomas, granddam by the four-times Cawdor Cup champion, Prince of Carruchan, great-granddam by the Highland and Glasgow first-prize horse, Flashwood, great-granddam by the £700 Garnet Cross. This is surely intensive breeding on prizewinning lines, and the colt was a winner himself. He has quality galore, and is smooth to a turn. Another bay, rising three, is Baron Gregor 14051, by Baron's Pride, dam by the Kirkcubright prize horse, Majestic, granddam by the noted sire, The Raider, great-granddam by the immortal Macgregor. This is one of the best two-year-olds imported in recent years. He has all the qualifications of a draft horse, and has quality to spare. Still another bay, rising three, is Baron Hope 14052, by Baron's Pride, dam by the unbeaten £3,000 Prince of Albion, granddam by the noted prize horse, Prince of Brunstane. He, too, is a colt of superb quality, and remarkably smooth. The three above mentioned have five numbered dams, and all were prizewinners in Scotland. Another bay, rising three, is Lomar 14053, by the popular prize and breeding horse, Baron Mitchell, dam by the renowned Prince Sturdy, granddam by the great Macgregor. He, too, has five numbered dams, and has character and quality galore. Pride of Albion 14056 is a black yearling, remarkably well-bred, and a colt of great scale and character. The fillies are particularly well-bred, and up to a big size. There are among them coming ton mares, and their underpinning is the very best. There are two three-year-olds; five two-year-olds; one yearling, and one foal. The three-year-olds are both in foal. One is by the well-known prize horse, Scott's Hero, the other is by Baron Scott. The two-year-olds are by the Aberdeen prize horse, Hyacinthus; the Cawdor Cup champion, Memento; the great Prince Sturdy; the noted Imperialist, and Argument. The yearling is a black, of grand quality, sired by the unbeaten champion, Everlasting, dam by the ever-popular Up-to-Time. Any one wanting a Clydesdale stallion or filly, and visiting Goodfellow Bros.' stables, will certainly not be disappointed in the lot, unless they are looking for a world-beater, and then some of these may make it.

### MAPLE VILLA OXFORD DOWNS AND YORKSHIRES

This fall I have the best lot of lambs I ever bred. I have plenty of show material, bred from the best stock procurable in England. Order early if you want the best. Ram lambs, shearings and ewe lambs. Yorkshires of all ages.

**J. A. Cerswell, Bond Head P. O., Ontario**  
Bradford or Beeton stations. Long-distance phone.

### Shropshires and Cotswolds!

In SHROPSHIRE I have for sale 35 imp. shearing rams and ewes from some of England's best flocks, a lot of fine home-bred rams and ewes bred from Minton and Buttar ewes. In COTSWOLDS a lot of rams and ewes, and an extra good lot of lambs. A few of each breed fitted for showing. Order early and get a good choice. Prices very reasonable.

Claremont Station, C. P. R., three miles. Pickering Station, G. T. R., seven miles.

**John Miller, Brougham, Ont.**

### Belmont Shropshires and Southdowns

I have a grand lot of rams and ewes for sale, both breeds. Anyone wanting a good ram, or a few good breeding ewes, should write me at once and get the first choice.

**C. Hodgson, Brantford, Ont.**

### Southdown Sheep Farnham Oxfords and Hampshires

The market to-day demands quality. It pays to breed what the market wants. Can you do this more cheaply or quickly than by heading your flock with a right good ram of this most perfect of mutton breeds? Orders taken for a few sturdy young rams for all delivery.

**ROBT. McEWEEN, Alloway Lodge Stock Farm, Byron, Ontario**

FLOCK ESTABLISHED IN 1881. Present offering: A lot of first-class ram lambs of both breeds, by imported champion rams. Also a number of yearling and older ewes and ewe lambs of both breeds. Prices reasonable.

