

PUBLISHED EVERY WEEK. \$1.50 PER YEAR



Vol. XLV.

LONDON, ONTARIO, JANUARY 20, 1910.

No. 904

## If the Life of the Average Fence is 12 Years, What's the Life of a Frost Fence?

Frost Fence will last from 12 to 15 years longer than any other.

It's just this way: The Wire used for nearly every Fence in Canada was never especially made to combat the extremities of Canadian weather.

Such Wire might give good service outside of Canada. But it is not making good here.

And this fault was never before overcome. Because, heretofore, no Canadian Fence-Maker made Wire for Fence only.

The Wire of which the Frost Fence was formerly made was manufactured under our own specifications. It always gave satisfaction, but we wanted better.

To control the quality of our Wire, we must own and operate our own Mills. So we have built special Wire-making and Galvanizing Mills, and equipped them with the most modern Machinery.

Our Wire Expert has been making Wire for 25 years. He made Wire way back when Zinc wasn't skimped to reduce the cost of Wire. He's using those same honest methods to-day. And for Frost Fence.

### Part of the Wire

Rust eats the very life out of Wire. You know that! And you also know that the Galvanizing means about two-thirds the life of Wire. It's Galvanizing which swings that two-thirds one way or the other.

Yet, in face of this vital fact, nearly every Wire Fence is Galvanized too thinly.

Zinc, you know, costs four times more than steel Wire. For this reason much Wire is wiped almost clean of its Galvanizing.

And when such Wire Fence is pitted against Canadian weather extremities, it rusts about 12 or 15 years sooner than it should.

### Double Galvanized

But here's how the Frost Fence is Double Galvanized, without fear of scaling and chipping off.

Frost Wire, before being Galvanized, is put through three different "Pickling" and "Cleansing" processes. They remove every particle of grease and scale, thoroughly cleansing the surface.

Now, then, when Frost Wire is put through its Galvanizing process, the Zinc not only spreads over the surface, but it goes into the Wire, making the Galvanizing a part of the Wire itself.

Because of that, Frost Double Galvanizing positively will not scale and chip off. Instead, it aids the Frost Fence to fight off rust 12 to 15 years longer than most other Fences.

When you buy Fence, just think of the Frost non-chipping Double Galvanizing, and what these extra 12 or 15 years mean to you.

### Proper Temper

After the Steel Rods are "drawn out" into Wire, it is brittle. To restore it to the only temper which can help make it fit for use in Canada, requires an exact degree of Annealing.

But our Wire Expert, with his

25 years of practical experience, knows exactly how to treat it.

This Frost Annealing gives Frost Wire greater resistance than any other same size Wire. It will not break under the most extraordinary strains.

### Most Practical Method

The Method of the Frost Woven-Fence Lock is the most practical of any Lock made. For this reason, principally, it is the strongest and most secure Lock ever used. It cannot slip or become loose.

Its peculiar firm "Knot" and Triple "Wrap" make it twice more secure than any other. And the "Wrap's" closely-bound ends prevent it from "springing."

Besides this, the Frost Lock contains more inches of Wire than any other Lock known. This adds still extra strength.

No other Fence-Maker in Canada can make a Lock like the Frost. Simply because we control the Method, and make the necessary Pattern Machines.

### A Permanent Grip

The Frost Field-Erected Fence Lock is the only Lock which permanently binds No. 7 Stays to the Laterals without injury to either.

This Frost Lock grips the extra heavy Stays and the Coiled Laterals, and holds them without the necessity of a kink.

The weakest spot in every other Fence is its Lock. But tests which have ruined other Fences have failed to even injure the Frost Metal Lock Fence.

These tests have proven that the Frost is the most secure and strongest Field-Erected Fence Locks in existence.

No other Field-Erected Lock can be even half so secure, without injuring the Wire.

### Acts Like a Spring

The Coils in the Frost Fence act just like a Spring. Instead of the Frost Fence snapping when contracted, these Coils "Give" their surplus. And when expansion is caused, they "Take" back that surplus.

Others are more likely to snap when contracted. And they'll sag and lose their shape when expanded.

It's because of the "Give" and "Take" that the Frost Fence can be stretched tighter than any other Machine-Made Fence in Canada.

This means a saving of many Posts. And that's money in your pocket.

And no matter how often contracted and expanded, the Frost Fence always acts the same.

### How to Know Wire

Just drop us a card and we'll send you our free Booklet and samples of the Frost Locks and Fence.

This free Booklet tells how Wire Fence is made, and the difference between the Frost Fence and all others.

It tells how to know any Wire Fence, so that you will be able to buy the best Fence in Canada.

Send that card now—or you may forget it.

The Frost Wire Fence Co.,  
Hamilton, Ontario

# "Frost" Fence

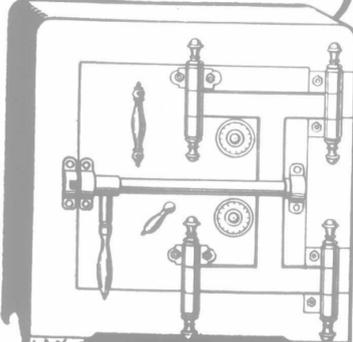
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You owe it to yourself—to your family and parents—to save some of your earnings. It's a part of your duty—to prepare for opportunities and old age.

Open an account here—today. One dollar will start it, and earns 3½% compound interest.

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**The Ontario Loan and Debenture Co.**  
A. M. SMART, MGR.  
DUNDAS ST. & MARKET LANE



**Synopsis of Canadian North-west 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 for 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 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.

A homesteader who has exhausted his homestead right, and cannot obtain a pre-emption, may take a purchased homestead in certain districts. Price, \$3.00 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres, and erect a house worth \$300.

W. W. CORY,

Deputy of the Minister of the Interior.

N.B.—Unauthorized publication of this advertisement will not be paid for.

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write us. We have farms at all prices for sale. State location, kind and size of farm desired. We offer only good value. Years of experience with Ontario land values enables us to do this. Address:

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**Corn that Will Grow**

Canadian grown seed corn. Yellow and white. Best for all purposes.  
**J. O. DUKE, RUTHERN, ONTARIO**

**INVENTIONS** This is the only...  
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Don't take our word for it. Ask us to prove to you that the

**SELKIRK STIFF-STAY FENCE**

is Heavier, Stiffer, Stronger. More Secure and Serviceable than any fence you have ever seen. It is the Best and Most Economical Fence to Buy, and consequently to Sell.

**FILL OUT THIS BLANK AND SEND IT TO US.**

SELKIRK FENCE CO., HAMILTON, CAN.

Gentlemen,—I want to examine for myself the merits of S. S. S. Fencing and Gates. Send me a free sample piece of the fence with descriptive matter and agent's terms.

Name.....

Post Office..... Prov.....

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Every farmer, market gardener and fruit grower, who has not already done so, should test the truth of this statement by using POTASH this year.

NO BETTER RESOLUTION CAN BE MADE FOR THE NEW YEAR.

Potash is an absolutely Indispensable Ingredient of a Complete Fertilizer, and may be obtained from all leading fertilizer dealers and seedsmen in the highly-concentrated forms of

**Sulphate of Potash and Muriate of Potash.**

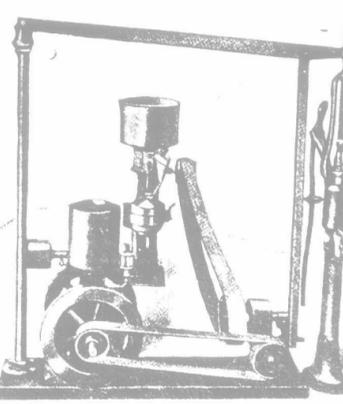
If there is no dealer in your locality who handles fertilizers, write us, and we shall advise you where you can get supplies. For the benefit of dealers and others requiring POTASH in CAR-LOAD LOTS, we would mention that our Head Office has established a Sales Agency at Baltimore, which will sell such quantities at CONSIDERABLY REDUCED PRICES.

Write us for particulars and FREE copies of our bulletins, including:—  
"Fertilizers: Their Nature and Use"; "Fertilizing Orchard and Garden";  
"The Potato Crop in Canada"; "The Farmer's Companion," etc., etc.

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1102-1105 TEMPLE BUILDING, TORONTO, ONTARIO

**IDEAL GASOLINE ENGINES**

1½ TO 40 HORSE-POWER.



Windmills,  
Grain Grinders,  
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Tanks,  
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Concrete Mixers,  
Etc., Etc.

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LIMITED,  
Brantford, Canada.

**NO NEED To Be Fooled**



Choosing the best cream separator is easy. The simplest is the best. No need to be fooled by claims that complicated machines are modern. Those who are misled by such claims are not satisfied until they discard their complicated machines for simple, sanitary Sharples Dairy Tubulars. Tubulars probably replace more common separators every year than any one maker of such machines sells. Disks and other contraptions cause work and trouble and are not needed in properly built separators.

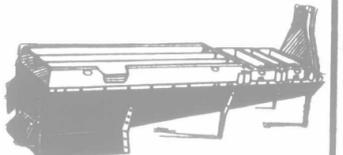
**This is the Proof!**

Sharples Dairy Tubular Cream Separators—the only simple, sanitary, easy to clean, modern separators made—easily and constantly outskim and outlast all others. That is because Tubulars are different. Tubular sales exceed most, if not all, others combined. The World's Best. The manufacture of Tubulars is one of Canada's leading industries.



Write for Catalog No. 193

**THE SHARPLES SEPARATOR CO.**  
Toronto, Ont. Winnipeg, Can.



Are you giving your maple grove the same attention as your other branches of farming? By installing the

**CHAMPION EVAPORATOR**

you are not obliged to take a back seat for anyone. The "CHAMPION" EVAPORATOR will make more and better syrup, with less time and fuel, and without reheating, and a better quality ready for market, than any boiling contrivance on the market. Made in 22 different sizes. Write to-day for our latest catalogue.

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**RUSH'S U-BAR STEEL STANCHIONS**

are swinging stanchions. See the comfort and freedom they give cattle. Are strongly made to stand roughest usage, and save lumber and labor in fitting up cow stables. Saves time in tying cattle, because the latch is easily operated and absolutely secure. Made in five sizes. Write for catalogue and prices.

**A. M. RUSH,**  
King St.,  
Preston, Ontario.

**Boys for Farm Help** The managers of Dr. Barnardo's Homes invite applications from farmers, or others, for the boys who are arriving periodically from England to be placed in this country. The young immigrants are mostly between 11 and 13 years of age; all will have passed through a period of training in Dr. Barnardo's English Institutions, and will have been carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars as to the terms and conditions upon which the boys are placed may be obtained upon application to Mr. Alfred B. Owen, Agent Dr. Barnardo's Homes 50-52 Peter St., Toronto.

Please Remember to Mention "The Farmer's Advocate" When Writing

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Any Subscriber May Have Date On His Own Label Advanced Twelve Months By Sending Us the Names of Two New Subscribers and \$3.

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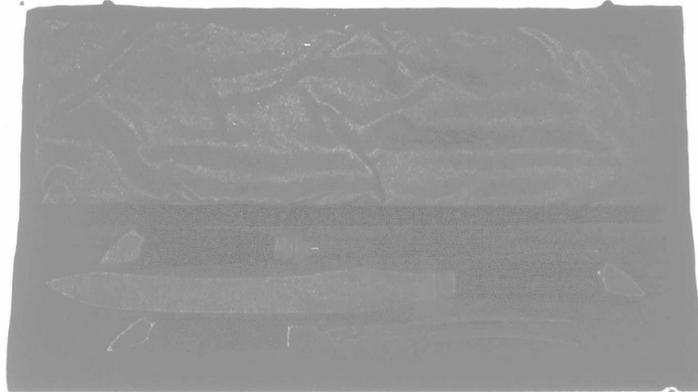
**"CARMICHAEL": A Canadian Farm Story.** Bound in cloth, illustrated. Just the thing for Christmas or Birthday Gift. "Far above the ordinary run of fiction," says the Buffalo Courier. "Should be in all the homes of the people," Toronto World. **2 new subscribers; or cash, \$1.25.**

We must have honest workers. Changing the name from one member of the household to another, or deception of any kind, will not be allowed. If discovered, the premium will be withheld.

These premiums are given only to our present subscribers for sending in bona-fide new yearly subscriptions, accompanied by \$1.50 each.

Send Postal for Sample Copies and Agent's Outfit and Start to Canvass at Once.

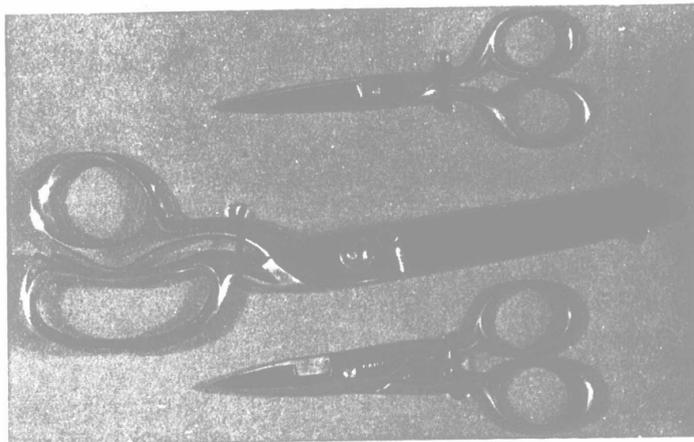
**The William Weld Company, Limited,**  
LONDON, ONTARIO.



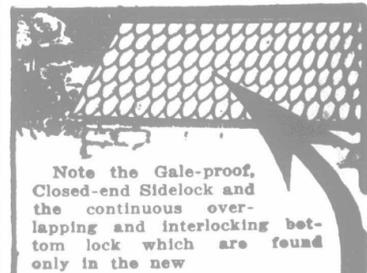
**SET STAGHORN CARVERS.** High-class goods. First quality of steel, and staghorn handles and handsome nickel mounting. These carvers will retail at \$3.50 to \$5.00 per set. **4 new subscribers.**



**A COMPLETE KITCHEN EQUIPMENT. A UTENSIL FOR EVERY PURPOSE.** All made of the highest grade of crucible steel, carefully tempered, ground and polished by the latest improved process. Rubberoid finished hardwood handles, mounted with nickel-plated ferrules. Now is your opportunity to supply your kitchen with a complete cutlery outfit. All six articles sent to any subscriber for sending in only **1 strictly new subscription and \$1.50.**



**SET SCISSORS.**—One self-sharpening scissors, one embroidery scissors, one buttonhole scissors—will cut buttonhole any size. All good quality steel. For only **One New Subscriber** to The Farmer's Advocate. Must be sent by present subscriber.



Note the Gale-proof, Closed-end Sidelock and the continuous overlapping and interlocking bottom lock which are found only in the new

## "GALT" SHINGLES

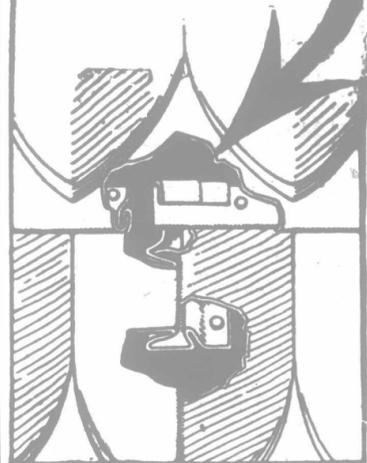
This ingenious and yet simple and easy-fitting construction makes a "Galt" Shingle roof absolutely weather-tight. It prevents wind from driving rain or snow up and out of the top end of side lock, as so often happens with ordinary metal shingles. There is not even the smallest opening—this cannot be truthfully claimed for any other steel shingle.

The material is the Best British Galvanized Steel embossed in a bold Gothic Tile pattern—"a thing of beauty, and of joy forever." Catalog "B-3" gives complete details of this newest and best shingle.

**THIS IS THE SHEET METAL AGE**

The Galt Art Metal Co., Ltd., Galt, Ont.

Sales and Distributing Agents: Dunn Bros., Winnipeg and Regina



OR COLD AIR IS ALL THE SAME TO THE **Canadian Airmotor**

At your service all the year. Works like a nigger. Let the wind pump your water. DOES MORE HARD WORK in a year than any other farm tool. Full line of PUMPS, Steel and Wood TANKS, DRILLING MACHINES, WATERING BASINS and TROUGHS. Get our Catalogue, No. 21; very useful.

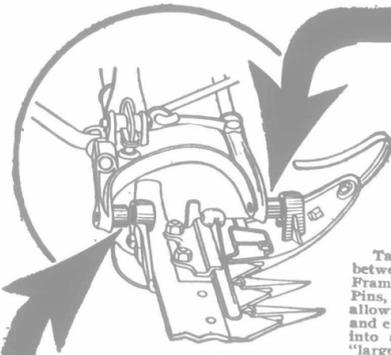
ONTARIO WIND ENGINE & PUMP CO., LTD., TORONTO, ONT.

## Nitrate of Soda

Nitrate Sold in Original Bags **NITRATE AGENCIES CO.**

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Address Office Nearest You  
Write for Quotations



**A Strong, Stay-Tight Connection Where Other Mowers are Weak**

Seventy years' experience, plus a disposition to use the very best materials when it might seem more profitable to cheapen things, is why Frost & Wood implements excel from the "Quality" standpoint.

Take, for instance, the connection between the Cutter Bar and Main Frame of a Mower. Others use Small Pins, that wear quickly, thereby allowing connection to work loose, and eventually "bang" the machine into a blacksmith shop. We use "large" Bearings for our "stay-tight" connection (see illustration). They

fit accurately and there is no opportunity for wear, because Cutter Bar has no chance to work loose from Main Frame. No time lost on the field—no bills to foot.

Another example of Frost & Wood "Quality" is the Pitman Connection of Forged Steel and "the Ball and Socket Joint"—strongest, firmest connection on the market.

Roller Bearings, with heavy boxes to maintain them in perfect position, make the No. 8 run easier than others. Every connection is neat and accurate. The "Internal Gear" cuts out the necessity of a "flying start"—knives commence cutting with first forward step of horses.

The No. 8 Mower is built in both Standard and Vertical Lift Styles.

Ask for Book F49



**FROST & WOOD No. 8 MOWER**

THE FROST & WOOD CO., Limited  
Smith's Falls, Canada

**Trinidad Lake Asphalt**  
is the greatest weather-resister known. It makes roofing last. We use it to make Genasco—and we own the Lake.

If you want your roof insured against leaks, damages, and repairs get

**Genasco Ready Roofing**

Mineral and smooth surface. Look for the trade-mark. Insist on the roofing with the thirty-two-million-dollar guarantee. Write for samples and the Good Roof Guide Book.

THE BARBER ASPHALT PAVING COMPANY



Largest producers of asphalt and largest manufacturers of ready roofing in the world.

PHILADELPHIA  
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**Goes Like Sixty**

Sells like Sixty  
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A perfect engine for pumping, grinding, sawing wood, corn shelling, churning, washing machines and all farming purposes. Larger sizes for feed cutting, threshing, silo filling, and all heavy farm work.

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**7% GUARANTEED**

Returns absolutely secure. A postal card will bring you information of a highly satisfactory investment

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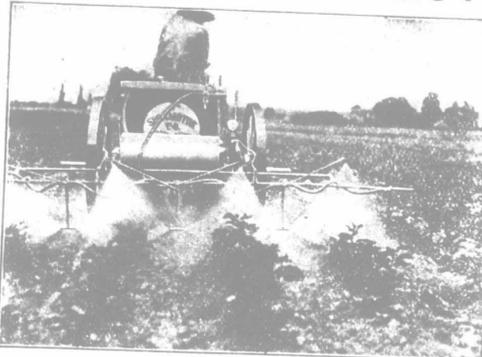


**First in the Hearts of the Countrymen DE LAVAL CREAM SEPARATORS**

have, by their universal performances of superiority, won for themselves the highest position in the Dairy EVERYWHERE

The De Laval Separator Co.,  
173-177 William Street, Montreal  
VANCOUVER WINNIPEG

THIS SHOWS THE **H. P. SPRAMOTOR** ARRANGED FOR



spraying potatoes, three nozzles to a row and four rows, two spraying from the sides and one from the top adjustable as to height and width up to 40 in. rows. Nozzles absolutely will not clog. 12-gallon air tank, automatic and hand controlled; 100 lbs. pressure guaranteed with 12 nozzles open. An acre can be sprayed in 20 minutes. Has agitator clean-out pressure relief into tank, and nozzle protector all under control of the driver from seat. For one or two horses. Fitted for orchard, vineyards and farms. This ad. will not appear again in this paper.

SPRAMOTOR, LTD.,  
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**The Central Nurseries**  
(30th Year)

Our new catalogue will tell you honest verities and prices of Fruit, Ornamental and Shade Trees, Evergreens, Shrubs, Roses, The Hills of Snow Hydrangea (new) beautiful Red Herbert Raspberry, California Privet, etc. Get our prices before placing your order. Better, place order early this season.

A. G. HULL & SON, St. Catharines, Ont.



**SEED PEAS**

Being one of the largest growers of seed peas in Canada, I am desirous of placing seed in good pea-growing sections free from "weevil" or "pea bug." I supply the seed and contract with farmers for the product, deducting the seed supplied when crop is delivered.

Prefer growing in places where a carload of seed could be placed.

For particulars, address: **W. P. NILES, Wellington, Ont.**

**Bagpipes**



We're the largest Bagpipe dealers in North America.

Lowrie's famous make is the kind we sell. Write to-day for

FREE CATALOGUE

We're from the Old Country ourselves, and know all about the Pipes.

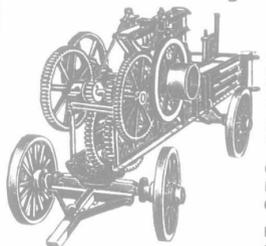
Chanters, Bags, Reeds, Etc., in big stock.

Repairs promptly done. Write for catalogue to-day.

**ORME**

Ottawa, Ontario.

**100 MEN WANTED TO SELL THE Columbia Hay Press**



We guarantee it the best belt press made or no sale. Capacity, 50 tons in 10 hours. Write for full description and agency.

COLUMBIA HAY PRESS, Kingsville, Ontario.

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To grow the finest flowers and most luscious vegetables, plant the best seeds. Ferry's Seeds are best because they never fail in yield or quality. The best gardeners and farmers everywhere know Ferry's seeds to be the highest standard of quality yet attained. For sale everywhere.

FERRY'S 1910 Seed Annual  
Free on request  
D. M. FERRY & CO.,  
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**CENTRAL Business College**

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A Commercial school of the highest grade. A school without a superior in the Dominion. Catalogue free.  
ELLIOTT & McLACHLAN, PRINCIPALS.

# The Farmer's Advocate

## and Home Magazine

"Persevere and Succeed."

Established 1866.

Vol. XLV.

LONDON, ONTARIO, JANUARY 20, 1910

No. 904

### EDITORIAL.

Mr. James does well to ring the changes on the fact that votes of money to aid agriculture are not to be regarded as benefactions to the farmer, but as a means of helping to develop our fundamental industry, thereby broadening the base of the whole country's prosperity and general welfare.

Introduction of a promising new feature into one's farming practice not only increases the profit—as it unquestionably does, in many instances—but adds fresh interest to the business and to the work. Whatever tends to make us study and think, has an even greater effect on our minds than on our pocketbooks.

An Essex, Ont., contributor recently gave in "The Farmer's Advocate" a short statement of the lines of farming that are proving most profitable in that county, and a reference to the chief farm improvements being made. Let us hear similar good words from readers in other districts. Essex is not the only good pebble on the beach.

Enthusiasm, plus more thoroughgoing methods now being applied in farming operations, were just as important factors in the \$15,500,000 crop-value increase of the Province of Ontario in 1909 over 1908 as the weather. In fact, such an annual increase might readily be doubled. And the Maritime and Quebec Provinces are moving in the same direction. The soil resources and conditions are all in their favor.

Our suggestion that the Department of Physics at the Ontario Agricultural College should be authorized as the regularly-constituted official referee of all drains constructed in the Province, under the Municipal Drainage and Ditches and Watercourses Acts, has been quite generally commended. Among other papers, the Free Press, of London, Ont., gives favorable editorial prominence to the suggestion, which it considers worthy of general attention.

Ten hundred and seventy silos erected in Eastern Ontario last year are reported by the Provincial Dairy Instruction staff. Whether this includes the total number erected east of Toronto, or only those built by patrons of factories and creameries, we are not advised, but even if it covers the number built by all farmers, the number is very encouraging. The propaganda must go on, however, until a farm without a silo is almost as rare as one without a barn.

The disappointingly low average of 2,700 pounds milk per cow in six months, calculated a year ago by the Chief Dairy Instructor of Eastern Ontario, on the basis of data collected from the factories, seems to have been but slightly bettered during the season of 1909, when the average per cow from May 1st to Nov. 1st has been 2,863 pounds per cow, with an average test of 3.66 per cent. Presumably, this takes no account of milk used at home, but still the production is far below what it would be if each dairyman were alive to his best interests. Strive for a 3,000-pound average in 1910! That means that "Farmer's Advocate" readers must do much better in order to pull up the average of the other fellows who are away below the mark.

### Shorthorn Records of Production.

The approach of the annual meeting of the Dominion Shorthorn Breeders' Association renders timely the renewal of a suggestion made and generally commended through these columns, that steps should be taken to establish a Record of Dairy Performance of Shorthorn cows, based upon individual yearly records of regular breeding cows, the records being made under the supervision of officers of the Dominion Department of Agriculture, the same as is now being done in the case of all the breeds of special-purpose dairy stock. The time has arrived when any breed making pretensions to profitable dairy capacity must demonstrate the fact by official records of yearly production. Such a system discovers the good milking individuals, strains and herds, and tends to the development of superior milking capability in many other individuals, and generally throughout the breed. The adoption of this system of records need not prejudice the standing of the Shorthorn as a beef breed, but will widen the sphere and standing of usefulness, and will especially benefit farmers and small breeders who keep pure-bred or high-grade Shorthorns on a commercial basis. The consensus of opinion among farmers of that numerous class is that the dual-purpose attribute is the bulwark of the Shorthorn breed. And except in districts where dairying is a specialty, and cows of the special dairy breeds and their grades are kept, the general farmer prefers a class of cattle the cows of which will give a profitable amount of milk, and produce calves which, raised on skim milk, will develop into animals suitable for the export trade, or bring the highest market price as heaves for the home market at anywhere from eighteen to thirty months old, while the cow, when she ceases breeding, will flesh up rapidly, and bring a good price for beef.

The friends of some of the dairy breeds who were slow to take up the Record of Performance system, have been very much gratified with the result. Those who have studied the milk tests conducted by the Highland and Agricultural Society, in the South of Scotland, are said to have cheerfully admitted that the Ayrshire cow never had a better advertisement than this series of herd tests. Not only has it proved a good advertisement for the breed, as it has done also in Canada, but it has very materially improved the demand for bull calves, and heifers, too, out of the best milking cows. And this would certainly apply in the case of pedigree dairy Shorthorns, as is being exemplified in the case of tested herds of the breed in England. Geo. Taylor, one of the leading Old Country breeders of dairy Shorthorns, having stated that his large herd now averages over 800 gallons (or more than 8,000 pounds) of milk yearly, and that there is such a demand for bulls of this class that his supply cannot meet the demand.

There should be little difficulty in finding a considerable number of cows in Canadian herds which would qualify under the requirements of the standard adopted by the Canadian Ayrshire Breeders' Association for the Record of Performance of cows belonging to that breed. This standard requires a minimum of 8,500 pounds of milk and 306 pounds of butter-fat in a year for a mature cow (five years and over), and 5,500 pounds milk and 198 pounds butter-fat for a two-year-old heifer, the minimum required production between these ages being graded proportionately.

The record of twenty Shorthorn cows in 120 days, away from home, at the Louisiana Purchase Exposition, which made an average of 4,421.6 pounds milk, 165.3 pounds butter-fat, and an average gain in weight of 105.3 pounds in 114

days, is an indication of the dairy and dual capabilities of the breed which should inspire sufficient confidence in the Shorthorn Association to adopt the Record of Performance system, and in breeders to sustain it, for the advancement of the claims of the Shorthorn as a dual-purpose breed in reality, as well as in reputation.

### Corn-growing in Ontario.

Corn is the greatest of fodder plants. It has demonstrated its right to a place of supremacy in the field crops of the dairyman and the cattle-feeder. Long ago it proved its adaptability to conditions in Ontario and parts of the other Eastern Provinces of Canada. But the increase of the area devoted to corn-growing has not been anything like what the merits of the crop would warrant, nor has the work of improvement in its culture been commensurate with the results obtainable. The rapid growth in recent years of the silo system of utilizing stalk and ear in combination as fodder has given corn-growing a decided impetus, but there remains much to do in the development of varieties and strains best suited for that purpose. There is also a great field for advancement in the growth of corn for the grain itself, as Ontario feeders are now so largely dependent upon the American corn belt for their supplies. More and better and cheaper corn would be of enormous advantage in the feed lots and stables of this country. The south-western section of Ontario has proved itself peculiarly adapted to the production of corn in its highest degree of perfection as grain for feed and seed purposes.

Despite its evident outstanding merit and possibilities, corn-growing had not the advantage of any organized effort behind it like those that have helped to make the output of the corn States famous the world over, and one of the greatest of American farm money-makers. It remained for A. McKenney, the representative of the Ontario Department of Agriculture in Essex County, to take the initiative in that direction, backed by the leading growers of Essex, Kent, and adjacent counties. What is now known as the Ontario Corn-growers' Association was organized during February of last year, for the purpose of making a systematic effort to increase the yield and extend the area of corn-growing in the Province. The policy of the association has not been to promote what might be called scientific breeding of corn, but rather to advocate simple but advanced methods of selection, culture, curing, storing and listing seed corn. There are four things which members of the organization are required to do:

- 1.—To go into the fields and select the corn for seed before it is cut; to hang this seed corn up in a dry, airy place, where it will get thoroughly dried out.
- 2.—To test each ear of corn planted.
- 3.—To carefully grade all seed corn, and regulate the planter to drop the required number of kernels in each hill.
- 4.—To select thirty or forty of the best seed ears, which have shown strong vitality, and plant these all together in a special seed plot of an acre or more. From this the seed corn is obtained for next year's crop.

These methods, coupled with careful cultivation and proper drainage, are bound to increase the yield per acre. They are so simple, and require so little extra labor, that members readily take up the work. The work of the association for the past year has been mainly in getting the growers throughout the Province more enthusiastic in corn and its improvement. Several thousand copies of the report of the first convention were printed and circulated. The corn exhibition and convention at Essex were a revelation to the

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THE LEADING AGRICULTURAL JOURNAL IN THE  
DOMINION.

PUBLISHED WEEKLY BY  
THE WILLIAM WELD COMPANY (LIMITED)

JOHN WELD, MANAGER

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public. An exhibit of the leading varieties of ensilage corn suitable for growth in the different sections of the Province was made at the Canadian National Exhibition, Toronto, and was viewed by thousands of farmers. Local interest was aroused by means of timely articles in the county press, and by means of rural-school corn fairs. Several meetings were held at different points in the large corn-producing counties, and corn improvement discussed with the grower. Many branch associations were formed. The membership of the association has increased until it has reached nearly 700, and the prospects for a very successful exhibition this winter are bright. The organization was handicapped for lack of funds, but the loyal support of the south-western counties and townships, expressed through their grants, and aid from local business men and the officers and members' fees, successfully sustained the work thus far. The far-reaching importance and Provincial character of the work of the association naturally arrested the attention of the Provincial Government, from which an initial grant of \$250 was received, which the imperative needs of the work have, of course, now far outgrown.

The lines of work which the association will follow this year are very similar to that which has been done during 1909, but the question of suitable varieties of corn for the different sections of the Province is one that will receive considerable attention.

As an earnest of the work to be accomplished, arrangements are already complete for the second annual exhibition and convention, at the town of Essex, on February 1st, 2nd, 3rd and 4th next. The directorate are offering prizes, exceeding \$800 in value, as compared with \$100 last year, and the programme is worthy the giant cereal, the growth of which it is designed to promote. The list of speakers includes such outstanding authorities as Prof. L. S. Klinek, of Macdonald College; Prof. C. A. Zavitz, Ontario Agricultural College; Prof. C. G. Williams, of Ohio; L. H. Newman, Secretary of the Canadian Seed-growers' Association, and Hon. J. S. Dufl, the Minister of

Agriculture for Ontario. The Secretary, Mr. McKenney, Essex, will respond to any enquiries for programmes or other particulars of what promises to be the greatest event of the year in Ontario cereal-growing.

## Aeration of Milk Harmful.

It was only yesterday, as it were, that the practice of dipping and pouring the evening's milk intended for the factory was thought to be the proper and the only proper way of treating it. In the warm summer evenings, it was for very many the last job before going to bed, an irksome but supposedly necessary task. Some ten or twelve years ago, several farmers in the neighborhood of London had automatic agitators installed, which, when wound up, kept stirring the milk for hours. These soon went out of use, however, their effect being the spoiling of several batches of milk. Now we are informed, on the authority of no less a person than Geo. H. Barr, of the Dairy and Cold-storage Commissioner's staff, Ottawa, a level-headed and careful experimenter, that aeration is not only needless, but positively hurtful.

The conclusion regarding proper care of milk at which Mr. Barr had arrived in 1908, after a series of carefully-conducted experiments, that prompt cooling of milk, without aeration, gave the finest curds and cheese, has been confirmed by a further set of experiments conducted in 1909. These latter might be expected to be even more authoritative than the first, in that, while in 1908 the milk from but two herds was used for experiment, the product of the herds of all the patrons of the Smith's Falls Cheese Factory was under test in 1909. Another factor: Mr. Barr or his assistants attended to the cooling or aerating of the milk in 1908 in person, but last year this work was done by the patrons themselves, acting under instructions. In this way, any suspicion that former conclusions were reached on account of the skill of the experimenter, was removed. Results obtained indicate that aeration by dipping and pouring is not only less beneficial than cooling without aeration, but that it is positively injurious. Milk that was simply stirred without cooling invariably gave better-flavored and less-gassy curds than were produced from aerated milk, whether cooled or not. The practice of leaving milk uncooled is not to be commended, however, as in warm weather it becomes over-ripe during the night. Much the best method is to cool the milk as soon as possible after milking, without aeration. The plan of cooling recommended is to place the milk cans in cold water, and, as the cows are milked, strain the milk into the cans, and put the covers on as soon as milking is finished.

## HORSES.

### Winning Clydesdale Sires in 1909.

The table of winning sires, as decided by the awards at the eight principal British shows, as published in the Scottish Farmer Album, does not differ, so far as the first two are concerned, from that with which we have been familiar during the past few years. Baron's Pride (9122) still leads with a deal in hand. Whether the standard be the total number of prizes, the number of first prizes, the number of championships, or the number of prize animals, he leads with an easy majority. Most of the most successful of his produce have already been named. Of other first-prize winners, Gartly Pride (12997), the first-prize stallion at the Highland, and Lady Dukina, the first-prize three-year-old mare at the Royal Northern, where, to the surprise of most people, she was preferred to Boquhan Lady Peggy, are the most notable. Mr. Pollock's Hiawatha (10067) comes second, with a capital record. His most noted representatives were undoubtedly the two mares, Minnewawa and Boquhan Lady Peggy, already referred to. Amongst stallions, his most outstanding representative was Mr. Leckie's very handsome two-year-old horse, Royal Salute (11826), which was first at Ayr, and second at the Spring Stallion Show. This is a gentleman's horse all the time. He is own brother to Wm. Benwick's beautifully-moulded two-year-old, Royal Review, which won supreme honors at the Highland and Agricultural Society's Show, at Edinburgh, in 1907, and he was hired at Ayr by the Strathmore Horse-breeding Association, who had Royal Review under engagement when he died. Third place on the list is worthily filled by

Baron of Buchlyvie (11263). No horse made a more rapid advance in public esteem as a breeding stallion than he. By the results of 1909, he has fairly outdistanced all the other sons of Baron's Pride, and he promises to be one of the most noted sires in Clydesdale history. With such winners as Bonnie Buchlyvie, Dunure Footprint, Perfect Motion, The Right Honorable, Baron Belmont, White Silk, Brenda of Montrave, to his credit, it is obvious that his must be a high place in the Clydesdale honor list. His half-brother, Revelanta (11876), a former Cawdor Cup winner, follows in fourth place; and then the Sir Everard succession is broken by the appearance of Peter Dewar's splendid breeding horse, Royal Favorite (10630), fifth. The most notable of his nine exhibits was Purdie Somerville's grand big horse, Scotland Yet (14829), which stood first at Kilmarnock, third at Ayr, and first at the Highland, in the three-year-old class. This horse created quite a sensation on all his appearances. At the Highland he was an outstanding winner in his class. The best of the female produce was J. E. Kerr's Ferelith, the daughter of the celebrated Pyrene, which was first at Ayr, and H. B. Marshall's yearling from Rathan, which was first at Edinburgh. She was subsequently exported at a big price. Mr. Kilpatrick's young champion horse, Oyama (13118), takes a strong position as sixth in such a list, with twenty-one prizes won by seven of the produce got by him when a three-year-old. This, we suspect, is an unprecedented feat, and promises very well for the future of this celebrated horse. Everlasting (11331) comes well up with a return of eighteen prizes won by ten animals, and of these, one had a championship, already referred to.

Mr. Taylor's Sir Hugo (10924) brings in a new grade of results with nine prizes won by six animals; while Veronique and Squire Ronald combine with two others to give Montrave Ronald (11121) a strong lead among the sevens. Count Victor (12108) takes first place among the fives, and promises to be perhaps the best breeding horse among the sons of Hiawatha. His best representative was, of course, Alex. Simpson's fine big colt, High Degree (14703), which was first at the Spring Stallion Show, and second at the Glasgow Summer Show and the Highland. He also won other prizes locally, and bids fair to be one of the best and biggest stallions of his age. The fours are pretty evenly balanced; perhaps Royal Edward (11495) may be awarded the premier place. Of the threes, Up-to-Time (10475) clearly has it with his representative British Time; and Rozelle's (10638) pre-eminence is equally assured among the twos. The place of pre-eminence among the sires which had each one representative at these eight shows is quite plainly that of Sir Humphrey (11912), whose honor is safe in the record of St. Clair (14347). The following tables speak for themselves, of the first fifteen sires, and every pains has been taken to make them correct:

Name of Sire	Total Prizes	Firsts	Sec. omals	Champs. Prizes	No. of Animals
Baron's Pride (9122)	53	23	7	7	57
Hiawatha (10067)	47	11	11	7	51
Baron of Buchlyvie (11263)	41	7	11	7	41
Revelanta (11876)	37	7	11	7	41
Royal Favorite (10630)	31	7	11	7	41
Oyama (13118)	21	7	11	7	41
Everlasting (11331)	18	7	11	7	41
Sir Hugo (10924)	9	7	11	7	41
Montrave Ronald (11121)	7	7	11	7	41
Marcellus (11110)	7	7	11	7	41
Marmion (11420)	7	7	11	7	41
Count Victor (12108)	7	7	11	7	41
Royal Chaffan (11189)	7	7	11	7	41
Benedict (10315)	7	7	11	7	41
Royal Edward (11495)	7	7	11	7	41

The Alberta Provincial Horse Show, Calgary's premier society event, will be held from April 5th to the 8th. The fat-stock show and pure-bred stock sale will also be held on the same dates.

# LIVE STOCK.

## Dairy Shorthorns in England.

The development of the milking propensity in Shorthorn cows is engaging the attention and effort of breeders in England—the home of the breed—in an increasing degree. The Shorthorn Society ten years ago decided to give liberal prizes at leading shows for dairy Shorthorns eligible for Coates' Herdbook. This has had the effect of exciting interest in the matter, and arising out of this movement a separate association has been formed of breeders interested in the propagation of superior milking qualities in the pedigree dairy Shorthorn. This association, called the Dairy Shorthorn (Coates' Herdbook), is gradually developing the objects for which it was founded, and it has obtained permission from the Royal Agricultural Society to establish a separate class for bulls bred from milking pedigree cows that have won prizes in classes specially designed for them. The President of the Dairy Shorthorn Association is offering a 50-guinea challenge cup for the best bull and two females at the Royal Show this year. Two of these animals must have been bred by the exhibitor, so that if necessary the exhibitor may buy a bull to mate with cows of his own breeding, it being stipulated that the bull shall be shown in the dairy class. The conditions on which pedigree dairy Shorthorn cows competing in these classes are to be entered and shown are that they must be milked out the night before at a stated hour, and milked next morning in the presence of the judge. The amount of milk necessary to qualify for competition is, in the case of cows that have calved within three months, 25 lbs., and those having calved over three months must produce 20 lbs. of milk. Heifers are required to give not less than 20 lbs. if calved within three months, and 15 lbs. if over three months.

The records in milk and butter production made by Shorthorn cows in public trials and tests at English shows in recent years have furnished ample evidence of their ability to rank with the best in competition, open to all breeds, while where private records have been kept whole herds of dairy Shorthorn cows have shown very satisfactory production, a registered cow of this breed having on more than one occasion won the supreme championship.

In a paper recently read before a Chamber of Agriculture, by G. Taylor, an experienced breeder of dairy Shorthorns, he said in part:

"When establishing a herd of pedigree milking Shorthorns, one must naturally look to the cow with dairy characteristics. I would place first and foremost a kindly head and shapely bag, with well-placed teats. Constitution must not be neglected, and I place great importance upon the selection of bulls if you intend to breed a milking herd. I think whatever the extra cost may be it is money well laid out if anyone before buying a bull will go to the herd where he is bred and see his dam, and, if possible, his sire also. The influence of the dam is specially pronounced in milking pedigree Shorthorns, and this policy I know is followed by many of the best breeders of horses, who consider it of greater importance to study the character of the dam than even the character of the sire.

"My experience leads me to the conclusion that milk and beef are very difficult to get right throughout the herd—that is to say, one naturally expects in a herd which is devoted solely to producing animals of one type to find them more perfect there than in a herd whose chief duty is to fill the pail, and vice versa. We must, therefore, maintain the idea of milk and beef in the one animal. This cannot be done in individual cases, but as every practical breeder knows, our heaviest milkers often make the best show of flesh, so that I think we ought to be content that our pedigree dairy Shorthorns while they are filling the pail should perform that duty satisfactorily, and when they go dry show a ready aptitude to put on flesh.

"I should not say altogether that the pursuit of milk and beef in one animal is altogether illusory, for so long as the Shorthorn is the Shorthorn we must necessarily cultivate both qualities; but he would indeed be a fortunate man who could find all the best qualities of the dual type combined in one herd, as we occasionally find them in individual animals."

### MILK RECORDS.

Reference is also made in Mr. Taylor's paper to the importance of keeping private records of the production of not only particular single cows, but of all in the herd, and attention is called to the elaborate series of milk tests conducted by the Highland and Agricultural Society in the south of Scotland. These were conducted by John Speir, who has said that the Ayrshire cow has never had a better advertisement than this series of herd tests; that in herds where no records had been kept before, they found cows which had been giving 1,000 gallons of milk, while others were giving only about 400 gallons, and not only has it proved a good advertisement for the breed, but has materially improved the demand for calves out of the best cows. Of course this applies also

to the dairy Shorthorn and to other breeds. "When I first started to keep milk records," says Mr. Taylor, "my herd average was not 600 gallons annually; now it exceeds 800 gallons (a trifle over 8,000 pounds), and I rarely keep a cow that does not yield 700 gallons per annum."

## Aberdeen-Angus Cattle.

By James Bowman.

From the earliest times, Aberdeenshire, and particularly the part called "Buchan," has been noted for its cattle, the name itself being derived from the fact that it paid tribute to the Romans in oxen, Buchan being derived from the Gaelic words "Bo," an ox, and "Caen," head, or poll. There were records of polled cattle being purchased in

1816, when he paid a visit to England, and saw the great work that was being done with Shorthorns. (What a lesson this is for farmers to let their boys see improvements.)

Mr. Watson's most noted cow was Old Grannie, that lived 36 years, and had 25 calves; her last, a bull of merit, in her 29th year (she holds the world's record, I think). Next followed Wm. McCombie, who came from six generations of good cattlemen. He loved his cattle, and mated and cared for them till he moulded them into the "Bonnie Blacks" that won the grand champion herd prize over all breeds at the International Show, at Paris, France, in 1878. He was a great believer in individual merit, coupled with superior pedigree, and emphasized the value of the sire. He bred Pride of Aberdeen (581), the founder of the famous Pride family. She was also a great show cow. He also bought Queen Mother (348), and founded the great Queen family. He also bred Trojan, that Sir Geo. McPherson Grant bred to Erica, and founded the Erica family. The late Sir Geo. McPherson Grant, of Ballindalloch, has made a great success in breeding Aberdeen-Angus cattle. How many years Ballindalloch bulls have topped the sales in Scotland, among them the noted Prince Ito, that sold at Chicago for \$9,100; Emulus, Ermine Bear, Eblito, Eland's Laggite, Judge, Justice, and many others.



Black, But Comely.

1752, and in 1775 there were two sorts spoken of, the small and lean-fleshed, such as the crofters (small farmers) used, and a larger sort, some black and some brindled. The smaller cattle were said to be the more prepotent.

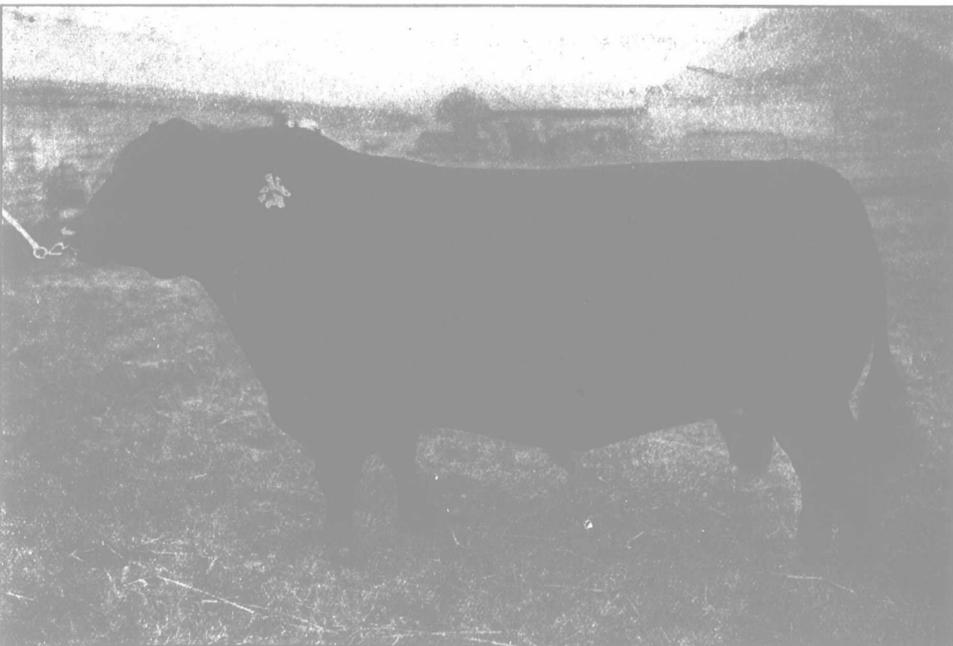
### NOTED IMPROVERS.

The earliest real improver of the Aberdeen-Angus was Hugh Watson, of Keillor, Forfar, Scotland, the "Colling" of this breed. He was born in 1789, became a tenant at Keillor in 1808, and remained there 56 years, dying in 1865. His father and grandfather were lovers of good cattle, and when Hugh went to Keillor he took six cows and a bull with him, all black. He also purchased other good heifers and a black bull named "Tarny Jock." His daughter states that he did not start his great work in earnest until

importations to Canada and the United States started in 1873, when Geo. Grant, of Victoria, Kansas, imported three bulls to use on Western range cows. In 1876, the Ontario Agricultural College, Guelph, imported two bulls and a cow. In 1878, Anderson & Findlay, Lake Forest, Ill., imported five cows and a bull. In 1880, George Whitfield, of Rougemont, Quebec; and, later, M. H. Cochrane, Hillhurst, Quebec; Dr. Craik, of Montreal; Hay & Patton, of New Lowell; Mossom Boyd, Bobcaygeon, Ont., and the Gearys, of London, and many of the best cattle to-day trace to these importations.

### DESCRIPTION.

Aberdeen-Angus cattle should be moderately short in leg; deep, thick and smooth in body; head moderately short and clean-cut, with poll



Idelamere (2306).

Champion Aberdeen-Angus bull at Royal Show, England, and sire of James Bowman's Magnificent—2856—.

well defined and prominent; wide between eyes, which should be large, full and bright; from eyes to nose, moderately short and clean, enlarging at nostrils. The bulls should have a strong, masculine head, and, as the late John Dryden said, "Carry it erect, like a gentleman"; ears erect, also; showing good vitality. Bulls should also have strong, muscular necks, with good crest. Cows—A feminine head, with finer neck, and top-line straight from shoulder-top to head. Shoulders should be deep and smooth, and well fitted on to body, with backbone slightly above shoulder-blades; brisket broad, full, and large enough for good constitution, but not wasteful. Fore legs should be straight, clean in bone, well set apart, heavily-muscled forearm. Chest should be deep, wide, and thick through behind elbow, and well filled back of the shoulder generally, giving large heart-girth. Ribs should be well sprung from backbone, giving wide, strong back, which should be straight from shoulders to tail, which should leave the body with a nicely-rounded turn. Loin should be wide, slightly rounded, but almost flat, coming out well to points of hook-bones. And in a well-finished animal it should be difficult to tell exactly where the hook-bones are. Females are rather wider in hooks than males, but prominent hooks are objectionable. Flank should be well let down, giving a straight underline; from hooks to pin-bones should be full, and nicely rounded, with pin-bones smoothly covered, but not bunched. Aberdeen-Angus are noted for good hind quarters. As the Scotchman says, "They leave you well"; and an American, "They have a good end next to the judge." They should be broad, deep and full in twist, and meat to the hocks; hind legs straight, with hocks set in a line with body, and not bowed inward or outward. In handling, they should be mellow, with an elastic firmness; soft, furry hair, of fair length, is preferable, but many good animals have straight, rather short hair. Skin soft and of moderate thickness, which will fill the hand when taken hold of.

#### COLOR.

Black, a small amount of white around udder or scrotum, is common, but in bulls, any noticeable amount of white hair above underline, or on feet or legs, excludes them from the record in Canadian or American herds.

