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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

Census and Statistics
Dec 31, 09
Dept of Agriculture

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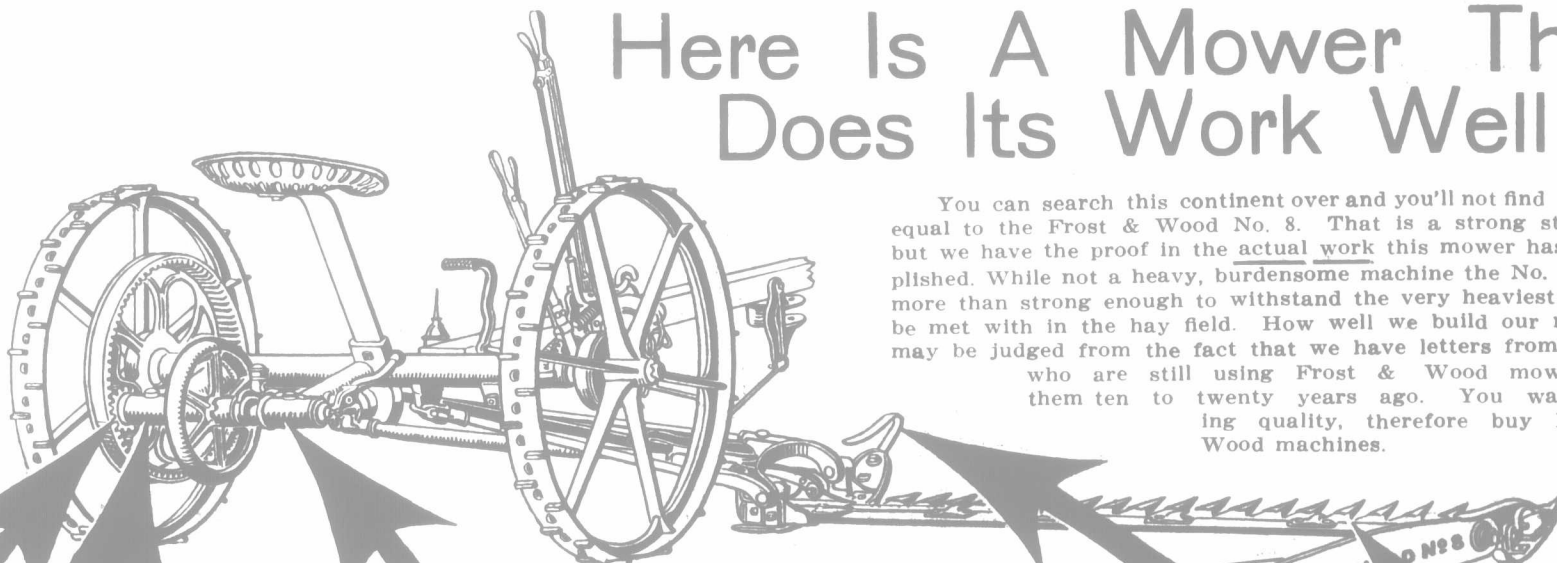
Vol. XLV.

LONDON, ONTARIO, FEBRUARY 3, 1910.

No. 906

Here Is A Mower That Does Its Work Well

You can search this continent over and you'll not find a mower equal to the Frost & Wood No. 8. That is a strong statement, but we have the proof in the actual work this mower has accomplished. While not a heavy, burdensome machine the No. 8 is built more than strong enough to withstand the very heaviest work to be met with in the hay field. How well we build our machines may be judged from the fact that we have letters from farmers who are still using Frost & Wood mowers sold them ten to twenty years ago. You want lasting quality, therefore buy Frost & Wood machines.



No Flying Start Required With No. 8

Thanks to the Internal Gear on Frost & Wood, No. 8 Mower, it's not necessary to back up several feet and get a "flying start" before the knives will cut—as must be done with mowers designed on the External Gear Principle. Look at illustration A and you'll understand what we mean by the Internal Gear. You see that the small gear wheel is inside the large. When outside it is the external gear.

Notice that two cogs are always in full mesh and at least one other in touch. External gear never has more than one cog in mesh, which leaves so much "slack" to be taken up between the Main Drive Wheels and the Pitman that the horses must travel several feet before the knives can commence cutting. But the Internal Gear, being nearly three times as fully in mesh there is no slack to be taken up. The knives commence cutting directly the horses begin to move. And the Internal Gear cannot slip a cog even in the heaviest part of your hay field.

Double Brace and Roller Bearings

On illustration B the arrows point to our Double Brace. We use this Double Brace to fully protect the working parts from the jars and jolts resulting from bumping over rough ground. This is a very important feature, as it prolongs the life of the machine. Yet on other mowers only a single brace is used. Look again at B and see the Large Roller Bearings placed at the points where wear might possibly occur. When we started to build this machine we determined to make it the easiest-running, longest-wearing—and we succeeded, as its records with progressive farmers have proven.

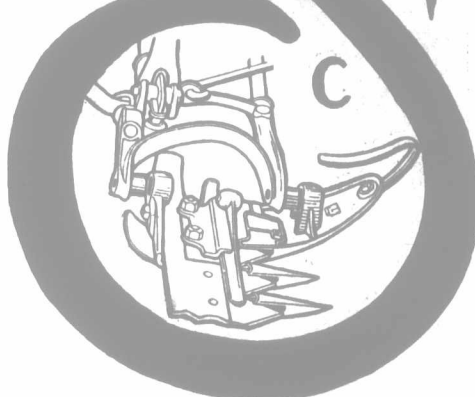
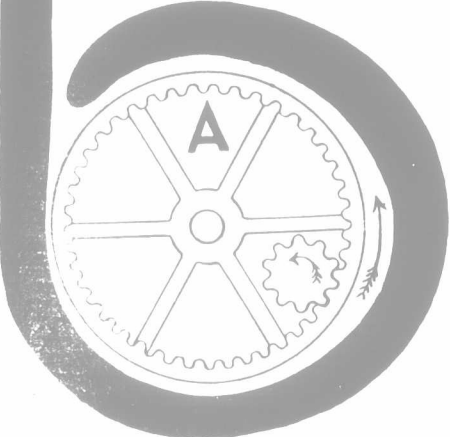


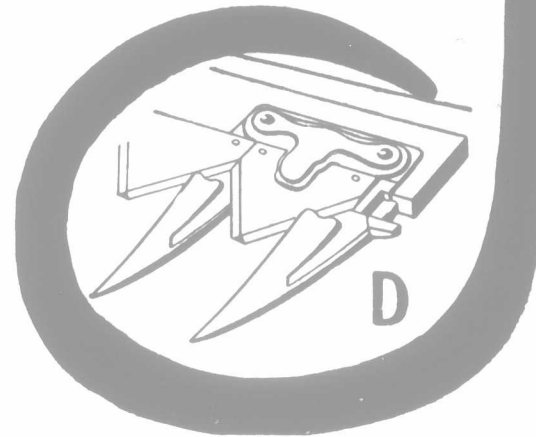
Illustration C shows you the Large Bearings used in our "stay-tight" connection between Cutter Bar and Main Frame of Mower. Unlike Small Pins used on other mowers, they do not wear down hurriedly and permit connection to work loose. Instead, they fit precisely together and have no chance to wear. That's why it is called the "stay-tight" connection. That's why there is no time lost on the field—no blacksmiths' bills to pay.



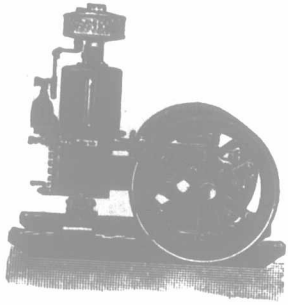
Frost & Wood No. 8 Mower

Study illustration D, because we want you to remember that we put a Steel Wearing Plate under the Clips that hold the Knife in place. With this Plate, the Cutter Bar is fully protected against the wear that would otherwise occur by the pressure of the knife against it when in action. This is just another life-prolonging feature on the Frost & Wood No. 8 Mower. Just one more reason why you should accept nothing less than Frost & Wood Quality. In fact, there are enough reasons why you should purchase the No. 8 to fill a book. Ask for catalog F 45 and read them all.

FROST & WOOD COMPANY, LIMITED, SMITH'S FALLS, CANADA



"STICKNEY"



Gasoline Engine
is built for the **FARMER**

SO SIMPLE that a boy can learn to run it in 5 minutes.
EASY TO START, another wrinkle. No pipes or separate tank. All in one, as shown above.

Power Guaranteed

And if you send for Catalogue No. 57 you will get some good ideas.

Tanks, Pumps, Windmills.
Ontario Wind Engine & Pump Co.,
LIMITED,
TORONTO and WINNIPEG.



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.

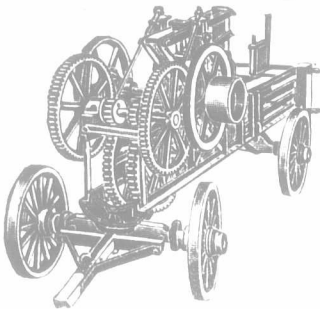
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RUSH'S U-BAR STEEL STANCHIONS

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.

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Preston, Ontario.

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

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Corn that Will Grow

Write for Catalogue and Prices
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A Chain is no Stronger than its Weakest Link.

are Strong and Practical in EVERY Feature and Part.

CATALOGUE FREE. AGENTS EVERYWHERE

When the milk is old, cold, or viscous; when the temperature is low; when any of the many emergencies to be expected on a Dairy farm, arise, the DeLAVAL CREAM SEPARATOR will be there with satisfactory performance.

The De Laval Separator Co.
173-177 William Street
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Many producers of maple syrup think it does not pay to make syrup. Of course it don't, the kind they are producing by using pots and old pans, consuming a lot of fuel and time making black strap. Invest in a

CHAMPION EVAPORATOR

and make a syrup that is clean, pure and wholesome. A little of your assistance and you have the best paying proposition on your farm. Made in 22 different sizes. Write to-day for our latest catalogue.

THE GRIMM MFG. CO.,
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IDEAL GASOLINE ENGINES

1 1/2 TO 40 HORSE-POWER.

Windmills,
Grain Grinders,
Pumps,
Tanks,
Water Boxes,
Concrete Mixers,
Etc., Etc.

Send for catalogue.

GOULD, SHAPLEY & MUIR CO.,
LIMITED,
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Don't keep your savings at home. You cannot tell what may happen to it.

Money deposited with this company is absolutely safe, and it earns 3 1/2 per cent. interest, compounded semi-annually.

Temporary address: 434 Richmond St., London, Ontario, Canada.

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DUNDAS ST. & MARKET LANE

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The Farmer's Advocate, London, Ont.

Sold on Commission

Farmers wishing to sell their farms should communicate with us. We make a specialty of this, and have constant inquiry for good Stock, Grain and Fruit Farms.

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174 1/2 Bay St. (1) TORONTO, ONT.

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"GOES LIKE SIXTY"
GASOLINE ENGINES

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WATER COOLED
Frost Proof

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AIR COOLED OR WATER COOLED
ALL SIZES
STATIONARY AND PORTABLE
Write for Catalogues and Prices
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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.

Before Purchasing Fencing Learn Facts About **LEADER** fence

Before purchasing fencing consider these facts about LEADER fence.

The largest wire mills in the world make the hard steel wire for LEADER fence. It is their best grade of No. 9. The galvanizing is extra heavy and very smooth. This wire easily withstands Canadian weather, and moisture cannot rust it.

The LEADER lock has the ends curved in such a manner that the lock practically interlocks itself. This gives it a double grip. It is doubly as secure a tie as the ordinary fence lock. And it is impossible to spring the ends of the wire.

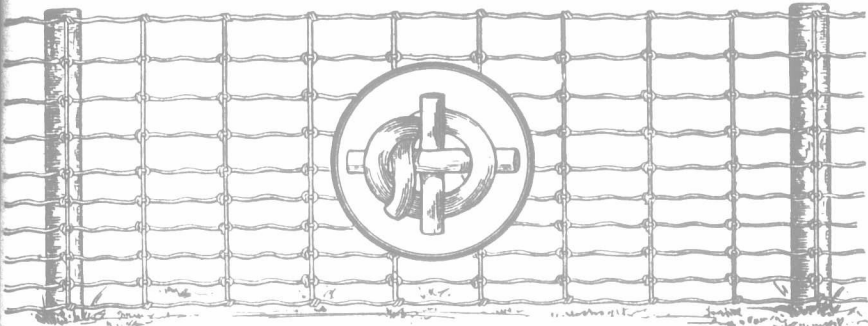
The locks, laterals and stays all being of No. 9 hard steel wire, the fence is evenly tensioned through-

out. It contracts and expands evenly, and always stays tight on the posts.

The LEADER is easy to erect, as great care is used in its manufacture. The laterals and stays are accurately cut to size by a positive measuring device.

You will be proud to show your neighbors your new fence, if it is the LEADER. You will be prouder still when you look at your LEADER fence six years from now and see it standing up straight and true, when ordinary fences erected at same time present a sadly dilapidated appearance.

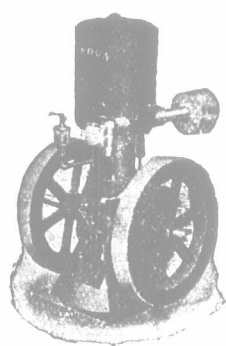
Let us send you our booklet, so you can read further facts about the LEADER fence investment.



SPECIAL AGENCY PROPOSITION.

We have a special agency proposition to offer you. If you will order LEADER fence in carload lots, we will send an expert fence salesman to help close orders and show how to erect LEADER fence properly. LEADER fence is easy to sell, so are our ornamental fences and gates.

Frame & Hay Fence Co., Limited,
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A WISE man grasps his opportunities.
This is yours. **BE WISE.**

Cut out this ad. and mail it to us for our Special Advertising Offer.
One month only.

“LONDON” Gas or Gasoline Engines

Guaranteed Satisfaction.

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The Hand Spramotor

No. 1 or No. 2 has 4 to 8 nozzles, all brass sprayer. The wheels and nozzles are adjustable, from 26 inches to 36 inches. Vertical adjustment from rack 16 inches. Automatic vertical nozzle adjustment brass spramotor. Ball valves, automatic compensating plunger. Mechanical agitator.

It is mounted on a cart with strong, hardwood frame. Has 52-inch wooden wheels, with iron hubs and steel axles. For one horse.

Can be used for orchard, vineyard, mustard and potatoes, or for painting and white-washing. Sold without cart as well. Guaranteed.

Write for free Treatise on Crop Diseases. **AGENTS WANTED.**
SPRAMOTOR, LTD., 1360 KING STREET, LONDON, ONTARIO



THERE'S no doubt about it. Thousands of farmers have proved and are proving every day that one of the simple, dependable IHC gasoline engines makes and saves more money for them than the best hired man they can get.

Don't let the up-to-date farming ways get away from you.

You can make your IHC engine work when and where and as long as you please. It is something you can own. It is all yours. You don't have to talk to it about getting up early or argue about quitting time. It is always ready and willing—just as well pump a tank full of water after dark as in the daytime. It is ready to start the saw, pump or any other machine going before daylight, if you are.

If you have a full day's work for it at grinding, you will get more out of it than you would get out of a half dozen hired men. It's just the same with all kinds of work. Your IHC gasoline engine will work with all your machines—will push them—keep them going steadily—make them really valuable to you. You have nothing to pay it in wages; no fear that it is growing tired and thinking of quitting you. Its only requirement for its faithful service all day—every day or night—is a small amount of oil and gasoline.

Why not let an IHC gasoline engine be your hired man? There are a dozen ways you can use it. You will have it going at some kind of work pretty nearly every day. Attach it to a power-house and, whenever you do start it going, you know you will get at least as much work out of it as you would get out of two or three men.

The IHC gasoline engine is the latest and one of the greatest real aids to the farmer. You ought to have one for your steady hired man. Thousands are going out on the farms. There are many styles and sizes, from 1 to 25-horse power—an engine for every section and every problem, for all farm uses—vertical and horizontal (both stationary and portable) engines on skids; sawing, pumping and spraying outfits. It also includes gasoline tractors—first-prize-gold-medal winners—the best all-round farm tractors.

Call and take the matter up with our local agent in your town. Or, write the International Harvester Company of America at nearest branch house for catalogue and further information.

CANADIAN BRANCHES: Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
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FARMERS AND DAIRYMEN

IF YOU WANT THE BEST ASK FOR

Eddy's Fibreware Canada's Standard

Pails, Tubs, Milk Pans, Handy Dishes, etc., etc. Eddy's Fibreware lasts longer than any other, and COSTS LESS. It is seamless. Has no hoops. Never leaks. Does not rust. Will not taint water, milk or other liquids.

EVERY GROCER KEEPS THEM.
MANUFACTURED BY THE

E. B. Eddy Company, Ltd., Hull, Can.

ALWAYS EVERYWHERE IN CANADA, ASK FOR EDDY'S MATCHES

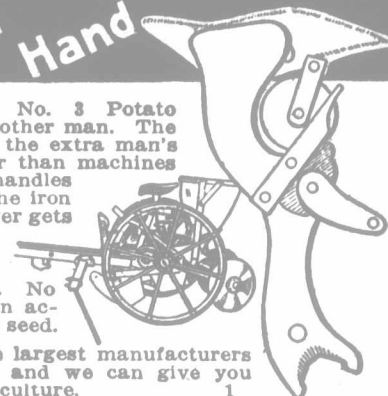
The Tireless Accurate Iron Hand

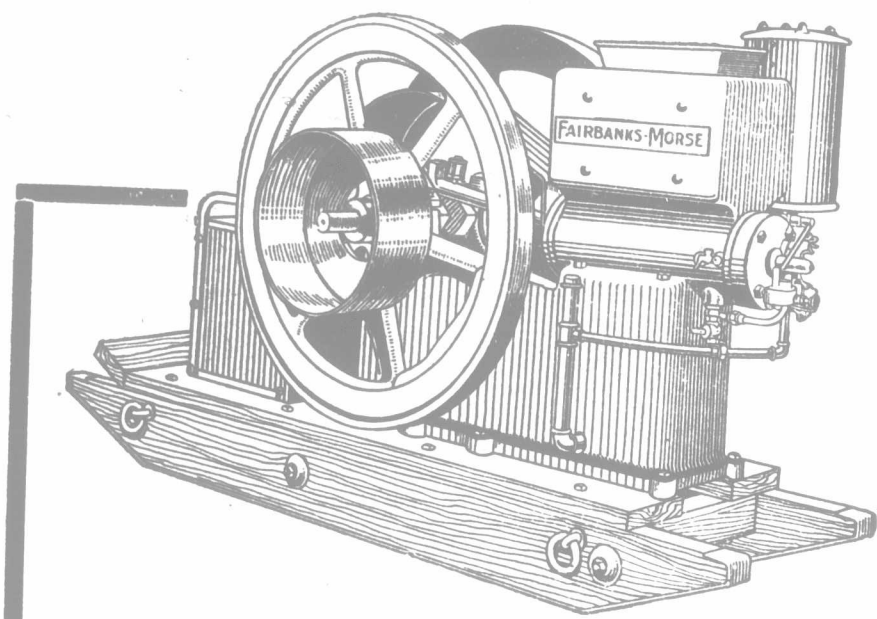
You can operate the Aspinwall No. 3 Potato Planter without the assistance of another man. The Aspinwall No. 3 not only saves you the extra man's pay, but also plants one-third faster than machines requiring two men. The hand that handles the seed on the Aspinwall No. 3 is the iron hand. Unlike the human hand, it never gets tired. It drops 99 per cent. good. You can use different sizes of seed and vary the distance of planting without requiring change of pickers. No other planter can compare with it in accuracy or handle as large a range of seed.

Send for our catalog F1. We are largest manufacturers of potato machinery in the world, and we can give you valuable facts on profitable potato culture.

The Aspinwall Mfg. Co. Aspinwall
Jackson, Mich., and Guelph, Can.

No. 3 Potato Planter





FAIRBANKS-MORSE

Improved Skidded and Portable Evaporator Tank

GASOLINE ENGINES

These engines are built along the same lines as our Fairbanks Morse Standard Horizontal Engines, with the exception that our improved Cast Iron Evaporator Tank is cast on top of cylinder, as shown in illustration.

No cooling tank is required, thus overcoming the difficulty of carrying the usual great volume of water. The lubrication difficulties of Air-cooled Engines are overcome in the above. There is very little water in the tank to take off by drain in the cold weather, thus saving time and trouble, and there is no water pump to freeze up. We provide a shield to prevent water splashing out of the Upper Jacket.

The skidded engine is a very desirable outfit where it is necessary to move the engine, providing a means where by the engine can be drawn about on its iron-shod runners, or can be placed on a farm truck or a bob-sled.

The engine itself is Fairbanks-Morse in every respect, and ensures to the customers the best there is in Gasoline Engine construction.

Send for our FREE CATALOGUE GE 102, showing our full line of Fairbanks-Morse Vertical and Horizontal Gasoline Engines and Machinery for farm work. It means money saved for you. Write to-day.

The CANADIAN FAIRBANKS Co., Ltd., Montreal.

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

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Annual Poultry Convention

At the ONTARIO AGRICULTURAL COLLEGE, Guelph, Can.

FEBRUARY 8, 9, 10.

This is the most important Poultry Institute held in Ontario during the year. Persons interested in poultry should make a special effort to be present.

The speakers on this occasion will be:

- Jno. Robinson, - Editor of Farm Poultry, Boston, Mass.
- W. H. Card, - Manchester, Conn.
- Peter White, - Pembroke, Ont.
- Jno. Clark, - Gainsville, Ont.
- F. C. Elford, - St. Annes, Quebec.
- Victor Fortier - Experimental Farm, Ottawa.
- Prof. W. R. Graham, O. A. College, Guelph.

We have made arrangements with the Grand Trunk and Canadian Pacific Railways for reduced rates to our Short Courses. In buying your ticket for Guelph, ask for a Single-fare First-class Ticket, and secure from the ticket agent a Standard Certificate. This Certificate, when signed at the College, will entitle you to reduced rate for the return trip.

You can't sow thistles and reap figs. If you plant Ferry's Seeds you grow exactly what you expect and in a profusion and perfection never excelled.

FERRY'S SEEDS

Fifty years of study and experience make them reliable. For sale everywhere. Ferry's 1910 Seed Annual free on request.

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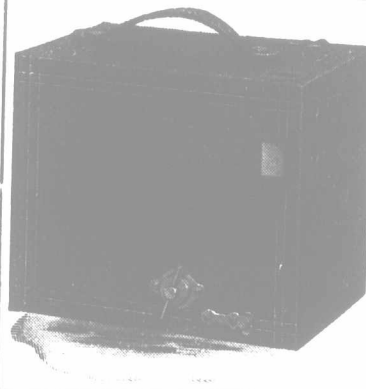
ROBERT E. KEMERER,

Confederation Life Building, Toronto, Ont.

Seed Grain Improved Ligowa Oats from the 5th year hand-selected seed. Price \$1.00 per bush.—reduction on larger quantities. Also Mandchurian barley. All seed well cleaned and graded. **Wm. Barnett & Sons, Living Springs P. O., Ont.** Fergus station, C. P. R. and G. T. R.

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 50-57 Peter St., Toronto.

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Pictures 3 1/4 x 4 1/4. Price \$4.00.

Loads in daylight with Kodak Film Cartridges, has a fixed focus meniscus achromatic lens, automatic rotary shutter, three stops and two finders. Simple, convenient and always ready. Well made in every detail and handsomely finished.

Handsomely illustrated booklet, "The Kodak on the Farm," free at the dealers or by mail.

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"Ideal" Fence has features that shrewd buyers appreciate

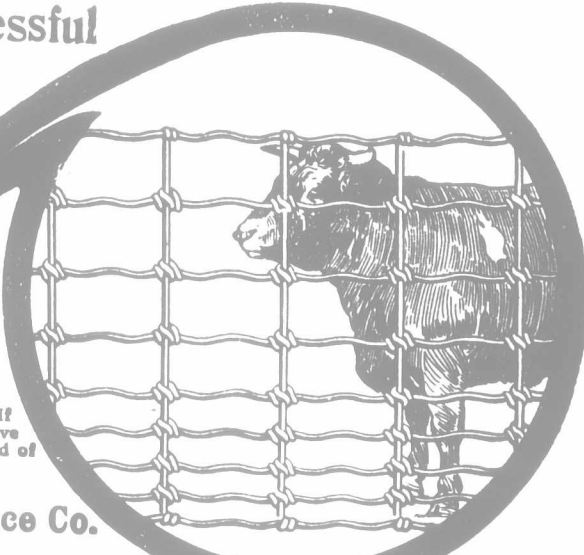
That's why our Agents are so successful

Taking orders for "IDEAL" fence is far easier than you may think. The "IDEAL" has features that shrewd buyers appreciate. The railways buy "IDEAL" because of its weight and quality, because of the gripping tenacity of the lock on the

"IDEAL" WOVEN WIRE FENCE

It is undoubtedly the strongest fence lock in existence. The farmers buy "IDEAL" for the same reasons as do the railways. "IDEAL" fence is easiest to sell. That is why our agents are so successful.

Don't you think it would be wise to write us for complete particulars in regard to becoming the "IDEAL" fence agent in your locality? Do so to-day. If you wait until to-morrow you give your neighbor a chance to get in ahead of you.



The McGregor-Banwell Fence Co. Limited
WALKERVILLE, ONTARIO

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The Farmer's Advocate and Home Magazine

"Persevere and Succeed."

Established 1866.

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Vol. XLV.

LONDON, ONTARIO, FEBRUARY 3, 1910

No. 906

EDITORIAL.

In the United Kingdom, all the Government can expect is to enjoy two consecutive terms of office. In Canada, a party turned out in less than a quarter of a century would consider itself harshly dealt with.

The severest argument against horse-racing we have ever heard is the claim that it requires gambling to maintain it. Is racing, then, or is gambling, the "sport of kings"? We have no serious objection to racing, properly conducted; but if it cannot exist without the colossal abuse of gambling, good-bye to both. The character of our people is above the improvement—if it be improvement—of our horseflesh.

There can be no manner of doubt that the pooling of cheese-factory proceeds is steadily increasing the amount of milk required to make a pound of cheese. At the Western Dairymen's Convention, retiring President Parsons told how their amount had been lowered from $\frac{1}{2}$ to $\frac{3}{4}$ of a pound of milk per pound of cheese in one season as a result of paying according to the system, "per cent. of fat, plus two." This is the fairest plan yet devised, and equity is the surest basis of progress.

A Montreal paper, seeking to make out a case for racing as a means of improving the courage, speed and stamina of Thoroughbred horses useful in the breeding of cavalry mounts, says: "The eyes of those who look upon racing as a pastime have been opened. The serious side of the work has been shown." So it seems the Yankee touts and gamblers who have come over to us to make racing attractive, are engaged in a grand, noble and patriotic work for the strength and glory of the Empire, and the betterment of the race. Ah, hem! Appearances are deceiving!

Denmark is a prosperous little country, ruled by peasant-farmers, ninety per cent. of whom own their own holdings. The farms are small, but worked like gardens. The State owns the railroads, and makes them serve the farmers. Education bears directly on the farm. The State loans money for the purchase of farms. Co-operation has minimized outlay and given the producer a fuller return for his bacon and butter and poultry products. Illiteracy is gone, and extreme poverty reduced to a minimum. It being a free-trade country, the cost of living is low. It buys where it can to best advantage, and sells its highly-finished farm products abroad.

For one Garfield or Lincoln, or Hill, there are hundreds who left farms in boyhood days, and never attained a position equal to that of the average farmer. With more reading, more thinking, and more planning, the average condition and contentment of the farmer can be made higher than the present average. Perhaps for those whose aims are fame and fortune, a withdrawal from the farm would be best, both for them and the farming industry. For those who esteem good-living, character, and the solid satisfaction that comes of acquiring an adequate, fairly-earned competence through the production of wealth direct from nature, agriculture is the sanest and best occupation of all.

Why Living is Dear.

During the past few weeks public attention has been turned in a very pointed manner to the steadily-increasing cost of living; that is to say, the increasing cost as measured by currency, which, as we have previously pointed out, is a variable commodity, rising and falling in value as the supply of precious metal in the world decreases, or augmentations in volume relatively to the demand for it. When gold becomes comparatively plentiful, the tendency is to decrease the amount of other products that can be purchased with a given quantity of it: hence gold is cheapened, while prices (of other products) rise. This is hard on the man who lives on the interest of his money, hard on the person working for a certain wage or salary, hard on all those who have to depend on fixed income. It is probably correspondingly advantageous to certain other classes, but the net effect is to disturb economic conditions and adjustments, entailing hardship here and there.

But there are many other factors bearing on the problem. One is the advancing standard of living. What were once rare luxuries to the masses are now regarded as everyday necessities. Choicer food, including more meat (and notably a more general demand for the select cuts), more tropical fruit, and a greatly increased consumption in the cities of expensive greenhouse products, are a few items that will suffice to illustrate this point. More good clothing, especially for ordinary wear, and for children, is also bought. In our houses, many of us enjoy such advantages as furnaces and other heating systems; gas, electric or acetylene light; conveniently-piped water supply, plumbing and sewage disposal; more light, more ventilation, more sanitary conditions, more convenience, and more gratification of the aesthetic sense. On the farm we have much more machinery, some of it economical in its saving of labor, some chiefly designed to promote ease and leisure. We rest more, travel more, and have more recreation. All these things tend to counteract the condition of abundance that should result from the economy wrought by invention, causing increases of prices in some lines of production, and preventing decreases in others.

Increased cost of doing business is another factor that has been stealthily creeping upon us. For example, take the retail business. To be successful, a store-keeper must keep up a "front." He must first of all secure a good stand; this costs considerably for rent, and rents are increasing as cities grow. He must advertise liberally, keep an attractive store, and hire well-paid, well-dressed clerks. He must keep his shelves filled with new and fashionable goods. By the way, fashion has a great deal to answer for in raising the cost of living. All these things must be done, or he will drop behind in the race of competition. Yet, all these things constitute charges that must be met; they directly affect the retail price that must be set upon the goods. Fortunately, the advent of the cash system, and the increasing business resulting from growth of population, tend to offset the increasing charges named above, but these two latter influences should be producing a decrease in the necessary margin of doing business. Take insurance, banking, manufacturing. Who pays the princely salaries, who erects the palatial buildings that adorn city corners, and who meets the rental of the increasingly valuable sites they occupy? The consumer or patrons of the institutions every time. The price charged for goods, the interest paid on

deposits, and the discount rate on loans, are all fixed with a view to meeting such charges, and then paying a profit on top of that. True, as stated above, the most successful businesses are often those that maintain appearances, just as a promoter or stock-broker often finds it good business to live in extravagant style; but it all comes out of the consumer's or patron's pocket in the end. Could we only arrive at the annual rental value of real estate in the business sections of our Canadian cities, the amount would be staggering. Who gets all that? The lucky landlord. Who pays it? The consumer—the general public.

But, we hear someone object, the advances recently complained of have been in meats, eggs, and farm produce. Yes, but did you ever reflect how sensitively the farmer's business and position is affected by that of other classes? Have you realized that tariffs and bounties which build up vast manufacturing industries in our cities, at the primary expense of farmers, must decrease the numbers and hamper the operations of the men upon the land? Artificially-enhanced cost of living on the farm tends directly and inevitably to restrict the farmer's production and increase the price of his products as sold in the cities. The pronounced cityward drift of population in America has been partly due to this very cause. Economic conditions readjust themselves in time; the very course meant to build cities ultimately reacts, in a measure, at least, to their detriment. Thus, the agricultural population of America, and, for that matter, of the world, is barely sufficient to feed the population, and a hint of scarcity sends prices bounding, particularly for the coveted choice articles of diet. Moreover, the increased cost of doing business, spoken of above, accounts for an increasingly wide space between the price of cattle and the retail price of beef, as indicated in U. S. Secretary Wilson's annual report, which sets forth that the cattle-feeder was getting little more for his products than a decade since, while the breeder of the cattle got no more at all.

Another fact: The system of education in this country has tended to alienate the interest of the people from the land, and, together with economic conditions, has reduced the numbers, detracted from the enterprise and lessened the success of the people on the land. This is now being glimmeringly recognized, and material change may be expected within the next quarter or half century.

We leave economists to wrestle with certain other abstruse considerations of an international character. Some of them hold, for instance, though others dispute it, that cheap labor in China and other Oriental countries, and its relation to the silver coinage, has the effect of lessening the buying power of gold in the newer countries of the world, and that until China and other countries begin to live better, prices will continue to go up. Others dispute this view. However this may be, there is in America a present local shortage of foodstuffs, and local remedies will not be without avail.

Personal thrift, not boycott, is to be recommended to the poor consumer. Steady reduction in tariff imposts will help; judicious economy in government; public ownership of municipal real estate and of public utilities (where opportunity presents, and as the people become educated to responsibility); co-operation in some instances, bringing producer and consumer together; removal of costly and hampering exactions from city markets; effort on the farmer's part to study economy of production; labor-saving methods and improved practice, are other suggestions which, if acted upon, would contribute to individual and general well-being.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
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Keeping the Boy on the Farm.

First of all, make the farm pay better. This is not put foremost because it is most important, but because it is uppermost in the minds of most persons. As a result of a systematic inquiry among 400 students in the College of Agriculture, Cornell University, Dr. L. H. Bailey found 155 young men reared on the farm who purposed leaving it, 62 of them for the reason that they did not see money in farming. The replies were from West, as well as East. Now, as a matter of fact, we know that thousands of men, under all sorts of conditions, do make money steadily at farming, and live in comfort, but the farms these young men had in mind were not money-makers, or else the process was too slow. How to improve the financial returns of the farm is a broad problem, but in a general way it is a matter of energy and intelligence. The adaptability of the farm must be studied. What crops or products will it give to best advantage, for which there is good demand? A specialty should be made of something. This does not mean to make a hobby of one thing, and let everything else on the average 100-acre farm slide. But get the farm a name for fine horses, beef or dairy cattle, swine, poultry, butter, cream, seed grain, or apples, so that buyers can always look for something choice, and not be disappointed. That is a sure way to command the best prices. Stop the leaks, study to improve. Plan liberally. Do not dream of short-cuts to wealth somewhere else. They are disappointing. Farm better, and the business will pay better. Then will the young man begin to see a financial future of brighter promise. Remunerate him for his work, and, when old enough to assume serious tasks, give him a tangible interest in making the farm, or certain of its operations, a more paying proposition. Above all, consult with him, and try to enlist the boy's interest in the management of the farm. If he is the right kind of a boy, that will do even more to make a farmer of him than merely giving him a certain share of the proceeds. Let him have a course at the agricultural college, if he likes the look of the

institution when he goes there on the Farmers' Institute excursion. Provide your home with the best agricultural literature available, both books and papers.

Over 50 young men said they were going to abandon the farm because of too much hard work, long hours, and monotony. How is this to be overcome. In many cases it is a result of trying to work too much land with too little help and lack of system. The boy is set alone at some hard, disagreeable job which he does not understand, and the father or employer does not give him a sympathetic word of explanation. No wonder he becomes weary and disgusted. The youth is a natural questioner, but he gets no encouragement. His interest is not aroused by any suggestion as to why the work is being done, what it means, or how results may be improved. Get so much done, and then, perhaps, without a word of commendation, tackle another task. Work is done by physical drudgery, that a wisely-chosen implement, properly used, would make almost a pleasure. The boy likes companionable talk, not morose or moody silence in barn or field or orchard, or by the fireside. Any wonder that he plans for the corner grocery, or finally the town? The remedies are obvious. Talk the farm up; don't growl it down. Some boys are actually driven off the farms by the everlasting disparagement that they hear about the farmer's lot and hard times, even when the grumbler has a fat savings-bank account. Cheer the lad; don't discourage him.

Nearly half a hundred American young men complained of the lack of social and intellectual advantages. For such conditions there is no good reason whatever, and in every well-ordered Canadian farm home or neighborhood they are speedily passing away, through the cheapening of good literature, libraries, music, social intercourse, daily-mail service, improved facilities for communication and travel, and all sorts of local organizations for improvement and recreation.

But there is another side to this whole subject. True, 40 per cent. of those 155 students thought they saw no financial reward for them in the business; 20 per cent. considered the physical labor too exacting, and as many more were discouraged for lack of social opportunity. But Dr. Bailey pursued his inquiries further, and in the cases of 68 town or city-bred students, found that they were going into farming occupations because they desired outdoor life, loved nature, regarded farming as the most independent and healthful occupation, more interesting, sufficiently profitable, and providing the best home-life for themselves and children. The most significant replies were from a class of 193 students who had had experience of farm life and college life, and were returning to the farm. In carefully-written letters they stated their reasons, which Dr. Bailey, in his recent work on "The Training of the Farmer," classifies as follows:

PERSONAL PREFERENCES.

- Love of outdoor life and nature—55.
- Love of farm life and work—47.
- Love for living and growing things—28.
- Love of free life on the farm—15.
- Natural bent to farm—5.
- Have already personal interest in a farm—5.

ADVANTAGES OF FARMING.

- An independent life—77.
- A healthful life—41.
- A profitable occupation—39.
- Not a hurried life—3.
- A natural life—3.
- A simple life—2.
- Wide opportunities offered—23.
- Ideal place for home and rearing children—20.
- Involves interesting social and economic problems—8.
- Pleasant and agreeable occupation, and provides a happy life—17.
- It is instructive—6.
- State aid making farming more attractive—5.
- Farmer's condition better than average city man's—6.
- A good education essential—4.
- Opportunities for study—2.
- Best place for spiritual life and growth—4.
- Good social opportunities—4.

Opportunity for individual work and initiative—3.

Cheaper living than in city—3.

An honorable occupation—4.

More knowledge required than other occupations—5.

One can see the fruits of his own labor—2.

Provides a better life in old age—1.

Life is not monotonous—1.

Farmers have good food—1.

Opportunity to acquire property—1.

Provides both mental and physical work—4.

Offers a variety of work—4.

Work is useful; affords good training; easy in winter (each)—1.

Readers young and old cannot do better than put in their thinking-caps all the foregoing reasons why so many sensible young men prefer farm life. The general result of the inquiry is hopeful, because it shows that the young men being reared on American farms are not altogether money-grabbers, and are doing some thinking. Of the 261 students who planned to be farmers, money-making was not the supreme motive. The love of nature and a free and independent life counted more with them. They evidenced pride in the calling. They did not apologize for it. They were hopeful, and they had the proper vision of the new twentieth-century country life. These young men will certainly make money, and plenty of it, on their farms; that type of men always do; and they will gather in their homes what is infinitely more important: the results of liberal education, personal influence, character, service, happiness, and contentment.

The "Smaller Farms" Competition

For some time after the "Smaller Farms" essay competition was announced, it was feared the subject was one that might not specially appeal to a great many, or, rather, that the treatment of the subject as proposed, "Advantages, Methods and Profits of Smaller Farms," with as much detail on the latter point as possible, presented difficulties to many who had the necessary successful experience. But the editorial heart rejoiced at the response that was made to the announcement; contributions came in from every Province from Ontario, eastward. One, indeed, came to hand too late to be considered. In all, sixteen essays have been received.

Articles such as those to which the prizes have been awarded will certainly be helpful and inspiring to many readers. They show what can be accomplished on small farms when system and good judgment are joined to industry. They will prove an eye-opener to many, and some who have felt discouraged over their limited area, and, as they have thought, limited prospects, will be given fresh hope and courage.

The prizewinners are not the only ones who have a stirring story of achievement to tell. Over sixty per cent. of the papers were of a high order of merit, not only as to their literary character, but also, and chiefly, as to the facts they relate. Several of these will be published later.

Some were disqualified because they were the theories of young men who as yet had not the chance to put their ideas into practice. Theories verified by experience carry more weight. Two very good papers had to be marked down because the experience given was on farms of eighty acres and over. The well-written essay of W. B. Rittenhouse went rather to the other extreme, and gave a detailed and surprising statement of possible returns from five acres. Two others may, in our readers' eyes, seem superior to those that received the awards. These were sent in by Andrew McPherson, Pictou Co., N. S., and E. F. Augustine, Lambton Co., Ont., and it was only after careful consideration that they were debarred from the place of winners, the former because no statement of receipts was given, and the latter on account of the inclusion of matter somewhat irrelevant to the subject, to the exclusion of details about methods. Several were specially good on one or more phases of the subject, but did not cover others so satisfactorily.

The first prize goes to Wm. Blain (nom de plume), Simcoe Co., Ont., and the second to R. G. Oulton, Westmoreland Co., N. B.

Taken all together, the contributions were admir-

able and most encouraging, as showing the excellent results possible in a modest way.

Two or three lessons can be learned from the experiences given. One is that much more intensive farming than most of us conceive of is not only possible, but profitable. Many who farm 100 acres or more would be pleased to enjoy the net returns realized by some from farms not half the size. Another is that, where soil and climate are suitable, and markets convenient, the growing of small fruits and vegetables, combined with poultry-keeping, give opportunity for almost unlimited expansion in both labor and receipts. A third point, emphasized by several, is that on a small farm a man may have more leisure, is not obliged to endure the worry and expense of hired help, and, in consequence, the work is more carefully, thoroughly and punctually done, and gives greater satisfaction.

Canadian Commission of Conservation.

The idea of a Commission of Conservation of natural resources originated in the United States. The Inland Waterways Commission of the United States, on October 3rd, 1907, addressed a memorandum to the President, suggesting that the time had arrived for the adoption of a national policy of conservation, and proposed that a conference of leading men be held in the White House to consider the question. The suggestion was acted on by the President, and the conference met in May, 1908, and adopted a declaration of principles, followed later by the appointment of a National Commission. Following this, on President Roosevelt's suggestion, a joint North American conference was held, which included representatives from the United States, Mexico and Canada. Upon receiving the report of the Canadian delegation, the Dominion Government determined to adopt the recommendation contained in the declaration of principles agreed upon at that conference, and constitute a permanent Commission of Conservation.

This Commission is made up of three members of the Federal Government of each Province, with the addition of several members from the universities of the country. It is non-partisan, having the unanimous endorsement of Parliament.

The Commission is not an executive or administrative body. It is advisory only. It is constituted for the purpose of collecting exact information, deliberating upon, digesting and assimilating this information, and advising the Government as to the best policy to be pursued in the conservation of the natural resources of Canada.

The appointment of such a body marks an epochal change in public sentiment, which, having been formerly intent upon the exploitation of natural resources, has recently come to realize the possibility of their exhaustion or serious impairment, and is now resolved to husband national opportunities in the interest of posterity, determined, while permitting their utilization, to insure that this shall be so regulated as to permit continual renewal and perpetuation of forests, fisheries, mines, farms, and even human energies. As an illustration of what may be accomplished in the way of use, combined with a policy of conservation, we recall Dr. Fernow's statement that Prussia, with but a half of Ontario's forest acreage, derives seven times Ontario's annual income from forestry, leaving the capital to increase annually in value.

Town Man's Success on a Small Farm.

FIRST-PRIZE ESSAY IN THE SMALLER-FARMS COMPETITION.

In the summer of 1901 I decided to engage in farming. My early boyhood had been passed on a farm, but I had been absent from it for ten years. I was working for a salary in town, and could not see independence ahead. My capital consisted of less than \$1,000 besides household furniture. My family consisted of wife and two small children, so that all outside work and some inside depended on my own exertions.

We wished to be close to town, and purchased a farm of fifty acres within a mile of town, paying three thousand dollars for same. This meant that I had to borrow about \$2,500 in order to make a start—quite a handicap, along with our inexperience—but hope beats high in youthful hearts.

The farm was cleared, except for a few acres of

bush at the back, adjoining which was about nine acres of permanent pasture land, which was very rough, and contained logs, stumps and berry bushes. The buildings were a good brick house, heated by furnace, a bank barn, and a silo, all in good repair.

I invested in only necessary implements—a mower, rake, plow, disk, sculler, harrows and smaller articles, besides necessary vehicles. I hire a seed drill, and pay for binder by the acre. On my farm it would not pay to invest in either for a few days' work each year, and they would require extra building to store them.

I divided the farm into six fields, and try to follow a rotation, as follows: First year, hay; second year, hay; third year, pasture; fourth year, oats; fifth year, roots, potatoes, corn; sixth year, oats, seeded down to red and alsike clover and timothy.

My main crops are hay, oats, potatoes and strawberries; other crops, corn, roots and garden vegetables.

I grow only the best varieties of oats and potatoes, and I am able to dispose of my oats for seed at a good advance on market prices. Last year I received 75 cents per bushel for all I sold. My land is a sandy loam, and is rather low, so that I have never tried to grow wheat or barley. In potatoes, I try to have bulk of crop of early varieties, which find a ready sale, at good prices, for shipping to northern markets in August and September.

I soon found that my land was well adapted to growing strawberries, and as there is here an unlimited market, at good prices, I like to have an acre, which yields from \$300 to \$400 per season. I set out a half acre each year, and thus take two crops off before plowing down. The old patch generally comes in a few days earlier, and thus lengthens the season. In 1905, I sold 1,400 boxes of one-sixth of an acre, at an average of 7½ cents per box. Last year we averaged 9 cents per box. The strawberry crop requires a little change in the rotation, as I like to have them follow potatoes, and, as they are two years in the ground, they will be in corner of oat field. I run a temporary fence around them if I wish to pasture field.

This farm had been occupied by a dairyman, who kept a large stock, and the silo was 14 feet in diameter. This is too large for my stock, so I do not use silage, but store straw in silo. As to stock kept now, the locality decided that dairying on a small scale would pay well, so I keep six milk cows. The bulk of the milk I dispose of to a dairyman, who retails it in town. The price received at door is 5 cents per quart in winter, and 4 cents in summer. I have five of the cows freshen about October 1st, and the other one in the spring, as the demand for milk, and the price, also, is better in winter, and the heavy milking occurs when there is a period of leisure. I do it all myself. I find that cows milk well through winter and continue till following August, or ten to eleven months. One coming in spring insures us always having milk. I sell or veal the fall calves, as five-cent milk is too expensive for calf-feed. We make butter from any milk that the dairyman does not take, as in June, when he has a large flow from his own cows. In order to dispose of any surplus skim milk, I keep a pure-bred Yorkshire sow, and the returns from her progeny add considerably to the year's income.

I keep a small flock of pure-bred Plymouth Rock hens, and find good sale from early chickens for tourist trade, but they evince a fondness for strawberries and tomatoes which make them a doubtful asset.

To do the work of farm, I keep one team of horses, one being a brood mare, whose yearly colt also adds a little more to income.

Besides the cows, I only have two or three young cattle at one time, as pasturage could not carry them. These I send out to pasture in summer, paying 50 cents per month per head. To help pasturage for cows, I grow a half-acre of rape, and same of oats and peas. The rape is sown in drills about June 1st, and as soon as high enough I keep going through it and thinning out to feed cows at milking time in stables. If sown thickly, and kept cultivated, it stands a lot of thinning. As I do not grow corn for silo, I sow a couple of acres of sweet corn. Kendall's Giant is my favorite. I sell a good many dollars' worth of green corn, to be shipped away north, and the balance, with stalks, are my dependence in fall, if pasture should be short. If not used, they go into barn, and help out winter feed till about February 1st. About an acre and a half of roots and three to four acres of potatoes are grown. The latter bring in from \$70 to \$100 per acre. I also grow a few green peas, tomatoes, beans, etc., and have a half acre of orchard.