**Henry Arkell & Son, Arkell, Ontario.**  
Long-distance phone in house.

**COTSWOLDS AND SHROPSHIRE** At Toronto I won 1st on ram and ewe in Cotswolds. I have for sale a big lot of shearing rams and ewes, ram and ewe lambs of both breeds; strictly high-class. **J. MILLER, JR., "BLAIRGOWRIE FARM," ASHBURN P. O., ONTARIO**

**SPRING VALLEY SHROPSHIRE**  
I am offering for sale shearing and ram lambs, shearing and ewe lambs, of highest quality and breed type. Prizewinners among them. Bred from imported stock. Order early. **THOS. HALL, BRADFORD, ONT., P. O. & STA.**

**Champion Oxford Flock of America**  
We are offering for sale 6 imported yearling ewes, one yearling and two 2-year imported rams, and 50 head of home-bred yearling ewes. Also ram and ewe lambs, all by Champion rams. Write at once for prices to Long-distance Phone. **PETER ARKELL & SONS, Teeswater, Ont. C.P.R. & G.T.R.**

**SHROPSHIRE** For Sale—Registered ram lambs, shearing rams and ewe lambs from imported and home-bred ewes. Also ewes from one to six years old. Prices very moderate. Write for particulars. **JOHN HAYWARD, EASTWOOD, ONT.**

**SWINE OF ALL BREEDS FOR SALE.** Yorkshires, Tamworths, Berkshires, Hampshires, Chester Whites, Poland-Chinas, and Duroc-Jerseys. I have constantly on hand both sexes of all ages. Show stock a specialty. **John Harvey, Freilighsburg, Que.**

**Pine Grove Yorkshires** Bred from prizewinning stock of England and Canada. Have a choice lot of young pigs of both sexes, pairs not akin, tooffer at reasonable prices. Guaranteed satisfaction. **Joseph Featherston & Son, Streetsville, Ont.**

**Fairview Herd Large English Berkshires** Present offering: Five young boars fit for service, sows ready to breed, young pigs all ages, sired by champion boar at Toronto, 1911 and 1912, and out of prizewinning sows. **J. S. COWAN, Donegal P. O., Ontario.**

**The Tamworths** in Canada—I have a particularly nice lot of young Tamworths just now of both sexes, from youngsters up to breeding age. If you want the best types of the breed, write me. **HERBERT GERMAN, St. George, Ont. Long-distance phone.**

**MENTION "FARMER'S ADVOCATE."**

**Hampshire Pigs** PRESENT OFFERING—7 Sows in pig from imported stock. Write for prices. Long-distance phone. **J. H. RUTHERFORD, Box 62, Caledon East, Ont.**

**Newcastle Tamworths and Shorthorns**  
Present offering: Seven boars from 6 to 10 months old; boars and sows 6 weeks to 4 months; sows bred and others ready to breed, from such noted stock as Colwill's Choice, Canada's champion boar, 1901, '02, '03 and '05, and Imp. Cholderton Golden Secret. Also a few choice Shorthorn heifers in calf; beef and milk combined. Show stock a specialty. Prices right. L.-D. Phone. **A. A. Colwill Newcastle Ont.**

**Morrison Tamworths and SHORTHORNS**  
—Present offering: Four dandy bull calves that will make show winners, from six to ten months old. Choice Tamworths, both sexes. **CHAS. CURRIE, Morrison, Ontario**

**Duroc Jersey Swine AND JERSEY CATTLE.**  
Grand stock, either sex, constantly for sale. Price reasonable. **MAC CAMPBELL & SONS, Northwood, Ontario.**