#### UTILITY.

This is the vital point that we, as farmers and feeders, are all interested in. Not many of us are feeding cattle just for the fun there is in it; we are after the profits. Looking over the 1881 report of the Ontario Agricultural Commission in England, a Mr. Hall, a buyer of fat cattle in Britain, said, in an address: "Of the cattle that come into the English market, the Aberdeen Scot ranks highest, and next to the Polled Angus or Scot come the Shorthorn or Durham." And as evidence that his opinion is still holding good, the records of the great Smithfield Show, London, Eng., give ample proof. Of the grand champions for the past ten years, four have been pure-bred Aberdeen-Angus, five grades containing Aberdeen-Angus blood, and one a pure Welsh, the only animal with no Aberdeen-Angus blood; and of the ten reserve champions, six were either pure or part Aberdeen-Angus. At the Chicago International, for the past ten years, of the ten grand

champion and ten reserve-champion awards, six of each were won by Aberdeen-Angus, three by Herefords, one by Shorthorns; and of the ten grand-champion awards in carload lots, seven were won by Aberdeen-Angus, three by Herefords, and one by Shorthorns. And in the open markets Aberdeen-Angus have topped the highest markets in North America for fifteen years in succession. Who will say that these prices are not based on utility from a consumer's standpoint; and who will say that these grand-champion awards were not based on utility from a feeder's and consumer's standpoint, making reasonable allowance for "Christmas beef"?

As cattle that will turn into money quickly, I believe they have no equal. A neighbor, who bought a son of Prince of Benton a few years ago, used him on his herd of good grade Shorthorn cows, and since then has been selling his steers at from 12 to 15 months old, at from \$60 to \$75 each, as much as he used to get for good grade Shorthorns at from 30 to 36 months; and he says that he never fed cattle with such capacity as feeders at so young an age. Some of these steers were fed on skim milk. He also states that there is nothing fancy about his care of them, only constant, regular feeding. The writer read an article by John Clay, Jr. (a man of world-wide experience, raised on a farm in Scotland; as a young man was manager of "Bow Park" herd of Shorthorns, and is now head of the Clay, Robinson Co. commission firm, Chicago), in which he said: "The Aberdeen-Angus are the best cattle for stall-feeding." And from some things I have heard of him, he is considered one of the best authorities in North America.

As to their milking qualities, we do not claim that they are a dairy breed, but they are constant milkers, and will compare well with the Shorthorns in this respect. We have been showing for 16 years at large fairs, and have never had a cow that would not raise her calf, and have had several that would raise two nicely. And our show cows will raise a prizewinning calf; we have never bought a nurse-cow. We firmly believe there is no bull which, crossed upon an ordinary lot of grade cows, will get as uniformly good a lot of calves, suitable for making export steers or baby-beef, as the Aberdeen-Angus.

Why I chose Aberdeen-Angus, and would recommend others to do so.—My father was fond of good cattle, and some of my mother's relations in England were buyers and butchers, so I presume I come by part of it in that way. My father bought some pure-bred Shorthorns as soon as his boys were old enough to take care of them, and the writer went to Bow Park, Brantford, for seven months, when John Hope was manager, and Jas. Smith herdsman, to learn something of good Shorthorns and their management. On leaving there, I saw a good Aberdeen-Angus cow being fitted for the butcher, and bought her, expecting to breed her and sell at a profit, but my prospective customer would not have her; so I thought, to make the most of her, I would see how she compared with our Shorthorns. It was her hardiness and ability to hold her flesh, and raise her calf under ordinary circumstances, that converted me into an Aberdeen-Angus instead of a Shorthorn breeder. She was Kyma II., 18920, bred at the Ontario Agricultural College, and I bred her to Jus-180—, also imported by the College, and got

Kyma's Heir 24835, four times in succession champion Aberdeen-Angus bull at Toronto. Secretary Hill said it was the greatest record of any animal of any breed at that great show.

The Banffshire Journal, in a recent issue, takes a pardonable patriotic pride in the victories standing to the credit of the doddies in 1909, and gives prominence to the following remarkable record of successes obtained by the breed and its crosses at the leading shows:

Norwich.—Best steer over all breeds. Best female over all breeds. Champion animals over all breeds. Reserve champion over all breeds.

Inverness.—Champion over all breeds.

Forres.—Champion over all breeds.

Aberdeen.—Champion over all breeds. Reserve champion over all breeds. Best heifer in show. Best ox in show. Best butcher's animal. Best cow in show. Best bull in show.

Birmingham.—Champion cross. Second best animal bred by exhibitor. Champion over all breeds.

Edinburgh.—Second best steer over all breeds. Best and second best heifer over all breeds. Champion animal over all breeds.

London (Smithfield).—Best and second best cross. Best yearling over all breeds. Best and second best steers over all breeds. Best and second best heifers over all breeds. Best and second best animals bred by exhibitors. Champion and reserve champion animals over all breeds. Champion carcass.

Redhill.—Champion over all breeds.

Tonbridge.—Second best animal over all breeds.

Leeds.—Champion and reserve champion.

Dublin.—Best heifer. Reserve champion.

Chicago.—Champion and reserve champion over all breeds.

### Does the Scrub Bull Pay?

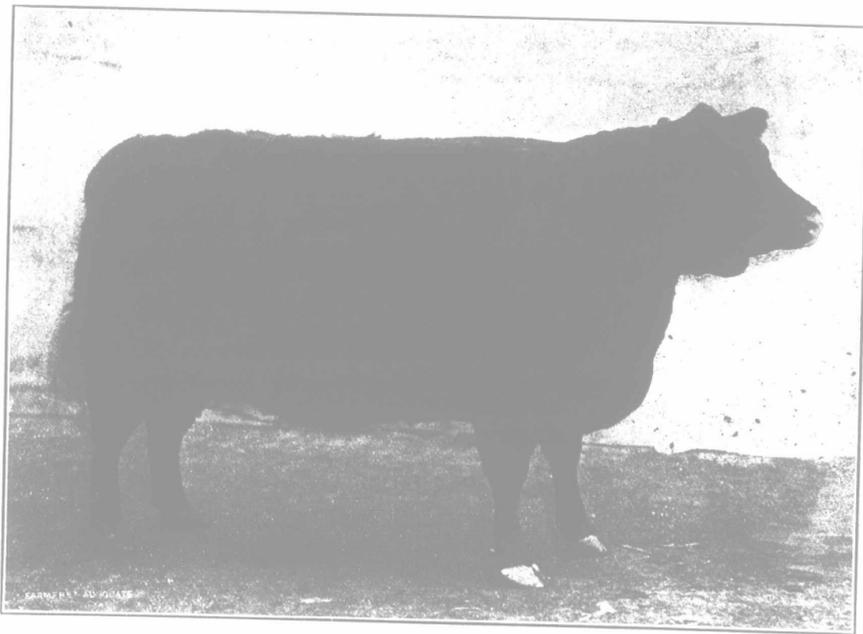
Editor "The Farmer's Advocate":

I think the time has come when every intelligent farmer can see the advantage in using a pure-bred sire for his herd, no matter what breed he keeps. In looking at the different prices paid for well-bred steers, and for steers sired by a scrub bull, it is soon noticeable to an experienced eye the difference between a good grade steer and a scrub at the shipping stations week by week—the broad, well-proportioned, mellow animals, selling at 5c. per pound; the razor-backed mongrel, selling at almost cannors' prices: One can easily see that it pays farmers to invest a few extra dollars in a pure-bred sire. I have for several years attended public sales in this district, and wherever a farmer is known to keep good cattle, even although not pure-bred, the difference in the crowd that attends the sale from that attending the sale of the man across the section who keeps scrubs is soon noticeable, even more so when the bidding is going on. I have seen as much as \$10 difference paid for steers which, if put up at a farm where scrubs were kept, would not have made that difference in price. Now, if it pays a man to give the higher price for a well-bred steer, would it not pay for the farmer or feeder to breed these extra quality steers himself? Most farmers are as keen after the dollars as the breeders are, and try to get the full price for their beef, and yet the advice so often given in "The Farmer's Advocate" is ignored, and the scrub sire still holds sway in great numbers. Procrastination is the thief of time. Farmers are missing the high prices for their beef by not investing a few extra dollars in a pure-bred sire. Why this is allowed to go on year after year I cannot say. I should judge that it is through lack of foresight, and extreme unwillingness to part with a few extra dollars when purchasing sires for their herds. It is no more to feed a good steer than it does to feed a scrub one. It certainly has been pointed out in "The Farmer's Advocate" that a well-bred steer takes less to feed up than a scrub, pound for pound. A great many farmers think the breeders are asking too high a price for their bulls, and a great many have been disappointed with their offspring after having purchased a bull, probably a cheap one, and have gone back to the grade. I certainly think myself that the breeders are making too much out of the small farmer. This, perhaps, is due, sometimes, to their selling a good beast at a high figure, and all the others' prices are raised accordingly, whether the case is warranted or not. I priced a yearling bull at Toronto last fall, and was surprised at being asked \$200. I thought him dear at \$60; we certainly had a better beast at home that cost us \$40 at nine months old. But I may, perhaps, be a poor judge of cattle. I certainly think it would pay our Government to do something up in Caledon hills to improve the breed of cattle, as we need a little help from that quarter.

Peel Co., Ont.

OLD COUNTRY JOE.

I send you two new names in addition to my own, and wish to state I am very much pleased with "The Farmer's Advocate." I assure you I find it a gentle reminder of my duty to others, as well as myself, and trust its influence may continue to spread as it deserves.—[Thos. Chalmers.



Danesfield Rose.

Cross-bred Aberdeen-Angus heifer, two years old. First and breed cup, best heifer any breed, and reserve champion of the Smithfield Show, 1909.

**Feeding Out Silage.**

Editor "The Farmer's Advocate":  
A trip through the country, or this part of it, at least, shows that a wonderful number of silos are being erected, probably more last year than ever before; soon most people will have them. I know every farm from mine, south of Currie's, to Woodstock, and, in thinking it over, I believe there are seventeen silos along that road, where there are only twenty-two farms in the six miles, taking less than one-half a mile on each side of the road. Driving from my farm at Currie's to Tillsonburg, I see there are many silos through the great dairy district of Norwich Township. At one place on the road I could count five silos, with six farms in sight. There is no longer need here to advise building silos, but a word as to feeding the silage may help some, because it does make a difference how it is used to get the most benefit from it.

It must be always remembered that silage is preserved by the exclusion of air. It is not embalmed. If that were so, then it would not be digestible. But, it is very digestible, which also means that when the air gets to it, it will soon spoil. I have fed out a great deal of silage in the past eighteen years, and under different conditions. I have fed out silage that had been in the silo for eight years, and it was just as good as it would have been if fed the first year; but, after all that time, as soon as it was exposed to the air, it would spoil like any other.

The length of time that silage takes to spoil when opened up to air depends upon the temperature largely, though there are other things that affect it, also. In warm weather, silage will be unfit to feed in four or five days, and in two or three days it is lessened in feed value. In cold weather it is not affected nearly so quickly, but, on the other hand, frost injures it, and, if loosened up and left in a frosty place, it will freeze right through, and, like most other frosted food, will cause cattle to scour. I have heard some say they could not feed much, as it made the cattle too loose. That is likely caused by silage that has been frosted, or injured from exposure to air too long in warm weather. I have hardly ever sent a new man into a silo, but he would dig a hole a foot or more deep in some place, and loosen up a great deal more than was needed, and perhaps it would take a week to get surface of the silage in the shape it should be in.

The silage should be taken out evenly, and all that is loosened up should be put out for feeding. It is well, in warm weather, to go just deep enough so that some can be taken off the silo all over in 3 or 4 days; that is, take two or three inches deep off one side, as far as required for that day, then further along on the top for next day, and so on, to the third and fourth day; then start at the side where it was first taken off, and go over another layer. There will then be the least damaged silage to feed. In cold weather it is better to take deep enough so that all the silo will not have been gone over for 6 to 8 days, because the silage will not spoil on top in that time from mold. But, no matter how solid the silo is kept, there will be a little on top frozen. This frozen will be of less ratio to the whole being fed if we go, say, six inches deep, instead of two inches.

During very cold weather, it is a good plan to keep the silage next the walls a few inches lower than the inside; that keeps it from freezing to the wall. If it will not freeze where it is thrown out to feed, it is as well to put out enough for a day at one time during cold weather; but if it freezes where thrown out, it should not be put out until ready to feed.

Some do not start to feed silage until near spring, or when the cows freshen. This is a mistake, as the cows should be fed some silage with the straw all winter. It is an ideal feed to put dry cows into good flesh and heart. And they must be fed well whilst dry, if they are to do good work after freshening. One never gets more value for any feed than that fed whilst the cow is dry, and there is no better feed for a dry cow than silage, but it does not contain enough nutriment in itself for a cow to milk the best upon. One should have both roots and silage if, as is the greatest practice, cows are to freshen in March or April.

Feed the cows during the winter on silage and good straw when dry, and if they get some meal, it will not hurt them. If there is not enough silage to feed 30 or 35 pounds a day for, say, four months, better to feed half that for the four months daily, rather than feed no silage for two months, then feed a full feed of it for the other two months.

Silage is not a perfect feed in itself, but with other feed it is of great value.

We will say the cows freshen in March. They should be fed on silage for the four months previous, and, when they freshen, feed both silage and roots, say 25 to 30 pounds silage, as much or more of roots. I think, for a dry cow, silage is rather of more value than roots, but for a cow in milk I would rather feed 25 pounds of silage and 35 pounds roots daily than to reverse it. That is why I advise feeding the silage early, and keep-

ing the roots until later. Cows wintered this way will give a good account of themselves, and will milk just as well through March and April as they will on grass, provided they are kept in a well-ventilated stable, and have plenty of water.

For ordinary grade cows to give 30 to 40 pounds milk daily, a good ration will be, worked up to a week or ten days after calving: 25 pounds silage, 35 pounds roots, 5 pounds hay (at noon), straw as they want after roots, fed long; 8 to 10 pounds meal daily, divided into two feeds, and placed on the silage. Bran, oat chop, and one pound oil cake, would be good for the meal, but almost any kind of meal will give good results when roots and silage are fed. But, don't forget, the cow wants to be in a well-ventilated stable, and have water when she wants it, not when you want to give it to her. GEO. RICE.

The Animal Husbandry Department at the Manitoba Agricultural College is this year feeding and butchering the beef required for the College. A slaughter-house has been fitted up, the animals to be slaughtered are carefully inspected on foot, butchered before the students, dressed and cut up by an expert. This feature has decided educational advantages, affording an opportunity to judge animals both on foot and in the carcass, as well as being instructive from the practical standpoint of the butcher.

David Coulter, Essex Co., Ont., is said to have realized during the past year \$2,300 from the sale of pigs, after deducting expenses incurred in connection with caring for them, except the food consumed. Mr. Coulter stated to a correspondent of "The Farmer's Advocate" that his last shipment, for which he received \$1,000, were fed largely on clover, being finished with corn.

**THE FARM.**

**What is a Ton of Farmyard Manure Worth?**

As pointed out in the editorial appearing in "The Farmer's Advocate" of December 30th, a ton of farmyard manure is a very variable quantity, being influenced in composition and manurial value by a long list of contingencies. An attempted definite answer as to its value per ton might prove about as satisfactory as a reply made by a witness in an assault case; who, after a long process of cross-questioning, stated that the stone with which the defendant struck the plaintiff, "was about the size of a lump of chalk." The value of a ton of farmyard manure is pretty nearly as variable as the size of a lump of chalk. It may be advisable, nevertheless, to show some of the possibilities represented by a ton of farmyard manure, and the extent to which these possibilities are realized will depend upon the care and intelligence used in handling this homely but useful product.

The three most important fertilizing constituents of any manure are nitrogen, phosphoric acid and potash. To illustrate the difference in composition of the excrement of different kinds of farm animals, the following table, representing the average of a large number of analyses, has been compiled by Heiden, a noted German investigator:

COMPOSITION OF MIXED EXCREMENTS.

Mixed Excrements.	Nitrogen.		Phosphoric Acid.		Potash.	
	Per cent.	Per ton.	Per cent.	Per ton.	Per cent.	Per ton.
		Lbs.		Lbs.		Lbs.
Horse.....	.6	12.0	.3	6.0	.5	10.0
Cow.....	.34 to .44	6.8 to 8.8	.1	2.0	.8	16.0
Sheep.....	.9	18.0	.5	10.0	1.0	20.0
Pig.....	.5 to .6	10.0 to 12.0	.1	2.0	.5	10.0

Nitrogen is the most expensive of fertilizing constituents, and it will be noticed that the table shows the mixed excrements (solid and liquid) of the cow to be the lowest in nitrogen, containing 6.8 to 8.8 pounds of nitrogen per ton; or omitting the fractions, we may say from 7 lbs. to 9 lbs. per ton. Sheep excrements are very rich in nitrogen, containing, according to the table, 18 lbs. of nitrogen per ton. They are also very rich in phosphoric acid and potash. Those of the horse come next to sheep in nitrogen, though swine excrements come close to those of the horse in this respect.

But the table given above is only a sort of general guide, and must be regarded as such. Individual analyses may show very wide variations from the averages given in the table. We must also remember that the composition of farmyard manure is affected not only by the kind of animal producing it, but also by the food consumed by the animal; by the use to which the animal is

put (milk production, fattening, etc.); by the age of the animal; by the amount and character of bedding used; by the care exercised in saving the manure; by the degree of fermentation, if any; and probably by other conditions. A child can see, therefore, that when we attempt to value a substance of such uncertain composition, we are facing a very difficult problem.

Another difficult point to settle is the rate at which the different fertilizing constituents should be valued. The only method we can employ is to use the prices at which the different fertilizing constituents are sold in commercial fertilizers. Generally speaking, however, the fertilizing constituents in commercial fertilizers are more readily available than those in farmyard manure; but, as an offset to this advantage, farmyard manure has a more lasting effect than a commercial fertilizer, and it improves the texture of the soil. Possibly, therefore, we could not be very severely criticised if we applied to the nitrogen, phosphoric acid and potash contained in farmyard manure the same prices which these constituents bring when sold in the form of commercial fertilizers. To be on the safe side, however, we shall use the very conservative values employed by the Cornell Experiment Station, namely, 15¢. per pound for nitrogen, and 4¢. per pound for phosphoric acid and potash. Applying these values to Heiden's table, we find a ton of mixed excrements from the different kinds of animals to be as follows:

Horse, mixed excrements.....	\$2.58 per ton.
Cow, mixed excrements.....	\$1.86 to \$2.17 per ton.
Sheep, mixed excrements.....	\$4.14 per ton.
Pig, mixed excrements.....	\$2.09 to \$2.40 per ton.

At the Cornell Experiment Station, considerable investigation has been carried on in regard to farmyard manure. According to Cornell findings, a ton of manure from different kinds of stock which had been liberally fed and given sufficient bedding, was worth as follows:

Horse manure .....	\$2.21 per ton.
Cow " .....	2.02 "
Calf " .....	2.17 "
Sheep " .....	3.30 "
Pig " .....	3.29 "

The values given above are not quite the same as those in the preceding table; but, considering the nature of the product, the two sets of figures do not vary more than might be expected; in fact, it is rather surprising that they correspond as closely as they do.

Prof. Shutt, in Bulletin No. 31 of the Central Experimental Farm, Ottawa, gives a very interesting table, showing the composition of mixed horse and cow manure as found by different investigators. To this table we have added a column showing the value per ton of the manure, according to the same method of valuation employed in the preceding computations. The letters "C.E.F." denote results obtained at the Central Experimental Farm. Rothamsted, as everybody knows, is a famous Experimental Farm in England.

Following is the table:

COMPOSITION AND VALUE OF MIXED FARMYARD MANURE.

(Nitrogen, 15¢. per lb.; Phosphoric Acid and Potash, 4¢. per lb.)

	Pounds per Ton.			Value per Ton.
	Nitrogen.	Phosphoric Acid.	Potash.	
Manure, fresh, average, many analyses .....	7.8	3.6	9.0	\$1.77
Manure, rotted, average, many analyses .....	10.0	5.6	10.6	\$2.28
Manure, rotted, C.E.F. ....	10.3	8.5	15.9	\$2.69
Manure, rotting during fermentation, C.E.F. ....	9.8	6.0	13.6	\$2.40
Manure, well-rotted, C.E.F., one year old.....	17.7	14.6	29.9	\$4.74
Manure from Rothamsted ..	12.8	4.6	10.0	\$2.64

Possibly the first point which will attract the reader's attention is the fact that rotted manure shows a higher value per ton than fresh manure. In this connection, we must remember that manure shrinks in weight very materially during fermentation, and though a ton of fermented manure contains a larger amount of fertilizing material than a ton of fresh manure, the practice of fermenting manure gives fewer tons, and generally results in a loss of more or less of the valuable constituents. For example, a ton of the well-rotted manure at the Central Experimental Farm shows the very high value of \$4.74. This sample of manure, when fresh, weighed 8,000 lbs., but after fermentation it weighed only 2,659 lbs., and had there been no loss of fertilizing material, it

should have shown a value considerably higher than \$4.74 per ton. If, therefore, it becomes a question of buying farmyard manure, there is no doubt that well-rotted manure is usually worth considerably more than fresh manure per ton, but when it is a question of how to handle homemade manure to get the greatest value out of it, the problem becomes a very different one indeed. Carelessness in the handling of farmyard manure may result in a loss of at least fifty per cent. of its fertilizing constituents, which, in the light of the figures which have been presented, is a loss of no mean importance.

Though not strictly belonging to the question under consideration, a few estimates of the amount of manure produced in a year by different animals may be of interest. The Cornell Experiment Station gives the following figures for animals which are liberally fed and given sufficient bedding:

Horse weighing 1,000 lbs., nearly.....	9 tons.
Cow weighing 1,000 lbs.....	13 1/2 "
Sheep, per 1,000 lbs., live weight.....	6 "
Pigs, per 1,000 lbs., live weight.....	15 "

Professor Shutt, in Bulletin 31, C.E.F., gives a summary of experiments made by Heiden, Bousignault, and others, which shows the amount of manure produced annually by different farm animals to be as follows:

Horse, well fed, from 5 to 6 tons during time he is in the stable.
Steer, weighing 1,000 pounds, about 20 tons.
Sheep, weighing 60 pounds, about 1/4 of a ton.
Pig, from 2 to 3 tons.

The figures just quoted do not agree exactly with the Cornell figures, but even if we take the lowest estimate in each case, we will find considerable food for thought.

There is another item connected with the valuation of farmyard manure, namely, the cost of handling. Manure made on the farm has to be removed from the stable day by day, and finally drawn to the field and spread. In some cases, a little extra labor may be required to incorporate it with the soil. As compared with commercial fertilizers, farmyard manure calls for more labor, though commercial fertilizers are not by any means exempt from labor charges. To estimate the cost of labor is even more difficult than to estimate the value of the manure. Manure that is drawn to the fields during the winter is usually subject to a minimum charge for labor, because, in many cases, the labor employed in drawing out manure in the winter would not otherwise have been profitably employed. The same conditions sometimes prevail in connection with the care of stock, so that in some cases it would not be fair to charge full rates for the labor bestowed upon farmyard manure, and in other cases it would be only reasonable to do so. The distance the manure has to be hauled is another factor which helps to complicate the calculation. The question of labor, therefore, is one which every man must work out for himself, and it would hardly be profitable to pursue it further at this time.

Anyone who has taken time to read this article will see that the question: "What is a ton of farmyard manure worth?" has not been answered definitely, for the reason that the question does not admit of a definite answer. He will see, however, that a ton of good farmyard manure has a considerable value when regarded as a substitute for commercial fertilizers. He will also see that every animal about the farm is a revenue producer of some importance in a way that we too often disregard. If he takes these two facts to heart, together with the fact that it is easy to lose half this revenue through careless handling of the manure, he will probably realize that there is more wealth in the manure pile than many people imagine, and that it is important to give some attention to securing the largest possible proportion of this wealth. Farmyard manure is a by-product of the farm. Every successful industrial enter-

prise is sparing no pains to secure the largest possible returns from its by-products, striving to prevent waste by every known means; and, in some cases, the returns from the by-products represent the profits of the business. The shrewd farmer will be equally awake to the importance of getting the most out of the by-products of his business.

G. E. DAY.

### Comforts of the Farm Home.

The accompanying photograph, which is a representation of the farm home of John C. Shaw, Oxford County, Ontario, is typical of what may be seen in many places in the rural districts of this country. This farm, for several years in the hands of Mr. Shaw, has been worked with much success and profit. It is not the object here to give details regarding the working of the farm, but rather to dwell upon the peaceful and restful character of such a home, as compared with the never-ending worry that usually dogs the steps of the business man. The escape practically from worry which such a home brings is in itself ample compensation for what some people regard as drawbacks in rural life.

Such a home should bring with it every reasonable comfort, though it may not make the owner a rich man. Farming is not a calling that is primarily intended to make men rich. It is calculated to provide them a comfortable and honorable living. The man who turns this occupation into a scramble for riches misses the mark to the extent to which he does so. It is a business intended to bring competency but not wealth.

Such a home brings with it true independence. The occupant may rise or lie down when he is ready. He can sleep when he needs rest, for he has taken that exercise which induces sleep when he lies down. He can work when he wills to work, and rest when he wills to rest. No sharp competition puts him to his wits' end as to how he may get even with others in business. He cares little what may be going on in the wheat pit or in speculative schemes. He is sure of growing a harvest if he does his duty, and he is sure of some kind of a market for it when it is grown.

Such a home brings with it security against the ups and downs of business life. The man who has his investment in banks or stocks may lose it. A financial panic may sweep it all away, in spite of his best efforts to the contrary. But no financial panic can sweep away a tiller to lands. It is as sure and safe as the nation when free from imbuance.

Such a home may be possessed of all the conveniences of city life and be free from many of the inconveniences and annoyances of the same. Among the former are the daily mail, in many instances the suburban trolley line, a water supply in every room, and the quiet that adds so much to true enjoyment. His taxes are moderate and his expenses are not heavy.

Such a home also brings one into close touch with nature. There is the garden, with the great variety it may possess of vegetables and fruits. There is the orchard, with its production. There are the flowers, with their varied bloom. The dumb dependents on the farm are also objects of increasing interest. No place can compete with the farm as a place for bringing up children, as is abundantly proved by the character of the development that accompanies such upbringing.

That so many try to get away from rural life is one of the unexplainable things, when they are usually lured away by some mirage that deceives. In the days that are not distant this will change. The farm will be looked upon as being what it is, the most enviable spot on earth where man may live and labor. The days are not far away in which men will say as never before, Oh give me a home in the country wide.

"The Farmer's Advocate and Home Journal," of Winnipeg, suggests that Canada should have a national or international wheat show, organized on broad lines, with the National Corn Show, of Omaha, Nebraska, as its prototype.

### Experiments in Manuring Grain.

Editor "The Farmer's Advocate":

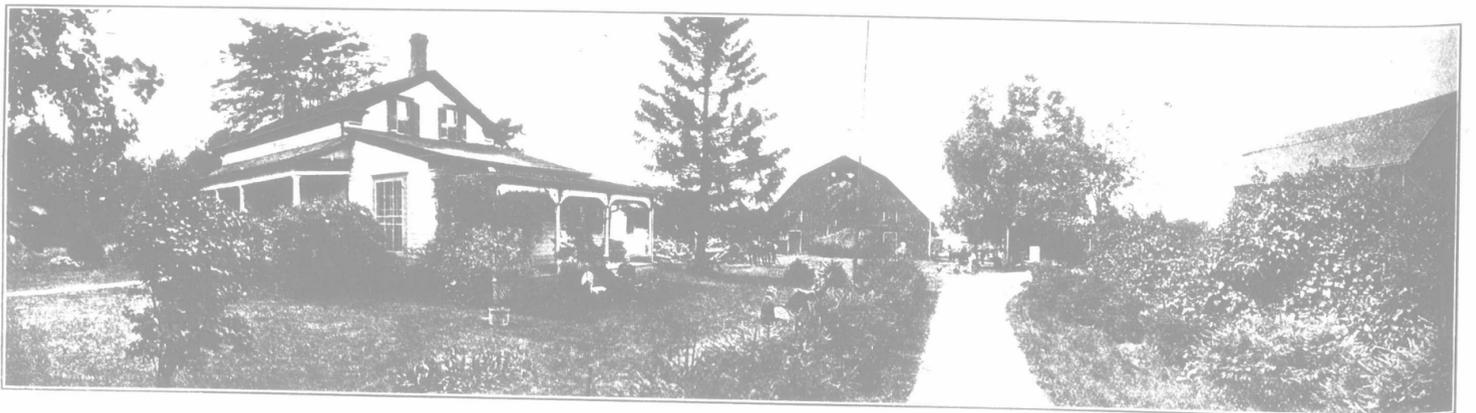
In your issue of December 30th, I noticed that you brought up the question of the value of a ton of manure. This I consider a very important question, and one which we would do well to investigate. If farmers generally could realize the great value of farmyard manure, they would handle it with much more care than is now commonly exercised.

Not only the method of handling, the manner in which it is applied, the litter used, and the class of animals fed, but the food fed to the animal and whether it is fed to a growing, milking or fattening animal must be considered in valuing the manure.

Manure from a fattening animal is much more valuable than that from a growing animal. Why? The reason is that a fattening animal takes from the food the carbohydrates, which are converted into fat on the animal's body, while the proteids of the food are only used to supply waste tissue, and the remainder, expelled in the solid excrement and urine, which contain large quantities of nitrogen, potash and phosphoric acid, almost equal to the amount present in the feed. These constituents are the very ones which soils require in order to produce a crop. It is claimed that in the case of fattening animals 96% of the ash and 95% of the nitrogen present in the food find their way into the manure. In the case of growing and milking animals the manure is of less value; the growing animals using the proteids and ash to develop muscle and bone. In the case of the milking cow, the solids of the milk are composed largely of proteids, which must of necessity come from the feed; thus an animal fed on feeds containing a large percentage of proteids, as oats, oil cake and clover hay, will produce manure of more value than an animal fed on straw and roots alone.

Manure has its greatest value at the time it leaves the animal, but from then on it is subject to great loss, through heating, the action of denitrifying bacteria, and leaching away. This leads the writer to believe that manure taken from the stables and spread on the fields in the winter, provided there is not too much snow, will give the greatest returns the following season. The objection may be raised that manure will lose all its value, through drying out, but it must be remembered that only the water evaporates, and the solids of the feces and urine, which contain the fertilizing constituents, chiefly remain behind, to be slowly dissolved by the acid of the plant roots and the weathering agencies. Manure hauled out and put in loose piles in the field so that it ferments, loses much of its value through the nitrogen being decomposed by heating and the action of bacteria, and passes off in the form of ammonia.

What, then, is the value? To reckon it on the dollars-and-cents basis is very difficult. But, a few years ago the writer conducted several experiments as to the best method of applying farmyard manure and its value. In one field sown with oats mixed manure from the yard was applied, just as the oats were sprouting. On half the field nine loads per acre were applied, with a sixty-bushel manure-spreader. The remainder of the field received no manure. From the part manured we had forty bushels of grain per acre, with good, strong straw, while the part unmanured yielded only twenty bushels of grain per acre, with weak, broken-down straw. This was a difference of 15 bushels per acre, and oats at 40 cents per bushel would mean a difference of \$6.00 per acre, or 66.6 cents per load for the manure. Besides this, the straw was of more value and the ground in better shape for yielding a crop the succeeding years. We also conducted experiments with barley, by spreading on top, in the winter, manure direct from the stable, and working it in in the spring; top-dressing another third of the field with mixed manure after the barley was sown, and leaving the remainder unmanured. The part where the manure was applied in this winter gave the best results, and ripened several days earlier than



Farm Home of John C. Shaw, Oxford County, Ontario.

## ring Grain.

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the rest. The part top-dressed after seeding gave double the yield over that unmanured; an increase of 12 bushels per acre, which at 55c. per bushel equalled \$6.60. This was put on at 6 loads per acre, which would make the manure worth \$1.10 per load. These experiments were tried on clay-per loam soil. Where the land is top-dressed it not only adds fertility to the soil, but it prevents the evaporation of soil moisture to a large extent.

Owing to the varying conditions affecting the value of farmyard manure, it is very difficult to give a fixed value for the manure. But it is certain that it has a value far above what the average farmer puts on it.

I. B. W.

"It is time some concerted good-roads movement was made in all three of the Western Canadian Provinces," remarks "The Farmer's Advocate and Home Journal," of Winnipeg. "Figured in dollars and cents it costs more to haul wheat from the farm to the elevator or loading platform than it does to transport it to the lake front; more, in some cases, than it does to carry it to the seaboard and across the ocean. When Harriman assumed control of the Union Pacific Railway it had stopped paying dividends, because operating expenses were too high. He spent several million dollars lowering grades, improving roadbeds and straightening out the line. To-day every locomotive on the Union Pacific hauls 50 per cent. more freight than it did ten years ago. The road is paying. A Harriman is needed to do something like this for our public highways."

## THE DAIRY.

## Creamery Problems.

Address by Prof. H. H. Dean, at Convention of Western Ontario Dairymen's Association, St. Thomas, January, 1910.

What we shall have to say about creamery problems will center about three words, which are associated with progress. These words are MORE, BETTER, BRIGHTER. We prefer these words rather than most, best, brightest, because the latter indicate the highest possible achievement, and when man has reached this stage there is nothing further to be done; he may as well quit this phase of existence. Progressive, improving, do-better dairymen are what is needed in the creamery and all other branches of the dairy.

## MORE CREAM PER COW AND PER ACRE.

Larger dairy farms are not needed in Western Ontario. A greater need is more cream per acre of land on the present farms. Because cream is a more or less indefinite commodity, it will suit our purpose better if we use the term, milk-fat. Some recent investigations in Ontario would indicate that the amount of milk-fat supplied to creameries is less than one-half pound per cow daily. If the average 100 acres carry ten cows, and the cows milk 250 days in a year, we have 1,250 pounds milk-fat produced on 100 acres, an average of 12½ pounds per acre. If we spread 12½ pounds fat over one acre of land, we shall have a very thin coating, so thin that it could not be seen with the naked eye. If we can increase the milk-fat production to 300 pounds per cow, and the number of cows to 50, per 100 acres—a by no means impossible increase—we shall have a production of 150 pounds milk-fat per acre, which would be a visible quantity. If this were done, it would mean more profit to the farmer, less expense for hauling cream, hence less cost for manufacturing, as the cost of hauling the cream is about one-half the total expense for making the butter.

## MORE BUTTER PER GALLON OF CREAM.

A great deal of loss to the farm and extra expense to the creameryman results from what is commonly known as "thin" cream; i. e., cream containing too small a proportion of fat and too large an amount of skim milk. Manufacturers and agents of cream separators can do a great deal to assist on this point. With average milk, the separator ought to be so regulated that not more than twelve per cent. of the whole milk is taken as cream. This will give a cream testing about 30 per cent. fat. The advantage to the farmer in having cream which tests about 30 per cent. fat is that he thereby has more valuable food for stock, and more fertility for the farm. The creameryman obtains more butter from a given volume of cream, which is likely to be of better quality, as it is the skim milk in cream which is the cause of sourness and most of the bad flavors.

## MORE MONEY PER POUND OF BUTTER.

What is a pound of butter worth as human food? It would be difficult to give a direct answer to the question, because the value of foods is always comparative. A food has a certain value compared with something else. Generally speaking, we believe that butter is worth not less than twenty-five cents per pound. If there was less than cheap dairy butter put on the market, it would tend to increase consumption and price.

If farmers would patronize creameries, instead of making the butter at home and selling it or "trading it out" at stores, and allow the expert salesman of the creamery to sell the butter, the price of butter could be advanced at least five cents per pound. We know of a creamery which practically controls the butter market of a certain city, and, as a result of the farmers having patronized this creamery, the prices obtained for their butter are fully five cents a pound more than they formerly received, after paying the cost of manufacturing, and they are saved the labor and expense of making the butter at home.

## BETTER CREAM.

Stronger efforts are needed towards the improving of cream—the raw material for butter-making. Ideal cream is that which is not over 21 hours old, sweet and clean in appearance and flavor, and tests an average of about 30 per cent. fat. Where pasteurization is practiced, sweet cream is very important, in order to reduce the loss of fat in the buttermilk. Experiments conducted at the Ontario Agricultural College during 1909 gave the following losses of fat in the buttermilk, when creams of various percentages of acidity were pasteurized:

Cream containing less than .35 per cent. acid, buttermilk contained .13 per cent. fat.  
Cream containing .35 to .4 per cent. acid, buttermilk contained .2 per cent. fat.  
Cream containing .4 to .5 per cent. acid, buttermilk contained .34 per cent. fat.  
Cream containing over .5 per cent. acid, buttermilk contained .52 per cent. fat.

These results indicate the importance of sweet cream where pasteurization is followed.

Cream containing a relatively high percentage of fat, kept at a low temperature (50 degrees F. or under), and delivered frequently (at least three times a week), are favorable conditions for obtaining better cream at creameries.

## BETTER BUTTER.

Better butter means butter of cleaner, sweeter flavor, uniform in color, properly salted, and put up in packages suitable for the market to which it is sent, and shipped to the consumer while in a fresh condition. Where butter is to be kept for any length of time, or where uniform quality is desired, pasteurization of the cream is one of the greatest aids in making better butter. The markets of the world are asking for more butter and better butter. It is the business of the creamery managers to supply this demand and exact the price. In the words of a somewhat slang phrase, "Plan your work, then work your plan."

This leads to the central thought of my address. One of the biggest creamery problems is how to obtain

## BETTER-MANAGED CREAMERIES.

To obtain this, it is necessary to have:

1. A good manager—a tactful, good business man.
2. Loyal patrons—those who stay with the creamery through good report and ill, so long as the business is well managed.
3. Quick, safe sales, with prompt returns, are necessary.
4. Prompt monthly or bi-monthly settlement with patrons.
5. A proper system of bookkeeping, and clear, concise monthly statements.
6. Careful, honest drivers.

## BRIGHTER MEN.

It is no reflection on the men at present engaged in creamery work to say the business would be improved if brighter men were attracted to and remained connected with the creamery industry. Chas. Reade, in one of his books says, "Better is a bright comrade on the weary road than a horse litter." To change this into modern dairy language, we might say, "Better is a bright butter-maker in the creamery than an automobile or an airship for gathering cream."

We need men like Goldsmith speaks of in his "Deserted Village":

"He tried each art, reproved each dull delay,  
Allured to brighter worlds, and led the way."

These are the men who hold the destiny of the creamery business in their hands. But we must not expect all to be smooth sailing. The creamery business has its ups and downs, like everything else. Carlyle expresses this idea in one of his aphorisms, "The brightest triumph has a bar of black in it, and might always have been brighter." Another writer says, "We hesitate to call pain and sorrow evils, when we remember what bright characters they have made." All this leads us to express the hope that our dairymen shall not grow discouraged at results below expectations, nor give up because of apparent failures.

A term at the Dairy School will give a man encouragement, insight into the creamery business, and enable him to solve creamery problems which cannot be solved so easily in any other way. There ought to be double the number of students at present in attendance at the two Dairy Schools of the Province. The founder of Cornell University, located at Ithaca, New York, said, "I would

found an institution where any person can find instruction in any study." Our dairy schools ought to be institutions where any dairyman can find instruction in any branch of dairying.

To sum up the creamery problems, they may be grouped as follows:

How to get more cream per cow, per acre, and per farm.

How to get more butter per gallon or per 100 pounds cream.

How to get more money per pound of butter.

How to get better cream, better butter, and better-managed creameries. And finally, how to secure and retain brighter men, better educated men—men whose hands and minds and hearts are in the creamery work. In this latter is to be found the main work of the revolving-arm-chair buttermakers, who may not know all the details of buttermaking and creamery practice, but who are, or should be, an inspiration to the toilers on the farm and in the factory.

## Roughage for the Dairy Cow.

## HOW TO GROW: HOW TO FEED.

Summary of an address by Prof. Grisdale at Eastern Dairymen's Convention, Belleville, Ontario.

One of the first things to be considered when discussing roughage for the dairy cow is pasture. That is the weakest point in dairy practice in Eastern Ontario. The prevailing practice is that once cows are turned out on grass, they are left to hunt for themselves, the feeling being that, no matter how bare the pasture may become, they will find something. How can they find it when it is not there?

It is doubtful if permanent pastures are possible, but, whether possible or not, they are impracticable. Pastures, then, of a short term—one or two years—are alone worth considering. Much of the value of such a pasture will depend on the seeding.

A field which has been in hoed crop the preceding year is the best one to use for seeding to grass. If it had been well manured, and the crop properly attended to, it will be rich, clean, and in good tilth, in ideal condition. But if anyone has no field fit for hoed crop, he need not despair of getting a first-class catch of grass. It can be done. Plow a sod field early in August, or in the latter end of July, and, after rolling it, work well with the disk. Cultivate or harrow occasionally during the fall, and late in the fall plow again, slightly deeper, or throw it into ridges with a double-mouldboard plow. Land treated in this manner will be ready for seeding in the spring from five to eight days earlier than ordinary ground. Put in a nurse crop of oats, barley or wheat, sowing more thinly than usual, and sow the grass seed the same day, and roll. If the ground is not dry enough for the roller, give a light harrow, and roll later.

"Don't forget to sow the grass seed." That is, do not be satisfied with a thin seeding. The very best mixture for meadow and pasture is timothy, red clover, and alsike, and, if the soil is suitable, alfalfa. Sow liberally, using about 12 pounds timothy, 9 pounds red clover, 3 pounds alsike, and, if alfalfa is added, 4 pounds alfalfa—28 pounds in all. That would probably cost \$30 for a ten-acre field. But the gain from such abundant seeding would be from \$100 to \$200 in the next two years. No drill that they have at Ottawa will sow that quantity of grass seed at once, and it is just as well. The seed should be divided into two equal parts, and one-half sown with the drill, the other half being sown by hand, crosswise of the drill marks. This insures that there shall be no blanks.

There are two good reasons for sowing grass seed thickly. The first is that every square half inch may be occupied, and the next that the clover stalks may not be so coarse as to be uneatable, as sometimes happens when the crop is thin. The hay crop may not be so very much heavier—at the Ottawa farm, however, five tons per acre have been taken off at a single cutting—but it is fine, and of better quality.

With pasture such as is ordinarily seen, it requires two acres, and some supplemental food besides, to keep a single cow for the season. At Ottawa, they had kept 60 cows from the first of June till the end of July on 14 acres. The cows had eight acres as a pasture run, and the grass on the six acres was cut and fed to them. After the end of July the fence was taken down, and the cows had the run of the whole field.

Pastures like that would revolutionize dairy conditions.

## ENNSILAGE.

It is not profitable to have sufficient land in pasture to keep stock grazing throughout the whole summer season. To do that, three acres per cow would be needed. All pastures, usually

fall in August. It pays to have some supplement. For this purpose, nothing is better than silage. Strange as it may seem, cattle like it better than green fodder cut for them. This country has an advantage over the countries of Europe that compete with us, in that corn can be grown here, while there it cannot. There are ideal conditions for growing feed in this country. Corn is a crop that never fails. At least, they had grown it at Ottawa for 23 years, and, while it varied in different years, the lightest crop had given 12 tons per acre, and it had gone as high as 20 tons. Some seasons, like last spring, for instance, it had to be put in late, but when such was the case an early-ripening variety could be used.

There is nothing equal to a clover sod for corn. It matters little whether it be plowed in fall or spring. If the manure made during winter is to be applied, plowing had better be deferred till spring. Plow not too deeply, and work very thoroughly with disk and harrow and roller. Nothing is more important than thorough working before planting. Work it until you think it is all right, and then work some more.

We sow our corn with the drill, in rows 42 inches apart, using about half a bushel of seed per acre, and thin the plants to eight inches apart in the row. That is better than to sow just the exact quantity of seed needed, as no drill can sow so evenly that there will not be gaps and bunches. We prefer the drill to hill planting, because it is more suitable for cutting with the corn binder.

Where large areas are grown, as at the Ottawa farm, and corn-cutting and silo-filling occupy quite a lengthened period, it is well to grow three varieties. We use the Longfellow for early, the White-cap Yellow Dent, and the Leaming. These are not mixed, but are sown separately, and cut at different times. The frost is not much to be feared. Frosted corn makes as good ensilage as any other. Indeed, the best silage he had ever seen was of corn that had been frozen a considerable time before being cut. The proper time to cut corn for ensiling is before it is fully ripe, about a week after the grain is right for boiling.

Professor Grisdale advised the feeding of straw in conjunction with silage, when the latter is fed in summer. Grass and silage combined are too succulent. Just lately he had been trying an experiment in feeding cows on silage alone. After three days on that fare, they began to eat their mangers. One of them ate out the side of her water-trough.

From an average of years at the Ottawa Farm, the cost of an acre of corn in the silo, including rent of land, manure, labor, and all other expenses, amounted to \$18. The value of silage, as it is taken out, on account of considerable waste from one cause or another which occurs in the silo, is placed at \$2.00 per ton.

#### ALFALFA, PEAS AND OATS, ETC.

Other useful supplemental food crops are alfalfa, oats and peas, oats, peas and vetches, and other mixtures. These grain mixtures should be sown thickly, using from three to five bushels of seed per acre. Caution should be observed in cutting them, not to cut too green, nor let them get too ripe. As Mr. Glendinning would tell us, alfalfa is the most valuable crop of them all. There is nothing like it for milk.

Q. Would you put alfalfa in the silo?

A. No. There is a considerable loss when alfalfa is made into ensilage.

#### ROOTS.

There ought to be more roots grown. Silage is all right, roots are all right, but the combination of roots and silage is ideal. An unexcelled roughage mixture for an average-sized cow is 50 pounds silage, 25 pounds roots, and 5 pounds straw, per day. Mangels are probably the best kind of roots to grow, especially on strong clay land. Mangels will grow as well on sod as on land in any other condition, but for them it must be plowed the preceding year. Liberal manuring is also of the greatest consequence. Prepare the land thoroughly in spring, and sow—either in drills or on the flat, there is little difference—in rows 30 inches apart, using an abundance of seed, and thin to a width of 8 to 15 inches.

#### HUNGARIAN GRASS OR MILLET.

Another roughage which is more of a catch than a regular crop, is Hungarian grass or millet, or either one mixed with sorghum. On well-prepared land, and sown any time in June, this produces an abundance of excellent food for dairy cows. Cutting should not be delayed until seed is forming; just when in blossom is the proper time.

#### Quality and Appearance Surprised Him.

Have received the kitchen set, sent by you to me as a premium. It more than surprised me, surpassing what I expected, both in quality and appearance. You have my best wishes for future prosperity, and many thanks for past favors.

F. A. CO., ONT.

O. N. HISLOP.

## GARDEN & ORCHARD.

### Tomatoes and Potatoes on Same Plant.

The past summer, W. Wagner, the gardener of the Botanical Institute of the Royal Agricultural Academy, Bonn-Poppelsdorf, produced an interesting double plant which bore tomatoes above and potatoes below. That one can graft tomatoes on potatoes is not new, yet this interesting fact may be unknown to a great many. The life-history of this plant is as follows. On June 1st potatoes were planted in pots, and placed in the greenhouse. After about three weeks, one of the young potato shoots, which had developed three branches, was cut off, and on each of the three branches a shoot of a young tomato plant was grafted in the ordinary way, by inserting the scion into the stalk, and binding the same at the junction with bast. On July 4th the plant was taken out of the pot and planted in the Economic Botanical Garden of the Agricultural Academy, where it remained until harvested. The illustration shows the photograph of the plant as it appeared in the end of October. Since the roots had suf-



Tomatoes and Potatoes Produced on the Same Plant.

ferred in being removed from the ground, the foliage soon commenced to wither, and obliged the grower to harvest them before the tomatoes and potatoes were fully matured. Eighteen tomatoes, weighing 370 grams, and 11 potatoes, weighing 300 grams, were reaped. As the illustration shows, the foliage consisted almost entirely of tomato leaves, which had to elaborate food not only for the tomatoes, but also for the potatoes. There was, therefore, from the same plant food two quite different parts of different plants developed, on the one hand juicy, fleshy tomato fruit, on the other starch-filled potato-tubers. It may be remarked that this plant is not a hybrid, but a double plant, produced by means of grafting, and neither part, in its general appearance, is influenced one by the other.—[Translated for "The Farmer's Advocate" from the German Agricultural Press.]

### Possibilities and Needs of Ontario Fruit-growing.

An Ontario Man's Tour of Inspection Through the Fruit-growing Valleys of British Columbia, and Ontario's Requirements to Keep Pace with the West.

From investigations made during a recent tour through the fruit-growing valleys of British Columbia, it occurred to me that it might be possible for the Eastern, and especially the Ontario growers, to learn some useful lessons from the British Columbia growers.

This season's work is over, but now is an opportune time to look about, review the past, and devise ways and means to overcome, if possible, mistakes, and endeavor to plan improvements for the future. Every season brings disappointments in one way or another to the fruit-grower, and these are in many instances our best educators,

putting us on the guard to avoid them in the future.

It naturally appeals to us that, as the British Columbia growers have only so recently gone into the business, their limited knowledge and experience could hardly be expected to compare favorably with ours, we being the pioneers in the fruit industry in Canada, and supposed to know all about it. We evidently have been paying little attention to their methods of growing, caring for and packing fruit.

It sometimes happens, when a person conceives the idea that he knows all that is worth knowing about a thing, it is just possible for him to be sadly mistaken. When he gets that idea in his head, he is on a fair way to lag behind, and not be up-to-date. Eventually he realizes that there are others who know just about as much, and possibly in advance of him. The only safe way to do any business or occupation, in order to keep up with the times, is to have an eye open, and be ready and willing to learn from others.

Is it possible that we Ontario fruit-growers have been content with the methods we have been so long adopting, and not been keeping pace with our Western fruit-growers, who evidently, it would appear, are adopting more modern and up-to-date methods? They are indebted largely to the Washington, Oregon and California fruit-growers, from whom they have acquired their knowledge.

No doubt, many Ontario fruit-growers will be ready to confront me, and say that Western climatic and other conditions are altogether different, and do not apply, nor could they be successfully carried out in Ontario. While I am ready to admit, to a certain extent, such may be the case, I am thoroughly satisfied that in many respects we could adopt Western methods in the growing, caring, thinning, grading, and especially in the packing of our fruits, to a decided advantage. If we wish to hold a prominent place in the future market, we must adopt more modern methods, in order to produce a better article, and put it in up-to-date packages.

My object in giving your readers this communication is to impress, if possible, the importance of this matter receiving careful consideration. I am so thoroughly convinced that I have been prompted, feeling it my duty, to bring this to the attention of the fruit-growers of the East.