I have found the best results in manuring are gained by applying coarse manure to corn and root ground, and fine or horse manure as top-dressing on meadows. The proximity to town enables me to procure manure at livery stables at 25 cents per load, and a few loads spread on hay fields proves a good investment.

I have found time during the last few years to make a few improvements, and also to keep fences and buildings in good repair. I have replaced about half of rail fences with woven wire, and cleared up rough fields at back, and brought them into cultivation. They are now the best part of the farm. I have planted hedges and shrubs on lawn.

The only help required has been a man in haying and hoeing time, and threshing, besides children for strawberry-picking.

I have found that, with a smaller farm, and diversified crops, at no time of the year are we rushed like those on larger farms. Our seeding and harvesting can all be done at proper season, as we have a small acreage to cover, and, by growing potatoes, strawberries and corn, which produce large returns per acre, our income per year compares favorably with larger farms. We also have more leisure for beautifying the home and premises.

As to financial returns of my venture in farming, as I said before, I started with less than \$1,000 capital eight years ago. I have paid off over \$2,000, besides enhancing value of place. The most of this has been paid in the last few years, and this year will see us clear, with farm and stock and implements worth four thousand. I have also made eleven payments on an endowment insurance policy of one thousand dollars, which will soon be payable.

We have not stinted ourselves, either, but have had everything we needed, and some luxuries besides. I might say that our income last year was \$1,250, besides a good part of living from farm, and we spent \$750, so that \$500 was left to reduce the indebtedness. After this year, we look forward to having a growing bank account.

My two boys are ten and eight years old (there is another little one now), and are able to help in the garden; and as they grow older, they can find plenty of employment right here, without our increasing the acreage, as we have only to increase the amount in small fruits, strawberries and potatoes to provide work and income for all. The work is not heavy, and there is not the same drudgery for young folks as there would be where a large acreage was cultivated and a large stock kept.

Upon reviewing the situation, we have never yet regretted our move in entering the ranks of small farmers. "WILLIAM BLAIN." Simcoe Co., Ont.

[Note.—We consider this a most instructive story of experience. The real name of the writer, although known to us, is withheld from the public at the writer's express request. The methods followed are, for the most part, good, prices encouraging, and results excellent. The crop rotation is, to our mind, improvable. We should think it would pay to grow more corn, and annually fill a smaller silo. On the whole, however, the farm practice is commendable, while the story of it is told in a lucid, well-balanced article. Note that both methods and results are given in reasonable detail.—Editor.]

HORSES.

To Stop a Horse Kicking in Harness.

A reader asks how to stop a horse from kicking in harness. He has a single driver that occasionally kicks, and desires a remedy. The following plan will be found effective:

Some years ago the writer saw demonstrated a contrivance for stopping kickers that was about as effective as anything that could be devised. It punished the kicker automatically. Every time he made an effort to dust his heels in the driver's face he had his head yanked up so suddenly that the hind feet were promptly returned to terra firma, and after about three attempts to kick, of which the first only was a genuine effort, the kicker settled down and behaved himself. We have seen this used on violent kickers, and invariably with success.

The contrivance is made thus: Tie a steel ring securely to the top of the bridle, having it directly over the horse's poll; tie another ring similarly to the crupper, about four inches back of the highest point of the rump. Get two pieces of quarter or half-inch rope, each piece about 12 feet long. Tie one end of each piece to the bit-ring, one on each side, carry the ropes through the ring at the top of the bridle; run one through each of the rings on the back band, then both through one ring on the crupper. Now pass each rope down and tie to the shaft or cross-bar. Be careful to have the ropes so tied that the horse can move without danger of his movement causing the ropes to jerk on the bit. Then wait for him to kick. He will be a badly-surprised horse when he tries it.

As soon as the head goes down and the rump goes up in preparation for dusting off the heels in the driver's eyes or demolishing the dashboard, something is going to happen on the bit that in the kicker's experience never happened before. If

the ropes are properly attached, the horse has changed his mind before he gets his heels up very high. Keep the ropes on him till the habit is thoroughly broken.

Clydesdale Horses.

By Prof. Duncan McEachran, LL. D., F. R. C. V. S., D. V. S., etc.

A legend has it that about 1715 the Duke of Hamilton brought home with him from the Continent of Europe five big black Flemish horses, which he gave to his tenants for the improvement of their stock.

Unfortunately, no records of this have been discovered, and some there be who doubt the accuracy of the legend. However it may be, we have the knowledge, in support of it, that his tenants in the upper wards of Lanarkshire are we indebted for the improvement in size and quality of this famous breed, whether we ascribe this to these Flemish importations, or to selection, proper mating and feeding by these men; to them belongs the credit of improving the Clydesdales throughout Scotland.

From Lanarkshire, Clydesdales found their way into Ayrshire, Argyleshire, Dumfriesshire, Kirkcudbrightshire, into the Lothians, Aberdeen and other counties of Scotland. At an early date, the stock-drives into the North of England were, in times of peace, regularly conducted, and, no doubt, Clydesdales were brought south and sold to farmers of the northern shires, Northumberland, Cumberland, Yorkshire and Lincolnshire, where they were mated with the old black cart-mares, which had also been improved by European importations.

This, as stated by the late Sir Walter Gilbey, led to the development of the Shire horse as we know him to-day, a horse of more weight, heavier but rounder bone, a truly magnificent draft horse for heavy work at a slow pace.

As was to be expected, many of the English breeders continued to use Clydesdale stallions, and at the present day, every spring, the agricultural societies of the English shires compete with the Scotch in premium-giving for the service of Scotland's best horses, with the result of producing as good and as pure-bred large-sized Clydes as are to be found anywhere. The great majority, however, adhere to the Shire horse, which has long been recognized as a distinctive breed, and registered as such.

Besides these famous horses in early days, we find such noted sires as Farmer's Fancy (298), Clyde, alias Glancer (153), from which were produced such noted stallions as Sir Colin (772), Blackleg (71), Ivanhoe (396).

A horse that I remember well, travelling there when I was a schoolboy, owned by Sandy Campbell, was Rob Roy (714). This horse left good stock, and many of the best pedigrees go back to him.

For a long period, Kintyre was justly celebrated for producing prizewinning Clydes, and to-day as good Clyde blood exists there as in any part of Scotland. True, owing to the influence of the late David McGibbon, factor for the Duke of Argyll, several of the Riddell-Drew Clyde-Shire-cross stallions travelled there for a number of years, and many of the best Clyde families there are in the meantime excluded from Canadian registration and importation. Notwithstanding this, many mares of purest pedigree are there mated to the best of Clyde sires, and many of the prizewinners in Scotland have been bred there, and not a few from my native county have enriched Canadian Clyde breeders. The celebrated Silver Cup served there during the past season, and for the season of 1910 a very promising young horse, High Degree, one of the best of his age in Scotland, has been secured, £100 premium being paid, and his terms to be £3 at time of service, and £1 when the mare proves in foal.

SELECT CLYDESDALES.

The early sixties mark an epoch in Clyde breeding in Scotland, when David Riddell and Lawrence Drew visited the northern English shires, and brought back with them some Shire fillies, and set about breeding a select Clyde, such as attracted their attention in England, a larger type of horse, with more bone, and well-haired legs. It is not to be wondered at that this step was strongly resented by the pure-bred Clydesdale breeders, when Riddell and Drew, with the produce of this cross, such horses as Prince of Wales, Darnley, Banker, etc., swept the show-rings, and outsold them both by private sale and under the hammer.

From this time, two factions existed in Scotland among Clyde breeders, Drew and Riddell working for the large-boned, heavy type, represented by such horses as Prince of Wales, Darnley, Banker, Sir Walter Scott, The General, and a host of others; and another faction working for lighter bone, flatter leg, less hair on the legs, larger feet, longer and more oblique pasterns. At the head of this type is Baron's Pride, by Sir Everard, by Top Gallant, dam Forest Queen, by Spring Hill Barley, and a long list of his progeny, Baron of Buchlyvie, Pride of Blacon, etc. Andrew and Wil-

liam Montgomery, the Clydesdale kings of Scotland, as owners of this phenomenal horse, must assume the responsibility of the new type of Clyde.

It must not be supposed that the little, neat type of horse, too long sought after by Canadian breeders and by Canadian importers, which until recently were representative of the show-ring class of Clydes, will continue to be sought after. If we visit the extensive establishments of Andrew Montgomery, at Netherhall, or William, at The Banks, our minds will be disabused of that idea; at both places ponderous animals predominate, and if you want size combined with quality, you can find it there.

dell's services to the breed of Clydesdale horses lie mainly in the fact that he retained the great horses, Prince of Wales and Darnley, in this country, when the demand for such horses for exportation was very strong; so that, had he parted with any of these horses to any foreign buyers, the whole course of Clydesdale history would have been different from what it is. Had he sold Darnley for exportation, for instance, there would have been no Top Gallant, no Sir Everard, no Baron's Pride; and had he sold Prince of Wales to any foreign buyers, there would have been no Prince Roberts, and no Hiawathas.

Mr. Riddell was on the right lines of breeding all along. He brought out The General, the sire of Prince of Wales, and he also brought out Sir Walter Scott, the sire of The General, and also Old Clyde, the sire of Sir Walter Scott; and, besides, he put through his hands Samson, the sire of the dam of both Prince of Wales and Darnley. So that he was well entitled to be called the Grand Old Man of the Clyde breed.

I extract the following remarks from Mr. Riddell's speech at the presentation dinner already referred to as worthy of our consideration:

"One of the most remarkable of his associates in Clyde breeding was Lawrence Drew. Taken all in all, he was a man of rare gifts, and, above all, a trusty friend and thorough gentleman. When he thought of the type of draft horses which was in fashion when he was a young man, meeting such men as Samuel Clark, Peter Crawford, William Park, and Robert Findlay, of Spring Hill; and again, when Mr. Drew and he went to Lincolnshire and other parts of England to buy mares and fillies, the change struck him forcibly, and they of the younger generation would perhaps pardon him when he said that there was danger of overdoing the fancy points, to the neglect of those which were of the utmost importance for work and durability."

In the North British Agriculturist, 7th October, 1891, is a report of a Clydesdale Symposium, where nearly all the prominent breeders of Clyde in Scotland met at Professor McCall's stock farm, Alexander Galbraith, of Jamesville, Wisconsin, said:

"Clydesdale breeders are making a fatal mistake in making big feet and long, sloping pasterns the 'be all and end all' of draft breeding." Professor McCall supported this view. Mr. Galbraith agreed with Professor McCall in saying that very large feet were sometimes a positive source of weakness to a horse.

A good-sized, well-shaped foot, with moderate length of pasterns, were much to be preferred in draft horses to unduly big, wide feet, for the above reason.

THE CLYDESDALE HORSE FROM THE UTILITY STANDPOINT.

I have been asked why I prefer Clydesdales, and selected them as the breed to which I am devoting my time and money. Various circumstances have contributed to that decision. In the first place, probably my acquaintance with the breed since my earliest recollection. It is truly said, "Find a Scotchman where you will, and you will find the Clyde horse." My countrymen are well known to be frugal in their habits, and they would not long stick to the Clyde horse unless he aided them in



Pyrene.

Bay; foaled 1900. Winner of Challenge Cup, Highland Society's Show, 1906.

If asked what my views are as to the points of variance by these two factions, my answer would be: Combine the two; let the showing judges judge by points, and give more value to the general conformation, size, weight, color and action; give up the present exclusive attention to feet; oblique, long pastern; flat, light bone, and clean legs—all of them important; nay, imperatively so—and base their decisions on the essentials to strength, endurance, soundness of body and constitution, prepotency, breeding, action and color—a combination of qualities which give the animals the highest commercial value. Let them

carry themselves erect, and in their line of vision take in the whole horse, and not his feet and legs only.



Hiawatha (10067).

Clydesdale stallion; bay. Foaled 1892. Sire Prince Robert.

While not agreeing with David Riddell in everything, I am bound to say that he did a great deal for Clydesdale breeding in Scotland, and a great many good ones came to Canada from his stables. For these reasons, I take pleasure in quoting the following extracts from a Glasgow newspaper of November, 1908, being the report of a dinner and presentation of a portrait in oil to him by his numerous Clydesdale-breeder admirers: "Mr. Rid-

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LIVE STOCK.

Judging Sheep in 1909.

Editor "The Farmer's Advocate":

Now that the year has passed into history, it is a good time to look into what the show-yard is doing in the way of stimulating improvement in live-stock circles. The types selected as being nearest to correctly high ideals which progressive breeders ever and always strive to reach up to, have been placed before the interested onlookers at many a show.

Have the selections at the leading shows been nearly always the proper ones; have the judges been at all times capable of doing the work undertaken by them? are questions pregnant with the possibilities of the future.

Some of the great fairs—Toronto, for instance—passed by without a heard murmur or any criticism of the placings in the ring. At the International, in Chicago, the atmosphere was different. Considerable electrical force was kept in check on the part of exhibitors by mere will-power, governed by great patience. Mutterings of disapproval were frequent, and why? Simply because, at least in one class, that in which the writer was specially interested, the gentleman doing the work was not "big enough for the job." Once more it was clearly demonstrated that no man is capable of judging horses at one great exhibition, cattle at another, sheep at a third, and swine at a fourth, where competition is keen, and the best in the land is out in full force.

'Twas more pity than blame for the gentleman who undertook so great a task. That man has yet to be born, and will not be seen in a thousand years, who can, with any near approach to correctness, place awards in so many different classes of stock, even if he were a practical breeder of the several classes, let alone being a comparatively diversified handler of, or speculator in, such diversified lines.

their thrift. He does that in a marked degree. The Scotch farmer has to contend against a rugged climate and high rents; he must of necessity work his land so that it returns the maximum possible for his labor and outlay. Lighter horses than Clydes would not enable him so to work his land as to do this. I know of no other breed of horses which can compare with the Clyde for lasting qualities and economy of keep. When carefully bred, an unsound Clyde is a rarity; as a rule, he is sound in his feet, has good bone, well-muscled, is a good feeder, and always ready for his work, and thrives on such food and work as would kill most other breeds. He is to the Scotchman what the old French-Canadian horse was to the habitant.

My professional experiences, extending over nearly half a century, gave me opportunities of seeing and comparing all the known breeds of horses in North America and Europe. I have had for many years the professional charge of most of the large transportation stables in Montreal, where I made careful study as to which breeds were most profitable, considering durability, cost of feed, and freedom from disease, and I have no hesitation in saying that no other breed will meet these requirements as well as the Clyde.

I have been extensively engaged in Clydesdale breeding on a large scale (at one time 350 mares), in Alberta, on the Wallond Ranch, for a quarter of a century, and my experience warrants me in saying that, if selected from dams sound themselves, and having no hereditary strains of unsoundness, using a sound sire, also free from hereditary taint, Clydes can be bred sound, and such, barring accidents, will remain sound through life.

From a professional standpoint, too, I can say that Clydes, properly kept in healthy surroundings, will resist, more than any other breed, the ordinary infectious diseases, and, as a rule, will recover quicker and more completely when attacked by them. Clydes, properly fed during colthood period, will mature and do light work as soon as any other breed, and sooner than most. No other breed is easier to break; as a matter of fact, most properly-handled Clyde colts will take to farm work as a pointer dog or a setter will to pointing or setting.

In the show-ring, no other breed of heavy horses can make such an imposing display, a fact that is being demonstrated year by year, by the increasing interest shown in them at the great New York show in Madison Square Garden, and the Olympic, in England. I think Clydesdale breeders are much indebted to the Nelson Morris Company for what they have done in showing their magnificent team of six Clydes. I believe the time has come when Clyde breeders must do more to keep the breed to the front, or they will suffer a temporary setback, so much is being done to push other breeds. But history repeats itself. I have seen so many attempts to push certain breeds of animals to the forefront. The Shorthorn, the Hereford, the Polled Angus, the Galloway, in cattle, all had their day; the Thoroughbred, Standard-bred, Hackney, Clyde, Shire and the Percheron, all had their innings; but the Shorthorn bull in cattle, the Thoroughbred in light horses, and the Clyde in draft horses, top them all. They produce an improvement, no matter what they cross, and this can be counted on, whereas my observations lead me to believe that this cannot be truly said of any other breeds.

My advice, based on long experience and observation, is, to the farmer, stay with the Clyde, but select the best sire and dam to breed from: for, like every other breed, they can be degenerated by errors in selection and mating, and very readily by neglect and mismanagement. Don't breed from the pedigree only; "like begets like," and individual excellence should be sought for in selecting both sire and dam.

It is a great mistake to shut young foals up where they can have no exercise to develop muscle. They require all the exercise they can have for this purpose. Young foals confined in box stalls will never develop the possibilities of their blood inheritance. A young foal, to develop suppleness and symmetrical growth, needs the free exercise of a paddock or pasture. If confined in a box stall, the youngster should be given regular daily exercise to develop strong bone and tissues that will make him an efficient horse when he reaches maturity.

Get your cheese factory in line by building an insulated cool-curing room and ice-chamber. The number is increasing, and will continue to increase. Western Ontario had eight more cool-curing rooms last year than the year before, and several more are spoken of for 1910. The idea is likewise taking firmer hold in Eastern Ontario. Cool-curing of cheese, cooling of milk by the patrons, and pasteurization of whey, are three ideas which every factory should aim to put into effect at the earliest possible date.

al, it is high time for a change, as politicians sometimes say. Do not think, Mr. Editor, that this is a bluff. When a certain decision was made at Chicago's last International, one of the officers of the association stepped up to the writer to whisper, "The professors will put the ribbons on college exhibits wherever they can." The award just then made was most severely criticised, and not a breeder present but would have placed it differently.

No one doubted the honesty of purpose nor the desire of the awardee to do right, but the feeling was prevalent that exhibitors were wrongfully kept out of their just rights.

It is discouraging, when breeders spend a whole year in fitting up for a great international contest, to find their exhibits robbed of their just dues by sheer want of knowledge and skill.

To observant exhibitors of years' experience, the capacity of the judge at work in placing awards is mentally measured before he has got through with the third section. By that time it is clearly seen whether he is a master or a make-believe. When we see a whole class of rams in every section gone over, without a single examination of scrotum or head, where disqualifying defects are to be found, we cannot but think there is a lack of thoroughness which cannot be justified.

If our live-stock interests are to be helped and developed along right lines by show-yard competitions, we must have the most practical men in the land select the winners at our Toronto and International, greatest of shows, so as to educate us by profitable practice, and not by theory, good enough in its place, but never the same foundation of successful results.

Victoria Co., Ont. JOHN CAMPBELL.

Lambing Time in England.

Editor "The Farmer's Advocate":

Now that the lambing season is coming on, it will not be out of order to relate the experience I had in the winter of 1885.

As a youth, I was always willing to learn, and always willing to earn a few shillings. It was also necessary for me to earn something, as I was one of a family of fourteen. I was given the chance to either work with the teamsters or to help the shepherds during the lambing season. I chose the latter, being a born-lover of sheep and horses. As usual, our flock was composed of Southdowns, about 600. Our lambing season commenced the 24th of February. The sheep were put on a 17-acre field of grey-stone turnips, with a grass pasture field on the north side, with a fir-fence around. The sheep were huddled in a fold each day, enclosing about as much turnips as they would clear up in two hours before noon. The teamster brought to the



A Pair of Working Clydesdales.

It is the firm and common belief of breeders and exhibitors that it is only the men whose capital is invested, whose living largely depends on their success as breeders, and who have proved by their productions to be well versed in their business, who are able and should be the judges in the great show-rings of our continent. Agricultural college professors have a place to fill, and proud indeed we are of the many who are occupying positions of trust because of merit both at home and abroad. But, leaving out one or two in Canada, and possibly two in the United States, all the others will do better work attending to their own special life-work than undertaking the placing of awards in sheep classes, in such a way as to not increase, but largely lessen, their standing as teachers of agriculture. In this wonderful age of progress in live-stock husbandry, so much depends on points, and detailed characteristics, which only keen, thoughtful breeders, giving practically their whole time and best thought, can master, so far as possible, by patient study and practical work, which no professor can pretend to accomplish.

When to all that is added the suspicion that professors are apt to give the benefit of their doubt—and doubts, we have noticed, are not rare with them—to college exhibits at the International

field, which was a mile from farm, a load of cut hay, mixed with gray peas, and about every two days a good load of pea straw.

For sheltering the young lambs, for a few days, each ewe and her lambs were put in pens which were made in long rows with hurdles covered with straw; one length of hurdle would make two pens, 10 x 5, with extra hurdles to put on top if weather was very wet or snowstorms prevailed. This season was very stormy. I can well remember the bitter, damp nights when I had my turn to go round the ewes, at intervals of about every two hours, or sometimes of half hours, according to what symptoms were noticed in the flock. There were two shepherds and myself to do night work, and on some nights, when the lambs came fast, we were out all night.

We had what the farmers term a shepherd's hut, drawn on four wheels to any part of the field, so it would be close to the fold. Our furniture consisted of two drop-beds, a small place for food, and a few shelves to put the shepherd's necessities in, and one coal stove. The necessities were composed of castor oil, whiskey, a patent drench, a fresh supply of cow's milk, and a supply of blue-stone and ointment for dressing. The whiskey was used as a stimulant, mixed with cow's milk, and given to weak lambs, sometimes resulting

when ewes were a long time giving birth to twins or triplets. When such stimulants are given, they must be given with caution, as some lambs will not readily take it, and a drop might go the wrong way and do injury. Sometimes we lost a ewe, and had two lambs left on our hands. We then watched for single lambs coming, and would rub the new arrival on the orphan before letting the ewe get up. In most cases the ewe would mother the orphan. If the ewe refused to mother it, we would tie her head down to hurdle until she would own it. When a ewe lost a lamb, we would skin it, and put the skin over another lamb, and give it to the ewe to mother. The shepherds do all in their power to raise the lambs, taking more interest than many an owner, as the shepherd gets a premium on all lambs raised. We had a great many ewes, especially shearlings, which could not deliver their lambs. The shepherd told me this was caused by the sheep feeding off a quantity of cabbage, which were planted where turnips had missed, and should have been fed off in the fall.

I learnt a lesson which has been very useful to me as a flock-owner. Some ewes would not deliver their lambs, and I have seen, in extreme cases, to save the ewe, the shepherd use the knife to bring the lamb away. This was done after other methods failed. I was rather timid the first lesson I had. Being young, my hand was small, and I was instructed by the shepherd. Some men would not use the knife, but every ewe saved was a £ to the farmer. The shepherd was always watchful that a strong disinfectant was used on hands, and also some pure oil or grease, when assisting ewes to lamb. Be sure and trim the finger nails, and always use clean hands, and insert the fingers into passage with finger nails back to the lamb, then turn the fingers round till object is grasped; see that legs and head are in a proper position, and be as gentle as possible in getting lamb away, lest injury be done. Flush the passage and womb out with disinfectant. In some cases the lamb will come hind feet first. If lambing is prolonged in these cases, the lamb usually dies, as the cord gets pressed and stops circulation. It is best, in such case, to help the ewe, and bring the lamb away hind feet first.

Peel Co., Ont. OLD COUNTRY JOE.

Details Re Pig-feeding Account.

Editor "The Farmer's Advocate":
In the Dec. 30th issue of your paper you published a short article from J. H. Colpitts, of Albert Co., N. B., giving his pig-feeding account for one year, beginning October 1st, 1908. Mr. Colpitts' accounts are somewhat lacking in details. He gives the expenditure and receipts, which are all right, so far as they go. He does not, however, give the number of pigs he had, nor their value, on October 1st, 1908, or their number and value a year later, as he should have. Surely there was an increase in the value of his breeding sows, at least. Nor does he state at what age he killed his pigs, or how old the young pigs were when sold, nor the price per pair received for them.

Now, Mr. Colpitts, kindly let us know how many pigs you had on October 1st, 1908, and also give their estimated value on that date and one year later. Then, if there is an increase in value, add it to the profits, and if a decrease, why, subtract it, and let us get at the facts of the matter. And say what breed or type they were, and whether you fed the turnips raw or cooked. And now, before closing, when your pigs have paid the market prices for the grain and roots raised on the farm and fed to them, and have paid over and above this a clear profit of over \$40.00, don't think you have only the \$40 to live on. It is, I think, a very good thing if we can get more for our grain and roots and potatoes on our farms than we can get for them in their raw state on the market. We not only save the labor and expense of shipping the raw produce, but build up the fertility of our farms as well. Thanking you, Mr. Editor, for your space, and wishing you and your splendid paper the success you deserve.

Queen's Co., P. E. I. E. R. Y.

Ans.—In answer to your P. E. I. correspondent, E. R. Y., who criticises my pig-feeding account, sent in a few weeks ago, I must admit that it was not a mine of information, but it helped to show, as I thought, what I supposed the editor wished to bring out, namely, about what pork-raising was bringing those engaged in it, and it certainly could not have been of much value if there had been much difference one way or other in the value of stock on hand at the beginning and end of the year in question. However, I cheerfully give the details asked for. Our stock on hand October 1st, 1908 and 1909 was as follows:

1908.—Two old sows, worth \$25; two young sows worth \$35; one boar, 3½ months, \$7; 12 pigs, 5½ weeks old, \$24; 10 pigs, 1 week old, say, \$8; total, \$99.

1909.—Two sows, \$50; one boar, 2½ months, \$5; 13 pigs, 4 weeks old, \$26; total, \$81.

I sold the ten young pigs in 1908 account for \$1.50 each, and left that item out of the account, roughly calculating that that would about balance depreciation. According to above estimate, it

lacked \$3.00 of doing so, and the profits would be smaller by that much. Yet, perhaps the other was as near correct as this. Pig stock was somewhat more valuable all round this last fall than a year ago. Farmers chased me for young pigs at \$2.00 each, while in 1908 they were not very anxious at \$1.50. I fed the two old sows, which were small ones, and killed them in December, 1908, and they furnished the first "pork" mentioned in the account. I kept the twelve early pigs, killing 11 of them February 10th, 1909, and the other about a month later. They brought slightly over \$9 per cwt., as per second and third entry "pork." In the spring of 1909 we sold eight young pigs at \$3 each. After sows were safely in pig, we castrated the young boar, and he, with five spring pigs, made the last "pork" mentioned in account. The dressed weight of the hog was 414; the pigs averaged about 170 lbs. Perhaps I should say here that the date of this killing was October 6th, and we counted that as October 1st in making up account. The two young sows developed into very fine animals, the best we have ever had, but so far they have not distinguished themselves as pig-raisers, only bringing, both fall and spring, thirteen pigs to salable age. If they don't do better than that in the days to come, they won't live to be very old. Our pigs are of mixed breeding, Yorkshire blood predominating.

We boiled our turnips, first running them through the pulper, as thus they cooked more quickly. Pigs seem to relish the turnips very much better when cooked, still I doubt if we ever do so again, as it adds greatly to the work. We mixed the grain fed along with the turnips, covered up close, and so had warm feed practically all the time. Probably, by this method, pigs can be pushed a little faster than with raw, cold feed, but I doubt if the "game is worth the candle."

This winter we are feeding eight young pigs, and we have no turnips for them, and they must scrub along on middlings and skim milk. We will thus be able to compare the profits of the two systems of feeding. One thing we have learned in the past is that we must go much more carefully in the absence of roots, as anything like forcing will promptly result in rheumatism-arthritis, comfortable quarters and plenty of exercise being no sure preventive, as we know by sad experience. We find it takes at least a month longer to make a 150-pound carcass in winter-feeding, without roots.

Thanking E. R. Y. for his interest, and "The Farmer's Advocate" for unflinching courtesy.
Albert Co., N. B. J. H. COLPITTS.

Clover Leaves as Pig Feed.

Editor "The Farmer's Advocate":

Having noted in "The Farmer's Advocate" different methods of feeding pigs, I have never yet seen anything about feeding clover leaves to pregnant sows. I have practiced saving the leaves that fall off the clover hay when it is put down from the mow. In this way you save a very good part of the hay.

I take about a pailful of pulped mangels, the desired amount of ground grain, and a pailful of clover leaves, put them in a box, mix well together, and leave sitting over night. Then, divide into three parts, one for each meal. You can put some buttermilk, whey or water on it if they will not eat it dry, but I have had no trouble in getting them to eat it dry.

In this way you have a more balanced ration than feeding all mangels, as so many do. I think this makes a very cheap feed for growing hogs, as well as sows.
Wellington Co., Ont. G. M. C.

THE FARM.

Marketing.

By Peter McArthur.

What is a market?
Why, it is a place where one goes to sell or buy things.

Quite right, and that is about all the average man knows about the market—or tries to know. With the man who is not average, the case is different. He studies the market, and when he dies his success is usually explained in his obituary by the stock line: "He probably knew the market better than any man of his time."

In its simplest form, a market is a place where two men, who are at once producers and consumers, meet to exchange commodities. In its highly-specialized form, it is a place where middlemen meet to take their profits.

As the whole business of the world is conducted through markets of one kind or another, it is no wonder that "the market" is a mystery to the average man. To the ordinary producer it is an institution that swallows his products at an insufficient price, while to the humble consumer it is a form of organized robbery that extorts from him his last penny. As the whole work of the market is to bring about the sale of the commodities of the producer to the consumer, it looks as if a simple matter had somehow been made unnecessarily complex. In fact, that is exactly what has happened, and about the greatest problem of the future is the task of bringing together the producer and consumer on a proper basis. But as every producer is also a consumer—oh, well, let us get off our high horse right here. This is beginning to sound like political economy, and the most sedate plug cannot travel far on that road without getting his tail over the line, kicking over the traces, and winding up everything in confusion.

"The market" of my boyhood was the place to which my father went once a year with a load of dressed hogs. He left home before daylight, and I can still hear in fancy the creaking of the runners on the frosty snow, while I snuggled down in bed, and wondered what he would bring home for me to-morrow night. Going to market was a two-days trip, and was never undertaken except in frosty weather. It has always been a matter of regret to me that, before I grew big enough to be allowed to accompany him on the trip, the method of marketing changed. Local dealers began to handle dressed hogs, drovers began to ship live hogs, and the romance of the market became a memory. Perhaps it is just as well. I don't believe they make such ginger-snaps now or "Old-Man taffy" (licorice) as they did in those days. I was always allowed to sit up to await the homecoming, and spent most of the time at the corner of the house, shivering with cold and listening for the tinkling sleigh-bells. Then, what a feast there was before the old open fireplace, with its huge back-log and blazing sticks of cordwood. The story of how the hogs were sold was recounted amid much excitement. Sometimes the buyers were so eager that they came to the stables and tried to buy the load before it was taken to the market. On the market there was usually lively bidding, and sometimes the man who hung on got ten cents per hundred more than the one who gave in too soon. From what I hear now, buyers have changed, also. They seem to be a sluggish lot, according to recent accounts. There may be half a dozen of them on the market, but you can't get one of them to bid more than another. You can sit on the top of your load and shiver until the end of your nose is blue, but no one will make you a much better offer than you got on your arrival. I wonder why that is.

After the practice of going to market stopped, one didn't hear much about markets. Taking things to the nearest town to sell didn't seem to be marketing. You just took your stuff to town "while the roads kept," and accepted whatever was offered. In the old days, a cautious shopper could get some excitement beating down the prices in the local stores. But that is changed, too. After selling your produce for what is offered, you pay the price that is asked for what you want to buy, or leave it alone. This is just about as simple as you could get it—if you didn't have a fairly well-founded suspicion that you didn't get enough for what you sold, and had to pay too much for what you bought.

Here is the place for taking thought. Consider now the trusts. If they control the production of any commodity, or have a monopoly of the field in which they labor, so that they can force the producers to sell to them at whatever price they care to offer, they promptly turn round and take every profit that can be made until the commodity is delivered to the consumer. They have made it very clear that they want, and will have, practically every profit there is in the business. Now, in a just condition of affairs, the producer would get all the profits that intervene between him and the consumer, or the consumer would be rid of the burden of profits that have piled up between him and the producer. But now we are getting technical and heavy again. Let us get back to everyday life.

Have you ever noticed a proud and happy farmer who has just sold his live hogs for some such fancy price as \$7.50 or \$7.75 per hundred? Feeling prosperous, he goes into the grocery store and buys a few pounds of bacon, for which he pays 22 cents, or even 25 cents, a pound. Don't you think that would make him realize that there would be more profit in disposing of his fat hogs as bacon? As a matter of fact, it has occurred to some, and they have tried to organize co-operative bacon-curing establishments. They had before them the examples of Denmark, Belgium and other European countries, where such co-operative establishments have been successfully conducted for many years. In Canada, however, the attempts have almost invariably failed, simply because the farmers would not hang together. For one reason or another they would sell to the buyers of private companies.

In other lines, however, the result has been different. Everyone can remember how the city visitor used to exclaim, a few years ago, when he found that prime apples could be bought in the country for a dollar a barrel, more or less. He would promptly take a pad and pencil, and begin to figure out what apples cost in the city when bought in small quantities. He usually found

consumer, it looks show been made that is exactly the greatest pre- ring together proper basis. But sumer—oh, well, here. This is onomy, and the r on that road ine, kicking over rthing in con-

was the place ear with a load before daylight, creaking of the slugged down old bring home to market was detaken except been a matter big enough to the trip, the local dealers es began to ship market became well. I don't now or "Old- in those days, wait the home- e at the corner d listening for at a feast there with its huge dwood. The was recounted es the buyers es the stables and s taken to the usually lively o hung on got one who gave w, buyers have a sluggish lot, e may be half you can't get her. You can iver until the will make you your arrival.

that they came to anywhere from \$5 to \$15 a barrel, according to the time of the year.

"Dear me, there is certainly something wrong here."

Of course, there was something wrong, but the wrong is being rapidly righted. In Ontario there are already twenty-five prosperous associations of fruit-growers that market fruit to the best advantage for their shareholders. But they are doing more than that. They are raising the standards of fruit-growing, establishing reputations for good brands, insisting on honest packing, and, by the power of their organizations, compelling fair treatment from transportation companies and others with whom they are obliged to deal. They get all the natural profit on their fruit until it has been delivered to the consumer. The consumer, on the other hand, gets a better brand of fruit, at a reasonable price. Everybody is happy except the commission man, and who is he, anyhow, that his feelings should be considered? He is part of the machinery of that mysterious institution "the market," which all sensible people are trying to get rid of.

Cheesemaking, on a businesslike scale, began as a co-operative work, but now can be described only as semi-co-operative. Many of the factories have passed into private hands, but the original system is somewhat closely adhered to, so that the result in most cases is satisfactory. The same is true of the creamery business.

While many books and numberless articles have been written about the success of co-operative stores and co-operative associations in the older countries of the world, Canada must solve her own problems. The conditions are all different, and the solution of the difficulty will be different. The progress that has already been made is cheering, though there are many parts of the country where people are so market-burdened that they may well lament with Jeremiah, "We have drunk our water for money. Our wood is sold to us." As I have been buying water by the tank load, and with my cord, this Scripture appeals to me with moving force. I have observed that my neighbors sell their produce for what they are offered, and pay what they are asked for what they buy. Looks like a good field for co-operative work. I wonder who'll make a start.

The Valuation of Barnyard Manure

The editor of "The Farmer's Advocate" has asked me to take a part in what ought to prove a very useful discussion on the value of barnyard manure to the Canadian farmer. I accept the invitation with pleasure, and propose to utilize the space at my disposal to present a phase of this subject which has not hitherto received the attention its importance merits.

Now, the acceptance of the views I purpose to bring forward make it impossible to give a definite answer to the question, What is the value in dollars and cents of a ton of manure? It would, of course, be an easy matter to calculate from the analytical data the monetary value of the essential elements of plant food—nitrogen, phosphoric acid and potash—in a ton of any particular sample of manure, assigning to these constituents their price per pound in commercial fertilizers, or, indeed, any other values that might be determined on. And this is what is usually done, but in so doing, the half would not be told; the figures so arrived at would give but a very inadequate idea of the value of the improvement that might result to many, indeed to most, soils from its application and incorporation. This improvement, it can be shown, is for the most part due to the humus-forming material which is supplied by the manure, and to which no pecuniary value can be assigned.

THE VALUE OF HUMUS AS A SOIL CONSTITUENT.

We have been learning in recent years that the distinguishing feature of our productive soils, whether clays or sands, is an abundance of semi-decomposed vegetable matter, or, as the chemist puts it, a high humus content. We further find that this humus is Nature's storehouse for nitrogen, and consequently that, in the majority of cases, the former is a measure of the latter. We now know that a soil kept well supplied with humus-forming material is one that is sure to be rich in nitrogen. And, lastly, that of all the important elements of plant food, nitrogen is the dominant; it is the constituent, above all others, that, in nine cases out of ten, according to our experience, determines the yield.

It will not be possible in this article to discuss in any detail the many ways in which this semi-decomposed organic matter makes a soil suitable and comfortable for the growth of farm crops; how it acts physically, in improving the texture or tilth of a soil, making it mellow, and capable of the retention of moisture, air and warmth; biologically, by furnishing the food for the soil micro-organisms that prepare and render available material otherwise valueless to the higher crops; chemically, by the liberation, in its further decay, of its stores of nitrogen, phosphoric acid and potash that can be assimilated by our farm plants, and built up into their tissues. But there are one

or two phases of this question that may with advantage be touched upon.

CONTINUED CROPPING MEANS LOSS OF HUMUS.

First, there is the fact that continued cropping without manure, and especially with crops that leave little residue, as, for instance, the cereals, leads inevitably to reduced yields, and this falling-off is not merely due to the decrease in plant-food constituents removed in the cropping, but in a very large measure to the soil becoming unfavorable for root extension and plant growth, and this unsuitable condition is due to loss of humus. When our wheat yields in the Northwest begin to fall off under the present system of farming, the cause will be the reduced humus content of the soil, rather than the impoverishment of the soil in those essential elements of fertility which have been withdrawn by the wheat plant during its growth.

CHEMICAL FERTILIZERS NOT A SUBSTITUTE FOR BARNYARD MANURE.

If the latter were the only cause of decreasing yields, then the sole use of chemical fertilizers might be recommended, and with confidence, for the maintenance of productiveness; but while science has demonstrated that these materials are most valuable for furnishing available plant food, practice has equally and emphatically shown that their employment is not sufficient in itself to economically keep up crop yields. On the majority of our soils their use for any length of time can only be profitably followed when accompanied by a periodic return of organic matter, either in the form of manure, or in the growth and turning under of a green crop.

MANURE AS A SOURCE OF HUMUS.

Now, the point to be made here is, that, of the various forms of organic matter available to the farmer for the up-keep of his land, that furnished

it is of inestimable value in mellowing the soil, rendering it friable and porous; in preparing an aerated, moist, warm—in a word, a favorable—seed-bed, and a foraging ground in which the roots and rootlets may find an easy passage in search of food. No pecuniary value can be placed on such beneficial properties—all due, it may be said, to the readily decomposed organic matter the manure furnishes.

In a word, good tilth—that favorable condition of the soil that every practical farmer knows is associated with large yields—is not dependent merely on a right proportion of sand and clay, nor solely on judicious culture, but very largely on the presence of organic matter, the chief source of which, in every well-regulated farm, must be barnyard manure.

MANURE AS A SOIL-INOCULATOR.

Soil must not be regarded as so much inert material—clay, sand, and dead vegetable matter; the microscope reveals that every fertile loam is the busy home of countless myriads of minute organisms (bacteria, for the most part), feeding and multiplying. Chemistry has shown that in these life-functions the germs are breaking down the complex compounds—the organic residues arising from past generations of plants and animals, and presenting their elements afresh in forms suitable for the maintenance of the farmer's crops. It is thus the cycle of life is maintained. The role played by these organisms is a varied one, but two facts may here suffice to bring home the importance of this minute vegetable life to the farmer, that the nitrogen assimilated by crops, and subsequently converted into their tissues, can only be acquired through the agency of the soil organisms; and that it is entirely due to the activities of these organisms that the soil does not rapidly become unfavorable, indeed unfit, for the growth of vegetation. Something of the significance of this phase of the question—the relation of soil

micro-organisms to agriculture—will be apparent on learning that in dry, sandy, barren soils, destitute, or practically so, of humus (such as those found in desert areas), this germ-life may be almost, if not altogether, absent; secondly, that, in ordinary arable loams this microscopic life is fairly proportional to the amount and kind of humus present—the richer the soil in this constituent, and the richer the humus in nitrogen, the greater the number of the organisms, provided conditions of warmth and moisture are favorable; and, lastly, that the more abundant the germ life of the soil, the larger the yield that may be expected. It is, therefore, evident that the relationship between humus, germ life and crop yield is a direct and distinct one.



Berkshire Barrow.

Winner of championship as best hog, at Smithfield Fat-stock Show, 1909. Shown by H. R. H. Prince Christian.

by barnyard manure is undoubtedly the most valuable, not merely from the fact that this manurial organic matter is in such a physical condition as to allow it to rapidly undergo further change and become intimately incorporated with the soil, not merely because it contains certain amounts of nitrogen, phosphoric acid and potash, but also because there is associated with it a large number of those germs—micro-organisms—which, multiplying and feeding on it, produce humus, and prepare its associated plant food for the nutrition of crops.

From these considerations, it is evident that this subject of the value of manure may be discussed from three points of view—the physical, the biological, and the chemical. Unfortunately, it is only the last which permits of a dollar-and-cent valuation.

INFLUENCE OF MANURE ON DIFFERENT TYPES OF SOILS.

As to its physical effect, let us take as an illustration its property of increasing the water-holding capacity of soils, especially light, sandy loams. In seasons of insufficient or irregular rainfall, an application made the year previous, of 5 to 10 tons of manure (one fourth of which, roughly speaking, is organic matter), may make all the difference between failure and success; and this not from the plant food it has supplied, but rather from the means afforded the crop of appropriating its food. In thus increasing the moisture content of the soil, we have a property of manure that cannot be appraised in dollars and cents, but certainly far exceeding, in many seasons, and on most soils, that of a few pounds of nitrogen, phosphoric acid and potash.

Or, again, consider the effect of manure on heavy, plastic and refractory clays. For such

The bacteriology of manure—that is, the history and function of its germ life—is indeed a complex and interesting study, but one that it is impossible to discuss at all fully at the close of this article. It must therefore suffice to point out that barnyard manure is extremely rich in bacterial life, and that the general result of this life is for the making available of inert soil plant food. This high bacterial content arises, in the first place, from the abundance of these organisms in the food consumed by the stock, and secondly, from the fact that manure consists very largely of organic matter, which is particularly suitable, by reason of its composition and moist condition, to the growth and rapid development of these organisms. It is thus that a small amount of manure may be able to inoculate a comparatively large area, and stimulate activities that result in the more rapid and larger liberation of plant food from the more or less locked-up stores in the soil. There is very satisfactory evidence to show that barnyard manure constitutes not only the chief, but the most valuable means of soil inoculation. We have thus seen that germ life in the soil is necessary for productiveness, but who shall say what price to affix to a ton of manure for its property of introducing and fostering this life?

In this article we have not touched upon what might be termed the purely chemical phases of the question—the composition of the different manures as regards the elements of plant food, the factors that influence this composition, and the nature of the losses that ensue under various systems of preservation. These are all-important topics, upon which the farmer should be informed, but such information appears more or less frequently in our agricultural press. It was thought that, in the presentation of the views we have here con-

sidered, an important but often-overlooked phase of the question would be brought to the attention of our readers.

FRANK T. SHUTT,
Chemist Dominion Exp. Farms.

Ensilage Corn on Prince Edward Island.

Editor "The Farmer's Advocate":

I would like to give my experience in growing corn for dairying purposes in Prince Edward Island. My choice of land is sandy loam, in which Prince Edward Island abounds. I prefer clover sod, on which about thirty loads of stable manure per acre has been evenly spread. Plow in the spring as early as in good condition, with repeated cultivation to keep down weeds and hasten rotting of sod, until about the first of June, or as soon as the weather becomes warm enough to sow. It should be planted in rows about three feet apart, and three or four inches apart in the rows.

The most satisfactory way of planting (if you have not a corn-planter) is to mark it off with a log nine inches through, with three pegs the proper distance for the rows, and a pair of shafts in it, driving the first peg in the last mark made; dropping it by hand, and giving it a run with the light harrows lengthwise, following it with roller. In about ten or fifteen days, if it comes up closer than one foot apart, give it a run with the light harrows crosswise the drills, to keep down weeds and hasten the growth. As soon as the corn is high enough to use cultivator, it should be run through, and also hand-hoed, if any weeds should appear. The cultivator should be run through it at least once a week as long as possible without breaking down the stalk of corn. The best variety of seed for our climate is the Longfellow, and if seed can be procured from a field on the Island, it is much better. I saved my seed two years ago, and planted it last year alongside imported seed, with the result that the crop from my selected seed matured at least ten days earlier, with fully as heavy a yield. I had no trouble to procure all the seed I wanted last year. Corn cared for in this way will be ready to put into silo about the last days of September, with an average yield of 15 tons per acre. This has been my experience in growing corn.

Prince Co., P. E. I.

FRANK GLYDON.

Draining and Fencing.

Editor "The Farmer's Advocate":

The order of the evening at the last meeting of the Brant Township Farmers' Club was a discussion on important improvements that could be made on the farm. Draining and fencing were thoroughly discussed, but, unfortunately, a very important improvement, that of beautifying the farm, was not touched on. In these days, when the farmer's sons are deserting the farms for city life, the subject of making farm life more pleasant is a very important one.

The subject of draining was pretty well threshed out, and can be summed up as follows: Why we should drain: 1. Because it pays. 2. Because it allows us to get on land earlier in spring. 3. Because drained land is got into shape for seeding more easily than undrained. 4. Because many weeds that grow on marshy land won't grow on drained land. 5. Because it insures an even crop. 6. Because it makes unproductive areas productive. A drain works when the farmer sleeps.

How to drain: First, know which way the water naturally runs. This can be ascertained in spring, or after a heavy rain. If this cannot be done the level should be found with a spirit level and stakes. After the lay of the drain is found the amount of fall must be figured out. To start the ditch a plow will save a lot of work. After the top soil is plowed out, use a strong plow, from which the mouldboard has been removed, fasten both handles to the landside, and with chain and a long whiffletree quite a deep ditch can be cut and loosened. Some prefer water in the ditch to determine the proper fall, but most people prefer a dry bottom. To keep the bottom of the ditch even, use a long straightedge, and slide it along as you advance. For getting the depth of the ditch, use a number of cross-pieces set on stakes, at intervals of about 15 rods, giving them the same fall as the bottom of the ditch is to be. Then set a stick on the bottom of the ditch as you go along, and sight over the cross-pieces. A regular scoop for scooping out a hollow for the tile to lie in is advisable. The less fall the larger the tile that should be used. Also, let the size of tile be determined by the amount of water to be carried off. In filling in, put the top loam next to the tile instead of the bottom clay. If ditching through quicksand, lay tile on a board. A tile smaller than 3 inches should never be used. A man showing all the different drains is invaluable for future reference and repairing if necessary.

