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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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SUCCEED
FOUNDED

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

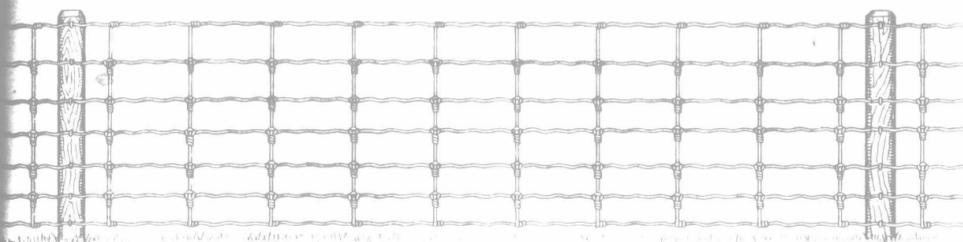
Census and Statistics
Dept. of Agriculture
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Vol. XLV.

LONDON, ONTARIO, FEBRUARY 17, 1910.

No. 908



Galvanized Heavy Enough to be Rust-Proof, But Won't Chip

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." This "Coating" will peel off years before the Frost Fence begins to even show signs of wear.

Cleaned Three Times

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

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

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

These three critical Cleansings leave the surface of Frost Wire

as clean as a pin. This 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 the Wire itself.

The Frost Fence will now endure those awful weather variations from 12 to 15 years longer than any other Fence made.

Make Our Own Wire

We are the only exclusive Fence-Makers 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.

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

But the Frost Scientific Annealing process restores Frost Wire to an exact degree of temper. This exact degree of temper is the result of years of ex-

perimenting. 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, shouldn't he?

Not Merely "Excuses"

Any Wire Fence without "coils" will snap when severely contracted. And it will sag, lose its shape, and become unsightly 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.

Triple "Wrap"

The powerful "Knot" and the Triple "Wrap" of the Frost Woven Fence Lock make it about 100 per cent. more secure than any other Fence Lock made. The closely-cut ends prevent it from springing.

Then, too, the Frost Lock contains more inches of Wire than any other Lock. This makes it more secure.

The Laterals in most Fence are kinked. This Lateral-kinking weakens the Fence. Because nearly all the strain falls on the Laterals.

But Frost Laterals are not kinked. It isn't necessary. The Frost Lock is secure enough without kinking the Laterals.

Tests which have ruined other Fences have left the Frost Fence erect and uninjured. This simply proves that the Frost Lock is the strongest.

Drop us a card, and we'll send our free booklet and samples of Frost Locks and Fences.

The Frost Wire Fence Co.,
Hamilton, Limited Ontario

"Frost" Fence

Agents
Wanted
in Open
Districts



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

Wooden shingles, of medium grade, in most parts of Ontario, cost at least \$1.50 per square—100 square feet of surface.

29¢c. per Square

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

Ready roofing is an even poorer investment. The best does not last longer than 10 years. At \$1.50 per square, the cost per year is 35¢.

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

Better Than Slate

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

All slate roofs, you know,

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

9c. per Square

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

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

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

Lay Them Faster

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

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

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

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

Less Insurance

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

Shingles—often as much as 50 per cent more.

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

Booklet Reward

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

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

METAL SHINGLE AND SIDING COMPANY, Limited

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



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

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

PRESTON SAFE-LOCK SHINGLES



Synopsis of Canadian North-west Land Regulations.

ANY person who is the sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, solely owned and occupied by him, or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing, may pre-empt a quarter-section alongside his homestead. Price, \$3.00 per acre.

Duties—Must reside six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

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

W. W. CORY,

Deputy of the Minister of the Interior.

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

Build Concrete Silos

Any size with the London Adjustable Silo. Send for Catalogue. We manufacture a complete line of Farm Machinery.

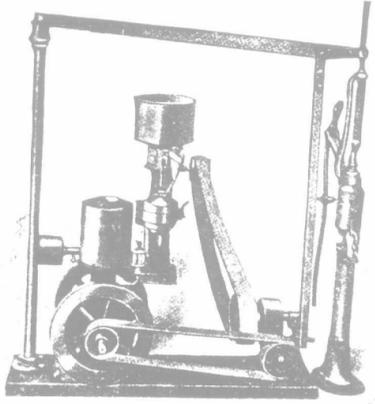
London Adjustable Machinery Co., Ltd., 100 King Street West, Toronto, Ontario.

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J. B. ...

IDEAL GASOLINE ENGINES

1 1/2 TO 40 HORSE-POWER.



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

Send for catalogue.

GOOLD, SHAPLEY & MUIR CO., LIMITED,

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Exceeds any other separator in the world. Our liberal offer enables you to prove this. Our prices for all capacities, SIX SIZES, is astonishingly low. The quality is HIGH. Our machines are well built, up-to-date, handsomely finished, Skin-Closer, Turn-Easier, and Guaranteed. Thousands in use. We send them to you on trial, FREIGHT PREPAID, and if you are not satisfied, return it at our expense. We take ALL the risk, which gives our Special Trial Offer, Testimonials, Remarkably Low Prices, and Easy Terms of Payment. "No Free."

DOMO SEPARATOR COMPANY, Brighton, Ontario.

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FARMERS, FRUIT AND VEGETABLE GROWERS



WHY ARE YOU IMPORTING PHOSPHATE AND AMMONIA WHICH IS A BY-PRODUCT OF YOUR FARMS OF WHICH YOU ARE EXPORTING MANY THOUSAND TONS ANNUALLY? BONES AND WHICH CONTAIN LARGE QUANTITIES OF PHOSPHORIC ACID AND AMMONIA

KINDLY ANSWER THE ABOVE

PURE BONE MEAL IS THE CHEAPEST FERTILIZER THIS PLANT FOOD IS ALL FROM OUR CANADIAN SOILS AND SHOULD ALL GO BACK SEND FOR PRICES, ETC.

THE W.A. FREEMAN CO. LIMITED
HAMILTON, CANADA



HOT AIR

Or cold air suits the

CANADIAN AIRMOTOR

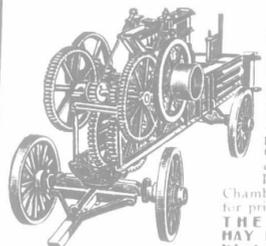
Will serve you all the YEAR AROUND. Made to stand severe WEAR AND TEAR.

TANKS, GRINDERS, PUMPS, GASOLINE ENGINES.

Ontario Wind Engine & Pump Co. Ltd. Toronto, Ontario

The Columbia Hay Press

BAILED 68 TONS IN 10 HOURS.



It has the points that sell: Automatic Self Feeder, Automatic Safety Fly Wheel, Highest Block-dropper, Double Gear throughout, Extra Long Tires Chamber, etc. Write for prices. THE COLUMBIA HAY PRESS CO., Kingsville, Ont.

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

THE UNION TRUST COMPANY, LIMITED,

Real-estate Dept., 174-176 Bay St., Toronto, Ont.

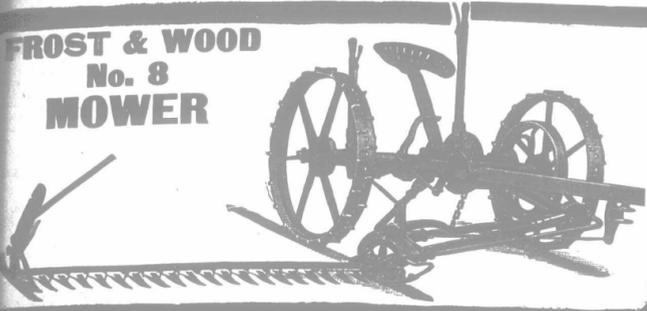
ELECTRO BALM

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Also Piles, Burns, Scalds, Sores, Chapped Hands and Face. Write for sample and booklet of testimonials. 50¢ a box at all dealers, or THE ELECTRIC BALSAM CHEMICAL CO. LIMITED, OTTAWA.

**FROST & WOOD
No. 8
MOWER**



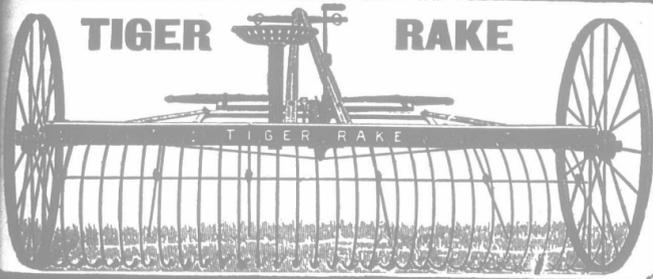
**HAY-MAKERS
THEY WORK WELL
TOGETHER**

An ideal combination for getting in your crop of grass. Our No. 8 Mower with its strong, substantial build, its accurate, clean-cutting power and ease of operation, is a real money-saver and profit-earner for thousands of farmers at every point in the Dominion. It is strong, durable, needs few repairs. It works day in and day out, proving the stalwart honesty and mechanical excellence put into every gear and wheel, knife and shaft, cutter-bar and pitman.

But there's the other tool—can't get along without that—the Tiger Hay-Rake.

It's all steel, except tooth-rail and shafts, which makes it proof against hard work, rain and exposure. A Tiger Rake is exceptionally durable. It does such clean work, too. The spring teeth have just enough elasticity, and are curved so as to pick up grass easily and evenly. It's an easy rake to handle for horse and driver. It can be dumped by foot or hand. The fall of the teeth after dumping is eased by a strong spring that prevents much of that disagreeable jar so evident in cheap rakes. We can't tell you here the scores of good points about these hay-makers. Send for our catalog 153 and special "Hay-Making Folder." Both books are free, and answer your questions. Ask our local agent to show you our farm implements. He'll gladly do it.

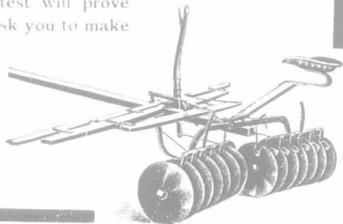
The Frost & Wood Co., Ltd.
Smith's Falls, Canada.



**HITCH YOUR HORSES TO
The "Bissell"**

The horses hitch close to the work, giving the "Bissell" light draft. You sit well back, the seat being balanced so that it removes all neck weight. The dust-proof ball bearings still further decrease the draft. The "Bissell" is by far the easiest on the horses. It pulverizes the soil the best, too. The shape of the plates enables them to easily enter the toughest soil. They turn clean furrows. The cleaners draw to the plates and meet them chisel fashion. They cannot be forced away from the plates, but cut right through the dirt, fiber and grass, and keep the plates free. The "Bissell" is solidly braced, and cannot be beaten for rigidity and strength. It takes skill and experience to build a harrow like the "Bissell." It has taken us about a score of years to bring it to its present perfection. Other harrows may look like the "Bissell," but a field test will prove it twice as good an investment. We ask you to make the test. Ask your local dealer to show you the "Bissell," or write Dept. W. for catalogue.

T. E. Bissell Company,
Limited,
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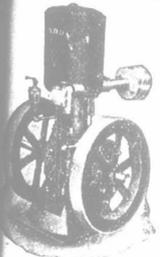
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Cut this out and mail to us, and we will send you our "SPECIAL ADVERTISING OFFER" for one month only.

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Engines and Outfits**
1/2 TO 5 HORSE-POWER.

Satisfaction guaranteed.

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THIS IS THE SHEET METAL AGE.

To make a factory, warehouse, barn, shed or outbuilding of any description, wind, water, snow, fire and lightning proof cover it with

Galt Corrugated Sheets

which are accurately pressed from the best and most durable British Steel it is possible to procure.

All corrugations are straight and true, assuring an accurate fit at both side and end laps without waste. Special hip and ridge covers make tight, neat joints at these points.

Where warmth is not important "Galt" Corrugated Sheets save three-fourths of the wood sheeting as well as considerable labor, and will give good service for a life time of at least fifty years.

It costs no more for a "Galt" Corrugated Sheet Steel Building than for a wood one. Which do you think is the better investment? Galvanized or painted material always in stock. Complete information in catalog "3-B."

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

Sales and Distributing Agents:
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Planet Jr. Tools

get largest crops with least work

What's the use of drudging to get ordinary results when a Planet Jr Seeder or Cultivator does six men's work, and gives you an increased yield besides? Planet Jrs are patents of a man skilled both in farming and manufacturing for over 35 years. They are light, strong, lasting, and fully guaranteed.



No. 4 Planet Jr Combined Seeder and Wheel-Hoe saves time, labor, seed and money. Almost all useful garden implements in one. Adjustable in a minute to sow all garden seeds, hoe, cultivate, weed, or plow. Pays for itself quickly, even in small gardens.



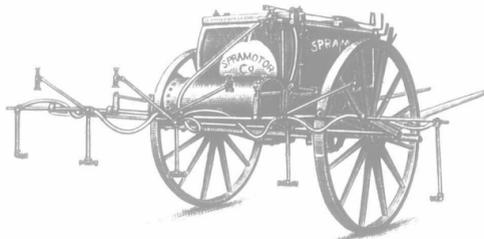
No. 8 Planet Jr Horse Hoe and Cultivator will do more things in more ways than any other horse-hoe made. Plows to or from the row. A splendid furrower, coverer, hiller, and horse hoe; and unequalled as a cultivator.

The 1910 Planet Jr catalogue is free. It illustrates and describes 55 different implements for the farm and garden. Write for it today.

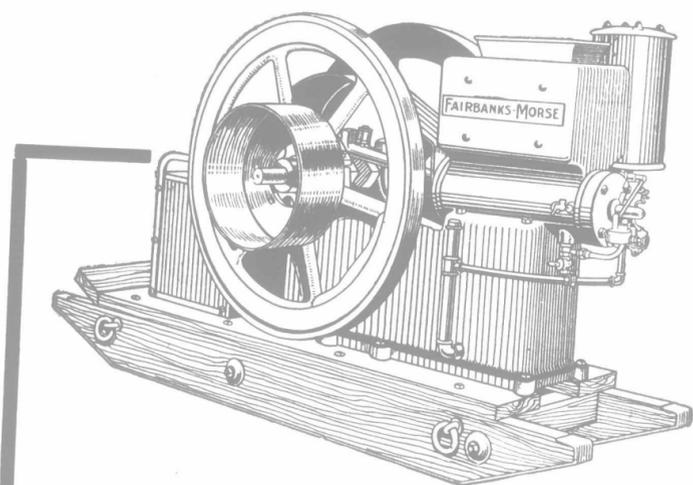
S. I. Allen & Co
Box 1108 F Philadelphia Pa

Write for the Name of Our Nearest Agency.

THE SPRAMOTOR



shown here, will rid an acre of potatoes of blight and bugs in 20 minutes. The only aid required is a horse. What do you think of that? Has non-clogging nozzles, 12-gallon air tank. 125 lbs. pressure guaranteed with 12 nozzles open. Agitator, clean-out and pressure relief into tank, and nozzle protector, controlled from seat. Can be fitted for orchard, vineyard and grain crops. For 1 or 2 horses, or hand operated, if preferred. Write for free booklet. **SPRAMOTOR, LTD., 1359 KING ST., LONDON, ONT.**



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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 slashing out of the Hopper Jacket.

The skidded engine is a very desirable outfit where it is necessary to move the engine, providing a means whereby 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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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:

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Cream Separators

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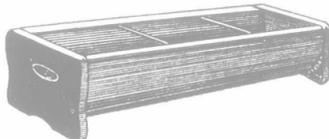
WINNIPEG

VANCOUVER

Send No Money Until You've Seen and Become Convinced this **STEEL WATER TROUGH** is Indispensable

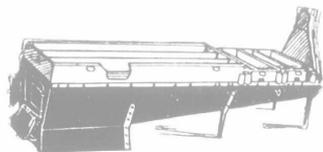
Up-to-date farmers are replacing their unsanitary wooden water troughs with our sanitary **STEEL WATER TROUGHS**. You will do the same once you have become convinced of the superiority of our **STEEL TROUGHS**. So we ask you to mail us your name and address. Then we will send you one of our **STEEL TROUGHS** entirely at our expense. You don't pay us a cent until you are sure our **STEEL TROUGH** is simply indispensable to you. That's surely a square deal?

Our **STEEL TROUGHS** are the only absolutely sanitary water troughs. No corners or cracks for dirt to accumulate or germs to breed. Serious diseases, resulting in loss of cattle, are often caused from unsanitary conditions of wooden drinking troughs. Our troughs are made of heavy sheet steel, and extra heavily galvanized. Will not leak. Cannot rust. Nothing breakable. Nothing that will require repairs. Cattle cannot gnaw them. Practically everlasting. Shall we send our booklet giving full description? Better still, tell us to send the trough to you at our expense. Address: Dept. W.



The Steel Trough and Machine Co., Limited, Tweed, Ont.

Look After Your Maple Grove Equipments



It will only be a short time before maple-syrup making. Are you ready? If not, write us for our catalogue. We can interest anyone who wishes to be on top making high-grade syrup that will bring more money. We make the

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Evaporator in 22 different sizes.

THE GRIMM MFG. CO., 58 Wellington St., MONTREAL, QUE

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Complete outfit and supplies free of charge. Write now for full particulars.

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The only Rear-Wheel Driven Seed Drill on the market. The feed in the "Bacon" handles seed without bruising or breaking, and seeds evenly to the just seed. Machine instantly converted from a regular seed sower into a hill dropper. Feed Cut prevents waste of seed when turning rows.

For sowing Sugar Beets, Parsnips, Radishes, Carrots, Onions, etc., the 1908 model of the "Bacon" is unequalled for strength, lightness, easy running and good work. Write for our complete catalogue.

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Capsicum VASELINE

Better than a Mustard Plaster. Does Not Blister.

FOR COLDS IN CHEST OR THROAT, CHILBLAINS, ETC.

12 Vaseline Remedies in Tubes

Mentholated, Camphorated, Borated, Carbolic, Oxide of Zinc, etc. Write for Free Vaseline Book.

CHESEBROUGH MFG. CO. (Cons'd) 379 Craig St. W., Montreal

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

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

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Reets, Parapets, Ra-
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on larger quantities
seed well cleaned and
s. Living Springs
P. R. and G. T. R.

n This Paper.

The Farmer's Advocate and Home Magazine

"Persevere and
Succeed."

Established
1866

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1871

Vol. XLV.

LONDON, ONTARIO, FEBRUARY 17, 1910

No. 908

EDITORIAL.

Breed something "classy." Nondescripts are nearly always at a discount. It is the top-notch, excelling in a certain class, or for a certain purpose, that lines the breeder's pocket.

The Parliamentary committee considering the Miller anti-race-track gambling bill must not take too seriously the resolutions adopted at several of the horse-breeders' annual meetings. They appear to have been introduced by men who have merely friendly or else a sporting interest in the Thoroughbred, and were passed in that perfunctory manner in which motions sometimes go through. To our personal knowledge, several men who sanctioned them questioned their propriety afterwards, and expressed misgivings as to the wisdom of allowing them to pass.

Mr. Biggar endeavors to hold out to Canadian sheep-raisers the same fond, illusive hope of cheapening goods to the consumer by raising the tax on them—both on the raw material and on the finished product. This promise of subtraction by means of addition is the time-honored means by which ultra-protectionists have ever deceived themselves. And they do it honestly, too. We are ready to admit that an industry adapted to a country may sometimes be earlier established by a little judicious tariff aid, but a business that cannot do with a virtual protection of thirty per cent. is hardly worth the whistle.

The request of the cattle- and horse-breeders' organizations, which recently met in Toronto, for a large amphitheatre in which judging may be accomplished with comfort, without fear of interruption by bad weather, and with seats for the thousands of would-be spectators, will surely commend itself to the good judgment of the Canadian National Exhibition Directorate. The experience of the large American State fairs, which, after providing such arenas, have only regretted that they did not build larger, and of the Winter Fair, Guelph, where the thousand seats provided proved hardly enough to accommodate a third of the keenly-interested observers, preaches the need more eloquently than argument could do.

That a readjustment of the tariff on wools and woollens, in accordance with the desires of Canadian manufacturers, would tax the consumer about fourteen millions in return for a benefit of four and a half millions to the Canadian sheep-raiser, was the conclusion arrived at by the Dominion Sheep-breeders' Committee on the woolen tariff, appointed in 1909 to look into the matter, and confer with the manufacturers. That is about the way any demand of Canadian farmers for increased protection is liable to work out. Not only are the consumers taxed by whatever amount the farmer might be benefited, but his request is sure to be made an excuse by manufacturers for increases in the tariff on their goods. The farmer's true interest lies, therefore, not in demanding more protection, but in working to have duties generally scaled down. Meanwhile, we quite approve of the Dominion Sheep-breeders' position that the duties on wool at present prescribed in the tariff schedule should be collected, that this duty should be extended to cover tops and noils, and that a proportionate impost should be levied on imported rags

"Beware of Dogs!"

The idea that the period of the year in which dogs are liable to contract hydrophobia is limited to the torrid summer season, sometimes called the "dog days," has been rudely shaken by the appearance of numerous outbreaks of the disease in the coldest weather of the present winter, in widely-separated districts in Western Ontario. So numerous have cases of rabies become that the Dominion and Ontario Governments have issued orders requiring the confinement or muzzling of all dogs in that part of the Province lying west of the eastern boundaries of the Counties of York and Simcoe, under the possible penalty, for infringement of the regulation, of a maximum fine of \$200 under the Federal Act; while, under the Provincial Act, a fine of \$20 for each infraction of any regulation of the Provincial Health Board may be exacted. The history of the present prevalence of rabies is said to date from May, 1907, when a stray dog carrying the disease crossed the boundary from the United States at Queenston, Ontario, since which time forty-two persons, of whom half were children, have been bitten by mad dogs. Sixty-three cattle, one horse, six sheep and thirty swine have died from rabies, and two hundred and six premises have been quarantined, owing to the presence of the disease. Most of the persons bitten have been sent to the Pasteur Institute in New York for treatment, incurring very large expenses. A peculiarity of the disease is that, as soon as rabies develops, the dog starts to roam the country, biting and infecting dogs or live stock, and frequently carrying the disease 30 or 40 miles away before the dog dies. From Queenston, the disease spread to the Counties of Welland, Lincoln, Haldimand and Brant, by June, 1908. In the following months, outbreaks were reported in Norfolk and Oxford. Early last year cases were reported from Waterloo, Wentworth and Perth, and in July infected dogs had gone as far west as Clinton, in Huron County. During the past few weeks cases have been reported from Simcoe and York, and from nearly every county in the whole of the Western Peninsula. In Galt and Paris over 60 dogs have been killed, and a few days ago a case of rabies was reported from Toronto.

In view of the fearful character of the disease, and the danger to human beings and live stock, the situation has become so serious that there should be no hesitation on the part of the owners of dogs to conform to the requirements of the regulation. And since it is a fact that a very large proportion of the dogs kept are absolutely useless for any practical purpose, and that they have become a menace to the keeping of sheep by farmers, one of the most profitable branches of agriculture, the present situation affords a favorable opportunity for the shortening of the dog census, which might well be cut in two as to numbers, without pecuniary loss to the owners, and with much greater safety to the public in many ways. It is safe to say that in few ways is so much selfishness and lack of consideration for rights and safety of others manifested as in the keeping of dogs, which in many instances are a public nuisance, and a frequent cause of well-founded complaint. Our towns and villages, where there is no earthly need for them, swarm with worthless dogs, which are liable to diseases communicable to persons, and which are a nuisance in various unmentionable ways, and are responsible for much loss to farmers by reason of the worrying of sheep. We would by no means be understood as condemning all dogs, some few of which are useful, and many of which are companionable and affectionate hardly second to man, but all will admit that there are thousands of dogs with the

services of which the country might well dispense. It is fervently to be hoped that the rabies regulations may result in a wholesome weeding out of the unfittest.

Canadian Seed Corn.