As the apple—king of fruits—is grown so extensively over such a vast area in Eastern Canada, I shall for the present confine my remarks to that fruit. I admit we have in the East some hard propositions to contend with, which they do not have in British Columbia. We have a great many old, neglected orchards, with not the most desirable varieties, the product of which, usually inferior fruit, is forced on the market, to the injury of the better varieties and superior quality; this they have not to contend with in British Columbia. They started right by setting good varieties that were best adapted for the localities, hence have practically only good stock to offer.

If the would-be apple-growers of the East had gone about the business systematically years ago, with the knowledge we now possess, we too would be producing a superior grade that would command prices possibly as good as the British Columbia product. I believe there will be better opportunities for the apple-growers of the East in the future than ever in the past, if modern and systematic methods are adopted throughout. The climatic conditions in most portions of the East may never produce apples so firm, with such good shipping and keeping qualities, as are grown in the West. Another apparent advantage they seem to have, their apples are bright, shiny, clean, presenting an attractive appearance, captivating to the prospective buyer.

The advantage of Eastern-grown apples, and also some of the other fruits, is their decidedly superior, richer and better flavor, to be preferred every time for eating out of the hand. This alone will go a long way toward making up the other deficiencies.

The all-important matter for us to consider is what can we do to raise our standard of production, and how had we better go about it? Criticising the methods we have been following is useless, unless something better can be suggested.

In the first place, we should learn just what varieties do best in each locality, and then only a few of these varieties should be grown by everyone in that locality. In that way, shipments of car lots of one variety could be made, which always command better prices than the mixed lots; buyers, too, know just where to go to secure what they may require for the markets they are catering to.

There should be more large orchards planted by those making it a specialty, from whom smaller growers could take object-lessons; and if they will not learn, they will soon be forced out of the market.

British Columbia to-day owes much to the Coldstream Ranch, the pioneers of the fruit industry in that Province, for the example and up-to-date methods there practiced. We want some such leading men all over Eastern Canada to-day. The tendency, in order to realize the best results

along all lines of business, seems to be toward specialization. The growers of California who have made it a success have acted thereon. The apples are all grown in a few localities; so, too, with the pears, peaches, apricots, prunes, cherries, grapes, etc.

Too many of our orchards do not receive the care and cultivation they should have, and often some crop is grown thereon, trying to make the orchard produce two crops in one season. It will soon resent such treatment by producing inferior fruit.

Shipping facilities are being greatly improved, and people everywhere are being educated to the necessity, almost, of having a supply of apples on hand, so that the demand is constantly increasing, and we need not fear a good market if we produce a good article, and put it on the market in prime condition.

Spraying is receiving due attention in British Columbia. While they have no San Jose scale, nor codling moth, they are well supplied with oyster-shell bark-lice and other pests. We, too, must attend carefully to the spraying of our trees, and not allow the codling moths to put their hieroglyphics on the apples, nor allow parasites to be sucking the life from the tree, if we would expect the tree to do its best.

There are two especially important matters that we must sooner or later adopt, and we cannot do it too soon. I refer to:

**THINNING AND PACKING.**

The average Ontario apple-grower will question at once the possibility, practicability, advisability (or any other ability), of thinning the apples, to say nothing of the enormous expense, which, for the small price usually received, would be certain to put him on the road to bankruptcy.

In order to be able to do the thinning more advantageously, we should head our trees lower, and aim to keep them down. Other advantages are, the convenience of spraying, the trees coming into bearing earlier, and the ease with which the picking can be done.

I want to show, or make an attempt, at least, how the thinning of our apples would pay us Ontario growers. How many of us have ever thought seriously of the enormous production of our trees, the effort they put forth to develop such quantities, and consider the few they have been able to mature to perfection? By far the greater proportion are so frequently worthless for marketing, as is evidenced by the fallen apples every season, to be seen in so many orchards.

What a waste of energy and plant food! It taxes the tree, and the demand from the soil is practically the same to produce a worthless apple as the choicest. Is it not possible for us to prevent this waste, and have the trees produce only marketable fruit? It has been accomplished in the Hood River Valley, Oregon, where, by a careful system of cultivating, pruning, spraying and thinning, they are to-day producing Newton Pippins and Spitzenbergs so perfect and uniform in size that 50 per cent. go No. 1 four-tier apples to the box, which the past season were all bought up by a New York house at \$3.25 per box, f. o. b.

By adopting the same precaution, we could get a yield all the way from 100 to 200 per cent. more marketable apples, with the increased chances of an annual crop. The saving, too, in packing, not having the culls to contend with, would go a long way, if not altogether repay the expense in thinning and other extra attention. Another item we must not overlook is the increased price such a class of apples would command.

I believe it is possible for us to produce only No. 1 apples, and much more profitably, everything considered, than the class too many of us are now growing. We cannot attain to this ideal stage without time and persistent efforts. The codling moth and other pests can and must be controlled. When we once allow our trees to produce only perfectly-formed and matured fruit, it will also present a more attractive appearance, being bright and clean. It is then (the fruit being free of any fungi which causes rot) that we can expect our apples, as well as all other fruit, to possess better keeping qualities—the ideal thing so much desired by all.

If only a limited quantity of choice apples were produced, we might not be able to get the fancy prices the goods demanded, but when we have a quantity to offer, and their quality becomes known, we would soon have a reputation established that would give us a market that would take all we could produce, at remunerative prices.

While I have thus far endeavored to picture a grade of No. 1 apples which it is possible for us to grow, it is equally important that they be put in packages in keeping with the demands of the age. Barrels have served their "day and generation." They may do for inferior apples, but for strictly good stock we must use the boxes, and in time even a smaller package will be demanded. I am well aware that it is much more difficult to pack in boxes than in barrels, and requires skilled packers to do the work properly. It would take some years to train a sufficient force to pack all our apples in boxes, hence it will require some time to bring about the desired change.

The barrels always have one advantage: they

are so convenient to stow away some inferior apples. The cost of boxes is a little more than of barrel. The expense of packing in boxes by experts is less than the barrels. West, where wages are high, 5 cents per box is paid, including the wrapping; here it can be done for 3 cents. I will give you a few instances of returns from orchards in British Columbia, and none of these are full-grown trees, and could not yield the quantity that our large trees could produce. We here in Ontario should and can do as well. I quote as my authority W. C. Ricardo, manager of the Coldstream Ranch, Vernon:

In 1905, from ten acres Northern Spies, the actual net price received by the grower, after all expenses of cultivating, picking, packing, etc., had been deducted, was \$10,975, or \$1,097.50 per acre, or \$1.25 per box.

The apple crop the past season throughout British Columbia was, owing to the more than ordinarily severe cold of last winter, a light crop. I will, however, give you a few instances of the yields, that I have just received from the Okanagan Valley: The Coldstream Ranch had 12,000 boxes Northern Spies from 16 acres, averaging \$1.10 per box, net, or a profit of \$825 per acre. Another instance: Six acres of Wealthies produced 2,200 boxes of No. 1, at \$1.25 per box, and 300 boxes No. 2's, at \$1.00 per box, making a total of \$3,050, or about \$510 per acre. An acre of Baldwins produced 600 boxes, at \$1.50 per box, or \$900. Such revenues would, I think, satisfy us Ontario growers.

If there were planted hundreds—yes, I may safely say thousands—of acres of early fall apples in the southern portions of Ontario, where they can be produced the earliest, there would be a good market for them, and good money in the business.

The Prairie Provinces and Northern Ontario would get away with a vast amount. There are at present quite a few fall apples grown in a small way here and there, which are usually valueless, for want of a market, as no sufficient quantity can be readily collected for shipment, and too many varieties. At present the West gets its supply principally from British Columbia and Washington.

If Ontario produces the quantity and quality, they have a market that will consume enormous quantities, and supplying the fall trade helps to hold the trade for winter apples.

There are lands suitable in Southern Ontario, and not expensive, that would be well adapted for apples. Where is the man or the company who will put out 100 or 1,000 acres of fall apples to supply the wants of our country?

My ideals, as outlined, may, in the opinion of many (myself included) be easier said than done. We must aim high in our profession—at nothing short of perfection, putting forth every effort possible, and never resting content until that high ideal is attained.

W. B. RITTENHOUSE.

Lincoln Co., Ont.

**POULTRY.**

**Excellent Record from a Small Flock.**

Editor "The Farmer's Advocate":

Thinking that my experience with poultry might be of some interest to your readers, I enclose the results for their perusal. I started with a flock of 24 Barred Rock pullets and one cockerel. They started to lay in December, 1908, and one or more laid every day of 1909. Following you will find the number of eggs received for each month, with the average price obtainable in this section: January, 162, at 50 cents per dozen; February, 325, at 40 cents; March, 400, at 36½c.; April, 349, at 28½c.; May, 252, at 36 2-3c.; June, 198, at 30c.; July, 243, at 27½c.; August, 238, at 28c.; September, 175, at 32c.; October, 98, at 40c.; November, 79, at 42½c.; December, 109, at 50c.—a total of 219 dozen, at an average of practically 37½ cents per dozen. The higher prices for May and June was the result of selling a few settings for hatching, for which we charged 50 per cent. more than market price for selected eggs. I might say that the receipts for eggs would have been considerably greater, but in the spring and summer we disposed of 8 hens, and hatched three broods of chickens, which goes to show a great deal better average. The following will show the result in detail:

Eggs, 219 dozen, at 37½c. ....	\$ 82.12
Eight hens sold and consumed, at \$1.25 ..	10.00
Ten cockerels, at 75c. ....	7.50
On hand, 7 pullets, at \$1.00 .....	7.00
	<b>\$106.62</b>

The feed consisted of wheat, barley, oats, corn, and sometimes a little buckwheat, with a few vegetables and some green bone nearly every day. The feed, as nearly as I can estimate, would cost \$10.00, leaving a balance as follows: Total receipts, \$106.62; cost of feed, \$10.00, and interest on investment, \$3.00 = \$43.00, leaving a balance of \$63.62.

W. J. RAMSEY.

York Co., Ont.

**P. E. I. Egg Account for 1909.**

Editor "The Farmer's Advocate":

On January 1st, 1909, we began to keep an account of the eggs laid during the year by a flock of 80 hens of mixed breeding, 50 of which were pullets, and the remainder varying in age from one year to four or five years. We did not measure the feed given them, which consisted of a mixture of barley and oats fed in its natural state, and a raw turnip or two occasionally. They got water regularly, and were fed broken oyster-shell part of the time that the snow was on the ground, or till the supply gave out. They were housed in two different buildings, that were cold and dry, and their grain thrown among chaff, so they had to work to get it. Some of the pullets had begun to lay in the previous November, and the most of the eggs in the first part of the winter were laid by pullets. A strict account of the eggs gathered each day was entered up at night in a book, a sample copy of which is enclosed, and which also served for a record of the weather and other events.

**EGG ACCOUNT AND DIARY OF EVENTS FOR JANUARY, 1909.**

Date	Eggs	
1	9	Cold day. Drove to Malpeque, 18 miles. Temp., 2 below zero. Good sleighing.
2	6	Came home from Malpeque. Attended Directors' meeting in evening in Cheese Factory.
3	10	
4	10	
5	9	
6	7	Drove home from St. Eleanor's, 24 miles, in terrible rainstorm. Gale of wind; roads almost bare.
7	8	
8	6	
9	7	
10	12	

In another part of the book an account was kept of all sales and prices of each sale, so at the end of the year we knew just how many were sold and how many were disposed of otherwise.

Our account shows that we got in:

January .....	349 eggs.
February .....	461 "
March .....	1,011 "
April .....	1,145 "
May .....	1,324 "
June .....	1,230 "
July .....	1,024 "
August .....	774 "
September .....	777 "
October .....	299 "
November .....	135 "
December .....	61 "

Total for year..... 8,590 eggs.

Which equals 715½ dozen. The price ranged from 20c. a dozen in January to 15c. in April, and up to 22c. for the last three months of the year. The average price for the whole year was 17.36 cents per dozen, making the value of the year's eggs \$124.26, a return of \$1.55 per hen. We raised 55 chickens, valued at 30c. each, \$16.50; sold and consumed at home poultry to the value of \$15.97. The account with our hens would stand thus:

Eggs sold and used at home.....	\$124.26
Dressed poultry sold or used at home.....	15.97
	<b>\$140.23</b>

With 25 pullets not accounted for that go to keep the flock up to the number of 80, with which we began the record. This would make the value received per hen a trifle over \$1.75 each, which we

consider the best paying branch of our farm business for the year, as it required very little labor. We would have made a much better record if the price of winter eggs had been at all in proportion to what they are in other parts of Canada. We did not feed specially for egg production in the colder months, as the price received would not warrant it. Summer eggs were produced much more cheaply, as the hens had free range, and gathered much of their feed without cost. It will hardly pay to produce many eggs here in winter till we have means of access to outside markets in the cold weather.

Our average of eggs per hen was low—only 107 per hen for the year—still, we believe it is above the average production of the P. E. Island hen, as others, as well as us, keep too many old hens in the flock, which are largely non-producers. Though we did not keep account of the value of the feed, still we have a pretty good idea of the amount used, and are perfectly satisfied that the grain fed to the hens gave us much larger returns than what was fed to other stock, besides turning in ready money every day or two for running expenses.

There is every encouragement for farmers to pay particular attention to their poultry, as prices of poultry and poultry products are going up every year, and it costs so little labor to get a good revenue from them. We are going on with our record for another year, and hope to make a better showing for 1910. Our advice to farmers is to begin to keep strict account with each branch of their business, and ascertain where they are getting the most return for their labor.

Queen's County, P.E.I. WALTER SIMPSON.

### Tuberculosis.

I lost a number of hens during the past year from some cause I do not understand. They were fed regularly, and, I think, well, and were running at large on a farm. The flock numbered about thirty, and were housed by themselves. The only visible sign of the affection is a lameness in one leg, while they are gradually losing flesh. Some die in two weeks, while some go as long as three months.

J. W.

The trouble is most probably tuberculosis, other symptoms of which usually are paleness of the combs, wattles and skin about the head, and a persistent diarrhoea, the feces appearing yellowish or greenish white. In the latter stage of the disease the feathers become more or less ruffled and the fowls weak, rather mopy, and inclined to move about little. Post-mortem shows the liver almost invariably affected, usually enlarged and studded more or less abundantly with little white nodules of a somewhat cheesy consistency, and from the size of a pinhead or less to a quarter of an inch or more in diameter. The nodules protrude more or less, and may be readily separated from the surrounding tissue, differing from those of black-head, which are sunken below the surrounding tissue, are more yellow in color, and may be much larger. The spleen is often affected and much enlarged. The intestines may be involved, in which case rounded masses of varying size may be found in the intestinal walls. The mesentery, or thin membrane, to the border of which the intestine is attached, is occasionally dotted with nodular masses. Kidneys, lungs, spleen, ovaries, skin and bones may be affected.

Tuberculosis in poultry, as in other animals, is caused by a germ, and there is no known cure for it. Treatment is pronounced to be a waste of time and money. The only course open is to adopt measures for eradicating the disease from flocks already affected and preventing future infection. Free ventilation should be at once and always provided. Destruction of affected birds, prompt marketing of apparently sound birds that may have the disease in its incipient stage, thorough disinfection of premises and recommencing with sound, vigorous stock, reared and maintained, if possible, on fresh ground by means of the colony-house plan, are a few of the measures advised.

Explicit directions as to eradication and disinfection we quote from an article published in "The Farmer's Advocate" of April 29th, 1909, synthesizing the 1908 annual report of the Bacteriologist at the Ontario Agricultural College.

#### ERADICATION.

After noting the conclusion that the bacteria of avian tuberculosis are liberated in the droppings of affected birds, the writer of the report stated unhesitatingly that the quickest and most effective method of eradicating the disease is to destroy all the fowls, and thoroughly disinfect the premises. In small flocks known to be infected with tuberculosis, this measure is advisable. The fowls could be examined, and all that were found healthy could be sold, thus lessening the loss considerably. In larger flocks, or when it is desired to preserve a certain strain in breeding, less drastic measures may be adopted, with final satisfactory results. There is no known test to

determine the presence of the disease until it has progressed so far as to cause lameness or emaciation. Ward, of California, has shown that tuberculin is of no value as a diagnostic agent for tuberculosis of fowls. There is good reason to believe that birds may be discharging the germs in the droppings, although the disease may not be far enough advanced to show noticeable symptoms. Hence, all individuals of the flock must be regarded as dangerous to those free from disease, and the latter should be kept separate. All fowls suspected of having the disease should be slaughtered, and the carcasses completely burned. Roosts, houses, etc., should be disinfected frequently. Inasmuch as affected birds may be continually distributing the bacteria in their feces, an occasional disinfection will be insufficient. No feed should be given the fowls on the ground. Feeding dishes or troughs should be frequently scalded with boiling water. It is not believed that this disease is transmitted through the egg. Hence, if the young chicks are placed on ground not previously inhabited by the old stock, the chances are very favorable for rearing them free from tuberculosis. Care should be observed, in purchasing new birds, that they come from flocks which are free from disease. Experience on some of the large poultry ranches of California has shown that the transfer of laying hens is an important factor in the transmission of the disease. Poultry-raisers should, as far as possible, raise their own stock.

#### DISINFECTION.

The first thing to do in putting the poultry premises in sanitary condition is to scrape the roosts, walls, floors and nests thoroughly clean. This loose rubbish, together with loose boards, etc., should be completely burned. When this has been done, the entire place should be whitewashed with lime-water-crude-carbolic-acid solution, in the proportion of twenty gallons of lime water to one gallon of crude carbolic acid. Unslaked lime should be used, mixed with enough water to give it the consistency of thin cream, and the carbolic acid then added. This mixture may be sprayed on or put on with a brush, due care being observed to see that every particle of surface in the poultry house is well covered. Coal-tar disinfectants may be used alone in place of the above mixture, but they are more expensive, and no more effective. After disinfection, clean boards may be placed beneath the roosts to catch the droppings, thus facilitating the work in future cleaning. Slaked lime placed on these boards will absorb the moisture from the droppings.

There is no way of effectually disinfecting soil. The yards, however, should be kept as clean as possible, and free from loose boards, and all unnecessary litter of any kind.

If there are occasional losses of fowls on the farm, and the cause is unknown, the birds should be examined after death for evidence of tuberculosis. If desired, specimens may be sent direct to this (O. A. C.) laboratory for examination. Such material should be securely packed and sent by prepaid express, so as to reach its destination as soon as possible after the death of the bird. The specimens will be examined, and reported upon, without further cost to the sender.

### Causes of Bad Eggs.

From Kansas Farm Bulletin, No. 162.—A store-keeper, especially in a small town, makes his livelihood from the farmers' trade. The farmer brings in butter and eggs, and wants all he can get for them. One merchant in the town offers \$5.20 per crate in cash. His competitor offers \$5.40 in trade. The one offering \$5.40 in trade, therefore, gets all the business. Maybe he loses on the eggs when he pays \$5.40, but if he does, he makes on the sale of his goods. When the man who originally offered \$5.20 per case has lost his trade, he becomes desperate, and offers \$5.50 per case, and takes anything, so long as it has a shell around it. That causes the farmer who loves the cold cash to make an extra effort to supply him with all the eggs he can get, and all the woods, orchards, barn lots, etc., are forced to give up their sometimes rather ancient supply of eggs. This competition compels all the small egg-buyers in that town to pay a big price for any egg. Some merchants even offer two cents per dozen more for those sold for trade than they do those sold for cash. The price of goods is raised to meet the deficiency in the profit from the eggs, and the farmer makes almost nothing by the competition.

A dollar a year profit per hen used to be the estimate retailed from mouth to mouth. It was not out of the way then. It is quite under the mark now. The fact is that with egg prices prevailing in most parts of the country during the last two or three years, with reasonably good stock and proper management, it is easy to secure from a farm flock returns of \$2.50 per hen per year in eggs alone, at an average cost not exceeding \$1.25, leaving \$1.25 per head for wages and profit. Many have done much better. What class of stock pays better, dollar for dollar, than a well-handled flock of poultry?

## THE FARM BULLETIN.

### Brown-tail Moth.

The following circular letter (abbreviated) has been sent out by the Division of Entomology, Department of Agriculture, Central Experimental Farm:

Ottawa, January 7th, 1910.

To Nurserymen and Others:

We are again confronted with the possible introduction of the Brown-tail moth into the Dominion, in the shape of the winter nests on nursery stock imported from abroad, especially from certain regions in France infested with the Brown-tail moth.

Last year, nurserymen and other importers cooperated with this Division in the work of preventing the introduction of this insect by notifying us of the arrival and expected arrival of consignments of nursery stock from abroad. This enabled the Division to inspect the stock, and to destroy any of the winter nests that were found. Over a million and a half plants were examined, and nearly two hundred nests were found on seedlings and stocks of pear, apple, plum, quince, cherry, rose, spiraea, etc. Each nest contains from 200 to 300 young larvae. In the Eastern States, thousands of dollars are being spent annually in efforts to control and prevent the spread of this insect since its introduction, on imported stock, about the year 1890. All steps possible should be taken to prevent its introduction and establishment in those regions of Canada now free from its attack, and its further spreading in Nova Scotia and New Brunswick, where it has been introduced accidentally.

Kindly inform me, therefore, if you are importing, or have already imported nursery stock this season from abroad, and the place from which the stock is being or has been imported. Please send me this information at once, in order that your stock may be inspected, if necessary. If the stock has not arrived already, please send me notice as to the time of its arrival, in order that it may be inspected at the time of unpacking.

It has been found that fumigation is of no avail against this insect, and that destruction by burning of the winter nests is the only safe remedy.

I shall be pleased to supply further information, and shall be grateful for any assistance which you are able to give to me.

C. GORDON HEWITT,  
Dominion Entomologist.

### Burning Straw.

Many of our readers will remember that when the Russian Mennonites emigrated to Manitoba in the early days, much interest was taken by the public in the newspaper accounts of their peculiar customs. One of their practices, brought from the home land, was to heat their houses with large clay or brick furnaces, into which straw was pitchforked for fuel. It was reported that some improved upon the loose-straw plan by twisting it into rough coils. Still another and more common method of preparing the straw for fuel was to tramp it in the yard with manure mixed in, and afterwards cut it into squares and dry it. This made excellent fuel, though some people might object to the odor. Canadians, and those of other nationalities, to whom the idea was strange, were inclined to smile at the rude furnace, while they could not but admit the shrewd economy of using straw where it was burned anyway.

Time works its revenge. The Mennonites are vindicated. There is now on the Western market a sheet-metal straw heater, for which it is claimed that it saves work, costs nothing for fuel, and needs to be filled only twice a day. The directions read: Simply remove the detachable cylinder, fill it with straw, place it again in position, and it will burn twelve hours without attention.

The many friends of W. F. Stephen, of Huntington, Quebec, the esteemed Secretary of the Canadian Ayrshire Breeders' Association, will join "The Farmer's Advocate" in expressions of sympathy and condolence on the death of his estimable wife, which occurred on New Year's day, after an illness of considerable duration. Mrs. Stephen's age was 44 years, her maiden name was Janet Macfarlane. She was a daughter of Daniel Macfarlane, Sr., of Elgin, who has reached the age of 86 years.

A Chatham, Ont., boy, George P. Oliver, is engineer in charge of the erection of a sugar refinery in New Orleans, said to be the largest in the world. When finished, this refinery will be capable of refining six carloads of sugar per hour. Mr. Oliver graduated five years ago from the School of Practical Science, Toronto.

## Successful Dairymen's Convention at St. Thomas, Ont.

St. Thomas, county seat of progressive and well-favored Elgin, was this year once more the meeting place of the Western Ontario Dairymen's Convention and Winter Dairy Exhibition, held January 12th to 13th. A most excellent hall was provided in the new Engineers' Building, the only drawback being the ill-balanced chairs—which on the smooth, hard floor, punctuated the programme regardless of time or season—for one person after another, tilting his weight forward, went flat on the floor as his chair slipped from under him. Perhaps this was what inspired two speakers to tell practically the same punctuation joke. Seriously speaking, the gathering was a decided success, and no dairyman who attended with a receptive mind could fail to be well repaid for the time and expense of attendance.

### A FLOURISHING INDUSTRY.

Progress in all lines of dairy work during 1909, was the message conveyed in the directors' report, presented by President J. J. Parsons, in his opening address. Exports of Canadian cheese from May 1st to December 30th were reported at 1,916,667 boxes, an increase of 41,539 boxes over 1908. The value of this cheese, at the average price of 11½ cents, would be over seventeen and a half million dollars. Exports of butter for the same period were reported as 39,505 packages, a decrease of 53,911. The value of the butter exported would be about \$508,025, making a total value of cheese and butter exports amounting to \$18,141,361. Our home consumption of all lines of dairy produce is rapidly increasing. Quality, however, must be maintained, by strenuous efforts, if we are to hold our own against increasing competition of other countries. Coming to Western Ontario, indications point to a larger make than in 1908. The creamery-butter output was ten tons greater in 1909 than in 1908.

### NEW FACTORIES.

Noting that several new factories have been erected during the past year, the directors pointed out the fallacy of continuing to build new factories in sections already served, as this brings the make of each below a paying basis, and introduces bad conditions generally. It is encouraging, on the other hand, to observe that sections which previously, or in the past twenty years, had paid very little attention to dairying, are beginning to take an interest in dairying, and new enterprises might with advantage be located here. Established factories are being improved in machinery and equipment to the full extent that might be reasonably expected.

Pasteurization, where adopted, has proven of great advantage, and is believed to have been a great help in overcoming some of the difficulties of previous seasons. Instruction work has been efficient and uniform in the several districts, and the continued employment of a special officer to take charge of cases of milk adulteration has been the means of reducing such cases, and helping to stamp out this objectionable feature of the dairy industry.

The question of makers' certificates has been discussed at several directors' meetings, and it is believed, as a result of conferences with the Provincial Minister of Agriculture, that a satisfactory arrangement has been made whereby certificates will be granted to cheese and butter makers.

Harking back a few years, Mr. Parsons referred to the comparatively crude system of dairy instruction, originated in the minds of men then identified with the dairy industry, who, foreseeing the need of greater efficiency and uniformity in methods, contributed out of their own means towards the effort at education from which has grown our present system of instruction, which is the finest in any Province, State or country where dairy goods are produced.

The financial statement, presented by Secretary-Treasurer Frank Hens, showed receipts of \$6,087.23, including a balance of \$867.84 carried forward; disbursements of \$5,770.90, and a balance on hand of \$316.33.

### DAIRY-HERD COMPETITION.

The directors of the Western Dairymen's Association decided to carry on a dairy-herd competition last year, donating \$100 in cash prizes to patrons of cheese factories and creameries in Western Ontario. Ryrie Bros., of Toronto, again very kindly donated a silver and a bronze medal. The rules of the competition were the same as the previous year. In the cheese-factory section, the prizes were awarded to the patrons who furnished the first, second, third, fourth and fifth largest amounts of milk per cow to any cheese factories in Western Ontario, from May 1st to October 1st, 1909. The prizes in this section were won by the following men, first position going, as last year, to John W. Cornish:

1. Jno. W. Cornish, Sprucedale Farm, Harrietsville, Ont.; 50 acres in farm; 9 Holstein grade cows; 59,727 total pounds of milk; 6,636 pounds of milk per cow; \$550.96 total money;



J. H. Scott.

President Dairymen's Association of Western Ontario.

\$61.22 money per cow; 1,194.5 pounds of milk produced per acre.

2. John VanSlyke, Dunboyne, Ont.; 100 acres in farm; eleven Holstein-grade cows; 71,828 total pounds of milk; 6,529 pounds of milk per cow; \$683.56 total money; \$62.14 money per cow; 718.28 pounds milk produced per acre.

3. Mason Bros., The Maples, Tyrrell, Ont.; 280 acres in farm; 21 Holstein and Holstein-grade cows; 132,127 total pounds of milk; 6,291.76 pounds of milk per cow; \$550.96 total money; \$52.31 money per cow; 471.8 pounds of milk produced per acre.

4. A. E. Hulet, Evergreen Stock Farm, Norwich, Ont.; 120 acres in farm; 8 pure-bred Holstein cows; 48,325 total pounds milk; 6,054.25 pounds of milk per cow; \$420.72 total money; \$54.15 money per cow; 402.7 pounds of milk produced per acre.

In the creamery section the prizes were given for the greatest amount of butter-fat per cow. Here, again, the first prize was won by the same man who secured it the previous year, R. M. Bowie.

1. R. M. Bowie, Maple Lane, Beachville, Ont.; 50 acres in farm; 11 grade Holstein cows; 2,472.4 total pounds butter-fat; 224.7 pounds of butter-fat per cow; \$706.08 total money; \$64.19 money per cow; 49.4 pounds of butter-fat produced per acre.

2. E. W. Lick, Beachville, Ont.; 100 acres in farm; 13 Holstein-grade cows; 2,546.2 total pounds butter-fat; 195.8 pounds of butter-fat per cow; \$696.50 total money; \$53.58 money per cow; 25.4 pounds of butter-fat produced per acre.

3. Wm. Hutchison, Pleasant Grove, Princeton, Ont.; 200 acres in farm; 21 Shorthorn cows; 3,738 total pounds butter-fat; 178 pounds butter-fat per cow; \$983.08 total money; \$46.81 money per cow; 48.7 pounds of butter-fat produced per acre.

4. Courtney Carr, Ingleside, Beachville, Ont.; 100 acres in farm; 20 Ayrshire and Jersey grade cows; 3,120.7 total pounds of butter-fat; 156 pounds of butter-fat per cow; \$860.95 total money; \$43.10 money per cow; 31.2 pounds of butter-fat produced per acre.

5. Geo. Bouchier, Echo Farm, Washington, Ont.; 25 acres in farm; 9 Jersey-grade cows; 1,184 total pounds of butter-fat; 131.5 pounds of butter-fat per cow; \$261.62 total money; \$29.06 money per cow; 47.3 pounds of butter-fat produced per acre.

Albert Goettling, Pine Grove, Baden, Ont.; 100 acres in farm; 10 Holstein and Jersey grade cows; 984 total pounds of butter-fat; 98.14 pounds of butter-fat per cow; \$213.48 total money; \$21.34 money per cow; 9.84 pounds of butter-fat produced per acre.

Called to the platform, Mr. Cornish explained that he had no intention of entering this year until he saw a piece in "The Farmer's Advocate," stating it was feared there would not be enough competitors to lift the prizes. He has a 50-acre farm, and started with six cows in May, and only on May 20th reached the total of nine milking

cows, on which his average was calculated. Throughout the summer he fed a little meal, either oat chop, middlings or bran, till the cows got on green feed, never more than two quarts, and when the grass was good one quart. Silage was fed for two weeks in summer. Dry weather affected the pastures adversely. He sowed half or three-quarters of an acre of Hungarian, and fed it till the corn came. His total receipts for the season, from April 1st to January 1st, 1910, for milk, and from six or seven calves sold at \$5 apiece at a few days of age, amounted to \$91.00 per cow, besides which he raised a couple of calves. His monthly yield of milk for the period of competition was: May, 8,518 pounds; June, 11,936 lbs.; July, 11,407 lbs.; August, 9,672 lbs.; September, 9,237 lbs.; October, 8,952 lbs.

### GOOD RETURNS FROM ALFALFA PASTURE.

Interviewed by "The Farmer's Advocate," Mason Bros., whose herd has had a standing in the prize-list of this competition for four successive years, stated that of the 21 cows, on a basis of which their average was calculated, they had only 16 milking to commence the season with. They have a large herd of 55 pure-bred and grade Holstein cattle, having many head of young stock. They fed no grain during the summer, relying mainly on 19 acres of alfalfa pasture, concerning which they are enthusiastic. Some other pasture was used to help out, while green corn was fed along with pasture during the latter part of the season. Their first small piece of alfalfa was sown three years ago; 19 acres more was put down the next year, and last summer another 24 acres. Up to date, their experience in pasturing one piece two years and another for one year has been most satisfactory, so far as the cows are concerned, and has been attended by no perceptible injury to the alfalfa. This, however, may not always be their experience. On many soils pasturing seriously endangers the stand. However, Mason Bros. like alfalfa pasture so well that they propose to sow more if their present fields fail. They have never had a case of bloating, but keep the cattle off the alfalfa meadows when wet.

### COW TESTING IN MICHIGAN AND ELSEWHERE.

A popular mixture of chaff and wheat was contained in the entertaining address of N. P. Hull, of Michigan, President of the American Dairy Farmers' Association, who discussed the value of cow-testing associations. "I got my dairy education in a cow stable with a lead pencil making notes," was one of his sentences, illustrating the educational effect of keeping individual cow records.

"You are putting your lives into this dairy proposition," he told his audience, "and profits are the measure of the value of the time put into it." Many dairymen with their whole families are working hard, yet making a bare living, not twenty-five per cent. of what is possible. What is hampering the American dairy farmer? Poor cows and lack of information, also lack of incentive or inspiration to do as well as they can. Cows, Mr. Hull divided into three classes: 1st, those which are disposed to turn their feed into beef; secondly, those which turn their digested nutriment into milk; and, thirdly, those which produce neither beef nor milk. Some cows, again, are efficient enough, but never get a decent chance.

Here is an illustration of the difference in men. Two young men started out a few years ago in Michigan; one took advice, got a set of scales and a Babcock test. His average is 250 pounds of butter per cow. The other went on in the usual way; his average is 200 pounds per cow. That difference is more important than it looks. Assuming that maintenance takes 150 lbs. butter per cow, one has a profit of 100 pounds, the other a profit of only 50, or only half as much. A dairyman makes a great mistake when he feels he hasn't time to take care of his business. The average American dairyman is putting in two years to do what he could accomplish in one.

Over in Denmark, said the speaker, taxes became so high the farmers couldn't pay them with the system of farming they were practicing. They turned to dairying, but found the average production per cow was only 112 to 114 pounds of butter per year. They began testing; to-day it is about 224 pounds. Cow-testing in Michigan was commenced under the tutelage of a young Dane. The first cow-testing association was organized in a district which did not boast one pure-bred dairy sire. In that district there are now twenty-six. Barns have been improved, interest increased, enthusiasm raised, a spirit of inquiry and emulation aroused. Knowledge is superseding guesswork.

At this point Mr. Hull asked for a show of hands of those who knew what it cost them to feed their cows. Out of the audience of six hundred, comprising a goodly proportion of farmers, only one man signified the possession of this knowledge. The question had been asked, whether it paid to feed meal to cows on grass. Go into a cow-testing association and find out. Take no-

body's say so on these questions. Second-hand opinions are not firmly fixed, and their holders are easily dissuaded. Find these things out for yourself. That will give you faith. Mr. Hull instanced the case of a man who was advised to feed his cows liberally. He had not faith to use the money he had in hand to buy feed, but he did feed a little better than winter than he had formerly done. He found it paid, and next year did better still, but it took him five years to get his faith up to the point of feeding as well as he had been originally advised. He would never have got that faith merely through listening to other people's experience. Another example was drawn from Vermont, where the best cow in a certain association gave a profit of \$90.72, while the poorest yielded a loss of \$15.36. How many of the latter cows would one need to keep to make as much profit as from one of the former kind?

There are still many dairymen who think they know which are their best cows, but the speaker declared he never knew one yet who could tell anywhere near which was his best cow. In his own stable are two black and white cows (same breed) standing side by side. The milk of one cow tests 2.8, that of the other 4.4 per cent. fat. Who could, without weighing and testing, tell the difference in value between these cows?

Some people are afraid of the light. They decline to join a cow-testing association, lest all their cows might turn out to be unprofitable, and then, as one of them asked, what would they feed their hay and cornstalks to? Men who own such cows, cows which having been given a fair chance yet prove unprofitable, could not do their enemies a worse injury than to give them half a dozen such cows to be kept and milked for five years. If, then, it is a mean trick to give such cows to a neighbor, is one not coming an awful mean trick on himself and his family by keeping them in his own dairy? How can we do better or enable our children to do better, unless we adopt some systematic method of coming to a better end?

So far as weeding out the poor cows is concerned, Mr. Hull claimed that weighing and testing one day a month would give fairly reliable though not absolutely accurate results. It does not, however, afford the same valuable dairy barometer of the care, feeding and condition of the cows; does not hold the milker's and herdsman's interest so closely, and is not so profitable as weighing every day, though it is a great advance over guesswork.

We append a few points from the address of C. F. Whitley, who gave substantially the same lecture as at Belleville.

We have been far too content with a dipperful of milk away on in the fall, when we should have had gallons.

We have too many cows that are giving forty dollars' worth of milk for twenty dollars' worth of feed.

If the average production of the 28,000 cows in Elgin County were raised \$10.00 per head, as has often been done in various herds, two hundred thousand dollars more would come into Elgin County for dairy produce.

Dairy records prove conclusively the value of a pure-bred dairy sire.

#### COMPARATIVE FEEDING VALUE OF DAIRY BY-PRODUCTS.

For two years, said Prof. H. H. Dean, the Dairy Department at the Ontario Agricultural Department has co-operated with the Live-stock Husbandry Department in conducting experiments to compare the value of dairy by-products. The 1908 experiments indicated that unskimmed whey was worth for hog feeding 25 per cent. more than skimmed whey. In 1909 the difference in value between skimmed and unskimmed whey was 33 per cent. Does it pay to separate fat from whey at cheese factories to make whey butter if the feeding value of the whey is reduced by 25 to 33 per cent.?

"Drink more buttermilk and less beer," was Prof. Dean's comment on the results of some other phases of this feeding experiment, which gave results 33% better for buttermilk than for skim milk in hog feeding. [Last year the skim milk was slightly ahead.] Skim milk in turn proved 29 per cent. more valuable than whey. Pasteurized whey in this experiment did not show better results than unpasteurized, but the conditions of the experiment were quite different from those obtaining at cheese factories. The unpasteurized whey, for instance, was taken directly from the vats, and, therefore, contained its full complement of butter-fat, whereas at cheese factories where the whey is not pasteurized a considerable proportion of it is lost, floating as a stinking mess on the top of the vat, to be ultimately thrown away. With hogs at \$8.00 per cwt., said Prof. Dean, we can, by sending these dairy by-products home pasteurized and in good condition, realize much more from them than we have been wont to suppose.

#### PROGRESS BACKWARD.

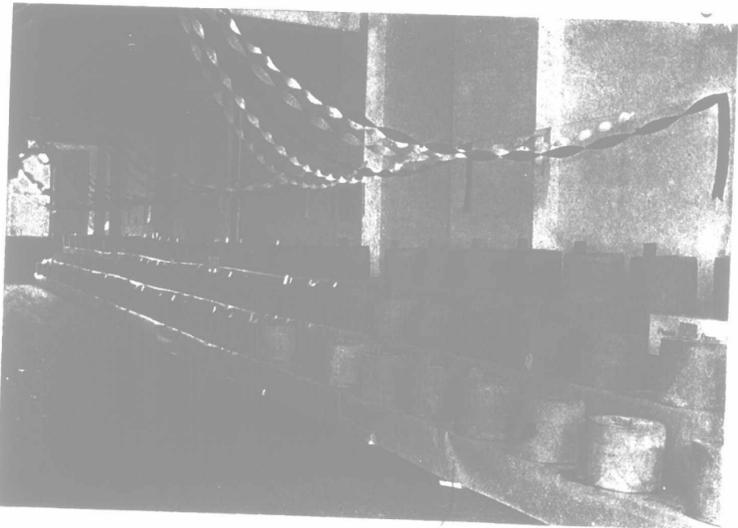
"If you want the farmer to improve his methods and produce more milk you must pay him better for it," was another of Prof. Dean's observations. That milk cannot be profitably produced for \$1.00 per cwt. or butter-fat for 25 cents a pound were a couple of further shots which

startled the audience. However, after a somewhat more conservative view by Dairy Commissioner Ruddick, who urged improvement in quality as a means of increasing the margin of profit, Prof. Dean again rose to his feet and explained that his aim was directed at the idea of payment according to quality. The increase in yield of cheese from 10 to nearly 11 pounds of milk per pound of cheese, he attributed to the unfair and pernicious system of pooling the proceeds, which if continued would raise the yield to 15 pounds. Pooling puts a premium on both watering and skimming. There is no excuse to-day for any cheesemaker not knowing the percentage of casein in his milk. Use the Babcock test to determine the percentage of fat, and the casein test occasionally as a check, and pay according to the percentage of fat, plus two.

Mr. Parsons told of having adopted the system advocated by Prof. Dean, with the result that last season it required  $\frac{1}{2}$  to  $\frac{1}{4}$  of a pound less milk to make a pound of cheese, although there has been no change in the breed of cows. The patrons, though at first skeptical, are now well satisfied with the system.

#### YEASTS IN WHEY AND CHEESE.

Twenty-five samples of unpasteurized whey from 25 factories in Western Ontario were examined by the Bacteriological Department at the Ontario Agricultural College, and 12 distinct yeast species isolated, said Prof. S. Fred Edwards, in his paper on a study of yeasts found in whey. All these yeasts when grown in milk produced a bad flavor. Three species used as starters for cheese are producing bad flavors in the cheese after curing for 25 days. Sixty-six per cent. of the species isolated are killed in ten or fifteen minutes at a temperature of 144° Fah. It is believed that pasteurization of whey at the factory is a remedy in most cases, at least, for off flavors in cheese caused by yeasts.



Cheese and Butter, St. Thomas, 1910.

Showing half the exhibit.

#### \$1,250,000 WORTH MORE FOR CHEESE FROM RIGHT KIND OF MILK.

In spite of all our educational work, the yield of cheese is creeping up from year to year, said G. G. Publow, Chief Instructor in Eastern Ontario. Last year, in the large territory under his supervision, it required 10.76 pounds of milk to make a pound of cheese. Last year it was about the same. Time was when 10 pounds of milk was reckoned sufficient to make a pound of cheese. It seemed to him that we have been rather neglecting the farm side of this educational work, and further improvements must come largely from that side. Quality, and, to some extent, quantity of cheese depends largely on the character of the raw material. Last summer, in Eastern Ontario, they made a special effort to improve conditions of milk supply at several factories, one of the best, one of the poorest, and four of the average ones. On August 7th an instructor was sent to a factory where the maker and other conditions were rather above the average. The cheese, however, were faulty. They took in that day 12.252 pounds of milk, and rejected 500 pounds. The test was 3.5 per cent. fat, and the temperature of the milk, as delivered into the vat was 83 degrees. It took 11.51 pounds of milk to make a pound of cheese. The instructor then went around to some of the farms whence the worst milk had come, trying to get people to cool and take better care of their milk. Most of the patrons were also seen at the factories, and spoken to along the same line. On August 11th, which was almost as hot a day, the instructor went back to the factory and made the cheese. That day they took in 12.711 pounds of milk, again testing 3.5. The temperature of the milk as it went into the vats, thanks to cool-

ing of evening's milk, was down to 71 degrees. That day it took only 10.86 pounds milk per pound of cheese. Thus, 67 pounds more cheese was made from the same amount of milk as had been accepted on the former date. Could we get all the milk delivered in the same condition as the best patrons are delivering theirs, it would take half a pound less milk to make a pound of cheese. That alone would amount to over half a million dollars in Eastern Ontario in six months. At the factory in question, attention to cooling and to the sanitary conditions under which the milk was produced, increased the make of cheese \$11 worth in one day, weather and other uncontrollable conditions practically the same. Then, to the improvement in yield add the saving in cuts on price, and the gain would amount to a million and a quarter dollars a year in Eastern Ontario alone. If all the cheese made in the 950 factories east of Toronto were as good as the best, we would be getting half a cent a pound more for cheese per day.

Of these 950 factories, probably not more than 200 could be seriously faulted on sanitary grounds. The factories and factory conditions have been greatly improved. In cases where bad milk has been sent, they have found stables in bad condition, and the milking often done in the stable; the milk has been kept in unsanitary places, and little attention given to cooling. When approached regarding these matters, people say they have done things this way for fifteen or twenty years, and never had a complaint before. The reply is that the longer they go on this way, the worse the conditions get, and the greater the need for reform. Besides, we are striving to improve on the conditions of the past. The milk cans are, in many cases, in very unsanitary condition.

#### THE PARTNERSHIP IDEA.

Mr. Publow appealed to the cheesemakers, men who receive the milk every day, and know the conditions intimately, to take an active part in the work of improvement. By their daily influence and personal connection, they could work a revolution in dairy conditions. Place before patrons the partnership idea, pointing out that whoever fails to do his part reduces both the yield and quality of the cheese, entailing a loss on everybody.

Is it worth while? Have we not gone far enough to learn that we can't correct faults by methods of making? True, cheese can be made from overripe milk, but not such good cheese, and the methods of making tend to lessen the yield. They have had cases where it took over 13 pounds of milk to make a pound of cheese. In these instances the cheese were faulty, and the curds soft and weak. Usually, it has been found that the cans were not properly washed, having never been scalded, and often washed with cloths allowed to hang on the stands or on fences by the roadside. Almost pure cultures of the fruity-flavor organism have been made from cloths so exposed. Pasteurization of whey has done much to neutralize the effects of such bad conditions, but the conditions themselves should be remedied.

#### COOL-CURING.

Q. Why lay stress on cool-curing rooms when the cheese go out within two or three days?

A. It is a mistake to allow the cheese to go out so soon. The farmer's interest lies in having them placed on the market in proper condition. A cheese properly made from sound milk will go on improving for at least three months. It is a mistake not to see that the cheese are held in proper curing-rooms long enough to insure the cheese reaching the consumer in good condition. The first week is the most important in the curing process. Our base to-day are competing with a product from New Zealand that is naturally cool-cured.

Q. Under present conditions, are not the men who hold their cheese at a disadvantage, as compared with those who ship green?

A. Sometimes it would prove very profitable to be in a position to hold the cheese.

#### QUALITY IMPROVED—CONTROLLING MOLD.

The quality of the cheese was kept up, and in many cases improved, particularly where bitter or yeasty flavor formerly prevailed, said Chief In-

structor Frank Hems, in his report of cheese-factory instruction in 1909. During the hot weather some open cheese were reported, but not so many as last year. A few complaints were made regarding mold, to which some buyers object. When mold is present a thorough washing of the shelves, woodwork and floors of the curing-room should be made with a solution of corrosive sublimate, in the proportion of 1 to 1,000 parts water, and then burn sulphur about once a week in the curing-room, with, if possible, considerable moisture present. This will materially help to keep down mold.

#### LATE FALL CHEESE.

Failure to make proper provision for curing the late fall cheese in a certain percentage of factories has had a considerable detrimental effect on the reputation of our November and late-made cheese. The press-rooms in some cases are not kept warm enough. The temperature in some of the curing-rooms goes far too low, and not sufficient care is taken to keep the cheese at an even temperature. Even after two weeks the cheese are not broken down, the color does not develop, the texture shows pasty, and the flavor in some cases seems to turn bitter. Cheese of this character do not by any means come up to the high standard expected of Western Ontario cheese, and it is to be hoped that next season makers who may be guilty of neglect in this connection will make a special effort to take proper care of the cheese and see that an even temperature of at least 60 degrees is maintained in the curing-room until the cheese are broken down.

#### FAT IN MILK AND WHEY.

During 1909, 16,586 patrons sent milk to the Western Ontario cheese factories; 690 more than in 1908. The average per cent. of fat in the milk for the season was 3.52%. In 1908 it was 3.5%. For May, 3.3%; June, 3.35%; July, 3.4%; August, 3.48%; September, 3.65%; October, 3.9%. The average loss of fat in the whey for the season was .227%. In 1908 it was .23%. For May, .215%; June, .211%; July, .211%; August, .241%; September, .245%; October, .241%. It will be noticed that there is very little difference in the average loss of fat in the whey for the first three months and for the last three months. The greater loss from overripe and tainted milk no doubt comes after the curds are dipped.

#### COOLING THE MILK.

Many patrons are improving in the care of the milk. More uniform methods are being adopted for cooling. In some sections patrons who have never made any attempt to cool milk except by dipping or stirring, have put in cement tanks large enough to hold the cans, surrounded with cold water or ice. Some are putting up milk houses in which a tank is placed. There is still, however, enough tainted and overripe milk arriving at the factories in hot weather to cause trouble in making the finest cheese. In sections where cold water is plentiful there is no excuse for any patron sending overripe milk, when a little care will reduce the temperature of the milk sufficiently to insure arrival at the factory in good condition. The cooling of milk in tanks or tubs of cold water seems to meet the requirements, and we have yet to learn of a patron cooling the milk by placing the can in cold water without any attention being paid to aeriation whose milk arrived at the factory in bad condition.

#### COOL-CURING.

Twenty-one factories have cool-curing rooms, eight more than last year. Some of these were not supplied with ice the past season, but the rooms have been insulated and put in shape to receive ice to control the temperature. Several other cool-curing rooms are spoken of as likely to be installed this winter ready for next year's operations. Patrons are each year beginning to realize the necessity for cool-curing along with cooling of milk, and are in some cases quite willing to assist the makers in erecting modern cool-curing rooms. They are beginning to see the folly of making fine cheese and then putting them in curing-rooms, the temperature of which cannot be controlled, with the result that the cheese are inferior when inspected, although they might have been finest when made, and would have continued so had they not been heated. It is quite evident that had the money spent in past years, in many cases, on substitutes for insulation, such as sub-earth ducts, ice boxes, fans, and so on, been spent in insulation, our curing-rooms would have been in far better shape to-day. However, we are beginning to realize that nothing will take the place of insulation if we expect to control the temperature in our curing-rooms.

#### DETERIORATION OF MILK.

Forty-five cases of deterioration of milk were reported by the instructors. These were looked after by the special officer appointed for this work, and fines ranging from \$5 to \$50 were imposed. Three cases were defended, but conviction was secured. One case was appealed by a patron from the magistrate's decision before a

county judge. The magistrate's conviction was sustained, the patron paying the cost of appeal.

#### SPLENDID EXHIBIT OF BUTTER AND CHEESE

The exhibit of butter and cheese, held in connection with the convention, was a great success, both as to the number of entries and quality of exhibits, which were advantageously staged in a long, bright hall. The October butter was especially creditable, much more so than in any previous year. At the auction sale of exhibits, it realized 24½ cents, or half a cent a pound more than the winter butter. I. W. Steinhoff, speaking for the judges, stated that it was the first exhibit of October butter at this exhibition with which he felt satisfied. There was not a discreditable piece of butter in the exhibit. It was even in character, and the good flavor was rather a surprise. The weak point of Western Ontario butter has been the heavy, deep, old-cream flavor. This is attributable in large part to infrequent gathering of cream, but the instructors have evidently been working an improvement in the quality of the cream. The winter butter, though good, was scarcely of such a high-grade order. Reporting for the cheese judges, Robert Johnston referred in high terms to the large number of entries and the fine quality. He had never judged or gone through so fine an exhibit as was on view downstairs. He doubted whether so many equally good cheese could be found anywhere else on the continent. Uniform excellence made the work of the judges difficult. The make-up was a credit to the exhibitors. By way of criticism, he observed that the October cheese was touched with a start of flavor. He suggested that exhibition cheese should be forwarded two or three days before they were to be judged, as cheese directly off the wagon are cold, so that one cannot get the texture. All cheese without bandages were considered unfinished, and cut one point. The cheese-buyers' challenge trophy is again held by Miss Mary Morrison, who first won it in 1908. The prospect of securing it permanently by winning it once more, should almost persuade Miss Morrison to repent of her recent action in going out of the cheese business. The judges of cheese were Wm. Gray, Jas. Bristow, and Robert Johnston; of butter, J. B. Muir, I. W. Steinhoff, and Jas. Biffin. The September white cheese auctioned off at 11 3-8 cents; September colored, 11 9-16 cents; October white, 11 3-8 cents; and October colored, 11½ cents; winter butter, 24½ cents; October butter, 24½ cents; and prints, 25½ cents.