Fencing is another improvement that is well worth considering. Good fences greatly increase the worth of a farm, besides improving the appearance. The old rail fences take up too much

room, and make a good breeding place for mice, bugs and insects, and for the raising of weed seeds. Old rails make good firewood, and in that way help to pay for a good wire fence. Rail fences cause heavy snowdrifts, and thus hinder getting on the land as soon as desirable. The up-to-date fence, of course, is the wire fence, either woven or coiled. Barb-wire has seen its day. Wire fences give the farmer at least 3 ft. more of land to cultivate than do rail fences. With wire fences the strain is on the end posts, so they should be strong and well set and anchored. The posts between need not be very big, about 5-inch top is large enough, and set about 25 to 30 ft. apart. Upright wooden stays should be fastened to coil fences. This prevents cattle from pushing through them, and stiffens the fence otherwise.

Bruce Co., Ont.

A. E. W.

Economy of Labor in Threshing.

Editor "The Farmer's Advocate":

Find enclosed \$1.50, for which you will retain my name on your subscribers' list for another year, and also these lines for publication, relative to a new method of threshing that I have practiced for this last year, and which I have sent to you, hoping that they may be of some interest or benefit to your readers. For ten years I have been a subscriber and constant reader of "The Farmer's Advocate," and, in my opinion, its equal as an agricultural journal is not printed in Canada.

Twelve years ago, when a boy, I first began to attend my neighbors' threshing. The custom was, and is to-day, in this section, for farmers to trade in the work with their neighbors. Upon calculation, I found that for years the help required to pay them in return for their assistance would be equal to the work of one man for from forty to fifty days. Of course, in the last few years, owing to the advent and exclusive use of the steam thrasher in this section, this time was considerably reduced; yet, however, comparing the work usually expended in threshing of the grain (not to say anything of the dirt endured), with the economy of labor practiced by large manufacturing concerns, and made possible by the use of the most-improved machinery, there still appeared to me to be far too much unnecessary work about the job, and ten years ago I conceived the idea, and brought it into successful operation this last harvest, that it would be possible to build a large barn, and that grain separators could be improved and labor-saving attachments put on them, so that one could be arranged in the barn, and the grain threshed as it is drawn from the field. And so, eight years ago, when building large barn, 91 x 56 feet, I kept this in mind, and made provision for it.

For a number of years I have operated a threshing outfit in this neighborhood, studied most of the different makes of threshing machinery built in America, and visited several thrasher-manufacturing concerns in Ontario. I saw the advent of the wind-stacker, the self-feeder, the cutting-box, and grain-blower, and investigated the merits of each, and finally decided that I could make the arrangement in barn that I wanted, and thresh the grain as it was drawn from the field. And so I purchased a separator with Jumbo cylinder, feeder, wind-stacker, with hinge chute, cutting-box attachment and grain-blower.

We set this machine near center of barn, beside our thresh-floor, so that teams could drive in and grain could be pitched from load into feeder. We placed cedar poles, 25 or 30 feet long, 3 feet apart, from floor to swing-beams, to which the tops of them were tied. These poles kept the cut straw from running out against separator, and left it so that wind-stacker could deliver straw in any direction all around separator. The granary was at the rear of separator, and the pipes and elbows were so arranged that grain-blower could put the grain in any part of it. This separator was driven by a 20-horse-power traction engine, which furnished ample power, and which was supplied with water by means of an injector from a large cement cistern, 20 x 16 feet, which received the water from both sides of barn.

After having threshed last season's crop by this method, I might say that I am more than satisfied with the experiment and results. In threshing this way, when the harvest is over the threshing is done—harvesting and threshing finished up with one sweep, and that with no more than the ordinary help required to draw grain into barn with two teams and mow it away. Any man of ordinary mechanical ability, who understands the science of threshing, and who has a head for running machinery, can handle an outfit of this kind in this manner with ease, if he takes care to put the whole outfit in first-class running order, and that barn is arranged so that everything will work to the best advantage. He is then ready for the grain as fast as it will come. Judging from last season's experience, I would say that a separator, with right equipment, set in a large barn properly arranged for this method of threshing, would thresh the entire grain crop usually grown on a good 300-acre farm, without

moving it out of its tracks, and without a man having to tramp in straw at all. This, no doubt, would be impossible without the cutting-box, as long straw bulks up fast.

For threshing as an occupation, I have no particular liking, but of this way of threshing at home, I must say that it was a pleasure and a delight to me, looking at the machinery doing the work. Both engine and separator remained stationary in their respective places, ready for work during the harvest season. There is not the moving, setting or changing as in the regular custom work, in which there is sometimes three or four sets in a day, with the usual changing for different kinds of grain. By this new method, a man can be ready for every load as it comes, and have ample time to look after whole outfit, oil it properly, and keep it in good running order.

Let it not be understood that I would recommend the purchase of a large outfit to thresh in this way merely the crop grown on an ordinary-sized farm, as it most certainly would not pay; or on any sized farm, for that matter, unless the conditions are such that it would work satisfactorily, and the operator be possessed of the mechanical ability necessary to the successful operation of such machine. But, as I have already said, in addition to doing our own threshing at home by this method, we have threshed for the neighborhood in the usual way, and where the full advantage was taken of the labor-saving attachments, the number of hands required to do the work was considerably reduced; and I might say that the most grain we have yet threshed with this machine in a day has been threshed with only eight men, hands and threshers, in all.

Now, Mr. Editor, I have dwelt rather long on this subject, and taken up considerable of your valuable space. As threshing is considered the hardest and most dirty work on the farm, and as you have always welcomed anything to the columns of "The Farmer's Advocate" that you believed to be to the farmer's interest, I have been induced to write you these lines, in the hope that perhaps some of your readers might be led to study how the work might be made easier. There are quite a number of farmers throughout the Province who do their own threshing with cutting-box machines, who might, with a little work, arrange it so that they could do it by this method; and if the conditions be such that an outfit with necessary attachments can work to best advantage, I feel sure that any who give this method a fair trial will not be dissatisfied with the results.

Durham Co., Ont.

NATHANIEL BELCH.

THE DAIRY.

Cheese-factory Conditions and Practices in Western Ontario.

PASTEURIZATION OF WHEY.

Pasteurization of whey eliminates so many abuses at a small cost that results far outweigh any objections to the system, said Frank Harns in his report as Chief Instructor before the Western Dairyman's Association. Cleaning tanks in the ordinary way did not get rid of bitter flavor, neither did the leaving of them without cleaning do so. Allowing the fat to rise to the top and the whey to become very sour did not put the whey in proper condition for feeding. Allowing the whey tanks to become filthy and ill-smelling was not improving our milk supply; therefore, a system which, when properly practiced, overcomes many of these conditions must have an uplifting effect. We have yet to learn of a factory adopting pasteurization and doing the work properly that has not had good results. Many factories troubled with bitter flavor for years are now practically free of it.

Ninety-four factories pasteurized the whey last year; 22 factories fed the whey at the factory, leaving 95 factories out of 211 returning unpasteurized whey. The average per cent. of fat in the whey returned in the patrons' cans pasteurized was .204%. The average per cent. of fat in the whey returned in the patrons' cans where not pasteurized was .1%. The average acidity of the whey returned in the patrons' cans pasteurized was .37%. The average acidity of the whey returned in the patrons' cans not pasteurized was 1.2%. These figures are practically the same as the previous year. The average length of time required to heat the whey to 155 degrees was 1.49 hours. The average time the whey remained above 150° was 2.4 hours. At a few factories they did not do a first-class job in the pasteurization of whey. Several reasons might be mentioned. Some factories are not yet properly equipped for this work. Boilers are too small, tanks too far from the factories, water supply short, and insufficient attention paid to the general conditions necessary for proper results. However, the majority of the factories have done the work well, and the patrons seem to be well satisfied and quite willing to pay their share of the cost of pasteurization. The patrons should in all cases pay the cost, and it is pointed out that when makers receive pay for the work they should in every case use their best efforts to see that the very best possible work

is performed. The cost of pasteurizing will not exceed \$1.00 per ton of cheese.

SEPTIC TANKS.

Difficulty met with at some factories in the early part of the season in getting rid of all the whey, stimulated interest in the construction of septic tanks to take care of the wash water, thus keeping it out of the whey tank, and reducing the amount of whey to be hauled away. Some of the factories began to put in septic tanks or other means of disposing of this wash water. Some factories were already in a position to handle the wash water. Factories which have put in septic tanks large enough to handle the wash water are having good results, and the Chief Instructor strongly urges factories intending to put in septic tanks to be sure they are large enough. It is better to have them too large than too small. Small septic tanks soon fill up with sediment and have to be frequently cleaned, while the large tank works better and needs cleaning only at the end of the season. Would suggest a tank. For an average factory a tank is suggested of dimensions 12 to 15 ft. long, 6 ft. wide, 5 ft. deep, with three compartments.

Only eight factories in Western Ontario made butter from whey the past season.

WHEY TANKS.

Our whey tanks are in much better condition than formerly, many new ones having been put in, particularly elevated tanks, which have replaced the old worn-out ground tanks. The few steel tanks in use are giving the best of satisfaction, are easily kept clean, and give every evidence of lasting for years. Cement tanks are not in the majority of cases giving good satisfaction, and it is not considered advisable to put in these tanks, as the whey seems to dissolve the cement face, and as soon as the rough surface is exposed all kinds of trouble begins. There are some whey tanks not kept clean. This is to be regretted, for there is no doubt that unclean whey tanks have a detrimental effect on the flavor of the cheese. A special effort should be put forth next season to keep these tanks in good condition.

SANITARY CONDITION OF THE FACTORIES AND IMPROVEMENTS.

Last year \$30,448 was spent by the factory men in putting their plants and equipment in better condition. Eight new factories were built, at a cost of about \$19,200, making a total of \$49,748 spent on our factories this year, 61 of which are joint-stock or co-operative factories, and 144 owned by private individuals. The sanitary conditions of our factories are steadily improving, as fast as the owners can afford to spend money for these improvements. Most factories now have cement floors. Many are attending to the drainage and general surroundings. Some, however, are not in as good condition nor kept as clean and tidy as they should be. They lack that system in the daily work and the neat appearance that makes the patron, the maker, and everyone else, proud of the factory. Some factories will need considerable repair in the matter of floors, equipment, and several other ways before opening up next season.

THE CULTURE.

One hundred and eighty-eight factories are now using a pasteurized culture. This is a great improvement over the old ordinary milk-starter or none at all. The makers are each year becoming more familiar with pasteurized cultures, and are using good judgment in handling them. We wish, however, to mention here that it is just possible that some makers may get a little careless at times in handling this culture, allowing it to become overripe and of poor flavor. If such culture is introduced into the milk, the result will certainly be off-flavored cheese, perhaps not showing at the time of shipment, but in the buyer's hands later on if the cheese are held. The instructors do their best to keep these cultures in proper shape, but if they are neglected in any way by the maker and become off-flavored, they will sow the seeds which may cause off-flavor in many cheese before the instructor can make his regular visit and discover the difficulty. The makers are urged to pay particular attention to the cultures. As soon as signs of off-flavor are observed secure another. Cultures with an acidity of from .7% to .75% are in the best condition for use and for propagation from day to day. All utensils which come in contact with the culture should be thoroughly sterilized, as it is useless to pasteurize the milk for a culture and then allow it to become contaminated by coming in contact with unsterilized utensils. Dippers with holes in the handles, wooden paddles, or anything but a wire-handled solid dipper should never be used for stirring a culture. The thermometer should be sterilized by dipping in boiling water before coming in contact with the culture.

ALKALINE SOLUTION.

One hundred and eighty-nine factories are using the acidimeter. The system followed the last season of having the instructors make most of the solution as they pass from factory to factory seems to have given satisfaction, and very little complaint has been received last year regarding

solution not uniform in strength. Many of the makers made their own solution after securing a supply of correct standard acid. The instructors were supplied with standard acid of proper strength by the Chemical Laboratory at the O. A. C., thus insuring the standard acid would all come from the same source.

It would be a good plan for the makers, particularly the younger makers, not to entirely discard the hot-iron or rennet test, but use them occasionally along with the acidimeter, and keep perfectly familiar with these tests, as they come in very handy at times.

QUARTER-INCH WIRE CURD KNIFE.

The majority of factory men now use the one-quarter inch perpendicular wire knife, with a three-eighth inch ordinary horizontal knife, which are giving good satisfaction. The reasons for adopting these knives were set forth in an article in "The Farmer's Advocate" last year. In some cases, when the wires become broken they are not replaced soon enough, and through this neglect the curd cannot be cut uniformly, bringing about conditions that are likely to result in open cheese. It is suggested that the makers keep on hand some wire necessary for repairing these knives, and immediately a wire breaks, replace it with a new one, if best results are to be expected from the use of the wire curd knife.

Business Dairying.

Three or four things every man must keep in view if he is to make the most profit out of dairying: good cows, good feeding and good care, said N. P. Hull, of Michigan, in his evening address to the Dairymen's Convention at St. Thomas.

Two business propositions the dairyman should have in mind are, first to sell as many dollars' worth as possible, carrying the largest amount of profit; and, secondly, to maintain or increase the fertility of the fields.

Of all branches of live-stock husbandry, dairying gives the largest return for feed consumed. "There has not been a time in the last sixteen years," asserted Mr. Hull, "when my cows would not have given a good profit on all the feed consumed. The feed which if fed to a steer would be converted into a pound of beef worth 5c. to 10c., if given to a good cow will produce a pound (?) of butter-fat, worth 30 cents. As population increases we must rely on the cow to furnish human nutrients most economically."

Seeking a business, the income of which would approximate the outgo in point of surety, Mr. Hull decided many years ago to make a leader of dairying, which ensures a steady income, the beauty of which is that fifteen minutes after one has fed the cows he steps around to the business end and draws the returns.

Dairying is profitable, if you do the right kind of dairying, was the clinching comment upon the case of a farmer in Ohio who commenced twenty years ago with one cow, and now has a herd annually averaging \$160.14 per cow from cheese-factory returns and city-milk supply; that man's best cow yields 14,000 pounds of milk a year, not a very extraordinary record, perhaps, but his poorest gives 10,000 pounds, or five tons of milk a year. He sells his calves at a young age for an average of \$59 per calf, making a total of \$219.14 per cow per year.

Investigation in Michigan discovered two men living a mile apart, one realizing \$22 per cow, or an estimated return of 76 cents per dollar's worth of feed consumed by the cows; the other receives \$79 per cow, or \$1.95 per dollar's worth of feed.

Dairying is profitable, but if you don't care enough for it to put a little intelligence into the business, don't go into dairying. What you should go into in that case is another question, but don't dairy.

"When I began dairying," said Mr. Hull, "I was getting \$40 worth of milk per cow, at a cost of \$30. I now have cows eating forty dollars' worth of feed per year. It still takes only about twenty dollars' worth of that to run the cow machinery, so that they have twice the surplus for milk production, and, consequently, yield eighty dollars' worth of milk, of which forty is profit. Feed more; run the machine to its full normal capacity."

"Feed regularly," adjured Mr. Hull. "I have had my herd yield reduced 40 to 60 pounds per day when for any unavoidable reason the hour of milking was irregular."

"Give a variety of feed; one man having heard silage recommended, complained that he had tried it, but while his milk yield increased a little his cows looked bad. 'What else did you feed?' he was asked. 'Nothing.' 'Do you like fresh pork?' 'Yes,' he replied, while his mouth fairly watered at the suggestion. 'Well, how would you like it if after butchering time your wife set nothing but fresh pork before you three times a day for three or four months?' He saw the point."

"Feed a palatable ration. We have heard much about the importance of a balanced ration, which is all right, being nothing but a common-sense judiciously mixed ration, but of two defects I would prefer a palatable unbalanced to an un-

palatable balanced ration. Get the stuff that tastes good to the cow. Medical experts agree that palatability has much to do with digestion. Palatability is one of the virtues of silage."

Keep the cows healthy and comfortable. See that they have plenty of fresh air and sunlight. If you can't afford any other system of ventilation, borrow a saw, cut a hole in the stable wall and tack cotton over it. Muslin curtain is not the best system of ventilation, but it is far ahead of none at all. The stable can be made warm with building paper and shiplap.

"Remember," said the speaker, "that dairying is a systematic practice upon the maternity of the cow, and the function of motherhood demands comfort. While intimating that his practice has been to water his cows in a covered barnyard, leaving them out for an hour or so, he very properly reminded his hearers that the cow, with her system daily depleted by milk production, cannot stand exposure as can the steer with his ribs padded with fat."

Is Cheese Trade in Danger?

"As a matter of fact," said Dairy and Cold-storage Commissioner Ruddick, in his address before the Ontario Dairymen's Associations, "the increase in New Zealand shipments is wholly a result of the decrease in Canadian shipments, and not the cause of that decrease." Mr. Ruddick believes that had it not been for the falling-off in the Canadian exports, which resulted in a higher relative price for cheese, as compared with butter, and thus encouraged the New Zealand factories to make cheese, instead of butter, the New Zealand shipments of cheese would have shown very little increase during the last five years. To back up the statement made, quotations from trade returns respecting exports of dairy products from both countries were given. One little hint was thrown out as to one reason for the popularity of New Zealand cheese, from which our dairymen should profit. There are no green New Zealand cheese put on the market. Even though shipped as soon as made, since the voyage occupies two months, they arrive cured, and cool-cured at that. That phase of the competition can be easily met by the general adaptation of cool-curing, and giving our cheese time to mature—a course advisable in any case, said Mr. Ruddick.

LACK OF THOROUGHNESS.

Slipshod cheesemakers and factory patrons have much to answer for. As compared with our competitors in New Zealand, Denmark and Holland, we lack thoroughness. A case in point that illustrates this failing was mentioned by Dr. W. T. Connell, of the Kingston Dairy School, in his report. In two out of five factories which he visited to inspect pasteurization of whey, a process which involves expense, and, to be effective, should be conducted with great care, he found that no thermometer was used to determine temperatures reached, though exactness in this point was essential.

Mr. Ruddick is of the opinion that a source of danger to our continued pre-eminence in the cheese trade is in the insufficient pay that capable cheesemakers receive. Some men would cost more than they were worth if they worked for nothing. But the good men should get enough to make it worth while for them to stay in the business for life, as very few of them do. By such men going into other occupations, the dairy business loses heavily. Valuable talent and gathered experience, so useful in the trade, are utterly lost to it.

For some years, complaints about the shrinkage of cheese have been heard from the Old Country merchants. They point to the fact that there is seldom any loss on New Zealand cheese. But the thing to which attention ought to be drawn is a discrepancy between marked and actual weights, of an entirely different character from that which is due to shrinkage. This has reached a stage where some effort must be made to have it remedied.

The records of the weighing of 68 lots of cheese have been secured, containing in all 7,181 boxes, among which were 219 boxes wrongly marked, the errors varying from 4 to 12 pounds per cheese. Any difference of 4 pounds and over could not possibly be due to shrinkage. Of the 219 boxes wrongly marked, 193 were overmarked, and only 26 undermarked. The overmarkings amounted to 1,193 pounds, and the undermarkings to 122 pounds. The preponderance the wrong way is significant. Whether the errors resulted from carelessness or fraud makes little difference to the British dealers who believe they are being cheated.

No man in the world will quit trading with you quicker than an Englishman, if he thinks you are not dealing fair. This overmarking is doing great harm. Canada has had, in the past, a good name for honesty in the dairy trade, and the great majority of our factories mark their cheese correctly. But there is crookedness or gross carelessness in some quarters, and our reputation is being tarnished; the good name of all is affected. Let factorymen deal severely with this sort of thing when reported. This is a matter that constitutes a greater danger to our export dairy trade than any other factor at present affecting it.

A Problem in Fertility.

Editor "The Farmer's Advocate":

I would like to see a little discussion in your valuable paper in regard to keeping up the fertility of the farm. I am going to outline our methods, and would like to see them criticised. We have 85 acres of land, with fully twelve acres of waste; practice a short rotation; seed all our grain to clover; pasture one year, and plow for corn or roots, and sell nothing but milk, keeping all the milk cows we can feed on the place, and a year like this one we buy a lot of millfeed. We have, all told, about thirty head of cattle; most of the time we milk twenty. We sent to the condenser last year about 131,850 pounds milk. With our revenue we are fairly well satisfied, but do not seem to be keeping the place up as well as we would like. We grow no wheat, and are very short of straw, but buy sawdust for bedding, and try to save all liquid from the stables. Now for a few questions, but should say, first, that we draw and spread all manure every day. As to crops, we have raised 1,000 bushels of mangels to the acre, but figure on about 3,000 bushels to four acres. We generally have pretty good corn, though it was poor last year. Grain was good, compared to the crops on neighboring farms. We have eight acres of alfalfa, which, I think, goes five tons to the acre. I don't think we have any deal that could be called sour, but have a good deal that is badly in need of draining.

1. Do you think it would pay us to grow a small piece of wheat, merely to have more straw?
2. Would it pay us to use commercial fertilizers, when we would have to buy a drill at a cost of one hundred dollars?
3. Could we do as well with fertilizer on our root crops, and thus save the cost of a drill?

Ingersoll, Ont. D. W. C.

Our inquirer is ambitious, though far be it from us to fault him for that. No man should infer, because he is doing well, that he cannot do better, and the questions asked signify a commendable determination to make the most of all present opportunities, and then search out more. The rotation is an excellent one, and would not be improved in point of profit by including wheat, though this might be advisable if it were desired to reduce the stock and labor of dairying. We figure that D. W. C. must be deriving from his rather small farm somewhere about thirteen hundred dollars' worth of milk a year. The sale of this, however, is removing annually about one hundred and thirty-six dollars worth of plant food from the soil, calculating on a very moderate basis of valuation. To specify, it would remove 698.8 pounds of nitrogen, which, at the low commercial price of 16 cents a pound, would be worth \$111.80; 250.51 pounds phosphoric acid, worth, at 5 cents a pound, \$12.52; and 237.33 pounds potash, worth, at 5 cents a pound, \$11.86. But purchase of feed should be annually restoring a part of this, while the clover and alfalfa is, or should be, yearly making good the drain on the nitrogen supply, by entrapping copious quantities of this element from the atmosphere. The annual cost of potash and phosphoric acid is not thus compensated, but, as there are large amounts of these elements in the soil, which the crops are annually bringing up, and a considerable proportion of which is returned to the soil in the form of stubble, roots and manure, the supply of available fertility should be, and doubtless is, increasing from year to year. The excessively wet spring, and very dry summer and fall, are doubtless responsible for unsatisfactory returns last year, particularly as the land is in need of drainage. This brings us to the point that until one has his soil thoroughly drained, it is usually unwise to expend money for commercial fertilizers; first, because the fertilizers will not give their best results in un-drained soil, and secondly because the money can be so much more advantageously spent in draining than in purchasing fertilizers. Doubtless the time will come when a farm from which large quantities of milk are annually sold, with no return of by-products, will come to need enrichment with the mineral elements of fertility, legumes being always relied upon to furnish the nitrogen. Possibly even now the purchase of such fertilizer would be profitable, though experiment should be made before investing heavily. Still, as stated above, we would strongly advise the economy of first bending every energy to underdrain, then investigating and experimenting with the fertilizer question after that. The only possible exception we would make would be a recommendation to use raw rock-phosphate as an absorbent in the stables. There are great resources of fertility open to Ontario farmers in the soil and the air above it, if they will only see that the physical conditions in respect to drainage, tillage and humus are such as to enable the plants to utilize them. If fertilizers were used, the root and corn crops would be a very good place to apply them. In any case, a fertilizer drill would not be required. Broadcasting is, in most cases, the best way to apply fertilizers of any kind, whether chemicals or barnyard manure.

Pasteurizing Cream to Overcome Churning Difficulty.

A Brant County farmer's wife writes: "Having noticed a question about a churning difficulty in a recent issue, would like to give a simple and sure remedy to those having trouble in getting butter. Heat the milk to scalding point before putting through separator, or in cans, when cans are used. Proceed as usual, and you will have no difficulty. This has been my experience, and also of others who I know."

[Note.—This idea of "scalding" the cream is simply an adaptation of the principle that pasteurizing renders cream rather easier to churn. Under creamery conditions, where pasteurizing is practiced, the cream is heated to 180 degrees, then immediately cooled down to about 50 degrees, and a pure-culture starter added. Under farm-dairy conditions, where such a starter is probably not available, and the cream is cooled down gradually to, say, 70 or 80 degrees, chance being depended upon to secure the desired ripeness through development of lactic-acid bacteria, results might not always be entirely satisfactory in the way of flavor. However, the practice is easy to try, though we would recommend the use of a thermometer to ascertain the temperature of the cream both at time of pasteurizing and afterwards, also at churning.—Editor.]

GARDEN & ORCHARD.

Small Orchards, Big Returns.

We have received from Jas. E. Johnson, Manager of the Norfolk Fruit-growers' Association, a more detailed statement than previously given of their operations for 1909. The Association graded their fruit into five classes, and sold as follows, after deducting expenses of loading, telegrams and postage: Class One—No. 1 Spies, Kings, Spitzenburgs, Snows, etc., 5,603 barrels, at \$3.30. Class two—No. 1 Baldwins, Russets, Greenings, Blenheims, Cranberry Pippins, and some others, 5,318 barrels, at \$3.00. Class 3—No. 1 odd and fall varieties, and hail-marked, 3,280 barrels, at \$2.65. Class four—No. 2's of varieties in classes one and two, 4,718 barrels, at \$2.35; and class five, consisting of No. 2's of odd varieties, 395 barrels, at \$2.00. Total, 19,314 barrels.

He also encloses account sales of two small orchards, to illustrate that, "no matter how small the farmers' orchards may be, they are well worth caring for."

The one reproduced shows account form as filled up and settled for, and is thus given, because it may be instructive to some who are interested. The net returns of \$366.94, not including culls, from an orchard of 35 trees, are certainly very

large. The trees yielded slightly over five barrels each on the average.

The other account, that of Frank Shearer, Victoria, Ont., is of an orchard of 1 1/2 acres. This orchard in 1907 yielded 65 barrels; in 1908, 100 barrels, and in 1909, 220 barrels. Items are: Class one—31 barrels, \$102.30; class two—104 barrels, \$312.00; class three—18 barrels, \$47.70; class four—66 barrels, \$155.10; class five—1 barrel, \$2.00. Peelers and ciders, \$70.36. Total receipts, \$689.66. Expense account: Spray material, \$16.22; 220 barrels, at 41 cents, \$90.20; 220 barrels, commission, J. E. Johnson, Manager, 20 cents per barrel, \$44.00. Net proceeds, \$539.24.

The above figures are very instructive, as showing, not an average, but what is possible in the way of returns.

A 75-pound Bag for Potatoes.

Editor "The Farmer's Advocate":

As the question of a standard weight for a bag of potatoes will come up at the present session of Parliament, I have been taking a very active part in having 75 pounds to constitute the standard weight for a bag of potatoes. The Province of Quebec, I believe, has a standard of 80 pounds, but I think this is the only Province that has a legal standard for potatoes. Cities and towns have their own by-laws, but none of these would stand law if taken before a higher court, as I understand that, in Toronto, a magistrate's conviction under local by-law was recently quashed.

What has brought me to suggest that 75 pounds be the legal standard is that since the sugar refineries have been using canvas bags for their product, which hold 75 pounds of potatoes to a nicety, the fixing of that as the legal weight would be to all parties handling potatoes a great boon. I presume, in this city, you could buy thousands of these bags at 2 cents each. Just think how that would save the farmer's cotton bags. The number of sugar bags available is likely to increase, as the use of bags in place of wooden barrels for sugar is growing. A very large quantity of salt is also being handled in bags.

When we come to think of the many handlings potatoes get, I think the wisdom of reducing the size of the bag will be evident. For instance, they are filled in the field, carried into the cellar, filled up again, and sold to some merchant, emptied into his bags, and taken to the cellar again. The merchant carries them up the steps again, and takes them to the consumer, and the delivery man has to put them in Mrs. Brown's cellar. Surely 75 pounds is quite heavy enough to be handled so many times, and in such paths as there are in going to cellars. When I was a young boy on the farm, I always observed that it was the boys and old men that attended to the potatoes (I might just mention that I am Irish).

Account Sales..... SIMCOE, ONT.....

Norfolk Fruit Growers' Association.

For Account of *E. Armstrong*
Forestville, Ont

Spray Material	4 59	17	Barrels, Class 1, \$3.30	56 10
Work Account	2 33 35	107	" " 2, 3.00	3 21 00
177 Barrels @ 41¢	72 57	4	" " 3, 2.65	10 60
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Check, Peelers and Ciders			" " 5,	
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Check, to Balance	366 94		Peelers and Ciders	
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REMARKS:

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What very strongly presents the good features of the sugar bag for potatoes is that grocers, for instance, would always have enough of these bags on hand, so that they could exchange bags, which, I am sure, would be very acceptable to many.

Emptying potatoes from one bag to another is no nice job. It might be said that a farmer who was paying men for working would lose a certain amount of time, as only the same number of bags would be handled. This is a very poor objection. I have tried it, and a man will handle more potatoes in bags of 75 pounds than he will of 90-pound bags; for a man gets very tired with 90 pounds, whereas he can go along all day handling 75 pounds.

I think I might say that this age prefers lighter labor. Light hoes, light rakes, light cradles, almost everything, is 25 per cent. lighter to-day than when I was a boy.

Now, from the fact that a Dominion standard is necessary, and as Quebec has already an 80-pound standard, I feel that a Dominion standard of 75 pounds just fills the bill. Seventy-five pounds of potatoes is exactly one bushel and a quarter.

If you should think this effusion worth your consideration, I would be very much pleased to hear your remarks upon it. If you should wish to see what a neat package the 75 pounds make, just get a 100-pound sugar bag and try it. Wishing success to my proposition.

Hamilton, Ont. ADAM BALLENTINE.

POULTRY.

A Boy's Ideas on Poultry Breeding

Editor "The Farmer's Advocate":

Every now and then, people living in the country hear of some of their neighbors starting to make a business of pure-bred cattle, horses, pigs or sheep, but hardly ever do you hear of any farmer making a business of pure-bred poultry. Now, why is this? I think it is because the men think it unprofitable for a man to work at chickens, and the women of to-day deem it low or unlady-like to attend to chickens. Or, perhaps they do not think it a money-making profession. I think, if one of the boys, or even one of the girls, would take hold of the poultry, and give them the attention given the cows or the horses, they would get more pleasure and profit from them than from the other stock.

I am just going to give a little advice to the beginner regarding the breeding stock. When starting in poultry-raising, I prefer birds, instead of eggs, for when buying birds you always can see what you are buying. Go to some reliable breeder of the breed you have chosen, and try to get some hens that he is going to kill off, providing they are not too old and are in a healthy condition. If these can be got for a reasonable price, when mated to a cockerel they will make a very good breeding pen for the first year. When selecting the hens for the breeding pen, no difference what breed, except bantams, always use a good-sized hen, always select a hen that is out in the fields from morning till night hunting her feed, and never take a hen that sits around waiting to be fed. When selecting the male bird, select a big, bold bird; never choose a coward. See that he has a bright eye, and is always finding an insect or watching for some imaginary hawk.

For feed for the breeding stock, I would advise a mixed ration of good sound grain. In the morning, feed one quart of wheat for every fifteen birds; this grain should be fed in a deep litter. At noon I would advise feeding a mash composed of three parts cornmeal, three parts wheat middlings, three parts oat chop, one part linseed meal or oil cake, one part crushed bone, one part beef scraps. At night I feed, to every fifteen hens, one quart whole corn; on cold night I heat this corn in the oven until it is brown. This feed may be changed now and then, by feeding whole oats or buckwheat in the morning, and peas at night. In addition to this, the hens should have free access to raw meat, such as liver or beef head, and grit, oyster-shells, charcoal and vegetables, such as turnips, mangels, cabbage, or beets. These would be better hung from the ceiling, within reach of the fowls, to afford exercise, or they might be boiled and mixed with the noon feed. The hens should be fed as much of the noon feed as they will eat up clean in ten minutes. A dust-bath, and good clear water, should be constantly kept before the fowls; an occasional drink of milk in any form is greatly relished.

The house the birds are kept in should be free from drafts and dampness; it should be well ventilated, and have plenty of light—the more sunlight, the healthier the fowls. Always keep the feed-litter clean; lice and disease soon accumulate in a dirty house. Keep the nest regularly supplied with clean straw. Always be on the lookout for lice; saturate the interior weekly with coal oil or a liquid louse-killer. I give two square feet of space to each fowl.

R. S.
Wellington Co., Ont.

The Marketing of Eggs.

THE NEED OF CO-OPERATION.

Poultry producers to-day are working against one another; there is too much competition, and not enough co-operation, said Prof. F. C. Elford, in his address at the Eastern Ontario Live-stock and Poultry Show. The system of selling our produce is decidedly wrong, and does not assist co-operation. As an example, look at the way eggs are sold. A large proportion of all the eggs sold by farmers are collected by egg-peddlars, who work on commission, so that it makes no difference to them whether they get good or bad eggs. They pay the same price for both. The eggs are then taken to grocery stores, where they are held for several days. The egg-dealers now get hold of them, and from there they go to the wholesalers, who in turn distribute them to the retailers. As long as this system of marketing eggs is followed, there cannot be either uniformity of quality or profit to the producer. The prices in buying the eggs should be determined by quality, and none or very few of those interested in the business are taking this matter up. There is no co-operation between the individual members at the producer's end, and neither is there any between the two ends of the industry.

IS IT FEASIBLE.

We have heard statements made time and again that poultry people will not co-operate. There should be no more truth in the statement than that the dairymen will not co-operate. We have had for some time co-operation in marketing dairy produce, and for a lesser time in the fruit industry. Both have demonstrated that co-operation is not only an advantage, but that it is feasible. If farmers can co-operate in these two industries, they can in poultry. Nine cases out of ten it means the same people, anyway. The co-operation in marketing poultry products should be easier to carry out. Since we have experience in the other cases, and in many cases the same organization that is used in fruit or dairy could be utilized in poultry.

WHAT WILL IT DO?

Never in the history of Canada have there been better prospects for poultry produce than at present. Prices are good, and are likely to continue so. Much information has been given on lines of better production, but very little information has been given as to how to market to best advantage. It has been shown how the eggs are usually marketed, and that an egg leaving the farm has no guarantee but what it will be on the road from one to four weeks. Nor is this all: we know that an egg is never as valuable as the day it is laid, and that every day it is kept off the consumer's table, the less value it is. As the eggs are taken to the grocery stores, the good and bad are stored together, and perhaps in the same room as vegetables, groceries, and so on. These flavors are rapidly absorbed by the egg, and are never gotten rid of, and are known to exist when used by the consumer. The two to four middlemen that handle the eggs in transit each take their toll, so that the system as it stands to-day has as its great drawbacks the deterioration in quality of eggs, and the numerous commissions that have to be deducted from the farmer's price.

The Department of Agriculture, of Washington, has been gathering data on the egg industry. They find that when eggs are bought from farmers at 15 cents per dozen, the consumer pays 25 cents per dozen. If we take the same figures for Canada, and our conditions are no better than theirs, during the year 1909, when approximately \$15,000,000 may have been paid the farmer for his eggs, these same eggs cost the consumer \$25,000,000. That is, that for a farmer to market in his own country, at a home market, \$15,000,000 worth of produce cost \$10,000,000. This is not fair. Why should it cost nearly as much to market as to produce? The system is surely at fault.

Another interesting item from this same authority states that there are 17 per cent. of all the eggs produced in the United States lost through carelessness, and this is largely in the hands of the farmer, or as a result of thoughtlessness. We have an estimated loss in Canada of over \$2,500,000 on eggs alone. This is divided up as follows: Dirty eggs, \$300,000; broken eggs, \$300,000; chick development, \$750,000; shrunken, \$750,000; due to rot, \$375,000; bad flavor, \$75,000. Surely this is too big an item to be lost every year through carelessness.

HOW TO DO IT.

Nothing will assist in this so much as judicious co-operation. Where every man markets his products singly, there is neither uniformity of system or quality, and there has been no united effort on the part of the poultrymen to make things better. For the purpose of accomplishing things that seem to be most needed, the Poultry Producers' Association of Eastern Canada was instituted. It has for its aims and objects the bringing of the two ends of the industry closer together, the uniting of the producers, so that the produce may reach the market in better condition, and with less expense. It also aims at standardization of the

product. Most products have certain grades and standards which aid materially in marketing, but neither dressed poultry nor eggs have any recognized grading, and before the industry can be put on the proper basis, there must be a national grading of produce. The work of the Association, then, is to get the producers to form co-operative collecting-circles, such as they have in Denmark and other European countries. At these circles one man would receive, grade and market the produce for the community, and all such circles would have a uniform system. Both the Dominion Government and the Quebec Government have taken the matter up, and are doing what they can to forward the co-operative work.

APIARY.

Concerning Foul Brood.

Will you kindly answer the following questions:

1. What is foul brood?
2. What is the cause of it?
3. Can a bee take the germs back to its hive if it goes in a flower that a bee has been on that is from a hive affected with the disease?
4. Is there any law compelling a man to burn the affected hives?
5. Is there any way that a person can cure foul brood?
6. Will chilling the brood or damaging it cause it?
7. Will bees gather honey from buckwheat when white clover or basswood is on?
8. How long does a working bee live, and how long does a queen live? C. H. H.

1. Foul brood is a germ disease; the larvae or brood of the bee is attacked; it kills the brood, and it becomes foul in the cell.

2. There are at present two forms of what is known as foul brood: one is now known as American foul brood, the other as European foul brood. The former is the general form in Canada. This American foul brood is caused by a germ generally transmitted to the larvae by means of food, honey or pollen. These are generally transmitted to the food through having been stored in a cell which has germs of disease in it through the death of the larvae from the disease. The bees cannot clean out the cell, and the infection remains. Bees may rob a diseased colony; this is often the way the disease spreads.

3. We do not yet know much about the sources of contagion in European foul brood. It is generally admitted that it must have a source of infection other than the food. A bee might transmit the American foul brood through the flower, but it is very unlikely, and an authentic case is not on record.

4. There is an Act for the Suppression of Foul Brood Among Bees in Ontario; 6 Edward VII., 1906. Sec. 3 reads, in part, as follows: The inspector (appointed by the Governor-in-Council, under the recommendation of the Minister of Agriculture) shall, whenever so directed by the Minister of Agriculture, visit, without unnecessary delay, any locality in the Province of Ontario, and there examine any apiary or apiaries to which the said Minister may direct him, and ascertain whether or not the disease known as "foul brood" exists in such apiary or apiaries; and wherever the said inspector is satisfied of the existence of foul brood in its virulent or malignant type, it shall be the duty of the inspector to order all colonies so affected, together with the hives occupied by them, and the contents of such hives, and all tainted appurtenances that cannot be disinfected, to be immediately destroyed by fire, under the personal direction and superintendence of the said inspector; but where the inspector, who shall be the sole judge thereof, is satisfied that the disease exists, but only in milder types and in its incipient stages, and is being or may be treated successfully, and the inspector has reason to believe that it may be entirely cured, then the inspector may, in his discretion, omit to destroy or order the destruction of the colonies and hives in which the disease exists.

This practically means that if the beekeeper will set about and do what can be done, no colony will be destroyed that is strong enough to be of any value. Also, if he will disinfect the hives, they need not be destroyed. Inspectors are ready to give advice and reasonable supervision in this work. No beekeeper can lose anything by having his bees examined, and, on the other hand, when part of the apiary is diseased, such inspection is of great value to the beekeeper in timely prevention of infection of healthy stocks.

5. Yes. The method is to shake the bees from diseased comb, honey, pollen and brood, giving them starters of comb foundation in frames. After two days, shake again upon starters of full sheets of foundation. The object in the second shake is to get rid of any diseased honey the bees may have had in their honey-sacks at the time of first shaking. The starters only are given to try to make the bees consume such diseased honey in wax secretion.

6. Not likely. Part chilling, or anything which enfeebles the constitution of the larvae,

would make it less able to resist disease, but the foul-brood germ must be present.

7. They may; in fact they are quite likely to do so. It is a matter of what attracts them most through abundant nectar secretion. In the early morning they may work on buckwheat, and later in the morning on clover. I have repeatedly known of cases where the quality of white honey was injured in this way.

8. A worker bee, in the active season, lives 6 to 8 weeks. When not gathering honey, and during the winter, when quiet and not losing vitality, a bee lives for months, even from August to April next. A queen bee may live five years, but two seasons is about the average lifetime.

Brant Co., Ont.

R. F. HOLTERMANN.

Wintering Bees.

Editor "The Farmer's Advocate":

I heartily endorse all that Mr. Holtermann says in issue of January 13th, re experiments in beekeeping. As an ex-student of the College, and one who has not only studied thoroughly the theoretical side of beekeeping, but also managed from two to eighty colonies for eight years, and experimented in almost all the known methods of wintering, losing heavily in some cases for the sake of gaining knowledge, I wish to say that there is no problem confronting the beekeeper in Ontario to-day as difficult to understand as that of wintering, and none in which the losses are as great, or as difficult to prevent. Therefore, the very best equipment will be none too good for an understanding of it. When we realize that over fifty per cent. of the bees in Ontario died in one winter through faulty methods, and that this represented a loss of at least \$5 per colony, as they could not be replaced that season for any less, owing to lack of capital, scarcity of bees, long and costly transportation, lack of time before honey flow, etc., we can understand how the equipment of a modern bee-cellar would more than justify the expenditure for the same. Now, I believe that had I the advantage of careful, accurate experiments in beekeeping, such as the farmers have in grain-growing, stock-feeding, etc., it would have saved me hundreds of dollars; and, after a trial of both beekeeping and farming, I am convinced that if the former had its rightful share of experimental work, at a properly-equipped station, the chances for profits in beekeeping would be much ahead of those in farming, when we count capital and labor. Ask almost any farmer who has tried beekeeping, and he will tell you that if it were not for the winter losses, the bees were the best-paying part of his operations. The solution of this one problem would alone make tremendous difference in the production of that most wholesome of all sweets, and add immensely to the comfort, health and physical stamina of the people, and, therefore, to the wealth of the country. Honey is as much an article of wealth as gold or silver, and it is more of a necessity, and the bees themselves act as important agents in the production of what are often called the more important food products, as clover, which makes beef and milk, which in turn supply man with muscle and energy to do things.

Perth Co., Ont.

J. H. BURNS.

THE FARM BULLETIN.

Short Courses at Guelph.

Notwithstanding the multiplication of similar classes throughout the Province (worked up by the several district agricultural representatives), the annual short course in stock and seed judging at the Ontario Agricultural College continues to draw large crowds of keenly-interested students. At the two weeks' term of such practical work, last month, at Guelph, there was an average attendance of 225 or 230, running up as high as 300, on some days. Forty students in the Dairy School, and 25 taking the special course in poultry, swelled the number of short-course students in attendance at the College to between 350 and 400, while the short course in Fruit-growing had an enrollment of 80 on the occasion of our visit a week ago, with prospects of an additional number bringing the total up to about 100. This latter course is a particularly good one, the ten-days' session being packed full of valuable addresses and demonstrations covering the subject of fruit-growing in a most comprehensive manner. In contrast to the courses in judging, which yield few new points that can be reported advantageously through the press, these lectures and discussions on fruit-growing bring out a wealth of information, the pith of which we shall endeavor to present after the course shall have been completed.

Looking to the establishment of a system of technical education for Canada, the Dominion Government proposes to appoint a commission not only to investigate the requirements of the Dominion, but to visit other countries, with a view to ascertaining the methods of industrial training pursued in those countries.

Canadian Ayrshire Interests.

Increased membership, increase of registrations, and a healthy state of finances, was the gratifying state of affairs reported by President W. W. Ballantyne at the annual meeting of the Canadian Ayrshire Breeders' Association, held in the Walker House, Toronto, on January 26th. The meeting was a lengthy one, occupying both forenoon and afternoon, following a full day's conference of the directors. Disappointment was expressed by Mr. Ballantyne with the exhibit of Ayrshires at the Highland and Agricultural Society's Show, at Stirling, where too many individuals, especially cows, of the show-yard type, received honors to suit a Canadian. The majority of Old Country breeders, however, were not in sympathy with this fashionable type, and in the byres and paddocks of the breeder-dairymen the utility cow of splendid type was in evidence. These were cows of fine form, having vigor of constitution and grand capacity. The Milk Records Committee in Scotland were doing a grand work in bringing to the front cows and heifers making large records of milk and fat, and demonstrating that the Ayrshire cow was a producer. Likewise, in the United States, the American Ayrshire Breeders' Association have been doing important work with their Advanced Registry test, demonstrating that they have many 12,000-pound cows. In Canada, the Record of Performance testing was making progress, Canadian-bred Ayrshires not taking second place to their imported sisters. More and more breeders are entering their herds in the test, which, together with the co-operative Cow-testing Association, was strongly commended.

AYRSHIRE INTERESTS ADVANCING.

In the West, the cow-contest is on, declared the Secretary, W. F. Stephen, in his report for 1909. Ayrshires have the lead. Keep it by retaining the culls in the East, sending them to the butcher. In 1908, eighteen pedigrees and transfers were recorded from Alberta; in 1909 there were 357. Ayrshire men in Canada are becoming more enthusiastic, as a greater demand and a wider field, at increased prices, is manifest. Good bull calves are no longer a drug on the market, but in great demand, at paying prices. At the Alaska-Yukon-Pacific Exposition last year, a dairy test was conducted in the Model Barn. All feeds were purchased in open market, and the milk sold at market price. The Ayrshires returned a profit for the period of \$49.69. The Jerseys were second, with a profit of \$27.71; Guerneys third, with a profit of \$11.34, and Holsteins last, with a profit of \$1.63.

RECORD OF PERFORMANCE TEST FOR 1909.

During the year, the Secretary of the Canadian Ayrshire Association had received from the Dominion Department of Agriculture the certificates of 29 cows and heifers that have registered during 1909, making 70 cows and heifers that have qualified. Primrose of Tanglewold, a cow owned by Woodissee Bros, Rothsay, Ont., holds the highest Canadian Ayrshire record for milk and fat, yielding, in one year, 13,536 lbs. of 3.9-per-cent. milk, which works out to 529 lbs. of butter-fat; while Canadian Princess, owned by A. S. Turner, Ryckman's Corners, Ont., holds, it is thought, the best known Ayrshire record for a three-year-old, having yielded 11,377 pounds of 4.59-per-cent. milk, or 521.91 pounds of butter-fat, in 335 days, dropping her calf prematurely, eleven months after the commencement of her test.

Conference with Ayrshire breeders in the Maritime Provinces, in December, revealed a desire on their part for representation on the directorate of the Association, and they considered that money expended on the official organ could be expended to better advantage.

One hundred and thirty-four new members were received during the past year, bringing the membership up to the highest in the history of the Association. The financial statement showed a balance on hand of \$623.02. The balance of assets over liabilities in 1909 showed an increase of \$932.67. The report of the Record Committee gives the number of registrations as 2,373; transfers, 985; the registrations by Provinces being: Ontario 660, Manitoba 62, Saskatchewan 13, Alberta 222, New Brunswick 90, Nova Scotia 61, Prince Edward Island 29, United States 47.

CONFLICT OF CONSTITUTIONS.