The report of the Ontario Corn-growers' Association for the year 1908 was, according to Prof. L. S. Klinck, of Macdonald College, Que., a revelation to thousands in old Ontario. The fact that in the south-western Counties of Essex and Kent, as well as portions of Elgin and Lambton, dent corn was grown and ripened for grain to such an extent as that report revealed, came as a great surprise to very many. Throughout the greater part of the section mentioned, it is common for farmers to have from 20 to 30 per cent. of their arable land in corn. This is not grown for silage purposes. Silos and dairy herds are almost unknown there. The corn is all ripened, and is used principally for hog-feeding, though other farm animals get their share, also, especially when mixed with oats or barley, and ground.

A movement towards making a specialty of growing corn for seed purposes has developed lately. It has been demonstrated that corn grown for silage in Eastern Ontario and Quebec is much later in maturing when seed from far south has been planted than when seed of the same variety is used which has been grown in more nearly the same latitude. Some of our best authorities, as, for instance, Prof. Klinck and Seed Commissioner Clark, are backing up this movement. Already, quite a considerable amount of seed corn is being sent out from this district, and the possibilities for a very large increase in the trade are excellent.

Much of the discussion that took place at the Ontario Corn Show and Convention was directed to this point. The most desirable type of ears, for maximum amount of grain, combined with medium-early maturity, and the proper treatment of corn intended for seed, were given prominent place. The season of 1909 being specially unfavorable for the full ripening and proper curing of corn, growers were specially warned that the future trade depended upon carefulness in sending out only seed that they were sure would grow. There has been just cause for complaint in the past, there should be none again. Very careful instructions were given by Prof. Klinck as to how to detect lack of vitality in seed from indications on the grain itself, but, as he said, the only sure thing is the germination test.

The corn-growers of Essex and Kent are in earnest, enthusiasm has been aroused to a great degree, and it may with confidence be expected that a large trade in seed corn, profitable both to seller and buyer, will result.

At the annual meeting of the Canadian Ayrshire Breeders' Association, the question came up as to the meaning of a certain item of \$100 received by the Record Committee from the Breed Society. The explanation, which will be of general interest, was that the National Records Office has no authority to pay out any money on account of the Breed Societies; and since it often happens that breeders, in sending in pedigrees, will remit more than necessary, the Records Office must have some fund out of which to reimburse these breeders for the excess of their remittances. The difficulty is overcome by the Breed Society depositing to the credit of the National Live-stock Records a sum ample to cover such probable refunds.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED)

JOHN WELD, MANAGER

AGENTS FOR THE FARMER'S ADVOCATE AND HOME JOURNAL,
WINNIPEG, MAN.

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LONDON, CANADA.

Why the Half-rate Privilege was Cancelled.

A bold Ethiopian stepped out of the wood-pile at the Dominion Cattle-breeders' meeting in Toronto, last week, when a certain well-known horseman unblushingly admitted that he had been the means of having the railroads cancel the half-rate privilege on stock going from one exhibition to another, which had been in force until last fall. His argument was that an exhibitor sending stock, say, from London to Toronto at single fare (with the usual free return, of course), and then sending it on from Toronto to Montreal at half fare, with free return again, had an advantage over a Toronto exhibitor sending to Montreal at full single rate. Naturally, his objection looked good to the railroad freight agent, and so, as a result of this dog-in-the-manger action, Canadian exhibitors of live stock have the privilege of paying full rates from fair to fair. This works out to introduce many anomalies, such, for example, as the payment of practically full return rates by an exhibitor living at, say, Maple Lodge, unless he went to the inconvenience of shipping home from Toronto, and then re-shipping at once to London. SELFISHNESS seems stamped on some men's characters.

United States Imports of Farm Products.

The farm products imported into the United States during the fiscal year 1907—the year of highest record—amounted in value to nearly \$627,000,000. The imports for 1908 were valued at \$510,000,000 in round numbers, and the average for the five years, 1901-1905, was a trifle over \$455,000,000. These and other interesting figures appear in a bulletin recently issued by the United States Department of Agriculture, which reviews imports of farm products during a period reaching back to the middle of last century.

The farm products imported may be divided into two general classes: (1) Those which compete with products of American farms, and (2) those which do not so compete to any considerable extent. The first class, embracing such items as sugar, tobacco, hay, and hides and skins, make up a little less than half of the total. The principal

items of the second class are silk, coffee, tea, sisal grass, manilla fibre, jute, bananas, coconuts, and Peruvian and Egyptian cotton.

Farm products have always constituted a large part of the imports of the United States, but not the preponderant share that such products hold in her export trade. In the fifties, only about one-third of the imports were farm products. But their importance gradually increased, and in 1875, to the end of the century, agricultural products made up just about one-half of the total, in some years rising above and in some years falling below the 50-per-cent. line. Since 1900, however, while farm products have continued to increase, the gain in imports of manufactured and other non-agricultural articles has been even greater, so that only about 46 per cent. of the total imports since 1900 are to be classed as agricultural.

By comparing imports with exports, it is found that for the five years, 1901-1905, the average U. S. exports of cotton, grain and grain products exceeded by \$74,000,000 her total imports of products of the farm.

Imports of agricultural products have increased much faster than population during the period covered by this review. In the period 1851-1855 these imports averaged in value \$2.71 per capita; during the five years, 1901-1905, the average was \$5.67. Of this increase of \$2.96 per capita, 55 cents was due to increased imports of silk, 55 cents to packing-house products, 45 cents to vegetable fibres, 28 cents to coffee, 20 cents to wool, 18 cents to tobacco, 17 cents to all fruits, 10 cents to coca and chocolate, and 7 cents to vegetable oils.

Comparing the two periods, 1851-1855 and 1901-1905, it is found that in fifty years imports of coffee increased from 7 to 12 pounds per capita, imports of tea from 1 to 1.2 pounds, and imports of sugar from 17 to 46 pounds per capita; while, during the half century, imports of manufactured tobacco doubled, and imports of wool trebled.

Import prices show some marked changes. Cheese rose from 9 cents a pound in 1851 to 19 cents a pound in 1908, and potatoes from 32 to 70 cents a bushel during the same period. Manila hemp, imported direct from the Philippines, was valued at \$76 a ton in 1862, when first recorded separately among the imports; it has subsequently more than doubled in price, being rated at \$171 per ton in 1908. Philippine sugar, on the other hand, despite improvement in grade, fell from 2.9 to 1.7 cents a pound during the fifty-eight years under review, while Cuban sugar declined from 3.3 to 2.5 cents a pound. Among the spices, pepper advanced from 3.5 to 7.5 cents a pound, while nutmegs fell to 12 cents a pound, less than a fifth of the 63 cents recorded in 1851.

Our Scottish Letter.

AN ELECTION IN MIDWINTER.

The first month of 1910 is about over. It has been a stormy, blustering, snow, hail, frost, everything kind of month, and farm labor in the lowlands is far behind, while the terrible snowstorm of the closing week of the month has greatly increased the anxieties and expenses of the hill farmer. With it all we have had a General Election in progress, and in some parts of the country keen politicians have done their duty by the State under very great difficulties. I am not sure that a general election has during my lifetime taken place before in midwinter. It is not at all a pleasing experience, and the candidates in the extreme north of Scotland have had a rough time. Personally, I am not a party politician at all, and at this election I have not cast any vote. This may seem unpatriotic, but I have a heart-hatred of party politics, and would give a deal to see all caucus-mongering abolished, and a great deal more independence displayed by all candidates, however labelled. Fortunately, a few members have been returned this time who do know a little about agriculture at first hand. Whether they will put their knowledge into practice for the good of the country is another matter.

It was difficult to determine what the issue before the electors on this occasion really was; yet several of the subjects which bulked largely in speeches have a deal to do with the well-being of agriculture. The House of Lords said the Budget contained so many novel proposals that the country should have an opportunity of passing judgment on it before it became law. It proposed to tax the windfalls which come to land owners through the purchase of parts of their estates for purposes of public utility. In one such case land which was regarded as so worthless that it was rent of about £60 per annum as the site of a lighthouse. The Chancellor of the Exchequer said: If that land is worth £60 per annum now, it was worth something before. If it was worth nothing before, the practice of penalizing the public when such is required for public purposes should be put a stop to. He therefore proposes two things: To get a share of a windfall for the State, in the shape of taxation, and to prevent such ransom prices being charged for such worthless pieces of land in future; to value all the land

in the United Kingdom now, and to rate it according to its present and prospective value. This is manifestly a very big job, and some declare it to be an impossible job. For obvious reasons land-owners do not like it, and hence they referred the Budget to the verdict of the nation. They do not object so much to the taxation of their "windfalls," and in respect of land "held for a rise" in an urban area, on which taxes and rates have not hitherto been levied, it is generally agreed that it is quite fair something should be charged on such for the benefit of the community.

Another ground of objection to the Budget is the proposed sweeping increases in the duties on alcoholic liquors. These are intended to be levied in various ways, and there can be little doubt, from the experience of the past six months, that whatever they may do to raise revenue they unquestionably have operated to reduce drinking. The liquor interest in all its phases is up in arms against these proposals, which became operative as soon as the Finance Bill passed the second reading. Those who desire to see a sober Britain in order to a prosperous Britain, cannot weep over the result, which is altogether in the way of righteousness. Of course, revenue must be found in other directions, and there can be no doubt that the ideal method of raising it is by assessing men according to their means and substance. The problem is to find out what those amount to in any given case. The Treasury must get money, and not unnaturally it takes the line of least resistance in collecting it. Lands and heritages cannot be hid, and they are therefore the first attacked, but all the same there is inherent unfairness in taxing a man who invests his £2,000 in land, while the man who invests his £2,000 in Consols gets off free. The problem is by no means an easy one, and the alternative of the Unionist party appears to be: Raise the revenue by means of a tariff on manufactured goods, and on all forms of imports which compete with home products. It needs no Adam Smith to recognize that here is a very big problem, and those who plead for Tariff Reform have certainly had considerable encouragement from the results of the elections in the English boroughs and counties. In Scotland it has been otherwise, and, on the whole, the results here must be regarded as giving a general approval to the Budget, and a repudiation of Tariff Reform. The net result of the election appears to be to place the Asquith Government again in power. In the fight some have fallen who occupied foremost places—notably T. W. Russell, the Vice-President, and actual head of the Irish Board of Agriculture. A similar fate befell his predecessor, Sir Horace Plunkett, who probably did more than any man of our time to revive the agricultural industry in Ireland.

DEATH OF MR. SPEIR.

The death of John Speir, perhaps the best-known tenant-farmer in Scotland, took place with startling suddenness on January 25th. Mr. Speir was a native of the parish of Dalry, in Ayrshire, and shortly before he attained his thirtieth year, he entered on the occupancy of the large farm of Newton, on the banks of the Clyde, near to Glasgow. He had reached the sixtieth year of his age when the cord was so suddenly snapped. Mr. Speir was educated at the Parish School in Dalry, and after leaving it he educated himself by extensive reading, wide travel, and accurate observation. A man of amazing industry, he toiled incessantly, and seemed to have an infinite capacity for work. He wrote much, lectured often, and took a large share of the burden of public responsibility. Whatever he did was exceptionally well and thoroughly done, and his mind was constantly planning and organizing new developments in agricultural practice on his own holding, and new experiments in connection with agricultural and dairy problems. Mr. Speir was a great traveller. He was at least twice in Canada, and he may have been oftener. He travelled far and saw much, and whatever he saw of value he put to use in his own work. His farm was the Mecca of all agricultural visitors to Scotland, and those who saw it at the height of the season, when every crop was ready for the reaper, got an insight into up-to-date Scottish farming not otherwise attainable. He had almost constantly several farm pupils from Continental countries, eager to learn the best agricultural methods of Scotland. Those who placed themselves under Mr. Speir's tuition had to work. He had no patience with drones—and the dilettante youth who took to farming as a pastime had a rough time on Newton. The loss of such a man to agriculture in Scotland is almost irreparable.

CO-OPERATIVE AGRICULTURAL ORGANIZATION.

The Co-operative or Mutual Association Movement is rapidly extending among Scottish farmers. The idea of combining for the purpose of reducing expenses was long recommended by men who recognized the leakage which took place when farmers were each working for his own hand, and against his neighbor. The Scot is naturally independent and self-reliant. He does not care to lean on anybody else, and this trait in the national char-

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acter has no doubt operated adversely to the suc-
cess of the movement in favor of creameries and
factories in dairying districts. Now, however, a
beginning has been made, and quite a number of
co-operative societies have been started in which
the principle of "all for each" and "each for all"
is allowed full play. So far the prospects of these
institutions are favorable. Not only in dairying
localities, but also in the remoter parts of the
country, such as Caithness and the Orkney and
Shetland Islands, societies have been formed for
the collecting and marketing of eggs, and other
produce of small farms, in such a fashion as re-
duces the cost and grades the quality. The chief
propagandist in this good work is the Scottish
Agricultural Organization Society, whose energetic
Secretary is John Drysdale. The results so far
have exceeded the most sanguine expectations. The
small farmers of the Orkneys are getting 1s. 6d.
per dozen for their eggs, where they were formerly
only getting 1s. 2d. per dozen. This means a sub-
stantial addition to the revenue of each farm-
house, and the movement is spreading. Those who
have found it so profitable to combine for the
marketing of their produce are setting about pur-
chasing their manures and seeds in the same way.
In place of each small farmer buying his own
dribble, all are combining to purchase in one lot,
and the dividing out to each person will be done
locally at a minimum cost for distribution. Other
forms of self-help are taking shape in the dairying
districts. When milk-collecting centers are being
established, and instead of each farmer and his
household slaving and toiling, the whole is being
handled in an up-to-date fashion at the common
center, with a maximum of advantage and a
minimum of labor to all concerned. We are get-
ting on in this Old Country after all, and perhaps
by-and-bye we may be up-sides with our go-ahead
up-to-date colonies across the sea.

A REGISTRATION DIFFICULTY.

Now I must revert to a Clydesdale theme, and
it is not the most pleasant. Unhappily, a differ-
ence of opinion has arisen between the parent so-
ciety in this country and the Clydesdale Horse
Association of Canada, respecting the identity of
a horse exported a few years ago, by Messrs.
Smith & Richardson, Columbus, Ont. There is
no doubt at all regarding the facts of the case.
The horse exported was transferred to Smith &
Richardson as "Sir Henry," but he is certainly
not "Sir Henry." He is another horse of the
same age, bred by the same gentleman, and got
by the same sire, named "Braidlie Prince." The
Clydesdale Horse Society here, having had their
attention directed to the matter, found beyond all
possibility of cavil that Sir Henry is still in this
country. He was in Cumberland when Smith &
Richardson bought Braidlie Prince, and no excuse
can be offered for the mistake that was made, as
the horses were well known to several persons in
this country. The society here have no option
but to put the matter right. They have recalled
the export certificate granted in name of Sir
Henry; they have intimated their intention to
forward a correct certificate for Braidlie Prince
whenever the other is returned, but the Executive
of the Clydesdale Horse Association of Canada
have refused to consider the matter.

This refusal on their part introduces a novel
element into the relationships between breed so-
cieties throughout the world. Hitherto it has been
the universally recognized rule that the decision of
a breed society respecting an animal bred in the
country in which it is organized is final and bind-
ing on all societies of a like character throughout
the world. The Clydesdale Horse Society of
Great Britain and Ireland would never dream of
calling in question a decision of the American
Association regarding a horse bred in the United
States, or a decision of the Clydesdale Horse As-
sociation of Canada regarding a horse bred in Can-
ada. But in the present case the Canadian Asso-
ciation, without inquiry, refuses to give effect to
the decision of the oldest breed society in the
world, but one, respecting the identity of a horse,
concerning which the Canadian Association has no
possible means of forming any opinion or judg-
ment.

I do hope the Canadian Association will re-
consider their action in this case. If they decline
to do so, they are breaking the brotherly cove-
nant, casting a slur upon the work of the parent
society, and not acting towards its council as
they have always endeavored to act toward their
Canadian friends. "SCOTLAND YET."

A Boy's Farm is one of the noteworthy suc-
cessful concerns of New York State. It covers
one thousand acres near Canaan, and is superin-
tended by W. W. Mayo. It was founded twenty-
one years ago to provide occupation for city boys
whose parents could not control them, or who
were committed by magistrates. There are 80
on the farm now, and a long waiting list. They
receive a four-years' course in farming, black-
smithing, dairying and laundry work, besides regu-
lar schooling.

HORSES.

The Percheron Horse.

By F. R. Pike.

Most authorities agree that the Percheron breed
of horses comes from the crossing of the stallions
left in Europe at the time of the Moorish invasion
with the larger horses of the lowlands. The horses
bred in the low-lying lands of Belgium and Hol-
land, feeding on the soft, rich meadow grasses,
grew grosser and heavier than their brethren raised
on the higher lands, and there is evidence to show
that all the draft breeds, with the possible excep-



A French Percheron Type.

tion of the Suffolks, as we know them to-day, have
had recourse to these horses of Flanders (as this
country was at one time designated) to increase
their size at some period of their history.

About seventy-five years ago the Percheron was
not what would be considered a heavy-draft horse
now; at that time he seldom exceeded 1,500
pounds in weight. They have always been sought
after where strength and endurance, combined with
activity, was required. The London Omnibus
Company, before the days of the motor, used
Percheron grades on their buses in London, Eng.,
almost exclusively, and were at one time the
largest buyers of this class of horse from the
French breeders. After the French breeders had
found regular customers in the American buyers.



American-bred Percheron Mares.

they began to devote their energies to increasing
the size of the breed to meet the requirements of
their customers, and succeeded in producing the
present-day Percheron, with a weight of from
1,800 to 2,000 pounds, without sacrificing to any
appreciable extent his ability to get out and go.

Many people claim that the only fault they find
with the Percheron is in his feet and ankles. While
the typical Percheron has not such sloping pas-
terns of the typical Clydesdale of to-day, still the
fact remains that his feet and ankles stand the
wear and tear of work on hard roads, and the
pavements of cities, better than those of any other
breed.

In the United States, where the Percheron is

the favorite draft horse, and has been ever since
his introduction to that country, about the year
1850, the buyers in the large markets pay higher
prices for grade Percherons than for any other
kind of grades, especially if they are gray in color.

During the last few years the Percheron has
gained considerable popularity with the farmers in
this country, especially in the Provinces west of
the Great Lakes. This is no doubt due in a
measure to the large number of our American
cousins who have crossed the 49th parallel of lati-
tude, and gone into the business of farming in
Canada. The Americans are not the only ones
who like the Percheron, however; there are plenty
of Canadians who find him a most useful animal;
and even if he was
a comparatively
small horse fifty
years ago, there has
never been any
trouble about the
size of his offspring.
They are as large as
any, and always
have been, for that
matter.

In connection
with this question
of size, there never
was a time when
good heavy draft
horses were more in
demand or com-
manded higher prices
than they do at the
present time, and it
seems to me that
the farmer is losing
money when so
many horses, under-
sized, and in thin
flesh, are offered for
sale. If the man
who raises a colt
or a few colts every
year were to give
them the same
amount of atten-
tion and care that
he would bestow
on a steer calf in

order to have him in tiptop condition for
the butcher at two and a half or three
years old, it would be money in his
pocket, and we would not see so many runty
horses on the market. Many men seem to grudge
the colt the grain it would take to keep him grow-
ing all the first winter of his life, and yet it is this
first winter that really makes a good horse or a
runt out of him. A colt properly fed from be-
fore weaning time, through the winter, is a far
different animal from the colt who has rustled his
living on scanty pasture, or perhaps run to a
straw pile all winter, with little or no shelter.
And this difference will never be made up, no mat-
ter how well the colt may be fed afterwards. Once
a colt starts to go backwards in flesh, he stops
growing for a time, and it
takes twice as much feed to
start him growing again as it
would have taken to have kept
him growing in the first place,
and the loss is never altogether
regained. The number of horses
that are sold as "expressers"
or "chunks" on the large mar-
kets, compared with the number
sold as "heavy drafters," is not
as it should be when farmers are
breeding their mares to 2,000-
pound stallions. These "chunks"
in most instances are merely
stunted "drafters," and would
have sold as "drafters" if they
had been properly fed during the
early period of their existence.
The difference between the price
realized for the "chunk" and
the "drafter" needs no further
argument as to whether it pays
or not. Therefore, farmers and
breeders, breed your mares to
the very best horse you can get,
whether it be Percheron, Clydes-
dale or Shire, and when the colt
comes, don't spare the oats and
make his growth, and I venture
to say that you will be well repaid, especially if
you have suitable mares, and can breed them to a
first-class Percheron stallion.

In regard to the Canadian Percheron Horse
Breeders' Ass'n, this association was only organized
in December, 1907, and the membership now num-
bers over one hundred, and it is self-supporting.
The first year of its existence it had some pecu-
niary assistance from the Dominion Government,
as most newly-formed Live-stock Record Associa-
tions have had. Now, however, it is able to pay
its share of the expense in connection with the
registration of pedigrees at Ottawa, and has do-
nated special prizes for Percherons at several of

the principal fairs in Canada, and is now publishing the first volume of the Canadian Percheron Studbook. This volume will contain about 2,000 pedigrees, and will be distributed free to members. Owing to some technicalities which affected a few of the pedigrees, the work of publishing this volume was unavoidably delayed, but the Association hopes to have it ready for distribution early in the year.

Membership fees are \$2.00 per annum, payable the first of January each year, or a fee of \$20.00 entitles one to a life-membership, without further payment. Members receive all publications issued by the Association subsequent to their becoming members free of charge.

Lolling Bits and Other Devices.

In reply to an inquirer who wished to know how to prevent a horse lolling—i. e., allowing his tongue to hang out of his mouth—a good many suggestions have been received. Lolling bits of various descriptions are sold by harness dealers. We reproduce diagrams of some of these which have been used with satisfactory results by several of our correspondents. In connection with these drawings, it may be well to point out that what will effectually overcome the habit in one horse, will not always in another. The general principle is to devise a bit that will keep the tongue down in its place. This is most commonly accomplished by something attached to the center of the bit that will curve slightly upwards and back, preventing the animal from extending the tongue over the bit.



Fig. 1.



Fig. 2.

A Middlesex Co. horseman sends the following: "I remember we had a bit made in something of this way, that answered the purpose in our case. The bit is a little longer than an ordinary bit. The buckling rings are about 1/2 inch from end of the bit; the bend in bit is about 1 1/2 or 2 inches, which lies upon the tongue of the horse, then 2 small rings about 3/4 inch in diameter are placed in the very ends of the bit; a small jointed-wire bit is fastened in the small rings, joined in the center to a small ring, so that it would not kink, but would hang loose pretty well down over the tongue. A blacksmith made ours."

W. E. Stout, of Halton Co., had a loller, on which he tried several experiments, without avail, until he purchased a lolling bit at a harness shop, since when the horse has not once put out his tongue while the bit was in his mouth. This particular bit is constructed as shown in Fig. 2.



Fig. 3.

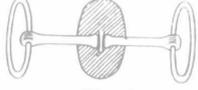


Fig. 4.

Other forms of lolling bits that may be inspected in harness shops are represented by Figs. 3 and 4. Fig. 3 is much like Fig. 2, except for one improvement and one defect. The improvement consists in the bar, which keeps the bit more fixedly in place. The defect is that a horse with a pointed tongue may insert it in the aperture, where it becomes fast, and swells, producing discomfort, and causing inconvenience in removing the bit. A Middlesex horseman of our acquaintance found this trouble with such a bit. A bar across the opening, such as shown in Fig. 2, would prevent this. Fig. 4 is a device we have seen, but not seen tried. The center piece turns on the bit, and is supposed, when in the horse's mouth, to lie flat on the tongue.