#### PRIZE LIST.

September White Cheese.—1, Mary Morrison, Newry, 96.66; 2, B. F. Howes, Attwood, 96.57; 3, J. E. Stedelbauer, Listowel (preferred for flavor), 96.49; 4, C. J. Donnelly, Scottsville, 96.49.

September Colored Cheese.—1, Donald Menzies, Molesworth, 96.15; 2, A. M. Herries, Lake View, 95.98; 3, B. F. Howes, 95.82; 4, Fred Cornell, Hawtrev, 95.65.

October White Cheese.—1, J. E. Stedelbauer, 96.49; 2, C. J. Donnelly, 96.41; 3, J. H. Williams, Embro (preference for flavor), 96.33; 4, R. A. Thompson, Attwood, 96.33.

October Colored Cheese.—1, J. E. Stedelbauer, 95.99; 2, A. E. Shapland, White Oak (preference for flavor), 95.66; 3, W. A. Bell, Pine River, 95.66; 4, C. M. Firby, Payne's Mills, 95.65.

Winter Creamery Butter, 56-lb. box.—1, J. A. Waddell, Kerwood, 95.98; 2, A. G. Patterson, St. Thomas, 95.15; 3, R. A. Thompson, 94.99; 4, T. J. Humphrey, Avonbank, 94.73.

Creamery Butter, 20 one-pound prints.—1, R. A. Thompson, 96.32; 2, E. M. Johnston, Innerkip, 95.99; 3, R. Johnston, Bright, 95.90.

October Creamery Butter, 56-lb. box.—1, Wm. Brown, St. George, 96.56; 2, H. B. Lowe, New Dundee, 96.15; 3, J. A. Waddell, 95.90; 4, W. A. McKay, Scotsburn, N. S., 95.23.

Challenge Cup won for second time by Miss Mary Morrison.

#### OFFICERS ELECTED.

Directors.—John H. Scott, Exeter, Western and Northern Creameries; Wm. Waddell, Kerwood, and London Group; D. A. Dempsey, Stratford, Stratford Group; J. N. Paget, Canboro, Brantford Group; S. R. Wallace, Burgessville, Ont., Ingersoll and Woodstock Group; W. S. Stocks, Britton, Listowel Group; J. B. Smith, Alton, Eastern and Southern Creamery Group; G. M. McKenzie, Ingersoll, Stratford Group; S. E. Facey, Harrietsville, Ont., Ingersoll and Woodstock Group; J. J. Parsons, Simcoe Group. Auditors—J. A. Nelles, London; J. C. Hogler, Ingersoll. Representative Western Fair—I. W. Steinhoff, Stratford. Representative Canadian National—Robert Johnston, Woodstock. President, John H. Scott, Exeter; 1st Vice-President, Wm. Waddell, Kerwood; 2nd Vice-President, D. A. Dempsey, Stratford; 3rd Vice-President, S. R. Wallace, Burgessville.

#### Prizes for Building Plans.

It has been decided to broaden the conditions of the Building Plans competition, announced in our issue of January 13th (page 42), to include plans of buildings erected in 1908, instead of restricting it to those built in 1909.

#### The Passenger Pigeon.

Not many years ago the passenger pigeon was a very common bird, and great flocks, comprising hundreds of thousands, were often observed during their periods of flight. Its range extended along Eastern North America, as far west as the Mississippi Valley, and northward to Hudson's Bay. It nested in the northern portions of its range. Now, however, it is so rare that there are doubts as to its very existence in America.

The cause of the disappearance of such useful, beautiful, tender-voiced birds in the course of a single generation is not far to seek. They were thoughtlessly slaughtered by the thousands, in order to provide sport and food for a few days. It is stated by a trustworthy eye-witness that "people would come from all parts of the country with wagons, axes, beds, and cooking utensils, camping on the ground with their families for days, where they could plunder the nests or the roosts of the vast army of passenger pigeons." Accordingly, the passenger pigeon has gone the way of the buffalo which existed once in countless numbers on the prairies of the West—awful examples of the work of destruction of people who had no thought of to-morrow.

An effort is now being made by persons interested in the preservation of such a fine bird, to save it from utter extinction, if there be any alive. At a recent meeting of the American Ornithologists' Union, the matter was brought up by Prof. C. F. Hodge, of Clark University, Worcester, Mass., and as a result of the discussion that followed, Colonel Kuser offered an award of \$300 for the first information of a nesting pair of wild passenger pigeons undisturbed. Before this award will be paid, such information, exclusive and confidential, must be furnished as will enable a committee of expert ornithologists to visit the nest and confirm the finding. If the nest and parent birds are found undisturbed, the award will be promptly paid, through Prof. Hodge. The object of this generous award is to induce a search for nesting passenger pigeons throughout the length and breadth of Canada and the United States; and when they are found, to organize adequate protective work through legislation and warden service, so that the birds may be permitted to feed in absolute safety, and be accorded the freedom of the American continent.

All lovers of birds, it is felt, will join heartily in the plan proposed for the preservation of this ill-fated pigeon. In order, however, that a widespread interest may be aroused in the effort to locate nesting pairs, there should also be local volunteer awards for the first undisturbed nest in each Province. And a call is here made to our liberal-minded citizens for such local awards. Teachers throughout Canada should call the attention of the boys and girls to the plan, and ask them to join in the search. The first nest discovered will draw Colonel Kuser's award of \$300 and the local award as well. The first nest is likely to be found in Canada.

Macdonald College, Que. W. LOCHHEAD.

#### Short Courses at Truro, N. S.

It was my good fortune to be able to attend a number of the lectures in seed and stock judging at Truro, N.S., where is located Nova Scotia's Agricultural College, under the able management of Principal Cumming. My mission was to help in the seed end of the campaign, along with Prof. Ross, of the Dept. of Agr., P.E.I.; Prof. Archibald, of the Truro College, and Seed Inspector Moore, of the Seed Branch.

Principal Cumming deserves much credit, not only for the staff he has organized, but for the interest he has worked up among the farmers of the Maritime Provinces generally. The short courses have been great factors in this. Like many other things, the movement began in a small way just a few years ago, until this year there were over 200 students in attendance, as many as can be accommodated at present without duplicating the lectures.

The class was made up of some sixty-five from Prince Edward Island, forty-six from New Brunswick, one from Newfoundland, and about one hundred and fifty from different parts of Nova Scotia. Among New Brunswick contingent was a Methodist preacher, I believe, who was taking what hints he could get back to his people, in order to benefit them in a material way, as well as spiritually, which is indeed laudable, and worthy of imitation by other ministers of all denominations. In rural parishes, why shouldn't the ministers be intensely interested in everything pertaining to the success of the farming community?

The interest of the class was very marked this year by their prompt and regular attendance at the various sessions, and by their perseverance even in the face of bad weather. Nearly 100 faced one of the worst blizzards Nova Scotia has seen, walking a mile to attend the evening lectures one night. These things augur well for the future of farming in our Provinces by the sea.

The influence of the College is reflected in the improvement of the average stock kept in the vicinity of Truro. Its constituency is widening

every year, and its influence is being more strongly felt. No apology is now needed for its existence. It would appear, too, that Prince Edward Island and New Brunswick would likely co-operate in the near future to help support the institution, instead of organizing rival ones, which would be harder to maintain.

At one of the seed sessions a Mr. McDonald, living some thirty miles beyond Sydney, Cape Breton, a man upwards of sixty, told how his father fifty years ago set the pace for a Canadian Seed-growers' Association, by having his children select the best heads of clover and sowing the seeds in plots. He also had them on rough, stormy days in winter help him hand pick seed grain which he had previously winnowed with the wind.

In seed selection and seed improvement the Maritime Provinces will make their influence felt more and more. They have one important factor in their favor, and that is nearly every farmer has his threshing outfit and can prevent the mixing of his grain and the introduction of weed seeds far better than Western farmers can.

At their seed fair in connection with the short course, which served quite a large constituency about Truro, there was evidence of knowing how to select, especially in potatoes. The blizzard that raged there the day before the fair was opened, prevented a number of exhibits from coming, yet there were some full classes, and competition was very keen. Perhaps the exhibits in potatoes were most abundant, stimulated by the offer of a silver cup, to be won three years by one exhibitor before it should become his property.

The courses opened on Jan. 4th covered the wide range of animal husbandry, stock judging, field husbandry, manures and fertilizers, horticulture, dairying, veterinary science and poultry-raising. Only a few ladies as yet have availed themselves of their opportunity to attend special courses open to them at the same time. Principal Cumming is wearing the smile that will not come off, and well he may. T. G. RAYNOR.

#### Fifty Addresses on Fruit-growing.

A short course in fruit-growing is announced by the Ontario Agricultural College, Guelph, beginning Tuesday, January 25th, and continuing until the evening of February 4th. This ten-days course of lectures and demonstrations gives promise of being most helpful and stimulating. A mere suggestion of the list of eminent speakers who are to take part will insure anyone of this. These are: Professors W. H. Day, J. W. Crow, W. P. Gamble and R. Harcourt, besides many of the most successful fruitmen of the country, such as Jas. E. Johnson, Simcoe; H. S. Peart, Jordan Harbor; W. T. Macoun, Ottawa; W. H. Bunting, St. Catharines; Elmer Lick, Oshawa, and others. To say that over fifty lectures are arranged for, will give some idea of the number and variety of the subjects dealt with.

Practical demonstrations in planting, pruning, grafting, budding, spraying, and barrel and box packing, form part of the course.

Reduced railway rates and absolutely free instruction, except for board, should, and doubtless will, guarantee a large attendance of both young and old.

Programmes of the course can be had for the asking. Apply to President G. C. Creelman, or J. W. Crow, O. A. C., Guelph.

#### GOSSIP.

Messrs. Dunham, the noted importers of Percheron horses, of Wayne, Illinois, whose advertisement runs in this paper, expect their next importation to arrive about February 10th.

The annual meeting of the Canadian Jersey Cattle Club will be held on Wednesday, February 2nd, at 10 a. m., in the Board Room of the Street Railway Company, corner King and Church streets, Toronto.

#### THE TORONTO SHORTHORN SALE.

The single-fare railway rates for the week of the breed society meetings in Toronto, tickets being good going January 27th to February 4th, and returning up to and including February 8th, will afford stockmen a favorable opportunity of attending the meetings and sales of most interest to them. The annual meeting of the Dominion Shorthorn Association is slated for February 1st, and the great sale of 140 high-class Shorthorns, selected from nine of the best herds in Canada, will be held on February 2nd and 3rd, followed by the two other important sales advertised in these

columns, making over 200 head to be sold in three days, the largest offering, and the best, ever catalogued for disposal at one place in one week in Canada. The annual meeting will, without doubt, be the largest gathering of Shorthorn-breeders in the history of the Association, and will afford a fine opportunity for breeders to meet, to exchange notes, do business, and get an idea of the prospects for the coming months, which, in view of the acknowledged scarcity of beef cattle, and the high range of prices prevailing and prospective, should give impetus to the demand for Shorthorn bulls, the founding of herds, and general improvement. Those who attended the combination sale at West Toronto in February last year, saw the best lot of cattle ever offered at auction in this country, and we are assured that this year's offering will excel that of last year in individual excellence, while their breeding is of the highest character. The catalogue comprises 35 young bulls, and 105 females, which will afford a wide range for selection. The bulls are a very superior lot for quality and breeding, as the contributors have been reserving their best young stock for this sale. There has never been so many really choice heifers and cows offered at one sale in

America. It will be a great opportunity to select high-class females for foundation stock. See advertisement on page 109, this issue, send for catalogue to Robert Miller, Stouffville, Ontario, and if it fails to reach you in time, come along, for the cattle will be on hand. Purchase a single ticket to Toronto from your railroad agent, and ask him for a standard convention certificate. This certificate will require to be signed by the Secretary of the Live-stock Convention, and will then be vided by the joint agent of the railroad companies, who will be in attendance at the meetings. This certificate, when completed in this way, will entitle the person named on it to obtain a ticket to the starting point free of charge at the city or station ticket office, Toronto.

#### TRADE TOPIC.

The Humane Horse Collar, advertised in this paper by the Whipple Horse Collar Co., Hamilton, Ont., sold by over 5,000 harness dealers, and over 60,000 sold last year, should attract the attention of farmers and horse-owners generally. See the advertisement, and write for particulars.

#### The Central Nova Scotia Seed Fair.

The seventh annual seed fair, held in Truro, N.S., was opened on Tuesday, January 11th. Owing to the inclemency of the weather during the days previous, the number of exhibits was somewhat less than in 1909, but it was interesting to note that the quality of exhibits far surpassed anything previously shown. All exhibits were judged by T. G. Raynor, of the Seed Department, Ottawa, and S. J. Moore, the Maritime representative of the Seed Branch, Ottawa. The number of exhibits of grain showed the greatest decrease, and it was observable that careful hand selectors and members of the Canadian Seed-growers' Association carried off the majority of prizes. Although the grain exhibits were of particularly good quality, yet the potato exhibit was by far the best, and showed greater advancement in type, size, quality, etc., than any of the others.

The cup donated by John Stanfield, M.P., for the best exhibit of six varieties of potatoes, was won in 1908 by J. E. Harrison, of Maccan; in 1909 by A. C. Walker, Truro, and in 1910 by J. E. Harrison, Maccan. Retson Brothers, of Truro, stood a very close second this year, and had other exhibits entered been on hand for judging, this cup, undoubtedly, might have stayed in either Colchester or Halifax County. Much credit is due the exhibitors for the splendid condition in which exhibits were placed before the public. This fair stands out prominently as a sales fair: prices were high, especially for pedigreed seed, and sales were brisk. Many were deeply interested in the process of seed selection, and the good results from this fair of 1910 cannot be overestimated.

"BLUENOSE."

#### Railroad Rates to Breed Society Meetings.

Arrangements have been made with the railroad companies for single railroad fare on the standard-convention-certificate plan from points east of Port Arthur, to the annual breed-society meetings in Toronto, Jan. 31st to Feb. 4th. A single ticket will be purchased to Toronto, and a standard convention certificate procured from the railroad agent at the time the ticket is purchased. This certificate will require to be signed by the Secretary of the Live-stock Convention (the breed-society meetings, dates for which find in "The Farmer's Advocate," Jan. 13, page 51), and will then be vided by the joint agent of the railroad companies, who will be in attendance at the meetings, a fee of 25 cents being charged by him for this service. This certificate when completed in this way will entitle the person named on the certificate to obtain a ticket to the starting point, free of charge, at the city or station ticket office, Toronto. Tickets will be good going Jan. 27th to Feb. 4th, and will be good to return up to and including Feb. 8th.

#### Fertilizer Distribution in New Brunswick.

The question of fertilizer supply has been investigated by the Agricultural Department of the New Brunswick Government, and the information acquired will be laid before the N. B. Farmers' and Dairymen's Association, and before the Legislature, and the Department will be prepared to receive recommendations looking to action in the future. Pending such recommendations, the Government will not make any appropriation for fertilizer distribution, as has been prematurely announced through the local press.

The Department is convinced, from its study of the question, that farmers in that Province, as elsewhere, could make a considerable saving in their fertilizer bills by buying the fertilizer ingredients and mixing them at home, and it is probable that a number of the societies may this year, as the Kingston Agricultural Society has been doing in the past, buy such material as nitrate of soda, sulphate of ammonia, vitriolated bone, and potash, and have their members mix them at home. The Department may be able to arrange for combining the orders of these societies so as to get a more favorable rate than heretofore. Information has also been obtained in regard to the cost and construction of a fertilizer-mixing plant, and if the recommendations are favorable, it is possible that some action along this line may be taken by the Department next year.

#### Too Many Crows.

In Kent County, Ont., where immense corn crops are grown, the farmers have of late gone into the raising of sugar beets for the sugar refinery, and as the hauling of the beets must be done in the late fall, when corn-hauling used to be in order, the result is that much of the corn is still standing in the fields. The crows know all about it, and, according to the farmers, have gathered in millions (the official report says hundreds of thousands) from every part of the Province, until they have become a most serious plague.

Complaint having been made, the Ontario Department of Agriculture sent C. W. Nash, of Toronto, to investigate. He reports that the crows are doing immense damage to the corn still standing in shocks. All the quail, so it is said, have also been destroyed.

At a meeting of farmers, held in Chatham, the following formula was recommended by Mr. Nash as the most effective for the destruction of crows: Three-quarters of an ounce of strychnine, 1 pint vinegar, 5 pounds corn, 1 pound brown sugar, 3 pints water. Boil the vinegar and dissolve the strychnine in it, add the water and pour the liquid over the corn; stir it well. Allow the mixture to soak for 48 hours, then stir in the sugar. Add corn meal if the liquid has not all been absorbed. Put the poison on a beef head or any carrion, mixing with the corn a little blood, brains or chopped offal of any kind.

The comment of a farmer of another county was that the Kent farmers should haul their corn in or stack it.

#### Niagara Fruit-growers.

The Niagara Peninsula Fruit-growers' Association is flourishing. This was shown by the large number attending the annual meeting, in St. Catharines, Ont., January 13th, and by the favorable financial report presented.

In response to the offer of the Dominion Government to provide funds for a course of Institute meetings, arrangements were made for meetings at Ponthill, Stony Creek, Grimsby, Beamsville, Jordan, Winona, St. David's, and St. Catharines. An attempt is to be made to arrive as a definite estimate of output of fruit from year to year. Two important resolutions were adopted, after keen discussion. The one urges appointment of a committee to bring about more satisfactory and systematic distribution of Niagara tender fruits, and the other that a committee of growers be appointed, authorized to treat with amalgamated canning companies, so that fair and uniform prices may be secured for fruits and vegetables.

"Powful fertile country daoun theh is Texas," said the colonel. "Yes, seh! Why, seh, I know spots daoun theh where the trees grow so close together that you-all couldn't shove your hand between theh trunks. Any game, seh! Why, seh! I've seen Fehginyuh deeah in those same forests with antlehs eight feet spread! Yes, seh!"

At this point some meddlesome idiot asked the colonel how such deer ever managed to get their antlers between such tree trunks.

"Theh, seh," said the colonel, drawing himself up with squelching dignity, "is their business."

"What is loaf sugar?" inquired Mrs. Justhitch.

"Why, it's sugar in the form of loaves. I suppose," answered her spouse. "Why?"

"I was wondering," said Mrs. J., "if that was what they made sweetbreads of."

Farmer's Wife—I hear your son is making money out of his voice at the opera? Byles—That's right, mum.

Farmer's Wife—Where did he learn singing?

Byles—Oh, 'e don't sing, mum! 'E calls the carriages!

BE SAFE, NOT SORRY.

There are many schemes and seemingly attractive investments that promise more for your money than a savings account...

Can you afford to take risk with your investments?

BANK OF TORONTO

Capital \$ 4,000,000
Reserved Funds 4,818,871
Deposits 34,000,000

Interest Paid on Savings Deposits

MARKETS.

Toronto.

LIVE STOCK.

At West Toronto, Ont., on Monday, January 17th, receipts numbered 55 cars, comprising 1,126 cattle, 21 hogs, 402 sheep, 22 calves...

REVIEW OF LAST WEEK'S MARKET.

Receipts of live stock at the City and Union Stock-yards last week were only moderate, amounting, all told, as follows:

Table with 4 columns: City, Union, Total. Rows for Cattle, Hogs, Sheep, Calves, Horses.

The quality of fat cattle generally was only medium, few good to choice lots being offered. Trade was brisk all week...

Exporters.—Export steers sold at \$5.60 to \$6; export heifers, \$5.50 to \$5.60; export bulls, \$4.50 to \$5.

Butchers.—Prime picked lots of butchers' cattle sold at \$5.75 to \$6; loads of good, \$5.50 to \$5.75; medium, \$5.15 to \$5.40...

Stockers and Feeders.—There was little doing in stockers and feeders, and prices were unchanged. Feeders sold from \$4 to \$4.60...

Milkers and Springers.—Receipts of milkers and springers were moderate, with prices ranging from \$35 to \$55 each. No extra-quality cows were on sale...

Veal Calves.—Receipts of veal calves were light all week, which caused prices to be firmer, at \$3.50 to \$7.25 per cwt. Sheep and Lambs.—The deliveries of sheep and lambs are becoming smaller...

Hogs.—Receipts light, and prices higher. Selects, fed and watered at the market, \$8.25, and \$8.60, f. o. b. cars at country points.

Horses.—Trade at the Union Stock-

yards Horse Exchange last week was active, when about 140 horses changed hands. Manager Smith, who is making a specialty of keeping the very best quality of heavy drafters that money will buy...

HAY AND MILLFEED.

Hay.—Baled, car lots, on track at Toronto, \$13.50 to \$14.50 for No. 1, and \$12.50 to \$13 for No. 2. Straw.—Baled, in car lots, on track at Toronto, \$7.50 to \$8.

SEED MARKET.

The Wm. Rennie Seed Company report very little business being done in the seed market, with prices unchanged, as follows: Alsike, No. 1, bushel, \$6 to \$6.25; alsike, No. 2, bushel, \$5.25 to \$5.75; red clover, No. 1, bushel, \$7.50 to \$8.25...

BREADSTUFFS.

Wheat.—No. 2 white, \$1.07 to \$1.08; No. 2 mixed, \$1.06 to \$1.07, outside. Manitoba—No. 1 northern, \$1.14; No. 2 northern, \$1.12, at lake ports. Rye—68c. to 69c., outside. Peas—No. 2, 85c., outside. Corn—American yellow, No. 2, 75c.; new No. 3 yellow, 72c. to 73c., at Toronto. Barley—No. 2, 58c.; No. 3X, 55c. to 56c.; No. 3, 50c. to 51c., outside points. Oats—No. 2 white, 36c. to 37c., outside, and 38c. to 40c., at Toronto. Buckwheat—No. 2, 51c. to 52c., outside. Flour—Ontario ninety per cent. patents, for export, \$4.20 to \$4.25, in buyers' sacks; Manitoba first patents, \$5.60; second patents, \$5.10; strong bakers', \$4.90.

COUNTRY PRODUCE.

Butter.—Receipts large, with prices easy, at unchanged quotations. Creamery pound rolls, 28c. to 29c.; creamery solids, 26c. to 27c.; separator dairy, 25c. to 26c.; store lots, 22c. to 24c. Cheese.—The market continues dull, with prices unchanged. Large, 13c.; twins, 13 1/2c. Eggs.—Cold storage, firm, at 26c.; new-laid eggs are becoming more plentiful, at 35c. to 40c. per dozen, case lots, the bulk going at about 37c. Potatoes.—Receipts large, prices easy, at 45c. to 50c., car lots, on track, Toronto. Beans.—Market somewhat firmer. Primes, \$1.75 to \$1.85; hand-picked, \$1.80 to \$1.90. Poultry.—Receipts limited, but plenty to supply the demand. Turkeys dressed, 18c. to 20c. per lb.; geese, 14c. to 16c.; ducks, 15c. to 17c.; chickens, 15c. to 17c.; fowl, 11c. to 13c. per lb.

HIDES AND WOOL.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 12 1/2c.; No. 2 inspected steers and cows, 11 1/2c.; No. 3 inspected steers, cows and bulls, 10 1/2c.; country hides, 9 1/2c. to 10c.; calf skins, 12c. to 14c.; horse hides, No. 1, \$2.75; horse hair, per lb., 32c.; tallow, per lb., 5 1/2c. to 6 1/2c.; sheep skins, 85c. to \$1 each. Wool and raw-fur prices given on request.

Buffalo.

Cattle.—Prime steers, \$6.75 to \$7. Veals.—\$6 to \$11. Hogs.—Heavy and mixed, \$9.10 to \$9.15; Yorkers, \$8.90 to \$9.10; pigs, \$8.80 to \$9; roughs, \$8.25 to \$8.50; stags, \$7 to \$7.75; dairies, \$8.90 to \$9. Sheep and Lambs.—Canada lambs, \$8.40 to \$8.65.

British Cattle Markets.

London and Liverpool cables quote live cattle at 12c. to 14c., dressed weight; refrigerator beef, 9 1/2c. to 10c. per pound.

Montreal.

Cattle.—The local market for cattle continues to show strength, the last market being an exceedingly firm one. It would seem that the supplies coming forward are now so small that they are barely sufficient to supply local consumption, to say nothing of the demand from outside places. It is considered that really choice stock would have sold at 6 1/2c. had they been available. As it was, fine stock sold at 6c. to 6 1/2c., and was in good demand from local and outside points. Good stock brought from 5 1/2c. to 6c., and medium from that down to 4 1/2c., while common sold at 3 1/2c. to 4c., and canners' stock brought as much as 3 1/2c. and 4c., which is much more than the previous week. Sheep—Lambs sold at 6 1/2c. to 7c. per lb., and sheep at 4 1/2c. to 4 3/4c. per lb. Calves were about steady, at 4c. to 6c. per lb. One of the features of the market was the continued strength in the market for hogs, and the generally advancing prices. A record price was made last week, when sales took place at 9 1/2c. per lb., for select stock, weighed off cars.

Horses.—Dealers reported a dull market last week, following the activity of the previous few weeks. There is every indication of a great amount of activity in the woods, as most of the purchases have been on account of lumbermen, hence there should be a big cut of logs. Meantime, dealers are quite prepared to await another period of buying, as they have had a satisfactory opening of the New Year. Prices hold steady, as follows, supplies being on the light side: Heavy draft horses, weighing from 1,500 to 1,700 lbs., \$225 to \$300 each; light draft, weighing 1,400 to 1,500 lbs., \$180 to \$240; light animals, 1,000 to 1,100 lbs., \$100 to \$150 each; broken-down, old animals, \$50 to \$100 each, and fine saddle or carriage animals, \$350 to \$500 each.

Dressed Hogs and Provisions.—Owing to the unusually-high price of live hogs, dressed hogs have reached what is probably a record price, being 13c. per lb. for abattoir-dressed stock, fresh-killed, selected, while country-dressed are selling at 12 1/2c., and sometimes 12 1/4c. per lb. The hog market is exceptionally strong. There is little or no change in provisions, though demand is good, and the tone of the market is firm. Heavy hams, weighing 25 lbs. and over, sell at 14 1/2c. per lb., while those weighing 18 to 25 lbs. sell at 15 1/2c., and smaller hams at 16c., the price for those with the bone out, rolled, being 17c. to 17 1/2c. per lb., according to weight. Breakfast bacon sells at 16 1/2c. to 17c., Windsor backs being 17 1/2c., Wiltshire sides 17c., and cottage rolls 16 1/2c., while spiced rolls are 14 1/2c. Lard, extra pure, 16 1/2c. to 17 1/2c., and compound, 11 1/2c. and 13 1/2c. Barrelled pork ranges from \$23.50 to \$32, and beef \$15 per barrel.

Poultry.—Demand for poultry of all kinds is on the light side, although it is not dull. Supplies are anything but liberal, and prices, while easier, are very high. Choice, fresh-killed or frozen turkeys were sold around 20c., and other good qualities as low as 18c., while some inferior stock might be had as low as 15c.; geese, 13c. to 14c.; ducks and best chickens, 16c. to 17c.; other chickens, 14c. to 15c. Fowl have declined in price, and were 10c. to 12c. per lb.

Apples.—Market for apples easy, owing to the large quantities being offered. The recent range of the auction sales would probably give the best idea of prices. No. 1 apples sold at \$2.50 to \$3 per barrel; No. 2, \$1.90 to \$2.25; No. 3, \$1.40 to \$1.75. These apples arrived here in cars from the West, and were sold by auction in quantities of not less than five barrels in a lot.

Potatoes.—Very fair trade in potatoes, but dealers were not ready to give quite so much as shippers demand. The general view was 55c. to 57 1/2c., for best stock, carloads, track, per 90 lbs., and 5c. more in broken lots.

Eggs.—Prices have advanced again, being up about 2c.; No. 1 eggs, 28c. per dozen; select, 32c. per dozen; new-laid, 45c. to 50c., according to quality.

Butter.—The market for butter about

IMPERIAL BANK OF CANADA
CHARTERED 1875
Capital Authorized, \$10,000,000.00
Capital Paid Up, 5,000,000.00
Reserve, 5,000,000.00
SAVINGS DEPARTMENT
\$1.00 opens an account. Interest paid at highest current rate from date of deposit.

steady. The demand, although better than during the corresponding period of 1909, is rather light. Prices practically unchanged, at 24c. to 24 1/2c. per lb. for fresh receipts of winter makes, and 25 1/2c. to 26c. for choicest fall makes, dairies being 21c. to 23c. per lb.

Cheese.—There has been more inquiry from England, and the market strengthened considerably. Prices, 14 1/2c. to 14 3/4c., with some at 12c. This covers all qualities.

Grain.—There was a further strengthening of the market for oats, prices being 44c. to 44 1/2c. per bushel for No. 2 Canadian Western, and 1c. under for No. 3. No. 2 barley sells at 68c. to 69c., and Manitoba feed at 53c. to 55c.

Flour.—Market unchanged, at \$5.70 per barrel, in bags, for Manitoba first patents; \$5.20 for seconds, and \$5 for strong bakers', Ontario patents being \$5.50 to \$5.60, and straight rollers \$5.10 to \$5.20.

Millfeed.—Market very strong on most lines, and prices of bran advanced \$1 per ton, shorts and mouille being also advanced \$1 by some millers. Manitoba bran, \$22; shorts, \$23; Ontario bran, \$22.50 to \$23; middlings, \$23.50 to \$24; pure grain mouille, \$31 to \$33; mixed, \$27 to \$29.

Hay.—Baled hay steady, at \$13 to \$13.50 for No. 1; \$12 to \$12.50 for No. 2 extra; \$11 to \$11.50 for No. 2; \$10 to \$10.50 for clover mixed, and \$9 to \$10 for clover.

Hides.—Demand for hides continued fair, but the quality showed deterioration. The market showed no further changes, after the several recent declines. Dealers paid 10c., 11c. and 12c. per lb., respectively, for Nos. 3, 2 and 1, and 12c. and 14c. for Nos. 2 and 1 calf skins, respectively, and selling to tanners at 1c. advance. Sheep skins, \$1 each. Horse hides, \$1.75 each for No. 2, and \$2.25 for No. 1. Rough tallow, 1 1/2c. to 3c. per lb., and rendered, 5c. to 6c. per lb.

Chicago.

Cattle.—Steers, \$5 to \$5.80; cows, \$3.50 to \$5.50; heifers, \$3.40 to \$6; bulls, \$4 to \$5.15; calves, \$3 to \$9.75; stockers and feeders, \$3.75 to \$5.50.

Hogs.—Choice, heavy, \$8.95 to \$9.05; butchers', \$8.90 to \$9; light, mixed, \$8.65 to \$8.75; choice, light, \$8.75 to \$8.85; packing, \$8.85 to \$8.90; pigs, \$7.70 to \$8.50; bulk of sales, \$8.70 to \$8.95.

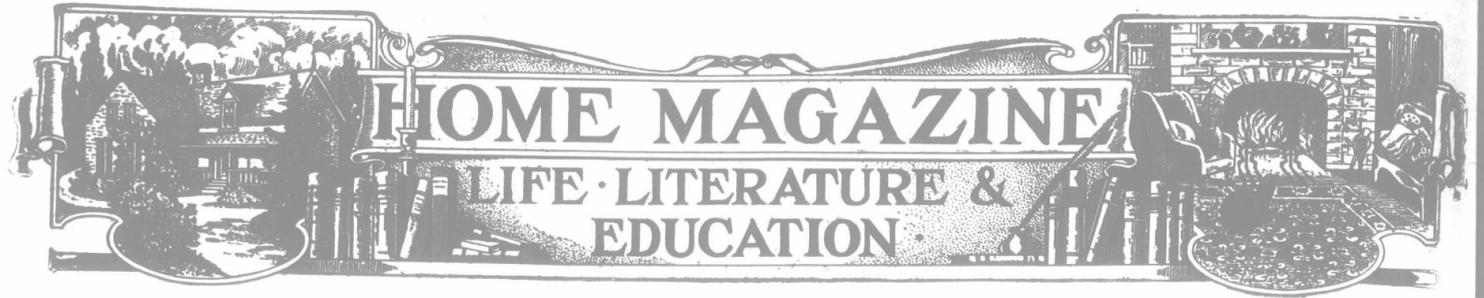
Sheep and Lambs.—Sheep, \$5 to \$6.15; lambs, \$7.40 to \$8.80; yearlings, \$4.25 to \$7.90.

Horses in Demand.

Reports from different quarters of Ontario indicate a keener demand than ever for horses for lumbering, railway construction, hauling mining materials, and for the Western Provinces. Buyers are scouring the country, and are paying stiff prices in order to secure what are needed. Good-actioned drivers are also very salable.

Two Irishmen, bent on robbery, held up a passing Scotchman. After a long, fierce fight, in which the Scotchman almost had the better of it, they succeeded in conquering him. A thorough search of his clothes disclosed one lone five-cent piece.

"Troth, Pat," said Mike, disgustedly, "if he'd had tin cents instead of a nickel he'd have murdered the two of us!"



Herbert Quick, in his new book, "American Inland Waterways," with a tone of apprehensiveness, devotes special attention to the strenuous activities of Canada in extending and improving the St. Lawrence River, Georgian Bay Canal, and other great arteries of commerce to the heart of the continent.

The new German Imperial Chancellor has pointed out the important duty of restoring good relations between his country and England, and has advised the Press "to practice the coolness and reserve which correspond to the sense of strength and to respect for neighboring countries." This is wiser and more Christianlike statecraft than comparing Dreadnoughts and stimulating competition on their construction.

Now that trade, its regulation and growth, are again acutely in the public mind, it is of interest to note by the United States Bureau of Statistics that nearly one-half of all the exports of the Republic go to British territory, and nearly one-third of all her imports come from British territory. During ten months of last year, the value of the trade between the States and the British countries was about one billion dollars.

A despatch from Providence, Rhode Island, calls attention to the fact that Brown University provides special courses in preparation for public or Government service, covering such subjects as international law, natural, industrial and commercial resources, history, government, institutions, and modern languages. President Taft has ordered examinations now preparatory to diplomatic appointments. This ought to be an improvement on the "political pull."

Upon foreign investment of British gold, over \$450,000,000 of interest pours back annually into London coffers. What has given Great Britain her mercantile supremacy, and made two-thirds of the world's commerce hers? Fred C. Howe, in an able article in Scribner's Magazine, declares it was the freedom of her trade, and that, too, without a subsidized marine. The United States, he says, was once a close second, but protection closed her gates, and she fell behind.

Albert I., the new King of Belgium, is thirty-four years old, strong, manly, well-educated, alert, and unostentatious. On his visit to America, some time ago, he went through the schools, factories, seaports, and other places of national interest, to prepare himself for his coming duties. He also went personally through the Congo Free State, in Africa, where unprincipled trading companies (in one of which the late King Leopold was a stockholder) enriched themselves by atrocious treatment of the natives, in order that he might know the truth, and prepare for needed reforms. It is hopeful when European kings begin to take their position as seriously as this.

One of the most notable books of the past year was the autobiography of the late Henry M. Stanley, the African explorer, supplemented and edited by Lady Stanley. Another

was Dr. Sven Hedin's "Trans Himalaya," a fascinating story of discovery and adventures in mysterious Thibet. Hedin is a Swede, who has made Central Asia his field of travel. But most talked of in the book world was "The Heart of the Antarctic," the two-volume account of the British expedition of 1907-9 to reach the South Pole, by Lieut. E. H. Shackleton, now Sir Ernest Shackleton. For lack of food the party had to turn back when about 100 miles from the pole. Commander Peary, by the way, announces that he will lead no more polar expeditions, having reached the North Pole, the "object all sublime" of his career.

The nineteenth century was the century of the town, but the twentieth century will be the century of the country. In the nineteenth century, town business and town life held sway, but rural life is swinging to the fore now. Its natural wholesomeness and charm make it the best. Thinkers know that; but the city glammers and chances to "get on" quickly have drawn the crowd. Now the eyes are turning the other way. Town industries are not slackening, but the country is getting busier, and its work paying better. The interest of it is deepening. People are making a study of plant and animal life, and aiming to improve all the "ins and outs" of the farm and of the home-life with good literature, music and pictures. The rural 'phone and radial line, more comfortable dwellings and smoother roads, the local library, the church adult class, the country Canadian Club and the more attractive public school, trips to the agricultural college, Institute gatherings, and co-operative work—all make for the betterment of the twentieth-century farm.

"Fletcherize your food." This phrase, or the verb it contains, is posted in conspicuous places in some of the leading sanitariums. What does it mean?

Mr. Fletcher, from whose name the word was coined, was twenty years ago a victim of indigestion. At forty years of age his hair was white, his weight was 50 pounds in excess of the standard for a man of his height. He gave up his business and devoted himself to a quest for health.

In the December Strand he tells of the discoveries he made by experimenting upon and studying the action of his own organism. These may be summarized as follows:

Don't take any food without feeling hungry. Wait for a true appetite.

Select for the food available that which appeals to the appetite, taking that kind first which thus appeals most strongly.

Chew the food and taste it, and enjoy the taste until it becomes emulsified, or dextrinized, or alkalized, or neutralized, as the case may be—in short, "fletcherized"—into a creamy substance that practically "swallows itself."

The moment that appetite slackens up, and the saliva ceases flowing, that moment stop taking more food.

Mr. Fletcher, by observing these practices, regained his health, and now, at sixty, he is, and looks like, one who has renewed his youth.

It is estimated that fully 5,000,000 human beings die every year from tubercular consumption, although it

is known that the disease is one which, if recognized in time, and properly treated, is certainly curable. As long as fifty years ago, Dr. Cormack, a recognized authority of his day, declared that it is as impossible for a person who lives outdoors day and night to die of lung consumption as for one whose only drink is cold water to die of delirium tremens. Sir Lauder Brunton said, in a recent speech, that if the people of Great Britain were to unite in a whole-hearted endeavor to stamp out consumption, it would, in twenty-five years, be as rare as leprosy is now. Within the memory of the reader the disease was generally regarded as hereditary and non-infectious; now it is known to be very infectious, and but slightly, if at all, hereditary. Until recently, precautions were seldom taken to prevent a consumptive from communicating the insidious malady to all around him. Preventive measures are not yet adequate, but rapid progress in their effective use is being made. Nearly every Provincial and State Government is publishing for free distribution circulars of information relating to the care of consumptives, and the prevention of the spread of the disease. The cause, nature and timely treatment of tuberculosis are now well understood. Every well-wisher of the race will inform himself concerning these, and of what he can do to disseminate the knowledge. Of consumption, it may be truly said the people die for lack of knowledge. In treating it, Nature is the chief physician; the patient the best nurse; pure air the sovereign remedy. Have you consumption?

Then, court sleep, that angel of life which comes in the silent hours of the night, and fills the cells with a new supply of vital energy. Sleep enough, but sleep in the pure air—out on the veranda, or with your head out of the window, or at least with the window of your bedroom wide open, even in the winter. Cover warm; keep your feet warm and your head cool. Eat sufficient of simple, nourishing, heat-giving, digestible food. Avoid drugs, and be scrupulously careful not to infect others or re-infect yourself with the germs of disease thrown off by your own lungs. Don't go to a far country to die of homesickness, but cure yourself by determined persistence in a hygienic regimen of breathing, sleeping and dieting.

### Botany as the Primary Science.

WHAT IT HAS DONE AND IS DOING TO BENEFIT MANKIND.

By Scholasticus.

No doubt, to many readers, the claim that Botany is the primary science, may appear as one which it would be difficult to prove. The subject, to those who have not studied it, and do not know all its important bearings, generally seems an innocent kind of amusement indulged in by apparently rather impractical men, and having very little indeed to do with the essential affairs of life. The very word, however, goes to prove how all-important the subject is, as it is derived from the Greek, "botane," meaning grass—fodder. Now, if we go back to the beginning of things, leaving out of the question all disputations as to evolution, and take the story of the creation as told in the Bible, the significance of the

word becomes very clear. The first thing to be created after the dry land, called earth, had appeared, was grass. And as to this we read: "Behold, I have given you every herb bearing seed which is upon the face of all the earth, and every tree in the which is the fruit of a tree yielding seed; to you it shall be for meat. And to every beast of the earth, and to every fowl of the air, and to everything that creepeth upon the earth wherein there is life, I have given every green herb for meat." Therefore, Botany deals with that prime essential to man and all living things—food: meat to nourish, meat to keep us in good health, meat for us to enjoy, meat indeed to sustain the very life. Can it not, then, be said that Botany is the primary science.

All through the ages, the importance of this science has been fully recognized. Solomon, we are told, spoke of "Trees, from the cedar tree that is in Lebanon, even unto the hyssop that springeth out of the wall." Then, we have such names as Theophrastus, Aristotle, Pliny, Gesner, Lobel, Casalpinus, Greir, Nalpihi, Ray, and Linnæus—men who did great pioneer work under many difficulties, and who bring us up to what may be called comparatively modern times. It would take too much space to give a list of succeeding workers, so we must leave them, and consider the question often asked, What practical good has Botany done for the world?

Supposing that you had but a few acres of ground upon which to grow wheat to supply bread for yourself and family, and year after year you had only enough to go round very sparingly, how thankful you would be if you could obtain seed that produced a surplus. This is what a botanist has achieved. Through the application of Mendel's Law—a law which shows the working out of heredity—new and stable varieties of grain are being produced which combine the best points of older varieties. This is the secret, wrung from Nature, which is at the root of the experiments always going for still further progress at the Ontario Agricultural College, at the various Experimental Farms, in Great Britain, in the States, and some foreign countries. At the present time, an endeavor is being made to combine the large-yielding, but not satisfactory-quality-giving English wheat with the Canadian high-quality but not large-yielding grain. Imagine what this will mean in the future, when successfully carried out. But we need not be on the watch for results; go to the O. A. C., or look out for reports in "The Farmer's Advocate," and you will soon find what has followed from the work of a quiet botanist. It is not always the noisiest worker who does the best work; and surely, to have increased the world's harvests is not the work of an impractical man.

How many sad hearts have been caused by the sight of what promised to be a good crop of grain being spoiled by disease. Patient botanists have sought out the causes of this, and have found them to be owing to the attacks of minute plants called fungi. The life-history of these has been laboriously inquired into, so that now farmers can treat their seed and their growing crops with certain mixtures which to a very great extent will speedily end the life-history of these enemies. A penny saved is a penny gained, goes the old saying:



the same axiom will apply to crops. But all fungi are not our enemies; nearly everyone likes mushrooms, and the botanists have carefully studied the dozens of such fleshy fungi, and report that among these are to be found a large number which are usually regarded as poisonous, but which really would provide many delicious and nutritious meals. Beautifully-illustrated books on fungi can be bought quite cheaply now, giving full instructions how to distinguish the poisonous from the non-poisonous varieties, and also how to cook the latter. Botanists have also discovered the plants most suitable for enriching poor land and acting as fertilizers.

Weeds! How farmers hate them! Here, again, the botanists step in, and have provided means by which weeds and poisonous plants can be recognized and destroyed on their first appearance. Many of these weeds get on to a farmer's land owing to impure seed. Botanists have supplied farmers with careful drawings and instructions, enabling them to detect the evil seeds in among the good. The short courses at the O. A. C. on seed-judging, under clever and genial Professor Zavitz, must have shown hundreds of farmers how real the curse of impure seed is, and how much praise is due to botanists for their study of weeds. The study of weeds has another aspect: it will teach a man something about the soil; certain weeds like certain soils, so that a man thinking of purchasing a farm can look out for them, and, if he has learned anything of their characteristics, can form some sort of idea of the quality of the land. The knowledge, also, of the native flora of a region will tell what cultivated varieties are suited to it, and do away with the old, haphazard and costly method of trial.

Many farms have places on them rendered useless owing to the soil having alkaline or saline properties. A comparatively recent discovery by a botanist has suggested a means by which these lands could be made fertile. He has found, after careful study and analysis, that certain plants take up large quantities of salts along with the water which they absorb. It is considered that if these were sown on these places, then cut at the proper stage and removed, in time the land would prove productive. Such a discovery as this required a botanist, a man who knows how plants live—that is Physiology—and it stands to reason that a farmer who had given this subject some attention would know better how to raise his crops. He would have learned that some plants require certain properties to be present in the soil, and to enter their roots, in order that they could procure food.

Forestry is but Botany, although many people think it a distinct study. It is a subject which is as important as any in Canada, and the services of botanists have helped it. The rates of tree-growth, as calculated by them, are important factors in planning a plantation. The study of the forest conditions, as ascertained by them, will help to show what trees will do best in given localities. Botanists are not backward in urging farmers to grow "crops of wood," or in showing them how best to do so. They have realized, if farmers have not, as has been well said by one of them, that "Our civilization is built

on wood. From the cradle to the grave, in some shape or other, it surrounds us as a necessity or a convenience. We are rocked in wooden cradles, play with wooden toys, sit on wooden chairs; are entertained by music from wooden instruments, enlightened by information printed on wooden paper with black ink made from wood. Over half our people live in wooden houses, more than two-thirds use wood as fuel, our thousands of miles of railroad tracks lie on millions of wooden ties, and on our coast and inland waters still ply fleets of wooden ships."

It is impossible to do more than mention the fact that botanists have conferred great boons on mankind by the discovery and cultivation of wild fruits and plants and vegetables, which they have made staple articles of diet. Who can estimate the returns, both profitable and beautiful, which have come from botanists' studies of the plants producing the vegetable colors and dyes; and who can value the benefits mankind has derived from the herbs which they have given to medicine? This leads us to consider that a botanist, to be worthy of the name, must be a man of wide culture, and our universities are now fully alive to the fact. He must know not only Botany, but

while he must know how to use the microscope, and master the difficult operation of preparing slides. He must have keen observation, and a most retentive memory. All these points are being recognized by Canadian universities, and especially so at Queen's, where Botany is receiving much attention, and, in consequence, the classes are rapidly increasing in numbers. It may just be mentioned that really expert botanists have no difficulty in obtaining excellent positions. A glance at the manner in which Botany is now divided into separate studies will give a good idea of the advance which it has made, and show how this primary science affects the arts of agriculture, horticulture and forestry. There are: Systematic Botany, that is classification; Morphological Botany, the study of descent, as revealed by structure; Ecological Botany, the relation of plants to their surroundings; Plant Anatomy, their gross structure; Plant Histology, their minute structure; Plant Physiology; Paleobotany, fossil plants; and Phytogeography, the distribution of plants.

Thus far, the material side of Botany has been chiefly spoken of, but how much have botanists not done to beautify the world? Think of the humble wayside flowers which they

them so that they can fully enter into the spirit of Wordsworth's lines:

"To me the meanest flower that blows can give Thoughts that do often lie too deep for tears."

In pain and pleasure, in suffering and in joy, from childhood to old age, they minister to us, and thus surround with a perennial, beautiful and fragrant garland the claim that Botany is the primary science.

### Current Events

The Legislature of Ontario has been called to meet on Tuesday, January 25th.

The Township of Fitzroy, Carleton Co., has just re-elected Mr. Charles Mohr as reeve. This is the forty-first time in succession that Mr. Mohr has been elected to this office.

A new organization has been formed in New York for the purpose of protecting immigrants, newly arrived, from sharpers and petty frauds, and for otherwise assisting them.

Plans are on foot for the construction of a dam across the Mississippi at Keokuk, Iowa. The estimated cost will be \$15,000,000, and, when completed, it will be the second largest dam in the world.

A bill has been introduced into the House of Commons to provide for a Canadian navy. The bill calls for five cruisers and six destroyers, at an annual expenditure of about three million dollars.

The third annual exhibition of the Canadian Art Club, now being held in Toronto, shows a distinct advance over preceding years, most of the leading Canadian artists being represented, and the display of pictures and bronzes very fine. The exhibition, which is well worth a visit, remains open until January 27th.

Three nations, England, France, and the United States, will this year be represented in Antarctic exploration. France already has an explorer within the Antarctic zone; Great Britain is preparing to send two parties, one commanded by Capt. R. C. Scott, and the other headed by Sir E. Shackleton, on an expedition in search of the South Pole; and the United States is sending a party on the same quest in the steamer Roosevelt, Capt. Peary's ship.

That was a pretty good rule of health laid down by Doctor Wyman, head of the United States quarantine service, when asked what a man should do to keep in sound health. He said to eat plenty of good food, wear reasonable clothing, sleep where there is pure, fresh air, get as much sunshine as possible, keep sanitary surroundings, exercise moderately, be careful and avoid worry. If these rules were observed by all, the death-rate would wonderfully decrease. With the exception of the matter of sanitary surroundings, this is all within the control of each individual, save the very poor.



Fighting His Battles O'er Again.