A question arose as to the regularity of the Record Committee's action in dismissing the former registrar, Mr. Nimmo, without consulting the directorate of the Canadian Ayrshire Breeders' Association, as required by the incorporated constitution of that body. It transpired that there is an inconsistency between the constitution of the National Record Board and of the Ayrshire, as well as some of the other breed societies. The Constitution of the Record Board gives it full authority in such matters, and the constitutions of the new breed societies recently organized under the National Records system have all been made to harmonize with the constitution of the National Record Board. The constitutions of the Ayrshire and some other breed societies will accordingly require to be amended in this one respect. In the matter of Mr. Nim-

mo's dismissal, however, the President and Secretary of the Ayrshire Breeders' Association were consulted, and their full concurrence secured before final action was taken. The present registrar is Mr. Hitchman, the registrar of Shorthorns. Several of the Ayrshire members wanted to know why the cost of their registration had increased, if the work was looked after by a registrar receiving part of his salary from another breed society. In reply, J. W. Brant, Accountant of the National Live-stock Records, and Secretary of the Record Committee, explained that Mr. Hitchman was paid wholly by the Dominion Shorthorn Breeders' Association, for whom all his actual work was performed. In order merely to use his name, the Record Committee had made him registrar of all the other cattle breeds except French-Canadians, but the real work in the registration of these breeds was done by clerks. As a matter of fact, considering the increase in Ayrshire pedigrees from 1,653 in 1908, to 2,373 in 1909, the work was being done proportionately more cheaply than before, although the saving was not so considerable as it would have been, owing to the payment of a couple of months' extra salary to the former registrar.

The directors reported that, owing to the resignation of Gus A. Langelier from the directorate, they had appointed a Maritime Province man, Geo. E. McIntyre, of Sussex, N. B., to fill out the remainder of Mr. Langelier's two-year term.

DIAGRAM SYSTEM OF IDENTIFICATION.

The matter of more definite description of animals on the registration certificates was dealt with. Many of the certificates describe an animal as "Red and white," "White, with a few red spots," or some other characterization quite inadequate to identify an individual. It was moved that the diagram system be adopted, the diagram to be filled in in a blank printed on the back of the application form, showing markings on both sides, characterized by the letters R and W in ink. Considerable discussion occurred, in the course of which the opinion was made manifest that if the diagram system were adopted, the registrars should be expected to fill into the certificates an explicit description, based on the diagram submitted with the application form. It was felt by others that, while the diagram system would be a good one, some of the breeders, particularly in Quebec, were hardly ready for it, and the Secretary accordingly moved, in amendment, that, "Whereas, it is the consensus of opinion among breeders that the descriptions of animals in the certificates are indefinite; therefore, resolved that breeders be requested to give some definite markings on their application forms, to appear in the certificate, and by which the animals may be identified." An even vote was decided by the President in favor of the original motion.

MILK RECORDS.

When at the Highland and Agricultural Society's show, in Scotland, last summer, the President had been consulted by a committee composed of Dr. C. Douglass, Thomas Clement and John Speir, to discuss the milk-records question, with a view of endeavoring to have the yearly-records test in Canada and Scotland correspond to a uniform standard, consistent with the prevailing conditions in both Scotland and Canada. As a result of this conference, a memorial was submitted to the Secretary of the Canadian Association, the gist of which was presented at the meeting last week. It seems that there are certain radical differences between the systems of official testing prevailing in the two countries. In Scotland, it appears that the inspector pays bi-weekly, or, at least, monthly, visits to the farms, and the yearly production of the cows is calculated on the strength of the data he obtains on these visits. In Canada the breeder keeps the daily milk records, the inspector simply checking these, and taking samples for butter-fat test. The feeling of the directors and of the Association was that the Canadian system of obtaining data was the better one, the only improvement desired being more frequent visits of the inspectors. In most cases very little difference has been found between the totals of the breeders' daily records and the results calculated from the inspectors' visits. Still, the daily weighing, with surprise visits, is considered desirable, and a means of guarding against temptation to leave a cow partially un milked when an inspector's visit is anticipated.

Then, in calculating the yields, another difference exists. In Scotland they reduce their yields of milk to a three-per-cent. basis. Thus, if a cow gave 6,000 lbs. of 4-per-cent. milk, it would be reckoned as equal to 8,000 lbs. of 3-per-cent. milk. At least, that is the way it was represented to the meeting. This does not appeal to the Canadian breeder at all. Here we publish actual yields of milk and calculated yields of butter-fat. Again, the Scotchmen seem to think the period over which the record extends should be limited to within 365 days prior to the birth of the next calf. The Canadian system, which is a compromise between the American and the Scotch, requires the dropping of a calf within fifteen months of the commencement of the test. The general opinion was that it would not be wise

to ask for any change in the Record of Performance system, but a committee consisting of W. W. Ballantyne, R. R. Ness, W. F. Stephen and William Hunter was appointed to confer on the matter.

PENALTY FEES FOR TRANSFERS.

In order to encourage greater promptness in sending in transfers, the directors recommended, and it was adopted, that a penalty fee be imposed, of 50 cents to members, and \$1.00 to non-members, for transfers not sent in until after 90 days. Within that time, the fees are 25 and 50 cents, respectively.

COUNT FEED AT THE DAIRY TESTS.

A motion was carried in favor of memorializing the other dairy breed societies, to see that cost of feed be taken into consideration in connection with the dairy tests at the Winter Fairs, account of feed to be kept for three days before and during the test. This was followed by a resolution in favor of duplicating last year's grants to the Winter Fairs, providing they accepted the proposition outlined above. It was recommended, in this connection, that the test at Amherst be made one of three days.

Despite the requests of the Maritime Province members for a grant to the Dominion Exhibition, at St. John, it was moved by R. R. Ness, seconded by Wm. Stewart, and carried, that no grants be made to any of the fall fairs this year. Lack of funds was the reason assigned.

REGISTRATION TANGLE.

Quite a tangle has developed in the matter of re-numbering Ayrshires to conform to the demand of the American Association. In the first volume of the Dominion Ayrshire Herdbook there were a number of pedigrees recorded in the following very loose manner: "Ewart cow, No. 3—235—; red and white; bred by Jas. B. Ewart, Dundas, Ont.; second owner, W. S. More, Hamilton, Ont.; sire, either Napoleon (imp.) —19—, Neptune (imp.) —20—, or Robbie Burns (imp.) —21—; dam, one of Ewart's imported cows, either —24—, —25—, —26—, —27—, or —28—."

When descendants of these animals came to be sold to go to the United States, the American registrar would accept them only on condition that the sires and dams be specified definitely, and new numbers given them. This was innocently done, without thought of the consequences it would ultimately entail.

The pedigree of Ewart Cow, No. 3 was accordingly revised to read as follows: 23808—Red and white. . . . Sire, Napoleon 23809, Vol. 17; dam, Creampot (imp.) 23810, Vol. 17. Last year, at Geo. Rice's sale, the cow Jean Armour was sold, to go to Pennsylvania, and it turns out that she traces to Ewart Cow, No. 1, formerly numbered as —205—, now re-numbered as 28199. Among the descendants of Creampot since re-numbered, are: Ewart Cow No. 3, formerly 235, now 23808; Ewart Cow No. 2, formerly 206, now 23809; Ewart Cow No. 1, formerly 205, now 28199. There is no doubt that thousands of Ayrshires now registered trace back to these Ewart cows. There is already a list of 100 tracing to the cow Creampot; and as such animals are sold to go across the line, and all their ancestors descended from the Ewart stock have to be re-numbered to comply with the American ruling, it will upset our whole Ayrshire herd record, so that there will not be one book right, not even in the office at Ottawa. A pedigree might be issued one day giving the original number of a certain ancestor, and the next day another pedigree giving that animal a new number. Only memory could prevent such discrepancies. As a matter of fact, the proper way to revise these ambiguous pedigrees would have been to retain their old numbers, simply striking out all but the true names of their sires and dams. At present, it seems that if obstruction is not to be placed in the way of trade across the border, the demand of the American Association will have to be modified accordingly. The secretary of the American Association claims he cannot rescind the rule without authority from his association. It was finally left with Secretary Stephen to attend the next annual meeting of the American Association, and take the whole matter up with them.

OFFICERS.

Election of officers resulted in the re-election of all the Western directors, and all the Provincial vice-presidents, except for the substitution of M. H. Parlee, representing New Brunswick, in place of Geo. McIntyre, who was chosen by the directors to fill out Mr. Langelier's term on the directorate. Delegates were elected as usual for the various exhibitions, and Ayrshire judges recommended. Following is a list of the more-important officers: President, Jas. Bryson, Brysonville, Que.; Vice-President, John McKee, Norwich, Ont.; Secretary-Treas., W. F. Stephen, Huntingdon, Que. Executive Committee—R. R. Ness, Nap. Lachapelle, Hon. Wm. Owens, A. Kains, Wm. Stewart, and W. W. Ballantyne. Registration Committee—R. R. Ness and W. F. Stephen. Delegates to National Record Board—W. W. Ballantyne and W. F. Stephen.

A gracefully-worded letter of condolence from

the directors expressed their sincere sympathy with the Secretary, in his recent bereavement through the loss of his wife.

Meat Boycott Misdirected.

The boycott against meat has been rapidly gathering adherents and strength. Already it has had effect on the price of meat, and also on the price of live stock. The originators of the movement doubtless intended to hit the packer only; the "trust" is universally feared and detested, but it is likely that, of all the classes affected, the packers will suffer least. Many retailers will be snuffed out, and the prices of stock will be depressed, but the packer is a go-between, a middleman. U. S. Secretary Wilson is inclined to blame the retailer for taking too large a percentage of profit, but he also very cleverly exposes the seat of the trouble when he says that "the American people are suffering not so much from the high cost of living as from the cost of high-living."

A Government investigation of the National Packing Company, of Chicago, for violation of the Sherman anti-trust, by maintaining an illegal combination to create a monopoly and restrain trade, is already in progress, and prosecution is expected to follow.

Let us not worry; good will undoubtedly come of it all. A little self-denial will hurt no one, and if the result of the furore should be the development of more thrifty, careful habits, it will be great gain.

Registrations, 1909.

At a meeting of the National Record Committee, on Tuesday evening, January 25th, the annual report for 1909, as prepared by the Accountant and Secretary, was considered and adopted. The report shows a large increase in the receipts of registration and membership fees for all breeds, the totals being, respectively, \$27,439.61 for 1908, and \$40,078.73 for 1909. Receipts for the Short-horns in 1909 were about \$1,500 ahead of the previous year. In Herefords the increase was \$500, and in Jerseys \$200. There was a small decrease in swine membership and registration, but an increase of over \$6,000 in Clydesdale registration. The Hackney business doubled, and the Shire business was three times as large as the previous year. Thoroughbred horses more than doubled, while \$1,500 was received on the Percheron account, being a slight increase over 1908. The sheep fees increased about \$300. The expenditure for conducting the office was slightly in advance of 1908, owing to necessary increase in the staff. In 1908 a total of 22,390 pedigrees were recorded, and in 1909, 26,145. In 1908 there were 4,752 transfers, and in 1909, 7,387.

New Canadian Ayrshire Milk Record.

What promises to be a new record of Ayrshire milk production has just been completed by the cow Annie Laurie, purchased at Mr. Rice's sale by E. K. Cohoon, of Harrietsville. At the recent meeting of the Canadian Ayrshire Breeders' Association, Mr. Cohoon stated that the cow would probably fall 150 pounds short of the record of the best American Ayrshire cow if Annie Laurie's recorded production only be taken into account; but if she be given credit for four days' production at the beginning of her lactation period, and before the recording of her milk yield commenced, she would have given about 15,090 pounds of milk. The present owner believes there is no reasonable doubt but that the cow must have given 150 to 160 pounds of milk in those four days immediately after calving, and application has been made by the owner to have allowance for this estimated production included in the cow's published record.

Canners Combine.

When the Canadian Canners, Limited, was organized it embraced 33 of the canning industries of the Dominion, and controlled about three-quarters of the output. Since that time a number of independent companies have sprung up, reducing the percentage of output of the merger to about one-half. A new development is the taking over of these independents, practically all of which, it is announced, have agreed to enter a new amalgamation, which will now comprise between fifty-five and sixty factories. It is understood that the independents will be given stock in the merger. Following this statement comes a Montreal despatch, hinting at an alleged secret agreement between the Canadian Canners and the American Can Company. It looks as though the subject would bear some investigation.

The Dublin (Ireland) Industrial Development Association, at a recent meeting, took steps to have a good exhibit of Irish products at the Canadian National Exhibition, Toronto, of the present year.

Essex Tobacco Profits.

Although it is midwinter, which is usually an idle time for farmers, yet in Southern Essex they are exceptionally busy. The good-times we are enjoying must account for it. Every enterprising man is seeking to improve present opportunities, not only so far as the dollar within reach is concerned, but making preparation for next season's crop. Old rail fences are disappearing to the hum of the circular saw, and new, substantial, tasty wire ones will be seen, instead, as soon as weather permits. Tobacco-growers are rushing their last season's crop to the warehouses. They are exceedingly well pleased with returns, and purchasers say sample is excellent. The following may give some idea of what money is made by successful growers of the weed. Forest Campbell received \$312.15 for one-acre crop; J. J. Wilkinson, \$1,065 from four acres; Geo. Evans, \$1,500 off five acres. E. Allen, on Barnard farm, who produced seed-leaf, received \$3,000 from sixteen acres; C. Stockwell, \$3,000 from ten acres; B. Wilkinson, from two and a half acres, \$600, etc. We might multiply cases, did space permit, but these are sufficient to indicate what a paying investment tobacco-raising is becoming in this Western peninsula.

The purchasing of 2,000 acres by English capitalists in the Niagara district, to be subdivided, and farmed after the most improved methods, is arousing farmers along the front, and bringing them to recognize the possibilities lying before this fruit-growing section. They believe the movement will spread, and land here will increase in value very materially. Even now advanced prices are being received. A returned Manitoban, Mr. Harroway, recently purchased B. W. Cox's farm of 25 acres for the handsome sum of \$5,000, an advance of \$2,000 since being procured by Mr. Cox about one year ago. Reports say Mr. Anderson has refused an offer of \$10,000 for his 25-acre farm, purchased a short time ago at \$7,000. Land in the fruit belt is rapidly rising in value. Investments in fruit farms are paying as high percentage, according to money involved, as any silver mine in Cobalt. So say our prominent fruitmen.

The Poultry Exhibition in Leamington last week was pronounced a marked success, by those who were in a position to judge such matters. Another point has been scored in Essex's favor. The fact was again demonstrated that this County is not only the home of the hog, but that, with the climate we possess, and the ability to produce the giant cereal in such abundance, we have likewise a suitable home for poultry. According to statements by those who are in the business, poultry in Essex compares favorably both in quantity and quality with the older counties. The prospective corn exhibit in the Town of Essex is exciting quite an interest among the more prominent corn-growers, and there is every indication of it being largely patronized. That it is a step in the right direction is acknowledged by all.

Essex Co., Ont. A. E.

Standing Field Crop Prizewinners at Ottawa Winter Fair.

The grain from the standing-field-crop competitions, exhibited at the Ottawa Winter Fair, was of a high standard, and created favorable comment among the many farmers from the different sections of Eastern Ontario who visited the Exhibition. A portion of the grain which won prizes was retained by the Ontario Department of Agriculture, to be used for experimental purposes by the agricultural specialists in different sections of the Province. The balance is being shipped to the office of the Ontario Government in London, England, to be used for exhibition purposes. The grain which did not receive prizes was sold by public auction in the Howick Pavilion, Ottawa. Not since the inauguration of these field-crop competitions, three years ago, were such crowds in attendance, the bidding so spirited, or such splendid prices realized. The money received for this grain is being forwarded promptly to exhibitors. Mr. Eddy, of Ottawa, acted as judge, and appeared to give excellent satisfaction. The following is a list of the prizewinners: Oats—1, Melville Trewin, Blackstock; 2, T. Cossins, Whitby; 3, John White, Beachburg; 4, Peter Drummond, Keene; 5, Andrew McKay, Woodville; 6, W. J. Barber, Ameliasburg; 7, Wm. Lewis, Dunsford; 8, Jas. Leask, Taunton; 9, Garfield Kennedy, Bobcaygeon; 10, Thos. Cosh, Bobcaygeon. Barley—1, David Malcolm, Nestleton.

The cause of better roads in Ontario has lost the services of an ardent champion and capable director through the appointment of A. W. Campbell, Deputy Minister of Public Works, and Commissioner of Highways, to the Federal field, in the capacity of Deputy Minister of the Department of Railways and Canals, at a salary of \$5,000 a year. His appointment to the position of Provincial Commissioner of Highways dates from 1896.

A Fair Association Banquet.

Annually, the directors of the Oakville (Ont.) Fair hold a banquet on the evening of the annual meeting, the aim being not only to have a pleasant time socially, but to invite leading live-stock men of the Province to be present, and give addresses along the most practical lines. Over two hundred intelligent, prosperous farmers and stockmen attend, and so popular have these banquets become that accommodation is the chief problem.

This year's banquet was on Friday evening, January 21st, when Dr. Rutherford, Dominion Live-stock Commissioner, came up from Ottawa to give an address, which dealt with live-stock problems of all Canada. The Doctor also visited the farm of E. F. Osler, at Bronte. Other speakers were Dr. E. A. A. Grange, Principal of the Ontario Veterinary College, Toronto, and R. S. Stevenson, the successful Ancaster breeder of dairy cattle.

A delightful feature was the presentation of an embossed resolution of thanks to Herbert C. Cox, Walter Harland Smith and Hugh Wilson, for the grand exhibition of horses gratuitously given at the fair last fall. An even greater exhibition is promised for this year, on Sept. 29th and 30th, the annual dates of the Fair.

A. S. Forster, the president, arranged the banquet, and was the presiding officer. Addresses at former banquets have been given by such gentlemen as Henry Glendinning, Robt. Miller, Jos. Brethour, Jas. Brookbank, C. C. James, Simpson Renzie, J. Lockie Wilson, and others.

A rumor which must have originated by spontaneous combustion has been in circulation, to the effect that G. C. Creelman, President of the Ontario Agricultural College, was a strong favorite with many Liberals for leadership of the Opposition in the Provincial Legislature. That Mr. Creelman has any such design or intention has been straightly denied by those most intimate with the president, while he himself has declared it was complete news to him.

TRADE TOPICS.

A Patent Snow Plow for farm and road work, also a stone and stump puller, and an automatic milk aerator, are labor-saving devices advertised by A. Lemire, Wotton, Que., and highly recommended by persons who have used them, as evidenced by numerous testimonials. For particulars, apply to the advertiser.

HUMANE COLLARS.

(Copy of postal.)

Dear Sir,—I know what your Humane Collars are. I got your catalogue to use in trying to convince my friends of the value of the great invention.

I am engaged in missionary work, and I travel all Saskatchewan. I meet farmers mostly, for my work is among the farmers chiefly. If I had a good number of your catalogues, I could help advertise your business perhaps more than anyone you could find. I do it for the poor dumb animals' sake. I don't want anything out of it. I wish everybody could see the merits of your collars as I do. I know I can sell a great many for you. Yours very truly,
McLean, Sask. B. P. MOONEY.

A CHEAP HOUSE.—The attention of parties contemplating building a summer or suburban house, convenient, comfortable, and at a moderate price, is directed to the advertisement of the Chicago House Wrecking Co., who offer to supply a bungalow cottage, 27 x 39½ feet, containing living-room, dining-room, kitchen, three bedrooms and a pantry, at a very low price. They offer to furnish the design and material, new, for above house, to Canadian customers, for \$675; also to supply a complete plumbing outfit for the house for \$130, paint for the whole structure for \$25, a hot-air furnace for \$108, or a hot-water heating plant for \$220. These figures include the extra charge for duty on material coming into Canada. See their advertisement, and write for particulars, mentioning "The Farmer's Advocate."

GOSSIP.

In the list of Canadian Holstein cow records for December, 1909, received too late for insertion in this issue, the record for the cow Francy 3rd (6230), owned by D. C. Flatt & Son, Millgrove, Ont., is corrected to read 23.38 lbs. butter-fat, equivalent to 27.22 lbs. butter; milk, 559.89 lbs.

Toronto despatches state that the Ontario Good Roads convention is to be held in that city, in the County Buildings, on March 2nd, 3rd and 4th.

The tenth annual convention of the Ontario Association of Fairs and Exhibitions will be held in the City Hall, Toronto, on Wednesday and Thursday, February 9th and 10th, 1910.

A. W. Campbell, who was appointed Provincial Commissioner of Highways for Ontario in 1896, and in 1902 was made Deputy Commissioner of Public Works for the Province, has been appointed Deputy Minister of the Department of Railways and Canals for the Dominion. He fills the vacancy caused by the retirement of M. J. Butler, and assumes office on February 5th. Mr. Campbell is a civil engineer, who has made a specialty of road construction, and is familiarly known as "Good Roads Campbell."

A resolution to the following effect was to be moved in the British Columbia Legislature on Tuesday of this week: "Whereas it is detrimental to the best interests of the Province that Japanese or Chinese persons should be allowed to acquire titles to or to hold lands therein, be it therefore resolved that this House is of the opinion that legislation should be enacted by the Parliament of Canada prohibiting such persons from acquiring or holding land in the Dominion of Canada." In explanation of this resolution, which has aroused keen interest in the Pacific Province, it was explained that all through British Columbia the yellow men, particularly the Japanese, have been acquiring and holding most desirable fruit and market-garden lands, which they are commencing to utilize in competition with whites.

Stewart Graham, Port Perry, Ont., writes: The Shorthorns I advertise include some very choice ones. Among the bulls is Royal Oxford, red, calved March, 1909, a thick, fleshy calf, with plenty of bone; his dam made 12 lbs. of butter in a week. Among the females is Emma of Port Oshawa, a right good young cow, having for sire Imp. Ben Lomond.

J. & D. J. Campbell, Woodville, Ont., write: Again, with much pleasure, we make our annual announcement that another year's business in Shropshire sheep is closed, and we have not heard one word of dissatisfaction from our numerous mail-order customers for live stock. Such remarks as, "He is a dandy," "He is better than I expected," "She is a beauty," or "They will greatly strengthen my flock," were the quite common statements in letters full of kind words of appreciation. In asking for a change of advertisement, we may state that we are completely sold out of all the in-lamb ewes we can spare. The year 1909 was a capital year in our Shropshire business. The Canadian trade was very good, thanks to "The Farmer's Advocate" for that to a large extent. It was wisely thoughtful on the part of our Canadian customers to have taken advantage of reduced prices because of the American quarantine, for at the last International at Chicago, many orders were booked for coming June shipments, at double the prices quoted earlier in the season. We shall ask for another change of advertisement soon, to offer Short-horns.

One of the most interesting figures in the sheep-raising business in America is Mrs. William Jenkins, of Battle Mountain, Nev., who perhaps owns more sheep than any other woman in the world. When her husband died some years ago, he left a modest fortune, and a flock of about 22,000 sheep. Mrs. Jenkins has developed her flock to 60,000 head. She is running 45,000 sheep, and her herds range over Elko, Humboldt and Lander counties, down through the Jersey Valley, and up across the Jarbridge county, to the Idaho State line. Mrs. Jenkins owns nearly all of the land at the mouth of Reese river, south of Battle Mountain, and two of her ranches produce a thousand tons of hay every year. She has leased over 100,000 acres of land from the railroad, and about 125,000 acres from the State. She owns twelve big ranches in all. Her wool clip this spring will amount to 400,000 pounds, and she

markets 5,000 wethers every year. The Utah buyers get most of her stock sheep. She has 60 men on her pay-roll in winter, and many more in summer. Mrs. Jenkins has built a pipe line to carry water to some of her ranches, and she has displayed wonderful ability in making the best of her opportunities. She is considered one of the wealthiest and most progressive citizens in Nevada.—Shepherd's Journal.

The Ottawa Winter Show proved a profitable venture to the exhibitors of pure-bred and fat stock, a record number changing hands at most satisfactory prices. Besides several Clydesdales that were sold by the smaller exhibitors, Robt. Ness & Sons, Howick, Que., sold four head, and Smith & Richardson, of Columbus, Ont., sold seven head, all imported animals. This is a record that should make breeders and importers of pure-bred stock sit up and take notice, and arrange to make an exhibit at Ottawa next winter.

The annual statement of The Dominion Bank, appearing elsewhere in this issue, makes an exceedingly creditable showing, and one which must be very satisfactory to all concerned. The authorized capital stock of the Bank at this time, as stated in the report, is \$5,000,000, of which \$4,000,000 has been issued and fully paid up. By-laws were passed at the annual meeting, authorizing an increase in the capital stock of \$5,000,000, and changing the par value of the shares from \$50 to \$100 each. The list of shareholders attending the annual meeting, as shown in the report, comprises many well-known men of wealth and high-class business ability.

WOODSIDE CLYDESDALES.

During 1909, so great was the demand for Clydesdales from the noted stud of Robt. Ness & Sons, of Howick, Que., that the first lot was soon sold out, necessitating a second importation, and we are bound to say that in this last lot Mr. Ness certainly excelled himself, for, while we have seen very many high-class Clydesdales in his stables, we do not remember ever seeing so many good ones, that showed so great a uniformity of big size, flashy quality, faultless underpinning, and nice, close, straight action, as this lot now on hand. There are eight Clydesdale stallions, one four-year-old,

European beet-sugar factories are offering farmers in Surrey County, England, at the rate of about \$4.25 per ton for growing beets, supply seed, and pay the freight across the Channel to the factories.

H. H. Miller's anti-race-track-gambling bill is causing a good deal of public interest. Petitions in line with the proposed amendment have been pouring into the Senate. A special committee of the Commons has been busy taking evidence both from those who oppose as well as those who favor the bill. The argument of those in favor of racing is that it encourages the breeding of the finest class of horses, and it seems to be assumed that, without betting, horse-racing would decline. On the other hand, attention is drawn to the increase in criminality which accompanies a race-meet, and to the crowd of undesirables which it attracts. Hon. Sydney Fisher, who does not attend races, gave evidence as to the class of men whom he had once observed swarming the hotels, when a race was on, and "whom he would not care to be with in the dark."

Since the resignation of Dr. Robertson as Principal of Macdonald College, matters have been in a somewhat unsettled state at this institution. Dr. Harrison, Professor of Bacteriology, is now Acting Principal, the matter of a permanent appointment to the position being in the hands of the Board of Governors at McGill University, with which the college is affiliated. It is sincerely to be hoped that the School of Agriculture be given due consideration when the appointment to the principalship is made. The man chosen should be in thorough sympathy with agricultural education in the wide sense. There are many on the College staff who would heartily support the appointment of Dr. Harrison, who has had a great deal to do with the constructive and administrative work of the College, both in its earlier and later stages. His ability is respected, and it is believed he would receive the support and co-operation of the staff.

one three-year-old, four two-year-olds, and two one-year-olds. In fillies, there are seven, one three-year-old, five two-year-olds, and one one-year-old; also one three-year-old Percheron stallion, and one five- and one four-year-old French Coach stallions. The Clydesdale stallions are: Viscount Lothian, a bay four-year-old son of the noted sire, Luffness, by Macgregor, dam by Superb. This is a horse of commanding appearance, up to a big size, particularly good at the ground, and moves true and straight. He was second at the late Ottawa Winter Show. Wood-end Chief, a bay three-year-old, by Up-to-Time, dam by the £3,000 Prince of Albion, is a horse of superb quality throughout, a right royal mover, and bred in the purple. He was second at Ottawa. The two-year-olds are a superior lot, showing ideal draft character, and particularly nice at the ground. Bowhill Baron, bay, is by Baron's Pride, dam by Gallant Barasse; Ingelston, a bay, by Everlasting, dam is by Prince Sturdy; Encore is a bay, by Lancer, dam by Carbineer; Dunhall, a bay, is by Ajax, dam by Prince Robert. Among these were several winners at Ottawa, including the reserve champion. The fillies are noted for their grand combination of size and quality and right royal breeding, being sired by such renowned horses as Everlasting, the unbeaten champion; Pride of Blacon, the H. & A. S. first-prize winner; Scottish Crest, the H. & A. S. champion; the good breeding horses and noted sires, Montrave Ronald, Lothian Again, Baron Winsome, and Lord Adams. One of them, Savona, the three-year-old, is in foal to the Kirkcudbright Premium horse, Iron Duke. There are thousands of this class of fillies needed in Canada. The Percheron stallion, Farcy, is one of the best of the breed ever imported; he is sweet of mould, has the very best quality of bone and ankles, and stands on big, open feet, and moves like a whirlwind. The French Coach stallions are, Etendard, a bay five-year-old, winner of championship at Chicago and Ottawa, and Fagon, a bay four-year-old, a champion at Ottawa, a right breedy pair.

A. W. Smith, M.P., Maple Lodge, Ont., writes: Will you please claim the date March 24th for an auction sale of Short-horns at my farm. I intend offering 30 head, mostly young cows and heifers, and a few young bulls. The draft will contain many bred from the best milkers in the herd, and all will be in nice condition.

THE BANK OF TORONTO

Incorporated 1855.

Our resources are large, and our equipment complete, we can therefore offer to

Savings Depositors

every facility for the safe and convenient deposit of their money. Interest is added to all savings balances half yearly.

Capital. \$ 4,000,000
Reserve Funds. 4,818,871
Assets. 48,000,000

Seventy-seven (77) Branches in Ontario, Quebec and the West.

MARKETS.

Toronto.

LIVE STOCK.

At West Toronto, on Monday, January 31st, receipts comprised 70 cars, consisting of 1,522 cattle, half of which were exporters; 28 hogs; 173 sheep; 28 calves. Prime picked butchers', \$5.50 to \$5.75; loads of good, \$5.25 to \$5.40; medium, \$4.80 to \$5.15; common, \$4.50 to \$4.75; cows, \$3 to \$4.25; canners, \$1.75 to \$2; milkers and springers, \$35 to \$55 each; calves, \$3 to \$7.50 per cwt. Sheep—Ewes, \$4.50 to \$5.60 per cwt.; rams and culls, \$3.50 to \$4; lambs, \$6 to \$7 per cwt. Hogs, \$8.40, fed and watered, and \$8.15, f. o. b. cars at country points.

REVIEW OF LAST WEEK'S MARKET.

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

	City.	Union.	Total.
Cars	188	138	326
Cattle	2,954	2,175	5,129
Hogs	4,461	1,373	5,834
Sheep	1,003	416	1,419
Calves	180	29	209
Horses	1	139	140

Total receipts for the corresponding week of 1909 were as follows:

	City.	Union.	Total.
Cars	198	80	278
Cattle	3,194	1,247	4,441
Hogs	3,164	909	4,073
Sheep	1,127	223	1,350
Calves	160	29	189
Horses	1	103	104

The quality of cattle generally was not as good as could be desired, the late high prices having had the effect of bringing them on the market before being properly finished. Trade all round at both markets was easier, with prices generally 15 cents to 30 cents per cwt. lower, both for butchers' and exporters.

Exporters.—Export steers, \$5.60 to \$6.10; export heifers, \$5.25 to \$5.50; export bulls, \$4.50 to \$5.25.

Butchers.—Prime picked lots of butchers' were bought at \$5.65 to \$5.85; loads of good, \$5.25 to \$5.50; medium, \$4.80 to \$5.15; common, \$4.50 to \$4.75; cows, \$3 to \$4.70; canners, \$1.50 to \$2.

Milkers and Springers.—Receipts of milkers and springers were moderate, with prices ranging from \$35 to \$55, with an occasional choice cow at \$60.

Veal Calves.—Receipts were light, with prices firm, at \$3 to \$7.50 per cwt.

Sheep and Lambs.—Receipts of sheep and lambs were not large, but prices were easier. Ewes sold at \$4.50 to \$5 per cwt.; rams and culls, \$3 to \$3.75; lambs, \$6.50 to \$7.35, for choice, grain-fed lots; common lambs, \$6 to \$6.50.

Hogs.—Receipts light; prices easier. Selects, fed and watered, \$8.50, and \$8.25, f. o. b. cars at country points.

Horses.—J. Herbert Smith, manager at the Union Horse Exchange, reports trade

for the past week, not nearly as brisk as for the two previous weeks, although he sold about 100 horses, all told. The bulk of them went to the Northwest, while several small shipments were made to Cobalt, and other local points in Ontario. Prices held at about the same quotations, as follows: Drafters, \$180 to \$220; general-purpose, \$160 to \$210; expressers and wagon horses, \$175 to \$200; drivers, \$100 to \$200.

HAY AND MILLFEED.

Hay.—Baled, in car lots, on track, Toronto, \$14 to \$15 for No. 1; \$12.50 to \$13.50 for No. 2.

Straw.—Baled, in car lots, on track, Toronto, \$7.50 to \$8.

Bran.—Car lots, on track, Toronto, \$22, in bags.

Shorts.—Car lots, on track, Toronto, \$24, in bags.

SEED MARKET.

The seed market is quiet, at unchanged quotations, 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; red clover (containing buckhorn), \$5.50 to \$6; timothy, bushel, \$1.40 to \$1.60.

HIDES AND WOOL.

E. T. Carter & Co., 85 East Front Street, have been paying the following prices: No. 1 inspected steers and cows, 12c.; No. 2 inspected steers and cows, 11c.; No. 3 inspected steers, cows and bulls, 10c.; country hides, 8 1/2c. to 9 1/2c.; 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, 90c. to \$1 each. Wool and raw-fur prices given on request.

BREADSTUFFS.

Wheat.—No. 2 white, \$1.07 1/2, outside; No. 2 mixed, \$1.07. Manitoba—No. 1 northern, \$1.12 1/2; No. 2 northern, \$1.11, on track at lake ports. Barley—No. 2, 57c.; No. 3X, 55c. to 56c.; No. 3, 50c., outside. Oats—No. 2 white, 40c., track, Toronto, and 37c. to 38c., at outside points. Peas—No. 2, 85c. to 86c., outside. Rye—66c. to 67c., outside. Buckwheat—No. 2, 51c. to 52c., outside. Flour—Ontario 90 per cent. patent, in buyers' sacks, for export, \$4.20 to \$4.25, outside points; Manitoba first patents, at Toronto, \$5.60; second patents, \$5.10; strong bakers', \$4.90.

FRUITS AND VEGETABLES.

Apples are plentiful, but generally of poor quality that are being offered on the Toronto farmers' market, and sell at \$2 to \$3 per barrel, the latter price being for Spies. Onions, \$1.10 to \$1.15 per bag; carrots, 40c. to 50c. per bag; parsnips, 65c. to 75c. per bag; beets, 55c. to 65c.; cabbage, per barrel, \$1.25 to \$1.50. Turnips, per ton, \$6.50.

COUNTRY PRODUCE.

Butter.—There is a good demand for choice butter, of which there is none too much coming forward, but inferior grades are plentiful. The best qualities are firm, but the market is weak with prices lower for poorer grades. The outlook for butter is certainly for lower prices. Creamery pound rolls, 28c. to 29c.; creamery solids, 26c. to 27c.; separator dairy, 25c. to 26c.; store lots, 21c. to 22c. Storage eggs, 27c.; new-laid eggs, 32c. to 35c., for case lots.

Cheese.—Market continues unchanged, at 18c. for large, and 13 1/2c. for twins.

Potatoes.—Receipts large, with prices easy, at 47c. to 50c. per bag, for car lots, on track at Toronto.

Beans.—Market firm, demand being good. Primes sell at \$1.80 to \$1.90; hand-picked, \$2.

Poultry.—Receipts light, but plenty for demand at present high prices. Turkeys, 18c. to 20c.; geese, 14c. to 16c.; ducks, 15c. to 17c.; chickens, 15c. to 16c.; fowl, 10c. to 12c.

Buffalo.

Cattle.—Prime steers, \$6.35 to \$6.60; shipping, \$5.60 to \$6.10; butchers', \$4.50 to \$6.15.

Veals.—\$6 to \$11.

Hogs.—Heavy, \$8.70 to \$8.75; mixed, \$8.65 to \$8.70; Yorkers, \$8.50 to \$8.70; pigs, \$8.50 to \$8.55; roughs, \$7.90 to \$8.15; stags, \$6.75 to \$7.50; dairies, \$8.50 to \$8.60.

Sheep and Lambs.—Lambs, \$5.25 to \$8.40; weathers, \$5.75 to \$6; ewes, \$5.25 to \$5.75.

Montreal.

Live Stock.—There was a good attendance of buyers on the local market last week, many being present from outside markets. Offerings of cattle were fairly liberal, and the quality of the stock was rather better than usual at this time of year. Some very nice Manitoba cattle were on the market. Some choice cattle brought as high as 6 1/2c. per lb., but the most of the fine sold at 6c. to 6 1/4c. per lb. Good cattle changed hands at 5 1/2c. to 5 3/4c., medium at 4 1/2c. to 5c., and common at 3 1/2c. to 4 1/2c. per lb. Some common cows and bulls sold as low as 3c. per lb. The offering of sheep and lambs was somewhat limited, and there was a good demand for them. Lambs were firm, at 6 1/2c. to 7c., and sheep sold at 4 1/2c. The offering of calves was more liberal than it has been for some time past, and prices held around the previous level, being from \$3 to \$10 each, according to size and quality. The market for hogs was fairly firm, and steady. Offerings were not especially large, and demand was good, being from 9c. to 9 1/2c. per lb.

Horses.—Dealers seem well satisfied with the situation, considering the time of year. Quite a few horses are being taken, from time to time, principally for the woods. The city trade is quite dull. Heavy drafts, 1,500 to 1,700 lbs., \$225 to \$300 each; light draft, 1,400 to 1,500 lbs., \$180 to \$240 each; small horses, weighing from 1,000 to 1,100 lbs., \$100 to \$150 each; old, broken-down animals, \$75 to \$100 each, and choice saddle or carriage animals, \$350 to \$500 each.

Dressed Hogs.—Sale of abattoir-dressed, fresh-killed, selects, were made at 12 1/2c. to 12 3/4c. per lb.; country-dressed, 12c. to 12 1/2c. per lb. Lard sold at 12c. to 13 1/2c. for compound, and at 16 1/2c. to 17 1/2c. per lb. for pure.

Poultry.—Little doing. Turkeys, 14c. to 15c. per lb., for secondary grades, and 18c. to 19c. for choicest; geese, 12c.; ducks, 17c. to 18c.; finest chickens, 15c. to 16c., and fowl, 10c. to 12c.

Apples.—Practically no change, auctions still ranging from \$2.50 to \$3 per barrel for No. 1 stock; \$1.90 to \$2.25 for No. 2, and \$1.40 to \$1.75 for No. 3. Supplies are liberal.

Potatoes.—Market quite firm. It is claimed that 55c. to 57 1/2c. per 90 lbs. would still purchase choicest stock, carloads, track, Montreal, but some asked 60c.

Eggs.—Market was somewhat affected by the recent soft weather, new-laid declining about 2c. per dozen. Deliveries have been rather heavier, quoted around 45c., and perhaps a cent or two more at times. Select held stock sold at 32c. to 35c., and No. 1 at 28c. Larger receipts of new-laid depressed prices on Monday to 38c. to 40c.

Butter.—Market slightly firmer on fresh makes, quotations being 24c. to 24 1/2c. per lb. Choicest held stock, 25 1/2c. to 26c. per lb.; dairies, 21c. to 22 1/2c., and 23c. for small lots. Very little alteration in the situation, though the recent spell of soft weather was not altogether welcome to holders.

Cheese.—Market very firm, and prices advanced about 1/4c. per lb. It was hard to get any Quebec cheese at less than 11 1/2c., and prices seemed to range from 11 1/2c. to 11c. Some colored Ontario cheese was bought at 11 1/2c., but white was being held for 12c. Townships were generally valued at 11 1/2c. to 11c. On Monday, 31st, still further improvement in demand was reported, Quebecs being quoted at 11 1/2c. to 12c.; Ontarios, 12 1/2c. to 12 3/4c.

Grain.—No. 2 Canadian Western oats, 45c. to 45 1/2c. per bushel, carloads, store; No. 2 oats, 44c. to 44 1/2c.; No. 2 white Ontario oats, 43c.; No. 3 Ontario, 42c.; No. 4 Ontario, 41c.; No. 2 barley sold at 68c. to 69c., and Manitoba feed barley at 53c. to 55c.

Flour.—Demand for flour was about steady, \$5.80 per barrel, in bags, for No. 1 Manitoba patents, and \$5.30 for No. 2, strong bakers' being \$5.10; Ontario flour is \$5.50 to \$5.60 for patents, and \$5.10 to \$5.20 for straight rollers.

Millfeed.—Market steady. Ontario bran, \$22.50 to \$23 per ton, in bags; middlings, \$23.50 to \$24; pure grain mouille, \$31 to \$33; mixed, \$27 to \$29. Manitoba bran, \$22 per ton; shorts, \$23. Gluten meal, \$31 to \$32; oil cake, \$35.50 to \$36.

Hay.—\$14 to \$14.50 per ton for No. 1

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.

Farmers' sale notes discounted. Branches throughout the Dominion of Canada.

baled hay, carloads, Montreal; \$13 to \$13.50 for No. 2 extra; \$12 to \$12.50 for No. 2; \$11 to \$11.50 for clover mixed, and \$10 to \$11 for clover.

Seeds.—The bulk of the seed is, apparently, out of farmers' hands, although there is believed to be still considerable red clover to come forward. Dealers still report paying \$7.50 to \$8.50 per bushel, f. o. b., shipping points, for alsike, and \$5.50 to \$6.50 for red clover. Nothing doing in timothy.

Hides.—Trade slow, and quality deteriorating. Prices are unchanged, being 10c., 11c. and 12c. per lb. for hides; 12c. and 14c. for calf skins; \$1 for sheep skins, each.

Chicago.

Cattle.—Steers, \$4.75 to \$8; cows, \$3.50 to \$5.25; heifers, \$3.40 to \$6; bulls, \$4 to \$5.25; calves, \$3 to \$8.75; stockers and feeders, \$3.75 to \$5.40.

Hogs.—Choice heavy, \$8.40 to \$8.50; butchers', \$8.35 to \$8.40; light mixed, \$8.15 to \$8.30; choice light, \$8.15 to \$8.35; packing, \$8.25 to \$8.40; pigs, \$7.25 to \$7.75; bulk of sales, \$8.20 to \$8.40.

Sheep and Lambs.—Sheep, \$4.65 to \$6; lambs, \$7 to \$8.30; yearlings, \$4.25 to \$8.00.

British Cattle Markets.

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

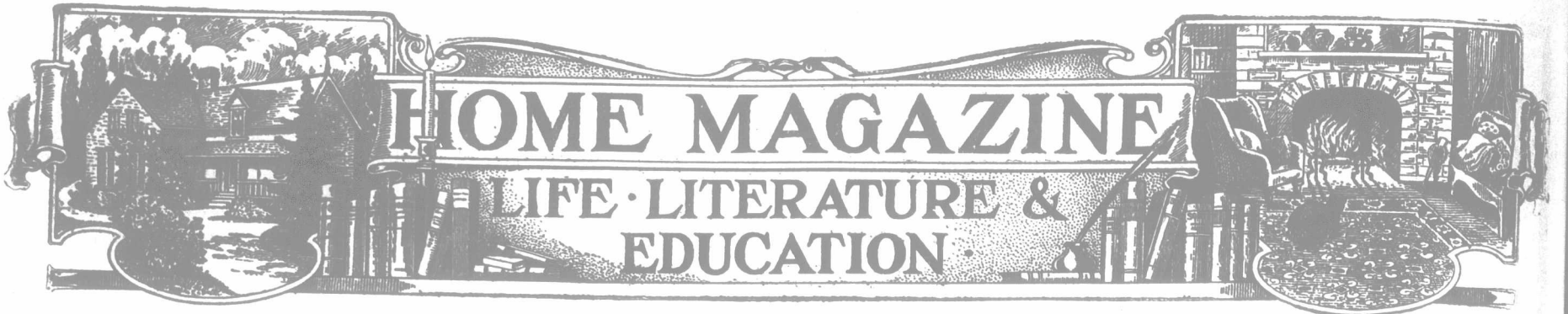
GOSSIP.

J. H. Patrick, Ilderton, Ont., writes: I shipped last week a very choice load of Clydesdale stallions, all purchased through my advertisement in "The Farmer's Advocate." Every mail still brings more offers of stallions for sale. Owing to the very severe weather in the West, I will not ship again before April.

SALE DATES CLAIMED.

February 16th.—Wm. Channon & Son, Oakwood, Ont.; Shorthorns.
March 1st.—R. & S. Nicholson, Sylvan, Ont.; Shorthorns.
March 9th.—Arthur Johnston, Greenwood, Ont.; Shorthorns.
March 9th.—Nelles & Woodley, Boston, Ont.; Holsteins.
March 24th.—A. W. Smith, Maple Lodge, Ont.; Shorthorns.
March 25th.—J. A. Caskey, Madoc, Ont.; Holsteins.
April 20th.—James Benning, Williams-town, Ont.; Ayrshires.

A. & W. Goodfellow, Macville, Ont., writes: We have recently sold two young Shorthorn bulls, one a Goldie, to James Shaw, of Wildfield, which, by all accounts, will be heard from later on; another to Geo. Downey, of Castlederg. Mr. Downey is a dairyman, but wants beef, too. Two cows to Chas. E. Porter, Lloydtown, one a Jessamine, the other out of Tilbouries Fancy. These are right good cows, out of imported dams, and by imported sires. We have still three young bulls and our stock bull for sale. These are the right kind, and will be sold right. Have still the young Clydesdale colt we advertised; he has good size, substance, quality, action and bone.



R. K. Row, who did good service as a Model-school principal in Lincoln County, and in Kingston, Ont., has risen in his profession in the neighboring Republic. He has recently written a book of 250 pages, under the title, "The Educational Meaning of Arts and Industries," in which he ably discusses the physical, intellectual, ethical, and other values of industrial education. Naturally, the farm and the home come in for as much attention as the workshop. He foresees in the adaptation of the rural school to the needs of the farming community, increased prosperity to the agriculturist, improved home conditions, greater self-respect, and respect for vocation, prolongation of the school-life, the socializing of the school through its library and laboratory, and opportunities for assemblies of the people. He argues for the specializing towards agriculture in the last three years of the public-school course.

The confident assertions occasionally made by some writers on this side of the Atlantic, that the conservative lethargy of England is such that no progress is being made in social or industrial conditions, are not correct. As a matter of fact, improvements in both respects are most marked, and perhaps surer for being deliberate. During the recent year there has been a marked improvement in trade, and the pauperism of London in 1909 was 4,517 less than in December of the previous year. Town conditions are being steadily regenerated. In a recent address, John Burns, M. P., chairman of the Local Government Board in the Asquith Cabinet, made it clear that the future care of the poor should be rather in the home than in great institutions, but the thinking ratepayer was coming to see that removable causes and preventable conditions must be dealt with. Root out the "causes," and there would be less "curing" of poverty to be done. The poor themselves must reciprocate by their own efforts. The war against poverty, illness and destitution was not a skirmish or a single battle; it was a long-continued, disciplined campaign, in which less was required of the generals than of the rank and file. To conquer, it needed good-health in the young, energy in early manhood, discipline, self-respect, providence, sobriety, and manly self-reliance in every one. The poorer men were, the more they needed those qualities. In the women, all those qualities were needed, combined with the holy fire of maternity, love of children, pride of home, and, above all, a cheerful disposition. In this work all men and women could co-operate, and, by their co-operation, the future of society will be so altered that poverty might be abolished, and misery compelled to disappear.