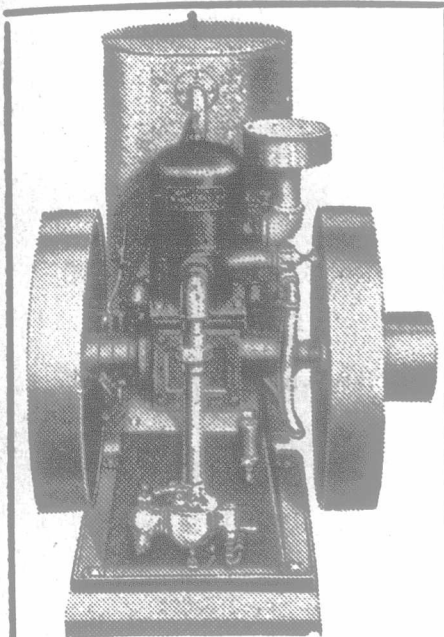
**Choice YORKSHIRE Pigs**  
Both sexes and all sires. Prices right. **BENFIELD, WOODSTOCK, ONTARIO**

**ELMHURST LARGE ENGLISH BERKSHIRES**  
Present offering: Select sows. Choice boars ready for service also younger stock, livery guaranteed. **H. M. VANDERLIP, Breeder and Importer, CAINSVILLE P. O. Langford station, Brantford and Hamilton Radial.**

**Registered Tamworths.**  
We are offering boars ready for service, sows bred and ready to breed. Young pigs all ages, from six weeks up. **W. W. GEORGE, Crampton, Ont.**

**Cloverdale Berkshires** Present offering: Sows bred and others ready to breed. Choice boars ready for service, also younger stock of both sexes. Also stock boar. Prices reasonable. **C. J. LANG, Hampton, Ont.**

**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. Show and breeding stock a specialty. **E. BRIEN & SON, Ridgetown, Ont.**

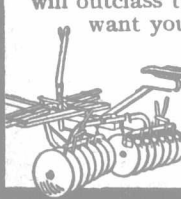


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**SHORTHORNS and OXFORDS**  
Sale, at Greenock farm, Elgin Co., Shorthorn 15 months old, Oxford-Down ram and ewe 18 months. Reasonable. N. A. McFARLANE, Elgin, Ont.

**New Movement in the Fertilizer Industry.**

The American Agricultural Chemical Company is about to take an advanced step in the history of the fertilizer trade in the United States.

It is planned, in brief, to make exhaustive practical tests of the individual ingredients used in the manufacture of the different brands of complete fertilizers. The company intends also to make a study of the needs of different kinds of plants and of various types of soils in the different sections of the United States, with the idea of so adapting its fertilizer products as to insure the best possible results in crop production. It is an attempt to aid in the universal movement for greater crop yields by showing how to produce the largest crops with the greatest conservation of plant food.

The company proposes to make certain free examinations of soils for its patrons, and to advise them how to best correct unfavorable conditions, heretofore unrecognized, which have often greatly depressed the yields of crops. To this end a bureau, or bureaus of information, are to be established in order to place the farmers in a position to use fertilizers so as to insure the greatest returns from their investment.

The idea of establishing demonstration farms is also under consideration, with the thought of showing the possibilities of crop production with fertilizers, under judicious systems of crop rotation.

The man who has been selected to direct these several lines is Doctor H. J. Wheeler, Director of the Agricultural Experimental Station of the Rhode Island State College. Director Wheeler, who is the son of a Massachusetts farmer, was graduated at the Massachusetts Agricultural College, and in 1897 pursued further studies in general agricultural chemistry, geology, and physiological botany at the University of Gottingen, Germany. He was given the degree of Ph. D. magna cum laude, in 1889, and in 1911 was honored with the degree of D. Sc., by Brown University. He had already been selected as chief chemist at the Rhode Island Experiment Station before his return to the United States. In 1901, he was elected Director of the Station, which position he has since held, and for an interim of half a year was acting president of the Rhode Island State College.

**It Couldn't Be Done.**

Somebody said that it couldn't be done, But he with a chuckle replied,  
That "maybe it couldn't," but he would be one

Who wouldn't say so till he tried,  
So he buckled right in with the trace of a grin  
On his face. If he worried he hid it.  
He started to sing as he tackled the thing  
That couldn't be done—and he did it!