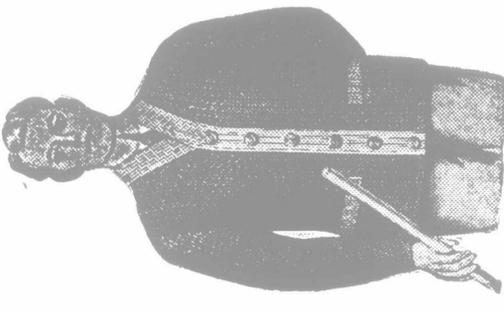
From an original photograph, showing a veteran of The Soldiers' Home, Chelsea, Eng., and a group of boys from The Duke of York's School.

have some acquaintance with Chemistry, Zoology, Geology, Physics; while a knowledge of Latin, Greek, French and German are of immense service to him. The names—that is, the scientific names—of plants are built up from words in the two first languages, and there is a vast literature on botany to be studied in French and German. Moreover, the botanist must be a strong, industrious, patient man, ready to take long tramps, to make long excursions by canoe or boat, and to wade into swamps in search of rare or new specimens. Skill is necessary in pressing, drying and mounting plants,

have taken and raised to regal splendor. Go to the flower shows, and see the countless varieties of roses, dahlias, gladioli, and other flowers, which owe their increased beauty and glory to the patient skill and labor of botanists. Consider the millions of people who have been cheered and gladdened by raising and tending, by giving and receiving these lovely flowers. It is needless to dilate upon this side of Botany; everybody loves flowers, everybody appreciates their colors, their grace, their beauty, and knows the poetry and romance connected with them; many love

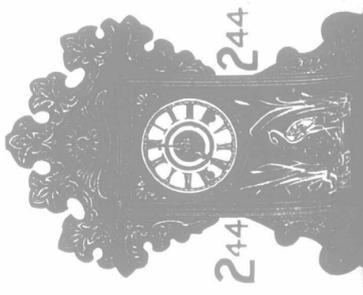
# EATON'S JANUARY SALE VALUES

Men's Coat Sweaters



E1-7020. Men's Buttoned Coat Sweater. Two-piece, close ribbed cuffs, in plain black only, with easy care trimmings. of these so order early. Medium sizes only. Sale Price, each 76c

Alarm Kitchen Mantle Clock



244 244

# THE EVENT OF THE YEAR



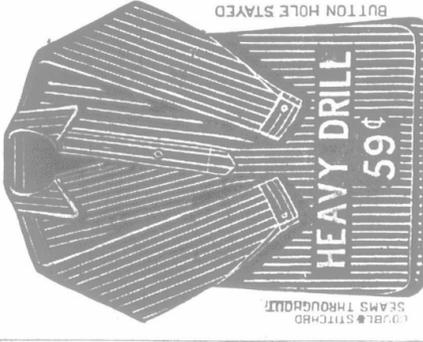
NOW READY

# EATON'S JAN. & FEB. SALE CATALOGUE

...MULTITUDE OF GENUINE VALUES... household. In other words it lists only necessities and the prices quoted in every instance are surprisingly low, while the quality is fully up to the EATON standard. Enormous purchases and enormous sales, both conducted on a spot cash basis, have made our prices possible. If you have never dealt with EATON'S, send a trial order to-day which we will endeavor to fill in such a manner...

## THE FARMER'S ADVOCATE.

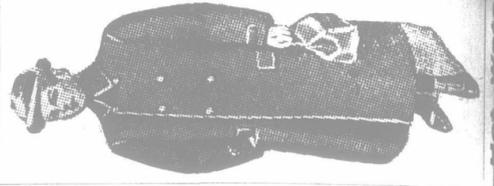
Liberal Size Bodies Particularly Well Made



HEAVY DRILL 59¢

E1-7002. Specially Made Large Full Jodled Shirts; the sleeves are full length and the body measures 51 inches around the chest longer than regular size, made in our own factory, all well made throughout. This price of such shirts should warrant a big sale. Sizes 14 to 18. Sale price 59c

Larger Boy's College Ulster 5.10



28-Ounce English Double-Breasted Ulster, with Close-Fitting Collar

E3-77. College Ulsters, made from tweed, dark in color, with faint patterns, double-breasted, close fitting collar, button big close at neck, pop-up collar, very strong throughout. Size 2; to 38. Sale price 5.10

FOUNDED 1866

65c

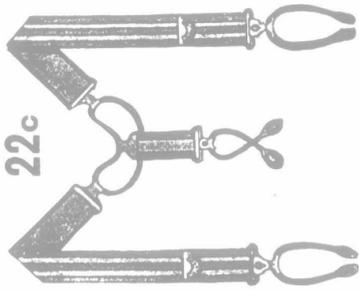
with a loud, clear tone which is heard throughout the room. With proper care this clock will last a lifetime. Guaranteed one year. Sale Price 2.44

# EATON'S CATALOGUE

244 244

With a hand strap that should always be worn, the soundest sleep; it is protected by a gilt decorated brass frame. With proper care this will last a lifetime. **Sale Price 2.44**

**Suspenders that give Satisfaction**



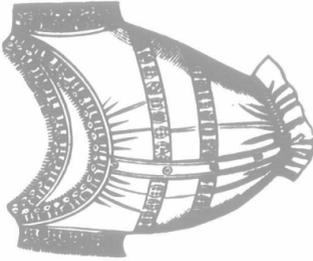
**22c**

E1-7086. **Men's Fine Elastic Web Suspenders**, "Premier" style cord back, and detachable cord under pure buckles. Special value. **Sale Price 22c**

### Factory Cotton

Q2-110. We selected this cotton as being specially suited for general household use. It is a fine firm cloth, perfectly pure and free from specks. You cannot do better than order this. 38 ins. wide, 40 yards in Web. **357**

**Sale Price, per web**



R1-8810. **Women's Corset Covers**, made of good quality cotton, full front, finished with two rows of lace insertion, lace edge and armholes. Pearl buttons. Draw string at waist. Sizes 32 to 42 ins. **Sale Price 19c**

household. In other words it lists only necessities and the prices quoted in every instance are surprisingly low, while the quality is fully up to the EATON standard. Enormous purchases and enormous sales, both conducted on a spot cash basis, have made our prices possible. If you have never dealt with EATON'S, send a trial order to-day which we will endeavor to fill in such a manner that we will be able to add your name to our ever-increasing list of regular customers.

## OUR PROMPT SERVICE

OUR MAIL ORDER DEPARTMENT is so systematized and conducted, that most goods are shipped on the same day that we receive the order. Whether your order be large or small makes not one particle of difference in that respect. We realize that everyone wants his or her goods shipped immediately, consequently we have eliminated every cause of unnecessary delay. Try us. Afford us an opportunity of filling your small rush orders.

## OUR LIBERAL GUARANTEE

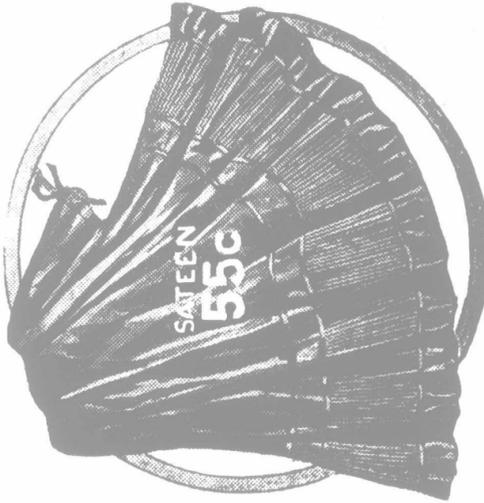
You have absolutely no cause for worry, trouble, or doubt, when dealing with EATON'S. In every instance you are the sole, only, and final judge as to the merits of our merchandise. If for any reason you are dissatisfied with your purchase, return the goods within 10 days and we will refund your money in full and pay all transportation charges.

## Women's Petticoats

We make these Petticoats in our own factories in order to save our customers all unnecessary expense between the maker and wearer and to keep up the EATON standard of quality and workmanship.

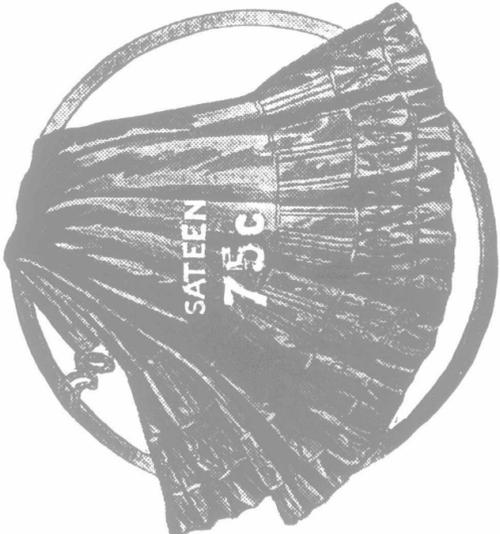
They are made in lengths 38, 40 and 42 inches.

**Goods Right or Your Money Back with Transportation Charges**



**SATEEN 55c**

T-85458. **Women's Petticoat made of Black Sateen.** The flounce is trimmed with crimping and three rows of strapping, finished with frill around the bottom. **Sale Price 55c**  
If by mail, postage extra 15c



**SATEEN 75c**

T-85492. **Women's Petticoat of Lustrous Black Sateen.** It is made with deep flounce tucked in clusters of - with shirring and three rows of strapping. **Sale Price 75c**  
If by mail, postage extra 15c

**THE T. EATON CO. LIMITED**  
**TORONTO - CANADA**

**65c**

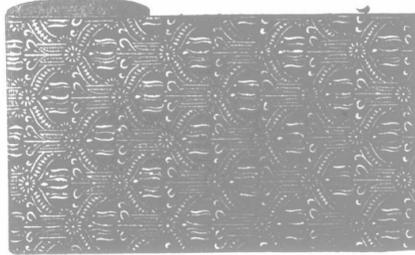
V1-126. **Haying** secured from one of the largest and best American manufacturers the over production of their water bottles at very considerable reduction. We are able to sell during January and February as long as the stock will last. **Sale Price 65c**



D7-110. **Handy sized, strongly bound, clearly printed, indexed Dictionary.** Friction paper good paper good bound in cloth. This is not only a dictionary—it contains sections on Commercial Law, Business and Legal Forms, Quotations, Proverbs, Foreign Words and Phrases, and a mine of other valuable information too extensive to mention here. Size of book 6 1/2 x 8 1/2 inches, weight 2 lbs. Indexed throughout and contains 470 pages. **Sale Price 38c**

### Bleached Sheetting

Q2-100. Order this one if you want the greatest value we ever offered in a Full Bleached Sheetting. It is made from long staple cotton, well spun and closely woven, making it a grand wearing sheeting. 12 inches wide. **24c**  
**Sale price, per yard**



M1-170. **A Good Quality Printed Hemp Carpet.** 38 ins. wide, 12 ft. length. A very pleasing design on a green ground. It is made of high quality red, brown and gold. This will give an excellent carpet for the price which has been made exceptionally low with a view to big sales. **Sale price 19c**  
38 ins. wide, at per lineal yard.

## Hope's Quiet Hour.

Editor "Quiet Hour":

In reading the "Quiet Hour," the thought came to me that you must reach a very large number of the farmers' homes in this Province, and, while perhaps the following does not really belong to your Department, I thought perhaps you might be able to do something in the matter. The subject I would like to mention is the very irregular way a minister is paid his salary in many places in the country. From early spring to late fall, money is scarce in a farmer's home, no doubt, but too often they never seem to remember that a minister has no farm to depend on, and that the butcher, baker, milkman, grocer and drygoods man must be paid, and a minister forced to live on credit must suffer as well as anyone else, and must take what the dealer chooses to give him.

No honest man or woman likes to be forced into debt, and yet there are ministers, with families depending on them, who not only have to run store bills, but have to borrow money during the summer. The trouble is, the farmer and his wife have no idea what it means to have to pay for every pint of milk used, for every egg, and every pound of butter and meat used in the house, besides the clothing, books, and other necessary expenses. The dealers do not like, or, very likely cannot afford to wait months for a settlement, any more than the farmer can afford to wait for months for payment for his grain, or dairy produce.

"What has this to do with the 'Quiet Hour?'" a farmer or his wife may ask, but I should think that the "Quiet Hour" would be all the more enjoyable if the church members were sure that their minister and his wife were receiving enough money each month to pay their weekly bills, and not having to worry over how to meet the store-bills that seem to grow large so fast.

I think this condition of affairs is caused, not because the members do not want to do everything for their minister's comfort, but because they have never been forced to depend on dealers for the necessities of life, and so do not realize what it means to be under the necessity of having cash on hand at all times.

Yours sincerely,

"READER."

## Worthy of His Hire

(S. Matt. x: 9, 10; S. Luke x: 7).

The writer of the letter given above seems to feel that the subject of paying a minister's salary with businesslike promptness is outside the province of the "Quiet Hour." But I am very glad indeed to give space to the letter, and also to take it for this week's topic. St. Paul declares that the Lord Himself has "ordained that they which preach the Gospel should live of the Gospel." This is one of the laws of Christ's Kingdom, being a continuation of the laws of maintenance of the priests and Levites, so strongly declared by Moses. We are told that those who minister "spiritual" things to their brethren should, as a matter of course, receive in return a necessary supply of "carnal" things—though no earthly gifts can ever balance the account.—1 Cor., ix: 11; Gal. vi: 6.

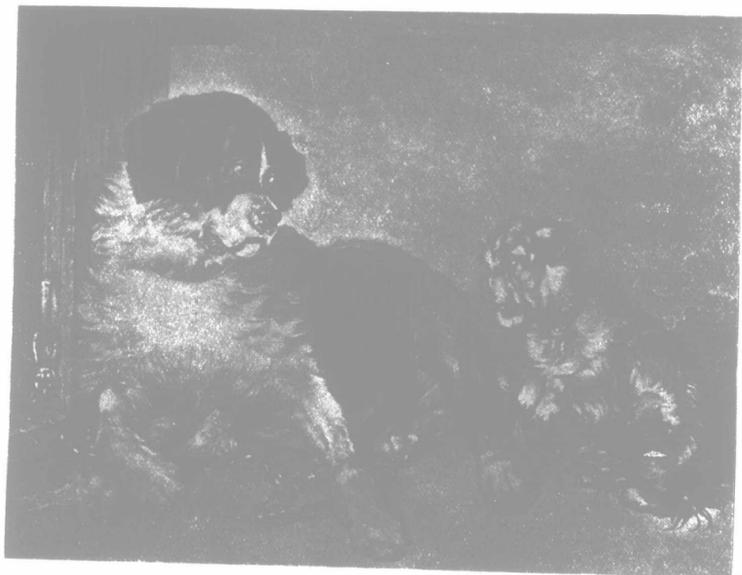
Under the old covenant, the tribe of Levi was not given any inheritance—except forty-eight cities. The members of this priestly tribe were set apart to minister about holy things, and the other tribes were allowed the privilege of supplying their earthly necessities. The "tenth" was their portion—so that rich and poor each paid a reasonable proportion—and to them was also given the "best" of the first fruits and other offerings. People are very fond of speaking as though Jews were grasping and miserly, but I am afraid a Christian minister, if he compared notes with a Jewish priest, might feel that those who, as St. Paul says—"live of the Gospel," fare more scantily than those who ministered as priests under the Law. Even heathen priests might look with admiration at the grudging offerings of Christians.

Let us look at this matter from a business standpoint, leaving the religious objection aside for the present.—Dorothy Cornish.

plain that sermons are 'poor,' and grumble at a lack of efficiency on the part of their ministers. If the congregations realized the spiritual gain to themselves of leaders able to lift their ideals high, and give them hope and courage for the battle of life, they would give them the leisure and freedom from anxiety about worldly matters which would allow these consecrated men to throw themselves whole-heartedly into spiritual work. A family suffers terrible loss when the house-mother is forced to drudge from morning to night and has no time, strength, or heart, to be a bright, well-read, thoughtful companion to the family. So also a congregation suffers infinite loss when its minister is not set free to attend to his reading and studying, to his praying and ministering.

The church is a body, and each member has his own share in the well-being of the whole. We know what loss the whole body suffers when the eyes are overworked and overstrained. The eyes may do very little hard work—in the opinion of the sturdy feet or toil-worn hands—and yet these eyes, with their apparently light duty, are precious treasures, very necessary to the welfare of the whole body.

Some farmers have an idea that a minister is not a "laborer worthy of his hire," because he does not know how to plow, because his hands are not toil-worn, and he does not usually get up at five o'clock in the morning. Sad indeed would the condition of a congregation be if the minister spent his days working in the fields, to the neglect of his proper



"What We Have, We Hold."

work. The people would suffer from famine of the worst kind.—Amos viii: 11.

I once read a story about the building of a big grain-elevator in a great hurry. The "boss" thought he was "just the man for the place," because he climbed on beams, driving nails with the workmen, working as hard with his hands as any of them. But the company had a different opinion, and sent down another man to take charge, who sarcastically informed the cheery "boss" that he had better go to the foreman for his dollar or two a day, "like the other hands." He was given a larger income in order that he might be free to work his brains and keep the oversight of the whole job. The new leader had not toil-worn hands, but he understood the duty assigned to him, and did it. The job was finished on time, just because he did not do other men's work to the neglect of his own.

It is the very poorest economy to starve one's minister, and a very good way to starve one's own soul. How can he minister to you of spiritual things, when he is full of anxiety about earthly things?

DORA FARNCOMB.

Happiness is not the end of life; character is.

—Henry Ward Beecher.

## The Beaver Circle.

[All children in second part and second books, will write for the Junior Beavers' Department. Those in third and fourth books, also those who have left school, or are in High School, between the ages of 11 and 15, inclusive, will write for Senior Beavers'. Kindly state class at school, or age, if you have left school, in each letter sent to the Beaver Circle.]

The announcement of the awards in the recent competition, "Do Dogs Think?" has been unavoidably delayed a little, but following is a list of prizewinners. We might say that several very good letters were not considered at all in the judging, because their writers forgot to give age, or standing in school. Some of these letters may appear later, though not eligible for the competition. Be more careful next time, Beavers, and remember particularly to state what class or book you are in at school.

Junior Beavers.—1st prize, Norma Gosnell; 2nd, Dorothy Newton; 3rd, Beatrice C. Annett. (Where are the Junior Beaver boys?)

Senior Beavers.—1st, John White; 2nd, Allan Walden; 3rd, Luella Killough; 4th, Meryl Cornish.

The number of competitors among the Senior Beavers was much larger than among the Junior Beavers, so we have given them an additional prize. The following members also wrote very good essays, and possibly some of these may

appear in the Circle later, if space will permit. Salem Thomson, Bella Rafferty, Anna Gertrude Brownlee, Bruce Learn.

Plaisance, Que.

### ESSAY III.

Dear Puck,—I have read the letters that other little girls and boys have written, and I thought I would write one, too. I am nine years old, and in the second class. I am going to tell you about our collie, and why I think he thinks.

He likes to go with me to pick berries; when we begin to get ready, he begins to bark and wag his tail, and starts ahead of us. He knows when we get ready to go to the other place to pick apples. We let him go, and he gets in the buggy and rides over there. He seems to know when we are going there, because he jumps in the buggy, and when we are going any other place he never wants to go. We feed Collie a lot of milk, and some bread and scraps of meat. I think a dog should be kept in a kennel, though ours sleeps in our old kitchen. I close with a few riddles.

1. What is the difference between a sigh, an automobile and a donkey?  
Ans.—A sigh is oh, dear! an automobile is too dear, and a donkey is you, dear.

2. What goes around the house and leaves a white glove in the window? Ans.—The snow.

3. What goes around the house with a string after it? Ans.—A hen and chickens.

I will close now, wishing the Circle every success.

BEATRICE A. ANNETT (age 9).  
Cairo P. O.

## Senior Beavers.

FIRST-PRIZE ESSAY.

The story of my dog Laddie, and his thinking powers.

One fine day in the fall of the year, when I was a little boy five years old, papa asked mamma if she and Aunt Ellen would like to go down to grandpa's for a drive, so mamma said "yes," and papa got out the horses, Minnie and Ned, and away we went in the wagon.

When we got to grandpa's, I was very much pleased when Uncle Sandy told me he had a collie puppie for me. It was black, with white around its neck and down by its front legs, and had brown spots above its eyes. My little doggie and I soon got to be great friends, and when the next summer came he was with me wherever I went. He would play tricks and would roll over, and speak for a piece. We were a while in finding a name for him, at last mother read out of the Northern Messenger of a good dog in Scotland who was named Laddie, so we called him that. When he and I were big enough to go for the cows, we went every morning and evening. We had no bother training him; the first time we went for the cows together, he went across an old swamp up over a rocky hill, and down by a shady path till he reached a place called Burns' pasture, and he and I got the cows home all right. Mamma said "she feared nothing for me," for he was a strong, stout fellow.

One time we were all milking, and my little sister was sleeping, and she wakened up. The dog heard her crying and ran up to the house and barked a while, then he ran to the byre and wagged his tail and barked. I went out and listened, and heard her crying and told mother, and she went up to where the baby was. The dog followed her up, and when he saw that the baby was all right, he went and lay down. Now, that shows that some dogs think for he must

### Do Dogs Think?

JUNIOR BEAVERS.

1st Prize.

Dear Puck,—I saw your prize competition offer, and would like to compete. My uncle had a dog a few years ago that he called Lad; he was a nice collie, and he used to do things that just seemed as if he reasoned like a person. He would stay at a gap, if he was told, all day, and keep the cattle from going through. One time my uncle was attacked by an angry bull, and old Lad probably saved his life by driving it away. My uncle lives by the railroad track, and Lad used to run after the cars. One day the mail train hit him and broke his leg, and the poor old fellow had to go on three legs. When he heard that same train whistle, he would strike after it and bark and growl. I think a dog should be treated kindly, and not abused like lots of dogs are, and I think dogs should be fed bread and milk, and meat. I think dogs think a good deal. Wishing the Beavers every success.

NORMA GOSNELL (age 10).  
Highgate, Ont.

### ESSAY II.

I am going to write a true story about

owned, to show  
One Sunday my  
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er.  
NEWTON (age 8).

III.  
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NETT (age 9).

avers. FROM  
ESSAY.

Laddie, and his  
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have thought before he acted so wisely. When my sister grew older, we had a cross heifer, and she would bunt my sister if she went out. One time my sister went out and the heifer was standing at the corner and made a race at her, but before she reached her the dog jumped up, grabbed her by the nose, and kept her back until I came to her help. That was another instance that showed he saw the danger, and went to the rescue. When the snow came last winter, and it was slippery, you all remember, I'm sure, he would catch us by the mitten when going up steep hills, and try his best to help us. We made him a house in the wood-shed, out of a barrel, and filled it with straw, and put some flour sacks over the head of it for a door, and he and a big cat we had slept together, and were fast friends. One day last winter my papa and Ernie, our hired man, went for a stack of hay on a farm about a mile from us, and Laddie followed and got a bait of poison a neighbor boy of ours had put out for foxes, and when he came to the stack where they were working, papa saw he was sick, and rolled him up in the horse blankets and made for home, but poor, faithful Laddie died on the way, and papa left him buried in the snow. He knew it would make the grief more if we saw him. We were all so sorry. Laddie got the same to eat as we did, and was big and fat. Some say we should feed a dog twice a day, but we fed him just after each meal. A friend of mine brought another dog and gave it to me; he looks just like my other dog. He is very good, and we call him Laddie also, but Laddie No. 1 still reigns supreme in our hearts.

JOHN WHITE (age 11).  
Clarendon Station, Ont.

ESSAY II.

I think that dogs have thinking powers. I will tell a little story that will show you dogs think. I have a little dog named Teddy. When he wants a drink, he comes to me and gives a little bark and runs half-way up stairs. He wants me to go up to the bathroom and give him a drink out of a tumbler. When a meal is over, he waits until he sees me folding up my napkin, and then he makes a fuss. If he does not want his dinner, I take it to the office for my cat, his name being Happy. If Teddy sees Happy eating it, he chases him away and eats it himself, for he knows he will not get anything until the next meal. Teddy is very fond of driving. He goes out with my uncle, with whom I live. Some days, after dinner, my uncle is in a hurry to get away; when that occurs Teddy knows it, and will not eat his dinner for fear he will miss a drive. One day in September, Happy fell into a well when he was looking for mice. It happened that there was no water in the well. Teddy was around at the time, and he saw that Happy could not get up, so he came running to me, then ran back and forth, barking until I thought something was wrong and followed him. He led me to the well, where I found Happy.

My theory is to let dogs have lots of fun, as their life is not long at the best, so let them have a good time while they are living. Teddy is a Yorkshire terrier. In order to have his long hair look nice, he should be kept in the house, brushed regularly, and taken out on a chain for exercise. Teddy likes to go out on his own hook. He likes to go out driving and roaming around in the barnyards. Of course, he cannot escape getting some burrs, but a little patience will take them out without much hair coming out. If I were that mean with Teddy, he would wish he was never born. Some people think that dogs should not be given much meat, but my uncle says so long as they get plenty of exercise, meat will do no harm. Teddy gets lots of exercise; he likes meat better than anything else, so I allow him nearly all he wants. He likes candy, peanuts, popcorn, and when I am flush with money I buy some for him. He will beg for anything like that, when he sees me eating it. He sits up and begs, and he walks on his front legs, with his hind legs up in the air; I never saw a dog do that before. I never built a dog house,

because Teddy sleeps in the house on a chair. I am in the third book at school and 11 years old.

ALLAN WALDEN.  
Guelph, Ont.



One of Our Tiniest Beavers.  
Conan Blake and his chickens.

ESSAY III.

One bright summer day, a pretty little black dog, a rat-terrier, was brought into our family. We called her Topsy. Her color was black and tan; she had little, mild brown eyes and short fur, and she was a great pet with everybody. Her great delight was to curl up in a little heap in one's lap and go to sleep. Every night when my uncle went out with the lantern to feed the cattle, she would get up from her warm place behind the stove and follow him out, and sometimes she would be rewarded with a fat rat or mouse from the meal barrel, for her supper.

I think all dogs have thinking powers, and here is a proof. For instance, if the house got on fire, and he noticed it, what would he do but run up stairs and bark or scratch at the door, telling plainly that something was wrong.

Then you get up and say, "Bad dog, what did you wake me for?" and for answer he gives a short bark and races down-stairs, expecting you to follow, and looking up to see if you are coming. Now your curiosity is awakened, and you rush down stairs, only to find the red, flaring flames, and tongues of fire creeping along the walls.

But the flames are quickly extinguished, and the dog receives kisses, and hugs for his "presence of mind."

Of course, all dogs are not like this, and are meant for different purposes altogether.

Here are some out-door dogs: Hound, Sheepdog, St. Bernard, Newfoundland, Great Dane, Mastiff, Greyhound, Bloodhound, Deerhound, Bulldog, Russian Wolfhound, Dhole, Dachshund, Collie, Watchdog, Pariah, Dingo, Wild-dog, Poodle, Pug, Scotch, Fox, Rat, Irish and Yorkshire terriers, Water, Field, Clumber Spaniels, etc.

The best ration for young dogs is chiefly milk, but for a dog that is about a year old, meat, or scraps from the table, are desirable.

Raw meat is not so digestible as cooked meat, and great care must be taken to remove all germs, etc. Dogs are very fond of liver, an ox head, or even the meat from a sheep's head. Sweets, such as cake, or candy, are not desirable, as it is sometimes injurious to a dog's digestion.

Animal doctors say that two meals a day are sufficient for any dog, and that the breakfast should be simple, while the supper should be substantial.

Now, we have the dog and his feed, but not his lodging-place.

Although I have never had anything to do about kennelmaking, I have an idea how I should go to work to make one. I should get a large box, and by some means or other, raise it from the ground. Then I would make a sloping roof and nail it on securely, so that wind and storm could not blow it off.

The kennel should be placed in a sunny, sloping position, with the outlook to



The hard work of bread-making should be done in the flour mill—not in the kitchen.

When it is necessary for you to make bread by main strength, the miller hasn't done his part. His flour is not fine enough.

Royal Household Flour

is made from hard Spring wheat—which is capable of finer grinding than any other wheat—and milled by a process that insures the finest, and most nutritious of flours. Get enough to try from your grocer.

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**HOME TREATMENT**

Read what Mr. J. B. Wiggins, a prominent farmer of Claude, Peel Co., says: "I wrote you about a trouble I had with my nose about three months ago. Although I don't know the taste of liquor, I had what any person not knowing me would call a 'whiskey nose.' I used your treatment according to instruction for about six weeks, when it got quite well, and there has not been a spot on it since. Before using your treatment I consulted three doctors. All said there could be nothing done for me. It troubled me for about ten years, and during the last two years it was quite sore all the time. I was even told that cancer was starting on it. Your treatment has done so much for me that I would consider the money well spent if it had cost me ten times what it did. You may use this unsolicited testimonial any way you wish."

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**SUPERFLUOUS HAIR, MOLES, WARTS, ETC.,** permanently removed by our reliable method of Electrolysis, which is antiseptic and practically painless. Smallpox pittings and similar scars entirely removed.

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Don't think that because last year's dress has become faded and lost its freshness that you will have to have another now.

Don't think that because the shade is not in fashion that you'll have to put it away.

That pretty dress, the one you liked so well, so becoming to you, too, can be worn again and again.

Diamond Dyes have solved this problem for thousands of women. It will do the same for you.

A ten-cent package of just the right shade will dye your old clothes so they'll look just like new.

And not only look new, but the chemical action of the dyes will add life to the material, and give it longer wear.

You may have tried dyeing some old material before and were not satisfied. But it wasn't Diamond Dyes you used. Diamond Dyes are far superior to any in the world, and give perfectly splendid results.

After trying it once, you'll use it with pleasure on many things you have in the home that seem too good to throw away.

Be sure to ask for Diamond Dyes—"The Standard of the World."

### THE TRUTH ABOUT THE USE OF DYES.

Diamond Dyes are the Standard of the world, and always give perfect results. You must be sure that you get the *real* Diamond Dyes and the *kind* of Diamond Dyes adapted to the article you intend to dye.

**Beware of imitations of Diamond Dyes. Imitators who make only one kind of dye, claim that their imitations will color Wool, Silk or Cotton ("all fabrics") equally well. This claim is false, because no dye that will give the finest results on Wool, Silk, or other animal fibres, can be used successfully for dyeing Cotton, Linen, or other vegetable fibres. For this reason we make two kinds of Diamond Dyes, namely: Diamond Dyes for Wool, and Diamond Dyes for Cotton.**

Diamond Dyes for Wool should not be used for coloring Cotton, Linen, or Mixed Goods, as they are especially adapted for Wool, Silk, or other animal fibres, which take up the dye quickly.

Diamond Dyes for Cotton are especially adapted for Cotton, Linen, or other vegetable fibres, which take up the dye slowly.

"Mixed Goods," also known as "Union Goods," are made chiefly of either Cotton, Linen, or other vegetable fibres. For this reason our Diamond Dyes for Cotton are the best dyes made for these goods.

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wards the south, so that sunlight can reach it at all times of the day.

A small window should be cut at one side of the kennel so that the dog should be able to see to eat its food. Then I would have a goodly-sized door at the opposite side to that of the window. This door should be rounded at the top to afford it a kennel-like look. Then I would strew clean straw about the floor for doggie's comfort, and, I think, by this time, he ought to be quite comfortable. When boxes are used for beds, they should be very often cleaned out.

LUELLA KILLOUGH (age 11),  
Auburn, Ont.

### ESSAY IV.

Dear Puck,—This is the second time I have written to this Circle, but before it was "The Children's Corner." I am thirteen years old, and am in the Senior Fourth Book. Now, I am going to try and write on the competition, "Do you believe that dogs can think." I believe they do. We have a Scotch collie dog named Carlo that we raised ourselves. He is about three years old, and is dark yellow, with white legs, and a white ring around his neck. He brings up the cows every morning in the summer, and if a strange cow, horse or pig comes in the lane, he thinks then. He thinks it's going out, and it goes out, quicker than it came in. Last summer my little brother Kenneth was going to gather bones to sell to the ragman. We were standing on the veranda talking about it, and did not take any notice of Carlo sitting there, but pretty soon he came up with a bone in his mouth and laid it beside the barrel that Kenneth was putting them in. He carried nearly half of the bones.

I think dogs should be fed on bread, milk, meat, and other things that people have. They get hungry as well as people.

MERYL CORNISH,  
Crampton, Ont.

### The Ingle Nook.

"Born an' scrubbed, suffered and died,  
That's all you need to say, elder;  
Never mind sayin' 'made a bride,'  
Nor when her hair got gray.  
Jes' say, born an' worked t' death:  
That fits it—save y'r breath.  
Made me think of a clock run down,  
Sure's y'r born, that woman did;  
A workin' away fr' ol' Ben Brown,  
Patient as Job an' meek as a kid,  
Till she sort o' stopped one day—  
Heart quit tickin', a feller'd say.  
Wasn't old, nuther, forty-six—No,  
Jes' got humped, an' thin an' gray,  
Washin' an' churnin' an' sweepin', by Joe,  
Fr' fourteen hours or more a day.

Worked to death. Starved to death.  
Died fr' lack of air an' sun—  
Dyin' fr' rest, an' fr' jist a breath  
O' simple praise fr' what she'd done.  
An' many's the woman this very day,  
Elder, dyin' slow in that selfsame way."

Periodically, we come around to the over-worked woman, just as the men who write in the "other part" of the paper come round to the various operations of agriculture in season. We must come round to her, as long as she exists. The hard-working woman is not always the over-worked woman. Many a woman, strong and hale, positively enjoys good hard work, and plenty of it. If she does, leave her alone. Don't try to make her think she is abused. Probably she has self-understanding enough to know just where she stands, and self-reliance enough to do just as she pleases about the matter.

There is, however, the other species of woman, the one who is working beyond her strength, and who, if she does not call a halt, will be obliged to pay up for it some day with a big doctor's bill, or worse. We all know her, and we all know that the little description of her given at the top of this column, is not much too far-fetched.

In reading the report of a Missouri Housekeepers' Conference, a club very similar, I gather, to our own W. L., I find some very interesting statistics given in regard to her, by Miss Martha Van Rensselaer, of Cornell University, whom most of the visitors to the Guelph Con-

vention of 1908 will remember—the dignified, graceful, self-contained woman, with a real message to real women, who held her audience almost motionless through two quite lengthy addresses. "A few years ago, in New York City," she says, "a woman was employed by the 'New York World' to wear a pedometer, and it was found that in one day, in doing her housework in a flat (which is more conveniently arranged than some of our farm homes), she travelled 7½ miles."

Think of it—7½ miles in doing the work in a flat, without a single trip to the pump, or garden, or to feed chickens! The reckoning makes us pause to wonder how many miles a farm woman often goes in a day. A step further, is to plan, however vaguely, how such an amazing amount of travel, with the accompanying arm and back movement inevitable in housekeeping, can be reduced so as to leave a desirable amount of exercise with no chance of overdoing.

In the majority of instances, I suppose, we pile up work for ourselves. We heap unnecessary things into our houses, and add unnecessary frills, and then take it "out of our bones." Of course, a little latitude must be allowed for satisfying our sense of the beautiful, also for the joy of possession ("the mania for owning things," Walt Whitman calls it), which every woman knows, but sometimes I think we could eliminate more than we do.

One way by which we can lessen our work a great deal is by having things as handy as possible; the fewest possible steps to the pump; a reel or pulley clothes line, instead of a long one, straggling half-way down the yard; the dining table as close as possible to cupboard and kitchen; a kitchen table adjusted to the height of the worker; zinc or oilcloth covers wherever possible; casters on all furniture that must be moved; these, and other things, ad infinitum.

Did you ever see a picture of a Dutch kitchen, with its wall near the work-table fairly covered with utensils of all kinds hung in order? Some people think this means clutter, but I confess the idea appeals to me. I like to see where things are when I am working. If there is one thing more than another which puts me out of patience, it is to dive around for fifteen minutes in a Black Hole or a "Deepole" in which the steppan sits on the dipper, and the piepans form a foundation for a "Babel-onish" tower of pails and pots and frying-pans.

And then, the built-in bookcase and cupboard, keeping books and dishes and groceries away from the dust, guiltless of legs, leaving no crannies beneath in which dust may congregate and microbes disport themselves;—to own such a case or cupboard is to make sure that you arise and call the inventor thereof blessed a dozen times a day!

There are a thousand little ways, too, by which work may be made easier; put a few dark padded holders, with loops attached for hanging them up, near your cookstove, and know the joy of having always a holder to your hand, and tea-towels in comparative whiteness; have a hook for the broom—it will be always in place, and will sweep better than when warped out of shape by resting on its brush; keep a big, strong tray, or dishpan, on hand for carrying things to and fro; save somehow for the washing-machine and wringer, that mean so much to tired backs; and don't be afraid to reduce the ironing a bit by leaving tea-towels, towels, stockings, underclothes, and sheets for everyday use, unironed once in a while. It is better that they be used rough-dry, and that your back and feet have a little time to rest. Your own brain will tell you many other methods, if you have a mind to use it.

Now, may I close, by another quotation from Miss Van Rensselaer? "I would like to repeat a little story," she says, "which has been an inspiration to me in my work among farmers' wives, and which I am sure you will like to hear. A question was put to 200 school teachers: 'Who was the greatest woman in all history?' The teacher who received the prize for her answer passed over Queen Victoria, Frances Willard, Helen Gould, and said: 'The wife of the farmer of moderate means, who does her own cooking, washing, ironing, sewing, bringing up a family of boys and girls to be useful members of society, and finds

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time for intellectual improvement, is the  
greatest woman in all history." "It  
takes navigating to do all that—  
navigating, and eliminating, and work.  
But the writer should have added an-  
other clause. Only the woman who does  
it all in such a way that she is not  
broken down, is truly great. There is  
little merit in slaving one's self into in-  
capacity or one's coffin—

Wasn't old, nuther, forty-six—No,  
Jes' got humpt, an' thin an' gray.  
Washin' an' churnin' an' sweepin', by Joe,  
F'r fourteen hours or more a day.

"Work must be done?"—Let it, then,  
be done judiciously, else better that it be  
sometimes left undone. "Head" can save  
arms and "heels." Give it a chance.  
D. D.

A New Year's Greeting from Help-  
onabit.

Dear Ingle Nookers.—The spirit moves  
me this evening to write and wish you  
one and all "A Happy New Year." Christmas  
for 1909 has passed and gone. My daughter  
said to me about a week before Christmas,  
"I think every year I'll begin early to make  
my presents, but somehow I can't get the  
Christmas spirit in July." No matter how  
you plan, or what you do, there are so many  
unexpected things come upon you near the  
last that cause an exciting bustle, and it  
is wonderful what one can accomplish  
when one has a will to do it. First,  
parcels to far-away friends were sent off.  
Then those that are nearer. This is an  
easy matter, but to get on and make  
things for those at home is the task.

I sent my daughter in B. C. an auto-  
mobile veil, my home girl helping me  
choose it. It was a pretty, light gray,  
and I thought "that will do for you,  
too." When she turned away to look at  
some choice laces, I said to the clerk—  
low and impressive—"Put two veils in,"  
and turned away. When the parcel came  
the next day, she was out, and I quickly  
untied it, and, out of the pretty box with  
"Season's Greetings," I took one of the  
veils, and tied the parcel up again. I  
had just sat down to my sewing when  
she came in. Gaily she called out, "The  
parcel has come!" and brought it into the  
sitting-room and opened it. (She always  
likes to open parcels.) She started and  
arranged the things, and separated those  
we had bought for a friend. Then she  
said, "Why, here are two bills for a veil,"  
and, opening the box, she shook the veil  
out, "but there is only one veil; there is  
some mistake; where is the transfer  
card?" and going to my handbag, out  
she brought the card. "Yes, there are  
two veils charged. That's too much to  
lose at this time of the year; it will buy  
something else. We must save the bill  
and inquire about it," and so she chat-  
tered and fussed, till at last she faced  
me and said: "Mother, did you buy two  
veils?" I laughed, and said "yes." So  
that little gift was found out before the  
time. I heard her say one day when a  
friend was showing her an elderdown  
wrapper she had bought for her mother,  
how she would like one to put on when  
she took a nap. I thought I would get  
her one, as she had found out about the  
veil. I got the goods to make one, and,  
fortunately, it was done up in a separate  
parcel, and I got it to my room without  
her seeing it when the parcels came home.  
I make the beds and do the upstairs work,  
so I managed to cut the wrapper out on  
my bed, and got it tacked together ready  
for stitching. There was only one even-  
ing before Christmas that I could do it  
when she would be out. She is Presi-  
dent of the Literary Society of the Ep-  
worth League, and this was the evening  
she had to take the meeting and prepare  
the programme. She had so much to do  
that she felt she could not give the time  
for it, but she did, and I was told it  
was the most interesting and best-attended  
meeting there had been for some time.  
The subject was "Christmas in our own  
and other lands," and she finished by  
reading "Hope's Quiet Hour" in "The  
Christmas Advocate." That evening  
there was a Trustee and Quarterly Board  
meeting at our home, and it was not  
until all the brethren had arrived and  
settled to business that I was free to go  
to my stitching. All went well for a  
time, and my hopes were high to get it  
done before the young folks came home,  
when the "Prompter" came and said to

me, "You must get refreshments and  
make coffee for those men." "I can't,"  
I said, "I must finish this." Presently,  
Prompter said, "It is a cold night, you  
must make coffee." "No," I said. "It  
will be very un hospitable," said Promp-  
ter. "Well," I said, "if they were hold-  
ing their meeting in the church they  
would not get coffee." A little while,  
and Prompter said again, "You must  
make coffee." And then I said, "I will  
if I finish this," and then—Oh, Ingle  
Nookers, have ever you wanted to finish  
a piece of work in a certain time, and,  
without any apparent cause, something  
goes wrong with the machine? This is  
the way it served me. The thread broke  
six or eight times, and it took me so  
long to thread the needle; at last, going  
over a seam, snap went the needle.  
"This ends it," I said, "I shall have to  
give it to her unfinished." I closed the  
machine, parcelled up the wrapper and  
put it away, and went and made the  
coffee. I just had everything ready when  
they came home; they were cold driving,  
and were glad to have a cup of hot coffee,  
and then we served the dear brethren.  
When one was saying good-night, he gave  
my hand a squeeze, stooped down and  
whispered, "That was delicious coffee,"  
and I felt at peace.

We were disappointed in our Christmas  
party this year, through sickness and  
other causes. We had no children, so we  
did not have a tree for the grownups,  
but gave out our presents after dinner. I  
had so many little things to look at that  
I did not notice a big, soft-looking parcel  
until my daughter said, "Mother, do open  
that parcel!" I did, and there was mat-  
terial exactly like her wrapper to make  
me one. She opened her big parcel,  
shook out the wrapper, put it on, and  
danced around the room. She had got  
stuffed to make me a wrapper just like  
I had got for her. It was very funny,  
and the fun was that all in the house knew  
about it but ourselves. Not having a  
large party, we sat around the parlor  
fire looking at the Christmas illustrateds,  
and took turns in reading a Christmas  
story, but while I was enjoying the  
warmth and company of dear friends, my  
thoughts would wander, and a prayer  
went up for the homeless, the sick and  
sad ones.

I think our "Christmas Advocate" was  
very good, and I turned the pages over  
to see what the Ingle Nook had for us,  
but not even a message from our Dame.  
How many times she says "many inter-  
esting letters are left over," and yet how  
often there is no Ingle Nook. The  
Beaver Circle always has something in-  
teresting. They are passing us. I think  
there are enough members in our Nook to  
write a letter so that we could have one  
every week, besides the household recipes.  
It might be on a trip, a visit, or on  
some interesting subject of one's experi-  
ence.

Dear Dame, could not you arrange for  
this, and let the members know when it  
is their turn to contribute? It will not  
do for us to live in the past, and think  
what we have done, and that it is some-  
one else's turn now, but let us think  
what there is to do, and how we can do  
more and be more helpful and useful this  
year than we ever were before. Let us  
forget those things that are past and  
gone, that were disagreeable and wrong,  
that we have done or that have been  
done to us, all the unkindnesses, jeal-  
ousies, envyings, and all uncharitableness,  
neglect, and many other things we could  
rake up, that we have been guilty of.  
God has promised to pardon and remem-  
ber our sins no more, and as far as the  
East is from the West, He will remove  
our transgressions from us. Then why  
should we be thinking and pondering over  
them. I heard a minister say, it is like  
a housekeeper who, after she has cleaned  
house, gathers all the rubbish and dirt  
and puts it in the parlor, and then sits  
and stirs it about and looks at it, in-  
stead of burning it up. Let us forget  
the disagreeable things of the past, and  
cultivate what is good, true and pure, let  
us try to be more patient, gentle,  
thoughtful and loving than ever before,  
and trusting in God's promises without  
a doubt or fear. Let us step out with  
gladness into the Fair New Year.  
HELPOHABIT.

Dear Helponabit, you surely practice  
what you preach, and your New Year's  
letter should be an inspiration to us all.  
Your suggestion will be taken into con-

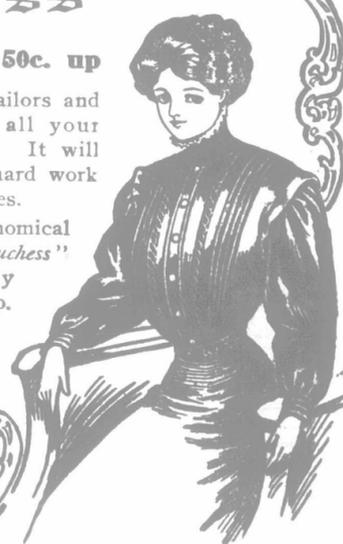
**Duchess**

**Sateen Waists, 50c. up**

Let the "Duchess" Tailors and Seamstresses make all your Waists, White Wear etc. It will save you many hours of hard work and save you money besides.

Just to show you now economical it will be, we mention "Duchess" Black Sateen Waists, in many pleasing styles, from 50c. up.

Let us know if your dealer does not handle the complete "Duchess" line. Every garment guaranteed both by makers and dealers.



DUNLAP MANUFACTURING CO.  
MONTREAL.



**BLACK KNIGHT**  
**STOVE POLISH**

Look how much "Black Knight" Stove Polish you get for 10c.

None of your stingy little tins of fine powder (that must be mixed with water) or a hard cake (that must be scraped)—but a big generous tin of coal black paste, that is easily applied, and bursts into a brilliant, lasting shine after a few rubs.

You certainly do get 10c. worth of the best stove polish, in the big 10c. cans of "Black Knight."

Send us 10c. for a large can postpaid if your dealer does not handle "Black Knight."

**THE F. F. DALLEY CO. LIMITED, Hamilton, Ont.**  
Makers of the famous "2 in 1" Shoe Polish.



**This Fence Stands Every Test**

Hard drawn steel running wires and "The Tie That Binds", give a strength that resists every strain.

Heavy galvanizing protects against rust. Patent Posts are made of No. 12 gauge steel, bent at right angle, to give the maximum strength at reasonable cost. No staples required to put fence on posts—we've attended to that.

**STANDARD WOVEN WIRE FENCE**

is fully explained in detail in our book. Write for free copy and sample lock.

13 **The Standard Wire Fence Co. of Woodstock Limited, Woodstock, Ont. & Brandon, Man.**

**STRENGTH AND ECONOMY**

You can depend absolutely on **PEERLESS** Fencing to hold live stock under any and all conditions. It is made of all No. 9 steel wire heavily galvanized and has lots of spring in it, making ample provision for contraction and expansion due to changes in the temperature, sudden shocks, etc.

**PEERLESS**

**The Fence That Saves Expense**

is held together by the Peerless lock which holds the wires securely and makes Peerless Fence absolutely stock proof. The lock cannot be slipped or knocked loose. Write for our new book—it will interest you. It's free.

**THE BANWELL HOKIE WIRE FENCE CO. Ltd., Dept. B**  
Hamilton, Ont. Winnipeg, Man.

**Please Mention The Farmer's Advocate**

**A Churn For Women**



This is our "LEADER" CHURN—made of the best White Oak—which won't chip or peel like glass or crockery—absolutely sanitary—and may be operated by foot or hand. If your dealer does not handle Leader Churns, write us direct. 53  
**CUMBERBOWSWELL LIMITED, - Hamilton, Ont.**

**POULTRY AND EGGS**

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

**BARRED ROCK** and R. C. R. I. red cockerels. Fred. Baldwin, Colchester, Ont.

**BUFF ORPINGTONS**—100 pure-bred, stout, vigorous cockerels, \$2; yearling hens, pullets \$1.50 each. Order early. Get choice. Satisfaction guaranteed. Hugh A. Scott, Caledonia, Ont.

**BARRED ROCKS**—First winners at Canadian National and Western Fair. High-grade stock at low prices. Write me Leslie Kerns, Freeman, Ont.

**BUFF ORPINGTONS** for sale. Utility cockerels and pullets from silver trophy winners, cheap; also a few Black Orpington pullets, winners Toronto and London. Eggs in season. William Lawrence, 191 Grey St., London.

**CHOICE** White Wyandotte cockerels bred from a 224-egg strain. R. Hindley, Everton, Ont.

**FOR SALE**—M. B. turkeys. Fine heavy birds, bred from first-prize winning stock. R. G. Rose, Glenthworth, Ont.

**FOR SALE**—Barred Rock and Silver-gray Dorking cockerels. One yearling Dorking cock. Garland Bros., Pinkerton, Ont.

**I HAVE** a good pair of Buff Cochins at your own price. S. C. White Leghorn eggs, from prize winners, at \$1.00 per 15. Also wanted—all kinds of raw furs. Write for price list. Robert Houser, Canboro, Ont.

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

**AGENTS** make big money selling "Vol-Peek" Granite Cement. Mends holes in granite-ware, iron, agate, tinware, etc. Mends a hole in one minute. Every housewife buys. Greatest seller on the market. Agents make over 100% profits. J. Nagle, Westmount, Que.

**FOR SALE**—100,000 feet iron pipe—good as new—for water, steam, fencing and fence posts, drains, etc. Any size. Write for prices, stating sizes. Imperial Waste & Metal Co., 13 Queen St., Montreal.

**WANTED**—Mother's help, to assist with light housework in small family; one accustomed to country preferred. Good salary to suitable person. Apply: Box P, Farmer's Advocate, London, Ont.

**Delhi Tannery** Custom robe and fur tannery. If you have a cow hide or horse hide you want tanned or made into a robe or a fur coat, or have any kind of hides, skins or furs you want tanned, send them to me and have them dressed right. B. F. REIL, DELHI, ONT.

**For Sale: 100,000 Apple Trees**  
**75,000 Pears, Plums, Cherries** Complete assortment of other stock. Guaranteed first grade and TRUE TO NAME. Agents wanted immediately where we are not now represented.  
**THOS. W. BOWMAN & SON CO., LIMITED**  
 Ridgville, Ontario

**HOLSTEINS BY AUCTION**  
 Messrs. Mason Bros. will sell by public auction, at their residence, 2 1/2 miles east of Tyrrell, Ont., on **WEDNESDAY, JANUARY 26th, 1910**, their herd of 17 grade Holstein cows and 10 spring calves. Trains met at Villa Nova and Jarvis. Terms cash.  
**MASON BROS., TYRRELL, ONT.**

No nation can be destroyed while it possesses a good home life.  
 —J. G. Holland.

sideration, and if at all practicable, something may be done in that direction. What fun you must have had over your Christmas parcels. We know the delightful difficulty there is in trying to make and arrange for gifts for members of the family when one works in constant danger of being disturbed and found out by just the one who oughtn't to know.