The newspapers were lately giving an account of the ostentatious funeral given a dead dog by its owner, a wealthy Minneapolis magnate. There were the sedate black horses, the plumed hearse, and closed carriages occupied by the man and members of his family, to the grave, over which a costly monument is yet to be erected. To what lengths will sickening sentimentality go! A corresponding instance of the inordinate display of wealth was the Geo. F. Kessler "North Pole Dinner," where 34 guests were regaled to 17 courses with waiters togged out as Esqui-

maux, at a total cost of £60 (nearly \$300) per head. An English contemporary aptly describes the function as "The brainless extravagance of a silly set." Little wonder at the restiveness of the toiling masses, or of those who are without even the bare necessities of life, as they witness such lavish and vulgar display. Of plain living and high thinking, Kessler & Co. are incapable. By "hook or crook" they were able to acquire wealth, but that is no evidence of a high order of intelligence. Ignorance and absence of ideals in life are at the bottom of such displays. Through lack of education, such men, though able to heap up riches, are unable to enjoy them in a rational way. They have no appreciation of the best things in literature and art, have no sense of proportion, and do not recognize the realities of life, the things that count. Lacking the seeing eye, they are blind to the pressing needs of humanity, struggling, often, for the bare necessities of existence. Instead of being a power for good, wealth to them is merely a means of unworthy ostentation and enervating luxury.

The imbecility that sometimes starts a war between nations is shockingly illustrated in a book recently published by M. Emile Ollivier, who became Prime Minister of France under Louis Napoleon just before the outbreak of the Franco-Prussian conflict, which spilled a sea of blood for both combatants, humiliated France, cost her the Provinces of Alsace and Lorraine, and fabulous sums besides. In the middle of the year 1870 the

calculated upon and intended this effect to follow on the Hohenzollern candidature; that he hoped and wished that it would provoke France to war; that he wanted war; and that his one apprehension was that France might manage to avoid war. Blindly, almost unwillingly, with the tottering steps and the reeling walk of a drunkard, France fell into the trap that Bismarck had laid. The old King of Prussia did not want war, and his pacific despatch to France was actually doctored by the "Iron Chancellor," as Bismarck was called, into a provocation to war. The Prince himself was not anxious for the shaky throne of Spain, and his father was opposed to his candidature. There still might have been peace but for mischievous and precipitous political intrigue in the French Cabinet, resulting in a demand upon Prussia for a guarantee against any future candidature for the Spanish throne. This gave Bismarck the chance he wanted, and forced France into a declaration of war. As T. P.'s Weekly points out, France learned from the disastrous lessons of the conflict of 1870, the madness of the war, the perils of a despotism, the blessings of peace, the triumphs that may be gained by patience, self-reliance, and self-control. The new France may win back by such methods much of what the old France lost.

Blotting-paper was discovered purely by accident. Some ordinary paper was being made one day at a mill in Berkshire, when a careless workman forgot to put in the sizing material. It may be imagined what angry

countries. The result now is that the descendant of the discoverer owns the largest mills in the world for the manufacture of this special kind of paper. The reason that the paper is of use in drying ink is that really it is a mass of hair-like tubes, which suck up liquid by capillary attraction. If a very fine glass tube is put into water, the liquid will rise in it, owing to capillary attraction.

Rural Architecture.

There is a movement in some of the American towns looking to the municipal supervision of architecture. It has been found that a heterogeneous town, made up of red, yellow and green houses, in startling juxtaposition, scream a discord harassing in the extreme to aesthetic nerves, and that, however individuality may be preserved, some sort of harmony must prevail, in the interests of beauty and quiet—nay, more, in the interests of the lives of the people themselves, since the discerning have discovered that we are not only happier, but better, in the midst of harmonious and beautiful surroundings.

The question, as applied to cities, does not, of course, concern us of the rural districts especially. We wish our urban cousins well, and it delights us to look at a handsome residence or fine lawn as we drive in to market; but we well know that such things as architecture and public beautification are likely to be looked after better in the city than in the country; and so, however public-spirited we may be, we feel that it is a question which concerns us not at all.

But the movements for civic beautification do set us thinking. When we hear of the renovation of Toronto, according to plan, and catch a mental vision of what the Queen City will be when the grime and smoke of the railways ceases to monopolize the water-front; when an esplanade runs down to the lake, and the "foot of Yonge St. crossing" is a nightmare of the past, then we wonder what "the country" will be doing. Perhaps we are a little thankful that it can never be beautified "according to a plan." Its beauty lies in its irregularities, its surprises, its bit of woods here, its stream or lake there, its diversity of farmhouses, ranging from the old homestead, with its century-old trees, to the brand-new "residence," with a purple clematis straggling up to its window in solitary splendor. Indeed, a log house may be a picturesque feature, especially if caught through a vista of green orchard or tangle of Virginia Creeper.

No, we would not give up the individuality of the country. The farmer is, pre-eminently, an independent man, and his individuality should reveal itself in his house and its surroundings. These should be an expression of himself and his family, as much as are the clothes they wear, and the manners and dealings which tell what manner of men and women they are. A rural "line," built up with city houses, differing one from another only in the disposition of a bay window or the addition of a chimney-pot, is a disappointing sight.

Ostensibly, then, the rural districts must not be beautified according to municipal direction. As for the architect who would seek to make all country houses of one character—away with him!

There are, however, certain considerations of harmony which should



Indeed, a Log House May be a Picturesque Feature.

throne of Spain was vacant. One morning Europe was astounded by the news that a Prince of the House of Hohenzollern—that is to say, a Prince of the same family as the King of Prussia—had been chosen for the throne. Everybody knew that the relations between France and Germany were severely strained; that they had both been piling up armaments against each other; that there was always the peril, if not the certainty, of a war between them; and that the magazine only required a spark to produce the inevitable conflagration. This Hohenzollern candidature seemed to be that spark. It is now pretty certain that Bismarck

scenes would take place in that mill, as the whole of the paper made was regarded as being quite useless. The proprietor of the mill desired to write a note shortly afterwards, and he took a piece of the waste paper, thinking it was good enough for the purpose. To his intense annoyance the ink spread all over the paper. All of a sudden there flashed over his mind the thought that this paper would do, instead of sand, for drying ink, and he at once advertised his waste-paper as "blotting." There was such a big demand that the mill ceased to make ordinary paper, and was soon occupied in making blotting only, the use of which spread to all

enter into the consideration of every one who owns a rural home. In the first place, do you wish your house, itself, to strike the eye of the beholder as the most conspicuous thing in the landscape? Then, give it gay coloring, plenty of trimming, and as unique a shape as you choose. . . . On the other hand, do you wish it to blend in with the landscape, and to group house, lawn and orchard into one harmonious picture, lying against its background of field or hill or woodland, as though a part of the grand scheme? Then, you must think of dignity for your house, or coziness, as the case may be, and you must give some attention to picturesque lines and happy coloring.

If the house is to be of stone, or dull red or yellow brick, the coloring is already provided very well, and all the attention may be given to form. If of frame or shingles, the question of the stain or paint to be used becomes important. In many places a stain is much preferred to a paint, as the dull finish is infinitely prettier, although perhaps less protective; and the colors preferred are gray, dull red, brown, deep yellow, and, in paint, white. At one time green was in much favor, but it was discovered that a green house against a green background, made too much green, or that, if the green of the walls happened to be a little off-shade, the contrast was far from agreeable, conveying the impression of a frantic attempt at having things to match. So now green is seldom used, except in the case of a dull olive stain for the roof, or occasionally for the upper story, if that should chance to be shingled. White is always good for a country house, as it makes an admirable setting for trees and vines, while the browns, yellows and grays carry a pleasing suggestion of the coloring of tree-trunks and rocks. Nature, when left to herself, never makes a mistake in coloring, and her example may very well be followed.

Hope's Quiet Hour.

The Second Crucifixion.

Loud mockers in the roaring street
Say: "Christ is crucified again;
Twice pierced His gospel-bringing feet,
Twice broken His great heart in vain."
I hear, and to myself I smile,
For Christ talks with me all the while.

"No Angel now to roll the stone
From off His unawaking sleep.
In vain shall Mary watch alone;
In vain the soldiers' vigil keep."
Yet while they deem my Lord is dead
My eyes are on His shining head.

"Ah! Nevermore shall Mary hear
That voice exceeding sweet and low,
Within the garden calling clear,
Her Lord is gone, and she must go."
Yet all the while my Lord I meet,
In every London lane and street.

"Poor Lazarus shall wait in vain,
And Bartimeus still go blind;
The healing hem shall ne'er again
Be touched by suffering human kind."
Yet all the while I see them rest,
The poor and outcast, in His breast.

"No more unto the stubborn heart,
With gentle knocking, shall He plead;
No more the mystic pity start,
For Christ, twice dead, is dead indeed."
So, in the street, I hear men say!
Yet Christ is with me all the day.

—Richard Le Gallienne.

Editor "The Quiet Hour":

I have been hoping more would be said relative to the question, "Are the farmers of to-day less interested in religion than those of thirty years ago?" and, if so, why?

Perhaps it is not too late to express an opinion upon such a vital subject, for if it be true that this is the case, there must be both a reason and a remedy.

There is no doubt that present-day farmers are in closer touch with the

forces that shape city thought, and as there is certainly a decided tendency towards materialism in greater centers, its influence must be felt in rural sections as well. So far as this tendency destroys religious zeal, by so much have we lost in Spirituality.

One cause is not far to seek—much teaching in our colleges; and the views held by many who claim to be leaders in thought is "Teaching for doctrine the traditions of men." What wonder many will think it to little purpose that we should assemble each week to listen to an exposition of what, according to a prominent minister of the Methodist Church, Ottawa, "we are privileged to deny or accept, according as our plain common sense and first law of thought" may dictate?

Professor Orr, of Glasgow, contrasting the attitude of men toward the Bible, with what it was fifty years ago, said: "Now, it cannot be denied that even within the church, men had become distrustful of its authority. Those who called the historical portions of the Scriptures myths and legends, but said they were better than history, did much to lessen man's reverence for the Bible, besides lacking authority for their assertions."

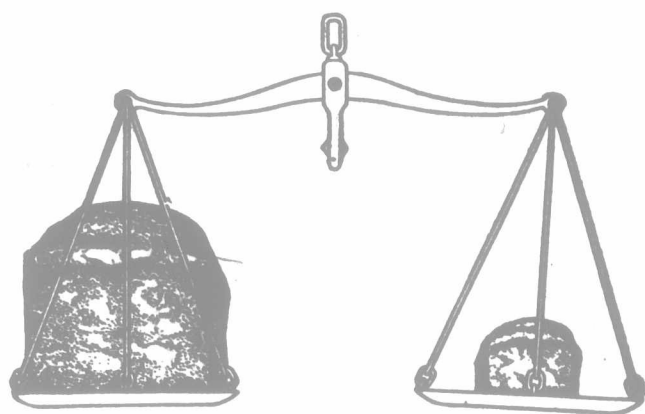
There is no doubt this "wounding of our Divine Master in the house of His friends" is having a most baneful effect upon religious thought everywhere. It is so easy to cut out what may be offensive to one's life, and eventually to discredit the whole Book, and grow indifferent to its precepts. But many are opposed to such teaching, and some already are refusing to attend the pastor's Bible class. What are we to do, who are so unfortunate as to have for our minister one who is not fully convinced that "the Word of God abideth ever," or at least, that we know what is the Word of God? We cannot choose, as in the city, and go to a church where the teaching is not detrimental to Faith, and we may feel that it is better to teach our children at home than risk having seeds of doubt sown in their young minds. How can it be expected that sincere Christians will be willing to sit under such instruction, from the place we have hitherto considered sacred?

A young man at Kingston was anxious to hear a Professor from Queen's, but unfortunately the learned gentleman spent the precious hour of the Holy Sabbath proving the non-existence of Jonah, in spite of Christ's reference to him, and the application, "The men of Nineveh shall rise in judgment with this generation, and shall condemn it: because they repented at the preaching of Jonas,"—could not the same be said of the present men, who claim to be able to instruct the Almighty?

Our theological students are much to be pitied. Many of them enter college with high aims and strong zeal for the salvation of souls; they emerge with that zeal crushed by (so-called) "advanced thought," a mass of scientific research, which is mostly rubbish for next decade's destruction.

How is it our college professors do not realize the awful responsibility that rests upon them? If they would but heed the Word: "Thus saith the Lord: stand ye in the old way and see and ask for the old paths, where is the good way, and walk therein"—then, indeed, might there be a renewal of interest in religion, not only among farmers, but throughout Christendom.

And yet—thank God! perhaps there never was a time since the first age of Christianity so full of earnest enthusiasm for the Person of Christ as this grand 20th century. The Bible is being studied—partly as a result of the researches of both "higher" and "lower" critics—more and more carefully, and new light is constantly being thrown on old difficulties—because the Bible always rewards study. The missionary zeal of this generation is burning with an intense glow, and men everywhere are rising to obey the Great Commission given to the Church to win the world for Christ. He who declared (Rev. iii: 15, 16), that open opposition was not so harmful as lukewarm indifference, may well feel that people are waking up to care more than they did about the Bible. No district visitor now could say, as one did of a certain parish in England in the last century, that she only "found one Bible in the village, and



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"Black Knight" is a smooth paste, that is spread easily with a cloth or brush and shines like a black diamond after a few gentle rubs.


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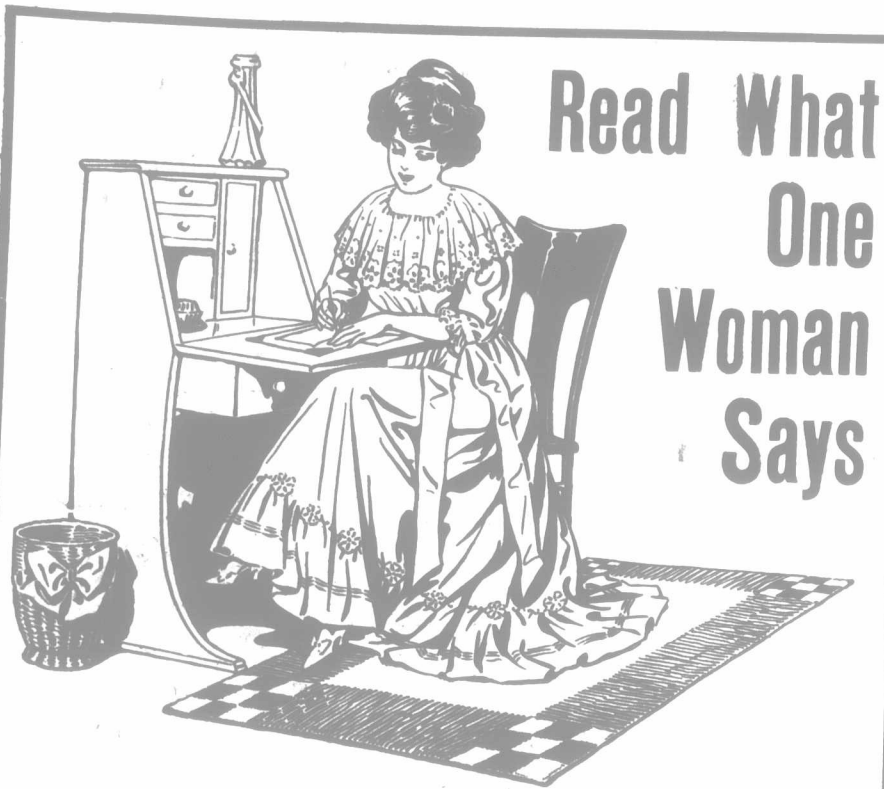
He Knows Its Value.

Elmvale, Jan. 10, 1910.
Canadian Correspondence College,
Toronto, Ont.

Dear Sirs,—Received my diploma all O. K. for Stationary and Traction Engineering. It is something to be proud of. From experience, I can say that a Course in your College is one of the best things for any man who can not take the time to go to school. I would not begrudge five times the cost just for the improvement of my education. I will do all I can to get others to take advantage of such a boon to working-men as a Correspondence Course is. Thanking you very much for what you have done for me, I am,
Yours truly,
W. H. CLEMENT.

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

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



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"Since I have been married I have held fast to **Diamond Dyes**, and they have helped me keep my children and my home looking nice at almost no expense.

"I have done hundreds of things suggested by your valuable **DIAMOND DYE Annual**, and I am so enthusiastic that I always show my friends my new things, and read them the helpful hints in the Annual. Lots of them have **Diamond Dyes** and my suggestions to thank for their pretty new clothes."

—MRS. HENRY MALCOLM, Toronto.

Diamond Dyes Will Do the Same for You

Faded hosiery, silk gloves, veils and feathers can be made like new with their use.

Portieres, couch covers, table covers, ribbons, sashes and trimmings of all kinds are given new life and added beauty.

And for dyeing dress goods, faded garments, skirts, waists and suits, **Diamond Dyes** are invaluable, both in economy and usefulness.

There is no other dye made that will do the work of **Diamond Dyes**. There is no other dye that you can use with safety to the material.

You Take No Risk with DIAMOND DYES.

You can use **Diamond Dyes** and be sure of the results. You can use them with safety on the most expensive piece of goods, and there is no danger of the goods becoming spotted or streaked or harmed in any way.

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Diamond Dyes are "The Standard of the World," and the only dyes *perfect* in formula, *positive* in action, *certain* in result.

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, while **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.

Diamond Dye Annual—Free Send us your name and address (be sure to mention your dealer's name and tell us whether he sells **Diamond Dyes**) and we will send you a copy of the famous **Diamond Dye Annual**, a copy of the Direction Book and samples of dyed cloth, all **FREE.** Address

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that was used to prop a flower-pot." A few years ago there was scarcely any religious literature for popular reading—now the writers of such books and pamphlets could be counted by hundreds. And the fact that these books are issued by hundreds of thousands, proves that there are plenty of readers—they are not only for scholars or ministers. Some of them run through many editions the first year they are issued—which shows how eagerly they are caught up and read. Certainly, we have reason to rejoice in this new proof that the Living Church of the Living Christ is a young and strong and vigorous. HOPE.

The Ingle Nook.

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

Some of you who were at the Women's Institute Convention at Guelph a year ago, may remember that one of the questions sent in to the Question Drawer ran as follows: "Why do we talk so much about what we eat? I think food for the soul is more important."

Without belittling in the least the importance of food for the soul, one may hazard a guess that the writer of that question never knew what it was to have dyspepsia, or to see anyone around her in the clutches of it. If she had experienced ever so little a tweak of it, or had seen somebody else gouching around or cranky or unreasonable because of it, she might have had a vague idea that, after all, the affairs of body and soul are rather strangely mixed up as long as we are on this mortal sphere, and that if we would do the best we can for the soul, we must look reasonably to the welfare of the body. A sick body means a sick mind. A sick mind means a mind incapable of doing its best and most generous work. It is a mind warped, jaundiced, one-sided, looking at things spiritual, as well as temporal, through yellow glasses.

I thought of this question to-day when reading some excerpts from an article on Domestic Science in Schools and Colleges (North American Review), from which it appears that, not only dyspepsia, but many other diseases, are directly due to improper or badly-prepared food.

"The appearance of the members of the family," says the writer, "is a good indication of the kind of housekeeping they are accustomed to. They may be proof against mismanagement for a time, and look rosy, but eventually they succumb. Bilious eyes, constellations of pimples, complexions like dough or dried apples, and the external symptoms of a hundred-and-one other ills, are conspicuous evidences of the wife's incompetency, and cry out, 'Behold her handiwork!'"

"Most illnesses come from improper food. A great deal of sickness in a family usually means inefficient housekeeping. Yet the wife never blames herself for the sickness or death of members of the family, but ascribes the untimely ending of their lives to an inscrutable visitation of Providence. Strenuous exertions are made, and no expense spared for nursing, medicine and doctors, to save the life of a member of the family who is ill; but the prevention of sickness through the study of housekeeping is disregarded."

"It is said that the American race is deteriorating physically. This assertion seems to be borne out by one's own observation. How few people one sees who are perfectly well; how many who have some ailment or other! And it is not to be wondered at that this latter class is so large when one sees the family dietary. Statisticians say that one-third of all the children in America die before they are a year old, and that the average age at which men die is thirty-five years. A quotation from Shakespeare, which is very appropriately printed on the title-page of a recent cook book, tells us the reason: 'Men die because they know not how to live.' With improved housekeeping, sickness will be decreased in direct proportion to the increase of intelligence and vigor, and longevity added

to life. People are beginning to realize that sickness is unnecessary, and might be avoided by hygienic living."

The remainder of the article is devoted to an argument that scientific housekeeping should be taught in all the schools and colleges. This is being done in our own land in the case of High Schools and Collegiate Institutes, and in some instances in the cities, in the public schools.

Ostensibly, there are many reasons why Domestic Science, etc., must have small place in rural public schools for long enough to come. There is, and will be, lack of apparatus; moreover, a teacher burdened with a dozen classes, with all the ramifications of curriculum for each, has not time to devote to household chemistry and physics.

What then?

The answer is not hard. Does it not appear that the homes must take the place of the schools in this respect? That the housewives themselves must make themselves mistresses of all the household problems, in order that they may teach their children? What are the most nourishing foods, and why; how such foods should be prepared in order to bring out their full nutrition; bacteria, how they should be fought or encouraged, as the case may be; problems of heating and ventilation; the art of nursing the sick; these, and many others, are subjects which the efficient housewife should hold in hand, and which she may hold in hand by alertly watching for authoritative information wherever she can find it.

The Women's Institutes are doing a great work in this line, also the W. I. reports sent to the members. Almost every magazine pertaining at all to the home, contains valuable information from time to time; and there are books galore on every subject. Surely the matter of being, not only a fairly good, but a scientifically good housekeeper, is not so difficult after all. And surely the rural mothers can see to it that their children fall not behind their city cousins in this matter of knowing the whys and wherefores of all that pertains to the health, happiness and efficiency of the human race. D. D.

Oatmeal Drop Cakes.

Three cups oatmeal, 2 cups flour, 2 cups brown sugar, 1 cup raisins seeded and chopped fine, 1 teaspoon cinnamon. Mix together dry; then add 1 cup melted butter, 2 eggs well beaten, 1 teaspoon soda, 5 teaspoons sour milk. Drop by teaspoonfuls on greased tins, and bake.

An Ingle Nook reader wanted this recipe in last week's issue. L. R.

H. A. B. sends us by a later mail a message from Wales, which, by the time it has reached us, will have crossed the Atlantic for the third time. With the message came a post-office order with the request that a copy of "The Vision of His Face" be forwarded to the writer. This, of course, will be done gladly, and in due course. "I am sure I shall enjoy it," writes the sender of the order, "as I do all Hope's writings in 'The Farmer's Advocate.'" I am a big reader, and when "The Advocate" comes, as soon as the delivery goes out, for I am postmistress, and have to see to that first, I just sit down, almost in the very middle of my work, and read what Hope has written, and what H. A. B. has to tell us about. I find much to help me in both, and when a bit down-hearted, I quote what the little child said, 'Peak like you do when you laugh,' and get to my work quite cheerfully again. I want you to know how I value 'The Farmer's Advocate,' which, as I told you before, I pass on to my neighbors, who appreciate it too."

Mercury Stain on Gold Ring.

While working at school one day, in the science room, a drop of mercury got on my gold ring and suddenly turned it to a silver appearance. Could you give me any information on getting it back to its original color. I have already tried chalk, but it has no effect. F. S.

Ans.—When a drop of mercury falls on a gold ring, it gives it a silvery appearance, which cannot very well be removed by any ordinary methods of scouring. The mercury, however, may be vaporized, so that if the ring is held in a flame, or over a heat of any kind, the mercury may

beginning to realize necessary, and might be living." An article is devoted to scientific housekeeping in all the schools being done in our High Schools, and in some instances, in the public schools.

many reasons why must have small schools for long term is, and will be, however, a teacher classes, with all curriculum for each, vote to household

be volatilized, and the ring brought back to its normal condition.
R. HARCOURT.
O. A. C., Guelph.

The "Farmer's Advocate" Fashions.



6550 Circular Knickerbockers. 24 to 34 waist.



6546 Square Yoke Night-Gown, 34 to 44 bust.



6497 Girl's Kimono, 6 to 12 years.



DESIGN BY MAY MANTON
6533 Child's Double Breasted Coat.



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6244 Dressing Jacket.
6218 Five Gored Skirt.

When ordering, give age, if for Misses' pattern, waist measure if for ladies'.
Price of above patterns is 10 cents for each number. Address: "Fashion Department," "The Farmer's Advocate," London, Ont.

Current Events.

Emigration from the United States last year totalled nearly 91,000, against 57,124 the previous year.

A destructive fire at Elk Lake has caused the ruin of the greater portion of the business district, and entailed a loss of nearly one hundred thousand dollars.

One of the most serious and fatal accidents in the history of railroading occurred on the Soo Branch of the C. P. R. on January 21st, when an express train was derailed, several of the cars plunging down the bank into the Spanish River. The dead and injured number one hundred.

The standing in the British elections, with the seven seats still to be heard from, is as follows: Unionists elected, 272; Liberals elected, 271; Nationalists elected, 80; Laborites elected, 40. The final result, which will not be known before February 12th, will probably give the Unionists 274 seats, the Liberals 273, the Nationalists 82, and the Laborites 41.

The first meeting of the new Imperial Legislative Council, by which natives will be allowed more voice in the administration of Anglo-Indian affairs than formerly, was held at Calcutta on January 25th. Lord Minto, who opened the meeting, described it as the beginning of a "new era of the inauguration of broader principles of government."

The high price of meat in the United States has caused the formation of a boycott, whereby 600,000 persons have agreed to abstain from eating meat for one month. The U. S. grand juries are making investigations as to the reasons for the increased prices, and whether or not they have been caused by a combine among the large firms.



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And I can tell you, Salt plays a very important part in butter making. Give me good cows and Windsor Butter Salt, and I will win the prize every time. At the big fairs for years, practically all of the prize winning butter makers have used it.

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Every "Duchess" garment is guaranteed by the makers as well as the dealers. If you can't obtain "Duchess" Combinations, Kimonas, Waists etc. at your dealer's, write us.

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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.

Throw away the old washboard!

How about that heavy family washing that has to be done each week? It seems incredible, but there are still some people who continue to use the old back-breaking washboard method, which makes common drudges of Mother, Wife and Sister (which results in irritable, nervous, over-worked women.) Our

"New Century" Washing Machine

washes a tubful of clothes in five minutes. Powerful oil tempered steel spiral springs and tool steel ball bearings make the work so easy that a child of six or eight can do it.

The new Wringer Stand is strong and rigid, and drains the water right into the tub. Ask anyone of the army of satisfied users about it, or better still try one; they will be a better argument than we can put on paper.

\$9.50 complete, without wringer, delivered at any railway station in Ontario or Quebec.

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Say Good-Bye to Colds, Chills and Doctor Bills. No More Corns, Bunions, Soreness or Discomfort!

Farmers and all classes of Workers wear Steel Shoes with amazing satisfaction. They are the most wonderful work shoe ever made—so strong—so durable—so comfortable—so easy—that everywhere heavy, cumbersome, leather-soled work shoes are being thrown in the junk pile and Steel Shoes worn instead.

Steel Shoes give comfort as long as you wear them. They need no repairs, and are absolutely waterproof. In the dead of winter—in snow, slush or mud Steel Shoes will keep your feet as dry, warm and comfortable as though you were indoors.

Steel Shoes Outwear 3 to 6 Pairs Leather-Soled shoes and Give Absolute Protection from Aching Feet, Chills, Colds, Bunions, Colds, Rheumatism and Sore Throat!

Steel Shoes are as waterproof as Rubber Boots. They defy cold and wet, and keep out dampness and chill. Nine-tenths of all sore throats, colds, pneumonia and rheumatism are traced directly to cold, wet feet due to leaky shoes. Why run any chances at all, when you can get absolute protection in Steel Shoes, get ease and comfort and save \$5 to \$10 a year in shoe money?

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The soles and an inch above the soles are stamped out of a special, light, thin, rust-resisting steel! The soles are protected from wear by Adjustable Steel Rivets. Rivets can easily be replaced. Fifty extra Rivets cost only 30 cents. No other repairs are ever necessary! The uppers are made of the very best quality of soft, pliable, waterproof leather, riveted to the steel and reinforced where wear is greatest.

Steel Shoes have thick, springy, Hair Cushion Insoles, which aid to ease of walking—absorb perspiration and odors, and keep your feet free from sores, blisters and callouses.

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Steel Shoes, 9 inches high, \$4.00 a pair, are better than the best all-leather \$5.50 shoes.

Steel Shoes, 9 inches high, extra grade of leather, black or tan color, \$5.00 per pair, are better than the best all-leather shoes of the height at any price.

Steel Shoes, 12 inches high, \$5.00 a pair, are better than the best all-leather \$6.00 shoes.

Steel Shoes, 12 inches high, extra grade of leather, black or tan color, \$6.00 per pair, are the world's best 12 inch high shoes.

Steel Shoes, 16 inches high, \$6.00 a pair, are better than the best all-leather \$7.00 shoes.

Steel Shoes, 16 inches high, extra grade of leather, black or tan color, \$7.00 per pair, are absolutely the greatest value ever offered in an extra high shoe.

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Please Mention The Advocate

She noticed two gentlemen in the group. "Oh, pardon me, Messieurs Le Mercier and d'Estebe!" said she. "I did not perceive you. My veil is so in the way!" She pushed it aside coquettishly, and gave a finger to each of the gentlemen, who returned her greeting with extreme politeness.

"Good morning! say you, Angeli-que?" exclaimed Mademoiselle Herbert; "it is a good noon. You have slept rarely! How bright and fresh you look, darling!"

"Do I not!" laughed Angelique in reply. "It is the morning air and a good conscience make it! Are you buying flowers? I have been to Sil-lery for mine!" said she, patting her blooming cheeks with the end of her riding-whip. She had no time for further parley, for her attention was suddenly directed by De Pean to some stir upon the other side of the mar-ket, with an invitation to her to ride over and see what was the matter. Angelique at once wheeled her horse to accompany De Pean.

The group of girls felt themselves eclipsed and overborne by the queenly airs of Angelique, and were glad when she moved off, fearing that by some adroit manoeuvre she would carry off their cavaliers. It needed but a word, as they knew, to draw them all after her.

Angelique, under the lead of De Pean, rode quickly towards the scene of confusion, where men were gesticulating fiercely and uttering loud, angry words such as usually precede the drawing of swords and the rush of combatants.

To her surprise, she recognized Le Gardeur de Repentigny, very drunk and wild with anger, in the act of leaping off his horse, with oaths of vengeance against someone whom she could not distinguish in the throng.

Le Gardeur had just risen from the gaming table, where he had been playing all night. He was maddened with drink and excited by great losses, which in his rage he called unfair.

Colonel St. Remy had rooked him at piquet, he said, and refused him the chance of an honorable gamester to win back some part of his losses. His antagonist had left the Palace like a sneak, and he was riding round the city to find him, and horse-whip him if he would not fight like a gentleman.

Le Gardeur was accompanied by the Sieur de Lantagnac, who, by splendid dissipation, had won his whole confidence. Le Gardeur, when drunk, thought the world did not contain a finer fellow than Lantagnac, whom he thoroughly despised when sober.

At a hint from De Pean, the Sieur de Lantagnac had clung to Le Gardeur that morning like his shadow, had drunk with him again and again, exciting his wrath against St. Remy; but apparently keeping his own head clear enough for whatever mischief De Pean had put into it.

They rode together to the market-place, hearing that St. Remy was at the sermon. Their object, as Le Gardeur believed, was to put an unpardonable insult upon St. Remy by striking him with his whip, and forcing him to fight a duel with Le Gardeur or his friend. The reckless De Lantagnac asserted loudly he "did not care a straw which!"

Le Gardeur and De Lantagnac rode furiously through the market, heedless of what they encountered or whom they ran over, and were fol-lowed by a yell of indignation from the people, who recognized them as gentlemen of the Grand Company.

It chanced that at that moment a poor almsman of the Bourgeois Phil-ibert was humbly and quietly leaning on his crutches, listening with how-ing head and smiling lips to the kind inquiries of his benefactor as he re-ceived his accustomed alms.

De Lantagnac rode up furiously, fol-lowed by Le Gardeur. De Lantagnac recognized the Bourgeois, who stood in his way talking to the crippled soldier. He cursed him between his teeth, and lashed his horse with in-tent to ride him down as if by acci-dent.

The Bourgeois saw them approach,

Unusually severe storms in France have caused the overflow of the River Seine, occasioning untold ruin and disaster along its course; the dead already number hundreds. In the City of Paris the distress is most acute; a great part of the city is under water; house-drains and sewers are bursting in all directions, undermining the streets; owing to the destruction of gas and electric-light plants, half of the city is in dark-ness; many are suffering from want of food, and at the time of writing the flood has not yet reached its height. The damage is already esti-mated at \$200,000,000.

The Golden Dog
(Le Chien D'Or.)

A Canadian Historical Romance.

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CHAPTER L.—Continued.

There was much stir in the market when the Bourgeois began his accus-tomed walk among the stalls, stop-ping to converse with such friends as he met, and especially with the poor and infirm, who did not follow him—he hated to be followed—but who stood waiting his arrival at certain points which he never failed to pass. The Bourgeois knew that his poor almsmen would be standing there, and he would no more avoid them than he would avoid the Governor.

A group of girls very gaily dressed loitered through the market, purchas-ing bouquets of the last autumnal flowers, and coquetting with the young men of fashion who chose the market-place for their morning prom-enade, and who spent their smiles and wit freely, and sometimes their money, upon the young ladies they expected to find there.

This morning the Demoiselles Grand-maison and Herbert were cheapening immortelles and dry flowers to de-corate their winter vases—a pleasant fashion, not out of date in the city at the present day.

The attention of these young ladies was quite as much taken up with the talk of their cavaliers as with their bargaining, when a quick exclamation greeted them from a lady on horse-back, accompanied by the Chevalier de Pean. She drew bridle sharply in front of the group, and leaning down from her saddle gave her hand to the ladies, bidding them good morning in a cheery voice which there was no mistaking, although her face was in-visible behind her veil. It was An-gelique des Meloises, more gay and more fascinating than ever.

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and motioned them to stop, but in vain. The horse of De Lantagnac just swerved in its course, and without checking his speed ran over the crippled man, who instantly rolled in the dust, his face streaming with blood from a sharp stroke of the horse's shoe upon his forehead.

Immediately following De Lantagnac came Le Gardeur, lashing his horse and yelling like a demon to all to clear the way.

The Bourgeois was startled at this new danger, not to himself—but to the thought not of himself—but to the bleeding man lying prostrate upon the ground. He sprang forward to prevent Le Gardeur's horse going over him.

He did not, in the haste and confusion of the moment, recognize Le Gardeur, who, inflamed with wine and frantic with passion, was almost past recognition by any who knew him in his normal state. Nor did Le Gardeur, in his frenzy, recognize the presence of the Bourgeois, whose voice calling him by name, with an appeal to his better nature, would undoubtedly have checked his headlong career.

The moment was critical. It was one of those points of time where the threads of many lives and many destinies cross and intersect each other, and thence part different ways, leading to life or death, happiness or despair, forever!

Le Gardeur spurred his horse madly over the wounded man who lay upon the ground; but he did not hear him, he did not see him. Let it be said of Le Gardeur, if aught can be said in his defence, he did not see him. His horse was just about to trample upon the prostrate cripple lying in the dust, when his bridle was suddenly and firmly seized by the hand of the Bourgeois, and his horse wheeled round with such violence that, rearing back upon his haunches, he almost threw his rider headlong.

Le Gardeur, not knowing the reason of this sudden interference, and flaming with wrath, leaped to the ground just at the moment when Angelique and De Pean rode up. Le Gardeur neither knew nor cared at that moment who his antagonist was; he saw but a bold, presumptuous man who had seized his bridle, and whom it was his desire to punish on the spot.

De Pean recognized the stately figure and fearless look of the Bourgeois confronting Le Gardeur. The triumph of the Friponne was at hand. De Pean rubbed his hands with ecstasy as he called out to Le Gardeur, his voice ringing above the din of the crowd, "Achevez-le! Finish him, Le Gardeur!"

Angelique sat upon her horse fixed as a statue and as pale as marble, not at the danger of the Bourgeois, whom she at once recognized, but out of fear for her lover, exposed to the menaces of the crowd, who were all on the side of the Bourgeois.

Le Gardeur leaped down from his horse and advanced with a terrible imprecation upon the Bourgeois, and struck him with his whip. The brave old merchant had the soul of a marshal of France. His blood boiled at the insult; he raised his staff to ward off a second blow, and struck Le Gardeur sharply upon the wrist, making his whip fly out of his hand. Le Gardeur instantly advanced again upon him, but was pressed back by the habitans, who rushed to the defence of the Bourgeois. Then came the tempter to his ear—a word or two and the fate of many innocent lives was decided in a moment!

Le Gardeur suddenly felt a hand laid upon his shoulder, and heard a voice, a woman's voice, speaking to him in passionate tones.

Angelique had forced her horse into the thick of the crowd. She was no longer calm, nor pale with apprehension, but her face was flushed redder than fire, and her eyes, those magnetic orbs which drove men mad, blazed upon Le Gardeur with all their terrible influence. She had seen him struck by the Bourgeois, and her anger was equal to his own.

De Pean saw the opportunity. "Angelique," exclaimed he, "the

Bourgeois strikes Le Gardeur! What an outrage! Can you bear it?"

"Never!" replied she; "neither shall Le Gardeur!"

With a plunge of her horse she forced her way close to Le Gardeur, and, leaning over him, laid her hand upon his shoulder and exclaimed in a voice choking with passion: "Comment, Le Gardeur! vous souffrez qu'un Malva comme ca vous abime de coups et vous portez l'eepee!" "What, Le Gardeur! you allow a ruffian like that to load you with blows, and you wear a sword!"

It was enough! That look, that word, would have made Le Gardeur slaughter his father at that moment.

Astonished at the sight of Angelique, and maddened by her words as much as by the blow he had received, Le Gardeur swore he would have revenge upon the spot. With a wild cry and the strength and agility of a panther he twisted himself out of the grasp of the habitans, and, drawing his sword, before any man could stop him, thrust it to the hilt through the body of the Bourgeois, who, not expecting this sudden assault, had not put himself in an attitude of defence to meet it.

The Bourgeois fell dying by the side of the bleeding man who had just received his alms, and in whose protection he had thus risked and lost his own life.

"Bravo, Le Gardeur!" exclaimed De Pean; "that was the best stroke ever given in New France. The Golden Dog is done for, and the Bourgeois has paid his debt to the Grand Company."

Le Gardeur looked up wildly. "Who is he, De Pean?" exclaimed he. "What man have I killed?"

"The Bourgeois Philibert, who else?" shouted De Pean, with a tone of exultation.

Le Gardeur uttered a wailing cry, "The Bourgeois Philibert! have I slain the Bourgeois Philibert? De Pean lies, Angelique," said he, suddenly turning to her. "I would not kill a sparrow belonging to the Bourgeois Philibert! Oh, tell me De Pean lies."

"De Pean does not lie, Le Gardeur," answered she, frightened at his look. "The Bourgeois struck you first. I saw him strike you first with his staff. You are a gentleman, and would kill the King if he struck you like a dog with his staff. Look, they are lifting him up. You see it is the Bourgeois and no other."

Le Gardeur gave one wild look, and recognized the well-known form and features of the Bourgeois. He threw his sword on the ground, exclaiming, "Oh! oh! unhappy man that I am! It is parricide! parricide! to have slain the father of my brother Pierre! Oh, Angelique des Meloises! you made me draw my sword, and I knew not who it was or what I did!"

"I told you, Le Gardeur, and you are angry with me. But see! hark! what a tumult is gathering; we must get out of this throng or we shall all be killed, as well as the Bourgeois. Fly, Le Gardeur, fly! Go to the Palace!"

"To hell sooner! Never shall the Palace see me again!" exclaimed he madly. "The people shall kill me if they will, but save yourself, Angelique. De Pean, lead her instantly away from this cursed spot, or all the blood in this spilt that will be spilt to-day. This is of your contriving, De Pean," cried he, looking savagely, as if about to spring upon him.

"You would not harm me or her, Le Gardeur?" interrupted De Pean, turning pale at his fierce look.

"Harm her, you fool, no! but I will harm you if you do not instantly take her away out of this tumult. I must see the Bourgeois. Oh God, if he be dead!"

A great cry now ran through the market-place: "The Bourgeois is killed. The Grand Company have assassinated the Bourgeois." Men ran up from every side shouting and gesticulating. The news spread like wildfire through the city, and simultaneously a yell of vengeance rose from the excited multitude.

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The Cowan Co. Limited, Toronto.

Special Notice. BETTER THAN SPANKING.

Spanking does not cure children of bed-wetting. There is a constitutional cause for this trouble. Mrs. M. Summers, Box 821, Windsor, Ont., will send free to any mother her successful home treatment, with full instructions. Send no money, but write her to-day if your children trouble you in this way. Don't blame the child, the chances are it can't help it. This treatment also cures adults and aged people troubled with urine difficulties by day or night.

Don't Throw it Away

USE MENDETS

They mend all leaks in all utensils—in brass, copper, granite, iron, hot water bags, etc. Nosolder, cement or rivet. Any one can use them; fit any surface; two million in use. Send for sample kits, free. Complete pkg. assorted sizes, 25c. postpaid. Agents wanted. **Collette Mfg. Co., Dept. K, Collingwood, Ont.**





Raise The Crop That Never Fails

That crop is poultry—the crop that knows no "bad years." You can raise that crop on your farm, no matter where you live in Canada. You can raise poultry successfully, make money doing it, and be sure of a good market for all you do raise. You need make no heavy investment to start it, you need no elaborate equipment, you don't have to give up a big slice of your land to poultry-raising, even if you go into it on a pretty big scale. Nor is it hard work to

make a go of poultry farming,—not anything like the work it takes most everywhere to make even a pittance out of ordinary farming. Poultry-raising, nowadays, with The Peerless Way to follow and the certainty it provides for you, is actually a business that you owe it to yourself to get into, and to get into right away. Consider the matter carefully. Read every word of what follows, and act upon its suggestions.

This Is How You Can Make Your Farm Pay Better

First of all, sit down now and drop us a post card with your name and address on it. That will bring you a book you ought to read. It tells you the real truth about poultry-raising. This book explains just why The Peerless Incubator, The Peerless Brooder, and The Peerless Way make a combination that puts success within anybody's reach—makes success practically certain, failure practically impossible.

Very Little Money Will Start You Right

Don't imagine for a moment that you need a great deal of cash to start after the profit there is in poultry. One important feature of The Peerless Way is how easy it is made for your friends to go into the business with but very little ready of an expert to succeed with poultry. Your own good common-sense, added to a fair degree of diligence and effort, equips you thoroughly to make money poultry-raising, and to make it quick. Get the cold facts.

You Get, Free, The Advice And Aid of Experts

Another very important thing about The Peerless Way is that our interest in your success, doesn't lapse when your Peerless outfit is shipped. If one Peerless customer should fail at poultry-raising because we did not do all we should have done to help him, we would feel disgraced. So we try to see to it that no Peerless user fails. Our Board of Experts gives advice, counsel, detailed instructions, to any Peerless user who wants them. The advice is so plain, so explicit, that a child could not misunderstand it.

We Trust You Willingly

When it is not just convenient for our customers to start on a cash-down basis, we willingly arrange such long credit terms that the Peerless equipment pays for itself—earns its whole cost long before the last payment is due. WRITE US TO-DAY FOR FULL DETAILS.

The Peerless Incubator is so designed, so constructed, from practical experience, with precise knowledge of the climatic conditions of every section of Canada, that it will positively hatch perfectly in any part of the country. When you get that book we ask you to send for, you will read letters in it from every province of the Dominion,—letters from people who have done with the Peerless what they could not have done with any other incubator built.

We Find a Buyer For Your Product

Here is another valuable service you get when you follow The Peerless Way.—We guarantee to find a buyer for all the fowl or eggs you want to sell—a buyer who pays spot cash, pays the highest market prices, and charges no commission whatever. Poultry prices, and prices for eggs—rising steadily year after year.

Best Paying Business For You

For the work involved and the money required, poultry-raising, The Peerless Way, is the best business there is. It has possibilities big enough to interest a capitalist, and yet a schoolboy of average intelligence can succeed at it, make money at it, prosper in it, yet start with but a few dollars. There is not a farm in Canada on which poultry cannot be raised for profit; there is not a farm on which poultry will not pay better than any other crop. You simply cannot find a better investment for part of your time or for all of it.

FREE BIG-VALUABLE POULTRY BOOK

You have read enough here to convince you, probably, that there really is something worth while in poultry-raising. The Peerless Way. Now send for the FREE book that tells the whole story—that gives facts and figures and proofs—things you want to know, and ought to learn of right NOW. Make a start this very day. Send for the book. Address: 37

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.

LEE Manufacturing Co., Ltd. PEMBROKE ONTARIO
462 Pembroke Avenue CANADA

New Amberol Records by Slezak

Leo Slezak, the great tenor, now sings for you in the Edison Phonograph the same famous arias from the Grand Operas that the New York audiences pay \$5.00 a seat to hear. Just how great a singer Slezak is, is told in the following remark, quoted from the New York World the morning after a recent appearance of Slezak at the Metropolitan Opera House: "Caruso now has a rival."

Slezak has made ten records for the Edison, comprising the principal tenor songs from the more prominent roles of his repertoire—so that, while the New York opera goer pays \$5.00 a seat to hear Slezak in one opera, with the Edison Phonograph and Amberol Records you get Slezak at his best in his ten best roles, including Otello, Lohengrin, Tannhauser, Rhadames in Aida and Rodolfo in La Boheme.

Only on Amberol Records can you get a full length rendering of these great arias—and only on the Edison Phonograph do you get Amberol Records. Hear these great Slezak Records at any Edison dealer's today.

Edison Phonographs \$16.50 to \$240.00	Edison Amberol Records (play twice as long) \$.65
Edison Standard Records - - .40	Edison Grand Opera Records - - .85 and 1.25

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 Co., 100 Lakeside Avenue, Orange, N. J., U. S. A.

The annual statement of the Traders Bank of Canada, published on another page of this issue, makes an exceedingly satisfactory showing, and reflects signal credit on the management. The capital of the Bank, as stated by the General Manager, now amounts to \$4,354,500, and the Rest Account to \$2,200,000. Out of the profits of the year, the Bank has been able to pay dividends amounting to \$315,671.48, and after making the usual appropriations to Guarantee and Pension Funds, and writing off \$20,000 on account of Bank premises, the sum of \$200,000 has been added to the Rest Account.

GOMBAULT'S CAUSTIC BALSAM, the great French veterinary remedy for wounds and other ailments of horses and humans, has been long before the public, and holds its own as a popular liniment for the cure of a great variety of diseases, superseding blisters and actual cautery, and leaving no scar or blemish. See the advertisement, and enquire of your druggist, or write to headquarters, The Lawrence Williams Co., Cleveland, Ohio.