Still another device is described by a Lambton Co. subscriber, as follows: "I had a colt that had that habit. I took a small strap and fastened it to the ring of the bit, and brought it over the nose to the other ring of bit, and fastened it tight enough to hold the bit to the roof of his mouth, to prevent getting his tongue over bit. Then run a strap up his face, and fasten to nose-piece of bridle to keep in place. I used this for about three months. It did not seem to interfere with guiding him, and cured him completely."

A Factor in Nation-building.

"The Farmer's Advocate" comes as a very welcome weekly visitor to our home; even the little ones take their share of interest from Beavers' letters. The stock news is invaluable to anyone engaged in that pursuit, and with the home department the paper is one of the great factors of nation-building of today. We wish you continued success and prosperity.

Kent Co., Ont.

WM. W. WEAVER

Fleshing Horses for Market.

The Illinois Experiment Station issued a bulletin recently, in which comparison is made of the cost and efficiency of different rations for fleshing horses for market. The results are of less value to farmers in this country than they are to farmers in the Central States, for the reason that the foods used in the experiments reported on are not generally available in this country. Corn, for example, figures largely as a grain food, with clover hay as fodder. Nevertheless, the results are of some interest.

The fleshing of horses for market is a subject that has received but little consideration from investigators, although the business is one of considerable magnitude and importance. The profits or losses resulting from this industry are determined by a number of factors, some of which are as follows: The market class and grade of horses selected, the initial cost of the horses, their soundness, the cost of feeds, the efficiency of the ration for producing gains, the methods employed in feeding; the length of time necessary to feed to secure the desired finish; the retaining of health and soundness of the horses during the feeding period; and the season when marketed.

The feeding in these experiments was carried on for 84 days, four lots of horses being fed, their value being estimated before feeding commenced and after the test was completed. It was found, after results were totalled up, that the twenty horses had increased in value an average of \$46.25 each, which was at the rate of 18 cents per pound for each pound of flesh taken on. As this was the average value of the increase for the entire lot, it was taken as a basis for estimating the dollar-and-cent gain of each individual lot in the experiment.

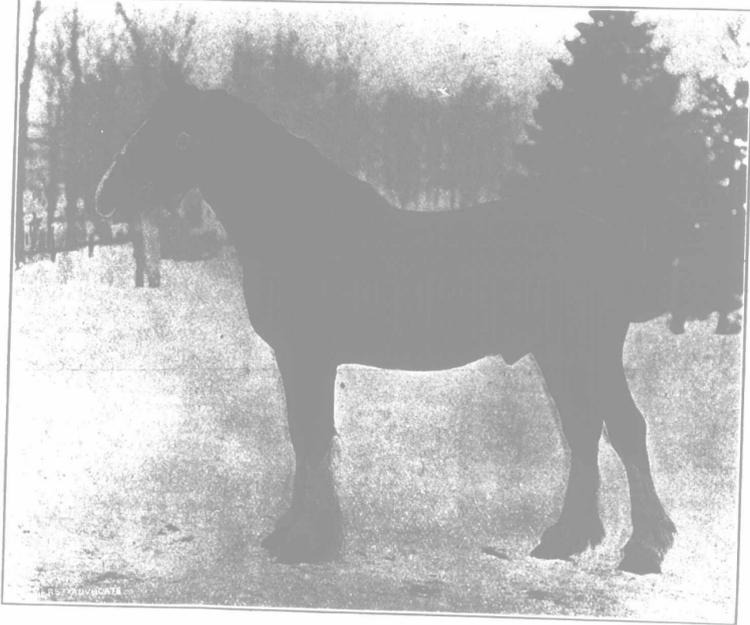
period of 84 days; that clover hay, when fed with a mixed grain ration, is more efficient for producing gains than timothy; in this test clover hay produced 58 per cent. more gains than timothy; that exercise has a retarding effect upon the taking-on of flesh, horses receiving no exercise making 24 per cent. more gains than those having a daily walk of 2.8 miles; that box stalls are safer, but less efficient, than single stalls in influencing the taking-on of flesh, horses in single stalls making 8 per cent. more gain than those in boxes in the 84-day feeding period; and that thin horses of some market classes will not return as large a profit in feeding as those of other classes. The kind of horses it will pay best to feed depends partially upon the season of the year when marketed. All heavy horses will pay better than light horses, and good and choice animals better than those of the lower grades.

Market Value of Good Feed for the Horse.

Address by J. H. Grisdale, Agriculturist Central Experimental Farm, Ottawa, at the Eastern Ontario Live-stock and Poultry Show.

For a hundred years we Canadians have been trying to improve our horses. For thirty years we have been making strenuous efforts in that line. As might be expected, we have achieved something. As is much to be regretted, we are still far short of what might be expected, of what is highly desirable, and of what is absolutely necessary before we take the place we should in the horse-breeding world. We have spent millions on importations; if importation is to prove the salvation of the industry, we must spend millions more. I am not so sure, however, that in importation lies the secret of success.

I admit good breeding important, and importation most certainly as the basis of progress. But too many of us neglect another factor, entering in no small measure into the production of the best horses of any breed, but perhaps more particularly into the development of the individual, as well as the breed or breeds of heavy horses. That factor, of so great weight and influence, is good feeding. None will deny its necessity; few apparently consider it to be of the importance it really is. That, at least, seems to be the case, when one observes the treatment accorded the colt by the average Canadian farmer, more particularly as he flourishes in Eastern Ontario and Quebec, but in no small measure all through the Dominion.



Baron Crawford (imp.) [9592].

Three-year-old Clydesdale stallion. Winner of third prize at Toronto and Ottawa Fall Shows, second at the Ontario Winter Fair, Guelph, and first at Eastern Ontario Live-stock Show, Ottawa. Owned by Smith & Richardson, Columbus, Ont. Sire Sensation.

Thus it was found that lot No. 1, in which each horse consumed 1,911.6 pounds of corn, at 43c. per bushel; 30 pounds oil meal, at \$27 per ton; and 2,075.2 pounds clover hay, at \$13 per ton, gave an average gain in weight of 238 pounds, valued at \$42.84, at a cost for feed of \$28.57, leaving a profit per horse of \$14.27, cost per pound being 12c. In lot No. 2 each horse consumed 1,600 pounds corn, 533.3 pounds oats, at 35c. per bushel; 35 pounds oil meal, and 2,162.3 pounds clover hay, gain in weight being 266 pounds, valued at \$47.88; total cost of feed, \$32.61, leaving a profit per horse of \$15.12, cost per pound gain being 12.3 cents.

In lot No. 3 each horse consumed 1,077.1 pounds corn, 1,077.1 pounds oats, 33.5 pounds oil meal, and 2,194.1 pounds clover hay, gain in weight being 273 pounds, valued at \$49.18; total cost of feed, \$34.76, leaving a profit per horse of \$14.38, cost per pound gain being 12.7 cents. In lot No. 4 each horse consumed 1,807.7 pounds corn, 351.5 pounds bran at \$20 per ton, 34.8 pounds oil meal, and 2,080.8 pounds clover hay, gain in weight being 254 pounds, valued at \$45.72, total cost of feed, \$31.40, leaving a profit per horse of \$14.32, the cost per pound gain being 12.1 cents.

The conclusions from these feeding tests are: That a mixed ration of corn and oats, when fed with clover hay, is the most efficient ration for producing large gains economically in a feeding

A glance at any horse-market quotations shows the general classification to be Drafters, Chunks, General-purpose, Expressors and Drivers. With the exception of an occasional extra-fine individual of some other class, the drafter commands the top price. For instance, to-day, the best drafters bring \$250 to \$300 each, while the next best price is from \$175 to \$250, for extra good expressors or drivers; the chunk and the general-purpose must be content with \$150 to \$175. The chunk and the general-purpose, more particularly in this Eastern part of Ontario, far outnumber the drafters. In my opinion, the great number of chunks owe their chunkiness to feeding methods, or rather the lack of feed. In other words, "chunk" means starved colthood. The Good Book says, "No man, by taking thought, can increase his stature," but it does not say a word about horses. Moral: Get busy; feed the growing horse; see if he can't be made to grow enough to raise him two or three degrees, or greater, when he strikes the market.

There is no doubt but it can be done. It is done in many cases, as witness the fine type of horse it is possible to find in this country, if one is willing to hunt long enough. What we want to see is every colt getting the chance to develop that is his by right of birth—by right of birth because no man unwilling to give the colt a chance should ever think of breeding.

Further, it is a profitable proposition. The

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spread of prices of from \$50 to \$300, between
chunks and drafters, shows good returns from the
small extra amount of feed required to help the
rightly-bred colt past the 1,400 or 1,500 pounds
mark, and so into the big-money sort that glad-
dens the seller's heart and makes the buyer smile,
despite the long price he must pay.

The feeding is a simple matter, yet at all times
requires judgment. It must begin with the dam
while yet the colt is long unborn. She should
work steadily at moderately heavy work. Con-
stant and uniform work, with right feeding, is the
thing. Her food should be somewhat different
from that given the average work-horse. Bran
should enter somewhat more largely in. Clover
hay, free from dust and mold, should figure fairly
prominently in the ration. Roots should in some
small measure form part of her food. She should
be kept in fair flesh, and improving, rather than
losing, in weight. She should work right up to
the last day before foaling.

After foaling, work her very little, and at work
not likely to tax her strength and cause overheating.
Shut the colt up while she is at work. If
she is idle, see that she has a good pasture; a
little extra feed will pay. Feeding the colt
through the mare is a good practice.

But teach the colt to eat early in the game.
Bran and whole oats are good—one to four of oats,
or thereabouts. Give all it will eat. Give
some hay. Wean when eating well. Keep colt
always in good flesh. The first winter run loose,
if possible, in box. If this is not possible, then
out every day.

Feed well all the first winter, giving all the
good clean grain and bran it will eat up. It
should weigh about 1,200 pounds at 12 months
old. Give a good pasture, and a little grain, if
possible, the first summer. Keep him growing and
in good flesh. Most Eastern Ontario colts are
ruined between the ages of 12 and 30 months.
The colt should reach the three-year-old mark in
good flesh, and growing rapidly.

At three years old, he is worth just twice as
much, if properly raised, as he usually sells for
raised by the average farmer.

Dr. Standish on Horses.

Editor "The Farmer's Advocate":

When on the platform at the Berwick Seed
Fair, N. S., Dr. Standish asked his audience upon
what subject they wished him to speak. A chorus
of voices answered, "Horses!"

In reply, the Doctor said that it seemed a
strange subject to discuss at a seed and apple ex-
hibition, to which a voice appropriately replied,
"It is the horse which makes the apple possible."

Dr. Standish agreed that without the horse it
would not be possible to work the orchards, for,
after the man on the farm came the horse. There
is no agricultural product so attractive as the
horse, and it is believed that it would solve one
of the points in the great problem, "How to Keep
the Young People on the Farm."

People might talk about the dairy cow, and
the farmer might keep his son to do the work, but
unless the young people could make money enough
out of her to enjoy a horse, even though they worked
oxen, they would not be likely to remain at home.

The Doctor mentioned a cow which produced
twenty-one thousand pounds of milk in a year.
This was considered profitable, but, comparing it
with a Nova Scotian colt which sold for \$250,
and taking into account that while the mother
was raising the colt she worked for eight months
earning her own living, he thought that the horse
was the more profitable production of the two.

There are as great opportunities for raising
horses in Nova Scotia as in any other Province
in Canada. In the vicinity of Berwick there are
colts which cost \$300 each, and there is no reason
why the raising of apples, horses and dairy prod-
ucts should not be combined.

In order to produce our own horses, it is nec-
essary to acquire a knowledge of the horse, the
class desired, and how to breed it, also the prin-
ciples of feeding. The Doctor emphasized the im-
portance of having good-sized horses. The saddle
horse is valued by its ability to carry weight, and
in the market it is the heavy horse which will get
the price. We want good road horses; the tend-
ency is to breed race-horses, which are not good
road horses. What is needed is a horse of from
thirteen hundred to fifteen hundred pounds in
weight. There are some men who judge at the
exhibitions without any fixed idea of what is
wanted. What we require are beauty, strength,
endurance, good action and soundness.

In the raising of colts, it must not be thought
that they could be reared on wind and water. Dur-
ing the first year they should be fed nutritious
food liberally, but it should never be left before
them all the time. If a colt receives a setback
during the first year, it never recovers. It is
now becoming a fashion to feed cows twice a day,
but horses, having smaller stomachs, should be
fed three times, but they must be deprived of all
food in between meals, that the stomach may rest.
Some salt—not too much—should be placed where

they can lick it when wanted. It should not be
forced upon them by mixing with their food. With
such nutritious food as one and one-half gallons of
oats and two or three pounds of bran per day, the
young colts must have exercise.

It is preferable to let colts run for four hours
in the morning, and four hours in the afternoon,
in a paddock. If there is not a proper place, the
colt should be exercised on the line, but not al-
lowed to trot round in a circle, as that teaches
them bad habits, such as throwing out a foot.
Horses having no exercise are very liable to dis-
ease.

Other essentials in successful colt-rearing are an
abundance of water and pure air. The stalls
should be ventilated and kept clean. Disease
will have a tendency to develop where odors arise
from the manure. Contaminated air will poison
the blood; therefore, pure air is necessary for pure
blood. Drafts do not mean pure air. There is
no other element so destructive to disease germs
as sunlight. The colts should not be kept too
warm, but should be reared under the same con-
ditions which made hardy men and women of the
last generation. The tendency nowadays is to
weaken the young people by coddling and luxury.

Colts should be handled and educated to the
farm from the day they are born until they are
old enough to sell. Manual labor to-day is dearer
than land, and the most expensive item with which
we have to contend. Two horses will more than
produce their extra food, and live on the land.

Touching upon diseases, many are caused by
defects in the mouth, and, often by the knowledge of
some simple remedy, an apparently big wrong
may be set right. Occasionally the defect will be
in the feeding. Horses need a balanced ration;
they are not improved by excessive fattening. Oats
are the best producers of energy. If clover is fed,
fewer oats will be required; the same is true of
alfalfa. The clover should be cured when young,
and not allowed to get to the stage when the
horse will think he is eating raspberry canes.
Much clover is spoiled by being left too long be-
fore cutting. Clover properly fed never caused
heaves, but mature animals do not need so much
of it as colts.

It is advisable to feed three pounds of turnips
to horses every night; carrots are also good when
the horse is shedding his coat, but they should not
be fed in cold weather. Potatoes might be fed in
small quantities, but they are more profitable if
fed to the pigs. Corn meal, having a tendency to
fatten, is another food more suited to pigs than
horses. When a horse is receiving no exercise,
boiled oats might be given with advantage. Chop
is excellent, but Nova Scotia farmers ought to
keep more horses, and raise it themselves. Mol-
lasses is not desirable, as it produces a soft fat.

Dr. Standish said that there was one thing
about which he was very particular, and that was
to have his horses well groomed and made com-
fortable every night. If the men did not care
about it, he would do it himself; it did not mat-
ter so much if the horses went out to work with
a few straws in their tails in the morning, if only
they were properly cared for at night.

In summing up, the Doctor said that the suc-
cess of any district is measured by its wealth.
Prince Edward Island is famed for its horses, and
its people are the wealthiest, per capita, in the
world.

Although much is to be said in favor of rais-
ing horses, not one cow less should be raised, as
butter is very scarce. Some people may claim
that farming is laborious, but the work of to-day,
with all the labor-saving devices, is not to be com-
pared with what it was a few years ago. The
future, with all the other industries that are aris-
ing, holds wonderful opportunities for the farmer
and his produce in Nova Scotia.

Agriculture is the most complicated science
known; for the farmer, unlike the doctor, has to
cope with conditions for which there are no books
of reference.

Denmark is considered a very successful area of
country, but when the cows of that country are
compared with those of Nova Scotia, it has been
proved that the Nova Scotian animals can do
equally well. In conclusion, let us remember that
live stock is the successful anchor of agriculture.

King's Co., N. S. EUNICE WATTS, A.R.H.S.

F. R. Pike, Sec.-Treasurer of the Canadian
Percheron Horse Breeders' Association, the writer
of the article on Percheron horses, published in
this issue of "The Farmer's Advocate," was born
in Tiverton, Devonshire, England, in 1868, came
to Canada in 1886, and after staying a few months
in Manitoba, went south into the United States,
where he remained until 1898, working on the
ranges in Wyoming, Nevada and Utah, and having
considerable experience breeding and selling
horses, especially Percherons. In 1898 he went
overland with a pack outfit to the Yukon country,
and stayed there until 1900, when he came to
High River, Alberta, where he has been ever since,
and of late years has had charge of Geo. Lane's
herd of Percheron mares, which is probably the
largest herd of pure-bred Percherons in North
America or anywhere else.

About the Colt-training Essays.

Judging by correspondence received from a num-
ber of the colt-training essayists, the comparison
of manuscripts on this subject is about as deli-
cate a matter as judging babies or umpiring a
baseball match. It looks as though, from the
opinions expressed, if we had published all the
articles, and left it to a popular vote, there
would have been at least one vote for each essay.
Some of the objections to the awards, as made,
are doubtless entitled to consideration, although
we doubt whether, all things considered, the work
could have been better done. We employed proba-
bly the most competent and experienced horse con-
tributor in the country—a man who has trained
many colts, and is accustomed to passing upon
manuscripts. Probably the methods he favored
are more especially suited to or demanded by colts
of the lighter breeds, but the practices described
will be adaptable in considerable measure to those
of the heavier breeds as well. At least, we con-
sider that the emphasis was properly placed upon
educating, rather than upon "breaking" methods.

One of the competitors faults the winning essay
for its length, which he estimates at 1,600 words
or over, whereas, he asserts, we "limited the essay
to 1,200 words. Reference to the rules, as origi-
nally printed, will prove that he is mistaken. The
sentence reads, "Essays should not greatly exceed
1,200 words." That is quite different. Mr.
Hamilton's essay was a little long, but so full of
practical suggestions, so thorough in the methods
advocated, and so well written, that the judge
considered him entitled to the prize. It is a note-
worthy fact that, so far, all the criticism received
from competitors has been from those marked in
the medium class. None of the closest competitors
—even those whose names were not mentioned in
the awards—have yet entered a word of protest.

LIVE STOCK.

Memories of Amos Cruickshank.

Editor "The Farmer's Advocate":

I was interested in reading the reminiscences of
Amos Cruickshank, and feel like adding some
recollections of my own, if you reckon them worth
inserting. I was brought into contact with Mr.
Cruickshank at one time (about forty years ago
now) when we were both staying for a short time
at Forres Hydropathic. His brother John was
also there and another farmer. The four of us
hired a rig one day and drove out a few miles to
see the famous Dalvey gardens. I may say that
Forres, with the surrounding "laichs" of Moray,
enjoy about the finest climate in Britain, although
well to the north of Scotland, so that the Dalvey
gardens looked and felt semi-tropical. One of our
party remarked how nice it would be if we farmers
could have some such amenities, and Amos replied
by the question, "Would it make us any better
Christians?" This bears out what Dr. Jamieson
states as to a life and hopes beyond this world.
He was indeed a man of few words, but his words
took a while to digest. At that time on opening
his morning mail he remarked: "An American of-
fers me £90 each for a pair of heifers. I suppose
I will let him have them." His brother, also a
most exemplary character, was a pioneer as well
in his own line, fattening two-year-olds. I will
remember the droves he used to bring to Inverurie
market about May or June, weighing, I would
say, from twelve to sixteen hundred, and groomed
from head to heel. That was before the days of
auction marts and weighbridges. Twice I bought
at the sales, then held annually, at Sittyton, once
a bull calf at \$250, and which Mr. Cruickshank
bought back after four or five years service for
\$375. Next purchase was a bull calf, white, at
\$200, perhaps the best animal, in cattle, I ever
owned, and one of his produce, from a black
polled heifer, was the best I ever bred, making
\$190 at two years and three months. That was
before competition from this side had begun to
affect us, and also before prices for Shorthorns
had gone so high, \$500 being the top up to that
time at Sittyton; that would be about the early
seventies. I think the herd at Sittyton and his
other farms numbered over three hundred at that
time. At least four farms were held to maintain
them, comprising about one thousand acres, and
the horses working the land were about as good
as the cattle. Anthony Cruickshank was engaged
in commercial pursuits, and was reputed to have
a quarter-million pounds. It was also told of
him that he said it would have saved him ten
thousand pounds if he had never seen a Short-
horn. A fourth brother, George, was a draper
and hosier in Aberdeen, noted for the quality and
corresponding high prices of his goods. I should
say that I had a partner in the bulls bought, in
keeping with a common practice in Aberdeenshire.
Halton Co., Ont. B. E.

Why Feeders are Scarce.

Editor "The Farmer's Advocate":

So much has appeared in the papers of late about the high cost of meats, etc., and of living in general, and of the meat boycott, that, living in a county where, I think, more beef and pork is produced than any other part of Ontario, perhaps a few hurried thoughts would not come amiss.

Different causes have been given, but in my experience there are at least three strong reasons why farm products are gradually rising, and have been for the last few years. The labor problem is a serious one. We all know too well the allurements of the cities have been gradually draining the rural section—the producing section—of people, a great many of whom could have found plenty of work, and perhaps better pay, to have cast their lot with those that produce food, instead of those that consume. It is a question that can be solved in simple mathematics, and certainly must bear fruit.

Another cause is the dairy industry. Our farm journals are loaded, and have been for years, on this subject, and the large profits derived from its different sources. Seventy-five per cent. of the men on Institute work talk dairy cow and dairy breeds, until our young men can see nothing else. But the most sorrowful plight of all, they invested in breeds for that sole purpose, instead of in dual-purpose Shorthorns, with the result that the male calves are sold for veal, instead of being matured, to take their places at the butcher's block. We feeders find it nearly impossible now to buy good stockers, hence less gain in weight, smaller profits, a poorer class of meat, and a general dissatisfaction with the business. Our last fall supply came largely from the West, and, with the increase in settlement, and the advanced price of wheat, we cannot expect anything else but a decrease from there of surplus stockers.

Another cause, and, I think, the main one, falls on not feeder or packer, but on all of us, as J. J. Hill puts it, as a warning, not the "high cost of living, but living high." Well do we men of middle age and older still remember warnings and advice given to us in youth upon the farm, from parents perhaps long since gone to their reward, which, summed up, would be, "Waste not, want not," and to-day should cover an area for thought that carries us back to a happy, contented and well-governed home. We were taught that self-denial of the vain and foolish allurements made brawn and brain for men and women that were looking for a future of respect and honor; and that to run a business or own a farm could only be the fruits of strict economy.

But what a change! To-day, it is with employee or employer more wages, more profits, more returns. Why? So that I can spend more, live higher, higher, until to-day our land is not producing enough to satisfy the uncalled-for waste and extravagance, not only individually, but in our society and national financing, also. Will the sons and daughters of fair Canada do us honor in the future?

Providence is most royally smiling upon us Canadians at the opening of what is called Canada's century, and let us not squander and waste such a heritage of wealth, etc., for a mess of pottage.

Waterloo Co., Ont.

J. H. W.

The Tariff on Woollens and Wool.

Considerable interest was evoked at the recent Dominion Sheep-breeders' meeting by the report of the special committee appointed a year ago to look into the wool question; and, if possible, to confer with the manufacturers regarding the advisability of working for a change in the tariff on wool. Col. D. McCrae, speaking first on behalf of the committee, stated that they had conferred with the Department of Customs at Ottawa, and found many anomalies in the present tariff situation as affecting the wool-growers. While there is supposed to be a duty of 3c. per pound on such wool as is grown in Canada, it seems to be not collected, because the great proportion of the wool imported into Canada does not conform exactly to the standard of Canadian wool. For instance, Southdown wool grown in Australia is different from Southdown wool grown in Canada. Then, too, the manufacturers have been allowed to import free tops and noils; tops are a partially manufactured article, described as bundles of combed, long staple wool slivers ready for spinning, and the free importation of them is a great boon to the Canadian woollen manufacturer (noils are defined as short wool, which falls from the combs in worsted factories). Then, again, the preference to British manufacturers has not been carried out to the same extent on woollen goods as in some other lines of Canadian manufacture, the preference on worsted cloths amounting only to one-seventh instead of the usual one-third. So strenuous have been the demands of Canadian woollen manufacturers for more protection, that the Customs Department in its schedules and rulings has been disposed to allow them the concessions indicated above, thus cheapening their raw material, while maintaining high protection on their product. Mr. McCrae explained further that

the attempt to arrange a general conference with the manufacturers in Toronto had failed, no common ground having been arrived at.