Dear Dame Durden and All,—As the bright New Year is just in, I will wish you all a "Glad and Prosperous New Year," and I am glad to say we have renewed our subscription for another year, which means much to me, and long may it come to our home. How I enjoy the nice chats and Quiet Hour, when able to read them, so I thought I would just call in right now. No; I can't stay, dears, this time; just came to thank one and all who have in any way been kind to me. How much cheer many of you gave me. Those kind letters helped me so, and I appreciated all kindness in any way and the lovely post cards. But it is impossible for me to write or even send a card to all. How much I would like to, but really I am not always able to hold a pen, and of late it seems I cannot, so kindly, one and all, accept my thanks to each one, and I still like to hear from you. You never thought, I'm sure, "The Farmer's Advocate" went to Nova Scotia. I did not, till a loving letter came to me from there and gave me pleasure, as many others have done. It was glorious to see sleighing for Christmas, and hear the merry bells, and so I was not all alone Xmas or New Year's, for so many bright faces came smiling in both days and kept me from being lonely. How kind all are, to be sure. Though I could not eat like others, yet I had so much cheer and remembrance from far and near. I hope one and all were able to enjoy a happy Xmas season, especially the dear Dame, who deserves a large share of pleasure; what a help she is to us. I hope the Ingle Nook will not miss being in any time this year. How often I wish I could read the Quiet Hour again, but I am not able for a long time now. Dear Hope, I thank you for your loving Xmas gift; it is so kind of you; I am sending you another hymn, and may it help someone, if Dame will be so kind to have it printed below this letter. Thank you, dear, for printing any I sent before—I am so glad to hear they helped someone. I have a lot more; I write them as my testimony for Jesus, as I cannot go to church as others do. Now, I will have to close, and may this be to you all a blessed year, full of happiness and prosperity, and better health to any who are not well, and abundance of cheer.  
 Your very grateful shut-in friend,  
 A LANKSHIRE LASS.

Composed by "A Lankshire Lass." Sing to tune of "There is No Place Like Home."

When all go and leave me  
 To stay here alone,  
 I've Jesus right with me  
 To cheer me at home.  
 I have long trusted Jesus  
 And told Him my care,  
 When He is here with me  
 I've nothing to fear.

**CHORUS.**  
 Home, home, sweet, sweet home!  
 What comfort in knowing I've Jesus at home.

In sadness or gladness,  
 In health or in pain,  
 What a dear, loving Saviour  
 To have as a friend,  
 To me He is precious,  
 My Rock and my Stay,  
 I'm leaning on Jesus,  
 He helps me away.

I leave it to Jesus,  
 It brightens my way,  
 To know I can trust Him,  
 From day unto day,  
 'Tis sweet just to trust Him,  
 And tell Him our care,  
 To know and feel always  
 That Jesus is here.

Nothing great was ever achieved without enthusiasm.  
 —Emerson.

**The "Farmer's Advocate" Fashions.**



6423 Child's Play Dress, 2 to 8 years.  
 6500 Blouse or Shirt, Waist, 32 to 40 bust.



6479 Straight Plaited Skirt with Yoke, 22 to 30 waist.



DESIGN BY MAY MANTON.  
 6518 Misses' Shirred Dress.

Price of above patterns, 10 cents for each number. Kindly state number and age when ordering. Address: Fashion Dept., "The Farmer's Advocate," London, Ont.

The teacher had been telling the class about the rhinoceros family. "Now, name some things," said she, "that are very dangerous to go near to, and that have horns." "Automobiles!" replied little Jennie Jones, promptly.

**The Golden Dog**  
 (Le Chien D'Or.)

A Canadian Historical Romance.  
 Copyright, 1897, by L. C. Page & Co. (Inc.)  
 [Serial Rights Secured by the Wm. Weld Co., Ltd., London, Ont.]

**CHAPTER XLVIII.**  
 "In Gold Clasps Locks in the Golden Story."

Love is like a bright river when it springs from the fresh fountains of the heart. It flows on between fair and ever-widening banks, until it reaches the ocean of eternity and happiness.

The days illuminated with the brightest sunshine are those which smile over the heads of a loving pair who have found each other, and with tender confessions and mutual avowals plighted their troth and prepared their little bark for sailing together down the changeful stream of time.

So it had been through the long Indian-summer days with Pierre Philibert and Amelie de Repentigny. Since the blessed hour they plighted their troth in the evening twilight upon the shore of the little lake of Tilly, they had showed to each other, in the heart's confessional, the treasures of human affection, holy in the eyes of God and man.

When Amelie gave her love to Pierre, she gave it utterly, and without a scruple of reservation. It was so easy to love Pierre, so impossible not to love him; nay, she remembered not the time it was otherwise, or when he had not been first and last in her secret thoughts as he was now in her chaste confessions, although whispered so low that her approving angel hardly caught the sound as it passed into the ear of Pierre Philibert.

A warm, soft wind blew gently down the little valley of the Laitet, which wound and rippled over its glossy brown pebbles, murmuring a quiet song down in its hollow bed. Tufts of spiry grass clung to its steep banks, and a few wild flowers peeped out of nooks among the sere, fallen leaves that lay upon the still green-sward on each shore of the little rivulet.

Pierre and Amelie had been tempted by the beauty of the Indian summer forward to the city in charge of a servant, while they walked home by way of the fields to gather the last flowers of autumn, which Amelie said lingered longest in the deep swales of the Laitet.

A walk in the golden sunshine with Amelie alone amid the quiet fields, free to speak his love, and she to hear him and be glad, was a pleasure Pierre had dreamt of, but never enjoyed since the blessed night when they plighted their troth to each other by the lake of Tilly.

The betrothal of Pierre and Amelie had been accepted by their friends on both sides as a most fitting and desirable match, but the manners of the age with respect to the unmarried did not admit of that freedom in society which prevails at the present day.

They had seldom met save in the presence of others, and except for a few chance but blissful moments, Pierre had not been favored with the company all to himself of his betrothed.

Amelie was not unmindful of that when she gave a willing consent to-day to walk with him along the banks of the Laitet, under the shady elms, birches, and old thorns that overhung the path by the little stream.

"Pierre," said she, smiling, "our horses are gone, and I must now walk home with you, right or wrong. My old mistress in the Convent would shake her head if she heard of it, but I care not who blames me to-day, if you do not, Pierre!"

"Who can blame you, darling? What you do is ever wisest and best in my eyes, except one thing, which

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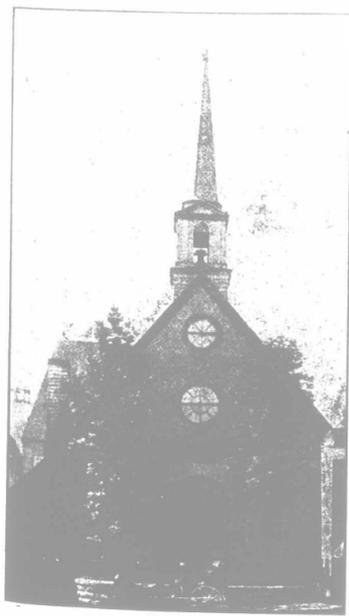
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Church, Notre Dame des Victoires, Quebec.

I will confess now that you are my own, I cannot account for—"

"I had hoped, Pierre, there was no exception to your admiration; you are taking off my angel's wings already, and leaving me a mere woman!" replied she, merrily.

"It is a woman I want you to be, darling, a woman not faultless, but human as myself, a wife to hold to me and love me despite my faults, not an angel too bright and too perfect to be my other self."

"Dear Pierre," said she, pressing his arm, "I will be that woman to you, full enough of faults to satisfy you. An angel I am not and cannot be, nor wish to be until we go together to the spirit-land. I am so glad I have a fault for which you can blame me, if it makes you love me better. Indeed, I own to many, but what is that one fault, Pierre, which you cannot account for?"

"That you should have taken a rough soldier like me, Amelie! That one so fair and perfect in all the graces of womanhood, with the world to choose from, should have permitted Pierre Philibert to win her loving heart of hearts."

Amelie looked at him with a fond expression of reproach. "Does that surprise you, Pierre? You rough soldier, you little know, and I will not tell you, the way to a woman's heart; but for one blindfolded by so much diligence to his own merits, you have found the way very easily! Was it for loving you that you blamed me? What if I should recall the fault?" added she, laughing.

Pierre raised her hand to his lips, kissing devotedly the ring he had placed upon her finger. "I have no fear of that, Amelie! The wonder to me is that you could think me worthy of the priceless trust of your happiness."

"And the wonder to me," replied she, "is that your dear heart ever burdened itself with my happiness. I am weak in myself, and only strong in my resolution to be all a loving wife should be to you, my Pierre! You wonder how you gained my love? Shall I tell you? You never gained it; it was always yours, before you formed a thought to win it! You are now my betrothed, Pierre Philibert, soon to be my husband; I would not exchange my fortune to become the proudest queen that ever sat on the throne of France."

Amelie was very happy to-day. The half-stolen delight of walking by the side of Pierre Philibert was enhanced by the hope that the fatal spell that bound Le Gardeur to the Palace had been broken, and he would yet return home, a new man.

Le Gardeur had only yesterday, in a moment of recollection of himself and of his sister, addressed a note to Amelie, asking pardon for his recent neglect of home, and promising to come and see them on St. Martin's day.

He had heard of her betrothal to Pierre. It was the gladdest news, he said, that had ever come to him in his life. He sent a brother's blessing upon them both, and claimed the privilege of giving away her hand to the noblest man in New France, Pierre Philibert.

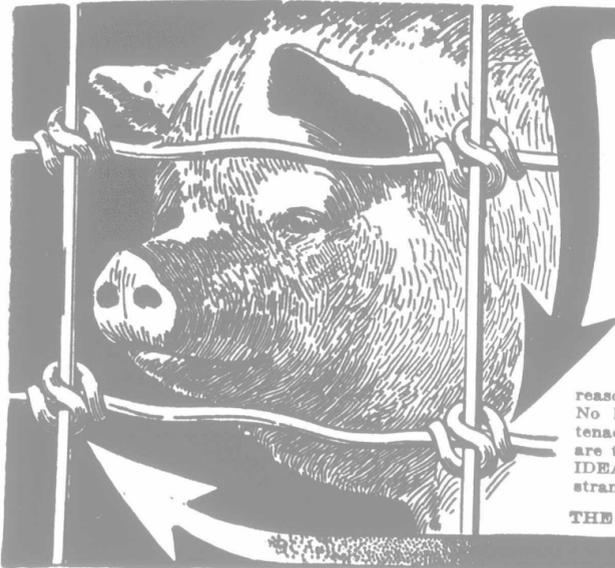
Amelie showed the precious note to Pierre. It only needed that to complete their happiness for the day. The one cloud that had overshadowed their joy in their approaching nuptials was passing away, and Amelie was prouder in the anticipation that Le Gardeur, restored to himself, sober, and in his right mind, was to be present at her wedding and give her away, than if the whole Court of France, with thousands of admiring spectators, were to pay her royal honors.

They sauntered on towards a turn of the stream where a little pool lay embayed like a smooth mirror reflecting the grassy bank. Amelie sat down under a tree while Pierre crossed over the brook to gather on the opposite side some flowers which had caught her eye.

"Tell me which, Amelie!" exclaimed he, "for they are all yours; you are Flora's heiress with right to enter into possession of her whole kingdom!"

"The water-lilies, Pierre, those, and those, and those; they are to deck the shrine of Notre Dame des Victoires. Aunt has a vow there, and to-morrow it must be paid; I too."

He looked up at her with eyes of admiration. "A vow! Let me



### PUT UP THE HEAVY, HOG-PROOF IDEAL WOVEN WIRE FENCE

You want a fence that is so heavy, stiff and strong that it will discourage any attempt at rooting. After an argument with the IDEAL your hogs will become thoroughly discouraged of trying to get under it. The IDEAL is undoubtedly the fence for you.

The IDEAL is the fence the railroads purchase because of its weight and quality. No. 9 hard steel wire throughout. Heaviest galvanizing on any fence. But the IDEAL lock is the BIG reason why you should buy the IDEAL fence. No lock equal to the IDEAL in gripping-tenacity has yet been discovered. Chances are there never will be. When stretched up, IDEAL is a very handsome fence. Every strand measures exactly true. Every lock is

correctly applied. You see, the IDEAL is manufactured by the most improved fence machinery, in a plant that is considered a model among fence factories. With such superior manufacturing facilities the natural result is a fence overshadowing others in quality—and that is IDEAL fence. For further reasons read our free booklet.

#### Agents Wanted to Sell This Superior Fence

IDEAL Agents make the best living, because IDEAL Fence has the weight, strength and quality that make it sell easiest. Let us send you our money-making proposition.

THE MCGREGOR-BANWELL FENCE CO., LIMITED, WALKERVILLE, ONT.



### THIS IS A REAR VIEW OF

## The Humane Horse Collar

SOMETHING no thoughtful farmer can afford to be without at least ONE, if he owns one pair of horses, or TWO if he owns more. Now, why? you ask. FIRST, because owing to the high price of horses, and all products raised on the farm this year, above all others. It is absolutely essential from a monetary standpoint that the horse should be kept well and busy. THE HUMANE COLLAR is the only one made to-day that is guaranteed to do this. If your horse should be idle for one day, it will more than pay for the collar, but when he gets sore shoulders it takes more than one day to cure him.

#### SOLD BY OVER 5,000 HARNESS DEALERS.

Over 60,000 sold in the U. S. last season. The Humane Horse Collar has 40 square inches of pulling surface to 10 inches on the old-style collar. The pulling is all done where the shoulder is the strongest, and where it is best protected by heavy layers of muscles. NO grinding from one shoulder to the other. NO pressure on top of the neck. NO hot sweat pads to chafe the horse. NO choking on going up hill. No sweened horses, and NO sore shoulders or necks with THE HUMANE HORSE COLLAR.

It is adjustable to any horse from 16 to 26 inches, and is put out on 15 days' free trial; if not entirely satisfactory your money cheerfully refunded.

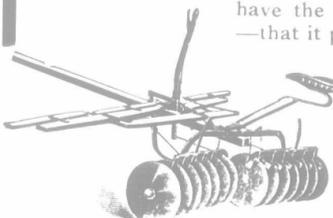
Write to-day for free catalogue describing and giving testimonials, then order one from your dealer for the spring work. If he cannot supply you, order direct from us. Address:

The Whipple Horse Collar Co., Limited, HAMILTON, CANADA.

### Hard Land Won't Stick

## The "Bissell"

Do the gangs on your harrow crowd together and rise out of the ground if it is hard? They don't do this on the "Bissell." The "Bissell" is so designed that the gangs cannot crowd or bump together no matter how hard the ground may be. Tough soil won't stick the "Bissell." It stays right down to its work and pulverizes the ground thoroughly. Wet, sticky soil doesn't clog it up either. The "Bissell" scrapers meet the plates "chisel fashion," and keep the cutting edges clean. Movable clod irons—an exclusive "Bissell" feature—keep the space between the plates clear. We ask you to take the "Bissell" out into a field and test it beside other harrows. Then you'll



have the proof that hard land won't stick it—that it pulverizes the best—that it is the lightest draft. Ask your local dealer to show you the "Bissell," or write to Dept. W for catalogue.

T. E. BISSELL Company, Limited, Elora, Ont. 8

Please Remember to Mention "The Farmer's Advocate" When Writing



**Wood shingles make a poor roofing investment**

The only way to arrive at a correct conclusion as to which roofing is the best investment is to compare their cost per year of service.

Wooden shingles, of medium grade, in most parts of Ontario, cost at least \$3.50 per square—100 square feet of surface.

**29¢c. per Square**

They may last twelve years. Chances are they will be rotted through long before then. However, let us divide \$3.50 by 12. That gives us their cost per year of service, which is 29 1-6¢ per square per year.

Ready roofing is an even poorer investment. The best does not last longer than 10 years. At \$3.50 per square, the cost per year is 35¢.

Slate is easily twice as good an investment as wooden shingles. A slate roof will last 50 years. At \$7.00 per square the cost per year figures out as 14¢.

**Better Than Slate**

PRESTON Safe-Lock Galvanized Steel Shingles are an even better investment than slate. They will at least last as long as slate.

All slate roofs, you know,

have galvanized steel valleys, hips and ridges—the most exposed portions of the roof. That proves good steel roofing is as durable as slate.

**9c.' per Square**

But PRESTON Shingles only cost \$4.50 per square. Allowing for 50 years of service their cost per year is 9c. per square, as against 14c. for slate, 29 1-6¢ for wooden shingles, 35c. for ready roofing.

PRESTON Safe-Lock Shingles should last 100 years. They are the only shingles made and galvanized so as to pass the British Government's Acid Test. Shingles that will pass this test are practically everlasting, yet PRESTON Shingles easily pass this severe test.

As PRESTON Shingles are made on improved automatic machinery and the locks are accurately formed, they fit together quickly.

**Lay Them Faster**

A man and a helper can lay 10 squares of PRESTON Safe-Lock Shingles in a day, whereas 5 or 6 squares would be a good average with wood shingles and other



**Prepared roofing, another poor investment**

metal shingles. If you have a large surface to roof that saving of time and labor means a good deal to you.

Remember, it takes half again as long to lay wooden shingles as PRESTON Shingles. Twice as long to lay slate.

Besides, wooden shingles and ready roofing cost something for repairing and re-painting every three or four years. You save all this expense with PRESTON Shingles.

**Less Insurance**

Also, the insurance rate for a barn covered with wooden shingles is far higher than for PRESTON

Shingles—often as much as 50 per cent. more.

But before making any decision as to the kind of roofing you will buy, send for our new booklet, "Truth About Roofing."

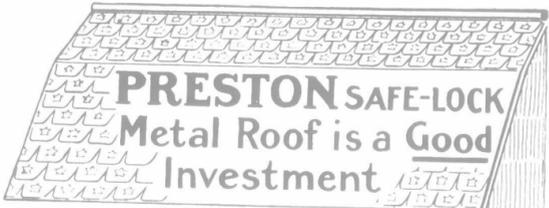
**Booklet Reward**

This booklet contains information of real value to anyone who has a building to roof. It explains PRESTON Safe-Lock construction fully and contains a copy of our Free Lightning Guarantee. We should charge something for this booklet, but we will send it FREE as a reward to all who will cut out, fill in and mail the coupon to us.

Send for it to-day, or you'll forget it.

**METAL SHINGLE AND SIDING COMPANY, Limited**

HEAD OFFICE, QUEEN ST. FACTORY, PRESTON, ONT. BRANCH OFFICE AND FACTORY, MONTREAL, QUEBEC.



**PRESTON SAFE-LOCK Metal Roof is a Good Investment**

Please send me your new booklet, "Truth About Roofing." I am interested in roofing, and would like complete information about PRESTON Safe-Lock Shingles.

Name.....  
P. O. Address.....  
County..... Prov.....

**PRESTON SAFE-LOCK SHINGLES**

share in its payment, Amelie," said he.

"You may, but you shall not ask me what it is. There now, do not wet yourself further! You have gathered more lilies than we can carry home."

"But I have my own thank-offering to make to Notre Dame des Victoires, for I think I love God even better for your sake, Amelie."

"Fie, Pierre, say not that! and yet I know what you mean. I ought to reprove you, but for your penance you shall gather more lilies, for I fear you need many prayers and offerings to expiate—" she hesitated to finish the sentence.

"My idolatry, Amelie," said he, completing her meaning.

"I doubt it is little better, Pierre, if you love me as you say. But you shall join in my offering, and that will do for both. Please pull that one bunch of lilies and no more, or Our Lady of Victory will judge you harder than I do."

Pierre stepped from stone to stone over the gentle brook, gathering the golden lilies, while Amelie clasped her hands and silently thanked God for this happy hour of her life.

She hardly dared trust herself to look at Pierre, except by furtive glances of pride and affection; but, as his form and features were reflected in a shadow of manly beauty in the still pool, she withdrew not her loving gaze from his shadow, and leaning forward towards his image,

"A thousand times she kissed him in the brook,  
Across the flowers with bashful eyelids down!"

Amelie had royally given her love to Pierre Philibert. She had given it without stint or measure, and with a depth and strength of devotion of which more facile natures know nothing.

Pierre, with his burden of golden lilies, came back over the brook and

THE ADJUSTABLE, COLLAPSIBLE

## Stable Moulds

Have solved the problem. Patented Oct. 26th, 1909, and sold by

**A. D. SCHMIDT, North Woolwich, Ont.**

Build your mangers, partitions and water system of concrete. It will last for centuries if properly built. It will cost only a trifle more than the wooden system, but here you get the water system in also. A continuous high-up water trough can always be kept in good order. Send your order in early, as only a limited number will be manufactured this season. It makes a sanitary dairy stable. For further information apply to

**A. D. SCHMIDT, North Woolwich, Ontario.**

## Cowan's Nut Milk Chocolate

**A chocolate confection of rich milk chocolate and fresh shelled walnuts. Simply exquisite. In 1/4 and 1/2 pound cakes.**

The Cowan Co. Limited, Toronto. 91

## TRENCH'S REMEDY -FOR- EPILEPSY AND FITS

**IMPORTANT NOTICE**  
A BRANCH OFFICE has been established at 107 St. James' Chambers, Toronto.

**REDUCTION IN PRICE**  
This important change permits of prices being reduced to those prevailing in Europe, namely:—Full package, \$12.00; half do., \$6.50; quarter do., \$3.75; postage or express charges extra.

THE ONLY CANADIAN AND U.S. ADDRESS  
**TRENCH'S REMEDIES, LIMITED**  
107 ST. JAMES' CHAMBERS, TORONTO

Pamphlet mailed free on application.  
Beware of spurious imitations. All packages of Trench's Remedy must bear our trademark seal in unbroken condition on each end.

ated himself beside her; his arm encircled her, and she held his hand firmly clasped in both of hers.

"Amelie," said he, "I believe now in the power of fate to remove mountains of difficulty and cast them into the sea. How often, while watching the stars wheel silently over my head as I lay pillowed on a stone, while my comrades slumbered round the camp-fires, have I repeated my prayer for Amelie de Repentigny! I had no right to indulge a hope of winning your love; I was but a rough soldier, very practical, and not at all imaginative." She would see

nothing in me," I said; and still I would not have given up my hope for a kingdom."

"It was not so hard, after all, to win what was already yours, Pierre, was it?" said she with a smile and a look of unutterable sweetness; "but it was well you asked, for without asking you would be like one possessing a treasure of gold in his field without knowing it, although it was all the while there and all his own. But not a grain of it would you have found without asking me, Pierre!"

"But having found it, I shall never lose it again, darling!" replied he, pressing her to his bosom.

"Never, Pierre, it is yours forever!" replied she, her voice trembling with emotion. "Love is, I think, the treasure in heaven which rusts not, and which no thief can steal."

"Amelie," said he, after a few minutes' silence, "some say men's lives are counted not by hours, but by succession of ideas and emotions. If it be so, I have lived a century of happiness with you this afternoon. I am old in love, Amelie!"

"Nay, I would not have you old in love, Pierre! Love is the perennial youth of the soul. Grand'mere St. Pierre, who has been fifty years an Ursuline, and has had the visions which are promised to the old in the latter days, tells me that in Heaven those who love God and one another grow ever more youthful; the older the more beautiful! Is not that better than the philosophers teach, Pierre?"

He drew her closer, and Amelie permitted him to impress a kiss on each eyelid as she closed it; suddenly she started up.

"Pierre," said she, "you said you were a soldier, and so practical. I feel shame to myself for being so imaginative and so silly. I too would be practical if I knew how. This was to be a day of business with us, was it not, Pierre?"

"And is it not a day of business, Amelie? or are we spending it like holiday children, wholly on pleasure? But after all, love is the business of life, and life is the business of eternity—we are transacting it to-day, Amelie! I never was so seriously engaged as at this moment, nor you either, darling; tell the truth!"

Amelie pressed her hands in his. "Never, Pierre, and yet I cannot see the old brown woods of Belmont rising yonder upon the slopes of St. Foys, without remembering my promise, not two hours old, to talk with you to-day about the dear old mansion."

"That is to be the nest of as happy a pair of lovers as ever went to housekeeping; and I promised to keep soberly by your side as I am doing," said he, mischievously twitching a stray lock of her dark hair, "and talk with you on the pretty banks of the Lairet about the old mansion."

"Yes, Pierre, that was your promise, if I would walk this way with you. Where shall we begin?"

"Here, Amelie," replied he, kissing her fondly; "now the congress is opened! I am your slave of the wonderful lamp, ready to set up and pull down the world at your bidding. The old mansion is your own. It shall have no rest until it becomes, within and without, a mirror of the perfect taste and fancy of its lawful mistress."

"Not yet, Pierre. I will not let you divert me from my purpose by your flatteries. The dear old home is perfect, but I must have the best suite of rooms in it for your noble father, and the next best for good Dame Rochelle. I will fit them up on a plan of my own, and none shall say me nay; that is all the change I shall make."

"Is that all? and you tried to frighten the slave of the lamp with the weight of your commands. A suite of rooms for my father, and one for good Dame Rochelle! Really, and what do you devote to me, Amelie?"

(To be continued.)

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THE SPICE OF LIFE.

"What a beautiful sight it is, Mrs. Bates, to see your two little boys always together!" the summer boarder exclaimed in an ecstasy, on the approach of Bobby and Tommy Bates, hand in hand. "Such brotherly love is as rare as it is exquisite."  
Mrs. Bates nodded in pleased assent. "I tell Ezry," she said, "that they're as inseparable as a pair of pants."

A son of Erin who had the misfortune to get mixed up in an accident, was immediately conveyed to a hospital, where it was found that his only injury was a slight wound. The house surgeon carefully examined him, after which he thus stated the case to the nurse:

"As subcutaneous abrasion is not observable, I think there is little reason to apprehend tegumental cicatrization of the wound. What do you think yourself?" he asked Pat, with a mischievous smile. "Sure, doctor," replied Pat, "you're a wonderful thought reader. You took the very words out of my mouth. I was just going to say that."

The recent publication in our columns of an anecdote about the Rt. Hon. George H. Reid, the stout Australian statesman, in which an interrupter got the better of the orator by his suggestion, that when they were all dead "the fat would be in the fire," leads a correspondent to send us a story of another interruption to one of Mr. Reid's speeches. He was in the midst of an attack upon his political opponents, and was using language which was particularly exasperating to their adherents, when a woman in the audience suddenly rose from her seat, and, pointing a lanky finger at the speaker, screamed, "Mr. Reid, if you were my husband, I would put poison in your tea!" Amid the uproar which ensued, Mr. Reid adjusted his monocle, looked the woman over from head to toe, and, regaining the attention of the audience, retorted, "Madam, if you were my wife, I would take it!"

A HOG RAFFLE.

B. F. Yeakum, at the convention of the Farmers' Union, at Shawnee, said of a swindler of farmers:

"He swindled. Then he covered up his swindle with some piece of tremendous audacity that silenced his dupe. He was like the two pig rufflers of Plymouth."

"Two Plymouth loafers, being hard up, decided on a pig raffle. So they had a big poster printed. It said:

"To be raffled, a fine Berkshire boar, recently imported with the Gould stock. Drawings, twenty-five cents each."  
(Signed) Small and Greenwood.

"The raffle went well. The two loafers made a lot of money. Then came the day when the result was to be announced."

"The loafers read over their list of victims, and selected the man they thought most gullible and meek. To him they wrote:

"Sir,—We are happy to inform you that the raffle of the magnificent Berkshire boar was held last evening, and you are the fortunate winner. We hold the animal at your disposal, and shall be pleased to forward same on receipt of your notification to do so. We beg to congratulate you on the acquisition of this valuable boar."  
(Signed) Small and Greenwood.

"But the winner had hardly received this letter, and the first thrill of joy had hardly warmed his breast, before he received another missive:

"Sir,—We regret to inform you that the Berkshire boar died very suddenly last night at 11:30 o'clock. We do not know the exact cause of death, but, judging from the symptoms, would impute same to be hog cholera, now so prevalent. Owing to the existing sanitary arrangements, the animal had to be buried without delay. We shall be glad to receive your check for \$5.00, being amount of interim expenses incurred."  
(Signed) Small and Greenwood.

"The winner, it is true, did not remit his check for \$5.00, but he thought it unsafe to investigate the loss of the boar."—Louisville Times.

A member of a school board was visiting a public school not long ago when he encountered a small boy in the hall.

"What are you studying, my boy?" the visitor asked.

"Arithmetic and geography," answered the boy.

"And what are you learning in arithmetic?"

The boy thought for a minute, then he replied, "Guzinta."

"Guzinta?" said the surprised official.

"What's that?"

"Why, don't you know?" said the boy.

"Two guzinta four, three guzinta six, four guzinta eight, five guzinta ten."

During the Presidential campaign, the question of woman suffrage was much discussed among women, pro and con, and at an afternoon tea the conversation turned that way between the women guests.

"Are you a woman suffragist?" asked the one who was most interested.

"Indeed, I am not," replied the other, most emphatically.

"Oh, that's too bad; but, just supposing you were, whom would you support in the present campaign?"

"The same man I've always supported, of course," was the apt reply; "my husband."

A Cleveland man, who visited friends in Hants, England, last year, tells the following story of a canny Scot, a beadle, whose habit it is to show tourists the remains of the abbey in his parish.

One day he had thus conveyed a party through the place, every member of which had tipped him with the exception of a crabbed old fellow of his own nationality.

As the offender left, the beadle whispered in his ear:

"Weel, when ye gang hame, if ye find out that ye hae lost your purse, ye maun recollect that ye havena had it oot here."

Dominie Campbell was one day watching a carpenter making repairs in his house. The carpenter whistled "Maggie Lauder," as he labored, and worked in time to the tune. "Saunders," said the dominie, presently, "can you no whustle a more solemn and godly tune while ye're at work?" "Ay, weel, minister, if it be your will," and he immediately changed the tune to the "Dead March in Saul," still planing in tune to the music. The worthy dominie looked on for some minutes in silence, and then said, "Saunders, I hae another word to say till ye. Did the guid wife hire ye by the day's work or by the job?" "The day's work was our agreein', minister." "Then, on the whole, Saunders, I think ye may just as weel go back to whustling 'Maggie Lauder!'"

One of the bright young men attached to the American Embassy at London, tells of his initiation into the mysteries of the Cockney dialect.

He had visited a resort where he chanced to overhear an exchange of remarks between a mother and her nine-year-old son.

"Sammy," said the mother, as she opened a box of sandwiches. "What sort o' sandwich will ye 'ave?"

"I'll 'ave 'am, mother," said the boy.

"Don't say 'am, son," rebuked the parent. "Say 'am!'"

Whereupon, another Cockney, who was standing near the American, chuckled with glee:

"Do ye mark that, sir?" asked he. "Both of 'em thinks as 'ow they're sayin' 'am!'"

TRADE TOPIC.

THE DE LAVAL Cream Separator has been in the lime-light of trial, and test, and constant use for many years, and has held its own in the favor of farmers and dairymen who have used it. The De Laval Company are up-to-date in improvements, and have won the confidence of the public by their straightforward and honorable way of doing business, and the character of their separators, for durability, thoroughness of creaming, and ease of operation. Parties contemplating the purchase of a separator, will do well to look up their advertisement in this paper, and write for their descriptive book and price list.

PURITY FLOUR

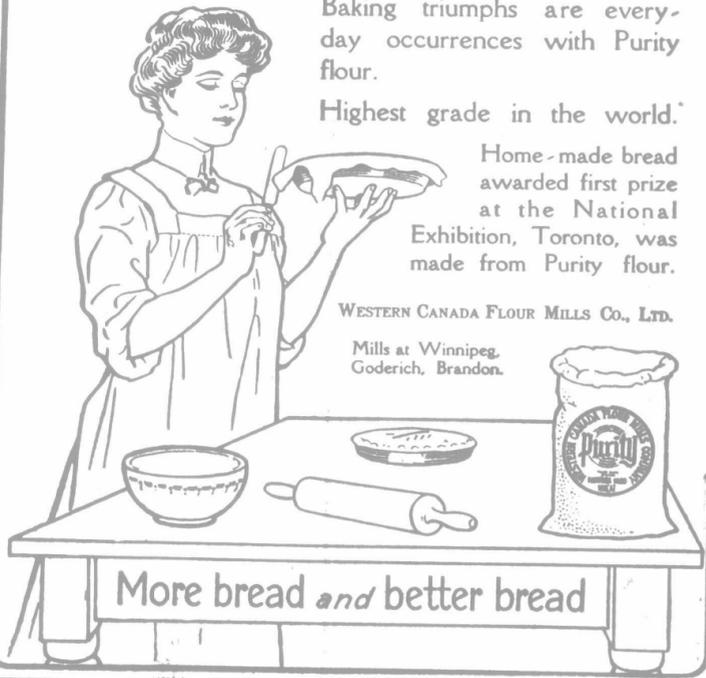
Baking triumphs are everyday occurrences with Purity flour.

Highest grade in the world.

Home-made bread awarded first prize at the National Exhibition, Toronto, was made from Purity flour.

WESTERN CANADA FLOUR MILLS Co., Ltd.

Mills at Winnipeg, Goderich, Brandon.



More bread and better bread

Just sit down and write us for full particulars of the best business proposition you are likely to hear this year. Let us tell you, in plain words, how very little money will start you in the profitable business of poultry-raising The Peerless Way. Let us show you why it will pay you well to adopt the Peerless methods, to make use of the advice and aid of the Peerless Board of Experts—pay you well, and profit you speedily.

One PEERLESS user will sell 200,000 fowl this year

Scores and hundreds—ten thousand people in fact—all over Canada, are following The Peerless Way to their profit. More than eleven million dollars' worth of eggs were sold in Canada last year. Yet with all this output prices stay high for every sort of good poultry and eggs. The market is far bigger than the present product—and it grows bigger day by day. Poultry-raising is the best business for any farmer, any farmer's child. Pays better for the time and money invested. Profit is sure. Isn't over-crowded—and never will be.

PEERLESS users get valuable help and service free

Besides finding a buyer for our customers' poultry-products (which we do free of any cost to you) our Board of Experts stands ready always to advise, counsel, help with practical suggestions—free, entirely so, to Peerless users. These practical men have developed the greatest poultry business in Canada—The Poultry Yards of Canada Limited. Long experimenting in the hatcheries of this great plant brought the Peerless to perfection, and proved it as the one successful incubator for use in every section of the Dominion.



Let us ship you this and trust you for it. We pay freight and give you a 10-year guarantee

More than 10,000 PEERLESS users are successful —

Poultry ought to be a side-line on every farm —

The poultry-crop is the one crop that never fails. Every farmer certainly ought to make poultry a "side line, at least—it is, a certain profit for him, no matter how bad a year he may have with his other crops. And the Peerless customer need feel no worry about finding a market for all he wants to sell in the way of poultry or eggs. We look after that for him. We find him a buyer who pays the best market prices in spot cash.

Within a month or so from this very day you could have a poultry-for-profit business well under way. Write and ask us to prove to you that success with poultry, The Peerless Way, is possible for anybody of good sense in any part of Canada. Get the facts about it. They are facts that will probably be new to you. Send for them—fits for your own benefit we suggest that you send for them at once, without another day's delay. Just use a post card, if you haven't a stamp handy—put your name and address on it—say "Show me"—that's all that's necessary

Send right away for interesting offer and FREE very valuable information.

You will know why The Peerless Way is the way to get profit from poultry, once you have read the big and plain-spoken free book we want you to ask for. With the book will come an offer to outfit you for poultry-profit on terms that will meet your wishes and fit your means. Please write and ask for this now—make your start now—it will pay you to.

Your credit with us makes it very easy to start —

Your credit is perfectly good with us. You can equip yourself fully for successful poultry-raising, and you don't need ready money to do it. We trust you, and we will make the terms so easy for you that you will never feel the outlay. In fact a Peerless Outfit pays for itself, and quickly, too.

LEE Manufacturing Co., Ltd. 451 Pembroke Avenue PEMBROKE ONTARIO CANADA

We carry ample stocks in our big distributing Warehouses at Winnipeg, Regina, Calgary, Edmonton and Vancouver, for the convenience of our Western friends. Address all letters to Head Office at Pembroke, Ontario. They will receive prompt attention.



Planet Jr.

Planet Jr Farm and Garden Implements do more and better work, and last longer than any other farm implements made. They are fully guaranteed. Over 35 years' actual farming and manufacturing experience is put into every Planet Jr.  
No. 6. The newest Planet Jr Combination Hill and Drill Seeder, Wheel Hoe, Cultivator and Plow, opens the furrow, sows seed in drills or hills, covers, rolls down, and marks out the next row—all at one operation. Also a perfect Wheel Hoe, Cultivator and Plow.  
Planet Jr 12-tooth Harrow, Cultivator and Pulverizer  
Is a wonderful tool for berry-growers and market gardeners. Works deep or shallow, without throwing earth on the plants, and pulverizes the soil thoroughly. Invaluable wherever fine close work is needed.  
Write today for the 1910 illustrated Planet Jr catalogue. It is free.  
S. L. Allen & Co Box 1108F Philada Pa  
Write for the Name of Our Nearest Agency.

\$532,992,100!!

That's the Value of Farm Products for Canada 1909—Isn't It Great?

OTTAWA, ONT.—An extra of \$100,000,000 in the value of Canadian crops is shown in the final estimates of the 1909 production just issued by the Dominion Census Department. An area of 80,065,556 acres of field crops has yielded a harvest which computed at local market prices, has a value of \$532,992,100, as compared with \$432,534,000 from 27,505,063 acres last year.

Canada's principle grain crops are wheat, oats and barley. This year they aggregate an area 18,617,000 acres, and in value \$263,710,000, against 16,297,100 acres and \$209,070,000 in 1908. Hay and clover from 8,210,000 acres have a value of \$132,287,700, against 8,210,900 acres and \$121,884,000 in 1908.

Rye, peas, buckwheat, mixed grains and flax, grown on 1,487,311 acres have a value of \$26,707,000, as compared with 1,525,700 acres and \$23,044,000 in 1908.

The total value of wheat harvested in the Northwest provinces is \$121,560,000 and in the rest of the Dominion \$19,760,000, as compared with \$72,424,000 and \$18,804,000 last year.

It is a showing that every citizen is proud of, whether he had a hand in the production or not. The most gratifying story told by these figures is that they represent a gain over the previous year of \$100,000,000.

We are going ahead—going ahead rapidly. This is the best message we gather from this report of our results for 1909.

But, instead of being content with these figures, let us take them only as an indication of what our real possibilities are, and let us use them merely as a mile post in our climb to better things.

Let each of us, for instance, look back over our operations of 1909 to determine whether or not we did our share toward making this showing possible.

We ought to stop and think of what has made the gains of former years possible. We must stop to realize that this gain of \$100,000,000 for 1909 is not only due to more land under cultivation; but has been brought about by better methods of cultivation; by better methods of preparing the soil, sowing the grain and harvesting the crops.

Without the wonderful strides made in the development of farm machines, a \$532,992,100-crop would be entirely out of the question.

And yet there is room for progress—the rules of 1909 farming are not the rules for 1910. New machines mean new advances and new wealth. Do you keep abreast—are you posted about these things?

About traction plowing—how to plow more acres, in less time, with less expense, for better, bigger returns?

How a good disk harrow will enable you to make better seed beds?

Why it's to your advantage to spread manure the right way—as soon as you get it—instead of spreading it after half its value is gone.

Why it will pay you to use seeding machines that put the seed into the soil so that the best germination is assured and big crops result.

About the money-saving and money-making advantages of having a good, reliable, dependable gasoline engine on your place.

What the right kind of a cream harvester means to you in increased milk and butter profits—and skim-milk calves?

Why a good feed-grinder means fatter stock? How to increase the value of the 1910 hay crop by using the right mower, baler, etc. How to know all about harvesting machines? How to know the ear marks of a good wagon.

If any of these will help you please secure a copy of our book—"Glimpses of Thriftland." That tells the whole story briefly and in verses that you'll like. Then we have some books that are still more business-like—the I H C Almanac and Encyclopedia, and others. Say which you are most interested in. All are free if you will write nearest branch house of the International Harvester Company of America listed below.

There is an International dealer near you. He will be glad to see you to hand you one of our new 1910 calendars, posters, catalogues or pamphlets on harvesting and haying machines and tools, and tillage implements or any of the machines mentioned above.

CANADIAN BRANCH HOUSES: Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

Send for a still bigger showing in 1910 Prosperity—Drainage for Profit

INTERNATIONAL HARVESTER COMPANY OF AMERICA (Incorporated) CHICAGO, U. S. A.



Please Remember to Mention "The Farmer's Advocate" When Writing

GOSSIP.

An imported Percheron stallion, six years old, is advertised for sale in this issue by H. D. Stanton, Thamesville, Ont.

The death is announced of the famous Jersey cow, Figgis, in her 18th year. Figgis was the grand champion Jersey female at the World's Fair, St. Louis, in 1904. She was once shown at Toronto, but done out of the place she deserved by an incompetent or unfair arbiter. She had the following records: 19 lbs. 15 ozs. butter in seven days; 75 lbs. milk in one day; 9,181 lbs. milk in 7 1/2 months, testing 547 lbs. 6 ozs. butter. Figgis was sold at one time in her life for \$875, at auction, and she was the dam of the two noted bulls, Hood Farm Pogis 9th and Figgis' Flying Fox.

A. O'Neil & Son, Birr, Ont., near London, have in this issue a new illustrated advertisement of their famous Hampshire hogs, which speaks for itself of the first and largest herd of the breed established in Canada, and the leading herd in prize-winning at the principal shows in Ontario. At leading shows in the United States, including the Chicago International, Hampshires have for many years made a strong showing, winning championship honors in classes open to all breeds. The increasing demand for breeding stock of this breed has encouraged Messrs. O'Neil to increase their herd by new importations, selected from noted herds, and of the most approved type, of which the portrait of the matchless sow, Covington Queen, grand champion at the Michigan State Fair, reproduced in the advertisement, is a representation.

LO, THE HORSE.

Says the Beacon, of Aurora, Ill.: "In the midst of the present extravaganza of automobile and aeroplane racing, it is refreshing to take notice, occasionally, of the horse. Witness the feat of an Illinois horse who belongs to a mail carrier: He has travelled 26 miles a day for 22 months, or a total of over 17,000 miles. It is impressive to note that in all this distance this horse did not puncture a tire, lose a bolt, wear out a bearing, foul a spark-plug, or run out of gasoline ten miles from home. Moreover, he did not once exceed a speed limit, run over a hog, or skid on a corner. His chauffeur never killed his engine on a hill, nor did he have to get out after an hour or two and crank him from in front. The horse climbed every hill, and pulled through every mudhole, and at the end of the 17,000 miles, his owner did not find that it would cost about \$100 to replace his bearings, rebuild his magneto, and take the carbon out of his cylinders. Truly, the horse may be humble, but there is much comfort in him." And the faithful Illinois horse can be duplicated in nearly every township in the country. One need not be a convert to the "horseless age" chimera because he runs an automobile, for there are plenty of illustrations showing that under certain conditions where mechanically-propelled vehicles absolutely fail, the faithful horse will be found doing business as usual.

F. MALLORY'S HOLSTEINS.

Fred. Mallory, of Frankford, Ont., is one of the leading young farmers and stock breeders of the noted dairy county of Hastings, Ontario. His preference for Holsteins over the other dairy breeds is most pronounced, and his present herd of about three dozen head are choice representatives of that breed, big, strong animals. Their type and general appearance indicate their record-making abilities, and practically every one of them is either in the Record of Merit or Record of Performance, with official records of more or less brilliancy. Great care in selection of a herd-header with high official backing, has been a predominating feature in the management of the herd, and was one of the prime factors in bringing it up to the present high standard. The sire now in use is Iuka Sylvia Beets' Posch, whose dam, granddam and great-granddam have official records that average 22.43 lbs. each in seven days, and his sire's dam was a daughter of the great Paul Beets De Kool, who has over 100 daughters in the Rec-

ord list, showing the wonderful propensity of his breeding on producing lines. For sale are a number of his daughters from two to seven months old, out of Record-of-merit and Record-of-performance cows; also females of all ages, holding seven-day records up to 18 lbs. butter, and yearly milk records up to 15,000 lbs. Of bulls, there are only two calves left, both of which are for sale.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free. 2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer. 3rd.—In Veterinary questions the symptoms especially must be fully and clearly stated; otherwise satisfactory replies cannot be given. 4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Miscellaneous.

WORMS.

Will you kindly tell me, through your paper, a cure for worms in horses; one mare supposed to be in foal.

SUBSCRIBER'S SON.

Ans.—Take 1 1/2 ounces each of sulphate of iron, sulphate of copper and tartar emetic; mix, and make into 12 powders. Give a powder every night and morning in damp feed, or mix with half-pint of cold water, and give as a drench. After the last powder has been taken, feed only bran for 10 hours, then give a purgative ball of 8 drams Barbadoes aloes and 2 drams ginger. For the mare in foal, give 1 1/2 pints raw linseed oil, instead of the aloes.

SALE OF HIDES.

A sells B five beef hides at 9 cents per pound, and one dollar is paid on them, hides to be delivered when the cattle are killed. A kills cattle and sends B a letter to send the money. B lives about 60 miles away from A, and the hides would have to be shipped by train to him. Nothing was said at time of sale about when they were to be paid for. B refuses to send the money for the hides until he gets them. A sends him his dollar of deposit, and sells the hides for 9 cents to another party. Now B returns the dollar, and threatens to sue in the courts for damages.

SUBSCRIBER.

Ontario. Ans.—He is entitled to do so.

REGISTERING A CLYDESDALE.

Can a Clydesdale colt be registered in Canada if all crosses except the grand-sire be registered in Canada, he being registered in the Old Country, or would he have to be registered in Canada also? If so, where would a person need to write in the Old Country to get his pedigree or number?

Ans.—All crosses in either a Canadian-bred or imported Clydesdale pedigree must be recorded in the Canadian Studbook. If you send to the Accountant, National Livestock Records, Ottawa, the name of the horse and the name of his importer, and any further information you may possess concerning the horse, the registrar can find his pedigree, if recorded in the Scotch Studbook, and will give you all necessary information. Address as above, "Accountant, National Livestock Records, Ottawa."

Veterinary.

OEDEMA.

A week before foaling, last May, my mare swelled from the breast to the muzzle. She foaled, and reared the foal, but the swelling has not disappeared. I may say that I worked the mare regularly during pregnancy until two weeks before foaling.

Ans.—B would probably have been better if you had continued to work her until she foaled. Swellings of this nature usually disappear, but in some cases become chronic, and are very hard to reduce. Get a horse made of 1 ounce each of potash and oxide of potassium, and 8 grains each of aloes and ginger. Rub the emulsion well with this once daily, and give the internally of dram inside of gut twice daily. If this causes loss of appetite, reduce the dose to 1/2 grain. Give regular exercise and don't feed heavily on grain.

DR. WOOD'S NORWAY PINE SYRUP.

Is Specially Calculated To Cure All Diseases of the Throat and Lungs.

Coughs, Colds, Bronchitis, Sore Throat, Hoarseness, Croup, Pain or Tightness in the Chest; and all Bronchial Troubles yield quickly to the curative powers of this prince of pectoral remedies. It contains all the virtues of the world famous Norway pine tree, combined with Wild Cherry Bark, and the soothing, healing and expectorant properties of other excellent herbs and barks.

Mrs. John Pelch, Windsor, Ontario, writes: "I was troubled with a nasty hacking cough for the past six months and used a lot of different remedies but they did me no good. At last I was advised by a friend to try Dr. Wood's Norway Pine Syrup and with the first few doses I found great relief and to-day my hacking cough has entirely disappeared and I am never without Dr. Wood's Norway Pine Syrup in the house."

The price of Dr. Wood's Norway Pine Syrup is 25 cents per bottle. It is put up in a yellow wrapper, three pine trees the trade mark, so be sure and accept none of the many substitutes of the original "Norway Pine Syrup."

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

SEED GRAIN WANTED

Table listing various seed and grain types such as Daubeneys Oats, Joannette Oats, Japanese Buckwheat, etc.

Write, stating quantity and price. Send samples of seed grain. Only purest and best qualities required.

Wm. Rennie Co., Ltd., Toronto

A WINDSOR LADY'S APPEAL

To All Women: I will send free, with full instructions, my home treatment which positively cures Leucorrhoea, Elevation, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or growths, also Hot Flashes, Nervousness, Melancholy, Pains in the Head, Back, Bowels, Kidney and Bladder troubles where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address: Mrs. M. Summers, Box 821 Windsor, Ont.

SHOEMAKER'S BOOK ON POULTRY

and Almanac for 1910 has 224 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It is an encyclopedia of fowling. You need it. Only 15c. G. C. SHOEMAKER, Box 574, Freeport, Ill.

FOR SALE: Imp. Percheron Stallion. Dark brown. Six years old. Weight, 1,850 lbs. Quiet, sound and sure. Easy terms. H. D. STANTON, 'HAMPSVILLE, ONT.

Don't Throw It Away. Does Your Granite or Hot Water Sanitary? USE MENDETS. They mend all leaks in all utensils—in brass, copper, granite, hot water pipes, etc. No solder, cement or rivet. Anyone can use them; fit any surface; two million in use. Send for sample pkg. 10c. Complete pkg. assorted sizes, 25c. postpaid. Agents wanted. Collette Mfg. Co., Dept. K., Collingwood, Ont.

WOOD'S  
WAY  
SYRUP.

ed To Cure All Dis-  
and Lungs.

onchitis, Sore Throat,  
Pain or Tightness in  
Bronchial Troubles  
curative powers of  
toral remedies. It  
rtues of the world  
ne tree, combined  
rk, and the soothing,  
orant properties of  
and barks.

Mrs. John Pelch,  
Windsor, Ontario,  
writes: "I was  
troubled with a nasty  
hacking cough for  
the past six months  
and used a lot of different  
remedies but they  
last I was advised  
Dr. Wood's Norway  
the first few doses  
and to-day my hack-  
ly disappeared and  
Dr. Wood's Norway  
use."

ood's Norway Pine  
ottle. It is put up  
e, three pine trees  
e sure and accept  
substitutes of the  
e Syrup."

by The T. Milburn  
Ont.

GRAIN

ED

PELTZ (EMMER)  
WHITE HULLLESS BARLEY  
BLACK HULLLESS BARLEY  
HUNGARIAN  
ANCY GOLDEN VINE PEAS  
LONGFELLOW CORN  
D POTATOES  
IRISH COBBLER  
DELAWARE

and price. Send samples  
t and best qualities re

Ltd., Toronto

DY'S APPEAL

I will send free,  
s, my home treat-  
cures Leucorrhoea,  
placements, Fall-  
inful or Irregular  
Ovarian Tumors  
t Flashes, Nerv-  
Pains in the  
s, Kidney and  
here caused by  
our sex. You  
nt at home at a  
2 cents a week.  
s Own Medical  
free on request.  
ss Mrs. M. Sum-  
sor, Ont.