The Recollet Brother Daniel had been the first to fly to the help of the Bourgeois. His gray robe presently was dyed red with the blood of the best friend and protector of their monastery. But death was too quick for even one prayer to be heard or uttered by the dying man.

The gray brother made the sign of the cross upon the forehead of the Bourgeois, who opened his eyes once for a moment, and looked in the face of the good friar while his lips quivered with two inarticulate words, "Pierre! Amelie!" That was all. His brave eyes closed again forever from the light of the sun. The good Bourgeois Philibert was dead.

"Blessed are the dead who die in the Lord," repeated the Recollet. "Even so, saith the Spirit, for they rest from their labors."

De Pean had foreseen the likelihood of a popular commotion. He was ready to fly on the instant, but could not prevail on Angelique to leave Le Gardeur, who was kneeling down by the side of the Bourgeois, lifting him in his arms and uttering the wildest accents of grief as he gazed upon the pallid, immovable face of the friend of his youth.

"That is the assassin, and the woman, too," cried a sturdy habitant. "I heard her bid him draw his sword upon the Bourgeois."

(To be continued.)

TRADE TOPICS.

AFTER MANY YEARS.—It is human nature to want experience and ability when we are in need of professional aid. The established physician or lawyer invariably has the most extensive patronage. It is the same in the other professions, and especially so in the case of the Hiscott Dermatological Institute of Toronto. This week, the principals of that widely-known establishment begin their nineteenth year in the treatment of skin, scalp, hair, and other troubles that the covering of frail mankind is heir to. The vast majority of these skin affections are treated by mail, enabling patients and patrons living at a distance to get just as successful treatment as those who visit the Institute. Ladies whose faces have a tendency to superfluous hair are an exception, as that blemish can only be permanently removed by electrolysis, a treatment that should only be given by experienced dermatologists. A card addressed to the Institute, care of Hiscott Building, 61 College street, Toronto, will bring you their booklet "P" explaining all their work.

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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.

BRITISH Columbia Fruit Ranches—For lovely little ranches overlooking Lake Okanagan, at the best possible value, write Walter Stark, the agent, Toronto House, Wallacey, Cheshire, England. Note: Ready for the plow. Easy terms of payment.

FOR SALE—Seed barley, O. A. C. No. 21, Good sample. Duncan Campbell, North Bruce, Ont.

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.

MARRIED couple, with some experience, desires situation on farm. State wages paid. F. Grimble, Yorkville Ave., Toronto City.

YOUNG men with small capital. Good profits await you in sunny, mild climate. Vancouver Island offers opportunities in business, professions, fruit-growing, poultry, farming, manufacturing, lands, timber, mining, railroads, navigation, fisheries, new towns. For authentic information, free booklets, write Vancouver Island Development League, Room B102 Law Chambers Bldg., Victoria, B. C.

Delhi Tannery Custom robe and fur tan 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. BELL, DELHI, 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.

BARRED ROCK cockerels. Prices low. Satisfaction guaranteed. Write for particulars. W. W. Dods, Alton, Ont.

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

EDELWEISS WHITE ROCKS—Eggs for hatching, \$2.00 for 15. Breeding pen: "Edelweiss I," (3rd Ontario cock, '09), with 10 yearling hens, trap-nested, which have as pullets proven themselves "worth while." A grand utility pen. J. A. Butler, M. D., Baden, Ont.

FOR SALE—Fine Barred Rock cockerels, Agricultural College stock. Bmt-den, African, Toulouse ganders, P. k. n. Rouen ducks and drakes, White gobblers, Buff Cochins Bantams. All bred from winners. Be quick. Baker Bros., Guelph, Ont.

FOR SALE—Blue Andalusians. High-class stock. Male birds, and female winners at Guelph, Central Ontario, Hamilton, Brantford, Ottawa. Good layers. Chas. Richardson Gourcock, Ont.

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

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

LARGE Pekin Ducks for sale. Jas. H. Oswald, Ste. Therese, Q. c.

M. B. TURKES from prizewinning stock. G. E. N. son, Arva, Ont.

WHITE PLYMOUTH ROCK females. Great winter layers. Satisfaction guaranteed. J. R. Dods, Alton, Ont.

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 GANADIAN 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.

Forehanded gardeners and farmers are already preparing to order needed implements for the coming season's work. The Planet Jr. Farm and Garden Implements, manufactured by S. L. Allen & Co., Philadelphia, have long held a leading place for efficiency and lightness of working. All sorts of sowing and cultivating implements, from a tiny hand seeder to a two-horse cultivator, are listed in their catalogue, which can be had for the asking.

Present Your Daughter With a Bank Account

Present your daughter with a bank account and a monthly allowance. Have her pay her accounts by check. Tell her what she saves will be hers.

3 1/2 %

This will teach her to be thrifty, and give her an education in the value of money—knowledge every girl should have.

\$ opens an account; 3 1/2% interest, according to agreement. Obliging clerks.

Agricultural Savings & Loan Co., 109 Dundas St., London, Ont.

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EATON'S
JANUARY & FEBRUARY
SALE
CATALOGUE

MAILED FREE UPON REQUEST

The values listed therein will convince you that **EATON'S** are leaders for making and distributing merchandise. In fact it contains values which must produce orders, consequently we have made great preparations by obtaining an enormous stock of brand new, up-to-date goods. Every item offers the last word in correct style, and every price is proof of **EATON** economy. Many of the articles are

Made in Our Own Factories

which means that the finished product reaches you with only the one small **EATON** profit added to the cost of production. Moreover every article is sold with the absolute guarantee that it will please you in every particular, otherwise we will

Refund Your Money in Full

These wonderful buying opportunities last for two months only. On February 28th this Great Sale is over, so send us your order at once. Don't delay.

THE T. EATON CO LIMITED
TORONTO - CANADA

THE TRADERS BANK OF CANADA

Proceedings of the Twenty-fifth Annual General Meeting.

The Twenty-fifth Annual Meeting was held at noon on Tuesday, the 25th of January, 1910.

The following shareholders were present, namely:—

F. J. Harris, John Smith, James Linton, H. R. Playtner, L. Bauer, Julius A. Halbhaus, Geo. F. Hedges, Edwin J. Thorpe, Andrew Semple, J. K. Niven, P. A. Vale, James Young, F. D. Johnson, R. L. McIntyre, H. H. Gildersleeve, J. C. Sinclair, M. Garvin, James E. Baillie, John J. Gibson, George LeRiche, J. R. McKichan, E. C. Jackson, W. E. Soule, E. Dickenson, jr., Rev. J. S. Williamson, George Watson, Wm. Stewart, W. G. Bryans, E. Galley, Alex. Stewart, George Mair, J. M. Duck, A. J. Barge, James Burnside, A. Dillon Mills, F. Wilson, W. S. Rodgers, Archibald Filshie, George Macdonald.

In the unavoidable absence of the President, the Vice-President, Hon. J. R. Stratton, took the chair, and appointed the General Manager to act as Secretary of the meeting.

On motion, Messrs. John K. Niven and E. Galley were appointed scrutineers.

The General Manager then read the following statement:—

Statement of the Result of the Business of the Bank

For the Twelve Months Ending 31st December, 1909.

The net profits for the twelve months, after making provision for bad and doubtful debts, and reserving accrued interest, amounted to.....	\$457,082 39
Premium on New Stock	50 00
Balance at Credit of Profit and Loss last year	190,982 49
	<u>\$648,114 88</u>
Appropriated as follows, viz.:	
Dividend No. 52, quarterly, at the rate of 7 p.c. per annum.....	\$ 76,190 16
" " 53, quarterly, at the rate of 7 p.c. per annum.....	76,193 16
" " 54, quarterly, at the rate of 7 p.c. per annum.....	76,200 18
" " 55, quarterly, at the rate of 8 p.c. per annum.....	87,087 98
Transferred to Rest Account.....	200,000 00
Written off Bank Premises and Furniture.....	20,000 00
Transferred to Officers' Guarantee Fund.....	5,000 00
Transferred to Officers' Pension Fund.....	5,000 00
Balance at Credit of Profit and Loss new accounts.....	102,443 40
	<u>\$648,114 88</u>

General Statement, 31st December, 1909.

LIABILITIES.	
Capital Stock paid up.....	\$ 4,354,500 00
Rest Account	2,200,000 00
Dividend No. 55, payable 3rd January.....	87,087 98
Former dividends unpaid	1,039 77
Interest accrued on Deposit Receipts.....	18,524 24
Balance of Profits carried forward.....	102,443 40
Notes of the Bank in circulation.....	\$ 3,060,070 00
Deposits bearing interest, including interest accrued to date.....	\$24,255,209 47
Deposits not bearing interest.....	5,557,984 87
	29,813,194 34
Balance due to other banks in Canada.....	37,254 32
Balance due to Foreign Agents.....	289,882 06
	<u>33,200,400 72</u>
	<u>\$39,963,996 11</u>
ASSETS.	
Gold and silver coin current.....	\$ 414,198 14
Dominion Government Demand Notes.....	3,633,251 00
Notes of and Cheques on other Banks.....	1,129,309 16
Balance due from other Banks.....	345,012 58
Balance due from Foreign Agents.....	803,913 94
Dominion and Provincial Government Securities	704,801 53
Railway and other Bonds, Debentures and Stocks.....	986,239 24
Call and Short Loans on Stocks, Bonds and other securities.....	1,544,818 98
Call and Short Loans on Stocks, Bonds, and other securities in U. S.....	600,000 00
	\$10,161,544 57
Bills discounted current.....	\$27,389,558 52
Notes discounted overdue (estimated to provided for).....	58,351 51
Loans to other Banks secured	12,625 42
Deposits with Dominion Government for security of general Bank Note Circulation.....	152,718 60
Real Estate, the property of the Bank (other than the Bank premises).....	700 00
Bank premises.....	1,996,459 61
Bank furniture, safes, etc.....	192,037 88
	29,802,451 54
	<u>\$39,963,996 11</u>

Toronto, 31st December, 1909.

STUART STRATHY,
General Manager.

During the year the following branches were opened: Bruce Mines, Camrose, Castor, Chapleau, Didsbury, Dryden, Embrun, Forget, Gadsby, Gerrard and Main streets (Toronto), Gerrard and Jones (Toronto), Gleichen, Holden, Lynden, Market Branch (Hamilton), Montreal, Vancouver, Vars, West Fort William, Yonge and Richmond streets (Toronto), and Zealandia. One branch, Hepworth, was closed.

After reading the report, the General Manager continued as follows:

General Manager's Address.

You can see by the foregoing statement that the Bank has made substantial increase in every department during the past year. The deposits now amount to \$29,800,000, as compared with \$25,300,000 a year ago, while during the same period the circulation of the Bank has risen from \$2,600,000 to over \$3,000,000. These additional funds have been used to the extent of over \$3,800,000 to further the commercial needs of the country by an increase in loans to the public to that extent.

Out of the profits of the year we have been able to pay dividends amounting to \$315,671.48, and together with the amount carried over from last year, after making the usual appropriations to Guarantee and Pension Funds of \$10,000, and writing off \$20,000 on account of Bank Premises, etc., we have added to Rest Account the sum of \$200,000, making that fund a little over 50 per cent. of the paid-up capital stock of the Bank, while the sum of \$102,443.40 has been carried to the credit of Profit and Loss "New Account."

Cash Reserves.

You will notice by the statement, the strong position which the Bank maintains as regards Cash Reserves. It is the fixed policy of the Bank to maintain a large proportion of its assets in a readily-convertible form. This policy necessitates a large amount of funds at its disposal, to be employed at low rates. The management of the Bank, however, considers it the first essential that the Bank shall be at all times in a position to take care of its rapidly-increasing clientele in all varying conditions of trade. That this policy is in the best interests of the Bank has been amply justified, the Bank being able during the recent times of an exceptionally-tight money market to take care of all the legitimate wants of its borrowers. Our ability to do this has given the Bank a connection which is of inestimable value, not only in cementing old clients to the Bank, but in attracting new business towards us.

Canada's Resources Attracting Good Settlers.

We have been blessed with a bountiful harvest during the period under review, not only in one section of this vast Dominion, but in all sections, the field crops alone yielding in money value about \$533,000,000, not to mention all the other natural resources of this vast country. True it is, our population is very limited, considering the immense territory belonging to us; but a large tide of immigration has commenced to be attracted towards us. It is estimated that in the neighborhood of 90,000 American settlers alone, with perhaps \$90,000,000 in cash, have settled in the Northwest Territories within the last year, besides settlers from Europe, amounting, roughly, to another 32,000 souls.

It is a platitude to say that the potentialities of this country are not to be conceived of, and the prospects of the country are identical with the prospects of its financial institutions, and that your property will increase in value with the growth of the country it is only reasonable to assume. The rapid settlement which will ensue by the completion of three transcontinental railroads, will increase our population at an enormous rate, and who is bold enough to predict what proportions its commerce will as-

sume, say, within the next ten years? The money markets of the world are open to us, investors abroad realizing the intrinsic value of our securities, and the increasing value which will naturally accrue to the same as the country is developed. I sincerely trust we may so fulfill our obligations, private and corporate, to merit this confidence.

The Bank's Progress.

The Bank's ramifications have been extended during the past year by the opening of several new branches. Amongst the most important, I mention Montreal and Vancouver. Our growing business demanded our occupation of these important points, and the growth of the Provinces of Saskatchewan and Alberta has induced us to increase our sphere of influence in those Provinces.

The capital of the Bank now amounts to \$4,354,500, and the Rest Account to \$2,200,000. It is interesting to note the growth of your property as compared with ten years ago:

	1899.	1909.
Capital paid up.....	\$1,700,000	\$ 4,354,500
Rest Account	70,000	2,200,000
Deposits	5,661,000	29,813,000
Circulation	681,000	3,060,000
Total assets	7,638,000	39,963,000

The revival in all lines of business on this continent is more or less apparent. It is natural that we should feel the mighty impetus which follows from a favorable state of affairs in our agricultural and other resources. We must not forget, however, that it is during such times we are apt to overshoot the mark of prudence in the matter of extensions. The inevitable cycle of bad times is bound to recur, and it behooves us to keep our commitments well in hand to prepare for other conditions when a policy of retrenchment will be necessary.

It will afford me much pleasure to answer any questions in connection with the statement which any of our shareholders may see fit to ask.

The Vice-President's Address.

The Hon. J. R. Stratton, the Vice-President, spoke as follows:

The Bank has been more than prosperous during the past year. Benefiting by the general advancement of all branches of business, and receiving its full share of the advantages resulting from greatly-improved conditions in the trade of the country, the Bank has been able to present to you a report which is as highly creditable to the management as it must be gratifying to the shareholders. At no time in its history has it presented more satisfactory results, nor has it ever been in as strong a position as it occupies to-day. Its reserves have been strengthened, and its business largely extended. The deposits have greatly increased, and the assets are readily available. The field of its operations has been extended, and several new and highly-important branches have been organized. A thorough revision of the working of the staff and the management of the various agencies has been exercised, and your Directors are in close relation to the business transactions and affairs of the Bank, from the Head Office down to the smallest branch. We have endeavored to bring the numerous details and many dealings of the various offices directly before the Board by means of systematic arrangement, in order that we may have an actual knowledge of what is going on in all the offices.

The Auditor to the Board.

The services of the Auditor to the Board have been devoted largely to this important work, and by his efforts we are enabled to pass upon the whole records of the Bank's business in an intelligent and effective manner. To illustrate, I might mention the matter of credits. By systematic and exact reports, which we receive every week, your Board is informed of how credits are being dealt with, how far accounts are be-

ing paid off as they mature, to what extent credits may be affected by overdrafts or change in securities, and how each branch is progressing. By this method, no material move can be made without the sanction of the Board. The actual condition of important accounts is investigated from time to time, and special reports concerning them are prepared and presented for such action as may be deemed advisable. Except in cases of small advances, every credit must be approved of by the Board on the fullest statement of the available facts. This method involves a large amount of work, but your Directors feel that they could not fully perform their duty to you and to themselves in any other way.

Economical Management.

Economy in every branch of the business is insisted upon, and I am glad to say that in this we are assisted by the whole staff. Saving has been effected in the matter of supplies by placing this class of expenditure in the hands of a competent and careful official. In transferring and appointing local managers and clerks, in the opening of new offices, and in the division of the work, there has been a decrease of expenditure wherever possible. In no case, however, has this desire for economy been allowed to impair the efficiency of the working of the Bank.

Branch System Extended.

During the year, owing to the largely-increased business of the Bank, we found it advisable to open some important branches. In Vancouver, an agency has been established in a central and highly-desirable location. A property was purchased, which has already considerably increased in value, and the Bank has opened there with every prospect of success. An office has been opened in Montreal under favorable circumstances, and several desirable points between these two large cities have been selected for our branches. The results from the Western field thus opened up have been very gratifying, and have fully justified the action taken by our Directors. It will also be necessary to consider, in the near future, what steps should be taken to connect our system with the Maritime Provinces, thereby extending our financial relations and still further increasing our facilities for doing business in all parts of Canada.

The astonishing growth and extension of Toronto, and its business, demanded serious consideration. The most important move made here was the opening within the past few weeks of a branch at the corner of Yonge and Richmond streets, in the office lately occupied by

the Bank of Montreal. Already business of a most material character is coming to us at this branch, and being in the center of the commercial, financial and trade locality of Toronto, this point will always be an important agency.

Assets Sound.

I need not go into the details of the Annual Statement, which has just been read to you, and which you have had for some time past in your hands. I would like to point out to you, however, that we are able to add \$200,000 to Rest Account, to contribute \$20,000 in reduction of Building and Furniture Account, to give \$5,000 to Pension Fund for the benefit of disabled or old retiring officers, to add \$5,000 to a Guarantee Fund to protect the Bank against loss by personal defalcation or losses through any member of its staff, and to carry something over \$102,000 to Profit and Loss Account.

In preparing this statement, we have dealt with the value of the assets in a vigorous manner. There has been no hesitation in allowing most liberally reasonable provision for bad and doubtful debts, and I believe that no item has been knowingly placed amongst the assets at one dollar more than its actual and available value. We felt that the solidity and vital character of the Bank's business justified us in using more than ordinary criticism of what might be treated as doubtful, and I believe that had we applied the ordinary test to the valuation of our assets, the net gains would appear much in excess of what the statement shows.

Gratifying Increase in Business.

At the last Annual Meeting, the statement was made that for 1909 great progress might be looked for. I am delighted to say that this statement has been fully verified. We have made, so far as I am aware, absolutely no bad debts during the year, except in the few small accounts which may yet be realized. The whole twelve months present a record of credits well observed, debts promptly paid, and no losses.

Our deposits have increased at an astonishing rate, and this, after all, is one of the great tests of public confidence, and of stability in a Bank's affairs. Look for one moment at the facts. The increase alone in our deposits for the past year is nearly as great as the total deposits were ten years ago, then representing nearly fourteen years' accumulation. This year's addition to Rest Account is three times more than the total Rest of the Bank ten years ago. We have added to our total assets in 1909, a sum almost equal to the whole assets

of the Bank at that period, and the increase in circulation for 1909 is equal to two-thirds the whole circulation of the Bank at the same period of comparison. In addition to all this, you are now receiving an increase in dividend of 1 per cent., as promised, with ample provision against all contingencies. The promises held out a year ago have, therefore, been fully met, and we have no doubt that the future will bring equally good, if not better, results, in every branch of the Bank's business. Notwithstanding the low rate of interest during the earlier part of the year, and the abundance of available money, the earnings of the Bank have not suffered. We are able to increase the dividend, and maintain at the same time a strong position with regard to all other obligations and contingencies. The increase in dividend is warranted by the condition of the Bank's affairs, and we feel that the interests of the shareholders should be kept in view, as the Bank has reached the stage when it can well afford to recognize these interests without impairing its ability to perform all its other obligations.

It is also a source of pleasure to know that the relations between the Bank and its customers are so satisfactory that litigation is almost unknown in the Bank's record for 1909. The absence of legal proceedings shows the accounts to be in a healthy condition, for it is only in cases of bad or doubtful credits that the law has to be invoked. Prompt payment and good security are the chief reasons why the Bank has not required the aid of the courts, and when you consider that nearly \$40,000,000 are under the control and management of the Bank, with tens of thousands of accounts in all parts of the Dominion, outstanding and current, and that only a few suits have been entered during a whole year, you will readily conclude that the financial condition is safe and strong.

The Building.

One of the best investments of the Bank continues to be the Head Office Building. Every foot of rentable space is occupied, and the rents are promptly paid. After paying all outgoings, the Bank receives nearly 5 1/2 per cent. net profit on the investment, or, to be exact, 5.40 per cent. Rents appear to be increasing, notwithstanding the many new office buildings, and with our equipment and accommodation for tenants, there need be no fear as to the future revenue from this source. The other buildings also yield a good return, and promise well for the future.

The staff, from the chief of the Executive to the messengers, are enthusiastic in their work, attentive to their duties,

and efficient in every detail. Every office has been thoroughly inspected, and full reports made to the Board thereon.

I now move that the Report for the year 1909 be adopted.

Mr. E. F. B. Johnston, K. C., seconded the motion. He pointed out that the Bank had risen from small beginnings to be one of the most important financial institutions in the Dominion. It had all the elements of sound progress and stability. The large deposits during the past year showed the confidence of the public. The absence of litigation proved that the debts were being promptly paid, or well secured, and the increase in the dividend, justified as it was, is the strongest evidence of the good earning power of the Bank. The Directors scrutinize every credit, except in very small accounts, and exercise their best discretion in determining the policy and conduct of the Bank's affairs.

The motion for the adoption of the Report was carried unanimously.

It was moved by Mr. Geo. Le Riche, and seconded by Mr. Geo. Watson, that the thanks of the shareholders are due and are hereby tendered to the President, Vice-President and Directors of the Bank for their attention to the interests of the Bank during the past year. Carried.

It was moved by Rev. J. S. Williamson, and seconded by Mr. J. R. McKichan, that the thanks of the Directors and Shareholders are due and are hereby tendered to the General Manager, the Assistant General Manager, and the staff of the Bank, for their diligent attention to the interests of the Bank during the past year. Carried.

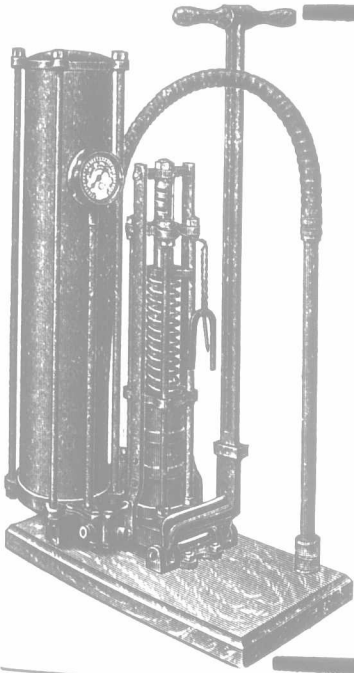
It was moved by Mr. Ed. Dickenson, and seconded by Mr. J. J. Gibson, that the ballot be now open for the election of Directors, and to be kept open until three o'clock, unless five minutes elapse without a vote being cast, when it shall be closed, and until that time, and for that purpose only, this meeting be continued.

The scrutineers reported the following gentlemen duly elected to act as Directors for the ensuing year, viz.: C. D. Warren, Hon. J. M. Stratton, C. Kloepfer (Guelph), W. J. Sheppard (Waubausene), C. S. Wilcox (Hamilton), E. F. B. Johnston, K. C., H. S. Strathy.

The meeting then adjourned. At a subsequent meeting of the newly-elected Directors, Mr. C. D. Warren was re-elected President, and Hon. J. R. Stratton Vice-President, by a unanimous vote.

STUART STRATHY,
General Manager.

The Traders Bank of Canada, Toronto.
25th January, 1910.



BEAN MAGIC PUMP No. 9.

The easiest-running pump ever made. The wonder among spray pumps.

The pump for the orchard that is too large for a hand-pump and too small for a power-pump.

The man who operates the MAGIC PUMP is working against only one-half the pressure indicated on the gauge. The spring does the rest. Pressure is important in effective spraying.

THE MAGIC GIVES THE PRESSURE.

For descriptive catalogue of this and power pumps, write us. We are the Canadian agents.

NIAGARA BRAND SPRAY CO'Y, Limited, Burlington, Ontario.

NIAGARA SPRAYS ARE ALSO MADE BY:

Niagara Sprayer Co., Middleport, N. Y. Oregon Spray Co., Portland, Oregon. Bean Spray Pump Co., Cleveland, Ohio. Medford Spray Co., Medford, Oregon. Hood River Spray Mfg. Co., Hood River, Oregon.

NIAGARA BRAND LIME-SULPHUR SPRAY.

MADE IN CANADA.

The famous spray of the Pacific Coast, which has made possible the production of a clean, perfect and marketable fruit, bringing the highest prices.

BECAUSE :- It is properly made.

- Cooked so as to retain permanently its strength.
- It is not a mere wash or mixture, but a perfect solution of insecticidal and fungicidal power.
- It is always ready for use.
- When NIAGARA is used thoroughly a clean and perfect fruit is assured.
- This means prices, profits and prosperity.

Write for our Spray Book and prices.

TRADE TOPICS.

THE CENTRAL NURSERIES of A. G. Hull & Son, St. Catharines, Ont., having a standing of thirty years, have issued their annual catalogue of fruit, forest, ornamental and evergreen trees, shrubs, roses, grapevines, berry plants, hedge and asparagus plants; also seed potatoes. These nurseries are regularly inspected by the proper authorities, guaranteed healthy and clean, and in first-class condition. They do not employ agents, but depend upon their catalogue for sales, and for thirty years have found

ready sales by sending out their annual catalogue. Their patrons have learned that they send out reliable stock, and a satisfied customer is one of the best of advertisers. Send for the catalogue, and give them a trial order.

MONTGOMERY, ROSS & CO., and the National Cloak & Costume Co., of Montreal, claiming to be the two largest mail-order houses in Canada in their respective lines, have joined forces, and purpose in future issuing the largest mail-order catalogue in this country. The new firm

will be known as Montgomery, Ross & Co., and the National Cloak and Costume Co., amalgamated. This catalogue will contain a complete line of ladies' and men's clothing and furnishings of all descriptions, millinery, and a complete general line, and will be run on the lines of the great American mail-order concerns. It is claimed that this will be the only exclusive general mail-order house in Canada. The men at the head have had years' of experience in the mail-order business, and are bound to make a success of the new firm. The principle of satisfaction or money refunded will be

carried out. The aim of this company is to place the country people on equal footing with those living in the large cities, as far as procuring merchandise is concerned, and this is what will help in keeping the younger generation on the farm. Their large spring catalogue will be ready for mailing in two or three weeks' time, and they will send free copies to anyone in Canada who will send their names. They offer to pay express charges all over Canada on all prepaid orders. When writing them, mention that you saw their advertisement in "The Farmer's Advocate."

The Dominion Bank

Proceedings of the Thirty-ninth Annual General Meeting of the Shareholders

The Thirty-ninth Annual General Meeting of The Dominion Bank was held at the Banking House of the Institution, Toronto, on Wednesday, 26th January, 1910.

Among those present were noticed: Hon. J. J. Foy, Jas. Carruthers, A. W. Austin, E. B. Osler, M.P.; C. A. Bogert, S. Jeffrey (Port Perry), Wm. Crocker, H. B. Hodgins, W. R. Brock, Wm. Ross (Port Perry), F. H. Gooch, D'Arcy Martin, K.C. (Hamilton), G. N. Reynolds, C. Walker, Dr. Andrew Smith, David Kidd (Hamilton), J. C. Eaton, A. A. Jones, John Stewart, Aemilius Baldwin, A. Foulds, Andrew Sempie, J. H. Paterson, C. H. Edwards, W. C. Lee, W. G. Cassels, Col. Sir H. M. Pellatt, J. Gordon Jones, Andrew Gunn, R. J. Christie, W. C. Harvey, E. W. Langley, W. C. Crowther, W. H. Knowlton, J. F. Ross, Wm. Davies, Jas. Matthews, Ira Standish, L. H. Baldwin, S. Samuel, H. S. Harwood, Barlow Cumberland, Capt. Jessopp, Jas. Scott, A. R. Boswell, R. Mulholland, Wm. Ince, J. E. Pringle, N. F. Davidson, J. W. B. Walsh, J. J. Maclellan, Rev. T. W. Paterson, R. M. Gray, John T. Small, K.C., F. J. Harris, H. W. Wilcox (Whitby), Wm. Mulock, Jr., H. J. Bethune, and others.

The Secretary read the report of the Directors to the Shareholders, and submitted the Annual Statement of the affairs of the Bank, which is as follows:

To the Shareholders:

The Directors beg to present the following Statement of the result of the business of the Bank for the year ending 31st December, 1909:

Balance of Profit and Loss Account, 31st December, 1908	\$302,996.08
Premium received on new Capital Stock	18,268.38
Profit for the year ending 31st December, 1909, after deducting charges of management, etc., and making provision for bad and doubtful debts	620,927.24
Making a total of	\$942,191.70
Which has been divided of as follows:	
Dividend 3 per cent., paid 1st April, 1909	\$119,504.10
Dividend 3 per cent., paid 2nd July, 1909	119,509.50
Dividend 3 per cent., paid 1st October, 1909	119,511.00
Dividend 3 per cent., payable 3rd January, 1910	119,631.74
Transferred to Reserve Fund	\$478,156.34
	18,268.38
	496,424.72
Written off Bank Premises	\$455,766.98
	150,000.00
Balance of Profit and Loss carried forward	\$295,766.98

Reserve Fund

Balance at credit of account, 31st December, 1908	\$4,981,731.62
Transferred from Profit and Loss Account	18,268.38
	\$5,000,000.00

Your directors have pleasure in reporting that since the affairs of the Bank were last placed before you at the annual meeting of the shareholders in January, 1909, there has been a steady development in all departments of its business, as is evidenced by the statement submitted.

During a considerable period of the year some difficulty was experienced in fully employing the Bank's funds at remunerative rates, but, as a result of improving trade conditions, and the harvesting of an excellent crop, the demand for legitimate banking accommodation has increased, and there is every reason to expect a prosperous current year.

Following the policy of conservative extension, new Branches have been established in important Western centers, and at other points in Canada where it appeared advantageous to do so.

Offices were opened during the year as follows: At Victoria, B.C.; in Saskatchewan, at Guernsey, Hanley, Melville, Moose Jaw, and Saskatoon; in Alberta, at Claresholm and High River; at the corner of Guy and St. Catherine streets, Montreal; in Ontario, at Malton, Rectory street, London; and in Toronto at Deer Park, Wychwood, and near the corner of Lee avenue and Queen street.

The Branch at Linwood, Ontario, was closed in March last. Desirable sites have been purchased in Calgary, Edmonton, Brandon and Moose Jaw; also at the corners of Queen street and Lee avenue, Bloor and Sherbourne streets, and Yonge street and St. Clair avenue, Toronto, and at the corner of St. Lawrence Boulevard and Prince Arthur street, Montreal. It is the intention to erect suitable buildings on these properties at a reasonable outlay.

The new office buildings in Windsor and Fort William were completed and occupied in 1910. The authorized capital stock of the bank at this time is \$5,000,000, of which \$4,000,000 has been issued and fully paid up. A by-law will be submitted for your approval providing for a further increase of \$5,000,000, which, together with the \$1,000,000 already authorized, but not issued, will be offered to shareholders from time to time in such amounts as the expansion of business warrants.

You will also be asked to approve of a by-law changing the par value of shares from \$50 to \$100 each.

The directors, as is customary, have verified the Cash Assets, Securities and various investments entered on the accompanying statement.

In addition, the General Balance Sheet of the Bank as on the 31st December, 1909, detailed herein, has been checked, and found to be correct, including the auditing of all Foreign Accounts.

Every branch of the Bank has undergone the usual thorough inspection during the year.

The report was adopted. E. B. OSLER, President.

The thanks of the shareholders were tendered to the President, Vice-President and Directors for their services during the year, and to the General Manager and other officers of the bank for the efficient performance of their respective duties.

By-laws were passed authorizing an increase in the capital stock of the bank of \$5,000,000, and changing the par value of the shares from \$50 to \$100 each.

The following gentlemen were duly elected Directors for the ensuing year: Messrs. A. W. Austin, W. R. Brock, James Carruthers, R. J. Christie, J. C. Eaton, J. J. Foy, K.C., M.P.P.; W. D. Matthews, A. M. Nanton, E. B. Osler, M.P. At a subsequent meeting of the Directors, Mr. E. B. Osler, M.P., was elected President, and Mr. W. D. Matthews Vice-President for the ensuing term.

General Statement.

LIABILITIES.	
Notes in Circulation	\$ 3,565,994.00
Deposits not bearing interest	\$ 7,052,129.04
Deposits bearing interest (including interest accrued to date)	38,435,684.81
Deposits by other Banks in Canada	45,487,813.88
Balances due to Banks in foreign countries	276,789.78
	69,795.07
Total liabilities to the Public	\$49,400,392.70
Capital stock paid up	4,000,000.00
Reserve Fund	\$ 5,000,000.00
Balance of Profits carried forward	295,766.98
Dividend No. 109, payable 3rd January, 1910	119,631.74
Former Dividends unclaimed	111.50
Reserved for Rebate on Bills Discounted, Exchange, etc.	141,136.06
	5,556,646.28
	\$58,957,038.98

ASSETS.

Specie	\$ 1,446,399.94
Dominion Government Demand Notes	3,942,763.75
Notes and Cheques on other Banks	2,938,025.60
Balances due from other Banks in Canada	642,736.62
Balances due by Banks in foreign countries	1,592,558.74
	\$10,562,484.65
Provincial Government Securities	833,572.56
Canadian Municipal Securities and British or Foreign or Colonial Public Securities other than Canadian	746,317.08
Railway and other Bonds, Debentures and Stocks	4,992,733.95
Loans on call in Canada, secured by Stocks and Bonds	3,407,124.23
Loans on call in the United States, secured by Stocks and Bonds	2,000,000.00
	\$22,042,282.47
Bills Discounted and Advances Current	\$34,815,943.29
Deposited with Dominion Government for Security of Note Circulation	160,000.00
Loans to other Banks in Canada, secured	429,229.72
Overdue debts (estimated loss provided for)	43,359.84
Real Estate, other than Bank Premises	118,225.99
Mortgages	37,008.97
Bank Premises	1,800,000.00
Other Assets not included under foregoing heads	11,038.70
	36,914,806.51
	\$58,957,038.98

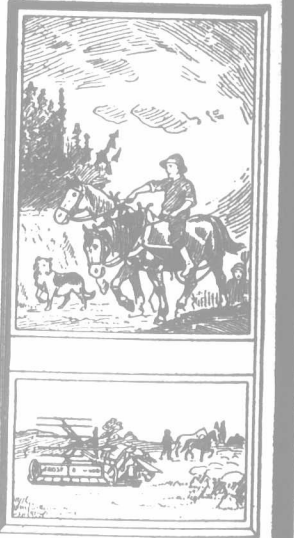
Toronto, 31st December, 1909.

C. A. BOGERT, General Manager.

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.

FROST & WOOD
FARM MACHINERY



Frost & Wood Co. Ltd.
Smith's Falls, Canada

For Dept F59I enclose 2 cents postage for which send me by earliest possible mail a copy of your handsome new calendar.

1	2	3	4	5	6	7	8
14	15	21	23				

NAME _____

POST OFFICE ADDRESS _____

COUNTY _____ PROVINCE _____

GOSSIP.

Too late for insertion in this issue, L. A. Wakely, Bolton, Ont., orders a change in his advertisement of Shorthorns, in which he offers for sale a few females of breeding age; also young stock of 1909. Bolton Junction, C. P. R., is within 1 1/2 miles of farm.

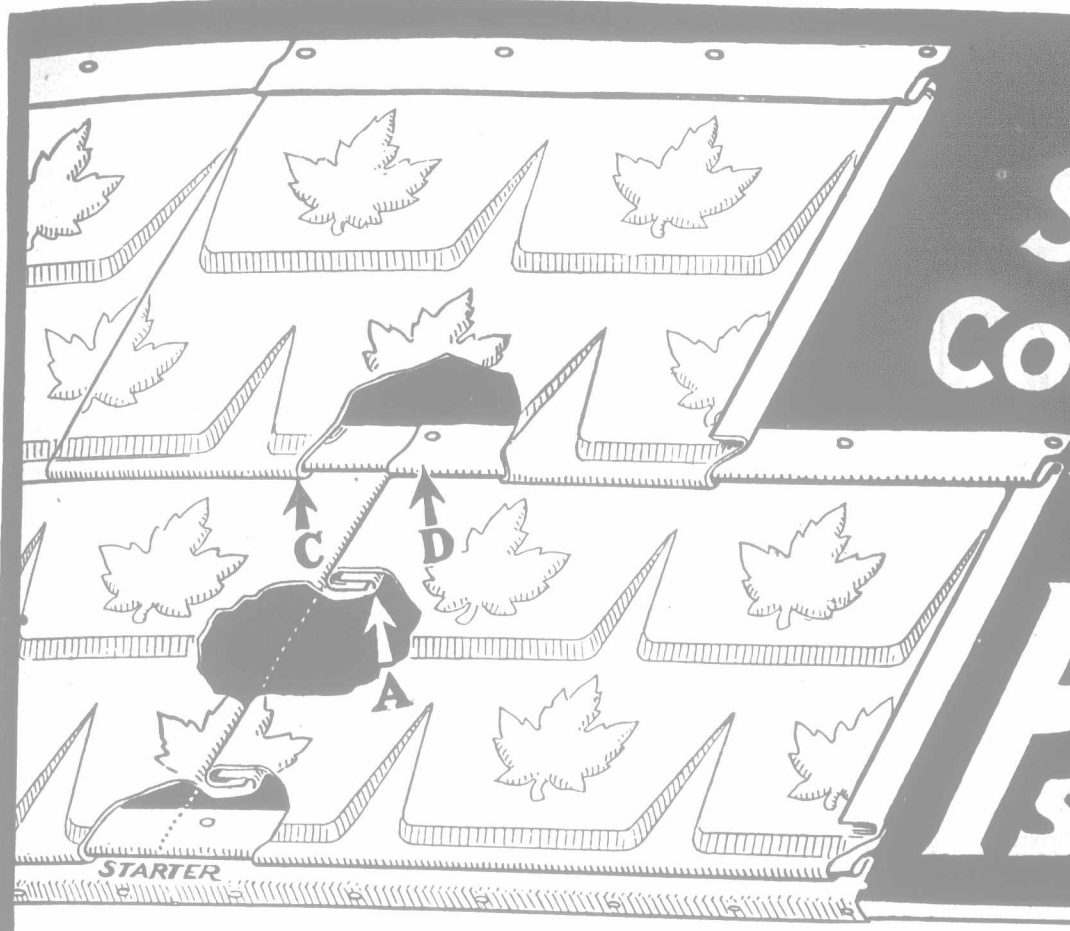
Peterboro and Belleville branch of the G. T. R. Further information as to the herd may be looked for in future issues of "The Farmer's Advocate."

SUNNY ACRES SHORTHORN SALE.

As announced in the advertisement in this issue, Wm. Channon & Son, Oakwood, Victoria Co., Ont., on February 16th, will sell at their farm, Sunny Acres, near Lindsay, their entire herd of Shorthorn cattle, of which further particulars may be looked for in later issues.

J. A. Caskey, Madoc, Ont., announces a dispersion sale of his herd of 40 head of choice Holstein cattle, to be held on March 25th. Madoc is a station on the

3,565,994.00
 45,487,818.88
 276,789.78
 69,795.07
 \$49,400,892.70
 4,000,000.00
 5,556,646.38
 \$58,957,088.96
 \$22,042,282.47
 \$36,914,806.51
 \$58,957,088.96



Note the Safe-Lock Construction of **PRESTON SAFE-LOCK SHINGLES**

Safe-Locked on All Four Sides

Don't make the mistake of thinking that all makes of metal shingles are very much alike. There is a vast difference between PRESTON Safe-Lock Shingles and others.

Unlike other Shingles, PRESTON Shingles do not merely slip or slide together. Instead, they are SAFE-LOCKED on all FOUR sides. The picture above shows how.

Look at ARROW A. See how the sides of the shingles hook over each other. This is on the principle of the "sailor's grip." It is utterly impossible for shingles locked in this way to pull apart. The heavier the strain, the firmer the grip.

Twice as Strong

The top lock of PRESTON Shingles is TWICE as strong as our wonderfully secure side lock. It consists of three thicknesses of sheet steel—see ARROW B.

The top of the shingle is where the greatest strain falls. Yet the top lock of most other metal shingles isn't as strong as the side lock of ours.

ARROW C shows how the shingles above hook over and lock securely to row below.

Nailing Is Protected.

ARROW D shows the method of nailing together the top locks of two adjoining shingles. The top lock of the right hand shingle overlaps the one on the left. The nail goes through both shingles.

All nails on the flange of the top-lock are covered by the shingles on the row above. Thus all nails are protected from exposure to the weather. They cannot rust or work loose. They are there for keeps.

So strong are our locks that there has not yet been a gale

powerful enough to rip off a roof covered with PRESTON Safe-Lock Shingles. The terrific wind storm that swept over Ontario on April 8, 1909 ripped off scores of wooden, metal and prepared roofings. Yet not one of these metal roofs was a PRESTON Safe-Lock roof.

Gale-proof Shingles

So close do PRESTON shingles lay to the sheeting and so secure are the Safe-Locks that even if some of the shingles were not nailed the roof would be solid and wind-tight.

It is utterly impossible to get PRESTON Shingles off the roof in any other way than by removing the nails one by one and unlocking each shingle separately. When you put PRESTON Shingles on your roof they are on to stay.

Snow-proof, too

No snow can be driven up PRESTON side locks and on to the sheeting below. The fold of our top lock closes right down over the end of the side lock. No rain or snow can be forced past this fold of sheet steel, unless you drill a hole through it first.

Just how easy it is for snow or rain to be driven up the side joints of other shingles you can readily see for yourself.

Simply fasten the sides of two ordinary shingles together. Then hold the shingles up and look through the joint. You can see daylight through it. That means there is an unobstructed passage through which rain or snow can be driven by the force of the wind.

Make the same test with PRESTON Shingles. You cannot see daylight through our side locks. That means the ends of our side locks are closed securely against wind and weather.

Generous Folds

The folds of PRESTON Safe-Locks are of such generous size that there is room and to spare for expansion and contraction due to excessive heat and cold.

Even the shrinking of the wood sheeting or the heavy strain due to the settling of the building is not sufficient to make any difference to our safe-locks, whereas other shingles will pull apart and leave spaces for leaks.

Patented Construction

You understand now why PRESTON Safe-Lock Shingles are so different in construction from other metal shingles. They will always be different and better, too. We were the originators of the interlocking Shingles. The patents we hold prevent others from making as good a shingle.

British Government Specifications

It is a well known fact that the British Government is the most particular buyer in the world. Ordinary metal shingles could not pass their Acid Test for galvanizing. This test is more severe on the galvanizing than twenty years of Canadian weather. Yet PRESTON shingles will easily pass this test.

PRESTON Shingles are made and galvanized according to British Government Specifications.

Twice the Service

Shingles galvanized according to these specifications are good for twice the service of shingles galvanized in the ordinary way.

Metal Shingle and Siding Co.

Head Office, Queen Street Factory, Preston, Ont. Limited
 Branch Office and Factory, Montreal.

Lightning Guarantee, Free

We have been making PRESTON Safe-Lock Shingles for eleven years. In all that time we have never heard of lightning damaging a building roofed with PRESTON Shingles.

So positive are we that a roof of PRESTON Shingles is lightning-proof that we give you a lightning guarantee free. This proves to you our unlimited confidence in the lightning-proof quality of PRESTON Shingles.

Most Quickly Laid.

As PRESTON Shingles are cut accurately to size, and the locks carefully made, they lock together quickly.

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

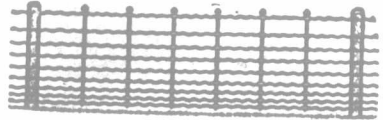
Booklet Reward

We have just issued a new booklet, "Truth About Roofing." We should charge something for this, as it contains information of real value to anyone who has a building to roof. But we will send it FREE as a reward to all who cut out, fill in and mail the coupon to us. Just you mail it today, or you'll forget it.

Please send me your new booklet, "Truth About Roofing." I am interested in roofing and would like complete information about PRESTON Shingles, British Government Specifications and Free Lightning Guarantee.

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

Galvanized Rust-Proof— But Won't Scale



Extreme weather changes in Canada is the reason why so much Wire Fence rusts about 12 or 15 years sooner than it should.

Nearly every Wire Fence is Galvanized too thinly to fight off the result of these weather extremities.

Two-thirds of the life of a Wire Fence depends upon its Galvanizing. Yet, because Zinc costs four times more than steel Wire, much Wire is wiped almost clean of its Galvanizing.

And, besides this, nearly all Wire is merely "coated" with Zinc. This "coating" will peel off years before the Frost Fence begins to even show signs of wear.

You see, all Wire, because of its process of manufacture, has a greasy surface. This dirt a scale must be thoroughly removed before Galvanizing will stick.

You can't expect Zinc to adhere permanently to greasy, scaly Wire, can you?



All Wire, after it is drawn out from the Steel rods, lacks pliancy—is quite easily broken.

But the Frost Scientific Annealing process restores Frost Wire to an exact degree of temper. This is the result of years of experimenting. It will not snap under the most severe strain. Frost Wire is now stronger than any other of the same size.

The man who makes this Frost Wire has been making some of the best in the States for 25 years. He ought to know how.

Not Merely Excuses

Any Wire Fence without "coils" will snap when severely contracted. And it will lose its shape when expanded.

But the Frost Fence has the essential coils. And they act exactly like a Spring. When contracted, these coils "give out" their surplus Wire, instead of snapping. And when expanded, this surplus returns to the Frost coils, instead of sagging.

The Frost Woven Fence is the only Machine-made Fence with necessary give-and-take features.

Lots of Fence has such things as Tensions, Curves, or Kinks. These excuses are so short that they'll snap with severe contraction. And they simply cannot "take in" when expanded.

Both the Frost Woven and the Frost Field-Erected Fence have the extra contraction and expansion provisions. These Frost Coils always act the same, regardless of number of times contracted or expanded.

Write for free booklet and samples.

The Frost Wire Fence Co., Ltd.
Hamilton, Ontario

Agents Wanted in Open Districts

Cleaned Three Times

But Frost Wire goes through three Cleansing processes before it ever sees a Galvanizing Furnace.

This makes the surface as clean as a pin. It enables Frost Wire to be double-Galvanized, without fear of peeling off.

When Frost Wire goes through its double Galvanizing process, the Zinc not only spreads over the surface, but goes into the Wire, becoming a part of it.

The Frost Fence will now endure those awful weather variations from 10 to 15 years longer than any other Fence made.

Make Our Own Wire

We are the only exclusive Fence Company in Canada who Make and Galvanize Wire. The Wire formerly used for the Frost Fence was made under our own specifications. It was as near to what we wanted as we could buy.

But we knew that we could make better, so we built and equipped our own Mills. We are now making the best Wire ever used for a Fence in Canada.