John Campbell, the other most active member of the committee, supported Mr. McCrae in his statements, and characterized in strong terms the nature of the attempted conference with the manufacturers. Only one or two men had attended the conference, and one of them was a carpet manufacturer. They appeared to have no definite proposition to advance, and from what the committee drew from them, they concluded that in order to satisfy the manufacturers with a readjustment of the tariff, the duty on the finished product would have to be raised to such a point that for a benefit of, say, 4½ millions to the Canadian producers of wool, about fourteen million dollars would have to come out of the pockets of the Canadian consumer. He estimated that the manufacturers had been relieved of about \$150,000 per year in payment of duty, and still they were not pleased. On the other hand, he reported having visited a large woollen mill in Amherst, N.S., whose proprietors were quite satisfied with the outlook for their industry, their trade being on the increase and the prospects bright. While under the circumstances he did not consider it would be wise to press for an increase in the duty on wool, the manufacturers should be required to pay the 3c. per pound which the tariff is supposed to provide.

E. B. Biggar, of Toronto, who has been endeavoring to bring producers of wool and manufacturers to a common ground on this matter, expressed his disappointment at the barren results of the conference in Toronto. The indifference of the carpet manufacturers, and in fact of most of the present manufacturers of wool, he attributed to the fact that the woollen industry as we have it in Canada at present is founded chiefly on carded wool. We scarcely have a worsted industry at all, there being only three mills manufacturing this line of goods, and all of these importing the tops, which displaced a certain amount of Canadian wool. By adequate protection he considered that 26 million pounds of wool could be manufactured in Canada to-day; at present we are importing from 5,000,000 to 6,000,000 pounds of tops and noils, and an equal quantity of waste and rags. The duty on wool would put \$4,500,000 into the pockets of Canadian sheepmen. The importation

it was pointed out that the United States, with their very high duty, had still failed to keep out British woollen goods, there being mills in Britain working exclusively on American orders.

J. Lloyd-Jones exhibited a suit of clothes purchased in England for \$15.00, the like of which he asserted could not be bought in Canada for less than \$25. He then cited figures of sales obtained from an American sheepman, who had secured 33c. per pound for unwashed Shropshire wool last year, 30c. being about the ruling price, while quotations from Canadian woollen dealers the morning of the meeting had elicited a bid of only 16c. for unwashed Shropshire wool, and coarse wool a cent or two less. He figured out that the owner of a flock of 100 sheep was losing about \$100 per year through inadequate protection.

Further light on the situation as to the relative values of Canadian and American woollens was thrown on the subject by Dr. Rutherford, who pointed out that in the United States they have an enormous home market of over 80,000,000 people, so that manufacturers can specialize and keep factories running 300 days per year producing a single article, whereas our Canadian manufacturers, lacking the market and working on a small scale, cannot get the machinery or employ the labor necessary to produce so economically. It was suggested that if the association would go at the matter energetically and look sharply after their interests, representing the facts fairly to the Government, it would probably be disposed to rearrange the matter on a palpable business basis, and stop the abuse of tops and noils coming in free.

The general sense of the meeting favored not the working of an increased duty on wool, but the taxation of tops and noils, some effective action regarding shoddy, and collection of the duty now supposed to be levied on the kinds of wool grown in Canada.

On Feeding Silage.

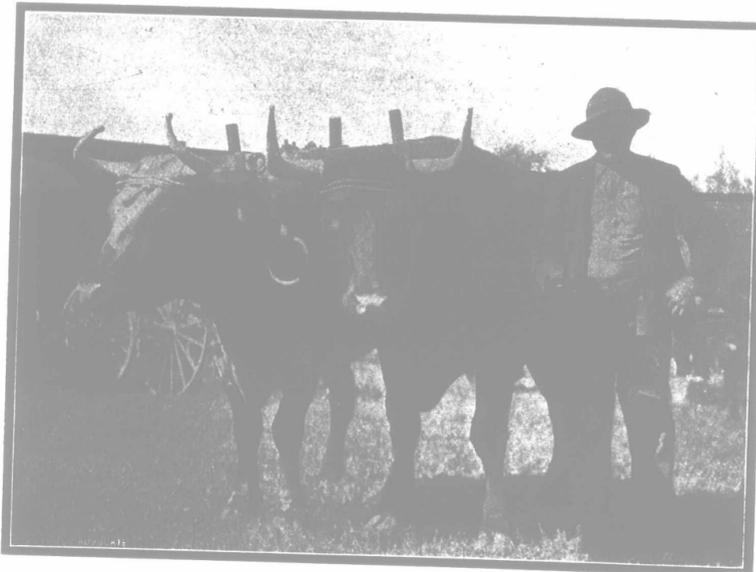
Editor "The Farmer's Advocate":

I have read George Rice's article on feeding out silage, and am afraid it is rather presumptuous in me to make any criticism on it, he being a breeder and feeder of dairy cattle of great re-

pute, known far and near. But my experience leads me to differ from him in a few minor points. What little I know about feeding cows, I have learned by experience in my own stable. I also know I have never yet had any cows to make the record that Mr. Rice has, and I never expect to. Mr. Rice says some do not commence to feed silage until near spring, or when the cows freshen. This is a mistake, as the cows should be fed some silage with the straw all winter.

And he goes on to say, if there is not enough silage to feed 30 or 35 pounds a day for, say, four months, better to feed half that for four months daily, rather than feed

for the other two months, then feed a full feed for the other two months. Then he says, "I think, for a dry cow silage is rather of more value than roots, but for a cow in milk I would rather feed 25 pounds of silage and 35 pounds roots daily than to reverse it." That is why I advise feeding the silage earlier, and keeping the roots until later. Mr. Rice says it makes a difference how silage is used to get the most benefit from it, which is true. And I say it also depends on the kind of silage you have, and how much of it. If you have good sweet silage to feed your cattle some all winter, and plenty to feed your cows when they freshen, and have enough left for six or eight weeks' summer feed, all right. But, as a large majority of the farmers last year had not enough corn to fill their silos, and there will be fewer yet who will have enough to feed all winter, and have any left for summer feed, I would prefer, in those circumstances, to let my cows go without for a couple of months when dry, and have some for summer feeding. To my mind, there is nothing that will take the place of a little silage, with some bran on it, night and morning, during a dry spell in the summer, and certainly there is nothing so convenient.



Pair of Prizewinning Oxen at Brome Fair, Que.

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My cows winter very well on clover hay and oat straw when dry. And if I grew any roots, I would grow turnips, and feed with hay and straw when dry. But I don't consider it necessary to grow roots of any kind. I have cellars that will hold from six to eight thousand bushels; have had them filled frequently, and flatter myself that I can grow mangels or turnips as successfully as most farmers, but have come to the conclusion that they are not worth the time and labor, since I have plenty of silage.

Now, a word or so as to sour silage, and there is danger of it with beginners. I think there is more danger of that causing cattle to scour than there is from silage having been frosted while feeding, or injured from exposure to air too long in warm weather. As Mr. Rice says, sour silage is poor stuff; you can't feed mangels with it. I wouldn't feed mangels with sour silage if I could get them for nothing; that is, if I was feeding get them heavy with the silage. If you have sour silage, mix it well with cut straw, and let it lie for twelve hours before feeding; if in cold weather, have it in a warm place. Sour silage will taint milk worse than turnips. But if fed sparingly, with plenty of good cut oat straw or hay, with wheat bran and chop, you can get along very well with it. I don't care for barley chop for milk. With so many silos being built, there are always some farmers who want to be the first to have their silos filled; they are the ones who will have the sour silage. One word more as to wheat bran. Don't forget there is a big difference in it—easily from six to eight dollars a ton. Oxford Co., Ont. S. A. FREEMAN.

Hogging Down Corn in Lambton.

The turning of hogs into the corn field to help themselves is a rather common practice with farmers of the corn section of South-western Ontario.

H. S. Bilton, Lambton County, has a farm of 100 acres, 85 acres cleared. He grows yearly 20 to 25 acres of corn, Strawberry Dent being the variety preferred. He cuts, shocks and husks about half of it, and leaves the remainder for the hogs to husk. He uses a woven-wire hog-fence to enclose the section in which the swine are allowed to run.

In the fall of 1909 Mr. Bilton turned 55 hogs, weighing, on an estimate, 100 to 140 pounds each, into ten acres of corn. They grew and fattened rapidly. As soon as a wagon load attained the proper weight, about 200 pound each, they were shipped off. When the field was cleaned up, there were ten hogs that still lacked a little of being heavy enough. These were put into a pen and fed for about a week.

After the hogs are taken off, cattle are turned on, and they find a considerable picking of leaves and stalks. In the spring the ground is disked and sown to oats. It is seldom that the stalks are troublesome, but if so, they are raked up and removed.

Mr. Bilton believes in saving work and expense. His husking he usually gets done with a corn-shredder. A boy or young man is hired for the summer months only. Last year he kept over winter thirty hogs, which were sold in June. His spring pigs, after being weaned, run on pasture, and get some corn given to them, if there is any left. If there is none, they go without, as Mr. Bilton buys in no feed.

Besides the 85 hogs which it is intended shall be turned off annually, and which are practically all raised on the farm, there is, in addition to the necessary work-horses, a light stock of cattle. Two cows are kept, just enough to make sure that there will always be plenty of milk and butter for the family; and these, with their progeny, which are sold as they come to the proper age, make up the cattle herd.

THE FARM.

Variegated Alfalfas.

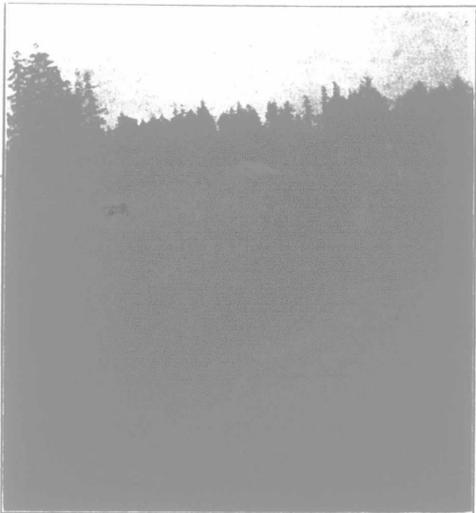
Within recent years alfalfa has forged to the front as a forage plant in the United States with extraordinary rapidity. In fact, it may now be considered one of the most important crop plants in that country. It is grown to some extent in all sections, but it is only in the western half of the country that it takes rank as a leading forage crop. In most parts of the West, the ordinary alfalfa appears to be well adapted to prevailing conditions, but for localities where drouth resistance is important, and along the northern border, where ability to stand extremes of cold is essential, it has been found very desirable to secure improved strains.

The species of alfalfa ordinarily grown bears violet-colored flowers, and its seed pods are coiled into close spirals. Persia was probably the original home of this species. There is, however, another species of alfalfa growing wild in Siberia and throughout the greater part of Europe which bears

yellow flowers, and whose seed pods are sickle-shaped. The prostrate stems and poor seed-bearing qualities of this species are obstacles to its use as a forage plant. It is, however, very drouth-resistant, and is able to stand very low temperature without winter-killing.

Where the yellow-flowered alfalfa grows alongside fields of ordinary alfalfa, there is a tendency, it is said, for the species to cross and produce hybrids combining some of the qualities of both species, and bearing both violet and yellow flowers. In this way have been naturally produced variegated varieties which are better adapted to stand extremes of cold than ordinary alfalfa. Variegated varieties, though possessing only 5 to 10 per cent. of the yellow-flowered parentage, are greatly superior for rigorous northern climates.

The strains of variegated alfalfa which have as-



Top of Oats and Peas Nearly 7 Feet High.

Cut for hay on Amblecote Farm, near Duncan's, Vancouver Island.

sumed greatest importance are those known as "sand lucern," "Grimm alfalfa," and "Canadian alfalfa." In many tests the variegated strains have resisted winter-killing better and have given larger yields than ordinary alfalfa in the Northwest and Canada. The Grimm alfalfa is grown with remarkable success in Minnesota and North Dakota. It is thought that some variegated strain may prove to be more successful than ordinary alfalfa in the Eastern States, but this has not yet been clearly demonstrated.

The United States Department of Agriculture, which has done a great deal of work looking toward the extension of alfalfa culture, has just issued a bulletin giving a very interesting account of the origin and character of these variegated alfalfas.

Changing Seed Grain.

Editor "The Farmer's Advocate":

The time is near when farmers will be looking around for seed grain, or preparing their own for spring seeding. By your permission I should like to say a little on the subject of changing seed. Very much has been said and written about it, but we do not consider that all has been said that should be said. The leading authorities seem to agree that there is little advantage in doing so, unless one can procure better, that with careful selection from year to year there will be no deterioration. This to a certain extent may be true, but there stands over against this another fact, viz.: that there are factors beyond our control which continually tend to lower the vitality of grain and roots, and this when once lost can never be regained. Adverse seasons, uncongenial soils, or soils deficient in the essential elements of plant growth are amongst the principal causes. We hold that many farmers should change their seed every year, if they would obtain the best results. We all know that there are certain soils upon which each variety of grain or roots reach their greatest perfection. Fall wheat and peas, doing the best on strong clay soils, take them from this soil and grow them on light soils—generally deficient in lime and phosphoric acid—there will be a more or less rapid falling off in yield and quality, though the grain sample may be good. The same might be said of all grain products. The farther we get away from ideal soils and climatic conditions, the more important it is to obtain seed grown where these conditions exist. There are hundreds of farms in Ontario whose soil is of a very pronounced character, such as light sand, black muck, stiff clays, marls, etc., where great benefit would result from a change of seed; this we could prove did space permit. We think that the matter will be sufficiently clear to all who are interested—and there are many such—to induce them to go to the extra trouble of obtaining seed grown under ideal conditions. We feel confident, from our own experience, that they will be well paid for it. FOYSTON BROS. Simcoe Co., Ont.

Alfalfa Sod for Oats.

On a farm near St. Mary's, Ont., a field had been in alfalfa for eight years, but as timothy and other grass was getting in and crowding the alfalfa, the owner, Hazel White, decided to plow the field up. This was done in part in the fall of 1908, and the remainder in the spring following. The strength of the alfalfa roots made the job a difficult one, especially in the fall, and the field looked rather rough when finished. However, it was sowed to oats, and they grew so well, despite the roots, or perhaps because of them, that the crop won second prize in the field competition for that grain. Alfalfa is an invaluable soil improver. Corn does famously after it.



Tree lined Road in Osborne Township, Huron Co., Ont.

Making First-class Sugar.

In my sugar bush of about 1,000 trees, the smallest size I tap is about 10 inches in diameter, up to 2½ feet. On the largest size I hang two buckets. The trees are all second-growth hard maple; the most of them have large tops.

In describing the appliances used in my bush, I will begin at the pails first; they are 12-quart, wine measure, 12 x 7 x 13 in. high, made out of 1x and 1xx tin, painted on the outside; cost \$19 per hundred. All the pails are covered, mostly with board covers painted blue on one side and red on the other, so that, in gathering, if blue is up when we start, we turn up the red side, so that we know when each bucket is gathered. The covers are one of the best improvements in a sugar bush, as it is impossible to make a good clean, light-colored syrup without them, besides saving both fuel and sap; they pay for themselves many times over in each season.

The spouts or spiles should be metal to make good syrup or sugar. The first metal spout we used was cast-iron, with a hook; they were very good in their day; we did away with them 20 years ago. We have tried many different kinds since, but the best spout we can find is the one we are using now, called the Grimm spout, made of sheet steel; the No. 1, without hook, cost \$2.00 per hundred, and No. 2, \$2.75. They are guaranteed to run one-quarter more sap than any other kind, and I am sure they will; besides, they do not injure the tree as much as other kinds. They are made so as to seal the bore from the air, so that they will not dry up after the first few runs are over, and have no flanges or projections to close up the sap cells or injure the tree. We bore with a 7-16-inch bit; then, toward the last of the season we often have a dry spell, with no sap running, or not much, and what does run is likely to be colored. Then we seam out the bore with a ½-inch reamer, and the sap will afterwards run as well again as when the tree was first tapped. This spout will take either a ¾-in., 7-16-in. or ½-in. bore, so that we can freshen and clean it out three times during the season.

For gathering, we use a team and bobsleighs, with four-barrel draw-tub, which has a draw-off pipe, so that it will empty itself in the store-tanks by driving up an elevated driveway at the sugar house. We try to have at least four men to gather, each man using gathering buckets holding four gallons, made small at top and large at bottom. We have the roads through the bush close together, so that the sap does not have to be carried very far. The buckets on the trees are emptied without taking them off the spouts; they are emptied by turning them over. The store-tanks are metal, placed on a trestle between the sugar house and elevated driveway. Sap should not be stored inside of the sugar-house, as it is too warm. The cooler sap is kept, the better syrup it will make. In warm weather, it is a good plan to keep ice in the store-tank.

We have it arranged so that the sap runs from the gathering tank, on the sleigh or trucks, into the store-tanks from them, into the evaporator from it, into the felt strainer, then in the syrup-pail, ready for market.

We use a modern evaporator. We used one for fifteen seasons, then sold it for half price, as it was too small for our bush; it was good for at least fifteen years more. The one we have now is 14 feet long and 4 feet wide, costing \$175, and will evaporate at the rate of 4 barrels per hour. It consists of a steel arch, 4 feet wide and 15 feet long; cast front and doors, with heavy grate bars; smokestack 20 feet high.

The pans are four in number, made of 22-gauge tin, and a regulator, which regulates the flow of sap into the evaporator from the storage tank. The front pan is 4 x 8 feet, with three compartments, and corrugated bottom, which increases the boiling capacity. The sap runs three times the length of this pan, into a pocket at one corner, then is carried by a siphon over into a pocket of one of the plain pans, which are three in number, then twice across each of these into the last one, where it is finished into syrup, and drawn off ready for market. We test the syrup with both thermometer and saccharimeter. We draw off the syrup when it tests not quite 219 degrees. It depends on the height above sea-level. The saccharimeter should show 32 degrees in hot syrup; in cold syrup of right thickness, at a temperature of 70 degrees, it should show 36 degrees.

In making sugar, a sugaring-off arch and pan should be used, and the syrup boiled down in it till the thermometer registers 245 degrees, for cake sugar.

We never use anything in the syrup to cleanse it, as it is apt to injure the flavor. We try to keep all the pails and everything the sap comes in contact with clean. The sap is run through a cotton strainer as it runs from the gathering tank into the store-tank, and the syrup is strained through a felt strainer as it runs from the evaporator. We can all the syrup in one-gallon tins, and sell it by orders, from \$1.25 a gallon wholesale, to \$1.50 retail.

The average annual yield of our bush is three

pints of syrup per tree; some years it produces one-half gallon per tree.

The expenses of making a gallon of syrup, I find, are about 65 cents per gallon; that includes all work done in bush by horses, and men, fuel, marketing, and interest on money invested in appliances. I think it would be advisable for the sugarmakers of Canada to form an association similar to the Vermont Maple-sugar Makers' Association, to help the enforcement of the Foods Adulteration Act.

The following rules should be followed to make a good article of syrup or sugar:

Have everything clean. Do not tap too soon, but be ready to start as soon as you are sure sugarmaking time has come. The sixth of March is the earliest we ever started to tap, and we are in a locality where spring opens about as soon as any other place in Canada.

Have a supply of good fuel under cover, so as to boil fast. Gather often, and strain all sap;

The bottoms of the stanchions are bolted into heavy three-inch planking resting on edge, forming the side of manger next the knees of the cattle. The cattle keep cleaner than when tied with chains. No other boarding is used about the manger, so that everything is clear, and the whole flooring is well cemented. There are six horse stalls, each five feet wide. Also, on the north side of the feed alley are four large box stalls or pens, varying in size from 14 x 15 feet, to 12 x 15 feet, for colts, calves or other stock. From each there is a door into the yard outside, through which the manure is cleaned from time to time. Each pen has a manger next the feed alley, and there are also sliding gates or slatted doors for ingress from feed alley. In addition to the opening to the silo, at the east end of the stable, there are three feed chutes for fodder or bedding, one off the barn floor, and one each between the two pairs of mows. A stairway leads up from feed alley to barn floor above.

The main posts of the barn frame are 22 feet high, and the roof, which is nearly square pitch, is supported by purline plates. The posts stand on top of a low cement wall which rises only about 2 ft. 6 in. above the stable floor. The stable walls are double inch boards, with building paper between, which is quite warm enough, and very much drier, in Mr. Weldon's judgment, than a solid cement-concrete wall. For air, exercise and water, the stock are all turned out of doors daily, and drink at a low, round tank, led by a windmill pump.

The excellent and healthy condition of the cows is sufficient evidence of the wisdom of this system of management. Unless on the score of watering appears to be now rather gaining in favor, providing the water supply is well sheltered. If the drinking place is exposed, and water ice-cold, cattle may not take enough for the needs of flesh-forming and milk-secretion.

The basement proper is well lighted with 23 windows of six lights each, the four in the lower sash being 10 x 12 in., and a pair above, hinged for ventilation, 10 x 10 in. The roof is covered with galvanized sheets, and the water carried off in eavestrough. Compact and convenient, the barn is well finished, and a credit to the farm on which it stands, and the work of which it will assuredly promote.

Waste in the Corn Belt.

Accepting an invitation to attend the breeders' meetings at Urbana, Ill., where their University, Agricultural College and Experimental Station are

situated, several days were spent pleasantly and profitably, much information being gathered regarding their conditions of agricultural and livestock husbandry. Wending our way southward from Chicago 126 miles, not a rise of twenty feet was noticed, either on the right or left. Half-way down the land appears too flat for successful cultivation in its present undrained condition. A travelling companion, posted as to soils, stated that much of the area was too light or sandy in composition.

From Kankakee to Urbana, "corn is king," and powerful is its rule. So far as the eye could reach towards all points of the compass, waving cornstalks were in evidence, and not much of prairie lands, is deep-black in color, and very fertile. And, strange to say, its fullness of plant food, and specially that needed by the corn crop, is proving a very stubborn hindrance to a betterment of conditions or the possible progress along agricultural lines. Some maintain that the ease and (of recent years) certainty with which corn has been grown year after year has led to a slipshod and unbusinesslike system of farming. Little or no attention is paid to maintaining soil fertility, as the large majority firmly believe their



A Convenient Sugar-making Plant.

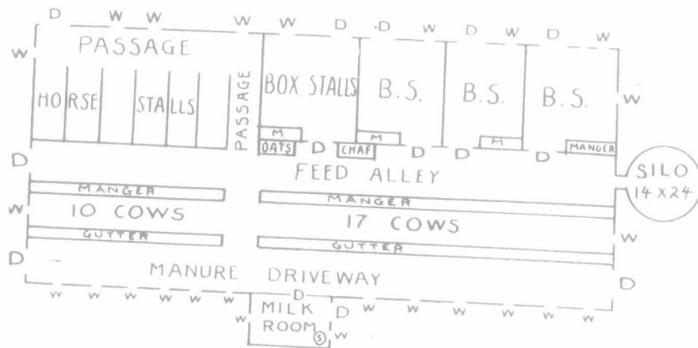
do not keep it long on hand. Have an evaporator that has interchangeable syrup pans. Draw off syrup often, and, if you should make any poor syrup, do not mix it with the good, so as to sell it all for first-class.