PULTRY

1910 has 224 pages with many  
owls true to life. It tells all  
our prices, their care, dis-  
All about incubators, their  
eration. All about poultry  
build them. It's an encyclo-  
on. You need it. Only 15c.  
4, Box 774, Freeport, Ill.

eron Station

Weight, 1,850 lbs.  
Easy terms.  
HAMPSVILLE, ONT.

Does Your Granite  
Best Water-Bag Leak  
RENDETS

enks in all utensils—tin  
niteware, hot water bags  
ment or rivet. Any one  
ny surface; two million  
mple pkg. 10c. Complete  
st paid. Agents wanted  
t. J. Collingwood, Ont.

# MOVING PICTURES OF THE WONDERFUL DAN PATCH 1:55 FREE

MAILED YOU ABSOLUTELY FREE AND WITH ALL POSTAGE PAID

IT COST \$2700.00 TO HAVE IT TAKEN AND REPRODUCED.  
THIS IS THE LATEST HORSE SENSATION AND GREATEST TRIUMPH  
IN THE MARVELOUS AND REALISTIC MOVING PICTURE ART.

It is a new invention that you can carry in your pocket and show your friends instantly day or night, either once or a hundred times and without a machine, curtain or light. It is the most attractive novelty and most valuable Dan Patch Souvenir ever invented and shows every motion of Dan Patch 1:55 in pacing one of his world record miles and absolutely true to life.

I want to assure you that it is the most successful moving picture of ever taken of a world champion horse in his wonderful burst of speed. If you love a great horse and want to be able to see him in thrilling motion pictures at any time as long as you live be sure and accept my remarkable offer before they are gone. I reserve the right to stop sending these moving pictures when 2,500,000 have been mailed.

The original photographic film contains

## 2400 MOVING RACE PICTURES OF DAN PATCH 1:55

and every one of these pictures shows the King of all Horse Creation as plainly as if you stood on the track and actually saw the mighty Dan Patch 1:55 in one of his thrilling speed exhibitions for a full mile. Just think of it! 2400 moving pictures taken of Dan in one minute and fifty-five seconds means 21 pictures taken for every second all of the way around the entire mile track from the back seat of a high power automobile.

tiful woolen blanket over him to prevent catching cold and then you can see him walk up the track before the madly cheering multitude.

You can see Dan shake his head to let his driver know that he is ready and then you can watch every motion of his legs as he flies through the air with his tremendous stride of 29 feet. As a study of horse motion alone this is better than if you saw the actual speed mile because you can see Dan Patch right before you for every foot of the entire mile and not a single motion of his legs, body or head can escape you. You can see his thrilling finish as he strains every nerve and muscle to reach the wire in record breaking time, you can see his driver dismount and look at his watch while thousands of people crowd around, you can see his caretaker force his way through the crowds, uncheck Dan and then throw a beau-

Wherever this wonderful moving picture, of the fastest harness horse in the world, is shown, people involuntarily call out "Come on Dan"—"Come on Dan." This marvelous moving picture of Dan Patch pacing a great mile is the most realistic and thrilling picture you ever saw. We have taken a part of these 2400 wonderful and sensational pictures and made them into a newly invented pocket moving picture that you can easily carry with you in your pocket and show to your friends at any time, day or night. It does not need a machine, it does not need a curtain and it does not need a light. It is all ready to show instantly, either once or a hundred times and creates a sensation wherever shown. If you admire a world champion who has gone more extremely fast miles than all of the pacers and trotters combined that have ever lived then I am sure you will write me to-day for one of my wonderful moving pictures of the King of all Horse Creation, Dan Patch 1:55.

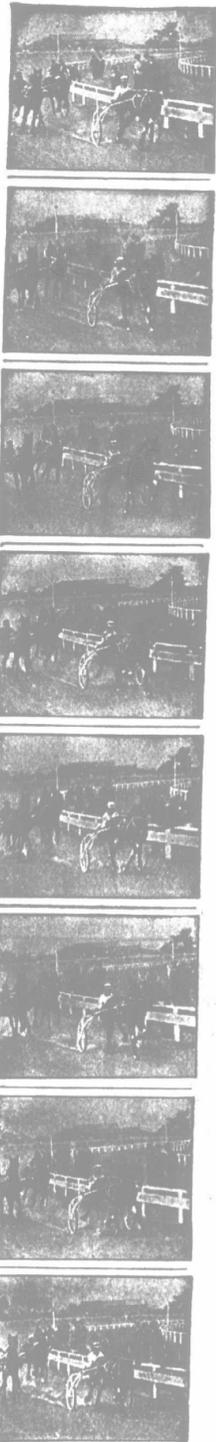
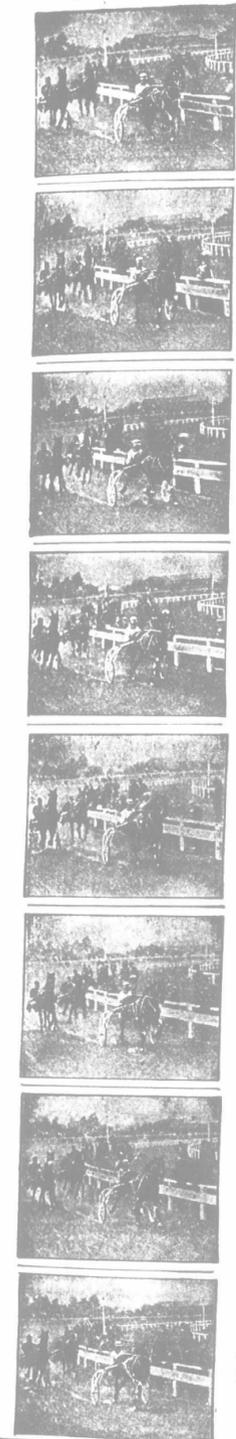
**THIS MOVING PICTURE WILL BE MAILED TO YOU ABSOLUTELY FREE, WITH POSTAGE PREPAID, IF YOU ARE A FARMER, STOCKMAN OR POULTRY RAISER AND IF YOU CORRECTLY ANSWER THE THREE QUESTIONS. YOU MUST ANSWER QUESTIONS.**

1st. In what paper did you see my Moving Picture Offer? 2nd. How many head each of Horses, Cattle, Sheep, Hogs and Poultry do you own? 3rd. How many acres of land do you own or how many acres of land do you rent? I will not mail this wonderful moving picture of Dan Patch 1:55 free unless you are a Farmer, Stockowner or Poultry Raiser and unless you correctly answer these three questions.

**If You are Not a Stockowner and want the Moving Pictures send me 25 Cents**

In silver or stamps to pay postage, etc., on Moving Pictures. I will mail this wonderful Moving Picture of Dan Patch 1:55, the fastest harness horse the world has ever seen, to you if you send me Twenty-five Cents in silver or stamps even if you do not own any stock or land. It costs about \$2700.00 Cash to have one of the original pictures taken and reproduced. Write me to-day so that you will be sure to secure one before my supply is exhausted.

Address  
**INTERNATIONAL STOCK FOOD CO., TORONTO, CAN.**  
E. B. SAVAGE, Proprietor




**International Stock Food Factory**  
LARGEST IN THE WORLD  
Covers over a City Block and Contains Over 18 Acres of Floor Space  
CASH CAPITAL PAID IN \$2,000,000.00  
Ask Your Dealer for My Preparations

International Stock Food	Dan Patch Stable Disinfectant
International Poultry Food	Dan Patch White Liniment
International Compound Absorbent	International Worm Powder
International Pheno-Chloro	International Hoof Ointment
International Disinfectant Remedy	International Sheep Dip
International Foot Remedy	International Cattle Dip
International Colic Remedy	International Hog Dip
International Louse Killer	International Harness Soap
International Gall Healer	International Copper Poison
International Pine Oil	International Worm Remedy
International Heave Remedy	International Healing Powder

Ask your dealer for any of my preparations and insist on having what you ask for. Be sure I many cheap and inferior but uses and imitations. If you have dealers sell my preparations on my Spot Cash Guarantee I refund your money if they ever fail.

**I OWN THE 5 FASTEST  
WORLD CHAMPION  
STALLIONS EVER  
OWNED IN ONE  
FARM IN THE HISTORY  
OF THE WORLD.**

On my "International Stock Food Farm" of 700 acres I own Dan Patch 1:55, Minor Heir 1:59, Directum 2:05, Arion 2:07, Roy Wilkes 2:06, and also about 200 head of Young Stallions, Brood Mares and Colts and they eat "International Stock Food" every day. I will be pleased to have you visit my farm at any time and see my horses and their splendid condition. I feel sure that you never saw their equals at any Fair or Horse Show. **ACTUAL TEST IS WHAT PROVES EVERYTHING IN THIS WORLD.** If "International Stock Food" gives paying results for the highest priced horses in the world on my farm it certainly will pay you to use it for all of your stock. Remember that if it ever fails to give your Horses, Cattle, Sheep or Hogs, better assimilation and digestion, purer blood and perfect health with quick growth and fattening that it will not cost you a cent no matter whether you have used one hundred pounds or five hundred pounds and you are to be put only the user but also the sole judge of results. I will leave the entire matter for you to decide and accept your own statement. The United States Government back my claims that "International Stock Food" is strictly a medicinal tonic, blood purifier, etc. During the Spanish-American War, United States officials made a special examination and decided that "International Stock Food" was strictly Medical and I paid \$40,000.00 patent medicine war tax. Can any honorable man deny this evidence? "International Stock Food" and label design is registered in Medical Department as a Trade Mark No. — giving it commercial standing and rights as a distinctive **"TRADE NAME" FOR A MEDICINAL PREPARATION**

The United States Government issues me a Trade Mark No. — on the world famous lines, 3 Feeds For One Cent — as

Signed, E. B. SAVAGE, International Stock Food Co., Toronto, Can.

showing how cheaply International Stock Food can be mixed with the regular grain feed—My label shows a list of the medicinal ingredients used and 250,000 druggists have sold "International Stock Food" for over 20 years as a medical preparation.

**DO YOU EVER EXPECT TO SEE  
THESE WONDERFUL DAN PATCH 1:55  
RECORDS EQUALLED?**

**DAN PATCH 1:55  
HAS PACED**

1 MILE IN	1:55
1 MILE IN	1:55½
2 MILES IN	1:56
14 MILES AVERAGING	1:56½
30 MILES AVERAGING	1:57
45 MILES AVERAGING	1:58
73 MILES AVERAGING	1:59

Dan Patch 1:55 has gone more extremely fast miles than the combined miles of all the trotters and pacers that have ever lived. Be sure and remember these facts when you think of some horse equalling Dan's marvellous performances.

For seven years Dan Patch has eaten "International Stock Food" every day mixed in his regular grain feed. It has given Dan Purer Blood, More Strength, More Endurance, More Speed and Perfect Health. It is constantly used and strongly endorsed by over Two Million Farmers and Stock Breeders, as the greatest Animal Tonic, and has been for 20 years. No other preparation has such strong United States Government and practical stock breeders endorsement.

## Hear it yourself - the Edison Phonograph



You cannot judge the Edison by hearing other kinds. The Edison is the sound-reproducing machine at its best. It is not a talking machine. It is a Phonograph reproducing every sound faithfully—the song exactly the way the singer sang it; the opera exactly the way the orchestra played it; the two-step exactly the way the band rendered it.

That is the Edison Phonograph as Mr. Edison makes it—the object of his constant, daily care.

When he says he wants to see an Edison Phonograph in every home, he means your home. Do you not want one there? Do you not need this amusement maker for your own sake, for your children and for your guests? Hear one today. Hear all the others too and compare. Only in this way can you know that what we say is true.

Edison Phonographs	\$16.50 to \$162.50
Edison Standard Records	.40
Edison Amberol Records (twice as long)	.65
Edison Grand Opera Records	.85

There are Edison dealers everywhere. Go to the nearest and hear the Edison Phonograph play both Edison Standard and Amberol Records. Get complete catalogs from your dealer or from us.

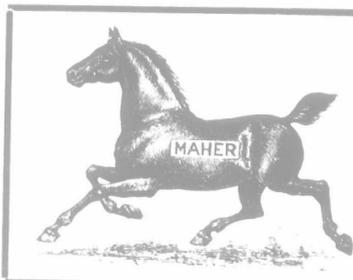
NATIONAL PHONOGRAPH COMPANY  
100 Lakeside Avenue, Orange, N. J., U.S.A.

# Debentures

More people would put their savings in the Debentures of this Company if they realized the simplicity and safeness of this form of investment. It merely means that one deposits a certain amount—any sum over \$100—with this Company for a period of time, not less than one year, preferably five years, or less if desired. The debenture form which the depositor receives is a promise of the Company to pay

the sum mentioned, plus the interest, at 4 per cent. per annum at the time of expiration. This promise is secured by over \$11,000,000 of assets. The interest coupons attached are the same as cash and can be deposited as such. Huron & Erie Debentures are an investment of the highest class, and the man with small savings can share in it equally as well as the capitalist. Write for full particulars.

## Huron & Erie Loan & Savings Co., London, Ont.



### Maher's Horse Exchange

16 to 28 Hayden Street TORONTO  
(Near cor. Yonge and Bloor)

AUCTION SALES of Horses, Carriages, Harness, etc., every MONDAY and THURSDAY at 11 a. m. PRIVATE SALES every day. We have always a large quantity of horses on hand for Auction or Private Sale. We have the biggest and best sale ring and stables in Canada. We hitch and try all horses for out-of-town buyers, and guarantee satisfaction. WE SELL STRICTLY ON COMMISSION.

P. MAHER, Proprietor. GEO. JACKSON, Auctioneer.

FOR SALE OR EXCHANGE: **Shorthorn Bull** BRAVE YTHAN = 273763-308801. Aged 2 years. Would exchange for a good cow in call or yearling heifers. Eligible for American record. PHONE H. M. VANDERLIP, CAINSVILLE, ONT.

### QUESTIONS AND ANSWERS. Miscellaneous.

#### SURPLUS TEATS.

Heifer, 17 months old, due to calve in three months, has six well-developed teats (all apparently with passage). Do cows ever milk from more than four teats, and would it be any advantage to do so? What would you advise me to do?  
H. C. H.

Ans.—There would be no advantage in cultivating the excess teats, though they would probably yield a small quantity of milk. Better not commence to milk them and they will do no harm.

#### BREEDING TO INCREASE SIZE.

I have a mare, eighteen years old, of mixed breeding. She is low and blocky, with clean bone of excellent quality, weighing 950 pounds. She was sired by a small Standard-bred horse, and from a native mare, weighing about 1,000 pounds. I have been breeding her to imported Hackney horses, have raised six colts from her, and she is in foal again by a Hackney, all of which have considerable quality and action, but they lack size, and am anxious for something larger. Would you recommend breeding her to a heavier horse, such as a Percheron or Clydesdale? There is a grade Percheron here, weighing about 1,400 pounds, and a registered Clydesdale, 1,600 pounds, both of which have proved themselves good stock-getters. Would they be too heavy to produce a useful farm horse?  
A SUBSCRIBER.

Ans.—You would be more likely to get a good-sized general-purpose horse by breeding her to a pure-bred Clydesdale of good quality than by using a grade Percheron. We do not think there would be any disadvantage in breeding her to a horse of the weight mentioned.

#### TRADE TOPIC.

THE T. EATON COMPANY'S double-page advertisement in this issue of "The Farmer's Advocate" should prove of special interest to its many thousands of readers. The Eaton Company has won the confidence of the people by courtesy, fair dealing, prompt attention to mail orders, and the assurance that if the goods are not satisfactory they may be returned within ten days, and the purchase money in full will be refunded, with transportation charges. The experience of country people in dealing with the company has been eminently satisfactory, good value for the money being the rule, and the prices marvellously low, considering the quality of goods. Their January and February illustrated catalogue, which will be sent free to all applicants, gives clear description of goods, price list, and full instructions as to method of ordering articles, by numbers, and remitting money, together with illustrations of style of goods, and statement of quality and size. The advertisement gives description and prices of a few of the hundreds of household articles and wearing apparel included in the catalogue. Write for the catalogue to The T. Eaton Co., Toronto, mentioning that you saw the advertisement in "The Farmer's Advocate."

An editor was talking about the famous English astronomer, Sir Robert Ball, who has recently declared that radium proves the earth to be 800,000,000 years old. Sir Robert Ball is as full of fun as of learning," said the editor. "Once I dined with him and a half-dozen other scientists at Stratford. At the end of the dinner Sir Robert's eyes twinkled, and he said to the landlady of the quaint Stratford inn:

"Madam, I am going to give you a lesson in astronomy. Have you ever heard of the great platonian year, when everything must return to its first condition?" Listen, madam. In 26,000 years we shall all be here again, on the same day and at the same hour, eating a dinner precisely like this one. Will you give us credit till then?"

"Gladly," the landlady replied. "It is just 26,000 years since you were here before, though, and you left without paying me. Settle the old bill, and I'll trust you with the new."

## Ring-Bone

There is no case so old or bad that we will not guarantee

**Fleming's Spavin and Ringbone Paste**  
to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of

**Fleming's Vest-Pocket Veterinary Adviser**

Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durable, bound, indexed and illustrated. Make a right beginning by sending for this book.

FLEMING BROS., Chemists,  
75 Church St., Toronto, Ontario

## This Cylinder Shows Why The "EUREKA" Root Cutter



is the best on the market. See how it is designed. Grooved knives, with the grooves on one blade opposite the teeth on the next. Instead of slicing or pulping, the "Eureka" turns out roots in shreds—thin narrow strips—suitable for any kind of feeding.

The "Eureka" shreds from one to two bushels a minute, and turns so easily that a child can operate it.

In the "Eureka" the feed is kept free from dirt, the feeder bottom being made with iron rods, thus allowing all dirt to drop out before it can reach the shredding cylinder.

The sloping form of the cylinder makes the machine a self-cleaner. Write for catalogue which explains fully.

The Eureka Planter Co.  
LIMITED  
Woodstock, Ont.

## FARMERS, FRUIT, AND VEGETABLE GROWERS



WHY ARE YOU IMPORTING PHOSPHATE AND AMMONIA WHICH IS A BY-PRODUCT OF YOUR FARMS OF WHICH YOU ARE EXPORTING MANY THOUSAND TONS ANNUALLY BONES AND WHICH CONTAIN LARGE QUANTITIES OF PHOSPHORIC ACID AND AMMONIA

KINDLY ANSWER THE ABOVE

PURE BONE MEAL IS THE CHEAPEST FERTILIZER  
THIS PLANT FOOD IS ALL FROM OUR CANADIAN SOILS AND SHOULD ALL GO BACK  
SEND FOR PRICES, ETC.

THE W.A. FREEMAN CO. LIMITED  
HAMILTON, CANADA

## Peachblow Clydesdales AND AYRSHIRES

Clydesdale stallions and fillies, Imported and Canadian-bred. Ayrshires of high-class quality and productiveness, 40 to 50 lbs. of milk a day; females of all ages and bull calves. My prices are right.

R. T. BROWNLEE, Hemmingford, Que.

## Clydesdales Wanted

Parties having registered Clydesdales for sale—fillies, mares or stallions—who wish to enter for our great annual combination auction sale of Clydesdales, to be held Thursday, February 24th, 1910, send for full particulars at once to:

HERBERT SMITH, Manager Union Stock-Yards Horse Exchange, Toronto, Ont.

SHORTHORNS FOR SALE. Choice young bulls of grand quality and breeding, from good milking cows; also females said to be prize-winners. Prices very cheap for quick sale. Write and come and see them. STEWART GRAHAM, PORT PERRY, ONT.

When Writing Mention The Advocate



**Send 2¢ Stamp & Get Handsome Calendar**

Would you like a calendar handsome enough to hang up in your parlor? Such a one is our 1910 Calendar. The picture entitled "Homeward Bound" is a typical farm scene, done in eight beautiful colors and giving one of the richest effects that has ever been produced in a calendar. We ask you to pay 2 cents postage, simply as a proof that you value a picture of real artistic merit. As there is always an enormous demand each year for our calendars, yours may be a few days late in reaching you, but no one will be overlooked. The sooner you fill out and send the coupon, the earlier the calendar will reach you. Be sure to write your full address distinctly.

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FARM MACHINERY



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For Dept F59I enclose 2 cents postage for which send me by earliest possible mail a copy of your handsome new calendar.

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**22 Imp. Clydesdale Stallions**



Just landed, ages from 2 to 5 years old. A number of them are premium horses. Several are over the ton, or will make it. A number of them are grandsons of Baron's Pride. All are for sale. Prices are reasonable. Intending purchasers will find it to their interest to see these horses before purchasing. Farm two miles from the end of street-car line.  
**O. SORBY, Guelph, Ont.**  
Long-distance 'phone.

**20 Imp. Percheron Stallions 20**



Our 1909 importation of 20 Percheron stallions, from 1 to 5 years of age, are now in our stables. Up to over a ton in weight. Big, stylish, choke-full of flashy quality, and faultless movers. Prizewinners among them. The best lot ever imported to Canada. All are for sale on terms to suit.  
**HAMILTON & HAWTHORNE, Simcoe, Ontario.**

**WILLOWDALE CLYDESDALES**

are from such sires as Baron's Pride, Up-to-Time, Benedict, etc. None but the best imported Stallions and fillies for sale. At Great Eastern Exhibition seven entries took six firsts, two seconds, gold medal and diploma.  
**J. H. M. PARKER, LENNOXVILLE, QUE.**

**T. H. HASSARD'S NEW IMPORTATION!**

MY NEW IMPORTATION OF  
**Clydesdale Stallions and Fillies**  
are now in my stables at Markham, Ont., and, as usual, I have a big range for selection, of a type, breeding and quality seldom equalled, never excelled, by any previous importation. Call and see them. Phone connection.  
**T. H. HASSARD, Markham, Ont.**

**Imported Clydesdales**

We have a number of newly-imported stallions on hand in our stables in London, Ont., including some very large and heavy horses, several prizewinners. Another consignment, stallions and fillies, sailed Saturday, October 16th, from Glasgow.  
**DALGETY BROS., LONDON, ONTARIO.**

**MY NEW IMPORTATION TO HAND.**

In my new importation of 4 Clydesdale Stallions and 6 Clydesdale Fillies, I have material that will stand comparison with anything ever imported. They have great size, beautiful mold, full of quality, right fashionably bred and perfect action.  
**JOHN A. BOAG & SON, QUEENSVILLE, ONTARIO.**

**High - class Imported Clydesdales!**

I have lately landed at my stables at Milverton, Ont., an exceptionally choice selection of Clydesdales—stallions and fillies. They are all prizewinners at the leading shows in Scotland. From one to five years of age. Full of quality and royally bred.  
**Jno. Semple, Milverton, Ont.**

**QUESTIONS AND ANSWERS.**  
Miscellaneous.

**UNDERDRAINING.**

I have a field lying alongside the road. It naturally drains to the road. I wish to underdrain it, but the road ditches are not deep enough to allow laying tile deep enough. Can I compel the Township Council to deepen the ditch, or will I have to do it myself?

YOUNG FARMER.

Ontario.

Ans.—You should apply to the Council, and endeavor to arrange the matter with them. Then, if you find you cannot get them to agree to co-operate with you upon suitable terms, you should take the proceedings prescribed by "The Ditches and Watercourses Act," Revised Statutes of Ontario, Chap. 285.

**WHITE HOUSE WASH VS. PAINT**

I received the premium as expressed to Consec all right, and was well satisfied. The young man who subscribed took such a delight in the paper when he saw the Christmas Number, and especially the account of your orchard experiment, that he at once wanted it. Would you please answer these questions to the best of your knowledge. We have good, soft maple, which we think of getting sawed for a barn. Will it make good siding, especially if kept painted, if it is not dressed, but battens of the same put over the cracks? Which will make the most economical paint, the White House whitewash you often write about, or regular paint? Does the whitewash save the wood as well as paint? I will write you an account of our experience with alfalfa as a slight remuneration for your valuable information. E. C. W.

Ans.—Soft maple would be rather inclined to warp, but, if kept painted, should be quite satisfactory. We would not recommend the White House whitewash as a substitute for paint on wood out of doors, especially if the building was new. Considerable of it is weather-worn off in one year. But, judging from our limited experience, we think that on rough boards it makes an excellent filler and foundation for paint. It is very, very cheap.

**A LONG-STANDING CLAIM.**

A fruit merchant bought an apple orchard from a farmer in the fall of 1904; merchant to supply hands to pick and pack in barrels, and to pay the cost of the empty barrels, and 50 cents for the apples in each barrel when delivered at his fruit-house, the farmer to draw empty barrels from cooper shop to orchard, and full barrels to fruit-house; also to board hands while at work in the orchard. The merchant, with his men, did not come to pick the apples until near the end of the first week in November, when he said the apples were frozen and worthless, and did not pack any. The orchard was estimated to contain 150 barrels. The farmer was left with 150 empty barrels on hand, which he had to pay 50 cents each for. Next season they were 40 cents each. The farmer has not asked the merchant to pay until October, 1909.

1. Is the merchant legally entitled to pay for estimated 150 barrels, less a reasonable amount for board and teaming?
2. Is the merchant liable for loss on empty barrels?
3. Does the fact that the farmer has not asked pay for five years invalidate the claim?

INQUIRER, Ontario.

Ans.—1 and 2. If liable at all, his liability would be in damages, and the matters mentioned would all be taken into account in estimating the amount of such damages. But the farmer might have serious difficulty in making out a case against the merchant, in view of the amount involved, and the absence, apparently, of any written agreement. It is, in our opinion, eminently a case for amicable negotiations between the parties. The merchant ought certainly to pay something, and the amount of the settlement ought to be reasonable, having regard to all the circumstances of the case.

3. No, it just adds to the difficulties the farmer would experience in any litigation of the case; it does not bar an action to enforce the claim.

**Why Not Put "BT" Stanchions In Your Stable?**



They will make it brighter and neater, are stronger, more durable, and cost less than any other when all is considered. Your cows will be kept clean and comfortable. Ask us how to lay out your stable, and why it pays to use "BT" Stanchions.

**BEATTY BROS., FERGUS, ONT.**  
MAY CARRIERS, LITTER CARRIERS, ETC.

**ELECTRO BALM**  
CURES  
**ECZEMA**

Also Piles, Burns, Scalds, Sores, Chapped Hands and Face. Write for sample and booklet of testimonials. 50c. a box at all dealers, or THE ELECTRIC BEAN CHEMICAL CO. LIMITED, OTTAWA.

**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., Ltd., 19 Marmora Street, London, Ontario.**  
Largest manufacturers of Concrete Machinery in Canada.

**FURS**  
Do you trap or buy Furs? I am Canada's largest dealer. I pay highest prices. Your shipments solicited. I pay mail and express charges; remit promptly. Also largest dealer in Beehives, Sheepskins, etc. Quotations and shipping tags sent free.

**JOHN HALLAM, TORONTO**  
**THE "MAPLES" HEREFORDS**  
Canada's Greatest Show Herd.  
For Sale: 25 bulls from 6 to 18 months of age, bred from imported and show stock; also about the same number of heifers, none better. Prices right.  
**W. H. HUNTER, Orangeville P.O. and Sta.**

**Homestead Aberdeen-Angus**  
Some extra good bull calves, 6 to 8 months old; also females, all ages. Parties looking for cattle, either sex, should write, or come and see them.  
**William Ische, Sebringville, Ont.**  
Long-distance Phone.

**ABERDEEN - ANGUS**  
Will sell both sexes; fair prices. Come and see them before buying. Drumbo station.

**WALTER HALL, Washington, Ont.**  
**Balmedie Polled Angus** and Oxford Downs sheep — Offering several exceptionally nice heifers, and a few young bulls. Discriminating buyers will be pleased with my herd. Anything in the herd will be priced. Also ram and ewe lambs. **T. B. Broadfoot, Fergus P.O. and Station.**

**Aberdeen-Angus Cattle**—Stock all ages, good strains, at reasonable prices. Apply to **ANDREW DINSMORE, "Grape Grange" Farm Clarksburg, Ont.**

**JOHN GARDHOUSE & SONS**  
Always have for sale a number of first-class **Shorthorns, Shires and Lincolns**, of both sexes. Drop us a line, or better, come and see for yourself.  
**HIGHFIELD P.O., ONTARIO.**  
Weston Sta., G. T. R. & C. P. R. Long-distance phone in house.

**SHORTHORNS for Sale**—I am offering for sale a number of females of various ages, and four first-class bulls. One two-year-old, one yearling and two bull calves. All good ones, and breeding as good as the best. Come and see me.

**HUGH THOMSON, Box 556, ST MARY'S, ONT.**  
**1854—Maple Lodge Stock Farm—1909**  
Shorthorn bulls and heifers of extra quality and breeding, and from best milking strains.  
Leicesters of first quality for sale. Can furnish show flocks.  
**A. W. SMITH, Maple Lodge P.O., Ontario**  
Lucan Crossing Sta., G. T. R., one mile.

"BT" Stanchions  
Stable?



They will make it brighter and neater, are stronger, more durable, and cost less than any other type when all is considered. Your cows will be kept clean and comfortable. Ask us how to lay out your stable, and why it pays to use "BT" Stanchions.

"BT" Stanchions  
FERGUS, ONT.  
CARRIERS, ETC.

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ERIC BEAN CHEMICAL

Concrete Silos  
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Do you trap or buy  
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highest prices. Your  
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HEREFORDS

Greatest Show Herd.  
25 bulls from 6 to 28  
age, bred from imported  
stock; also about the  
ber of heifers, none  
ices right.

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nd bull calves, 6 to 8  
also females, all ages,  
for cattle, either sex,  
come and see them.  
Sebringville, Ont.  
Phone.

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Drumbo station.

Washington, Ont.

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sheep - Offering  
ers, and a few young  
will be pleased with my  
will be priced. Also  
Broadfoot, Fergus

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and both sexes,  
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of first-class Short-  
s, of both sexes. Drop  
and see for yourself.  
ONTARIO.

P. R. Long-distance  
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number of females of  
lass bulls. One two-  
bull calves. All good  
as the best. Come

ST MARY'S, ONT.  
ock Farm - 1909

heifers of extra  
from best milk-  
ity for sale. Can  
ge P.O., Ontario  
T.R., one mile.

At the UNION STOCK-YARDS, WEST TORONTO, ONT.

2nd and 3rd February, 1910,

WE WILL SELL

# 140 SCOTCH SHORTHORNS

SELECTED FROM THE HERDS OF

HON. W. C. EDWARDS, ROCKLAND, ONT., SIR GEORGE DRUMMOND, BEACONSFIELD, QUE., PETER WHITE, K. C., PEMBROKE, ONT.,  
W. G. PETTIT, FREEMAN, ONT., J. A. WATT, SALEM, ONT., JOHN MILLER, BROUGHAM, ONT.,  
MILLER BROS., BROUGHAM, ONT., JOHN MILLER, JR., ASHBURN, ONT., and ROBERT MILLER, STOUFFVILLE, ONT.,

and no collection of Shorthorns has ever been sold in Canada that approached this lot in **QUALITY, BREEDING AND REAL VALUE.** We now add that the number is greater; each animal is in perfect condition in every way; no apologies or explanations will be necessary; there will be bulls and heifers that have won in the best shows, and that can win again; there are others that have never been shown that will be wanted by those that are after the honors of 1910.

Unprejudiced men will use this space and more to tell you the rest, but in the meantime get your name in line for illustrated catalogue, and keep the dates open so you can be there.

There will be cheap rates to attend the annual Shorthorn meeting on the 1st.



ALEXANDRINA 36th = 86415-. MILLER BROS., BROUGHAM, ONT.



RINGMASTER = 74010-. Calved Nov. 6, '08. W. G. PETTIT & SONS, FREEMAN, ONT.

**Robert Miller, Stouffville, Ont., Manager of Sale.**

Auctioneers: Col. Geo. P. Bellows, Maryville, Mo.; Col. Carey M. Jones, Chicago, Ill.; and Captain T. E. Robson, London, Ont.

## QUESTIONS AND ANSWERS. Miscellaneous.

### BALING FRESHLY-CURED HAY.

Does hay that is baled when freshly cured keep as well as hay that has been mowed away for a month or so?

A. R. H.

Ans.—Hay baled as it comes from the field will not keep. It is sometimes baled at that stage, but only for immediate consumption. Dealers' instructions to any of their outsiders who buy such hay, are to cut the wires at once and let it loose.

### SILO STAVES AND HOOPS.

1. I purpose building a stave silo next summer. I thought of building it out of hemlock staves, 1 1/2 x 6 inches, about 28 feet high. Would you advise having the staves matched or jointed?

2. Which would you advise, wooden or iron hoops? I notice a number of silos around here with wooden hoops; they are made out of elm, 3/4 x 4 inches, four plies nailed together. This makes a hoop 2 x 4 inches, which appears to be very strong, and looks well. H. O. W.

Ans.—1. There is something to be said in favor of matching or, at least, beveling the edges of the staves, perhaps the chief advantage being the effect in helping to hold the silo in shape better. Personally, we have never been sufficiently impressed to deem either matching or

## FEBRUARY 4TH

# 56 SHORTHORNS 56 BY AUCTION

At the Union Stock-Yards, West Toronto, Ontario,

Commencing at 1 p. m., on **FRIDAY, FEBRUARY 4TH, 1910**, there will be sold 56 head of Shorthorn cattle, representing the Executors' Sale of the Dunrobin Herd, Beaverton, Ont., the property of the late Donald Gunn; and the dispersal of the well-known herd of Walker Bros., Walkerville, Ont. Among this lot are many of the choicest cattle in Canada; immensely thick and soggy, and bred on the most fashionable lines. All will positively be sold. All are eligible for American registration. Terms cash. For catalogues write:

**R. E. GUNN, Beaverton, Ont.,  
or WALKER BROS., Walkerville, Ont.**

CAPT. T. E. ROBSON, AUCTIONEER.

Please Remember to Mention "The Farmer's Advocate" When Writing

beveling worth while, and if building to-morrow would expect simply to have the staves planed and trued up, the sides as well as the edges being planed.

2. We prefer hoops that can be tightened when occasion demands, and do not see how this could be very well accomplished in the case of wooden hoops.

### TRADE TOPIC.

#### SHOEMAKER'S 1910 POULTRY BOOK.

Shoemaker's Poultry Book and Almanac for 1910 is full of clear explanations and suggestions for those engaged in the raising of poultry. The points are carefully illustrated with correct, beautiful color plates, diagrams and sectional views being given. The information includes talks on incubators and brooders. This book is gotten out annually by C. C. Shoemaker, Box 874, Freeport, Ill., and will be sent to anyone, postpaid, on receipt of 15 cents.

### GOSSIP.

John Cousins & Sons, Harriston, Ont., breeders of Oxford Down sheep, write: We have had a fair season, although backward at start, but fall trade made up for shortage. Sold very close in rams and ewe lambs. Good local trade, thanks to "The Farmer's Advocate," which should be in every farm home.

**Dispersion Sale of Scotch Shorthorns**

AT THE UNION STOCK-YARDS, WEST TORONTO, ON  
**THURSDAY, FEBRUARY 3rd, 1910,**

Commencing at 7 p. m. Mr. A. D. Schmidt & Sons, of Elmira, Ont., will hold a dispersion sale of their entire herd of Scotch Shorthorns, numbering 13 head. They are most richly and fashionably bred, are strictly up-to-date in type, and are in splendid condition. Included in the lot is their champion stock bull, imp. Dees de Chier. Terms cash. Also four head from the herd of F. W. Nicholson, Fiesheron, Ont. Catalogues on application to:

**A. D. SCHMIDT & SONS, ELMIRA, ONT.**

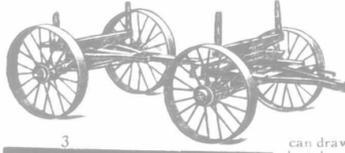
Capt. T. E. Robson, Auctioneer.

**The Razor Steel, Secret Temper, Cross-Cut Saw.**

WE take pleasure in offering to the public a saw manufactured of the finest quality of steel, and a temper which toughens and refines the steel, gives a keener cutting edge, and holds it longer than by any process known. A saw to cut fast "must hold a keen cutting edge." This secret process of temper is known and used only by ourselves. These saws are elliptic-ground thin back, requiring less set than saws now made perfect taper from tooth to back. Now, we ask you, when you go to buy a saw to ask for the Maple Leaf, Razor Steel, Secret Temper Saw, and if you are told that some other saw is as good, ask your merchant to let you take them both home, and try them, and keep the one you like best. Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand. It does not pay to buy a saw for one dollar less, and lose 25 cents per day in labor. Your saw must hold a keen edge to do a large day's work. Thousands of these saws are shipped to the United States and sold at a higher price than the best American saws. Manufactured only by



SHURLY & DIETRICH, GALT, ONT.



**GUARANTEED SUPERIOR.**

Dominion Low, Wide-tire Steel Wheels are guaranteed not to break in coldest weather or on roughest roads. They are stronger, lighter and cheaper than wooden wheels. They pay for themselves first season, and will last a lifetime. Save roads and horses. Strong enough to carry all horses can draw. Only steel wheels which can be taken apart and put together again.



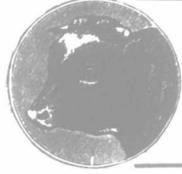
Our Low-wheel Handy Wagon gives easiest draft. Greatest strength of any wagon made. Best material and finest workmanship. Wide tires don't sink into soft soil. Easy on horses, enabling them to pull more. Guaranteed too. Free Catalogue tells about our Handy Wagon and Dominion Low, Wide-tire Wheels. Write for it to-day. Dominion Wrought Iron Wheel Co., Limited, Orillia, Ontario.

**RAW FURS** TORONTO, 1815. WALKERTON, 1895. ALL KINDS WANTED.

In any quantity. Ship by freight, express or mail. We pay charges, and remit full market value same day. Send trial shipment, or write for information, prices, tags, etc.

**C. H. ROGERS, WALKERTON, CAN.**

DIRECT EXPORTER AND MANUFACTURER.



**30 HEIFERS AND 29 BULLS** PRESENT OFFERING.

Bred right, made right and at prices to make you feel right. Come early and get your choice. List of these, with catalogue, will be mailed to those who ask for them.

**H. CARGILL & SON, CARGILL, ONT.**

**H. SMITH, EXETER, ONTARIO. Scotch Shorthorns**

Extra choice young bulls and heifers for sale. Write for what you want. Farm adjoins town.

**SHORTHORNS** Belmar Parc.

Calves for sale by our grand quartette of breeding and show bulls. Nonpareil Archer, Imp. Proud Gift Imp., Marigold Sailor, Nonpareil Eclipse. Females, imported and from imported stock, in calf to these bulls. An unsurpassed lot of yearling heifers. John Douglas, Manager. **PETER WHITE, Pembroke, Ont.**

**VALLEY HOME SHORTHORNS AND BERKSHIRES**

FOR SALE: Three show bulls and five choicely-bred pure Scotch bulls of extra good milking strains; some show heifers, young cows and heifers of good milking families, and choice Berkshires, of both sexes. Our prices very reasonable, considering quality. Visitors welcome. **S. J. PEARSON, SON & CO., Meadowvale P. O. and Sta., C.P.R.**

**SALEM SHORTHORNS!**

Young bulls and heifers, sired by the great show and breeding bull, "The Victor (imp.)", at moderate prices. If you see them you will want to own them. **J. A. WATT, SALEM, ONT., ELORA STATION, G. T. R. and C. P. R.** Long distance Telephone.

**Meadow Lawn Shorthorns**

I am offering for sale young stock, both bulls and heifers, of richest Scotch breeding, and of high-class show type. I can show some of the best young things in the country. **P. W. EWING, SALEM P. O., ONT., ELORA STATION.**

Please Remember to Mention "The Farmer's Advocate" When Writing

**QUESTIONS AND ANSWERS.** Miscellaneous.

**CEMENT FLOOR IN GRANARY.**

1. Would you advise putting a cement floor in a granary?
2. Also, would it do to allow grain to come in contact with a brick wall?

G. W.

Ans.—1. Testimony concerning this, as in the case of most other points in agricultural practice, has been somewhat conflicting. Some claim satisfactory results, others not. We should say that in a building with wooden walls and ceiling, set on a well-drained foundation, and reasonably well lighted by windows, a cement floor laid over a good bottom of small stones, cinders, or other filling of that kind, might be expected to prove fairly satisfactory, though probably not quite so good results as a wooden floor, except in respect to being more durable and being proof (so far as the floor is concerned, though this probably does not amount to much) against rats and mice.

2. It would be safer to avoid this, particularly if, as is likely the case, the wall were an outside one.

**WALNUT TREES—ORCHARD ON UNBROKEN LAND.**

1. Would a gravelly loam that has produced a good hardwood bush, be a good place to plant black walnuts? How many bushels of nuts would be required to plant an acre?
2. Would new land that has never been broken, be a good place to plant an orchard? The land is a black loam, with a sandy subsoil. Would it need cultivation, or would it grow all right, just to prune and look after the trees?

W. P.

South Ontario Co., Ont.

Ans.—1. There should be no trouble in growing black walnuts in your locality on such land as you describe. It has been found best, however, to plant other trees with the walnuts, which will afford a better ground cover than does the walnut. For this purpose, evergreens, such as spruce or cedar, or dense-topped trees, such as maples, may be used. The walnuts should be planted at least five or six feet apart each way. The quantity required to plant an acre cannot be definitely set by measure, as they vary so in size, depending also upon whether they are in husks or not.

2. It would not be advisable to attempt to grow an orchard on new and unbroken land without cultivation. The most profitable orchards are those which are not only regularly pruned and carefully sprayed, but those which are thoroughly cultivated during the early part of the season. **H. L. HUFF, O. A. C.**

**CLIMBER FOR BRICK OR STONE WALL.**

The Trustee of the Church wish to ascertain the best species of climber for clinging to a brick or stone wall, as they wish to plant such around the church in the spring. Please state the probable cost of such plants; also where they can be obtained; also planting and care, in order to obtain best results. **A. J. McC.**

Lambton Co., Ont.

Ans.—The most satisfactory kind of climber for brick or stone walls in your section of the country is the Japan or Boston Ivy (*Campelopsis Velutina*). This clings very tenaciously to brick or stone, and I have no doubt would be entirely hardy in your district, although it is only partially so here. Plants can be obtained in the spring through any of the leading seed-men, or direct from the nurserymen. The cost of good plants is usually about twenty-five cents each.

The principal point to be observed in planting them, is to make sure that the soil close to the wall in which they are planted, is good, rich surface soil, and not hard, subsoil such as is usually thrown out from collars, landed about the walls of buildings. It would be advisable, too, to keep the ground cultivated around the plants for a couple of feet or more on all sides, and apply in lieu of well-rotted compost. Sometimes the plants freeze hard, the first winter to near the ground, but the roots are quite hardy, and are seldom injured. **O. A. C. Guelph. H. L. HUFF.**

**I Cured My Rupture**

**I Will Show You How To Cure Yours FREE!**

I was helpless and bed-ridden for years from a double rupture. No truss could hold. Doctors said I would die if not operated on. I fooled them all and cured myself by a simple discovery. I will send the cure free by mail if you write for it. It cured me and has since cured thousands. It will cure you.

Fill out the coupon below and mail it to me today

**Free Rupture-Cure Coupon**

**CAPT. W. A. COLLINGS,**  
Box 30, Watertown, N. Y.  
Dear Sir:—Please send me free of all cost your New Discovery for the Cure of Ruptures.

Name.....  
Address.....

**Scotch Shorthorns**

At Toronto Exhibition this fall yearling bulls bred by us won 1st and 3rd in class and junior champion. We also bred the sire of these bulls. The grand champion steer at Guelph was sired by a bull of our breeding. We have 10 young bulls for sale now, bred the same. Write for breeding and prices. **John Miller, Brougham P. O., Ontario.** Claremont Stn., C. P. R., 3 miles.

**Spring Valley Shorthorns.**

Herd headed by Clipper Chief (imp.)—6422—(94673). If you want to get an imported bull, or a good Canadian-bred one to head your herd, be seen and write, or come and see them. Long-distance telephone.

**KYLE BROS., AYR P. O., ONT.**

**HIGH-CLASS SHORTHORNS**

I have on hand young bulls and heifers of high-class show type, pure Scotch and Scotch topped, bred by that sire of champions, Mildred's Royal. If you want a show bull or heifer, write me. **GEO. GIER, GRAND VALLEY P. O. AND STA., ALSO WALDEMAR STA.**

**Geo. D. Fletcher, Binkham P. O., Ont.**

offers four choice Shorthorn bulls, 10, 13 and 18 months old, with both breeding and quality for herd-heads. Prices easy. Stock bull, Benchie (imp.)—69954—also Shorthorn females and Yorkshire sows. Erin shipping station, C.P.R.

"Well, I'm not that bad. I'd have you know that I yet have a great deal of the milk of human kindness, even if I don't look it."

"Sheeh! my boy. Don't mention it out loud. The Board of Health will be after you and you'll have to sterilize it and take out a license."

**THIS WELL-KNOWN ADVOCATE STATES**

**His Doctor Advised Him to Take Dodd's Kidney Pills.**

And He Found Them to Be All They were Advertised—How and Why Dodd's Kidney Pills Cure.

Montreal, Que., Jan. 17.—(Special)—"Dodd's Kidney Pills were recommended to me by our family physician, and I must say they have proved to be what they were advertised."

This statement, made by L. J. B. Hubert, the well-known advocate, of 214 James street, is a double tribute to Dodd's Kidney Pills. It shows that they are recognized by reputable medical men as a peerless remedy for diseases of the kidneys, and also that they are now looked upon as a standard medicine by the best people in Canada.

And the reason of this is that they do just what they are advertised to do. They cure diseased kidneys, and put them in condition to clear all impurities out of the blood. They cure Bright's Disease, Diabetes and Backache, because these are kidney diseases. They cure Rheumatism, Lumbago, and Heart Disease, because these are caused by impurities in the blood that the kidneys would strain out of the blood if they were in good working order. If you haven't used them yourself, ask your neighbors about Dodd's Kidney Pills.

My Rupture

How You How To

re-Cure Coupon

ILLINGS,

Waterford, N. Y.

for the Cure of Rupture.

Shorthorns

Lump Jaw

The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure and it remains today the standard treatment with years of success back of it.

ELECTRIC BEANS

ARE A BRACING BLOOD & NERVE TONIC.

They are unequalled for Biliousness, Sick Headache, Constipation, Heart Palpitation, Indigestion, Anemia. Write for sample and booklet of testimonials.

Shorthorn Cattle

Would price my stock bull, Star Prince = 53900 =. Red. It would pay anyone wanting a bull to come and see his produce.

GLENGOW Shorthorns

Have two excellent bulls left yet, both about ten months old, and good enough for any herd; also a number of choice heifers, all ages.

Maple Grange Shorthorns

Am offering an extra choice lot of 1-2 and 3-year-old heifers, Scotch and Scotch-topped, Claret, Non-pareils, etc., sired by Royal Bruce, Imp., and among them are daughters and granddaughters of imp. cows.

SPRINGBROOK SHORTHORNS

For sale: 8 good bulls, 6 red and 2 roan, some sired by Royal Sovereign. Bred by the late S. Campbell, Aberdeenshire, Scotland.

Clover Dell Shorthorns

Have several young bulls for sale, of show quality; dark colors, from good milking dams. No fancy prices asked.

High-class Scotch Shorthorns

We are now offering choice young bulls of serviceable age, and a number of one and two year old heifers. Most fashionably bred, and high class show things among them.

Shorthorns and Leicesters

A number of choicely-bred young bulls and heifers from grand milking dams and imp. sires. And an extra good lot of rams and ewes of all ages in show trim.

GOSSIP.

Chas. Currie, Morriston, Ont., near Guelph, ordering a change in his advertisement of Tamworth swine, writes: I have for sale, at reasonable prices, a choice lot of young sows, in farrow to a first-class boar, bred from the best herd in England; also a fine lot of young boars from two to four months old.

Following were the values in 1908 of some of the principal items of imports into the United States from the Dominion of Canada: Live animals, \$2,040,882; packing-house products, \$3,516,825; dairy products, \$67,914; animal fibres, including wool, \$607,351; vegetable fibres, \$207,691; grain and grain products, \$956,410; hay, \$89,348; clover seeds, \$221,715; flaxseed, \$7,590; other seeds, \$236,857; fruits, \$540,205; vegetables, \$635,218; sugar and molasses, \$227,964; alcoholic liquors, \$1,137,437; tobacco, \$142,305; forest products, \$30,998,441.

Henry Arkell & Son, Arkell, Ont., Oxford Down breeders, report a good season's trade. Sales have been good in Canada, thanks to "The Farmer's Advocate," to which we attribute the most of our sales through the Dominion. We have retained about 100 head of both sexes, also shipped three double-deck carloads of rams and ewes to J. M. Johnson, Idaho; 200 ewes and a few rams also went to Idaho, to a Mr. Pierce, which speaks well for the ever-increasing demand for Oxford Downs. We are also wintering a flock of between 200 and 300. We are now offering a nice lot of young ewes, bred to our champion imported ram, Addebury Hugo, at reasonable rates. They are a very typical lot, and our prices are reasonable. We have also added 30 registered Hampshires, bought of F. C. Biggs, of Dundas, part of which are imported, and the balance from imported sire and dam.

TRADE TOPIC.

ATTRACTIVE CALENDARS AND POSTERS.—The International Harvester Company of America have issued an exceptionally artistic assortment of lithographed 1910 calendars and posters for distribution among their dealers, to be given free to farmers applying for them. Each applicant may have one of the posters and one of the catalogues, showing the machine he is most interested in. Both calendars and posters are printed in beautiful colors, representing farm scenes and different classes of machines. An original conception is embodied in the design of the Deering calendar, representing a butterfly type of flying machine, as a sudden apparition over a meadow where a farmer is mowing hay. Astonishment is personified by a wave of his raised hat, by the transfixed expression of the girl beside him, as well as of the man with the pitchfork also standing nearby. The blending of the colors is a fine piece of work, and the artist has caught the spirit of the scene to a T. Users of the McCormick machines are also well provided for. The human touch of the two children as the central group, with the harvesting scene as the bottom panel, appeals as a happy conception. A 20 x 30-inch gasoline engine poster, depicts in a very attractive manner the many uses to which this farm power is put, the labor it saves, and the prosperity it helps to bring. Two other posters are on cream separators, one for the "Dairymaid" and one for the "Bluebell." The manure spreader, hay press and wagon posters speak for themselves. The I. H. C. Almanac and Encyclopedia is a neat, compact little booklet, brimful of information which needs perusal to be appreciated. It is a valuable ready-reference guide, containing many useful data and tables, as well as instructive articles by eminent authorities on various agricultural subjects. The International Harvester Company always seem to make it a point in their literature and publications to achieve two ideals, beauty and utility, and the present productions are an exception to the rule only in that they have surpassed former efforts. Every farmer who has not already done so, should obtain one of the posters and one of the calendars. Apply to the nearest International Harvester Company's agent.