"Frost" Fence BUY THE EASIER-RUNNING "Bissell"



The "Bissell" has the weight, solidity and stiffness necessary to pack the soil properly. But it is not a hard-running roller. It is simple in construction. Nothing to get out of order and cause wear. Unlike others, the "Bissell" has no center bearing. With a center bearing it's impossible to keep out the dirt. Dirt causes friction—hard running—and it's only a matter of time until the shaft is badly cut. The "Bissell" has large, smooth, polished Roller Bearings, one-half inch in diameter, which causes easy running. And as the axle revolves with the drums, friction is reduced to the minimum, and oiling is hardly necessary. There is no squeaking, cutting and grinding about the "Bissell." Because it is easier-running, lighter draft, you can roll more ground with it in a day than with a hard-running roller, which drags the life out of the horses. So be sure you get the "Bissell." Send to Dept. W for catalogue, showing the different styles and sizes, or see your local dealer.

T. E. BISSELL COMPANY, LIMITED
ELORA, ONTARIO.

Anything from a Berry Plant to a Shade Tree is Waiting Your Order.

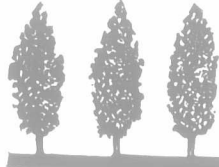
No better stock or value offered than at the old reliable CENTRAL NURSERIES. We ship direct to customer with satisfaction. See our Priced Catalogue before placing your orders. It will pay. If you have no bad wood results from others, TRY OURS—30TH YEAR.



Apple, Pear, Plum, Cherry, Trees
Peach and Ornamental

Roses, Shrubs, Seed Potatoes, etc.

A. G. HULL & SONS,
ST. CATHARINES, ONTARIO, CANADA.



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.

COW DYING IN POUND.

Cattle inspector puts three cows in pound. Owner comes for them, but has no money, and promises to come for them next day. Next day, one of the cows is found dead in the field from some unknown cause. I (the poundkeeper) notify owner in the evening, he promising to come to see about her in the morning. In case the man brings an action for damages, would the Township Council defend it, or would the poundkeeper have to defend it himself? C. B. Ontario.

Ans.—It would depend largely upon the way the action is framed. If the poundkeeper, only, is sued, he would probably have to defend himself; but if the municipal corporation is joined with him in the summons as a party defendant, such co-defendant would likely bear the main burden of the defence.

SHIPPING STALLION TO U. S.

What are the terms to send a stallion to the United States?

- (1) How much duty would be charged?
- (2) If I get his pedigree transferred in the U. S. Studbook, what will it cost?
- (3) Will the horse have to be examined by a V. S.? Can any veterinarian do it?

Ans.—(1) If not registered in a U. S. Studbook, the duty is 25 per cent. ad valorem. If registered in a U. S. Studbook recognized by the Department of Agriculture, no duty is charged, provided the stallion is being imported by a citizen of the United States for breeding purpose, or for sale for such purpose.

(2) For this information, write the Secretary of the Studbook Association of the breed to which the horse belongs, enclosing copy of the certificate of registration and of pedigree.

(3) Inspection is required at the port of entry, and by a veterinary inspector of the U. S. Bureau of Animal Industry.

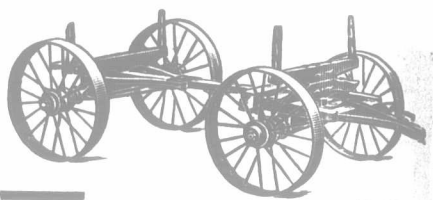
A DANGEROUS DOG.

A neighbor of mine has a dog which does pretty well as it likes. A few days ago, I, in company with my wife, was driving a young colt by the neighbor's house, when, like a flash, out dashed the dog and rushed savagely at the colt's head. That colt was as most other colts are, easily scared, so it was not surprising that she kicked and plunged, and finally broke the cross-bar of the cutter. It was a very cold day, so, rather than further inconvenience my wife, I patched up the broken bar with a neck-strap and drove home, and did not stop to interview the dog's owner then and there. The damage was trifling, compared to the inconvenience and somewhat dangerous aspect of the affair. The apparent indifference to a dog's tricks is common among certain people. A good watch dog is one thing, and a public nuisance is quite another.

1. Has the township clerk authority to intervene on the travelling public's behalf?
2. Can the owner be compelled to keep or place dog under restraint?
3. Is owner liable for damage caused, directly or indirectly, through dog?

Ontario.
Ans.—1. No.
2. Possibly, under local municipal by-law. The clerk should be applied to for information on this point.
3. Yes.

Part II., of Volume 55 of the Short-horn Herdbook of Great Britain and Ireland, has been received at this office, thanks to the secretary and editor. The book contains nearly 950 pages, filled with pedigrees of cows and their produce, the first part of the volume issued some months ago being filled with pedigrees of bulls.



If any of your farm wagons need new wheels, don't use wooden wheels again. Put on Dominion Low Wide-tire Steel Wheels. They are cheaper, lighter and stronger than wooden wheels. Guaranteed not to break in coldest weather, or on roughest roads. Wide tires save roads, and make pulling easier for horses. Will last a lifetime. Made to fit any axle. Pay for themselves first season.

The Dominion Handy Wagon saves half your labor and time in loading and unloading. Wide-tire, low wheels save roads and horses. Parts are arranged for easy draft. Saves its own cost first season, like our Low, Wide-tire Steel Wheels. Write for free booklet.

Dominion Wrought Iron Wheel Co., Ltd.
Orillia, Ont.



ABSORBINE

will reduce inflamed, swollen Joints, Bruises, Soft Bunches, Cure Bells, Pile-tula or any unhealthy sore quickly pleasant to use; does not blister under bandage or remove the hair, and you can work the horse, \$2 per bottle at dealers or delivered, Horse Book 7 D free.

ABSORBINE, JR., for mankin, \$1.00 per bottle. Reduces Varicose Veins, Varicocele, Hydrocele, Gout, Wens, Strains, Bruises, stops Pain and inflammation.

W. F. YOUNG, P.D.F., 258 Temple St., Springfield, Mass.
LYRANS Ltd., Montreal, Canadian Agents.

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
Ridgeville Ontario

Glen Maple Aberdeen - Angus

Young males and females for sale.
E. A. & G. S. McIntosh, Seaforth, Ont.
Box 338.

Poultry Enthusiast—"Have you read that article on 'How to Tell a Bad Egg'?"
Facetious Townsman—"No; but if you have anything important to tell a bad egg, my advice is, break it gently."

IT'S THE TALK OF THE COUNTRYSIDE

How Dodd's Kidney Pills Cured Mrs. Samuel Thompson's Dropsy.

Hers was a Terrible Case and the Doctors were Powerless to Check It, but the Great Kidney Remedy Cured It.

Holt, Ont., Jan. 31.—(Special.)—All the countryside about here is talking of the wonderful cure of Mrs. Samuel Thompson, of this place. She was taken sick with Jaundice, and, though the doctor was called in, she grew steadily worse. Her stomach was so bad she could not keep anything on it. Dropsy set in, and she bloated to a terrible size. The doctor came three times to tap her, but her husband would not allow him to do it, saying that if she could not get better, they might let her die in peace. Finally she dropped the doctors and tried other medicines, but they did her no good. Her leg burst, and the water streamed from it. Then someone told her about Dodd's Kidney Pills, and so she asked her husband to get her a box.

After taking them a while, she took a bad turn. Something would come up in her throat and she would vomit. The water would just fly from her mouth. But from that time she commenced to get better, and to-day she is a well woman. Dodd's Kidney Pills cured her.

Dodd's Kidney Pills cure Dropsy by putting the Kidneys in condition to take the surplus water out of the blood. They always cure it.

Money to Loan

on Mortgages of Real Estate at Current Rates
All Business Strictly Confidential

Liberal Terms of Repayment
Loans Completed Quickly
 Expenses Moderate
 Full information gladly given

Huron & Erie

Loan and Savings Co., London, Ont.



THE ENTIRE HERD OF
 "Sunny Acres"
SHORTHORNS

The property of WM. CHANNON & SON,
 will be sold by auction on

Wednesday, February 16, 1910

AT SUNNY ACRES FARM, SITUATED THREE MILES EAST OF
 OAKWOOD, AND FIVE MILES WEST OF LINDSAY.

Conveyances will meet the morning trains from east and west at Mariposa Stn., G. T. R., on morning of sale. Morning train from north will be met at Cambray Stn., G. T. R. The herd consists of several popular families and individuals of high-class type and quality. They have been winners at the local shows, and some of them, if fitted, would make good material for any show. Three-fourths of the number are eligible for American registration. Write for catalogue, and remember the date—1.30 sharp, Wednesday, February 16th. Terms: Cash, or twelve months' time on satisfactory notes bearing 5 per cent. per annum.

GEO. JACKSON,
 AUCTIONEER.

Wm. Channon & Son,
 Oakwood, Ontario.

DISPERSION SALE

OF OVER

40 Head Holstein - Friesian Cattle

AT MADOC, MARCH 25th, 1910,

Including the great bull, Sara Jewel Hengerveld's son, whose dam has an A. R. O. butter record: In 7 days, of 28.12 lbs.; in 30 days, of 110.18 lbs. The only cow in Canada that ever produced in official test 100 lbs. milk in one day. All females old enough are bred to this great bull, and by the time of the sale there should be 20 calves sired by him. Catalogues will be ready March 1. Positively no reserve.

J. A. Caskey, Madoc, Ont.

SEED POTATOES

A Change of Seed is Always Advantageous.

I am offering 5,000 bushels pure-bred seed potatoes grown from imported English, Scotch and American seed. Extra First Early, First Early, Second Early, Main Crop, Late Main Crop. For prices etc., address:

W. P. NILES, WELLINGTON, ONTARIO
 Grower of Seed Peas, Beans, Potatoes, Oats and Barley.

GOSSIP.

SPRINGHILL AYRSHIRES.

The Springhill herd of imported Ayrshire cattle, the property of Robt. Hunter & Sons, of Maxville, Ont., were seen in fine bloom when visited by a representative of "The Farmer's Advocate" a short time ago. This great herd, famous as one of the best in America, and second to none in the world, for the very good reason that, annually, selections are made from the best herds in the land of their foundation as a breed, was certainly never stronger as a herd of high producers, as a herd of high-class show animals, nor as a herd containing many representatives of Scotland's leading herds, and of their leading strains. There are now 64 head in the herd, nearly all of which are imported, the balance either imported in dam, or bred from imported sire and dam. Among the leading Scotch herds represented are ten head from Mr. Montgomery's famous Lessnessock herd, prominent among which is the famous old cow, Edith, dam of some of the best Ayrshires in Canada to-day. Other noted cows from this herd are Hopeful, Rosie, Pansy 2nd, and Flora 6th, all young cows that have made good, both at the pail and in the show-ring. Then comes the noted Auchrain herd of Mr. Wallace, represented by seven head of such good ones as Bloomers 4th and 8th, White Rosie and Cheerup, all cows of wonderful dairy type and producing ability. From the noted Netherhall herd of Mr. Scott there are five extra-choice young cows, Queen Kate, who has several first prizes to her credit; Lulu Kate, of the same strain, and Mertie 5th. Then, from the great Castle mains herd, comes Violet, the Toronto grand champion, and her mate, Minnie 2nd, both of which have made good. Then, from the Ardyna herd of Mr. McAllister, comes the high-class young cow, Rosebud, who won her honors at Toronto; also Carnyni 4th, who has qualified for the Record of Performance, and many others from herds of lesser note. As a herd of producers, a note or two will show their superior ability along those lines, several being in the official records. Castle mains Violet, the Toronto grand champion, has given 62 lbs. a day; Barboigh Big Nancy, another Toronto grand champion, has given 59 lbs.; heifers of two years, up to 46 lbs. for one day, and from 6,119 to 8,000 lbs. for the year; cows, from 8,700 to 10,448 lbs. for the year. The stock bulls in service are Lessnessock Durward Lely, whose dam, Blossom 3rd, gave an average of 48 lbs. 8 ozs. of milk a day, for eight months. As a sire, his get at Seattle, which were all calves, in competition with all ages, won second prize. Bargenock Victor Hugo, his dam, in 40 weeks, gave the wonderful yield of 11,000 lbs. Both these bulls are richly bred on producing lines, and should be most desirable as sires. In the last year, Mr. Hunter has sold over 100 head of Ayrshires, and anything on hand is for sale. Certainly nothing better can be bought in any country in the world. There are for sale seven young bulls, a right nice lot, and bred from producing cows, and bulls bred on producing lines.

TRADE TOPIC.

Remember that laying hens are usually confined in winter and can't help themselves. If given liberty and unrestricted range, they would solve their own problems without help. But being confined in yard or house, it becomes positively necessary that natural conditions be replaced by something so much like them that the hens won't know the difference. In other words, you must help her get out of grain, meal, milk, meat, or whatever you feed, the elements she would help herself to if she were out in the fields picking at grass and leaves, insects and worms; this help the digestive tonic gives. Dr. Hess (M. D., D. V. S.), a practical poultryman, has shown, beyond question, that everything hinges on the perfect performance of the digestive function. That is, cause your hens to digest, without unnecessary waste, the greatest possible amount of the food given, and there will be no lack of needed elements for either growth or egg-production. This is called "The Dr. Hess Idea" of feeding, and out of it has come Dr. Hess' Poultry Pan-a-c-a, a preparation which immensely increases poultry profits by making more grain, milk, meat and meal available for egg-production.

Had a Bad Cough

FOR A NUMBER OF YEARS.
 WAS AFRAID IT WOULD
 TURN INTO

Consumption.

Too much stress cannot be laid on the fact that when a person catches cold it must be attended to immediately or serious results may follow.

Thousands have filled a consumptive grave through neglect.

Never Neglect a Cough or Cold, it can have but one result. It leaves the throat or lungs, or both, affected.

Mrs. A. E. Brown, Ottawa, Ont., writes:—"I have had a very bad cough every winter for a number of years which I was afraid would turn into consumption. I tried a great many remedies but only received temporary relief until I got a bottle of Dr. Wood's Norway Pine Syrup and after taking two bottles my cough was cured. I am never without a bottle of Norway Pine Syrup."

Dr. Wood's Norway Pine Syrup is the medicine you need. It strikes at the foundation of all throat and lung complaints, relieving or curing all Coughs, Colds, Bronchitis, Asthma, Croup, Sore Throat, etc., and preventing Pneumonia and Consumption.

So great has been the success of this wonderful remedy, it is only natural that numerous persons have tried to imitate it. Don't be imposed upon by taking anything but "Dr. Wood's." Put up in a yellow wrapper; three pine trees the trade mark; price 25 cents.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

To Breeders of Pure-bred Sheep.

To assist breeders to conform to American Dipping Regulations when exporting sheep, we offer a limited number of the famous

COOPER DIPPING TANKS

AT COST PRICE.

These tanks are strongly made of best galvanized iron, perfectly tight, and will swim two sheep, hold 200 gallons; 8 feet long at top, 4 feet at bottom, depth 4 feet.

For a limited period ONLY.

Price, \$11.00 f.o.b. Toronto.

WM. COOPER & NEPHEWS,
 TORONTO, ONTARIO.

Nitrate of Soda

Nitrate Sold in Original Bags

NITRATE AGENCIES CO.

California.....321 Stinson Block, Los Angeles
520 Bank San Jose Bldg., San Jose
 Georgia.....36 Bay Street, East, Savannah
 Illinois.....1204 Hartford Building, Chicago
 Louisiana.....305 Baronne St., New Orleans
 New York.....62 Stone Street, New York
 Virginia.....Citizens Bank Bldg., Norfolk
 Washington.....603 Oriental Block, Seattle
 Canada.....1103 Temple Bldg., Toronto
 Cuba.....Havana

Address Office Nearest You

Write for Quotations

STONE AND STUMP PULLERS

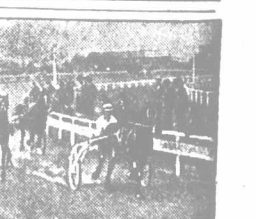
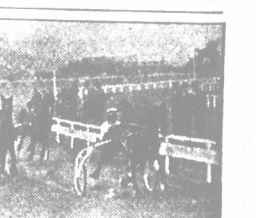
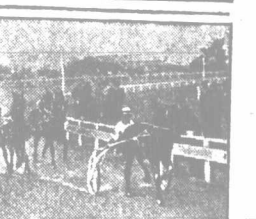
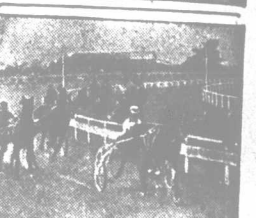
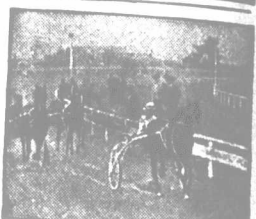
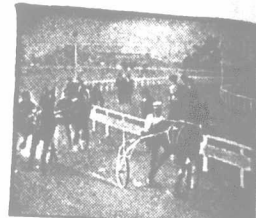
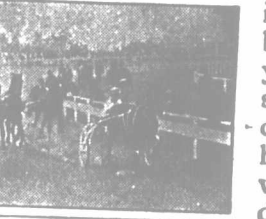
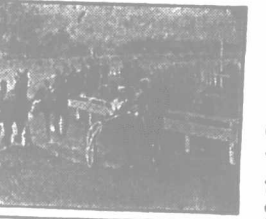
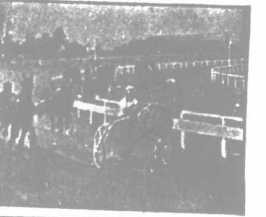
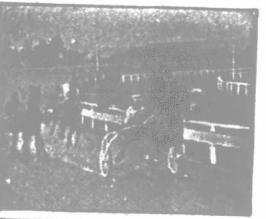
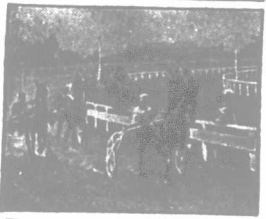
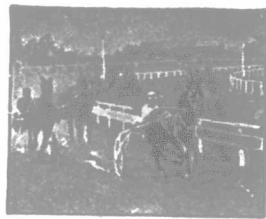
Can raise, carry stones, and easily put them into wall four and a half feet high. Also

NEW PATENT SNOW PLOW,

so constructed as to be able to dig roads when necessary, and to plow and sink them when snow is melting. For full particulars write:

A. LEMIRE, WOTTON, QUEBEC.

MOVING PICTURES OF THE WONDERFUL DAN PATCH 1:55 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.

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 beautiful woolen blanket over him to prevent catching cold and then you can see him walk up the track before the madly cheering multitude.

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 today for one of my wonderful moving pictures of the King of all Horse Creation, Dan Patch 1:55.

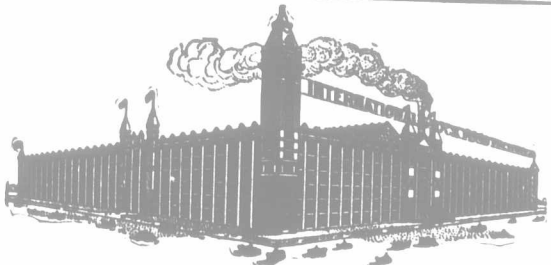
THIS MOVING PICTURE WILL BE MAILED TO YOU ABSOLUTELY FREE, WITH POSTAGE PREPAID, IF YOU ARE A FARMER, STOCKMAN OR POULTRY RAISER AND IF YOU CORRECTLY ANSWER THE THREE QUESTIONS. YOU MUST ANSWER QUESTIONS.

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.

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 Lintment |
| International Compound Absorbent | International Worm Powder |
| International Pheno-Chloro | International Hoof Ointment |
| International Distemper Remedy | International Sheep Dip |
| International Foot Remedy | International Cattle Dip |
| International Colic Remedy | International Hog Dip |
| International Louse Killer | International Harness Soap |
| International Gall Heal | International Gopher Poison |
| Silver Fine Healing 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. Beware of many cheap and inferior substitutes and imitations. High class dealers sell my preparations on a Spot Cash Guarantee to 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 1/2, Directum 2:04, Arion 2:07 1/2, Roy Wilkes 2:08 1/2, 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 have used one hundred pounds or five hundred pounds and you are to be not 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 Dan Patch purifier, etc. During the Spanish-American War, United States officials made a special examination and decided that "International Stock Food" was strictly medicinal 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 Medicinal 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

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 medicinal 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	1:55 1/2
2 MILES IN	1:56
14 MILES AVERAGING	1:56 1/2
30 MILES AVERAGING	1:57 1/2
45 MILES AVERAGING	1:58
73 MILES AVERAGING	1:59 1/2

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.

Signed, E. B. SAVAGE, International Stock Food Co., Toronto, Can.

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Write to-day for "Veterinary Experience"—a book that will enable you to be your own veterinarian. It is an invaluable treatise on the horse, horse diseases, and the treatments and remedies which cure. Among other things of vital importance to every horse owner, it tells how and why.

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Every farmer, livery man and veterinary surgeon should have a Climax Speculum for administering medicine or getting at the teeth or mouth of horses and cattle. Every one agrees that it is more durable, more easy to use, more satisfactory in operation than any other on the market. We are so certain that you will be satisfied with it that we make this special offer. Send us \$6.50 by Post Office or Express Order and we will send you a Climax Speculum at once. If, after 30 days trial, you are not convinced that it is the best speculum you could have, send it back to us, and we will refund the purchase price. SEND FOR DESCRIPTIVE BOOKLET

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Next large importation stallions and mares here FEBRUARY 10th, which, added to our present stock, offers intending purchasers the finest collection in America. If you want the best horses, horses with bone, quality, size, action and best breeding, stallions or mares; if you want fair and liberal treatment; if you want lowest prices consistent with good merchandise, visit Oaklawn. Catalog shows the place and the horses. W.S., J. B. & B. Dunham, Wayne, Ill.

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 per day; females of all ages and bull calves. My prices are right.

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Commission Agent and Interpreter, LILLE, FRANCE, will meet importers at any port in France or Belgium, and assist them to buy Percheron, Belgians, French Coach horses. All information about shipping, banking and pedigrees. Many years' experience; best references: correspondence solicited.

For Sale: REGISTERED HACKNEY STALLION, COCK ROBIN.

Three years old; 15½ hands; chestnut; hind feet white. Sire Commodore 3rd, imp., (6695), by Chocolate Jr. (4185). Dam Ada Adair (181), by Robin Adair 2nd, imp., (3907). For description, terms, etc., address: G. W. CLEMONS, ST. GEORGE, ONT.

FOR SALE: Imp. Percheron Stallion
Dark brown. Six years old. Weight, 1,850 lbs. Quiet, sound and sure. Easy terms.
H. D. STANTON, THAMESVILLE, ONT.

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

QUESTIONS AND ANSWERS Veterinary.

RESULT OF WOUND.

Horse got cut (with a harrow tooth) to the bone on hind leg, between hock and fetlock. This occurred about 6½ months ago. It is not quite healed yet. What will I apply after it is healed to remove the hard lump, which is as large as an apple. A. J. D.

Ans.—It is not probable you will be able to remove the enlargement, but it may be reduced some by repeated blistering. For details for blistering, see answer to H. V. C. V.

URINARY TROUBLE.

Mare, when standing in the stable, tries to urinate frequently, but voids very little at a time, and strains a great deal. Even after urinating normally, she strains for some time. She acted like this last spring, after having distemper, but got somewhat better for a time. N. S.

Ans.—The symptoms indicate the presence of calculi (stones) in the bladder. If there be calculi, they may be removed by a veterinarian. If there be no calculi, the following treatment should check the irritation. Give 2 ounces of the tincture of hyoscyamus, in a pint of cold water, twice daily. V.

SEMI-DIARRHEA.

Am feeding mare chopped oats, with a little flax in it, and good hay. She is let out during the day and eats straw. She is also fond of eating silage that was thrown off the top of the silo two weeks ago. Her bowels are very loose. How can I stop this tendency to diarrhea? R. J. P.

Ans.—The decomposed silage causes the trouble, and you may be thankful if more serious trouble does not occur from the same cause. You must arrange matters so that she cannot have access to this. The flax in the chop is laxative, but it is not probable there is sufficient to cause trouble. V.

LAME MARE.

1. Mare's feet are in good growing order, but there is a puffy swelling just above the fetlock. She goes lame after being driven for a few miles.

2. Do you advise the use of spavin cure? H. V. C.

Ans.—1. The symptoms indicate the lameness due to the puffy swelling you mention. When these bursal enlargements are of considerable size, and tense, they cause lameness. Repeated blistering will probably effect a cure. Get a blister composed of 2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces vaseline; clip the hair off the part; tie so she cannot reach it with her mouth; rub well with the blister, once daily, for two days; on the third day apply sweet oil. Turn her loose in a box stall, and oil every day. Repeat the blistering every four weeks for a few months.

2. I know nothing about this. V.

ABORTION—RINGWORM.

1. Cows are fed on silage and large quantities of frozen cornstalks. One aborted a month ago, and four others have discharged tissue resembling after-birth.

2. Does crude carbolic acid exist in crystals? C. B.

3. If the abortion is contagious, would lime be a good disinfectant?

4. Young cattle have eruption which causes the hair to fall out in spots about eyes and roots of tails.

Ans.—1. I am of the opinion that the abortion was caused by the food. The silage should be mixed with cut hay, straw, or chaff. Frozen cornstalks should not be fed at all if it can be avoided. If necessary, thaw them out with hot water. If the food is changed, it is probable you will have no further trouble.

2. Crude carbolic acid is a dark-colored liquid. The crystals mentioned are refined carbolic acid.

3. Yes; but is still better if about five per cent. carbolic acid (either crude or pure) be added.

4. This is ringworm. Moisten the scales with sweet oil; remove them; then dress daily with tincture of iodine until cured. V.

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The Worlds Greatest and Surest Veterinary Remedy

HAS IMITATORS BUT NO COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for

FOUNDER, WIND PUFFS, THRUSH, DIPHTHERIA, SKIN DISEASES, RINGBONE, PINK EYE, SWEENEY, BONY TUMORS, LAMENESS FROM SPAVIN, QUARTER CRACKS, SCRATCHES, POLL EVIL, PARASITES.

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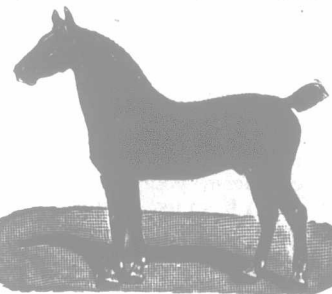
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THE BEST FOR BLISTERING. I have used GOMBAULT'S CAUSTIC BALSAM quite a good deal, and for a blister it's the best I ever used. I wish your remedy every success. CHAS. MOTT, Manager, Mayfield Stud Farm, Leesburg, Va.

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Have used your GOMBAULT'S CAUSTIC BALSAM to cure curb. I blistered it twice, and there is no sign of it any more. The horse is as good as ever.—DAN SCHWER, Evrington, Ill.

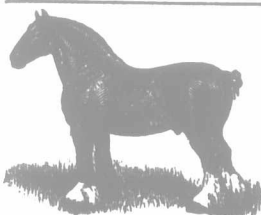
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are from such sires as Baron's Pride, Up-to-Time, Benedict, etc. None but the best imported Stallions and fillies for sale. At Great Eastern Exhibition seven entries took six firsts, two seconds, gold medal and diploma.

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DUNCAN McEACHRAN, F. R. C. V. S., D. V. S., Proprietor. Importer and breeder of high-class pure-bred Clydesdales. Farmers or ranchmen starting breeding Clydes., pure or grade, specially invited to correspond.



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My 1909 importation of Clydesdale stallions and fillies, Percheron stallions and fillies, French Coach and Hackney stallions are now in my stables. In this lot I can supply the most exacting. Size, style, character, quality and breeding. Will sell on terms to suit. Phone connection. T. D. ELLIOTT, BOLTON, ONTARIO.



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My new importation of Clydesdale stallions for 1910 have arrived. They were selected to comply with the Canadian standard, combining size, style, quality and faultless underpinning with Scotland's richest blood. They will be priced right, and on terms to suit. C. W. BARBER, GATINEAU PT., QUEBEC.

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We have for sale a few choice Clydesdale mares, imported and Canadian-bred; also some Canadian-bred Clydesdale stallions. Hackney stallions and mares for sale always. Long-distance phone. Hodgkinson & Tisdale, Beaverton, Ont. G. T. R. and C. N. R.



THIS IS A REAR VIEW OF
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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.

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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 sweetened 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,
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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.

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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.

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The Greatest Wholesale and Retail Horse Commission Market.

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The largest, best equipped and most sanitary stables in Canada. Half-mile of railway loading chutes at stable door. Quarter-mile open track for showing horses. Northwest trade a specialty. **HERBERT SMITH, Manager.** (Late Grand's Repository.)

Clydesdales and Percherons



To my many friends, and the public generally, I wish to say that in my stables at Weston, Ont., I have my 1909 importation of 10 Clydesdale and 8 Percheron stallions; a lot that for true draft character, faultless underpinning, choice quality and breeding were never surpassed. Terms to suit and prices right.

J. B. Hogate, Weston, Ont., & Brandon, Man.
W. B. COLBY, MANAGER WESTON, ONT.

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

I have lately landed an importation of 4 young stallions and 5 fillies, whose breeding is unsurpassed. They are the kind the country wants. Big, smooth, stylish, full of quality and straight movers. Will be sold right and on easy terms. **Geo. G. Stewart, Howick, Que.**



QUESTIONS AND ANSWERS.
Veterinary.

SWOLLEN LEGS.

Last fall, my pregnant mare had three swollen legs, and they cracked at heels and discharged matter. Two of them healed up, but are still swollen. The swelling subsides some when she is exercised, but reappears. The other leg is quite sore, and discharges a watery fluid.

Ans.—Some horses are predisposed to this condition, and especially some mares when pregnant. Get a solution of corrosive sublimate 30 grains to a quart of water, and rub this well into the skin of the leg that still discharges. Rub twice daily. Hand-rub, and bandage the other legs. As she is in foal, it will not be wise to give medicine internally. Feed on easily-digested food, as good hay, bran, and linseed meal, and some rolled oats. Give a few raw roots daily, and give regular exercise, or light work. It is probable she will give you trouble until she gets on grass, and there is a danger of the legs becoming chronically enlarged.

Miscellaneous.

A DANGEROUS DITCH.

There is a large ditch on a certain road in our township. It formerly was a Government drain, but was made a municipal drain. This drain is now about 40 feet wide in some places, leaving it dangerous to travel. The farmer who owns the land along the dangerous place, refuses to allow people to drive through his field unless the commissioner pays him about four times as much as other men ask for winter roads in time of drifted roads. Will I have to give him his price, or am I liable for any accident that might happen for not doing so—as a commissioner?

Ontario.
Ans.—It would seem to be advisable for you to refer the matter to the council of the municipality. We do not see that you are in a position to compel the landowner to grant the desired right of way. At the same time, you are in duty bound to see that the matter is dealt with; and, under the circumstances, the council would seem to be the proper parties to suitably deal with it. If you take the course suggested promptly, we think you will thereby avoid the danger of incurring liability of the sort mentioned.

TRADE TOPIC.

FARM HANDS FOR CANADA.—Notwithstanding the great flow of immigration to Canada during the past few years, the need of farm help seems to be almost as great as ever, and, in order to meet the demand, the Salvation Army has had ten experienced Canadian representatives in Great Britain during the past three months, selecting a good class of able-bodied men and women, whose emigration will be arranged this spring. As the Emigration Department of the Army has done extensive advertising in the rural districts of Great Britain, it is expected that they will be successful in bringing a class of people to this country who will readily adapt themselves to Canadian farming.

Married Men as Permanent Settlers.
There is a great desire on the part of married men with families to emigrate to Canada for farm work, and it is gratifying to observe that farmers are seeing the advantage of making proper provisions to be in a position to hire this class of help. Married men are to be heartily recommended as making the most permanent settlers, being anxious to make homes for their families in this country.

Full information and Application Form will be furnished by Lieut.-Colonel Howell, Immigration Offices, James and Albert streets, Toronto, or Staff-Captain Williams, Clarence street, London. It is expected that parties of men for farm work will arrive during the months of March, April, May, June and July, under the supervision of the Army's duly appointed conductors, and will be sent from port of landing direct to situations throughout the Provinces of Ontario and Quebec.

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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.

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Dear Sir:—Please send me free of all cost your New Discovery for the Cure of Rupture.
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Money Back if it fails to cure. \$2.00 per bottle postpaid on receipt of price.
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CATALOGUE FREE.
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Exports Pedigree Live Stock of Every Description to all Parts of the World.
During the spring months the export of horses of the light and heavy breeds will be a specialty. Write for prices, terms and references.

Hereford Bulls!

2 YEARLINGS, in fine order; good individuals and from prize stock. Also choice bull calves, 8 to 10 months old.
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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.
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Long-distance Phone.

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Will sell both sexes; fair prices. Come and see them before buying. Drumbo station.
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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.

Balmedie Polled Angus and Oxford Down 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.**

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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.
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New No. 14 Planet Jr. Double-Wheel Disc-Hoe, Cultivator and Plow has three adjustable discs on each side, a pair of new-idea pronged cultivator teeth that run shallow next the row, steels for plowing, furrowing, and covering, and a pair of leaf-lifters.

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Write for the Name of Our Nearest Agency. 2

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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

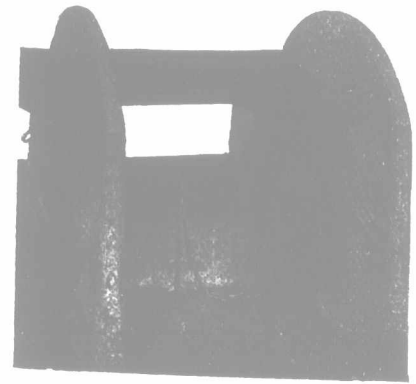
Sulphate of Potash and Muriate of Potash.

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.

The Dominion Agricultural Offices of the Potash Syndicate,
1102-1105 TEMPLE BUILDING, TORONTO, ONTARIO.

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.

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ALL KINDS WANTED.

FURS

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.

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.

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 mould, full of quality, right fashionably bred and perfect action.
JOHN A. BOAG & SON, QUEENSVILLE, ONTARIO

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

QUESTIONS AND ANSWERS. Miscellaneous.

SCHOOL SITE.

When a schoolhouse is not in the center of the section, have the trustees power to have it moved to the center, or do they have to have the vote of the rate-payers? OLD SUBSCRIBER.

Ontario.

Ans.—If it be really necessary to change the school site, the trustees should select the new location, and then call a special meeting of the ratepayers to consider same, and no site can legally be adopted without the consent of a majority of such meeting.

RHEUMATISM IN PIGS.

A choice litter of pigs did splendidly until four months, when they developed very stiff and swollen joints on both hind and fore legs. The pigs are in good health, and feel well, except for the very painful joints. I have other pigs in the same pen, that got exactly the same feed and treatment as these, which are O. K. They have been stiff for a month past, and are growing some. Their bed has been dry, and have never been fed much heavy feed. H. D.

Ans.—This trouble is generally diagnosed as articular rheumatism, and attributed to damp sleeping quarters, or to overfeeding with rich, concentrated food, but it may occur in pigs that are well cared for and judiciously fed. Dry quarters and laxative food are important for prevention. Salicylate of soda is the most useful drug to give in this ailment. The dose is 20 grains in feed, or as a drench, three times a day. The application of camphorated liniment to the affected joints may be helpful, or a liniment made of 4 ounces alcohol, 1 ounce oil of turpentine, 4 drams camphor, and water to make a pint.

FEEDING TWICE — COVERING GRASS SEED—MIXED GRAIN VS. BUCKWHEAT.

1. You advocate feeding cattle in winter twice, rather than three times in the 24 hours. What would be the most profitable division of the 24 hours for the two feedings? What about the time for watering, in the event of water not being before the stock all the time?

2. You advocate the sowing of clover, timothy, and alfalfa, for meadow or pasture, so thickly that it cannot be put into the ground with the ordinary seed drill, and you would have the farmer put in, say, half the requisite amount with the drill, and the remainder crosswise with the hand or the hand seeder. What is the treatment of the second half, after it has been scattered on the surface of the ground?

3. If you had three acres of land which would be suitable in spring for either buckwheat or a mixture of peas and oats, which would be the more profitable to sow? Why?

Ans.—1. If it is more convenient to feed cattle three times a day than twice, we do not advise feeding twice only. But in most cases, time is saved by feeding twice, rather than three times a day, and results are equally as good. Some give part of the morning's feed before breakfast, and the remainder after, and the evening's feed about five o'clock. Seven in the morning and five at night, makes a very fair division of the time. Watering should be done after the bulk of the morning's food has been eaten, and again before feeding in the evening.

2. It was Professor Grisdale, not "The Farmer's Advocate," who advised the sowing of an extra-large amount of grass seed. We are not to be held responsible for the opinions of correspondents whose letters we publish, nor of speakers whose addresses we report. Prof. Grisdale's advice is probably good, because the more common error is in sowing too thinly. Grass seed, sown by hand, can be covered by merely rolling, if done immediately, but if land is not quite dry enough for that, a light stroke of the harrow should be given at once, and rolling done later.

3. Peas and oats. This mixture will produce a more valuable crop than buckwheat, and of grain more useful on the farm.

Was Troubled With Dyspepsia.

For Years Could Get No Relief Until She Tried

Burdock Blood Bitters.

Can Eat Anything Now.

Mrs. Herman Dickenson, Benton, N.B., writes: "I have used Burdock Blood Bitters and find that few medicines can give such relief in dyspepsia and stomach troubles. I was troubled for a number of years with dyspepsia and could get no relief until I tried Burdock Blood Bitters. I took three bottles and became cured and I can now eat anything without it hurting me. I will highly recommend it to all who are troubled with stomach trouble."

Burdock Blood Bitters has an established reputation, extending over 34 years, as a specific for Dyspepsia in all its forms, and all diseases arising from this cause.

For sale by all dealers.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

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 = 58703 = 263904 A. H. B. Young stock for sale. Long-distance train in house.

Shorthorn Cattle

Would price my stock bull, Star Prince = 53900 = Red. It would pay a yone wanting a bull to come and see his produce. Oldest bull I have left by him will be a year old in February. A winner in Toronto and London. Females of all ages. Some very good heifers in nice condition. All reds or good roans.

J. T. GIBSON, DENFIELD, ONT.

Geo. Amos & Sons, Moffat, Ont.

Cattle bred by us have won grand champion females, Toronto, 1907, 1908 and junior champion 1909. American grand champion 1908, grand champion, A. Y. P. E., Seattle, Wash., 1909; also won five firsts at Toronto, 1908, in groups our own breeding. For sale: several good young bulls, cows and heifers at very moderate prices for sake of room for coming calves.

Farm 11 Miles East of Guelph, C. P. R.

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

1854—Maple Lodge Stock Farm—1909

Shorthorn bulls and heifers of extra quality and breeding, and from best milking strains.

Leleesters of first quality for sale. Cattle furnish show flocks.

A. W. SMITH, Maple Lodge P. O., Ontario.

Lucan Crossing Sta., G. T. R., one mile.

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. Most of them by Lord Gordon, bred by A. Watson, Elgin, Scotland.

J. & W. Russell, Richmond Hill, Ont.

Spring Valley Shorthorns.

Herd headed by Clipper Chief (imp.) = 64220 = (94673). If you want to get an imported bull, or a good Canadian-bred one to head your herd, be sure and write, or come and see them. Long-distance telephone.

KYLE BROS., AYR P. O., ONT.

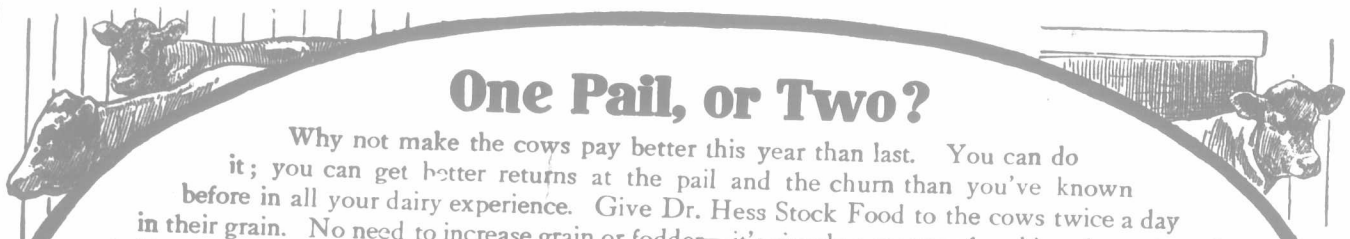
HIGH-CLASS SHORTHORNS

I have on hand young bulls and heifers of high-class show type, pure Scotch and Scotch topped, sired 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, Benachie (imp.) = 69954 =; also Shorthorn females and Yorkshires cows. Erin shipping station, C. P. R.

SHORTHORNS FOR SALE. Choice young bulls of grand quality and breeding, from good milking cows; also females bred from prizewinners. Prices very cheap for quick sale. Write, and come and see them. STEWART GRAHAM, PORT PERRY, ONT.



One Pail, or Two?

Why not make the cows pay better this year than last. You can do it; you can get better returns at the pail and the churn than you've known before in all your dairy experience. Give Dr. Hess Stock Food to the cows twice a day in their grain. No need to increase grain or fodder—it's simply a matter of making the grain and fodder you do give digest more perfectly, and of turning a larger per cent of it into rich, foamy milk.

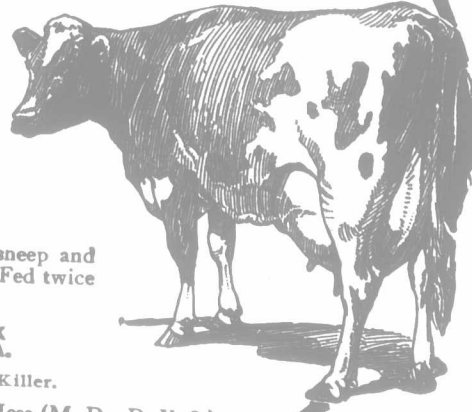
DR HESS STOCK FOOD

will do this—is doing it wherever given, because it makes grain, hay, roughage—whatever the cow eats—at once available to pass into the blood as the basis of a larger milk secretion. This attention to animal digestion, rather than to quantity of ration, is known among stock raisers as "THE DR. HESS IDEA" and is practical for all farm animals. Horses work better, steers fat quicker, and sneep and hogs show greatest development when they receive Dr. Hess Stock Food Daily. Fed twice a day in small doses. Sold on a written guarantee.

100 lbs. \$7.00; 25 lb. pail \$2.00. Smaller quantities at a slight advance. Duty paid. DR. HESS & CLARK, Ashland, Ohio, U. S. A.

Also manufacturers of Dr. Hess Poultry Pan-a-ce-a and Instant Louse Killer.

Free from the 1st to the 10th of each month—Dr. Hess (M. D., D. V. S.) will prescribe for your ailing animals. You can have his 96-page Veterinary Book free any time. Send 2c stamp and mention this paper.



DR. HESS POULTRY PAN-A-CE-A must not be confounded with so-called "poultry foods." It is a *tive tonic* so that what they eat will make the most in eggs and flesh. Dr. Hess Poultry Pan-a-ce-a *strengthens the digestive organs* of the laying hen and growing chick, and thus there is less food waste and more production and growth. It also cures Gapes, Roup, Cholera, etc. A penny's worth feeds 30 fowls one day. Sold on a written guarantee.

1 1/2 lbs. 35c.; 5 lbs. 85c.; 12 lbs. \$1.75; 25 lb. pail \$3.50. Duty paid.

Send 2c for Dr. Hess 48-page Poultry Book, free.

INSTANT LOUSE KILLER KILLS LICE

ELECTRIC BEANS

ARE A BRACING

BLOOD & NERVE TONIC.

They are unequalled for Billousness, Sick Headache, Constipation, Heart Palpitation, Indigestion, Anæmia. Write for sample and booklet of testimonials. 50c. a box at all dealers, or THE ELECTRIC BEAN CHEMICAL CO. LIMITED, Ottawa

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. For particulars write to:

Wm. Smith, Columbus, Ont.

SHORTHORNS, Berkshires, Cotswolds.

In Shorthorns, 53 head to select from: 20 calves (13 bulls and 7 heifers), 7 yearling heifers, 3 two-year-old heifers, and the balance cows from 3 years up. No Cotswolds or Berkshires to offer.

Chas. E. Bonnycastle, Campbellford, Ont. STATION AND P. O.

Maple Grange Shorthorns

Am offering an extra choice lot of 1-, 2- and 3-year-old heifers, Scotch and Scotch-topped, Clarets, Nonpareils, etc., sired by Royal Bruce, Imp., and among them are daughters and granddaughters of imp. cows. Young bulls also for sale. Phone connection.

R. J. DOYLE, Owen Sound, Ont.

Clover Dell Shorthorns

Have several young bulls for sale, of show quality; dark colors, from good milking dams. No fancy prices asked.

L. A. WAKELY, BOLTON, ONT. Bolton Junction on C. P. R., within 1/2 mile of farm

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. Also one two-year-old Clydesdale stallion, with size and quality.

Goodfellow Bros., Macville P. O., Ontario. Bolton station.

Shorthorns and Leicesters.

For sale: Choice-bred young bulls, and a number of 1 and 2 year-old heifers. All got by Imp. sires, and out of grand milking dams. And Leicester rams and ewes of all ages. W. A. Douglas, Tuscarora, Ont., Caledonia Station.

275 BURLINGTON SHORTHORNS 275

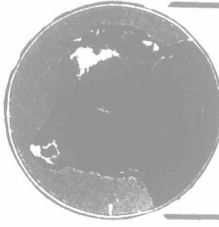
3 Choice Imported Scotch Shorthorn Bulls—yearlings.
1 Imported 2-year-old Bull, red—an extra sire.
10 Bulls, 9 to 16 months old—all by imported sire.
30 Choice Young Cows and Heifers—mostly bred or have Calves at foot. Long-distance telephone. Farm 1/4 mile from Burlington Jct. Sta., G. T. R. J. F. MITCHELL, Burlington, Ont.

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.



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.

SALEM SHORTHORNS! Young bulls and heifers, sired by the great show and breeding bull, Jit 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.

VALLEY HOME SHORTHORNS AND BERKSHIRES If you want a first-class Shorthorn bull or heifer come and see what we have, or if you want a show animal with a choice pedigree we have them. For description of herd see Xmas Number of The Farmer's Advocate, on last page. S. J. PEARSON, SON & CO., MEADOWVALE, ONT., P. O. AND STATION, C. P. R.

Please Mention this Paper.

QUESTIONS AND ANSWERS. Miscellaneous.

BRIBERY CLAUSE OMITTED IN LOCAL-OPTION LAW.

1. Is there any law regarding bribery in a local-option election?
2. Can a person buy votes against the by-law and be free from the law?
3. If there is a law regarding such election, please mention? G. A. M., Ontario.

Ans.—1 and 3. Specific provision regarding corrupt acts in a local-option contest seems to have been unintentionally omitted from the law dealing with the matter.

2. Not after this year. The law is expected to be amended.

SCHOOLHOUSE PLANS.