Wentworth Co., Ont.

MARCUS LEE.

Basement-barn Plan for 100-acre Farm.

The accompanying engraving illustrates the basement design of a convenient style of barn suitable where dairying or cattle-feeding is pursued on a farm of about 100 acres. This one was erected last year by Arthur Weldon, Westminster Township, Middlesex Co., Ont. Its dimensions are 40 x 90 feet, extending from east to west, with a covered approach, 14 x 16 feet, underneath which is a milk-room. The advantage of the approach with roof is that the bridge, which forms a covering for the room below, is preserved from wet and decay, and, being dry, gives the incline a better foothold for the horses. There is one driving-floor, 14 feet wide, across the upper barn;



Plan of a Compact Barn.

Erected in 1909 by A. Weldon, Middlesex Co., Ont.

east of it are two bays, 20 feet wide each, and west two bays, 18 feet wide each, but out of the lower portion of the north side of the latter is taken the granary, 18 x 36 feet. Along the south side of the basement stable there is room for 27 swinging stanchions. The manure passage is wide enough (7 feet 6 in.) for sleigh or trucks and team. In order to give the horses a better foothold with the loads, the cement-floor surface of the passageway is creased across at intervals, also the rear portion of stall floors. The bottom of the manure gutter slants outward. The manger bottom (two feet across) drops four inches from the floor of the feed alley, which is seven feet wide, except before the horse stalls, where it is five feet.

rich land is inexhaustible. But the few, the close observers, are getting alarmed. With no more than five acres of grass in the hundred, having no fences to mention, and barns small, with cornstalks to the value of hundreds of thousands of dollars largely going to waste, and the manure made in open feed-lots washed out by rains and snows, it is a cause for surprise how long the tillers and owners of the soil have felt safe and secure, when disaster is sure to drop sooner or later, like a "bolt from the blue."

The rearing of beef cattle, once a leading and profitable industry, has been in many parts of the State discarded, and the finishing of Western-grown cattle and sheep is the now popular line of meat-making. One million sheep, seven million hogs; a full stock of horses, home-bred, and large numbers of imported mares and stallions from Europe, with the feeding cattle and sheep mentioned, and the necessary herds of dairy cows to furnish milk to towns and cities, consume about half the corn grown in the State.

The indifference of the majority as to the value of manure, or the need of caring for it, was a puzzle to the Canadian in this agriculturally-enlightened age. It is difficult to believe that in Illinois barns have been moved, rather than the many years' accumulation of manure, but such was the report of a long resident. There is well-timed alarm manifested by the thoughtful because of the constantly-decreasing yields per acre, and a feeling of anxiety was in the air at each meeting of the different associations. When Ontario's average of wheat is double theirs, and corn (their staple crop) gives but an average of 28 bushels per-acre, with Ontario's statistics giving 76 bushels as average, we need not wonder should there be unrest of mind. The writer, when asked to state his views, could not refrain from being outspoken, and frankly said that the thought uppermost in mind was fully pictured by one word, and that was WASTE. To say that the waste of animal feed, as seen in the thousands of acres of cornstalks, was deserving of condemnation, was putting it mildly. The waste of valuable manure, produced from the heavy feeding of corn in the open lots, was also scored in definite terms. But worse, perhaps, than all else is the reported teaching of one of the agricultural college staff, whose theory is that it will be possible to keep on growing corn indefinitely, without animal manure. His plan is to maintain fertility by the use of commercial fertilizers. It was freely stated that the effect, already seen, is that the young man trained at the college, on going back to the farm, will pay but little attention to stock-breeding or feeding. They are determined to make an easy living growing corn, spending but a part of their time so doing, and try having a good time the balance of the year. The mischievousness of such teaching in this enlightened age will, sooner or later be seen in disastrous results.

The meetings were spirited, the discussions vigorous and pointed, and there was no hesitation in giving free expression of opinions. Attended by those who were said to be the backbone of agriculture in the State, as well as gentlemen holding positions of trust, some at home, and others from adjoining States, all told, formed a company of veterans whose deliberations were elevating. As many hundreds, mostly young men, were attending the two-weeks' course, and several other hundreds taking the full course, they were in the majority, and did much to inspire enthusiasm.

One of the surprises of the trip was the large number met who have invested in our Canadian Western lands, not as settlers, but as speculators. How it is that Americans can, as land-seekers, travel on Canadian railways on a cent-a-mile rate, while Canadians from the East get no such privilege, is a conundrum.

The several associations' members had their annual round-up in a Friday-night banquet, when good-feeling, wit and genuine friendship found free scope. The occasion shall long be happily remembered, because of the free expressions of goodwill towards our country and self, and the many kindnesses, heaped to overflowing measure, during the few days' stay with our American cousins. As so often happens, Canadians were met occupying positions of honor and trust. Prof. Blair, a Nova Scotian, head of the Horticultural Department, is credited with having the best-directed and most fully-equipped station of the kind in all the Union.

Canada is looked upon by our neighbors as a land of great possibilities in the near future. It is, however, Ontario which is in their mind's eye. It is in the air with them that the acquirement of our banner Province, with its comparatively superior agriculture and general progressiveness, would be an addition fully gratifying to them as a nation. What encouragement such sentiments should be to us, in our excellent country, to keep on, and press more and more determinedly forwards to the highest possible level of advanced agriculture.

There cannot now be the shadow of a doubt as to the products of the farm having reached somewhere near to their true relative values, compared to those of other commodities. And when our Province stands out in the foreground as the lead-

er in such productions, not only in the opinion of Canadians, but also in that of our good friends to the south, well may we take heart, not to "rest on our oars," but ever to strive to reach a still higher plane as successful producers of the higher qualities, which the best markets are eager to barter for, at the high and, therefore, profitable prices. Such are the conclusions drawn from an exceedingly pleasant outing on the other side of the line.

JOHN CAMPBELL.
Victoria Co., Ont.

Wanted, Silo Roofs

Editor "The Farmer's Advocate":

The widespread but welcome snowfall over so much of Eastern Canada this season emphasizes more sharply than usual the need for silo-roofs to protect the surface silage from wet and cold. An inch or two of wet or frozen snow is no little detriment to the morning meal of the cows, I can tell you. If held for summer feeding, silage exposed to rain and heat will decay more rapidly, also. Speaking for myself and neighbor, with tub and cement silos, respectively, we would appreciate very much if "The Farmer's Advocate" would publish from other readers short letters telling what material are required for inexpensive but efficient roofs, how put on, and the approximate cost, including height and design of door.

Durham Co., Ont.

FEEDER.

J. O. Duke, President of the Ontario Corn-growers' Association, in his address at the opening of the Convention and Exhibition lately held at Essex, said the reason there was so much corn standing out in the fields yet was because the grain was so soft that it was not fit to crib. There had been plenty of good husking weather, but the corn was not ready then, and the reason of that was that the land had been too wet to work in spring; and that, again, was because so much of the land was undrained.

when I have been unable to mix the feed, the milk production has dropped immediately, and has taken some two or three days to catch up again. Hay was fed in very limited quantities, and the cows had to fill up on straw; these were fed three times daily. Owing to scarcity of bedding, the gutter behind the cows was filled with fresh horse manure, which proved a good absorbent. This, of course, will be condemned by some, but it is far better than allowing the liquid excrement to waste.

In summer the cows depended entirely on pasture until about the middle of July, when they were fed green oats, barley and peas. This ran out in about three weeks, but by that time the corn was ready, and was fed right up to the time the cows were stabled. Last year was the first I had tried summer feeding, and I don't intend to be without something in future that will keep up the milk flow when the pasture gets short or dry. A mixture of fish oil, sulphur, and oil of tar, was used for the flies, and proved particularly effective in keeping off warble flies, which are such a torment to the cows in spring.

The milk was all kept at home, separated, and fed to calves, pigs and poultry, and I think it is cheap feed at 20 cents per hundredweight. The butter was churned at home, and every churning weighed. The low average price, 20.8 cents per pound, is accounted for by the fact that, in summer, as I had no ice, it had to be sold at the local store; the highest price for the year was 26 cents, in Toronto.

Following is the individual record for the year, giving age of cows, milk produced, amount and cost of feed, etc., in tabular form. Hay is valued at \$8 per ton, grain at \$1.25 per cwt., and roots at 10 cents per bushel, these being the actual prices in this locality last year. Every milking was weighed, while the feed is calculated from frequent weighings, whenever the feed was changed. Each cow is charged the same amount for pasture and summer feed, though, no doubt, they vary as much in eating capacity in summer as in winter:

Name of cow.	Age.	Calved.	Lbs. of Milk.	Hay lbs.	Grain lbs.	Roots bus.	Pas-ture cost	Green Feed cost	Total cost feed.	
Dot-Shorthorn;	6 yrs.;	Jan. 15th.....	7,438	2,170	1,162	8.7	\$6.00	\$5.00	\$35.07	
Belle-Jersey;	7 yrs.;	Dec. 25th, 1908 *..	5,542	2,065	1,176	10.	6.00	5.00	34.96	
Floss-Jersey;	8 yrs.;	Feb. 14th.....	3,052	1,190	756	4.75	6.00	5.00	26.00	
Beauty-Jersey;	3½ yrs.;	June 6th.....	3,053	50	462	13.4	6.00	5.00	18.31	
Pansy-Sh.-Jersey;	1½ yrs.;	May 30th.....	2,920	105	427	13.4	6.00	5.00	18.10	
Brindle-Sh.-Jersey;	2 yrs.;	Aug. 25th.....	1,760	105	427	13.4	6.00	5.00	18.10	
Total pounds of milk			23,765							\$150.54

*Also calved December 5th, 1909.

As the last three cows came in in summer, they received very little grain, hence the low cost of feed. The grain fed them while in calf is, however, counted in.

The United States Government has adopted a policy of encouraging settlers to take up agricultural land in Alaska and farm it. Secretary Wilson is quoted as stating it to be quite within the bounds of probability that the farm products of that region will eventually be worth more than the mineral output. If such are the possibilities of Alaska, what shall be said of Canada, which has an immense area south of the lowest latitude of the Alaskan peninsula?

THE DAIRY.

A Year with a Dairy Herd.

SECOND-PRIZE (TIE) ESSAY.

My herd is a small one, comprising one Short-horn, three Jerseys, and two Shorthorn-Jersey crosses—all grades. The cow stable is part of an ordinary bank barn, built in the seventies, and not by any means up-to-date, but fairly light, well-ventilated and comfortable. In giving records of the past year, the figures for feed and milk production are easily obtained, as everything was weighed, but it is extremely difficult to give a fair estimate as regards cost of labor and value of manure, as the former is all done in the family, and no cash paid out for it, while the latter is dumped out on a pile and mixed with the manure from the other stock. Great care has been taken, however, to try to arrive at fair figures for both, and I think they are not far off.

The winter feed consisted of hay, straw, chaff and mangels, and oat, barley and buckwheat chop. A very small quantity of bran and oil cake was fed, but the prices here for these are too high to be profitable, unless one can buy in large quantities. Grain was fed only twice a day, but never alone. It was mixed with the chaff and roots, with a little salt sprinkled over, and the whole moistened (not soaked) with water. I have found out the truth of Prof. Dean's recently-pronounced dictum, that succulence will make up in some degree for an overwide ration. On rare occasions,

As I have not had the cows tested for fat, I cannot give the actual profit for each one, though, of course, I have a fair idea of the percentage fat of each from observation in separating and churning. The average per cent. fat for the whole herd, however, is easy to estimate, as both butter and milk are weighed, and works out at 4.35.

BALANCE SHEET.

Expenses.	
Cost of feed	\$150.54
Labor	60.00
Stabling	10.00
Interest on value of herd, etc., at 5 p. c.	15.00
Total expenses	\$235.54
Receipts.	
1,050 lbs. butter, actually made, at 20.8 cents per pound	\$218.40
1,750 lbs. milk fed calves = 90 lbs. butter	18.72
1,500 lbs. milk used in home = 77 lbs. butter	16.00
19,500 lbs. skim milk, at 20c. per cwt.	39.00
50 tons manure, at \$1.50	75.00
Total receipts	\$307.12
Total expenses	235.54
Profit	\$131.58

This shows a clear profit over cost of feed, labor, etc., of \$131.58, or nearly 56 per cent. As has been mentioned, the cost of feed is easy to get at; the cost of labor may seem high to some, perhaps it is, but when one reckons on the time spent in milking, feeding, cleaning out stables, separating and churning, \$10 per cow does not seem to me to be excessive. It is often said that the manure pays for the labor, and, as far as one can judge, they do about balance. In my case, however, the manure is more valuable than in many others, as I have a run-down farm; in fact, I am not sure that I should not have valued it at

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\$2.00 per ton. As to the amount of manure, that was calculated from the proportion of cows to the other stock, and the whole quantity of manure for the year. The amount of milk fed to calves is based on actual weights, as also is that for home use. The latter was a surprise to me, as I did not think our milk bill was such a big one. Like a good many other things on the farm, the cost is seldom counted, as no actual cash is paid out for it.

In conclusion, I would say that, although I consider a fair profit was made from the dairy herd in 1909, I am not satisfied, and look to larger yields and profits in the future. I would not keep one cow one day without weighing her milk and feed, and am quite convinced that individual milk records are a necessity to profitable dairying.

W. HARGRAVE.

Waterloo Co., Ont.

Export of Cream to United States.

The export of cream to the United States, made possible by the reduction of the duty to five cents a gallon under the new tariff, increased last fall with remarkable rapidity. The official returns of cream exports for the last five months of 1909 show this clearly. They are:

For August	16,509 lbs.
" September	121,602 "
" October	390,993 "
" November	700,599 "
" December	318,071 "

Total

1,547,774 lbs.
The value is not inconsiderable. Valuing the whole at the price given for the cream exported in December, 11.8 cents per pound, it would total up to more than \$180,000.00.

Lakes and Rivers of Milk.

In concluding his address on "Danger to the Canadian Cheese Trade," J. A. Ruddick, Dairy and Cold-storage Commissioner, Ottawa, gave a calculation which might serve to impress his audience with the magnitude of the dairy industry. "I have computed the total value of our exports of butter and cheese from 1880 up to the end of the last fiscal year, and I find that they total \$359,707,012 for cheese, and \$62,399,931 for butter. If we add to these sums the home consumption of milk, butter and cheese for the same period at \$10 per head, we have the unthinkable amount of \$1,885,089,703. Now, just think, if you can, of the enormous volume of milk which has been produced to be worth that much money, at \$1 per 100 lbs. It would make a lake, approximately, 8 miles long, one mile wide, and 15 feet deep; and it would supply a stream 10 feet wide and one foot deep, running at the rate of three miles an hour, for two years and two months."

Successful Year in a Co-operative Creamery.

Editor "The Farmer's Advocate":

As it is seldom we see any communication from this quarter in your valuable columns, we hope you will not consider the writer trespassing in submitting the following. At the annual meeting of the Farmers' Co-operative Creamery Company, Limited, held at New Dundee on January 28th, a large number of shareholders being present, a report of the business transacted during 1909 showed that the company had enjoyed a very successful year. The business year had resulted in a substantial increase in the number of patrons and shareholders, and butter manufactured. There are at present 185 shares, sold at \$10 per share. During the past year an up-to-date building has been erected, furnished with the latest and most-approved equipment. In connection with the creamery is a cold-storage, built according to plans and specifications supplied by the Dairy and Cold-storage Commissioner. It is a cold, dry-air circulation system, the kind that stands highest by test and most approved by the best cold-storage authorities. This classifies the plant among the best in Ontario.

The amount of butter manufactured during 1909 was 146,062 pounds, for which \$33,344.61 was received. This shows an increase of 42,783 pounds of butter over 1908.

Geo. Bouchier, one of the patrons and shareholders, took fifth prize in the dairy-herd competition for Western Ontario. From a herd of nine Jersey grades he sent 1,184 pounds butter-fat to the creamery during the six months, from May 1st to October 31st, 1909. This is an average of 131.5 pounds of butter-fat per cow.

A. Goettling, another patron and shareholder, stood sixth, with an entry of ten cows, most of which are Holstein grades.

The report showed, further, that a high-class trade has been developed in one-pound prints in several of the largest cities of Canada, which goes to prove that the creamery is producing butter of the finest quality. After this gratifying report was unanimously approved, the election of directors followed.

A number of interesting questions were then discussed, including the individual-can system for collecting cream. The subject was ably treated by the enterprising buttermaker, H. B. Lowe, and others. It was decided to investigate further into the merits of the system, and report at next meeting.

In conclusion, allow me to urge upon farmers to organize and co-operate. The great success which has accompanied the efforts in this respect in this community is very gratifying, indeed. It should be understood by all that this is purely a farmers' company, organized for the mutual benefit of farmers. It is conducted on co-operative principles, which provide that the bare cost of manufacturing the butter be deducted from the total receipts, and the balance paid to patrons in proportion to the amount of butter-fat supplied by each. Farmers here are beginning to realize that the time has come when they must organize, in order to assert themselves.

After having some experience with creameries managed by private capital, joint-stock company, and, lastly, co-operative, I do not hesitate to state that, from the farmer's and dairyman's standpoint, the co-operative system is the kind for us to patronize. I believe in Government ownership or in Government control as they have it in Alberta and other parts of the Canadian West; but in communities fairly settled, and where farmers are in moderate circumstances, I believe in their organizing, investing capital sufficient to equip a plant, and then staying with it.

Co-operation is the cry of the present time. Let us as farmers be awake to our opportunities, unite, co-operate, and in this way we can be of mutual benefit.

"NEW DUNDEE RURAL."

Waterloo Co., Ont.

A Frontenac County (Ont.) subscriber writes: "In January 27th issue you have a record of high-grade Shorthorns. To try to advance the popularity of the Shorthorn, we kept a record of our grade Shorthorns last year, by weighing the milk night and morning for the full year. There were thirteen cows and three two-year-old heifers. Quantity of milk, 97,655 pounds; average for the sixteen, 6,103 pounds. Two of our best cows, unfortunately, did not freshen till July, else the record would have been better."

GARDEN & ORCHARD.

Money in Apples in Huron Co.

Editor "The Farmer's Advocate":

A few years ago I had the privilege of attending the Ontario Agricultural College, taking a two-year course. When leaving there I did not know exactly what line of agriculture I would ultimately follow, but drifted gradually into fruit-growing, and especially apples, in Huron County. The factors which govern the profitable culture of any crop are, of course, the determinants for the outlook for that particular branch of agriculture. When did the apple-growers' future look more promising than at the present time, with our markets, such as the Mother Country, where they require an immense amount of fruit annually; our great West, the population of which is increasing very rapidly, where there are 250 million acres, only seven millions of which have been touched by a plow; and our friends across the line occasionally requiring considerable quantities of our fruit? We can always get the market if we produce what the consumer requires, and in this line of agriculture is No. 1 fruit.

Now, I shall give you some of my personal observations and work during the past two or three years. Twenty-five years ago my father planted some thirty apple trees, Spies, Seeks and Russets, but just a few figures, which bear upon my topic. Take, for instance, the Spy trees, twenty-five years old. In 1907 these trees had a full crop; in 1908 the crop was very light; in 1909 they had another full crop, of from nine to twelve barrels per tree. Instead of planting 30 trees, if there had been 1,000 planted and cared for, see what a handsome financial return they would bring the owner at this age. Allow, then, forty trees per acre, and ten barrels to the tree, which is only a fair crop, we have then 400 barrels per acre, at usually a good price, if your fruit is good; or take the average for three years, 260 to 270 barrels per acre, deducting all expenses, you still have a very large net return per acre.

Again, seven years later, an orchard of 500 trees was planted. At that time the planting was supposed to be a very ridiculous idea, but not so today. The varieties were Spy, Baldwin, Greening, King, Ben Davis, Twenty-ounce and Seek. The last two turned out to be seedlings, when the trees grew to bearing age, so required to be grafted, leaving about 300 bearing trees in the orchard. The plantation was cropped till 14 years old, and by this time there began to appear some fruit on the trees, and especially the Ben Davis. In 1907 we harvested a crop of over 500

barrels, which brought the grower nearly \$1,200, or \$200 per acre. The next year, 1908, the apple crop in Huron was almost a failure. In 1909 this orchard gave a return of \$1,100, bearing in mind the Spies were very lightly loaded, making the average return per acre for three years \$130 for trees up to eighteen years of age. This orchard has only started to do good work. There is one very ancient plantation coming under my notice, containing some 40 trees, mostly Spies. These trees are over 60 years of age, and last year some of them produced as many as 16 barrels per tree, so you see that trees do not decrease in usefulness when 35 or 40 years old, and I cannot see why they are not, under proper care, good for at least five or six years more. So you see, if trees are well nurtured they should last a man a lifetime. During the past few years I became somewhat acquainted with tree culture. In the spring of 1908 I happened to run across a large young orchard, with some beautiful stock in it, and seeing what I thought to be an A1 opportunity, I bought this plantation, containing at that time some 1,800 trees, 1,200 of which were 16 and 17 years old, the remainder two years planted. They consisted of Spies, Baldwins, Russets, Greenings and Kings. The orchard, like many others, had been sorely neglected. The land had been cropped, the trees had not been pruned, and had never been sprayed; consequently, had never given satisfactory results. In the spring of the same year I went to work and pruned as many of the larger trees as time would allow; the trees had been fairly well headed, therefore needed very few main limbs cut out. It is quite customary for many to prune off all the small limbs and twigs on the lower limbs, which practice if continued would be detrimental to the object in view. Instead, thin out the outer parts of the tree, letting in air and sunlight. During the season the trees were sprayed and the land thoroughly cultivated. I also planted 500 more trees, which I obtained from a nursery about eight miles distant. In the fall of the same year there were 200 barrels of apples sold; not a very large return for the outlay, but, nevertheless, not at all discouraging.

METHODS IN DETAIL.

The past summer's work I shall give you in more detail, so you can see our yearly methods. We always start to prune about the first of March, and continue until the weather gets warm enough for grafting, if there is any of it to be done. Some trees were top-worked, using Baldwin and Steel Red scions, doing the whole tree the one year, which gives a more even tree and satisfactory job than taking two or more years to do the work. In colder sections it is better to spread the work over two years or more. The orchard was sprayed four times, using Bordeaux mixture and Paris green. Three of my neighbors also sprayed their orchards. The ground was well cultivated during the summer, working in the manure and ashes, which was put on during the previous winter, up till the 10th of August, when a cover crop of clover was sown; this made fairly good headway. If our growing crop fails, nature usually supplies one, in the way of snow.

The returns were very satisfactory, some 600 trees bearing fruit, of which was packed nearly 1,000 barrels; some varieties 90% No. 1, while other kinds 60% to 75% No. 1. The large quantity of small and clustered apples were very detrimental to the whole crop. The crop was sold for \$2.25 per barrel, f.o.b. The cost of spraying, figuring copper sulphate at 6¢ per pound, lime at 40¢ per bushel, and Paris green at 25¢ a pound, was from 10 to 15 cents per tree. I left one tree unsprayed, just to show people the results. There were no marketable apples on the tree, and if the whole crop had been likewise I would have lost \$1,500. I could enumerate other orchards doing just as well under proper management.

The above remarks go to disprove the seemingly widespread opinion, that there is no money in apples, and that to make money in fruit you must live in the Niagara district and grow peaches, small fruits and grapes, but such is not the case. Trees are like animals, and if they do not get proper care you cannot expect to get satisfactory results. Many old orchards, as well as younger ones, are full of diseases of all kinds, and if your sprayed trees are in the same vicinity as these you are much hampered in your work. There is an act to be submitted to the present session of Parliament for the compulsory care of orchards, so in this way we ought to get over that difficulty. We are as yet without a co-operative association, but judging from the results that some of the present associations are obtaining, I do not think it will be long before we have one established in Huron County.