Somebody scoffed: "Oh, you'll never do that—  
At least, no one ever has done it";  
But he took off his coat and he took off his hat,  
And the first thing we knew he'd begun it.

With the lift of his chin and a bit of a grin,  
Without any doubting or quiddit,  
He started to sing as he tackled the thing  
That couldn't be done—and he did it.

There are thousands to tell you it cannot be done,  
There are thousands to prophesy failure;  
There are thousands to point out to you one by one  
The dangers that wait to assail you.

But just buckle in with a bit of a grin,  
Then take off your coat and go to it;  
Just start in to sing as you tackle the thing  
That "cannot be done"—and you'll do it.

—Edgar A. Guest, in the Detroit Free Press.

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They keep the feet warm and cozy in any style of vehicle in coldest weather. There is no flame, smoke or smell, and one of these heaters will last a lifetime. They fit in at your feet and occupy little space. They cannot be bent or broken. We make twenty styles, some as low as \$1.25 each. We guarantee that you will be pleased or money refunded. Get one from your dealer or write for complete catalog. Write today. You will never know what real comfort means during cold weather riding until you get one of these heaters.

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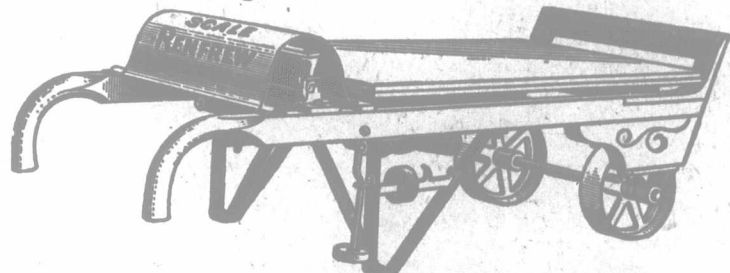
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LIVE STOCK ENTRIES CLOSE NOVEMBER 23rd

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Parliament Buildings,  
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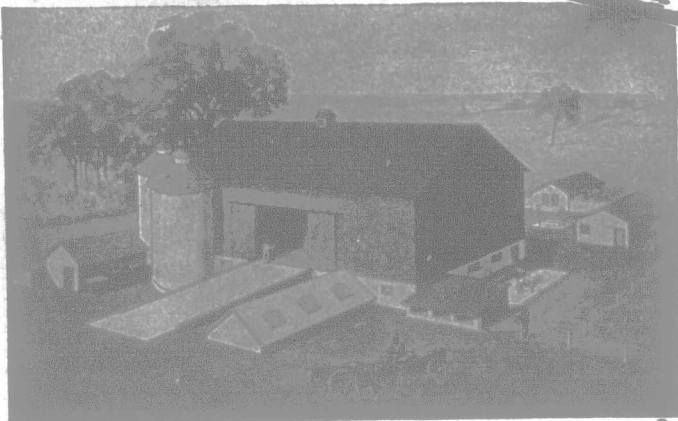
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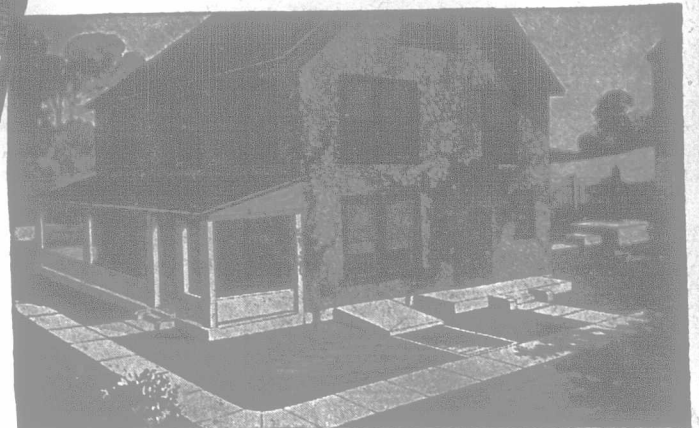
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