I have been requested by the ratepayers of S. S. No. 11, East York, to write you for plans for new schoolhouse, cost not to exceed \$2,500, or possibly \$3,000. Don. HENRY ELLIOTT.

Ans.—The Ontario Department of Education has just recently issued a valuable booklet of about 120 pages, giving about three dozen plans for rural school buildings, ranging from one to three-roomed schools. This report also contains much valuable matter regarding the construction and equipment of school buildings. The booklet in question is entitled "Plans for Rural School Buildings," and can, no doubt, be obtained free of cost, upon application to the Department of Education, Normal School, Toronto. O. A. C. H. L. HUTT.

FOWLS DYING.

Is it healthful for hens to live above pigs? Our henhouse is above pigpen, and the fowls are dying. I give lots of good feed, mixed grain, good, fresh water, lots of grit, and still they will get poor and die. Should hens have ground floor? MRS. W. S.

Ans.—We do not think it is particularly disadvantageous to the birds to inhabit a second story, so long as they have access to the earth when there is anything to be scratched or picked up. Of course, when they are over a pigpen, special pains should be taken to have the floor tight, and also well covered with litter. Likewise, the walls should be made warm by using tar paper and lathing, or ship-lap. Unless your hens are lousy, which an examination under the wing and in the fluff would prove to be or not to be the case, we would surmise that there was some infectious or contagious disease among them, probably tuberculosis, and would suggest that you send a dead fowl with full particulars as to conditions and symptoms, to the Bacteriological Department, O. A. C., Guelph.

A SCHOOL TREASURER.

1. Is it legal for the treasurer of a rural school section, where they have a surplus of about \$500 on hand, to use the money in his own private business, or to deposit it to his own credit in the bank, and not give account of the interest to the auditors, or at the annual meeting?

2. If it is not legal, what is the best thing to do in a case like that? Ontario.

Ans.—1. No. 2. He ought to be called to account. The trustees should demand a statement from him of the amount of interest, or other profits earned by the surplus money in question, and that credit be given the school section for such amount, in his books. His sureties, if any, ought also to be notified of the treasurer's course of dealing with the funds of the section. Further, unless satisfactory assurance be given on the part of the treasurer that there will be no irregularities in the future, the trustees ought to dispense with his services; and they ought to do so very promptly in the event of his refusing or failing to comply with the demand above advised.

"How far is it between these two towns?" asked the lawyer.

"About four miles as the flow cries," replied the witness.

"You mean as the cry flows."

"No," put in the Judge, "he means as the fly crows."

And they all looked at each other, feeling that something was wrong.

Bone Spavin

No matter how old the blemish, how lame the horse, or how many doctors have tried and failed, use Fleming's Spavin and Ringbone Paste. Use it under our guarantee—your money refunded if it doesn't make the horse go sound. Most cases cured by a single application. Covers Bone Spavin, Ringbone and Sidebone, new and old cases alike. Write for detailed information and a free copy of Fleming's Vest-Pocket Veterinary Adviser. Ninety-six pages, durably bound, indexed and illustrated. Covers over one-hundred veterinary subjects. Send this book before you treat any kind of lameness in horses. FLEMING BROS., Chemists, 75 Church St., Toronto, Ontario.

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 BRAN CHEMICAL CO. LIMITED, OLLAWA.

AGENTS 200%-PROFIT

Handy, Automatic HAME FASTENER. Do away with old hame strap. Horse owners and teamsters wild about them. Fasten instantly with gloves on. Outlast the harness. Money back if not satisfactory. Write today for confidential terms to agents. F. Thomas Mfg. Co., 744 Wayne St., Dayton, Ohio.

THE SUMMER HILL HERD OF HOLSTEINS

is making some wonderful records. This year it has produced the champion Canadian-bred butter cow for 7 days' record—29.16 lbs. Also the champion 2-year-old in yearly production. We have some younger ones that promise to be just as good. We offer for quick sale ten fine heifers, all in calf to an imported bull. Come AT ONCE and make your selections. Prices are right, and everything guaranteed just as represented. Trains met at Hamilton if advised. D. C. Flatt & Son, Bell 2471, Hamilton. Millgrove, Ont.

AVONDALE HOLSTEINS

Offers for sale high-class Holsteins all ages. Herd headed by Prince Hengerveld Pietje, a son of Pietje 22nd & Woodcrest Lad, out of Princess Hengerveld, a daughter of Hengerveld DeKol, with record of 23.34 lbs. butter at 23 months. We also offer some fine young Yorkshire pigs of choice breeding. ARTHUR C. HARDY, Brockville, Ontario.

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. Telephone connection. A. KENNEDY, Ayr, Ont.

Imperial Holsteins!

For sale: Bull calves sired by Tidy Abbekirk 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 herd-headers. W. H. SIMMONS, New Durham P. O., Ont., Oxford County.

For Sale—7 Holstein bulks: Tamworth

Wyandotte cockerels and Buff Orpington hens. BERTRAM HOSKIN, The Gully P. O., Ont. Phone connection via Cobourg.

EVERGREEN STOCK FARM

offers choice young Holsteins. Bred from 10 to 11 months, sired by Sir Mercedes Fayette, 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. F. Pettit Burgessville, Ont.

Glenwood Stock Farm—Holsteins and

Yorksires. 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. THOS. 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.

MAPLE GROVE'S SPECIAL OFFER.

A few exceptionally rich-bred bulls from one to four months old. Individually as good as their breeding. Fit to head the best herds. None better, no matter what price you pay. If you want this kind write: H. BOLLERT, CASSEL, ONT.

QUESTIONS AND ANSWERS. Miscellaneous.

MEASUREMENT OF GRAVEL.

A man drawing gravel fills his box, which holds 1/4 cord level full. When he gets to his destination, it has settled a couple of inches. Should that be allowed as a 1/4 of a cord? A. E. H.

Ans.—Yes; though the usual practice is to round the load a little at the start.

COMPARATIVE VALUE OF SILAGE.

What would be the value per ton of first-class silage, to a party buying a farm with a silo filled? Hay at \$15 per ton; chop, \$1.50 cwt. N. E. B.

Ans.—With a given stock to feed, with hay at \$15 a ton, and mixed grain chop at \$1.50 per cwt., you could afford to pay nearly one-third, or at least two-sevenths as much per ton for good silage as you would have to pay for timothy hay. This would be five dollars per ton. At such values, it would be pretty hard to make much profit in feeding, unless it were to cows supplying a city milk trade at good prices, and we are by no means sure that the tenant could be equitably expected to pay such a price for silage. However, we are safe in stating the comparison as above.

OPHTHALMIA IN SHEEP.

Two sheep have gone blind. The trouble must have come on suddenly. I attend the sheep myself, and had not noticed anything wrong till one day when letting them out as usual, those two seemed so stupid; would run up against anything that came in their way. I caught them, and discovered that both were blind. Their eyes seem completely covered with something of a bluish color. They are good, healthy sheep; one is about the best in my flock. The eyes of some of the others have been running, as though they had a cold. Two of my neighbors have some of their sheep affected with this blindness. Can you give cause of blindness, and a cure? G. B. E.

Ans.—This is infectious ophthalmia. As a rule, in ordinary cases the scum disappears in the course of a week or two, and the sight is entirely restored. In stubborn cases, blowing powdered burnt alum into the eye through a quill, removes the scum. The prescription of a veterinarian is a few drops of the following lotion, viz.: Sulphate of zinc, 15 grains; fluid extract of belladonna, 20 drops; distilled water, 2 ounces. If ulcers form, touch once daily with a pencil of lunar caustic.

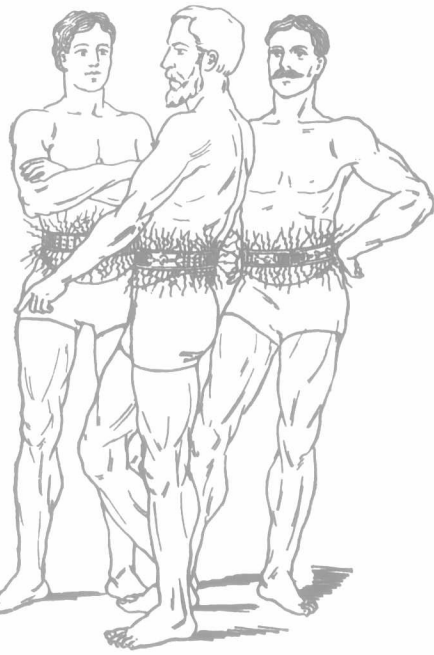
REFRIGERATOR, AND ICE-HOUSE.

Please tell how to construct a combined ice-house and milk-stand, what material to use, how to arrange the refrigerator chamber, etc. G. S.

Ans.—The combined ice-house and milk-stand of J. R. Anderson, Prince Edward Co., Ont., illustrated and described in the 1909 Christmas Number of "The Farmer's Advocate," is a good model. The size of this building, however, is 21 x 16, not 12 x 16, as stated in that article. Then, five feet off for the stand, leaves 16 x 16 feet for the ice. The insulation was constructed according to the plans for cooling room ice chambers, as given in the 1906 annual report of the Dairy and Cold-storage Commissioner, Ottawa, from whom they may be obtained. Specifications for such insulation were republished fully in "The Farmer's Advocate" of July 29th, 1909. Mr. Anderson's refrigerator chamber is 6 x 8, outside dimensions. A smaller one, say 5 x 6, would do on many farms. As to provision for keeping the ice, we quote Mr. Anderson's words:

"We have the rack for the pan across the end of our chamber; the pan has a pipe running down in one corner, right through the floor, with a small pail hanging on the end of pipe that fills with water, and prevents the warm air going in. This pan will hold two or four cakes of ice, and we generally put ice in ours twice a week. As to drainage of the ice-house, we put tile in the bottom, and broke stone very fine over the top, then some gravel, a little sawdust over the gravel."

STRENGTH FREE TO MEN



How to Regain It Without Cost Until Cured

Strength of body—strength of mind. Who would not possess it if he could? It is nature's greatest gift—our most valuable possession. Without this strength, life is a failure, with it everything is possible. Almost every man was made strong, but few have been taught how to preserve this strength. Many, through ignorance, have wasted it recklessly, or used it up excessively, leaving the body exhausted, the nerves shaky, the eyes dull, and the mind slow to act. There are thousands of these weak, puny, broken-down men, dragging on from day to day, who might be as strong and vigorous as ever they were if they would only turn to the right source. Electricity cures these weaknesses. It gives you back the very element you have lost. This offer is made especially to men who lack strength and vitality, who have nervousness, lost vigor, varicocele, etc., but I also give my Belt on the same terms to sufferers from Rheumatism, Lame Back, Sciatica, Kidney, Liver and Stomach Troubles. Write for a Belt to-day, or, if you want to look into the matter further, I have two of the best books ever written on Electricity and its medical uses, which I send free, sealed, by mail.

It puts new life into the veins and renews the vigor of youth. For 40 years I have been curing men, and so certain am I now of what my method will do, that I will give to any man who needs it, my world-famed DR. SANDEN ELECTRIC BELT AND SUSPENSORY, FREE UNTIL CURED. You pay nothing down, you deposit nothing, you risk nothing; but, upon request, I will furnish you with the Belt to use, and, if it cures, you pay me my price. If you are not cured, or satisfied, return the Belt to me, and that ends it.

As I am the originator of this method of treatment, and have made it a great success, there are many imitations of my Belt; but my great knowledge, based on 40 years' experience, is mine alone. My advice is given free with the Belt.

This offer is made especially to men who lack strength and vitality, who have nervousness, lost vigor, varicocele, etc., but I also give my Belt on the same terms to sufferers from Rheumatism, Lame Back, Sciatica, Kidney, Liver and Stomach Troubles. Write for a Belt to-day, or, if you want to look into the matter further, I have two of the best books ever written on Electricity and its medical uses, which I send free, sealed, by mail.

DR. A. F. SANDEN,

140 YONGE STREET, TORONTO ONTARIO.
Office hours—9 to 6; Saturdays, until 9 p. m.

CENTRE AND HILLVIEW

Holsteins 140 head, 45 females in R. O. M. Herd headed by Brookbank Butter Baron, Bonheur Statesman and Sir Sadie Cornucopia Clothide. The average of dam, sire's dam and granddam is: milk in 7 days, 62.35 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 13.88 lbs. butter in 7 days at two years. Price, \$150.00. E. H. Dollar, Heuvelton, N. Y. NEAR PRESOTT.

Holsteins FOR SALE; COWS AND HEIFERS

All ages. Also bull and heifer calves, including daughter and granddaughters of Pietertje 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 160 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.

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.

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, a 15.70-lb. Jr. 2-year-old, due last of December 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.

Lakeview Holsteins

Herd headed by Count Hengerveld Fayne De Kol, son of Pietertje Hengerveld's Count DeKol, 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.

High-class Holsteins—Head of herd, Pietje

nearest dams average 26.09 lbs. butter in 7 days. His sire's dam, Pietertje 22nd, has a record of 31.42 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, PHILLIPPSVILLE, ONT.

HOMWOOD DAIRY

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 Abbekirk Mercena. Write for particulars. M. L. & M. H. Haley, Springford, Ont.

Lawncrest Holsteins

We offer high-class R. O. M. and Record of Performance FEMALES at BARGAIN PRICES; also young stock of both sexes, with high official backing. Write, or come and see us. Good railway connection. Long-distance phone. F. R. MALLORY, FRANKFORD, ONT.

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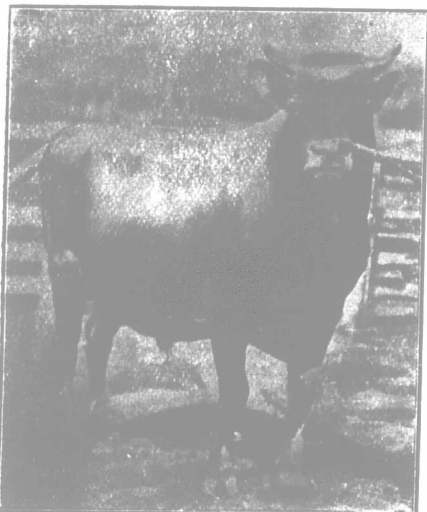


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THE GOLDEN LAD BULL,

"Golden Fox of Dentonia," at 3 years old a Toronto champion, at the head of my St. Lambert herd. Some beautiful young stock of both sexes for sale from him.

I. P. RIER, 360 St. Clair Ave., Toronto.

ARE YOU IN WANT OF A CHOICE BULL TO HEAD YOUR HERD?

We are offering choice bull calves sired by Fountain's Boyle, who won first prize at Toronto, London and Ottawa, who also headed first-prize herd at Toronto and Ottawa. Also offering some choice heifers.

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DUNCAN STATION C. N. O.

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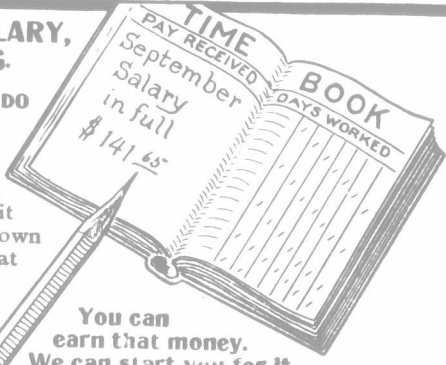
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Whatever your present monthly salary may be, multiply it by 12, and find your yearly income. Will it amount to \$1,699.80, the salary shown above? Do you earn one-half that amount? If not, why not?

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Earn from \$75 to \$150 per month.
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THE DOMINION RAILWAY SCHOOL,
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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.



CRAIGIE LE AYRSHIRES

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 showing form.

H. C. HAMIL, Box Grove P.O. Markham, G. T. R. Locust Hill, C. P. R. Bell phone connection from Markham.

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are large producers of milk testing high in butter-fat. Young stock for sale. Prices right. Write or call on W. F. STEPHENS, Box 167, Huntingdon, Que.

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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.

Long-distance Phone **ALEX. HUME & CO., MFNIE, 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.

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. IRAN & SON, Locust Hill, P.O. & Sta., Ont.**

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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**

Ayr-hires—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.**

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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.**

QUESTIONS AND ANSWERS. Miscellaneous.

GRAIN MIXTURES.

I am advised to sow barley, oats and spring wheat for a good mixed crop. I think I have oats and barley that will come on and ripen fairly well. Can you tell me what kind of spring wheat would ripen with them? Some say the Goose wheat is rather late. Our oats are Bumper King, from Rennie & Co., Toronto, and Mandscheuri barley. What proportion of each should be sown?

R. A. R.

Ans.—Judging by Prof. Zavitz's experiments, you could expect to gain nothing by including wheat in your mixture of oats and barley, as he has had the largest yield from barley and oats that he has derived from any of the many mixtures of two and more kinds tried. For our own part, in sections where peas do well, we prefer a mixture of oats and peas, on account of the greater feeding value of peas over barley, and the superior condition in which they leave the land. If wheat were to be included with the barley and oats, we could suggest nothing better than Goose wheat, which yields well, and ripens practically as soon as the other kinds. The best yielding proportions of grain in the seed mixtures are, if peas and oats are used, one bushel of oats and one bushel of peas, mixed, per acre, or where oats and barley are combined, one bushel barley and one bushel oats, mixed, per acre.

FEEDING VALUE OF CORN EN-SILED VS. FIELD-CURED—VALUE OF FODDERS—PROTECTION OF STAVE SILO.

1. What is the feeding value of an acre of corn put into a silo, compared with the same stood up in the field till winter, and fed in this way.
2. What is the value of a ton of silage, compared with a ton of clover hay, peas and oats cut green, or fall rye cut green?
3. Will stave silo last longer, or give better satisfaction, by being enclosed?

SUBSCRIBER.

Ans.—1. From a chemical standpoint, there is not a great deal of difference between the two methods of preservation, so far as the economy of dry matter is concerned. Practical feeding tests, however, both in experiments and in everyday practice, have almost, if not quite, always indicated a considerable advantage to be possessed by silage, especially in milk production. Whether this consists wholly in its succulence, or partially in that and partially in its appetizing virtue, we do not pretend to say. Probably both factors count.

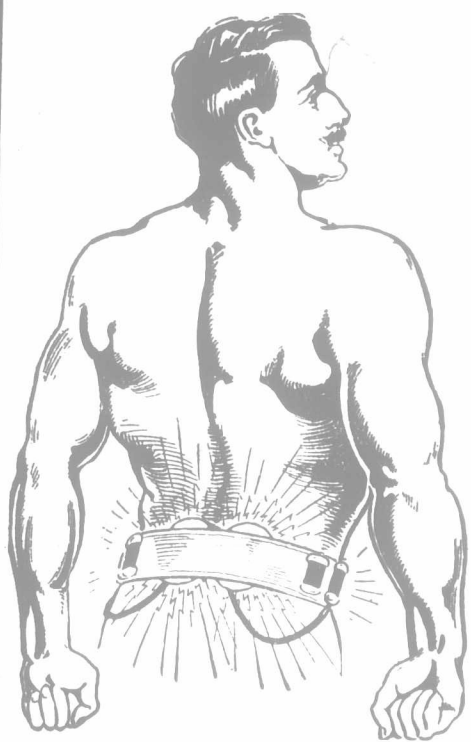
2. This comparison is between substances so different in their nature that an estimate of values would be contingent upon the knowledge of what each was to be fed with, and even then could be only very approximate. For instance, if cattle were receiving roots, the addition of silage would not be of so much advantage as if the stock were getting no other succulent feed. The best we can do in answering this question is to submit a table giving the total dry matter and the percentages of digestible nutrients in each feed. In the data before us, we do not readily find the analysis of cured oat and pea hay, nor of rye hay, but we give the analysis of these fodders green, and also the analysis of green clover, to convey a rough idea of the effect of drying on the content of dry matter and digestible nutrients:

	Dry matter	Digestible protein	Digestible carbohydrates	Digestible ether extract
	%	%	%	%
Corn silage	20.9	0.9	11.3	0.7
Red clover hay	84.7	6.8	35.8	1.7
Red clover (green)	29.2	2.9	14.8	0.7
Oat hay	91.1	4.3	46.4	1.5
Peas and oats (green)	16.0	1.8	7.1	0.2
Rye (green)	23.4	2.1	14.1	0.4

3. A stave silo will last little if any longer by being enclosed, nor will it give materially better satisfaction, except in severe climates, where protection from severe freezing is a consideration.

New Life and Energy!

MEN, LOOK HERE!



EVEN UNTIL OLD AGE YOU MAY FEEL THE VIGOR OF YOUTH, WITH ITS LIGHT HEART, ELASTIC STEP, COURAGE AND TIRELESS ENERGY. YOU MAY BE FREE FROM PAINS AND DEFY YOUR YEARS.

Varicocele, Spermatorrhea, Losses and Drains, and all ailments which destroy Manhood's Vigor are cured by Dr. McLaughlin's Electric Belt.

Free Electric Suspensory for Weak Men

Sends the Current to the Prostate Gland, the Seat of All Weakness. It Develops and Expands Weak Organs and Checks Losses. No Case of Weakness Can Resist it. FREE WITH BELTS FOR WEAK MEN.

No man should be weak; no man should suffer the loss of that vital element which renders life worth living. No man should allow himself to become less a man than nature intended him; no man should suffer for the mistakes of his youth, when there is at hand a certain cure for his weakness. Most of the pains, most of the weakness of stomach, heart, brain and nerves from which men suffer, are due to an early loss of nature's reserve power through mistakes of youth. You need not suffer, this. You can be restored. The very element which you have lost you can get back, and you may be as happy as any man that lives.

Easy to Wear. Cures While You Sleep. Never Fails.

Give me a man (or woman, for that matter) who has been sick and suffering for years and taken medicine until the system is all run down and debilitated, the stomach unable to digest the food, and the nerves shattered. My Electric Belt will give new life to every organ, drive out disease and restore health.

I have the grandest invention of the age for weak men; the surest and easiest cure for all nervous and chronic diseases. Its wonderful power is directed to the seat of the nervous system, through which its vitalized strength penetrates into all parts of the body, carrying new life to every function which has been weakened by excess or dissipation, restoring energy to the brain and power to the vital organs. No weak man, no delicate or sickly woman will ever regret a fair trial of my Belt.

It is a quick and lasting cure for all Nervous Debility, Weakness, Varicocele, Rheumatism, Pains in the Back and Hips (Sciatica), Lumbago, Constipation, Indigestion, Weak Kidneys, Failing of Memory, and all evidences of breaking-down. It cures when all else has failed.

My arguments are good, my system is good, but I know you haven't time to study these. You want proof, and I give you that and lots of it. When your own neighbors tell you I cured them you will know I did it.

Dear Sir,—Is it not high time that I should report to you? I must say that I feel like a new man since I began the use of your Belt. My sore back has not troubled me since the first time that I buckled my Belt around my waist, and my appetite is very good. The testicle which hung very low is now all right.

HUGH McCULLOCH,
Care of McFadden & Malloy, Camp 4,
Webbwood, Ont.

Dear Sir,—Your Belt is all you recommend it to be. It has completely cured me of my trouble, and I feel like a new man. Your Belt is the best remedy on the market for all pains

in the back, and I would not be without it. Wishing you every success, I remain,

FRANK VINALL, Hespeler, Ont.

Dear Sir,—Being run down from nervous trouble and unable to work for four months, I decided to try your Belt, which I did with good results. I felt better as soon as I started to wear it, and inside of four weeks I was able to go back to work, and have worked steadily ever since. I feel satisfied that the Belt will do all you say it will, and would recommend it heartily to any one whose strength is run down, as I believe it would do for others what it has done for me.

C. W. TINDALL,
188 Humberside Ave., Toronto Junction, Ont.

Dear Sir,—I have had one of your Belts now for over two years. When I got it, I was badly run-down and beginning to feel old, but about six weeks' use of it made of me practically a new man. I did not write you then, because I wanted to be sure that there would be no bad after-effects or any reaction. I can now conscientiously recommend it to any one who needs building up. Accept my sincere thanks for what your Belt has done for me.

L. L. MCPHAIL,
(Turnkey, Kenora Gaol),
Kenora, Ont.

NO CURE, NO PAY

is the offer I am making to any man who wishes to regain his strength and vitality. All I ask is security for the Belt while you wear it. Men, arouse yourselves, break the chain that is to ever hold you bound to an existence of misery. If you are sceptical I can send you evidence that will convince you beyond a doubt that there is a complete cure for you in my Belt. One of my patients writes that my Belt is the production of a man who is a friend to suffering humanity in a true way. I have hundreds of just such expressions of gratitude from patients all over the country. Let me know where you are and I will give you their names, that they may tell you their experience.

Send for My Book To-day.

Do you want to feel big, husky and powerful, with your veins full of youthful fire, your eye clear and your muscles strong and active? If you do, fill out this coupon and send it to me, and I will send you a book which will inspire you with the courage to help yourself. It is full of the things that make people feel like being strong and healthy, and tells of others like yourself who were just as weak once, but are now among nature's best specimens of strong and healthy human beings. Cut out the coupon and send it to-day and get this book, free, sealed, by return mail. Call for free consultation. Office hours, 9 a.m. to 6 p.m. Wednesday and Saturday till 9.00 p.m.

CUT THIS OUT.

DR. M. S. McLAUGHLIN,
112 Yonge St., Toronto, Can.

Please send me your book for men, sealed, free.

NAME

ADDRESS

SEND IT TO-DAY.

QUESTIONS AND ANSWERS. Miscellaneous.

SILO CONSTRUCTION.

As I intend putting up a silo this summer, I would like to know a few things about building one.

1. What richness of cement should be used?
 2. Should the silo be washed inside and out, and what with, lime and sand, or cement?
 3. To have a continuous opening up the silo, what is the best way to hold in the boards, and to keep the silo strong?
- W. A. R.

Ans.—1. Many are built with one part

good Portland cement to ten parts clean gravel. One part cement to six parts gravel would be reckoned rich, but it is better to err on that side.

2. If concrete is mixed rather wet and fairly rich, no wash on outside is necessary, but the inside should be coated with a wash of pure cement and water. There are also proprietary preparations on the market recommended for this purpose.

3. It would be better not to have an opening right from the bottom to the top. It would be advisable, in any case, to have at least two feet of complete wall at bottom, and three feet at top of silo. Across the continuous opening between, rods of half-inch iron should be placed at intervals of 2½ or 3 feet, the

ends extending at least two feet into walls on each side. Reinforcing wires, which should stop short of reaching the opening, should be connected with these rods by being wrapped or twisted around them.

Leave the inside corners of walls, or each side of opening with the corner, as it were, taken out, so that planks or narrow doors of plank, when set in place one above the other, shall be flush with inside of wall, and have a bearing, or lap, of two inches at each end.

SCHOOL TRUSTEE BECOMING NON-RESIDENT.

A was living in S. S. No. 4, and was elected school trustee in S. S. No. 4; then he moved across sideroad into S. S. No.

3, but is still a ratepayer of S. S. No. 4, and his children attend said S. S. No. 4. Is he still a legal trustee for S. S. No. 4? A still owns land in S. S. No. 3 and in S. S. No. 4.

J. B. Ontario.
Ans.—We think that he is not now competent to act as such trustee.

WIFE DYING INTESTATE.

Wife dies, leaving money and property. She leaves no family or will. Who is her legal heir, her husband or her relatives? A SUBSCRIBER.

Ontario.
Ans.—Both; the husband can take one-half, and the wife's relatives the remaining half.

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6.8	35.8	1.7
2.9	14.8	0.7
4.3	46.4	1.5
1.8	7.1	0.2
2.1	14.1	0.4

little if any or will it give on, except in action from ation.

Lump Jaw



The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser. Most complete veterinary book ever printed to be given away. Durable, bound, indexed and illustrated. Write us for a free copy. FLEMING BROS., Chemists, 75 Church St., Toronto, Ontario

Hampshire Down Sheep.

SPLENDID WOOL, GOOD WIGHT, GREAT WEIGHT.

Unrivaled in rapid and WONDERFULLY EARLY MATURITY, hardness of constitution, adapted to all climates, and in quality of MUTTON and LARGE PROPORTION OF LEAN MEAT.

Champion against ALL breeds at the great Smithfield Show, London, 1908.

Full information of Secretary, Hampshire Down Sheep Breeders' Association, SALISBURY, ENGLAND.

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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.

FARNHAM OXFORD DOWNS.

The Champion Flock. The Old-st Importers. The Largest Breeders in America.

See 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. HENRY ARKELL & SON, Arkell, Ont. Arkell, C. P. R.; Guelph, G. T. R. and Telegraph.

Fairview's Appreciation.

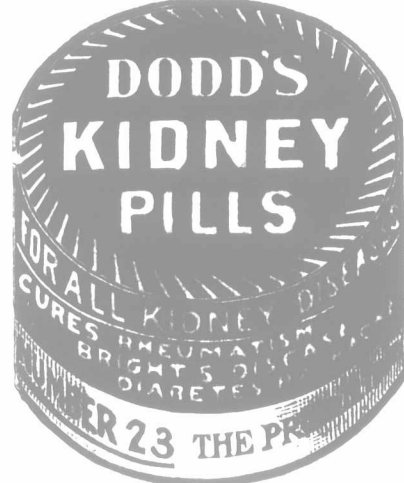
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Kindly show us most heartily to thank you for the many nice statements made regarding Shropshire sows to your orders. We fully appreciate your kind words in telling us of your satisfaction. J. & J. Campbell Fairview Farm, Woodville, Ont.

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs.

Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Buena Vista Farm, Harington, Ont.

"Man calls his wife his better half, But that's a sort of bluff, He can't deceive himself, For she's the whole thing sure enough."



DODD'S KIDNEY PILLS

FOR ALL KIDNEY DISEASES

CURES RHEUMATISM, BRIGHT'S DISEASE, DIABETES

NO. 23 THE PR

QUESTIONS AND ANSWERS. Miscellaneous.

WATER SUPPLY—EFFECT OF FROST ON MORTAR.

We have a well at house, 22 feet deep, in which we have a syphon pipe, 1/2-inch galvanized iron, used only in summer, which rises from the water to the surface of the ground, and then runs along above ground down a slope for about 600 feet to a point on the brow of a hill 27 feet below the ground level at the house. At this point the water will rise 10 feet in the pipe, and fill a dairy pail in 70 seconds. The water in the well stands from 3 1/2 feet to 18 feet deep.

1. Can water be brought from well to barn, which is five feet below level at house?
2. Stone wall, built 1st of November last, but not pointed yet. The mortar seems to be sifting out quite a lot by freezing. Do you think the wall will be all right?

G. T. K.

Ans.—1. Not without being pumped. By windmill, either at house or barn, that could be readily done. Or a well 20 feet deep could be dug at barn into which syphon pipe could be led to a depth of 16 feet, and pumping done by hand.

2. Probably it will, but nothing certain can be known until frost has gone out in spring.

EMMER.

1. Is emmer suitable for horse feed alone? If mixed with oats, what proportion would you recommend?
2. What proportion of emmer would you recommend in a mixture of peas, oats and barley, for fattening cattle and milch cows?

A. B. F.

Ans.—Emmer has not been used in this country in very large quantities for feeding purposes. The composition is as follows:

	Husks and grain.	Husks and grain.
Water	12	10.172
Ash	7.45	2.956
Ether extract	1.48	2.467
Crude fibre	39.02	11.450
Crude protein	2.39	11.577
Nitrogen free extract	41.54	61.398

Notice the large amount of fibre in the husks. When the emmer is ground, the husks seem to separate very readily and completely from the kernel part. I do not know of any digestion experiments having been made with this material, and cannot show the comparison of digestible matters.

The South Dakota Experiment Station carried on a number of experiments with this food. They report results from feeding experiments with steers, three lots of four steers each, and one lot of three steers, used in a test covering 170 days. The conclusions were as follows:

"This test shows that a pound of corn is equal to 1.25 lbs. of emmer for steer feeding. It also shows that where corn and emmer are mixed, half and half, by weight, the relation is about the same, with a small increase in gain in favor of the mixture."

The Nebraska Experiment Station made a number of tests to ascertain the most profitable methods of producing pork on alfalfa, and to study the feed value of grains commonly grown locally, as corn, emmer and barley. They conclude that:

"For fattening hogs that have access to alfalfa hay, corn at 35 cents, barley 24 cents, and emmer 19 cents, should give about equal profits. Under these conditions, 4 bushels of barley are worth as much as 5 bushels of emmer."

These experiments would go to show the value of emmer as a feed for cattle and hogs, and it is evident that it may be used in a mixture of peas, oats and barley, for fattening cattle or for milch cows, but whether it may be used profitably or not, will depend upon the comparative prices of the materials.

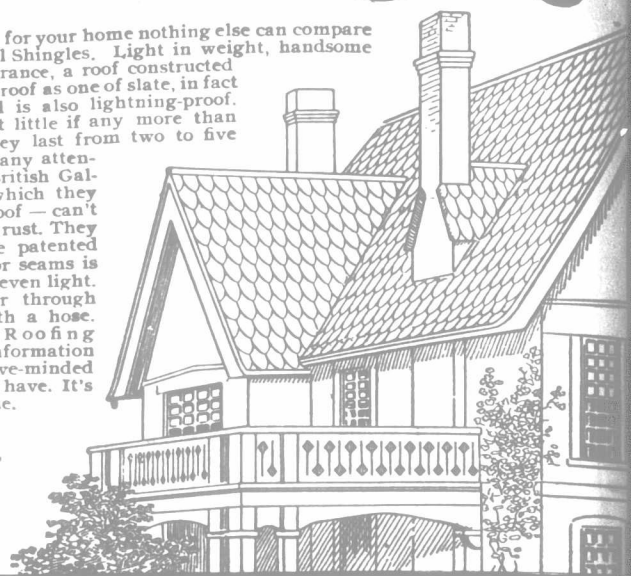
I cannot say anything with reference to whether emmer is suitable for horse feed alone, but I do not think that it will be anything like as satisfactory a food as oats. I think that in many respects it might be treated as barley, only that it is not worth as much as this grain.

R. HARCOURT.

O. A. C., Guelph.

Galt Shingles

As a roofing material for your home nothing else can compare with "GALT" Steel Shingles. Light in weight, handsome and dignified in appearance, a roof constructed of them is just as fire-proof as one of slate, in fact more so because steel is also lightning-proof. "GALT" Shingles cost little if any more than wood shingles and they last from two to five times as long without any attention whatever. The British Galvanized Steel from which they are made is wear-proof—can't burn, crack, curl up or rust. They last indefinitely. The patented construction of locks or seams is so tight as to exclude even light. You can't force water through "GALT" Shingles with a hose. Our new booklet "Roofing Economy" contains information that every progressive-minded property owner should have. It's free to interested people.



THE GALT ART METAL CO., Limited GALT, ONTARIO. Winnipeg, Dunn Bros.

RAW FURS

ESTABLISHED 1865 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.

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. CRESSWELL, BOND HEAD P. O., ONT., BRADFORD or BEETON STAS.

DOPLAR 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.

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. B. MONTGOMERY, Bond Head P. O., Bradford or Beeton 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.

and a lot of grand Shropshire and Cotswold lambs, ewes and ewe lambs of high class, both males and all of the best breeding. Will sell them in lots or singly at prices you can afford to pay. Show horn bulls and heifers, two good registered Clydesdale mares, and a few beautiful Welsh ponies will also be priced at attractive figures. Robert Miller, Steuffville, Ontario

Large White Yorkshires

Am 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.



Hilton Stock Farm

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

Newcastle Herd of Tams and Shires—horns For quick sale at very reasonable prices. 6 sows sired by James 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 boar, Colwill's Choice, or Newcastle Warrior, champion boar at Toronto, 1901, '02, '03 and '05. I also own 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 house. A. A. COLWILL, Box 9, NEWCASTLE, ONT.

PINE GROVE YORKSHIRES

including all the firsts and sweepstakes for best dressed carcasses, both at Guelph and all the prizes of imported stock of superior excellence. Joseph Featherston & Son, Streetsville, Ont.

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Young sows of breeding age. Some already bred. Also choice young pig 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.

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OHIO IMPROVED CHESTER WHITES—Longest strains. Oldest-established registered line in Canada. Young sows in farrow. Choice pigs 4 weeks to 6 months old. Pairs furnished not akin. Express charges prepaid. Pedigrees and sale tickets delivery guaranteed. E. D. GEORGE, Putnam, Ont.

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PINE GROVE BERKSHIRES!

Sows bred and ready to breed. Nice things, three and four months old. W. W. BROWNIDGE, Ashgrove, Ont. Milton, C. P. R. Georgetown, G. T. R.

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.

The Lantern Foot-warmer.

Guaranteed to be satisfactory or money refunded. Keeps the feet warm while driving, furnishes light like the common lantern, and is attached to a wooden base, which prevents ordinary upsetting.



The above cut shows how the Lantern Footwarmer is used. It is a simple, safe, effective footwarmer and lantern, which every farmer and person who drives, as well as people that are required to sit in chilly stores, studios or rooms, should own.

The heat from the flame of the lantern is conducted by a copper strip to copper plates placed on the wooden base, at each side of the lantern. The driver regulates the strength of the heat by turning the wick up and down in the regular way—places the lantern in front of him, puts his feet one on each plate, and tucks the robe in around himself. No danger to the robe, no disagreeable odor, no cold feet—the entire body kept warm, and a lantern ready lit at the end of the journey.

Sold by mail complete—lantern, stand and attachments, for \$2.00. Use for seven days, and if dissatisfied we will return your money. Liberal discounts to the trade or agents.

THE LANTERN FOOTWARMER CO.,
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(Sole owners of patent for Canada)



Two Good Things For Farmers

—a trouble-proof fence and a trouble-proof fencepost.

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is all No. 9 hard drawn steel wire, heavily galvanized—with "The Tie That Binds", which locks on the running wire and lies smooth on both sides.

OUR NEW STEEL POSTS are bent at right angles, which gives the necessary strength without the expense of solid or tubular steel.

Don't buy blindly. Learn the facts about wire fences in our book. Sent free if you write—also sample lock.

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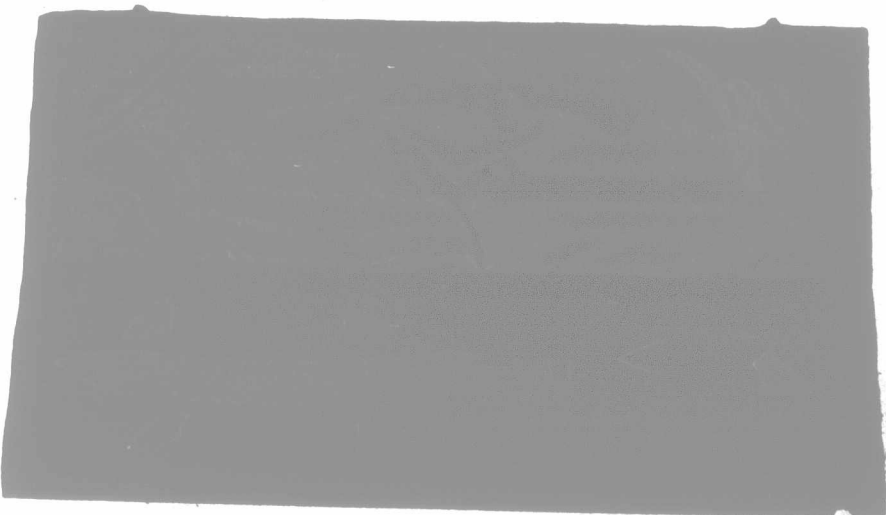
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Any Subscriber May Have Date On His Own Label Advanced Twelve Months By Sending Us the Names of Two New Subscribers and \$3.

Every Premium We Offer Is Exceptionally Good Value. We Give Greater Value in Our Premiums Than If You Were Paid a Cash Commission. Note the Following List:



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BIBLE—Old and New Testaments in beautifully clear, legible type; references; concordance to both Old and New Testaments. Index to names of persons, places and subjects occurring in the Scriptures. Twelve full-page maps, all excellent in type and outline. This book is of most convenient size, being 7 x 10 inches when open; weight 23 ounces; with strong and flexible binding; and would sell at regular retail price for \$1.00 or over. Sent postpaid to any subscriber for sending in only 2 new subscriptions accompanied by \$3.00.

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FARMER'S ADVOCATE KNIVES, manufactured by Jos. Rodgers, Sheffield, England. Jackknife and Penknife, both nickel-handled and having two blades. These knives were manufactured specially for the Farmer's Advocate. Worth, retail, \$1.00 each. 1 new subscriber for each knife.

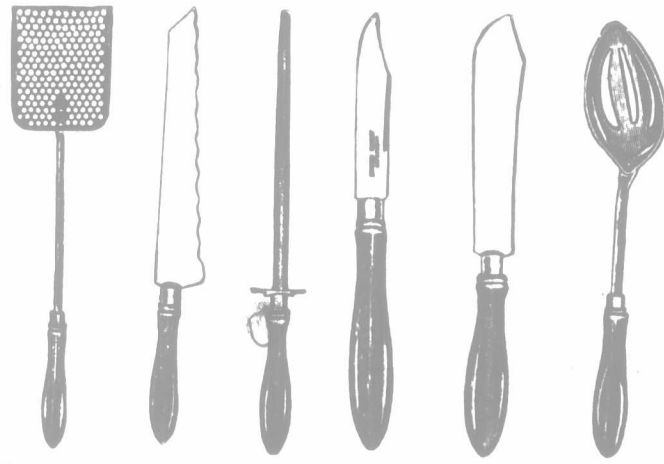
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We must have honest workers. Changing the name from one member of the household to another, or deception of any kind, will not be allowed. If discovered, the premium will be withheld.

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

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.

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

The William Weld Company, Limited,
LONDON, ONTARIO.

You Cannot Afford Any Roofing Which is Not Guaranteed for Twenty-five Years

Oshawa-shingled roofs are guaranteed for twenty-five years. No other roofing is guaranteed for five minutes.

So put it squarely up to the next fellow who tries to sell you some roofing "as good as Oshawa Steel Shingles." Ask him to agree in writing to replace the roof free if it gives any trouble within the next quarter-century.

Then watch him dodge. See him evade. Hear him tell about Mr. Somebody, of Someplace, who roofed a barn with his roofing in 1884 and it's a good roof yet. Hark to him ask if that doesn't make you feel safe.

Tell him it doesn't prove what the Pedlar Guarantee does prove. Because that guarantee is your absolute protection against roof troubles for twenty-five years to come.

There is your roof-insurance for the future.

There is a binding promise to give you a new roof entirely free, to put it on the building for you free, and to guarantee it for another twenty-five years, if your roof of Oshawa Galvanized Steel Shingles gives any roof trouble within twenty-five years from the day it's on.

There is \$250,000 capital back of that guarantee. There are 48 years of honorable reputation back of that guarantee. And there is the biggest business of its kind in the British Empire back of that guarantee.

So it is plain common sense for you to refuse to buy any roofing that is not guaranteed. And the only kind that is guaranteed is this kind we make — Oshawa Galvanized Steel Shingles. Guaranteed for 25 years. Actually good for a century.

This is the Roofing For Your Money

Oshawa Galvanized Steel Shingles make the roof you can best afford for any building. They cost but five cents a year per square. (A square is 100 square feet). They are stamped from heavy sheet steel—28 gauge steel. Then they are thickly galvanized. That means they are coated with zinc—the rust defying metal—in such a way that the zinc is driven right into the steel. It cannot flake off, as it would if this galvanizing were done the ordinary way.

Thus these Oshawa Shingles require no painting. They will not rust. They cannot possibly leak.

So you are sure you will have no bother with your Oshawa-shingled roof, once it's on the building. You can depend on that; and you can doubly depend on it because you have the guarantee. Hand it to your banker or lawyer to keep for you; and know that it is good for a new roof right up to the last day of the twenty-fifth year—if the first one gives any trouble whatever.

Cost Far Less Than Wood Shingles

You must pay about the same price per square for ordinary wood shingles. They will cost you more to lay, because it is a quick and simple job to roof with Oshawa Steel Shingles—and it is no easy job to lay wooden shingles right.

And the wood-shingled roof will need repairs every year or two. Probably it will leak from the start. And it will be no real roof at all at the end of ten years, at the most.

You can be certain that an Oshawa-shingled roof will outlast a wood-shingled roof ten to one. Thus it costs but one-tenth as much.

This is the Roof That Really Protects

Oshawa-shingled roofs are not merely weather proof roofs. They are fire-proof roofs. They are wind-tight roofs. They keep buildings cooler in summer and warmer in winter.

And the building covered with Oshawa Steel Shingles is safe against lightning—far more so than it would be if it fairly bristled with lightning rods.

Put these Oshawa Shingles on a building, following the simple, plain directions that come with them, and you have a roof that is handsome enough for a city hall and that absolutely protects.

Practically an Oshawa-shingled roof is one seamless sheet of tough galvanized steel. Not a crevice for moisture to get through. No way to set fire to it. No chance for the wind to worry it. Dampness cannot gather on the under-side of it. It needs no painting. And you need not worry about it needing any repairs, for twenty-five years at least.

Isn't that kind of a roof the roof for you? Isn't that kind of a roof worth more than it costs? Isn't it the only roof you ought to consider?—since it is the only roof of which all these things are true.

Get Your Copy of This Free Book

Send your name and address to the nearest Pedlar place. Tell them you want your free copy of "Roofing Right."

When you have read that book through, you will know more about roofing than a good many experts know. It gives you facts, proofs, figures.

Get it and read it. Get it even if you don't expect to do any roofing for some time yet. It will put you right on the whole roofing question.

With the book will come a copy of our Guarantee. Study that, too, and see how fair and square and straightforward it is. See what positive protection it gives the man who buys Oshawa Steel Shingles.

Sample Shingle Free

With the book will come a sample of the Oshawa Shingle itself. It will interest you to study it. You will see the actual construction. You will see that the Pedlar Improved Lock, on all four edges of the shingle, makes it certain that moisture never can get through any Oshawa-Shingled roof. You will see how the Pedlar process of galvanizing drives the zinc right into the steel so it never can flake off. You will be in no doubt about which roofing after you have studied this shingle.

Send for it and the Book and Guarantee—Send now.



I know, of course, that some salesman for some other roofing material is liable to tell you there some "catch" about Pedlar's guarantee.

And you can't wonder at his saying so. How else could

he meet the great, big, dollars-and-cents value that guarantee has for the man who buys Oshawa Shingles?

But you know right well that a concern cannot stay in business unless it does business strictly on the level. Our business was founded by my father in 1861. To-day this is the biggest factory of the kind in the British Empire. Our capital is a quarter of a million. You can easily find out our business standing.

So, seriously, do you imagine for a minute we would dare issue a guarantee that wasn't square?

Take my personal word for it—the Pedlar guarantee is exactly what this advertisement says it is.

Send for a copy of it and see for yourself. You won't doubt its good faith then. That is certain.

G. A. Pedlar

It Will Pay You to Pedlarize All Your Buildings

"To Pedlarize" means to sheathe your whole home with handsome, lasting and beautiful steel—ceilings, side-walls, outside, roof. It means to protect yourself against cold; against fire; against much disease; against repair-bills. Ask us and we will tell you the whole story. Just use a postcard and say: "How about Pedlarizing my house?" State whether brick or frame. Write to-day.

Send to-day for Sample Shingle and "Roofing Right" Booklet No. 16. Address nearest place:

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