In Ontario, as a whole, those who are looking after their respective interests in the apple industry are obtaining much better results than in former years. We must keep right along these lines of advancement, and in the future let us as fruit-growers put forth every effort for the betterment of our industry. We can safely look forward to great achievements, as we are only beginning to take advantage of our opportunities.

Huron Co., Ont. R. R. STONAN.

Insects Attacking the Apple—I.

Specially prepared for "The Farmer's Advocate," by
L. Caesar, O. A. C., Guelph.
CODLING MOTH.

Everybody has seen wormy apples, and recognizes that the insect which causes them, the codling moth, is one of our worst orchard pests; in fact, it is the cause of more loss to apple-growers than all other insects combined. About twenty-five per cent. of the apples of Canada are attacked each year by this insect, and rendered unfit for market. This means an annual loss of not less than \$2,000,000. This is a great loss, and it is gratifying to know that experiment after experiment has shown that it can nearly all be prevented by a single thorough application of poison at the right season of the year. To understand how this is possible, we must have some knowledge of the life-history of the insect itself.

Life-history.—The codling moth passes the winter in the worm stage, in a little cozy nest in



L. Caesar, B.A., B.S.A.

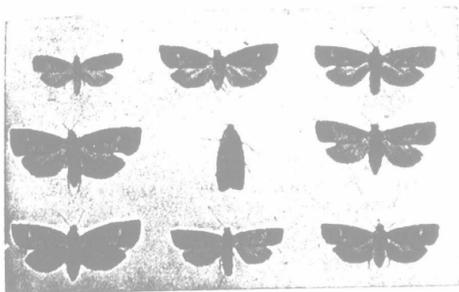


Fig. 1. — Codling moth. (Natural size. After Slingerland.)

some good hiding-place, such as under the loose bark of trees, or in crevices, or in cracks in the walls of fruit-houses. When the warm spring weather has come, the worm undergoes a great change in appearance, and turns into a little, glossy, brown, cigar-shaped creature, known as a pupa. After remaining in this stage for a few days, it changes into a pretty little moth, as shown in Fig. 1. Only a very few moths appear as early in the season as the time of the blossoming of the apples, by far the greater number not emerging until a couple of weeks later, and some not until the end of July, or even later than this. This long period during which they continue to emerge accounts for our finding worms in all stages of development throughout the summer, even where there is only one brood. The moths themselves are very seldom seen during the day. They lay their eggs singly on the leaves and fruit, from 30 to 80 eggs being laid by each female. In from seven to fourteen days these hatch out, and the little worms seek the fruit, though sometimes they feed to a small extent on the leaves before reaching it. Once they have got to the apple, they hunt for an easy place to enter. The easiest they can find is the blossom end, or calyx, as we shall now call it. Here they readily work their way in among the tiny leaflets, feeding as they go, and gradually eating their way down into the pulp of the apple. It is very important to know that by far the majority of worms enter by the calyx end. This year, 66 per cent. were found to have entered apples at this place, and 90 per cent. entered pears there. After remaining in the fruit from 20 to 30 days, they are full-grown, and leave the apples, which in most cases have ripened prematurely and fallen. In all parts of Ontario as cold as Guelph, all but a very few of the worms now seek a hiding-place under the bark of trees, or in crevices, or other sheltered spots, and remain here over winter. In more southern and warmer parts, however, a large percentage remain only about 20 days in such places, during which time they go through the pupal stage, and then emerge as moths to lay eggs for a second brood of worms. This second brood, wherever it occurs, is very destructive. In the districts south of a line from Toronto to about Sarnia, the majority of the worms transform into moths and produce this second brood; but above this line it is seldom that we find more than 3 to 10 per cent. of a second brood. The worms of this brood also pass the winter in hiding places in the ordinary manner. Such is briefly the life-history of the codling moth.

Spraying.—This is the only reliable and, in some districts, the only practicable method of controlling the insect.

When to Spray.—It is found that the little calyx leaflets, as seen in Fig. 2, remain open for about a week after the blossoms fall. Now, as it is at the calyx that the great majority of the worms enter the apple, the object of spraying for the codling moth is chiefly to cover every part of the upper surface of the calyx with a coat of poison, so that when it closes, as seen in Fig. 3, the poison will be inside, and destroy every worm that tries to enter here at any time in the sum-

mer. The poison that gets all over the surface of the apple at the same time will kill so many of the worms trying to enter by the sides that very few will be left; and if we kill practically all the first brood, there cannot be a sufficiently large second brood to cause much loss. Hence, direc-

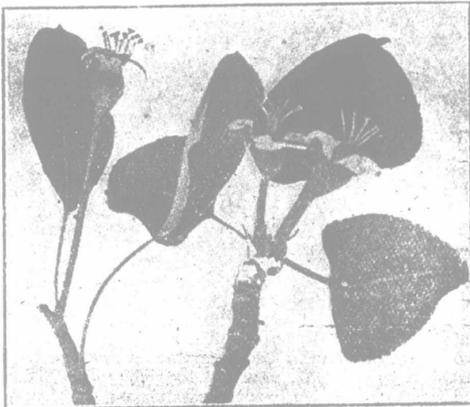


Fig. 2.—Just the right time to spray. A pear and two apples, from which the petals have recently fallen. The calyx lobes are widely spread. (After Slingerland.)

tions are to begin to spray as soon as the blossoms are nearly all off the tree. Unless the whole orchard is sprayed inside of one week, or 10 days at the most, after this it will be too late, and the pest cannot be controlled that season.

Poison to Use.—Use 2 pounds arsenate of lead to 40 gallons of water, or preferably to 40 gallons of Bordeaux of the strength of 2 pounds

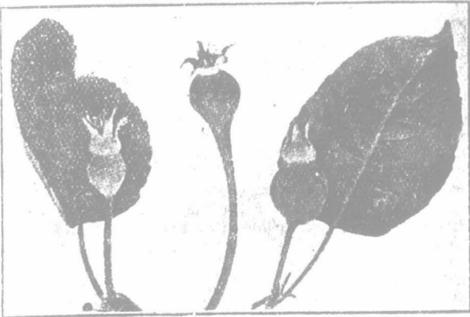


Fig. 3.—Almost too late to spray effectively for codling moth. Calyx lobes are drawn nearly together on the two apples, while in the pear, on the center, the calyx cavity is open.

bluestone, 2 or 3 pounds fresh lime, and 40 gallons of water. This is only half the ordinary strength of Bordeaux. In place of Bordeaux, commercial lime-sulphur, of about the strength of one gallon to 30 or 40 of water, may be used. By using either of these mixtures with the arsenate of lead, we help to keep the apple-scab also in check. Paris green may be used in place of arsenate of lead, with Bordeaux, but not with lime-sulphur. Use 1/4 pound to 40 gallons of the Bordeaux.

How to Spray.—Use a fairly coarse nozzle; one of the Friend type (Fig. 4) is very satisfactory. Two of these nozzles at the end of a V give an almost ideal spray. Place a brass elbow (Fig. 4), with an angle of 45 degrees between the end of the extension rod and the V, or of the nozzle itself, if only one nozzle is used. This elbow can be obtained for 20 cents. Some such device as this is a necessity, to enable the sprayer to send the poison directly into the calyx cavity. Use high pressure, preferably 150 pounds, and not lower

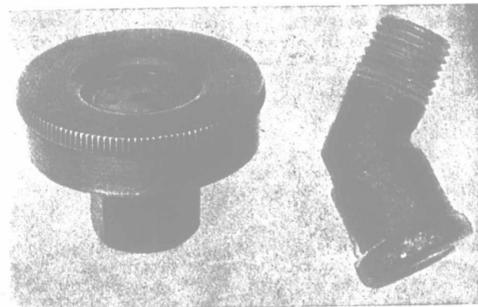


Fig. 4.—Friend type of nozzle and elbow.

than 100 pounds. Hold the nozzle fairly close to the calyx, from 20 to 30 inches, if possible. For high trees, use a tower to spray from. Do not leave a tree until it is certain that you have covered every calyx thoroughly. This means that if there are many blossoms the tree will have to be drenched. Eight gallons is none too much spray for a good-sized tree of 30 or 35 years of age.

In very badly infested orchards, in warm districts, where there are two broods, it may be necessary to give a second application of the poison three weeks later, which is the time when most of the worms are just hatching out. This application need not be so heavy, but every apple should be covered all over with a fine mist. One spraying, however, is sufficient in more than 90 per cent. of our orchards.

Means of Control.—(1) Birds: Woodpeckers search out large numbers of the worms under the bark in winter and devour them. Anyone who shoots our Downy or Hairy Woodpeckers is, therefore, doing great injury to fruit-growers.

(2) Sheep and Hogs: If these animals are allowed to run in the orchard in sufficient numbers to keep the fallen fruit eaten up, they will do much to lessen the number of worms, because the great majority of worms leave the fruit only after it has fallen. They will not, however, completely control the pest, because a considerable number of worms leave the apples before they fall from the trees.

Co-operative Fruit-shippers' Organization.

A meeting of representatives of Co-operative Fruit-growers' Associations was held in Toronto recently. Definite information has been obtained from the Assistant Provincial Secretary in regard to the incorporation of fruit-shiping associations with share capital. The fee will be ten dollars for the taking-out of a charter, and two dollars per annum when making the returns. Those present at the meeting also decided to seek incorporation for the central organization, with the idea of aiding the local associations in the purchasing of their supplies of all kinds at reasonable prices, and with the hope that by autumn the central organization may also be in a position to sell the crop of the smaller local bodies. This has been one of the greatest drawbacks up to the present in the work of co-operative organization in the newer sections. It is quite easy to get the men together, but when they have found that it is difficult to sell at a reasonable figure, they soon disband. In most cases they are away from all centers where the buyers congregate, and are out of touch with the very class of men that are after their fruit.

As far as the present year is concerned, the central organization has arranged to supply all such associations who will affiliate with it with such needs as spray pumps, chemicals, hose, fertilizers, packages, etc., at low rates. The small fee of \$5.00 which has been charged in the past will likely be continued. This includes not only the right to purchase supplies through the central organization, but also the weekly reports which are issued during the fruit season.

grower nearly \$1,200, year, 1908, the apple failure. In 1909 this 100, bearing in mind loaded, making the three years \$180 for age. This orchard work. There is one under my notice, mostly Spies. These and last year some 6 barrels per tree, decrease in usefulness I cannot see why re, good for at least you see, if trees are t a man a lifetime. became somewhat ac a the spring of 1908 rge young orchard, t, and seeing what nity, I bought this at time some 1,800 and 17 years old, d. They consisted eenings and Kings, had been sorely cropped, the trees never been sprayed; satisfactory results. r I went to work rger trees as time fairly well headed, limbs cut out. It o prune off all the ower limbs, which detrimental to the ut the outer parts sunlight. During yed and the land lanted 500 more urseries about eight e same year there not a very large theless, not at all

MAIL.

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e the seemingly no money in fruit you must grow peaches, not the case. y do not get t satisfactory all as younger s, and if your nity as these rk. There is nt session of of orchards, r that diffi- co-operative results that obtaining, I we have one

are looking apple indus- ts than in along these are let us as r the better- ly look for e only begin- nities. R. SLOAN.

Fertilizers for Potatoes.

Editor "The Farmer's Advocate":

Wishing to know the benefit to be derived from the use of commercial fertilizers when applied with a medium quantity of barnyard manure, I applied to Prof. Gamble, of the O. A. C., who kindly sent me enough fertilizer for four plots of potatoes, each one-fortieth of an acre.

The ground was plowed in the fall of 1908, and in the spring of 1909 was manured at the rate of eight tons of barnyard manure per acre. The preparation of the ground, planting, cultivating and spraying was exactly the same for all the plots. The following are the results:

Plot No. 1—Check plot, no fertilizer, 327 lbs.

Plot No. 2—Potash, superphosphate, nitrate of soda, 318 lbs.

Plot No. 3—Superphosphate, nitrate of soda, 343 lbs.

Plot No. 4—Potash, superphosphate, 318 lbs.

Plot No. 5—Potash, nitrate soda, 282 lbs.

The potash and superphosphate were sowed and well mixed with the soil before planting, the nitrate of soda after the potatoes were up.

Yield per acre for check plot, 218 bushels; cost of fertilizer, \$8.90.

Plot No. 3—228 bush.; cost of fertilizer, \$4.10.

Plot No. 4—216 bush.; cost of fertilizer, \$6.40.

Plot No. 5—186 bush.; cost of fertilizer, \$7.30.

I was disappointed in the results, as I expected the fertilizers would have increased the yields in each plot.

I also tried the following experiment with muriate of potash on corn: On three acres, eight tons per acre of barnyard manure was applied; on one acre 224 pounds muriate of potash. The acre on which the muriate of potash was used was the best acre in the field. The soil was a black muck, and the variety of corn White-cap Yellow Dent. I think farmers should experiment for themselves in fertilizers, as what might be a good investment on one farm would be money wasted on another.

Bruce Co., Ont.

T. W. L.

[Note.—Quite right, each man should experiment for himself. But do not draw final conclusions from one year's results. It may be that the check plot would have given considerably better results than any of the others if no fertilizer had been used on these. Try at least another year: better for three or four years. As to the relative returns from the various kinds of fertilizers sown, bear in mind that the nitrate of soda, being very soluble, has already yielded up about all its virtue. The superphosphate and potash may be reasonably expected to yield results in this year's and the next year's crops. Watch particularly for their effect on the clover-seeding.—Editor.]

Cross-pollination in Apple Orchards.

There are two especially important points to be considered in planting an orchard, said J. W. Crow, Professor of Pomology at the O. A. C., addressing the Short Course in Fruit-growing. The first of these is the question of cross-pollination of varieties; the second, that of ease in spraying and harvesting.

Many varieties are self-sterile; that is, the pollen of certain varieties will not fertilize the ovaries of the same variety. Without fertilization there is no fruit. It is necessary, then, to plant alongside of these self-sterile varieties other varieties that bloom about the same time, so that the pollen from the one variety shall be in condition to fertilize the flower of the other variety when it is ready. One often sees large blocks of Spies which never bear, and the reason is usually self-sterility. Again, blocks of Spies will bear all around the outside of the block, but very little in the middle, the reason being that insects bring the pollen from other orchards to the outside of the Spy orchard, but never penetrate to its center.

A self-sterile variety will nearly always fertilize another self-sterile variety, provided they bloom at the same time. A block of trees that are non-productive because of self-sterility can often be rendered productive by grafting to certain trees with a variety that blooms at the same time. Nearly all varieties, whether self-sterile or not, yield larger and better fruit when cross-fertilized by other varieties. The following lists of completely or partly self-sterile and self-fertile varieties are arranged opposite one another in the order of blooming at Guelph. The order of blooming varies in different localities, and it is only by personal observation that one can settle this point for his own locality:

Self-sterile (more or less). Self-fertile (usually).

Gravenstein blooms with Duchess.

Winter St. Lawrence blooms with Russet.

McIntosh blooms with Wealthy.

Peewaukee blooms with Snow.

Blenheim blooms with Yellow Transparent.

Spy blooms with Wagner.

Cano blooms with Fallwater.

King blooms with Tolman.

Baldwin.
Alexander

Other self-fertile varieties are: Ribston, McMahon, Stark, Ontario, Greening, Colvert, Hubbardson. It is not necessary that the flowers of a certain variety must open on just the same day as those of the variety you wish it to fertilize, but there must be a reasonably close relation between the blooming habits of both. For instance, an early-blooming variety like Duchess will not pollinize Spy; but Baldwin, although two or three days earlier than Spy, will do the work all right.

Cross-fertilization of flowers is dependent, in the case of fruit trees, almost entirely on the agency of insects. Wild bees and other insects do a very important and beneficial work in this way, but often these are not sufficient to do the work where plantations are large. There should be in nearly every large orchard a few colonies of honeybees. There are instances on record of orchards that never bore a full crop until bees were kept in the orchard. Seasons when the weather is wet and cold during the blooming period often give very marked instances of the benefit of a few colonies of bees in an orchard, as insects travel only short distances in such seasons.

While it is necessary to mix the varieties somewhat, promiscuous planting should not be practiced. Plant in solid rows. If you are using, say, equal numbers of Spy and Baldwin, it is well to plant in courses of two or three rows of one variety, and then the same of the other variety. If only one-fourth of one variety are being planted to three-fourths of another variety, plant three rows of one kind, and then one row of the other kind. This arrangement will be satisfactory so far as pollination is concerned. Although Baldwin will fertilize Spies, the bloom of the former will be off several days before that of the latter. Spraying for the codling moth should be commenced as soon as the bloom falls, and simply by missing the rows of Spies, the Baldwins can be sprayed to advantage. Picking and packing will also be greatly facilitated where the varieties are in rows or courses of rows.

S. E. T.

POULTRY.**Poultry Incubation.**

As the season approaches for the poultryman to lay his plans for winning the ribbons at next fall's and winter's shows, he must first hatch the chicks and then develop them for the exhibition. Chickens hatched in April, and given the proper attention, will be ready when desired. Pullets hatched then will prove good winter layers, which is much desired, as an egg in winter is worth three in summer. Bantams should not be hatched before May 15th, for, if hatched any earlier, they grow too big, and smallness is very essential in these mid-gets of the poultry yard. If you desire to set eggs from your own birds, you should mate up your pens about a month before you intend to set the eggs. This should insure good fertility. If you wish to purchase your eggs, you should decide early where you intend to buy them, and book your order, so as not to be disappointed when ready. If you intend to hatch with an incubator, be sure to have it thoroughly cleaned and disinfected, and test it to see if it runs true to the proper temperature. Have it right before putting in the eggs; if not, you will lose your eggs, time and temper. If you propose setting the eggs under a hen, get a box and fill it about two-thirds full of clean, dry earth, hollow out the center, and cover with cut straw. This done, place it where Biddy will not be disturbed by other hens, and do not have much light, as she will be more contented in semi-darkness. Now put in some nest-eggs and test her for a couple of days on these. If at the end of that time she is on the job, you will be safe in placing the good eggs under her. This should be done at night, as you are less liable to excite her. The best way to accomplish this is to place your left hand, palm down, under the hen, then raise her gently, and with the right hand take out the nest-eggs, and in their place put the good eggs. Keep plenty of water, grit, and good clean grain close to the nest, so that the hen will not have to be long away from the eggs, and so thereby chill them. Above all, do not feed any soft feed while she is sitting. By following the above, hatch, providing the eggs were fertile and Biddy attended to her knitting. Another important part is the rearing of the chicks after they are hatched. Have prepared a clean box, about two feet square and about thirty inches high, having a slatted front for the chicks to go through, and close enough to keep the mother from flirting with some strutting dude or getting into an argument with her sister suffragettes. Have the bottom of the box covered with cut straw, or chaff free from dust. As soon as the chicks are dry and fluffy, put them and Biddy in their new quarters. Place water and fine grit or coarse sand where they will have easy access to it. Keep these constantly before them, for it spells "health." A very important point is when you give them their first meal. Do not give them anything but the water and grit for the first forty-eight hours after hatching, as the first time before coming out of

the shell the chick fills its stomach with plenty of nourishment from the egg, and this must have ample time to digest before feeding any more. For the first meal, there is nothing so good as hard-boiled eggs, then dry breadcrumbs and oatmeal. For the first ten days they should be fed four or five times a day. Do not feed any wet food, as it will produce bowel trouble, which is likely to prove fatal. After they are feathered out, they are ready for a variety of foods, and if kept in a dry place will grow very fast. Another point that must not be overlooked is the presence of lice. They multiply very fast on a sitting hen, and when the chicks arrive, naturally, they get taken to her new quarters, thoroughly dust her with insect powder, and put vaseline or sweet oil on the heads and necks of the chicks; this should be repeated once a week. It is well to remember that a chicken, given the proper care when young, will prove the profitable bird for the farmer and fancier.

Northumberland Co., Ont.

C. P. BROWN.

The Luxury of Fresh Eggs.

Editor "The Farmer's Advocate":

Am enclosing brief statement of our experience with hens last year. Our flock averaged about fifty hens, mostly Barred Rocks, and from these we sold eggs to the amount of \$69.73, and young cockerels to the amount of \$17.57, making a total of \$87.30, cash receipts. The average price was 31½ cents per dozen for the eggs, and 19½ cents per pound for the chickens. We kept no account of the eggs used (and we use a lot—perhaps that is why we did not keep account) or given away, nor of the chickens used on our own table. In addition to the cash receipts, we have pullets to the value of \$11.25, making the total \$98.55.

We did not keep account of the grain fed, but, estimating the cost on the basis of 10 cents per head per month (Prof. Graham), would amount to \$60, still leaving us a profit of \$38.55, and the luxury of fresh eggs and chicken. Is it not worth something?

Even with this to their credit, our hens are not particularly "winter layers"; they stop in November, and continue "on strike" till February. But a hen is like a cow or any other money-maker—she must have rest and recuperation after her faithful work for nine months. There is profit in poultry-keeping for the farmer, and who is in a better position to make poultry-keeping a paying proposition than the farmer?

York Co., Ont.

CHAS. T. DENT.

THE FARM BULLETIN.**The Death of Stewart Houston.**

Farmers and stockmen who have been privileged to attend the Spring Horse Show and Military Tournament in Toronto in past years, will regret to learn of the death of Stewart Houston, who was the founder and for many years the courteous and capable secretary of the show. He was also known to a host of admiring friends as the manager of Massey Hall. Mr. Houston was stricken some weeks ago with typhoid fever, but was thought to be recovering, but a relapse occurred, and his death took place on Monday, February 7th, in the forty-third year of his age. Mr. Houston was a man of very marked executive ability, and did a great deal to promote various business enterprises and many kinds of sports.

More on the Trade Question.

We have received a communication from T. B. Scott, Middlesex Co., Ont., in which, as an old supporter of the present party in power at Ottawa, he expresses his dissatisfaction with the trade policy of the Dominion Government. He finds grave fault with the "dumping clause," and with the postal law regarding U. S. mail matter. His idea is that the Government has been neglecting our trade with the United States, while spending freely in order to develop trade with Britain, "a much less important market." A part of his letter reads thus:

"All commercial men are noting how rapidly the United States is ceasing to be an exporter of foodstuffs and an importer of raw material. This being the case, each year adds to the Canadian interest in that market, as the last year's increase clearly demonstrates, it showing the largest trade accessible at almost any point between the Atlantic and the Pacific, with no obstacles except of man's making.

"On the other hand, to reach the British market, we have built and housed railways from the Atlantic to the Pacific; we have subsidized steamship lines; we have dredged rivers, built docks, population of about five million people. All this to reach the British market, and when we set there we are only on a par with the rest of the world." The above will show the views held by the

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writer, and, while many may disagree entirely with them, yet every man has the right to his own opinion. "The Farmer's Advocate" is not a party newspaper, and the opinions and phrases regarding public men which might be in place in such an organ, are not in keeping with our idea of fitness. Letters from readers are always welcome, and it is right that strongly-held views be strongly put, but let us beware lest in our zeal we weaken our case by so presenting it as to hurt the feelings of others.

Power Privileges Coveted.

The power privileges on the Canadian side of the line are exciting the covetousness of American capitalists. The Ontario and Minnesota Power Company, of Fort Frances, on the Canadian side of Rainy River, have applied to the Ontario Government for right to export power to the American side of the river. Fort Frances itself is opposed to the project. The Ontario Government declined to grant the request.

A much more ambitious scheme is that of partially damming the St. Lawrence at the Long Sault so as to develop electric energy to the extent of six hundred thousand horse-power. The powerful group of capitalists who are at the back of this proposal have had a hearing by the International Waterways Commission. Strong opposition to anything likely to interfere with the navigability of the St. Lawrence river is being manifested. The Globe says editorially that on the part of the promoters of this power scheme there appears to be a disinclination to reveal for public scrutiny their whole case, both from the engineering and the financial point of view.