New Life --- New Strength

THAT'S WHAT YOU NEED



I wish you could know for yourself the wonderful effect of the galvanic current on weak and nervous men. I wish you could realize the health and happiness that will be yours when this wonderful force infuses every nerve and vein of your body as accomplished through my treatment.

I use electricity applied to the body by means of the world-famous Dr. Sanden Herculex Electric Belt, in a steady, invigorating stream during your sleeping hours. You get up in the morning feeling as if born anew.

Free Until Cured

Call, or write to me, and I will at once arrange to let you have the Belt on trial, not to be paid for until cured.

No deposit or advance payment. Send it back if it doesn't do the work. Liberal discount for cash if you prefer to deal that way.

The world has no use for a weakling. Men must be strong to-day, or give way to those who are. There is no compromise. Strength means success. Weakness spells failure. Which will you be?

How strength is lost and how it may be regained; how to increase your earning power; how to be successful in business and popular in society; how to rid yourself of rheumatism, indigestion, lame back, etc.; how to be strong, vigorous, magnetic and happy, and make life a real pleasure; all this and much more is told and pictured in a neat little book which I am distributing free for the asking. It is sent closely sealed, without marks, to anyone sending name and address. No tire-some exercises or dope-laden drugs used.

DR. A. F. SANDEN, 140 YONGE STREET TORONTO, ONT. Office Hours, 9 to 6; Saturday until 8 p.m.

275 BURLINGTON SHORTHORNS 275

4 IMPORTED SCOTCH SHORT-HORN BULLS. 12 BULL CALVES, 9 TO 16 MONTHS OLD. All choice yearlings — 2 reds and 2 roans. All from imp. sire and a number from imp. dams.

We are offering 15 choice young SHORTHORN BULLS of serviceable age. Among them are high-class herd-headers. We can supply females of all ages. Farms close to Burlington Jct., G.T.R. W. G. PETTIT & SONS, FREEMAN, ONT.

INVERNESS SHORTHORNS I can supply Shorthorns of all ages, with richest Scotch breeding and high-class individuality. W. H. EASTERBROOK, Freeman, Ont.

Imp. Scotch Shorthorns—When looking for Shorthorns, be sure to look me up. Young bulls fit for service, and females all ages; bred in the purple, and right good ones. A. C. Pettit, Freeman, Ont.

Maple Leaf Shires, Shorthorns, Hampshire Hogs 1- and 2-yr.-old Shire stallions, females from yearling fillies up; Shorthorns, both bulls and heifers; a choice lot of young Hampshire pigs, both sexes beautifully belted. PORTER BROS., APPLEBY P.O., BURLINGTON STA. Phone.

SHORTHORNS Nine bulls from 8 to 20 months old, reds and roans; 10 yearling heifers and a few cows. Will sell very cheap to make room in stables. CLYDESDALES One pair of bay mares and one dark brown, heavy draft and two spring colts. JAMES McARTHUR, Gobles, Ontario.

A. Edward Meyer P. O. Box 378, Guelph, Ont., Breeds SCOTCH SHORTHORNS Exclusively. Twelve of the most noted Scotch tribes have representatives in my herd. Herd bulls: Scottish Hero (imp.) = 55042 = (90065) 295765 A. H. B.; Gloster King = 68708 = 28304 A. H. B. Young stock for sale. Long-distance phone in house.

RAW FUR COMMISSION HOUSE

58-60 TEMPERANCE STREET, TORONTO, ONTARIO, CANADA. Shipments of Raw Furs Solicited. Highest prices, prompt returns, fair assortments. All shipments kept separate until remittance is found satisfactory. We pay all express charges. Write for Price Lists. Chas. Weckler, Manager.

## Suffered Terrible Pains From Her Kidneys For Nine Months.

For Backache, Lame or Weak Back— one of the commonest and most distressing symptoms of kidney inaction, there is no remedy equal to Doan's Kidney Pills for taking out the stitches, twinges and twinges, limbering up the stiff back, and giving perfect comfort.

A medicine that strengthens the kidneys so that they are enabled to extract the poisonous uric acid from the blood and prevent the chief cause of Rheumatism.

Mr. Dougald A. McIsaac, Broad Cove Banks, N.S., writes:—"I was troubled with my kidneys for nine months, and suffered with such terrible pains across the small of my back all the time that I could hardly get around. After taking two boxes of Doan's Kidney Pills I began to feel better, and by the time I had taken three I was completely cured."

Price 50 cents per box, or 3 for \$1.25, all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

When ordering specify "Doan's."

## BRAMPTON JERSEYS

Canada's greatest Jersey herd offers male or female stock; imported or home-bred; show type or producers; one or a carload. 150 for sale. Phone. B. H. BULL & SON, BRAMPTON, ONT.

### WOODBINE STOCK FARM

Offer a number of Holstein cows, heifers and young bulls at moderate prices, sired by Sir Creamelle, whose breeding combines the blood of DeKol Creamelle, world's champion milk cow, with that of Duchess Ormsby, highest testing family of the breed. Write for anything you want.

A. KENNEDY, Ayr, Ont.

### Imperial Holsteins!

For sale: Bull calves sired by Tidy Abbe Kirk Mercedes Posch, whose seven nearest dams have records within a fraction of 27 pounds, out of show cows with high official records. A most desirable lot of coming heifers. W. H. SIMMONS, New Durham P. O., Ont., Oxford County.

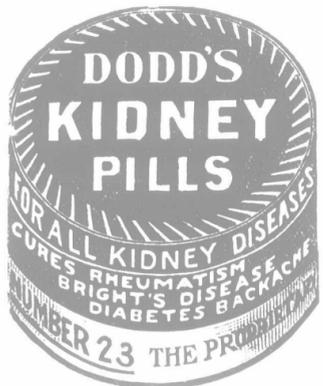
### Glenwood Stock Farm—Holsteins and Yorkshires

Holsteins all sold out. Have a few young Yorkshire sows, about 2 months old, for sale cheap. True to type and first-class. Bred from imported stock. Tnos. B. Carlaw & Son, Warkworth P.O., Ont., Campbellford Station.

Holsteins at Ridgedale Farm—Eight bull calves on hand for sale, up to eight months old, which I offer at low prices to quick buyers. Write for description and prices, or come and see them. R. W. WALKER, Utica P.O., Ont. Shipping stations: Myrtle, C. P. R., and Port Perry, G. T. R., Ontario Co.

For Sale—7 Holstein bulls; Tamworth pigs from 2 to 6 months old. White Wyandotte cockerels and Buff Orpington hens. BERTRAM HOSKIN, The Gully P.O., Ont. Phone connection via Cobourg.

When occupying the pastorate of a Western church in his early career, Dr. George H. Ferris had a deacon whose character had always been above reproach until a certain prayer meeting which followed a sermon, during which the elder had soundly slumbered at the opening. "Will Brother Jones kindly lead?" was asked by the pastor. Walking with a start at the mention of his name, the deacon almost broke up the service by replying, "I led last time; it's your turn. What's trumps?"



### GOSSIP.

Geo. Amos & Sons, Moffat, Ont., write: Our cattle are doing finely in their winter quarters. We have a good bunch of young calves coming up. Have still for sale four good young bulls, from nine to twelve months old, including Collynie Prince, by Ben Lomond (imp.), out of Imp. Collynie Fragrance; and Bud's Choice, a very promising calf, out of Rosebud 11th, dam of Lancaster Bud, grand champion female, A. Y. P. E., Seattle, Wash., 1909. We will sell these young bulls worth the money for want of room. Write us, or come and see us, as we feel sure these young bulls will interest intending purchasers.

### SELLING THE KING'S FAT STOCK.

At the sixtieth annual Christmas show and sale of fat stock at Slough, Eng., a large gathering witnessed the dispersal of the thirty-five bullocks, 280 sheep, and eighty-one bacon hogs and porkers, fed on King Edward's farms at Windsor. Twenty-seven bacon pigs made nearly £10 10s. each, on the average; thirty-two fat hogs realized more than £5 apiece, and twenty-two porkers made prices ranging up to £12 15s. for a pen of three. Altogether, the pigs realized £522 10s. Good prices were obtained for the cattle, the thirty-five averaging £39 each, and the top figure of £56 being made by a grand Shorthorn steer. Mr. Willis, of Sheffield, was the buyer. The highest prices paid for the King's fat sheep were £5 12s. and £5 each, respectively, for prime Hampshire Down tegs. The sale realized £2,900 in all. W. W. Astor's white polled ox was awarded the cattle championship, and was afterwards sold for £42.

### THE GUNN-WALKER SALE OF SHORTHORNS.

At the Union Stock-yards, West Toronto, on Friday, February 4th, the day following the big combination sale, as announced last week, the entire herd of the late Donald Gunn & Son will be sold by the executors in winding up the estate; and Walker Bros.' entire herd will be dispersed, the whole being an offering of the highest type of excellence of the breed, and bred on the most fashionable lines; all told, 56 head. The Gunn consignment consists of 21 head, 17 females and 4 bulls. They are all in splendid condition, and nearly all eligible for American registration, an essentially high-class lot of big, thick animals, several of which are imported. Trout Creek Lavender, white five-year-old, by the \$5,100 bull, Lord Banff (imp.), dam Imp. Lavender Rose 2nd, has a heifer calf at foot. Also to be sold is a red yearling bull out of her, and got by Prime Sailor, named below. Collynie Mistletoe (imp.), a Marr Missie, roan, seven years old, by Royal Edward, granddam by William of Orange; also a one- and a two-year-old pair of her daughters, both by Prime Sailor. Sea Shell (imp.), a Bruce Mayflower, by the Rosewood bull, Luxury. D. R. Mayflower is a three-year-old daughter of hers, by the Missie bull, Blythsome Ruler. D. R. Mayflower 2nd, two years, and D. R. Mayflower 3rd, a one-year-old, are also her daughters, sired by Prime Sailor; all three are roans. Pine Grove Clipper 8th is a C. Clipper, roan, six years, by Imp. Village Champion. D. R. Clipper is a white three-year-old daughter, by Royal Favorite. D. R. Clipper 2nd is a red two-year-old daughter, by Prime Sailor. D. R. Clipper Boy is a roan yearling son, by the same sire. D. R. Rosegirl (imp.) is a Marr Roan Lady, by Inkerman. D. R. Rosegirl 2nd is a nine-months-old daughter, by Prime Sailor. Village Queen 5th is a red six-year-old, a C. Village, by Royal Prince. This cow is dam of the Guelph grand champion fat steer at the late show. Belmar Mayflower is a Bruce Mayflower, roan, four years, by Imp. Merryman. Nonpareil Lady 2nd, a C. Nonpareil, by King Edward, is the dam of Nonpareil Eclipse, who is the sire of the Guelph champion steer. Dums-in-Glass Nonpareil is another C. Nonpareil, a five-year-old roan, by Scotland's Fame (imp.). This cow is a heavy and persistent milker. D. R. Nonpareil Lad is a yearling son of hers, by Prime Sailor. Prime Sailor, the stock bull, is a red five-year-old, sired by Imp. Village Champion, and his dam is a Marigold-bred daughter of Imp. Prime Minister.

**IF YOU WANT A BIG SALARY YOU OWE IT TO YOURSELF TO WRITE US A LETTER OR A POSTAL.**

Don't you often wish you had a good position and a big salary? You see other men who have. Do you think they get them by wishing? Don't you feel if you had the chance you could do their work? Of course you could. Just say, "I'll do it," and you will. Get your pen. Write us a letter or postal. We will show you how.

**YOU CAN EARN BIG MONEY. WE WILL START YOU FOR IT.**

**FIREMEN AND BRAKEMEN!**  
Earn from \$75 to \$150 per month.

With the rapid progress of railway building in Canada it takes only two or three years to be advanced to engineer or conductor, whose salaries are from \$90 to \$185 per month.

ADDRESS:  
**THE DOMINION RAILWAY SCHOOL**  
Dept. F.  
Winnipeg, Canada.

**Our free booklet** tells all about our system of teaching. When writing, state age, weight and height.

**Canada Post Card**  
The Dominion Railway School  
Winnipeg  
Canada

### HOMWOOD DAIRY HOLSTEIN CATTLE!

Offers two beautiful bull calves, sired by a son of Lady Aaggie De Kol, sweepstakes winner and a four-per-cent cow. Price \$100 each. Six cows in calf to the richly-bred bull, Prince Abbe Kirk Mercena. Write for particulars.  
**M. L. & M. H. Haley, Springford, Ont.**

If you are thinking of buying a choice young cow or heifer in calf, come and see our herd. Will sell anything. Have a dozen beautiful heifers safe in calf to Summer Hill Choice Goods (imp.), who has five sisters averaging 29 1/2 lbs. butter in 7 days, and one sister that held world's record as 4-year-old with 31.60 lbs. butter. Write us what you want. We will guarantee everything just as described. Visitors met at Hamilton by appointment.  
**D. C. Flatt & Son, Millgrove, Ont.**  
L.-D. Telephone 2471, Hamilton.

### Holsteins FOR SALE: COWS AND HEIFERS

All ages. Also bull and heifer calves, including daughter and granddaughters of Pieterje Hengerveld Count De Kol, whose TWO famous daughters made over 32 lbs. butter each in 7 days, and sire of the "world's champion milking cow," De Kol Creamelle, which gave 119 lbs. in one day, over 10,000 lbs. in 100 days. Also for sale daughters of De Kol's 2nd Mutual Paul, sire of Maid Mutual De Kol, which gave over 31 lbs. butter in 7 days; also granddaughters of Hengerveld De Kol. Other leading breeds represented. Putnam station, near Ingersoll.  
**H. E. GEORGE, CRAMPTON, ONTARIO.**

### CENTRE AND HILLVIEW Holsteins

140 head, 45 females in R. O. M. Herd headed by Brookbank Butter Baron, Bonheur Statesman and Sir Sadie Cornucopia Clothilde. The average of dam, sire's dam and granddam is: milk in 7 days, 662.85 lbs.; butter in 7 days, 30.58 lbs. We have bulls born Mar., '09, to two weeks old for sale, from Record-of-Merit dams. Long-distance telephone. P. D. Ede, Oxford Centre, Ont. Woodstock Sta.

### Fairview Herd

offers for sale a son of Rag Apple Korndyke. His dam is a daughter of Pontiac Korndyke, with an A. R. O. record of 13.08 lbs. butter in 7 days at two years. Price, \$150.00.  
**E. H. Dollar, Heuvelton, N. Y.**  
NEAR PRESCOTT.

### Lakeview Holsteins

Herd headed by Count Hengerveld Fayne De Kol, son of Pieterje Hengerveld's Count De Kol, who has five daughters averaging over 30 lbs. butter in 7 days, and whose dam (26.30 lbs. in 7 days) has a daughter with a record of over 35 lbs. in 7 days. Five bull calves from nine months old down from this sire for sale. G. T. R. and Hamilton Radial close to farm. Visitors met by appointment. E. F. OSLER, BRONTE, ONTARIO.

### Maple Glen HOLSTEINS

For sale: Two 3-year-olds, bred to a son of Brown Bros. 30-lb. cow, due to freshen next March. Netherland Johanna Mercedes, member to King Fayne Segis, a son of world's champion cow. Also two bull calves, from tested dam, born last June, sired by King Fayne Segis. G. A. GILROY, Glen Buell, Ont. Long-distance phone.

### THE MAPLES HOLSTEIN HERD

of Record-of-Merit cows, headed by King Posch De Kol. Only two sons of our old Record-of-Merit stock bull, Lord Wayne Mechthilde Calamity, left for sale, from cows with good official backing; also a few bull and heifer calves sired by King Posch De Kol, and from Record-of-Merit dams.  
**WILBURN RIVERS, FOLDEN'S, ONTARIO.**

### HERE AGAIN! CHEESE IS HIGH. Why not invest AT ONCE? We sell at BARGAIN prices. Write or call, we're always home. Railway connections good.

**E. & F. MALLORY, Frankford, Ont.**

### High-class Holsteins

Head of herd, Pieterje Korndyke Lad. Two nearest dams average 26.09 lbs. butter in 7 days. His sire's dam, Pieterje 22nd, has a record of 31.62 lbs. butter in 7 days. Present offering: 2 heifers, due to calve in April, at a bargain before Dec. 1 to make room; also 2 bull calves by Mannor Johanna DeKol, out of officially-tested cows.  
**WM. C. STEVENS, PHILLIPSVILLE, ONT.**

### AVONDALE HOLSTEINS

Offers for sale high-class Holsteins all ages. Herd headed by Prince Hengerveld Pieterje, a son of Pieterje 22nd's Woodcrest Lad, out of Princess Hengerveld, a daughter of Hengerveld DeKol, with record of 20.34 lbs. butter at 23 months. We also offer some fine young Yorkshires of choice breeding.  
**ARTHUR C. HARDY, BRUCKVILLE, ONTARIO**

### Maple Hill Holstein-Friesians

FOR SALE—Julia Arthur 2nd, calved Aug. 1st, 1905, 9,219 lbs. milk and 312 lbs. fat in one year; calving in Aug. at 3 yrs. 8 days old. Freshened Oct. 19th, '09. Price \$200 cash. Also bull calves.  
**G. W. CLEMONS, ST. GEORGE, ONT.**

### EVERGREEN STOCK FARM

offers choice young Holstein Bulls, from 10 to 11 months, sired by Sir Mercena Favorite, whose dam and gr. dam averaged 80 lbs. milk per day, and 24.60 lbs. butter per week. Their dams also in A. R. Also choice females for sale. F. E. Pettit, Burgessville, Ont.

GOSSIP.

SPRUCE LODGE SHORTHORNS AND LEICESTERS.

Spruce Lodge Stock Farm, the home of a choice herd of Shorthorn cattle and Leicester sheep, is the property of W. A. Douglas, Tuscarora P. O., in the County of Brant, about four miles west of Caledonia. This herd represents a division of the far-famed herd of the late Wm. Douglas, which herd was established over fifty years ago, on imported selections that were principally of Bates breeding, a strain of Shorthorns noted for the two greatest qualifications a breed of cattle can possess, namely, great size, many of them touching the 1,800-lb. mark, and great milk-producing qualities, both of which are eagerly sought for to-day. In this herd, at the present time, are descendants of the following great cows, that in their day made the original herd famous as one of the best in America: British Lady 2nd, that traces to Beauty (imp.), by Snowball; Adeliza 17th, a descendant of Adeliza (imp.), by Frederick 1060; another descendant of the good, old-time strains, is Marvis, that traces to the Scotch-bred cow, Imp. Louisa, by Red Lion. Others of more modern strains are Beauty 32nd (imp.), a Marr Beauty, by Count St. Clair, dam by Cash Box; Lovely Queen, a Cruickshank Lovely, by Prince of Pine Grove; Daisy of Strathallan, a Strathallan, by Imp. Rosicrucian of Dalmeny, etc., so that in this herd are Shorthorns bred on heavy-milking lines, descendants of the imported cows that were practically the founders of the breed in Canada, namely, Beauty, Adeliza, Lavinia, Daisy, etc. Others are bred on such modern and fashionable lines as the Cruickshank Lovelys, Marr Beautys and Strathallans. Many of the older ones are the get of Imp. Rosicrucian of Dalmeny, and Imp. Christopher, the younger ones being all the get of that great bull, Imp. Joy of Morning, a Toronto first-prize winner. In females, for sale, are four yearling and three 3-year-old heifers, Scotch and dairy bred. In bulls, there is only one left, but a most desirable one, a red yearling, by Imp. Joy of Morning, and his dam is a Lavinia-bred cow, a direct descendant of Waterloo Daisy, who won the Shorthorn championship in dairy test at the World's Fair, Chicago. This young bull is exceptionally large for his age, very thick-fleshed, deep-ribbed and mellow; a right good kind.

The flock of Leicester sheep are wintering in fine shape, a big, choice lot of sheep, of a flock that has produced very many prizewinners. The 1909 crop of lambs are by Imp. G. 54, 12287, bred by W. F. Ferguson, and the ewes are again bred to him. There are still on hand for sale a few big, thick ewe and ram lambs.

TRADE TOPIC.

The Union Trust Company, with its head office at 174-176 Bay street, Toronto, and branches in Winnipeg, and London, England, acts as executor or administrator of estates, and gives ample security. A private executor may die, a Trust Company never does. It may lose an officer, but there are always others trained to take his place. The Government charters a Trust Company to do this sort of work, and it always has trained and competent officers, devoting their entire time to it. The Union Trust Company pays 4 per cent. interest on deposits, and the interest is compounded quarterly, with the privilege of drawing by check any amount, or the whole account, at any time. As a source from which to get a loan on property, the Trust Company can accommodate as cheaply as can a private individual, with less difficulty or inconvenience, and with perfect privacy. As a means of selling or purchasing a farm, the Union Trust Company is at the service of the people, having an office in London, England, and a list of farms for sale in many sections of Ontario. The company has a capital of \$1,000,000, a reserve fund of \$500,000, and assets of \$10,627,082. The officers and directors are among the most influential and trustworthy in the Dominion.

# IT MAKES LIVE MEN OUT OF WRECKS!

Many people would give all they possess to regain the health they have lost. Many have spent their last cent in its pursuit—and thrown their money away.

Such people are misled by custom and the well-meant advice of friends. They take every new drug under the sun and find them all useless.

Yet here is a simple, natural remedy, Dr. McLaughlin's Electric Belt, that does what other things fail to do. It does not poison the system nor depress the spirits. On the contrary, it starts the life current anew and produces health. It invigorates the mind. Without knowing how, the patient jumps from despondency to health and ambition.

There is nothing wonderful in this change. It is all so natural. Think what the effect would be if you were suddenly deprived of all the Electricity in your body. You could not live an instant. No mental or physical life could exist without Electricity. Naturally, when the amount is below normal you are less vigorous, less ambitious.

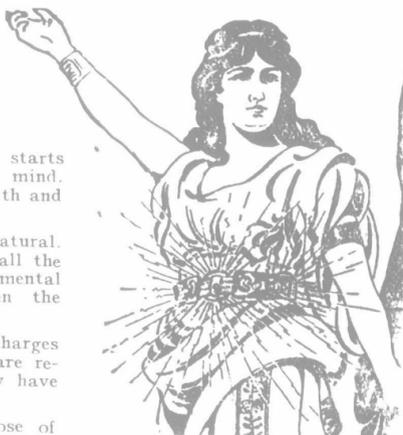
Then is the time my Belt does great things for you. It recharges your nerves with life-giving currents. Soon strength and vitality are restored. You feel the old, stimulating glow of health. You now have the right amount of Electricity, and you are "equal to anything."

What is my Belt? It is a body battery, made for the purpose of applying Electricity to the human system in the most scientific and effective way. It is made on an entirely different plan from the worthless devices known by "Electric Belt." Its current is of guaranteed strength and constancy. It is provided with a regulator. This enables you to change the current to suit varying needs. You wear it at night. Its soothing currents send you to sleep. You wake up refreshed and invigorated. Before long you feel like a different person—and you are different. Your friends tell you so.

The benefits of my Belt are being daily demonstrated by thousands of patients, and it is heartily endorsed by those who have been cured.

If you are sick or weak, and your doctor isn't helping you much, you ought to try my Belt. It's a grand remedy. All such troubles as Indigestion, Constipation, Torpid Liver, Tired Feeling, Weak Kidneys, Rheumatism, Neuralgia, Lame Back, Lumbago, Sciatica, Sleeplessness, Nervousness and Headaches are cured completely with Electricity applied with my Belt; it overcomes all signs of weakness or breakdown in men and women. My Belt not only cures the sick, but gives the well a greater zest in life.

If you haven't confidence in Electricity, let me treat you at my risk. I will give you the Belt on trial, without one cent of risk to yourself. Give me reasonable security, and I will take your case, and



## When You Are Cured Pay Me

### FREE BOOK

Call at my office and let me explain my Belt to you. If you can't do this, cut out this coupon, send me your name and address to-day, and I'll mail you, closely sealed, my elegant, illustrated 80-page Book, which is FREE. My FREE BOOK for women is now ready.

MR. WILLIAM P. MORTER, 87 Hawkesbury, Ont., says: "I am pleased to report a good account as regards my health. I am beginning to find myself stronger in every way. Certainly your Belt does its duty and its work is sure."

MR. JOHN HUNT, Davisville, Ont., says: "I wish to say that your Belt has done me more good than all the medicine I ever took. I used it regularly for three months, and I have not needed it since."

MR. THOS. JORDISON, Chatsworth, Ont., says: "Your Belt worked wonders with my back, and my general health is built up far beyond my best expectations."

**DR. M. S. McLAUGHLIN,**  
112 Yonge St., Toronto, Can.

Gentlemen: Please send me, prepaid, your Free Book.

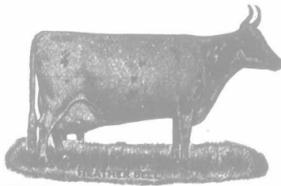
NAME.....

ADDRESS.....

Office Hours—9 a.m. to 6 p.m. Wednesday and Saturday until 8.30 p.m.

### Just Landed with 50 Head CHOICE AYRSHIRES

Including 12 bulls fit for service, a few August calving cows and two-year-old heifers; cows with records up to 70 lbs. per day. I have a choice lot of two-year-olds, yearlings and heifer calves. Anything in the lot for sale. Correspondence solicited. Phone, etc.



R. R. NESS, HOWICK, QUE.

### AYRSHIRES AND YORKSHIRES

Can fill orders for car lots of Ayrshires, or for good grade dairy cows. Young bulls, cows, heifers or calves of choice breeding. Orders taken for imported stock for 1910. A few young Yorkshires. Write us for anything you need in above lines.



ALEX. HUME & CO., MENIE, ONT.

### Stonehouse Ayrshires

36 head to select from. All imported or out of imported sire and dam. For sale: females of all ages. Am now booking orders for bull calves.

Hector Gordon, Howick, Quebec.

### ISALEIGH GRANGE AYRSHIRES!

Our herd were all selected on their ability to produce a heavy yield of milk. We have a number of 40, 45 and 50 lb cows, imported and Canadian-bred. From them are young bulls and heifers for sale. None better. JAMES BODEN, DANVILLE, QUEBEC, ISALEIGH GRANGE FARM.

**CRAIGIE LEE** Have won more money the last 4 years than all competitors combined, they are heavy producers and high testers. Stock of both sexes for sale, of show-ring form.

H. C. HAMILL, Box Grove P.O. Locust Hill, C. P. R. Markham, G. T. R. Bell phone connection from Markham.

**Shannon Bank Ayrshires and Yorkshires.** Am now offering young bulls and heifers, true to type and high in quality. Young Yorkshires of both sexes. W. H. Tran & Son, Locust Hill P.O. & Sta., Ont.

**Ayrshires from a Prizewinning Herd—** Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to **WM. STEWART & SON,** Campbellford Sta. Menie P.O., Ont.

**SPRINGBROOK** are large producers of milk, testing high in butter-fat. **AYRSHIRES** Young stock for sale. Orders booked for calves of 1909, male and female. Prices right. Write or call on **W. F. STEPHEN, Box 163, Huntingdon, Que.**

**Ayrshires**—Four young bulls, all bred on dairy lines, out of famous dams; fashionable in color, as well as in breeding. Will be sold worth the money. Females all ages. **N. DYMENT, Clappison's Corners, Ont.**

When Writing Mention The Advocate

**BIG SALARY YOURSELF TO WRITE FOR A POSTAL**

Do you had a good salary? You see have. Do you get them by wishing? You had the chance their work? Of could. Just say, "and you will get pen. Write us for postal. We will show you how.

**YOU CAN EARN BIG MONEY. WE WILL START YOU FOR IT.**

**REMEMBER BRAKEMEN!**

from \$75 to per month. rapid progress building in takes only two years to be an engineer or whose salaries \$90 to \$185 per

**CATTLE!**

ing a choice young cow our herd. Will sell beautiful heifers safe in Goods (imp.), who has a butter in 7 days, and record as 4-year-old with what you want. We list as described. Visitors

Millgrove, Ont. 171. Hamilton.

**ERS**

ing ger- ters re of one tual and- tation, near Ingersoll, N. ONTARIO.

**w Herd**

Apple Korndyke. His ac Korndyke, with as butter in 7 days at Melton, N. Y.

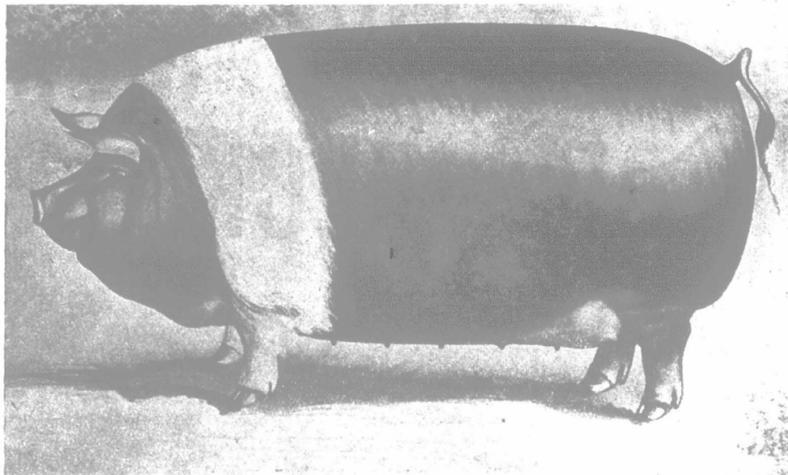
**COLSTEINS**

Kol, son o has five days) has onths old itors met

**ford, Ont.**

**CKVILLE, ONTARIO**

M offers choice young 10 to 11 months, sired ose dam and gr. dam y, and 24.60 lbs. butter in A. R. Also choice Burgessville, Ont.



COOPING QUEEN 1800, GRAND CHAMPION AT MICHIGAN STATE FAIR.

A. O'Neil & Son, Birr, Ont., Can., Middlesex Co. Stations: London, G.T.R. and C.P.R.

### Canada's Greatest Herd of Hampshire Swine.

First and largest established herd in Canada. Stock all ages for sale at all times. Have some good ones now from 6 weeks to 4 months old. Pairs and trios furnished not akin. All stock safely crated and properly equipped for transportation, so there is no danger in shipping even to the most distant points. Call on or address:

### GOSSIP.

John T. Gibson, Denfield, Ont., in renewing his advertisement of Shorthorn cattle, writes: I was talking to a large steer feeder the other day, who said he would either have to go out of the business, or go somewhere else for his steers to feed, as it was practically impossible to get a bunch of good steers without a lot of trash mixed with them. Where the beef is coming from in the near future, I cannot figure out. If the Canadian people are satisfied to eat beef fed from dairy-bred cattle, they may get that, but that is not the kind of beef this great country should produce.

Dalgely Bros., of Glencoe, Ont., have lately sold to Martin H. Rosser, of Denfield, Ont., the choice-quality Clydesdale stallion, Sir Randolph, a son of the noted prize horse, Moneriffe Marquis, by Prince of Carruehan, by Prince of Wales, his dam being by that good breeding horse, Tulloch. Sir Randolph is a massive, thick, smooth horse, with a superior quality of underpinning, and has to his credit as winnings in the land of his birth, first at Bishopton, Paisley and Beith, and reserve champion as a yearling; first and champion at Bishopton and Paisley, and second at Glasgow as a two-year-old. He has always held noted premiums, and is the sire of numerous prizewinners in Scotland. He is the kind of horse that is calculated to leave a decided improvement on the size and quality of the draft horses in any section in which he may go, and the breeders around Denfield are to be congratulated in having him in their section.

### MORE SHORTHORNS AT AUCTION.

Another lot of Scotch Shorthorns of superior type, quality and breeding, will be sold at the Union Stock-yards, West Toronto, on the evening of Thursday, February 3rd, commencing at 7 o'clock. These represent the dispersion of the entire herd of A. D. Schmidt & Sons, of Elmira, Ont. This herd was gotten together at a big expense, long prices being paid for a number of them, but will now be sold for whatever is bid for them, as Mr. Schmidt is going into other business. All told, there are thirteen head, Crim-son Flowers, Minas, Wedding Gifts, El-virus, Nonparils, etc. Dunrobin Prim-rose is a white three-year-old daughter of Imp. Lucerne, a grand, thick-fleshed heifer. Mina Lass 13th is a red four-year-old, a show proposition, by Imp. Proud Gift, dam by Imp. Prime Minister. Sunset is a red three-year-old, by Missie Champion, dam Imp. Susanna, by Scot-tish Bard. This is another right good thick one, put up on show lines. These are sufficient to show the royal way in which they are bred. Several of the younger ones are the get of the Cran-berry-bred bull, Imp. Greengill Archer, others are got by Sunnyside King, a son of the noted champion, Imp. Spicy Mar-quis, Imp. Bandolier, the Marigold-bred bull, Prime Sailor, and the Matchless-bred Matchless Duke. Others are out of daughters of that great breeding bull, Imp. Derby. They are essentially a high-class lot, thick and even-fleshed, and in splendid condition, in age ranging from yearlings up. There will also be sold the stock bull, Imp. Deedsie Chief, a roan five-year-old, sired by the Emma-bred bull, King Victor, dam Cinderilla, a Mar-rian Lady. This bull was champion of the Maritime Provinces for two years, is away above the average in the matter of thickness of flesh and modern type, a grand handler, and right in every par-ticular. Other bulls to be sold are Model Chancellor, a red two-year-old, by a son of Imp. Bapton Chancellor, dam a Crim-son Flower; Archer's Gift, a roan fourteen-months-old, a Wedding Gift, sired by Imp. Greengill Archer. The other is a red six-months-old, a Crim-son Flower, got by the same sire. Also, there will be sold a consignment by F. W. Nichol-son, Flesherton, Ont.; four head, Telluria's Secret, sired by Imp. Derby, is a red yearling bull, with a calf at foot, a red yearling bull, a son of hers, by Scottish Pride, and Dubside Rose, a roan three-year-old heifer, by Imp. King Ed-ward. As will be seen by the above, the offering is bred on the most approved Scotch lines. For fuller particulars as to terms, etc., look up the advertisement in another column, and write Mr. Schmidt for catalogue.

### A PERFECT HOG FOOD

You can save time and money by feeding

### Imperial Hog Food

The only exclusive hog food on the market. Once used always used. Write for booklet.

The Imperial Stock Food Co. KINGSVILLE, ONT.

ESTABLISHED 1865  
**RAW FURS**  
 E. T. CARTER & CO.  
 84 Front St., East, TORONTO, ONT.  
 WRITE FOR OUR LATEST PRICE LIST  
**SHIP US NOW!**  
 HIGHEST PRICES PAID FOR ALL KINDS OF RAW FURS. PROMPT RETURNS. WE PAY EXPRESS.



### MONKLAND YORKSHIRES

With very nearly 100 sows in breeding, of modern type and high-class quality, our herd will stand comparison with any in Canada. We are always in a position to fill large or small orders with despatch. Long-distance phone. **JAMES WILSON & SONS, FERGUS, ONT.**

### Large White Yorkshires

An offering at the present time a fine lot of young sows, bred to farrow during Mar. and Apr. Also young pigs, both sexes, from 2 to 4 months old. Pairs supplied not akin. Write or call on

**H. J. DAVIS, WOODSTOCK, ONT.**  
 Long-distance Bell phone. C.P.R., G.T.R. main lines.

### Improved CHESTER WHITES

Young sows of breeding age. Some already bred. Also choice young pigs of both sexes, 6 to 8 weeks old. Joe No. 5629, first-prize boar at Toronto and London, 1909, at head of herd. Also two grand young Jersey bulls. **Chas. E. Rogers, Thames Valley Farm, Dorchester, Ont.**

**Newcastle Herd of Tams and Short horns**—For quick sale at very reasonable prices. 6 sows sired by Imp. Cholderton Golden Secret, bred to farrow in Jan., Feb. and March, to a Toronto prize boar. Nearly all my brood sows are sired by that noted prize hog, Colwill's Choice, or Newcastle Warrior, champion boar at Toronto, 1901, 02, 03 and 05. I also offer 50 boars and sows, from 2 mos. to 4 mos. old. Two bull calves one year old. Half-a dozen heifers, from 1 to 3 years old. Long-distance Bell phone in home. **A. A. COLWILL, Box 9, NEWCASTLE, ONT.**

### Willowdale Berkshires!

Young sows ready to breed, boars ready for service, young pigs just weaned, all choice stock and bred in the purple. Everything guaranteed as represented. Long-distance phone. **J. J. WILSON, Importer and Breeder, Milton P.O. and Station. C.P.R. & G.T.R.**

### DUROC - JERSEY SWINE

Imported and home-bred. Sows ready to breed. Boars fit for service, and younger ones either sex. Also Embden geese. **MAC CAMPBELL & SONS, HARWICH, ONT.**

**OHIO IMPROVED CHESTER WHITES**—Largest strains. Oldest-established registered herd in Canada. Young sows in farrow. Choice pigs 4 weeks to 6 months old. Pairs furnished not akin. Express charges prepaid. Pedigrees and safe delivery guaranteed. **E. D. GEORGE, Putnam, Ont.**

**Tamworths**—A grand lot of young boars from 2 to 4 mos., also young sows (landies). Some just bred. Some in farrow to first-class boars from best herds in England. Prices reasonable. **Chas. Currie, Morrison, Ont.**

### PINE GROVE BERKSHIRES!

Sows bred and ready to breed. Nice things, three and four months old. **W. W. BROWNRIDGE, Milton, C. P. R., Ashgrove, Ont. Georgetown, G. T. R.**

### PINE GROVE YORKSHIRES

including all the firsts and sweepstakes for best dressed carcasses, both at Guelph and the Ottawa Winter Fat-stock Shows of 1908-09. Young pigs for sale, mated not akin, all the progeny of imported stock of superior excellence. **Joseph Featherston & Son, Streetsville, Ont.**

### FARNHAM OXFORD DOWNS.

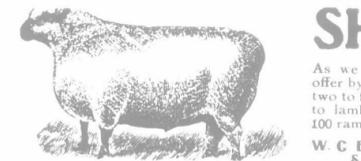
**The Champion Flock, The Oldest Importers, The Largest Breeders in America.**  
 In American Oxford Down Record. We are offering a number of first-class yearling ewes from imported sires, and bred to champion imported ram; also a number of ram and ewe lambs. Prices reasonable. **HE'RY ARKELL & SON, Arkell, Ont. C. P. R.; Guelph, G. T. R. and Telegraph.**

### Hilton Stock Farm Holsteins and Tamworths.

Present offering: 6 yearling heifers and several younger ones. All very choice. Of Tamworths, pigs of all ages and both sexes, pairs not akin. **R. O. MORROW & SON, Hilton, Ont. Brighton Tel. and Stn.**

### Oxford Down Sheep, Shorthorn Cattle, Yorkshires

Hogs—Present offering: Lambs of either sex. For prices, etc., write to **John Cousins & Sons, Buena Vista Farm, Harri-ston, Ont.**  
 Envy not greatness: for thou mak'st thyself the worse, and so the distance greater. —Herbert.



### SHROPSHIRE!

As we are disposing of the whole of our Shropshires, will offer by private sale 75 imported and home-bred ewes from two to five years old. These ewes are a grand lot, and due to lamb in March to imp. Buttar and Harding rams. Also 100 ram and ewe lambs. Apply: **W. C. Edwards & Co. James Smith, Rockland, Ont.**

### FAIRVIEW SHROPSHIRE OFFERED.

12 high-class two-shear ewes. Sired by grand champions; Bred to grand champions. Every one has proved a fine breeder. Considering their breeding and Excellent quality, prices are low. Send for prices and circular to: **J. & D. J. Campbell, Fairview Farm, Woodville, Ont.**

### MAPLE VILLA OXFORDS AND YORKSHIRES.

Present offering: Excellent ewes, choice rams, and the best lot of lambs I ever offered; all sired by imported rams. Yorkshires of both sexes and all ages. Boars fit for service. Sows ready to breed. A high-class lot. Satisfaction assured. **J. A. CERSWELL, BOND HEAD P. O., ONT., BRADFORD or BEETON STAS.**

### POPLAR LODGE SOUTHDOWNS AND BERKSHIRES

For sale: A high-class show flock of Southdowns, also shearing rams and ewes, and ram and ewe lambs. Berkshires of both sexes and all ages; right good ones. An honest representation is my motto. **SIMEON LEMON, Kettleby P. O., Ont., Aurora Station.**

### I HAVE GREAT, THICK, ROBUST SHROPSHIRE

**YEARLING AND TWO-YEAR-OLD RAMS** dale mares, and a few beautiful Welsh ponies will also be priced at attractive figures.

### SPRING BANK OXFORDS

Rams and ewes of all ages at a great reduction for next 30 days. Order at once and get the pick. **WM. BARNETT & SONS, LIVING SPRINGS P.O., ONT. FERGUS STA., G.T.R. and C.P.R.**

### When Writing Mention The Advocate

### Shropshires, Shires and Clydesdales

High-class Shropshires, shearing rams and ewes, ram lambs and ewe lambs, from imported and Canadian-bred stock, show stuff; Shire and Clydesdale fillies; White Wyandotte cockerels and pullets. Prices right. **W. D. Monkman, Bond Head P. O., Bradford or Beeton Stations.**

### and a lot of grand Shropshire and Cotswold ram lambs, ewes and ewe lambs of high class, both breeds, and all of the best breeding.

Will sell them in large lots or singly at prices you can afford to pay. Short-horn bulls and heifers, two good registered Clydes-dale mares, and a few beautiful Welsh ponies will also be priced at attractive figures. **Robert Miller, Stouffville, Ontario**

# Send NOW for Free Book and Sample!

For more than five years I have been experimenting with our experts to find the BEST culvert for all-around uses. We sought the markets of the world for one that was just right; and we didn't find it. If we had, we'd have bought the patent rights for Canada. Finally, last Spring, we struck the idea. Then we put in some expensive months in making that idea better,—and NOW we've got a culvert that is so far ahead of any other there's no comparison.

KNOW how 'way ahead it really is, you'll want to see the sample (sent free) and read the booklet (free, ditto). With that before you, you will soon see why every reeve, or warden, or town councillor, or anybody who has any use for culverts at all,—will find it pays to get in touch with me right NOW. I am asking you to lay aside your notions of what makes a good culvert, and a cheap culvert, and find out about this NEW culvert. I don't expect you to buy a foot of it until it PROVES to you that Pedlar Culverts are in a class by themselves, and that you can't afford to overlook them. Let us start that proof toward you soon—address place nearest you.

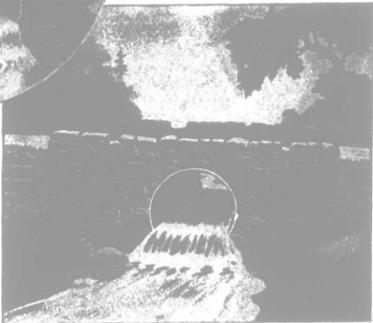
KNOW how 'way ahead it really is, you'll want to see the sample (sent free) and read the booklet (free, ditto). With that before you, you will soon see why every reeve, or warden, or town councillor, or anybody who has any use for culverts at all,—will find it pays to get in touch with me right NOW. I am asking you to lay aside your notions of what makes a good culvert, and a cheap culvert, and find out about this NEW culvert. I don't expect you to buy a foot of it until it PROVES to you that Pedlar Culverts are in a class by themselves, and that you can't afford to overlook them. Let us start that proof toward you soon—address place nearest you.



G. A. Pedlar

A few hours' work and a few dollars will put a modern and permanent culvert structure in place of a ramshackle bridge like this.

A structure like this, with Pedlar Culvert, won't wash out nor need repairs.



### Learn about the strongest most practical most durable and easiest-laid culvert ever made

## PEDLAR PERFECT GALVANIZED CORRUGATED CULVERT

#### Made of Special Billet Iron, Extra Heavy

In every size of Pedlar Culvert, which comes in all standard diameters from 8 inches to 6 feet, we use nothing but the best grade of Billet Iron, specially made for us, of extra-heavy gauge (14 to 20 gauge according to the diameter). This Billet Iron is curved into semi-cylinders—curved COLD, so there will never be any variation from exact dimensions; and it is then deeply and smoothly corrugated on a special press that puts a pressure of SIXTY TONS on every square inch of the metal. The corrugations, therefore, are uniform and very deep.

#### Galvanized AFTER Being Pressed Up

When the corrugating process is done, the sections are galvanized by our exclusive process that covers the entire surface with a thick coating of zinc spelter. Every edge, every crevice, is heavily coated with this rust-proof, corrosion-proof galvanizing; not a spot is left unprotected. This is the ONLY culvert galvanized AFTER being shaped. It is ABSOLUTELY RUST-PROOF.

#### Frost-Proof, Rust-Proof and Wear-Proof

This triple-rib flange-lock principle, found only in Pedlar Culverts, not only adds greatly to the strength of the piping and makes a perfect joint—practically as good as if welded—but it also allows for expansion and contraction under cold or heat. Though a Pedlar Culvert, of any length, be frozen solid full of ice, it will not spring a leak. Send for sample and booklet and you will see why. State your probable needs and we will gladly quote prices.

Two men can ditch for, and lay more lineal feet of Pedlar Culvert in a day than four men can with any other culvert.



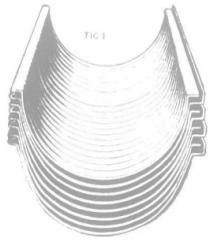
Can be readily laid by unskilled labor. Can't lay it wrong.

#### Will Stand Incredible Strains

The heavy-gauge Pedlar Billet Iron sections deeply corrugated and locked together without bolts or rivets by our compression triple-rib (this rib is flat, not corrugated), make a culvert that will stand enormous crushing strains and neither give nor spring. A thin cushion of soil on top is all the protection such a culvert needs against traffic; and no special precautions need be observed in laying it,—it will stand what no other culvert can.

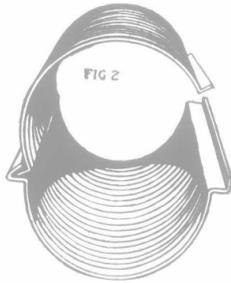
## COMPACT—PORTABLE—ENDURING—ECONOMICAL

This Shows How It Is Put Together

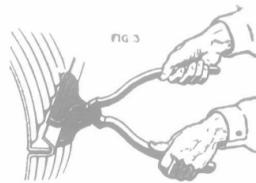


Pedlar Culverts are shipped in half-sections, nested—saving freight and making carriage easy in roughest country. Quickly and easily transported anywhere. Fig. 1 shows the half-sections or semi-cylinders, nested one within the other for shipment. One of the ribs is a radial flange, the other a re-curved flange. Sections are assembled as shown by Fig. 2.

Note that the ribs are flat, and the curved part of the cylinder deeply corrugated. These ribs add vastly to the culverts' strength. Unskilled labor, with a simple



tool, quickly clamps the flanges together, making a triple-fold joint that is tighter and better than any riveted or bolted joint could possibly be. Fig. 3 illustrates the simplicity of the Pedlar Perfect Culvert flange-lock—no bolts, no rivets, no makeshifts. This is the only culvert that is laid with broken joints—the overlap between ends comes in the centre of each length. No chance of leakage.



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## Just as Necessary in Your Home as the Sewing Machine

**Makes Kitchen Work Easy  
Saves Room, Time, Toil  
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**Have a Common-sense Kitchen**

**M**R. Man-of-the-house, do you half realize what toilsome drudgery it is for the women-folks to get the meals in your kitchen without a Chatham Kitchen Cabinet? It is about as up-to-date as if you cultivated your crops entirely with the hoe, instead of the cultivator; as if you mowed your grain with a scythe, instead of a self-binder; as if you threshed with a flail, instead of a threshing machine. You see to it that the farm work is done by modern methods, with labor-saving tools. Outfit your kitchen with this labor-saver—give the wife what rest and ease you can buy her,—kitchen work is hard enough at its easiest. This greatest kitchen convenience makes it far, far easier.

**Look at It in the Picture**

**S**HOW this advt. to your wife. Ask her what it would mean to have a cabinet that held everything used in cooking,—focussed the whole kitchen-battery in one spot, right in easy reach of a woman seated instead of making that woman trot from pantry to cupboard, from cupboard to table, from pot-closet to range, back and forth a hundred times a day. The Chatham Cabinet saves, easily, five hundred steps a day in any kitchen; and the kitchen is easier kept tidy, gets rid of endless clutter, and the foodstuffs are kept in far better shape and wasted less. Isn't it worth while to save the women-folk 150 miles of needless kitchen walking in a year? This cabinet does just that.

**Sells for Less than Any Ordinary Cabinet**

# CHATHAM Improved 1910 KITCHEN CABINET

**Guaranteed To Satisfy You In Every Detail**

**So Practical — So Compact.**

**L**ET your wife see the picture here of The Chatham Kitchen Cabinet. She will perceive at a glance that it combines pantry, cupboard, baking kit and kitchen table all in one, and yet takes up less space than the ordinary table alone. Note the large enclosed closet for kettles and larger utensils, with the extra shelf at back for smaller pots, etc. Shelf-rack across closet door holds six aluminized canisters, air-tight,—supplied free with Cabinet, as are also six large canisters seen on table section. See the big flour-bin at the bottom, below the drawers glides out on roller-bearings, has metal bottom, is dust, fly and mouse proof, and holds 75 pounds.

**Table-Top Is Zinc and So Roomy.**

**N**O drawer nor bin opens on the table-surface, which is covered with heavy sheet zinc, easy to keep clean, and unwearoutable. Drop leaves at each end, self-locking when lifted and strong enough to hold a man's weight, almost double the table's surface. Nothing about in its own way; roomy, handy, right,—within Table top is 2 floor; whole 6 ft. high, than a good and yet has for everything, spices, package tea, baking kit, and pans,—used in getting



MANSON CAMPBELL.

**Handsome, Solid, Sensible**

**E**VERY Chatham Kitchen Cabinet is framed throughout out of finest selected hardwoods, richly finished; metal bottoms are provided everywhere they'd be useful; drawers are of snowy basswood; glass and mirror (at top, centre) of best quality; catches and knobs heavy copper finished,—every part of it BUILT RIGHT, and better built than any other cabinet sold. Metal bottom under whole cabinet, and dust-tight back; mounted on triple-action roller casters,—easily move about.

Be sure to examine The Chatham Kitchen Cabinet fully before you invest in any. If we have no representative near you, you can buy direct from the factory. Send for fully illustrated free booklet.

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