Macdonald College Principalship.

It is understood that tentative proposals have been made looking to the securing of Prof. C. C. James, Deputy Minister of Agriculture for Ontario, and formerly on the Ontario Agricultural College staff, for the principalship of Macdonald College, St. Anne de Bellevue, rendered vacant through the retirement of Dr. Robertson to spend a year abroad in research and recuperation. As to Prof. James' rich endowment of qualifications for the position, there can be no two opinions. The only question is whether he could be induced to leave the Department in which he has wrought so long, and with such distinguished success. It is known that he has refused very lucrative business offers, despite the fact that his services have been scantily recognized, so far as salary is concerned, by the Government and Province he has served so well.

Home industry is threatened by the arrival in Montreal of a shipment of 6,000 dozen eggs from Russia; but if the Canadian hen refuses to supply our tables, what can we do but import?

As expected, the meat boycott has proven short-lived. The appetite for meat, supplemented by increased prices of fish, and the knowledge or fear that the boycotters' self-denial would only have the effect of depressing prices of meat to other consumers, has had its effect. Prices of live stock seem to have fully recovered their former strength.

The fifth annual Poultry Institute was held at the Ontario Agricultural College on February 8th, 9th and 10th, with a large number in attendance, composed of short-course and regular students, poultry fanciers, and many from a distance, who came eager to hear all that the speakers had to say on this important branch of agriculture. A review of the main points brought out will appear in our Poultry Department next week.

It was reported last week that the position of Deputy Minister of Public Works for Ontario, left vacant by the appointment of A. W. Campbell as Dominion Deputy Minister of Railways and Canals, was to be filled by R. W. Fairbairn, Provincial Engineer, who superintends much of the work on bridges and colonization roads. Mr. Fairbairn is a thoroughly experienced engineer, who has been in the Public Works Department for thirty years.

The question of telephone rates is one that cannot be considered settled. In some quarters great dissatisfaction exists. A bill intended to deal with the subject in all its aspects, is to be introduced into the Legislature of Ontario by S. Charters, member for Peel County. Under the bill, the Ontario Railway and Municipal Board would be given power to hear complaints, to make orders and regulations, and to prescribe penalties for violation of the provisions of any of the Acts respecting telephones in force. All contracts and agreements between companies must be made subject to the approval of this Board. The board should also have power and right to approve of all tolls to be charged by any company or person.

Holstein Breeders Meet.

A full attendance of members and a most satisfactory report of the year's business characterized the annual meeting of the Holstein-Friesian Breeders' Association, held in the Temple Building, Toronto, on Thursday, February 10th, 1910. President Mallory, in his opening remarks, congratulated the members on the flourishing condition of their association, and the increasing popularity of the Holstein cattle as the greatest of all the dairy breeds, and the most satisfactory prices obtained at the several sales held during the past year. The reading of the annual report showed a remarkable increase in membership and registrations for the year, the total membership at present being 750, an increase of 163 over 1908, the increase in registrations for the year over the previous year being 1,291, and of transfers 1,603, the total number of registrations for the year being 3,909. There was also a marked increase in the number of official tests for the Record of Merit, 14C being admitted during the year, an increase of 55 over the previous year. The total number of cows in the Record of Merit to date is 588. The reading of the financial report for the year was equally satisfactory, the total receipts for the year including a balance of \$5,050.54 from 1908, was \$14,235.80, and expenditures, including the purchase of Kenora Municipal Bonds to the amount of \$4,317.29, and cash on hand in bank of \$4,136.58, of \$14,235.80. The auditors congratulated the secretary-treasurer on his neat and efficient method of bookkeeping, not a mistake of any kind being detected. The total assets of the Association to date are \$9,611.87.

GRANTS TO FAIRS.

The following grants were made to the several exhibitions: Canadian National, \$200; London, \$100; Ottawa, \$100; Sherbrooke, \$150; Winni-

London—H. Bollert, Cassel, and Geo. Laidlaw, Almonte; Winnipeg and Brandon—J. M. Gibson and H. Smith, Winnipeg; Calgary—Mr. Tregiller; Victoria and New Westminster—T. Lang and J. Steves; Guleph Winter Fair—H. Bollert and J. W. Richardson; Ottawa Winter Fair—P. Clark and G. W. Gilroy; Amherst Winter Fair—S. Logan.

Fairs and Exhibitions Convention.

"There is nothing too good for the farmers," seemed to be the feeling of the Toronto people, when the use of the grand city council chamber was granted to the Ontario Association of Fairs and Exhibitions for their annual convention, Feb. 9th and 10th. Mayor Geary, in welcoming the delegates, expressed the same sentiment, and very happily referred to his own boyish recollections of the delights of the little township or county fair. The great gathering of 460 delegates, the largest that has yet assembled, seemed to be dull, almost stupid, while perfunctory addresses were being delivered, but when some question touching the interests of fall fairs was under consideration, the change to quick, eager life, and snapping, almost fighting speeches, made it seem like a different crowd. For the third time the Fairs Association delegates made a pilgrimage to the Government Buildings to ask for an increased grant to agricultural societies. Other business matters to which special attention was given were: Insurance against wet-weather losses by fall shows; the appointing of directors, one each from twelve districts of the Province, by the delegates present from each district, instead of, as has been the custom, having them elected by the convention as a whole; and having special help given to societies in sparsely-settled townships of old Ontario.

President H. J. Gould, of Uxbridge, in his opening address, said that association and co-operation were the order of the day. Individualism was, in a sense, out of date. Fall fairs were held in the Province before any present saw the light, and their usefulness was not by any means gone. He referred to the fact that some societies had been kept from expanding by the fear of bad weather, and touched slightly on the wisdom of having some system of insurance which would guard against societies being wrecked by a wet show day. In regard to special attractions, Mr. Gould said that "many come for amusement, and we must give it to them."

Dr. J. U. Simmons, Frankford, first vice-president, who led in the discussion on the President's address, held that vegetables were worthy of more attention than they received, and that there was a disparity between the small prizes offered for valuable live stock at local shows and the sums expended on special attractions.

The report of Secretary and Superintendent, J. Lockie Wilson, whose jurisdiction extends from Kenora to Glengarry, showed that the year had been exceedingly prosperous. There are now 350 agricultural societies in Ontario. Increased prize-money for horse exhibits is generally reported. As is well known, Government grants are given according to the amount spent by societies for agricultural purposes, but in the new regulations, what is meant by "agricultural purposes" is clearly defined. Mr. Wilson suggested a division of the Province into twelve districts, for the purposes of election of directors, and a scheme of insurance against wet-weather losses, both of which subjects had been discussed by the Executive.

FREE LOANS OF SEED GRAIN.

Referring to field competitions of standing grain and other crops, which had rapidly increased, Mr. Wilson drew attention to the prize grain being used for distribution for seed purposes at eleven different points in Ontario. It is given out free in two-bushel lots, the same quantity to be returned by the growers next season.

DEPARTMENTAL JUDGES.

The departmental-judge system is expanding. Two hundred and fifty-five judges were sent out last year. The amount paid these judges by the Department was \$10,000, which was reduced by refund from societies to \$5,500. The cost of field-crop competitions was \$7,000. The total grants for agricultural-society work amounted to \$86,700, of which one-seventh went to New Ontario. The report was adopted.

WANT MORE MONEY.

When the question of seeking increased Government grant came up, it was, after some animated discussion, unanimously agreed, on motion of J. T. Murphy, of Simcoe, "That we ask the Government to increase the grant to agricultural societies from \$70,000 to \$100,000, and that this convention, as a body, appear before the Government to support the resolution."

So heartily did the delegates follow up this resolution that the room in which the Government, in the persons of Hon. J. S. Duff, Minister of Agriculture, and Hon. Dr. Reaume, Minister of Public Works, were in waiting to receive them, was not nearly large enough to hold them all, even standing. The sacred Legislative Chamber itself



H. Bollert.

President Holstein-Friesian Association of Canada.

peg, \$100; Brandon, \$25; Calgary, \$50; Edmonton, \$50; New Westminster, \$75; Victoria, \$75; Halifax, \$50; Charlottetown, \$50; St. John, (Dominion Exhibition), \$150.

Milk Tests.—Guelph Winter Fair, \$450; Ottawa Winter Fair, \$225; Amherst Winter Fair, \$225; Milk Test, Canadian National, \$50; Milk Test, Sherbrooke, \$25, the whole making a total of \$805 over the grants of last year. The prizes for Record of Merit and Record of Performance tests remain the same as last year; also, the series of silver cups, as awards in Holstein-grade classes, remain the same.

An amendment to Article 4, Secs. 19 and 20, of the by-laws was made. Instead of the word "member," it now reads: "Any person found guilty of fraud or misrepresentation," full power being given to the executive committee to deal with all cases of this kind brought to their notice. A standard was also fixed for estimating the amount of butter from any given amount of butter-fat, to be on an 80-per-cent. basis.

ELECTION OF OFFICERS.

President, H. Bollert, Cassel, Ont.; 1st Vice-President, S. Logan, Amherst, N. S.; 2nd Vice-President, J. E. Herrick, Abbotsford, Que.; 3rd Vice-President, J. Rettie, Norwich, Ont.; 4th Vice-President, R. F. Hicks, Newtonbrook, Ont. Two directors, to serve two years—H. Smith, Winnipeg, and M. L. Hale, Springford. Secretary-Treas., G. W. Clemons, St. George (re-elected). Auditors, J. W. Richardson, Caledonia, and A. C. Hallman, Breslau.

Representatives to Fair Boards—Canadian National—W. G. Ellis, Bedford Park; Ottawa—P. Clark and G. A. Gilroy; Sherbrooke—J. E. Herrick, Abbotsford, Que., and F. C. Cane, Montreal; Halifax and St. John—S. Logan and T. Harding;

had to be requisitioned for the occasion. John Farrell, Forest, and R. E. Cowan, Galt, were spokesmen, Mr. Farrell stating that, even under favorable weather conditions, gate receipts and grant combined were insufficient to meet expenses, and that directors were forced to go from house to house to get the needful; while Mr. Cowan showed from statistics that, though Canadian shows are more truly educative than those of the United States, they do not receive nearly as much financial assistance from the Government, in proportion to their number.

Ministers Duff and Reaume replied in very pleasant vein, assuring the delegates that they were one with them in feeling and experience. On the important point of granting the money, however, which was what the delegates insisted they were bound to have, the answer was that the best that could be promised was "careful consideration." The Minister of Agriculture took pains to inform the delegation that there were many claims for assistance from his Department; also, that the total grants for agriculture had increased from \$475,600 in 1906, to 747,900 in 1908.

BENEFITS OF FIELD-CROP COMPETITIONS.

On reassembling, the subject of "Educational and Financial Benefits from Standing Field-crop Competitions" was taken up by T. G. Raynor, of the Seed Branch, Ottawa. The great increase in the number of agricultural societies taking up this work is noteworthy. At first limited to ten societies, the work grew, until, in 1908, there were forty who had field competitions, and in 1909 the number was increased to eighty. It was believed that such competitions in some degree restored the educational influence which it was intended that fall shows should exert. In exhibits of grain, the tendency has been for the prizes to fall into the hands of professionals, who, with hand-picked samples, kept from year to year, discouraged entries by ordinary growers. This sort of trickery is eliminated from competitions in standing grain. Judging is done by score-cards, and the use of these has made known to many farmers weak spots in their culture of crops and selection of seed. Unsuspected noxious weeds and fungous diseases have been revealed by the judges, and instruction as to proper treatment given. Neighboring farmers also compare notes, and share in the benefit.

As an instance of financial gain that might accrue, the case of one man in the audience was cited, who, for the last three years, has sold his oats for seed at \$1.25 per bushel. It would be good policy for farmers who had extra-quality seed grain to dispose of to notify the proper authorities at Ottawa or Guelph, as inquiries for such were being constantly received.

There were 1,500 competitors in standing field crops in 1909, and, as a result of these contests, a great increase in the quantity of good seed grain procurable was certain in the near future.

Following this address, at intervals throughout the Convention there were other practical and very instructive addresses on "Preparing Sheep for Exhibition," "Poultry at Fairs and Exhibitions," "Exhibits of Home Industries," and "Improvement of Swine Exhibits," by John Campbell, Woodville; A. J. Gilbert, Poultry Manager, Ottawa; Miss Shuttleworth, Toronto; and J. E. Brethour, Burford, respectively. Miss Shuttleworth characterized those ancient pieces of extra fancywork which were resurrected each fall in time to go the round of the shows, as a nuisance. Such should be ruled out or put in a class by themselves. Prize lists needed frequent revision, and the specialties of each district should be kept in mind in such revision. She thought that special prizes for the work of young girls should be offered. Actual competitions in making a buttonhole or putting on a patch before the judges, in a given time, would be most useful. She emphasized, also, proper care on the part of directors of delicate work entered for exhibition.

FEWER FAIRS AND LARGER.

Hon. J. S. Duff, in the course of his evening address, suggested greater consolidation of fairs in the future. By having fewer fairs to attend, people would save valuable time, meet a greater number of friends, and a better use would be made of the money grant.

President Creelman, O. A. C., Guelph, pointed out that agricultural societies started out to advance farming by, first, having essays on practical subjects; second, by improving seed and live stock; and third, by conducting fall shows where results might be seen. The first two went by the board, the latter only remained. The Agricultural College at Guelph was established to take up the work thus dropped, and has so far succeeded that in many respects it is without a peer in the world.

An old O. A. C. boy, in the person of Prof. W. J. Black, Manitoba College, Winnipeg, also gave an address along the same line, "Agricultural Societies and Education."

A MODEL EXHIBITION.

Deputy Minister of Agriculture, C. C. James, in addressing the convention, spoke of four features that had specially attracted his notice at

the Show of the Royal Agricultural Society, at Gloucester, last summer. The first was the neatness and order observed. Though the weather was wet, there was no mussiness or dirt. You could have picked up and put in one pocket all the loose paper on the large grounds. Second, the attention given to arrangement of exhibits. By consulting the catalogue, any animal or article could be found. Animals were not hidden away in dark corners, but, on the contrary, every facility for seeing such was afforded. Third, one wondered where the faker and side-show were. There were none. No one loves sports more than does the Englishman, but he does not mix them up with this show. And fourth, there were no enormous crowds. The class of people attracted by amusements were not appealed to. But every day there was a steady stream of strong, sturdy yeomen and their families.

UNDERPRODUCTION AND WASTE.

A grave problem confronts us in Ontario, said Mr. James. In ten years the rural population has decreased by 62,000, while the population of towns and cities has increased by 350,000. No wonder citizens are feeling the pinch of higher prices. These are not due to cold-storage plants or to the middlemen. The situation calls for the attention of agricultural societies, and of town and city dwellers combined. We waste. We don't know how to buy food. We don't know how to keep food. We don't know how to prepare food. Toronto wastes as much as would feed a European city.

Referring to the request for increased Government grant, Mr. James thought that if they got it, the effect would be to lessen the value of their work. "The best societies in Ontario are those that are standing on their own feet."

Nelson Monteith, ex-Minister of Agriculture, responded very acceptably when called on for a short speech.

NO INSURANCE AGAINST WET DAYS.

So many difficulties in the application of a measure to insure against losses sustained by societies on account of a wet show day cropped up during a lively discussion of the subject, that no action was taken. On motion, unanimously agreed to, the suggestion was disposed of as notice of motion.

Treasurer McFarlane's statement was a very favorable one, showing a balance on the right side of \$280.35.

OFFICERS.

When the proposal to divide the Province into twelve districts, so that a director from each might be appointed, considerable opposition developed, principally on the ground that sufficient notice of such a radical change had not been given. After discussion, however, as no one was opposed to the principle involved, it was unanimously agreed to.

The officers, with the exception of 2nd vice-president, were all re-elected, and all went in by acclamation. They are as follows: President, H. J. Gould, Uxbridge; 1st Vice-President, Dr. J. U. Simmons, Frankford; 2nd Vice-President, John Farrell, Forest; Treasurer, Alex. McFarlane, Otterville; Secretary and Superintendent, J. Lockie Wilson, Toronto. Auditors—R. Agnew, Meaford, and Wm. Collins, Peterboro. The election of directors was done by members of each of the twelve districts getting together during the noon intermission and choosing their man, and resulted in the following board: District No. 1, W. K. Farlinger, Morrisburg; No. 2, R. J. Bushell, Kingston; No. 3, C. W. Neville, Newburgh; No. 4, Dr. A. Galloway, Woodville; No. 5, J. D. Orr, Meadowdale; No. 6, W. A. Fry, Dunnville; No. 7, J. T. Murphy, Simcoe; No. 8, John Brodie, Mt. Brydges; No. 9, R. A. Harrington, Chatham; No. 10, Wm. Searff, Durham; No. 11, W. H. Johnson, Sundridge; No. 12, Rev. T. J. Crowley, Warren.

Salary Increases and Developments at O. A. C.

APILARY DEPARTMENT BEING ESTABLISHED.

The supplementary estimates of the Province of Ontario for the fiscal year ending October 31st, 1910, recently brought down, provide an additional \$3,000 for services and expenses of assistants in farm drainage.

Some changes of interest are to be noted in the grant for Apiculture. Morley Pettit will be continued in the position of Lecturer in Apiculture at the Ontario Agricultural College, at a salary of \$1,500 a year, \$750 being provided for equipment. He is to lecture at the College, carry on experimental work, and supervise the inspection of apiaries. For this latter work, the 1909 vote of \$2,500 has been increased to \$3,000. Mr. Pettit is being sent to Washington this month to look into apicultural work in the Department of Agriculture there. The vote means the definite establishment and equipment of a new branch at the College, and marks an important era in connection with beekeeping in the Province. Another point worth noticing is the provision for the salary of an expert in plant-breeding at the Horticultural

Experiment Station at Jordan Harbor. A. J. Logsdail has been appointed to the position. Some increases were provided in the salaries of the Ontario Agricultural College staff, ranging from \$200 a year for Professors, down to \$50 for lecturers and demonstrators. This, however, failed to satisfy the staff, who had last December sent a deputation to Toronto to interview representatives of the Cabinet and ask for an increase in the present maximum of \$2,000 a year for professors. At the School of Practical Science, in Toronto, the minimum salary accompanying professorships is \$3,000, and the maximum \$4,000. The O. A. C. staff asked to be placed on a similar basis, though they would probably have been satisfied had the minimum been advanced to \$2,500 this year. Instead, it was increased by only \$200, while the lecturers and assistants to the professors were chagrined to find that their customary annual increases of \$100 had been reduced to \$50, in order, it was assumed, to provide for the \$200 increases to six of the senior members. A deputation of the faculty went down to Toronto again last week, and had another interview with the Minister of Agriculture, who met them courteously, and assured them that everything would be adjusted as far as possible at the present time, and that the whole matter of salaries, promotions, titles, allowances, etc., would be considered after the adjournment of the House.

Seed-growing in Canada.

On every hand, outward and visible signs attest the reality of the renaissance of Canadian agriculture. Men of courage and prophetic discernment saw the inward possibilities of her unrivalled soil and position, and have been setting at work agencies, educational in character, giving shape and momentum to farming as practiced in Canada, making it more conspicuously than ever the greatest and best of human industries. These agencies embrace the growing of seed, live stock, fruit, dairying, teaching, agricultural publications, marketing, experiment, seed-testing, the suppression of weeds, demonstration seed fairs, and inspection. Many of these are directed by the Department of Agriculture at Ottawa, and closely allied with one of them, The Seed Branch, is the Canadian Seed-growers' Association, organized in June, 1904, the sixth annual meeting of which was held last week, on February 10th and 11th, in the Canadian Building. The meeting was large and enthusiastic. It has been under the inspiring presidency of Dr. J. W. Robertson, and with men of capacity, such as G. H. Clark, now Seed Commissioner, and subsequently, L. H. Newman, as secretaries. Mr. Newman's annual report was a comprehensive survey of the work throughout Canada, which clearly verifies the importance of careful and systematic seed selection. Thirty thousand copies of the last annual report were distributed, and the demand for registered seed is steadily growing. There were in operation 684 plots; 167 growers are in full standing as members, 28 new ones having been added in 1909. There are now 529 affiliated members. Officers of the Seed Branch in the different Provinces inspect the seed-plots and methods on the farms of the members. In Alberta, marked activity in the work is manifested in relation to wheat, oat and barley improvement. Banner is yet the most popular oat, the Turkey Red and Dawson's Golden Chaff wheats being in favor. Saskatchewan is advancing slowly; the Fifes are the popular wheats still, but Stanley and Preston are making progress, while the Marquis is very promising. Oat-growing is forging ahead, and there is a great future for seed-growing. Banner and Abundance are most in favor. In several places good work is being done in barley-growing. Mandscheuri No. 21, selected and developed by Prof. C. A. Zavitz, being specially noted in several places. In Manitoba there is great need for more better-bred seed, if her reputation in grain production is to be maintained. In Ontario, oat, barley, wheat, potato and corn improvement are strongest in evidence. The latter has received a great impetus, over 3,000,000 acres being grown in 1909. The work of the Ontario Corn-growers' Association is especially commended. The Corn Show at Essex was magnificent, and there is a great future for seed production in the dent, as well as flint, varieties, particularly in the Southwestern Ontario. Good progress has been made in Quebec, the beneficial effects of field-crop competitions being felt, but there is great need for more good home-grown seed of known varieties. Quebec potatoes are holding a high place, but there are too many varieties, and lack of uniformity in type. In the Maritime Provinces results are encouraging, the yield of potatoes there being double that of wheat, oats and barley. New Brunswick showing as high a yield as 209 bushels per acre. Taken altogether, progress has been substantial, and one general lesson learned is the advantage of certain districts devoting particular attention to one or two crops for which they are well adapted. The importance of selecting seed from the best plants, and eliminating the others till one remains, was emphasized. In potato-growing, there is a rapid response

an Harbor. A. J. to the position. Some salaries of the Ontario, ranging from \$200 to \$50 for lecturers. However, failed to sat-ember sent a depu-ew representatives of crease in the present or professors. At ce in Toronto, the professorships is 000. The O. A. C. similar basis, though n satisfied had the 500 this year. In-ly \$200, while the e professors were etomy annual ind to \$50, in order, the \$200 increas A deputation of onto again last ing with the Min- them courteously, ing would be ad- present time, and aries, promotions, be considered after

Canada.

visible signs at-Canadian and prophetic ilities of her un-ave been setting character, giving g as practiced in uously than ever industries. These seed, live stock, ural publications, ng, the suppres- d fairs, and in-cted by the De- wa, and closely d Branch, is the n, organized in eting of which 10th and 11th, e meeting was en under the in- Robertson, and H. Clark, now ly, L. H. New-ly, an annual re-ort work through- the importance ction. Thirty eport were dis- ed seed is stead- 684 plots; 167 embers, 28 new There are now of the Seed spect the seed- the members. work is mani- and barley im- at popular oat. n Chaff wheats vancing slow- eats still, but gress, while at-growing is ture for seed- are most in is being done 21, selected being special- toba there is , if her repu- maintained. In and corn im- The latter 000,000 acres e Ontario e commended nificent, and ction in the ction in the ss has been of field-crop great need own varieties mportations. a place, but lack of uni- provinces re-ates there barley, New 209 bushels s has been rned is the particular ch they are ctng seed the others

to proper selection of seed tubers; many good varieties have been lost through carelessness in seed selection. In the seed-plots of members in 1909, over 131,138 bushels of improved seed were grown, 6,339 bushels of which were catalogued, and the rest sowed at home or sold locally. There were issued 2,148 certificates. There was a considerable call from abroad for Association-grown seed.

The report of the directors recorded with regret the death of W. L. Davidson, of Quebec, and referred to the measures taken by the Association to promote the interests of agriculture and of commercial seed-growing. The aid of the Seed Branch, Press and Governments in furthering the work was gratefully acknowledged.

(1) An amendment to the by-laws was recommended, changing the words "standing plants" to "crops," in sub-section No. 1, in sec. 33, in order to facilitate work at busy harvest times.

(2) That the executive be empowered to supply certain members, or prospective members, with larger quantities of selected seed, and

(3) Thanks to the Government for financial aid in the past, with a request that it be continued.—Adopted.

In the discussion of the secretarial report, W. T. Macoun said he was glad to hear that the demand for good seed was exceeding the supply. He advised recommending fewer varieties, and that reports should be freely published showing the comparative advantage to farmers of using better seed. More should be done in producing Canadian vegetable and root-crop seeds of good quality.

S. J. Moore, Truro, N. S., district representative for the Maritime Provinces, reported an increasing membership and greater improvement last year than during the two previous years together. The improvement was due in part to better cultural methods. Field-crop competitions were proving most beneficial. Last year, at the Agricultural College Farm, Truro, selected seed from members of the Canadian Seed-growers' Association gave the best yields. Selling less seed, but of higher quality, at a better price, was his advice.

J. C. Cote, Quebec, reported last year's yields of grain crops greater than previously. Grain shown at the seed fairs was almost perfect. He cordially approved of the object-lessons in seed improvement.

T. G. Raynor, for Ontario, reported progress. Some early members dropped out because they started with varieties that did not prove popular. He mentioned the case of four seed-dealers who once imported a carload of oats from Chicago, which were sold under four different names. There was a great opportunity for seed-grain growing.

J. H. Grisdale emphasized the necessity of coupling good cultivation with better seeds, if satisfactory results were to be obtained. In going all the way from St. Hyacinthe, P. Q., to Ottawa, he saw only two grain fields that appeared to be free from weeds. The results of the "seed faker" in Quebec Province had been disastrous.

Mr. Simmers, of Toronto, called attention to the detrimental effect of large quantities of seed, sometimes coming from farmers, not being up to samples previously sent in to dealers.

Wm. Thompson, of "The Farmer's Advocate" editorial staff, suggested that the Association enlarge the scope of its work in the way of farm or field demonstrations, not only with improved seed, but in methods of conserving moisture in the soil. There had often been disappointment with the results of costly seeds, owing to defects in cultural methods and lack of drainage.

Prof. C. A. Zavitz bore testimony to the splendid and enduring results, judged from displays at the exhibitions and otherwise, in the purity of seed, as a result of the work of the Association.

We must reserve for a subsequent issue report of the many other excellent addresses. Officers were elected as follows: President, Dr. J. W. Robertson. Vice-Presidents—Prof. C. A. Zavitz; G. A. Gigault, Deputy Minister of Agriculture, Quebec; John Mooney, Valley River, Man. Secretary-Treasurer—L. H. Newman, Ottawa. Directors—W. W. Hubbard, Fredericton, N. B.; C. A. Zavitz, O. A. C., Guelph; G. A. Gigault, Quebec; Thos. H. Woolford, Cardston, Alberta; J. Dimitriou, of Oka, Quebec; Hon. W. R. Motherwell, Regina, Sask; Thos. S. Waugh, North Bedouque, P. E. I.; J. O. Duke, Ruthven, Ont.; John Mooney, Valley River, Man.; S. A. Bedford, Manitoba Agricultural College, Winnipeg; John Brack- en, Regina, Sask; Prof. M. Cumming, Truro, N. S.; Geo. Hareourt, Edmonton, Alta.; J. W. Wheaton, Toronto; Wm. Thompson, London; Geo. Ratho, Winnipeg; W. J. Black, M. A. C., Winni- peg; Theodore Ross, Charlottetown, P. E. I.; Prof. L. S. Klnck, Macdonald College; Donald Innes, Tobique River, N. B. Auditors—Prof. L. S. Klnck, and Accountant Department of Agriculture.

Executive Committee—President, Secretary, Messrs. Klnck, Gigault, Zavitz, John Brack- en, Prof. M. Cumming.

H. H. Groff was created an honorary member at the suggestion of Dr. Robertson.

The report of the Resolution Committee (1) expressed thanks to the Department of Agriculture, to the Provincial Governments, and Experi-

mental Farms, in aiding the Association; (2) to railways for minimum rates, to inspectors in inspecting plots of members; (3) commendation of work of the Ontario Corn-growers' Association; and (4) commended the policy of farm demonstrations in showing the comparative value of improved seeds, in producing the latter on a larger scale for distribution, and to determine advantages and methods of conserving soil moisture.

Hon. Mr. Fisher sent his regrets at being unable to attend the convention, and His Excellency Earl Grey, who is deeply interested in its work, sent a message of congratulation, with a gift to the directors of five bananas grown in the Rideau Hall conservatories, thus disclosing to the world that Ottawa, so famous for everything else, is now in the banana belt.

Vegetable-growers' Convention for London.

The annual meeting of the directors of the Ontario Vegetable-growers' Association was held in the office of the Secretary, J. Lockie Wilson, Parliament Buildings, Toronto, with the President, Thos. Delworth, of Weston, in the chair. There was a full attendance from the various branches. It was decided to hold the Ontario Vegetable-growers' Association convention in London this year, during the week of the Western Fair. The financial statement showed a balance on hand of \$53.10. The matter of changing the name of the Association was left in the hands of the executive. An effort will be made to get express rates on vegetables and small fruit reduced. Mr. Rush suggested a change in the standard weights of vegetables, as follows: Parsnips, 45 pounds; carrots, 50 pounds; artichokes, 56 pounds, for which standard weights were now 60 pounds. For potatoes, the standard to be 75 pounds, instead of 90 pounds, as these are often sold in sugar bags, which only hold 1½ bushels. The present standards work injuriously to vegetable-growers. The executive was instructed to bring this matter before the Dominion Government.

Referring to the question of seed potatoes, the president thought that experiments conducted in Ontario would show that just as good ones for seed could be raised here as were now imported. The Minister of Agriculture expressed his willingness to experiment along this line at the Experimental Farm at Driftwood, in New Ontario.

The election of officers resulted as follows: President, Thos. Delworth (re-elected); 1st Vice-President, F. G. Fuller, London; 2nd Vice-President, T. A. Newton, Woodstock. Executive Committee—President, Secretary, F. F. Reeves, Humber Bay; C. W. Baker, London; C. H. Weaver, Dunnville. Directors for Ontario Horticultural Exhibition—F. F. Reeves, Geo. Syme, West Toronto; Thos. Delworth, Weston; J. W. Rush, Humber Bay.

Dr. Robertson Entertains Friends.

On one of the evenings of the great gathering in Ottawa, last week, of the Canadian Seed-growers' Association, Dr. Jas. W. Robertson, the President, entertained officers, members and others to an informal dinner in the Parliament Buildings. The company was representative of every part of Canada, and of agricultural, educational and journalistic interests. After the toast of "The King," Prof. C. A. Zavitz proposed, supported by G. H. Clark, Canadian Seed Commissioner, in felicitous terms, a resolution of thanks for the opportunities of social intercourse afforded by the occasion, and expressing the heartfelt wishes of the company that Dr. Robertson and family would greatly enjoy and benefit by their year's stay in Europe, where the Doctor will study economic and other conditions for the future service of Canada upon his return, with reinvigorated energy and stores of knowledge. His departure from the new Macdonald College, which stands as an enduring monument to his splendid constructive genius, was deeply regretted. The ringing applause confirming the resolution was expressive of the enthusiastic devotion entertained toward Dr. Robertson from one end of the country to the other.

Farm Laborers and Domestic Servants.

The Ontario Department of Agriculture, in order to supply the pressing demand in the Province for competent farm laborers and domestic servants, have, in addition to their regular staff of emigration agents in Great Britain, secured the services of a number of special representatives in England, Ireland, Scotland and the Channel Islands, who are now actively engaged in the work of promoting emigration of these classes to Ontario. The Department have now definite assurance that there will be a considerable number of men accustomed to farm work arrive here during the next few months. Farmers wishing to engage any of these should forward their applications to the Director of Colonization, Parliament Buildings, Toronto, who will endeavor to see that their requirements are supplied.

Rabies Regulations.

The Federal and Provincial Governments are carrying on a joint campaign to stamp out rabies from Western Ontario. Dominion and Provincial orders-in-council similar in text have been distributed and made public. These orders cover twenty-three counties, and direct that all dogs must be chained up or muzzled until the orders are countermanded. The penalty for dog-owners who fail to obey is a fine not exceeding \$200 under the Dominion Act, and \$20 under the Provincial statute. The destruction of the dog is also involved. Following is a copy of the official order, issued by the Department of Agriculture, Ottawa, Health of Animals Branch. It declares that as rabies is known to exist in many widely-separated districts in that part of the western peninsula of the Province of Ontario lying west of the eastern boundaries of the Counties of York and Simcoe, all dogs within the said area must either be securely chained in an outhouse or other building, or kept under lock and key, or kept constantly muzzled with effective metallic muzzles, in a manner satisfactory to the veterinary inspectors of this Department. Providing that in any municipality where rabies is known actually to exist, the muzzling privilege may be withdrawn, in which event all dogs must be detained or isolated by being chained or kept under lock and key.

In view of the fact that rabies is readily transmissible to human beings, the attention of all Provincial and municipal officers is specially directed to this order, and their co-operation in its enforcement is earnestly requested.

Canadian Trotting Standard.

For the proposed new Canadian Standard-bred Registry, the following rules of entry have been approved:

The following animals may be admitted to registry:

TROTGING STANDARD.

1. An animal recorded as Standard in the American Trotting Register under the rules governing the Trotting Division.

2. An animal whose sire and dam are recorded as Standard in the American Trotting Register under the rules governing the Trotting Division.

3. An animal whose sire and dam are recorded in the Canadian Standard-bred Studbook.

4. A mare sired by a registered Standard Trotting Horse, providing her first, second and third dams are each sired by a registered Standard Trotting Horse.

PACING STANDARD.

1. An animal recorded as Standard in the American Trotting Register under the rules governing the Pacing Division.

2. An animal whose sire and dam are recorded as Standard in the American Trotting Register under the rules governing the Pacing Division.

3. An animal whose sire and dam are recorded in the Canadian Standard-bred Studbook.

4. A mare sired by a registered Standard Pacing Horse, provided her first, second and third dams are each sired by a registered Standard Pacing Horse.

5. The progeny of a registered Standard Trotting Horse out of a registered Standard Pacing mare, or the progeny of a registered Standard Pacing Horse out of a registered Standard Trotting mare.

Note.—Clause 3 in each case means sires and dams recorded in the new book after it is opened.

The Saskatchewan Grain-growers, at their convention, at Prince Albert, February 10th, received with great enthusiasm the suggestion of President Drury, of the Grange, that their Association and the Grange should unite. A strong declaration for free entry of farm implements was also unanimously passed.

At the conclusion of the convention of the Grain-growers' Association of Saskatchewan, held last week, a Dominion federation of farmers, to be known as the "National Council of Agriculture of the Dominion," was organized. The president-elect is Mr. McCuaig, Portage la Prairie; secretary, E. C. Drury, Crown Hill, Ont.

Hon. John Charlton, of Lynedoch, Norfolk Co., Ontario, whose death, at the ripe age of 81 years, took place on February 11th, removes one of the ablest and most worthy statesmen of Canada. For thirty-two successive years, until 1904, he sat in the Dominion House, and none have made a better record of independence and loyalty to the best interests of his country. A man of strong religious views, he was instrumental in promoting morality legislation which has been effective in the protection of the weak and unfortunate, and for which he will long be gratefully remembered.

THE IDLE DOLLAR

An idle dollar in your pocket is apt to be spent.

A dollar deposited in the Bank of Toronto Savings Department becomes a wage-earner for you.

Are your dollars idle? Better put them to work for you in the Bank of Toronto.

One dollar or more will open an account.

Interest is added every six months.

BANK OF TORONTO

Deposits over \$34,000,000
Incorporated 1855.

MARKETS.

Toronto.

LIVE STOCK.

At West Toronto, on Monday, 14th, receipts numbered 70 cars, comprising 1,543 cattle, 15 hogs, 42 sheep, 16 calves. Market steady; prices firm, but unchanged. Prime picked butchers', \$5.75 to \$6; loads of good, \$5.50 to \$5.70; medium, \$5.20 to \$5.40; common, \$4.50 to \$5; milkers, \$4.00 to \$6.00; calves, \$4 to \$8 per cwt. Sheep, \$4.50 to \$5 per cwt.; lambs, \$6.50 to \$7.50. Hogs—Selects, fed and watered, \$8.40, and \$8.15, f. o. b. cars.

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	147	123	270
Cattle	2,475	2,076	4,551
Hogs	2,753	1,174	3,927
Sheep	542	248	790
Calves	175	51	226
Horses	—	179	179

For the corresponding week of 1909 the total receipts were:

	City.	Union.	Total.
Cars	171	77	248
Cattle	2,528	1,047	3,585
Hogs	—	749	5,284
Sheep	—	—	1,879
Calves	—	—	—
Horses	—	—	—

than for several weeks, export class. Trade was brisk, prices 15c. to 25c. per cwt. higher than quoted in our last letter.

Exporters.—There were three American buyers, who took all the export cattle on sale, and one of these told your correspondent that 200 more would have found a ready market. I. F. Brown bought for Armour's 275 exporters, at \$6 to \$6.50 per cwt., but only one choice, well-finished load of heavy cattle at the latter price, \$6.30 being the next highest price.

Geo. Campbell bought for Morris & Co. 210 cattle. Those for the London market cost \$6 to \$6.30, and for Manchester cattle he paid \$5.50 to \$5.75.

E. L. Woodward for Swift & Co. bought 249 cattle, at \$5.80 to \$6.30 for steers, and bulls \$4.75 to \$5.50, and one prime-quality bull sold at \$5.65 per cwt.

Butchers.—Four loads of butchers' heifers, such as the export dealers like to get, were bought at the Union Stock-yards by one of the Abattoir Companies at \$4.20 per cwt. They were really export cattle, weighing from 1,100 to 1,210 lbs. each. Outside of these, prime-picked lots of 1,000 lb. cattle sold from \$5.75 to \$6; loads of good, \$5.50 to \$5.70; medium, \$5 to \$5.25; common, \$1.50 to \$1.90; cows generally sold from \$3.50 to \$4.60, but there were a few well-finished heavy cows sold at \$4.75 to \$5.25; canners, \$2 to \$2.50.

Feeders and Stockers.—None were on sale.

Milkers and Springers.—The demand for first-class milkers and forward springers still continues to be good, as several buyers from Montreal and Quebec, as well as Western Ontario dairymen, were on the market. Prices ranged from \$55 to \$65 for the best, and \$40 to \$50 for medium to good.

Veal Calves.—Receipts continue to be light, with prices very firm for any calves of good quality. Prices ranged from \$4 to \$7.50 per cwt.

Sheep and Lambs.—Receipts light. Prices about steady. Ewes, \$4.50 to \$5; rams and culls, \$3.50 to \$4; lambs, yearlings, \$6 to \$7 per cwt.; selected lots of ewe and wether lambs, sell, out of the market to retail butchers, at \$7.25 to \$7.50 per cwt.

Hogs.—The buyers tried to get hog prices down below \$8 at country points, but, as far as can be learned, failed. Selects, fed and watered at the market, \$8.40, and \$8.15, f. o. b. cars at country points, was the general price paid after Monday, as they found they could not get them at less than \$8 from the farmer.

Horses.—J. Herbert Smith, manager of the Union Horse Exchange at the Union Stock-yards, West Toronto, reports the best trade for any week this season thus far. They started the week with 200 horses in the stable, and disposed of the bulk of them at firm prices. The principal demand was from the Northwest and the lumber camps; and quite a number also were sold for farm purposes. Mr. Smith reports the following prices: Drafters, \$180 to \$225, with a few topers at \$230 and \$235, as well as two pairs of extra-heavy draft horses, 1,700 to 1,800 lbs., for show purposes, at \$550 per pair; general-purpose, \$160 to \$190; expressors, \$140 to \$200; drivers, \$100 to \$200; farm chunks, \$125 to \$165; serviceably sound, \$35 to \$80 each.

HAY AND MILLFEED.

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

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

Bran.—Car lots, in sacks, at Toronto, \$22.50.

Shorts.—Car lots, in sacks, at Toronto, \$24.50.

SEED MARKET.

The William Rennie Seed Co. report very little doing in seeds, this being the between seasons. Prices steady, at unchanged quotations: Alsike, No. 1, bushel, \$6 to \$6.25; No. 2, bushel, \$5.25 to \$5.75; red clover, No. 1, bushel, \$7.50 to \$8.25, and red clover (containing buckhorn), \$5.50 to \$6; timothy, bushel, \$1.40 to \$1.60.

HIDES AND WOOL.

T. Carter & Co., 85 East Front Street, have been paying the following prices for selected steers and cows, and for steers, cows and calves: Hides, No. 1, \$2.00 to \$2.25; No. 2, \$1.75 to \$1.90; No. 3, \$1.50 to \$1.65; No. 4, \$1.25 to \$1.40; No. 5, \$1.00 to \$1.15; No. 6, \$0.75 to \$0.90; No. 7, \$0.50 to \$0.65; No. 8, \$0.25 to \$0.40. Tallow, per lb., 90c. to \$1 each; skins, \$1.00 to \$1.25; prices given on order.

BREA.

Wheat.—No. 2 white, outside; No. 2 mixed, \$1.10; Manitoba—No. 1 northern, \$1.10; northern, \$1.10; on track at lake, \$1.10; No. 2, 85c.; outside, Buckwheat—No. 2, 52c. to 53c.; outside, Barley—No. 2, 57c.; No. 3V, 55c. to 56c.; No. 8, 50c.; outside, Corn—American, No. 2 yellow, 75c.; new No. 3 yellow, 71c. to 71 1/2c.; Toronto, Oats—No. 2 white, 39c.; outside; 41c. to 42c., track, Toronto; No. 3 white, 37c.; outside; 40c. to 41c., Toronto. Flour—90 per cent Ont. patents, \$4.45, at seaboard. Manitoba flour—Toronto prices: First patents, \$5.70; second patents, \$5.20; strong bakers', \$5.00.

FRUITS AND VEGETABLES.

Apples, the bulk of which are seconds and worse, are very plentiful, and cheaper, at \$1.50 to \$2, and \$2.50. No. 1 Spies are easy, at \$3 per barrel. Onions, \$1.10 to \$1.15 per bag; carrots, 40c. to 50c. per bag; parsnips, bag, 65c. to 75c.; beets, bag, 55c. to 65c.; cab-

bage, per barrel, \$1.25 to \$1.50; turnips, \$6 to \$6.50 per ton.

COUNTRY PRODUCE.

Butter.—Receipts large, with market tending downwards, at least there is an easier feeling, but prices remain unchanged. Creamery rolls, choice, 28c. to 29c.; creamery solids, 26c. to 27c.; separator dairy, 23c. to 24c.; store lots, 20c. to 21c.

Eggs.—Strictly new-laid, in case lots, 30c. to 32c.; storage eggs, 27c.

Cheese.—Market firm, at unchanged prices. Large, 18c.; twins, 13 1/2c.

Potatoes.—Receipts large; prices easy, at 45c. to 50c. per bag, for car lots, on track, Toronto.

Beans.—There is a good trade reported in beans, at firm prices, as there is a feeling that there is going to be a shortage of supplies. Primes are worth \$2 to \$2.10; hand-picked, \$2.10 to \$2.15 and \$2.20 per bushel.

Honey.—Prices steady. Strained, 10 1/2c.; combs, per dozen sections, \$2.50 to \$3.

Poultry.—Receipts light. Prices firm, as follows: Turkeys, 18c. to 20c.; geese and ducks, season over; chickens, 15c. to 18c. per lb.; fowl, 12c. per lb.

MARKET NOTE.

Dealers on the Toronto cattle market have combined, and will not buy cattle that have been fed grain or meal after arrival at yards. Only hay shall be fed, and cattle must have all the water they want as soon as they are yarded.

Montreal.

Live Stock.—The local market was altogether different from the English last week, being firmer, early in the week, owing largely to the smaller offerings, and also to the colder weather. There was quite a demand from outside sources also, and this helped to keep prices firm. Some very choice steers sold at 6 1/2c. per lb., while choice sold at 6c. to 6 1/2c., and fine at 5 1/2c. to 6c., good selling 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., according to quality. There was an excellent demand for sheep and lambs, and, as offerings were not large, the market held quite firm. Lambs brought 6 1/2c. per lb. to 7c., sheep selling at 4 1/2c. There was a fairly active demand for calves, and prices ranged around previous prices, being \$3 to \$12 each. The market for hogs was rather firm, and sales of select lots were made at 9c. to 9 1/2c. per lb., weighed off cars.

Horses.—Local demand seems to continue. Little demand from outside. Dealers are quite encouraged with the situation, and they predict the continuation of a good demand for some time to come. Heavy draft, weighing 1,500 to 1,700 lbs., sold at \$225 to \$300 each; light draft, 1,400 to 1,500 lbs., sold at \$180 to \$240 each; small horses, 1,000 to 1,100 lbs., \$100 to \$150 each; old, broken-down animals, \$75 to \$100 each, and choice saddle and carriage animals, \$350 to \$500 each.

Dressed Hogs.—Tone of market showed little change, although the strength of the situation in live hogs was reflected to some extent upon the prices of dressed. Abattoir-dressed, fresh-killed hogs were selling at 12 1/2c. to 12 3/4c. per lb., and country-dressed at 12c. to 12 1/2c. per lb.

Poultry.—General interest in this market last week seemed to have entirely disappeared.

Market steady. Choicest probably superior this year contains, the latter being a soft side. Very choice stock of 90 lbs., carloads, track, are 55c. to 57 1/2c.

continued liberal, with At auction, No. 2 apples, round \$2 to \$2.50 per barrel, were selling at \$1.25 to \$1.50.

Eggs.—New-laid eggs being 32c. per dozen held eggs 25c. for No. 1, 24c. to 25c. for select's. On Monday, 14th, prices were rather firmer, fresh-laid being quoted at 32c. per dozen.

Butter.—There has been a report of dairy butter, at 20c. per lb. here being about the best deal of summer. A good full makes were 25c. per lb. Fancy makes 23 1/2c. to 24 1/2c. It is stated on Monday of this week, that wholesalemer-

IMPERIAL BANK OF CANADA

CHARTERED 1875

Capital Authorized, \$10,000,000
Capital Paid Up, 5,000,000
Reserve, 5,000,000

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.

chants had agreed to advance prices one cent.

Cheese.—Market steady and firm, at 11 1/2c. to 12c. for Quebec cheese, and 12 1/2c. to 12 3/4c. for Ontario.

Grain.—The advance in the price of oats was not continued last week, and prices were still 46c. to 46 1/2c. per bushel, car lots, store, for No. 2 Canadian Western; 1c. less for No. 2; 44c. to 44 1/2c. for No. 2 white; 1c. less for No. 3, and yet a cent less for No. 4. No. 2 barley, 59 1/2c. to 60c.; No. 3, 58 1/2c., and No. 4, 56 1/2c.; feed barley, 54 1/2c.

Flour.—Manitoba first patents, \$5.80 per barrel, in bags; seconds, \$5.80, and strong bakers', \$5.10; Ontario winter-wheat patents, \$5.50 to \$5.60; straight rollers, \$5.10 to \$5.25.

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

Hay.—Market steady; No. 1 hay, \$14 to \$14.50 per ton, cars, track; No. 2 extra, \$13 to \$13.50; No. 2, \$12 to \$12.50; clover mixed, \$11 to \$11.50; clover, \$10 to \$11.

Seeds.—Dealers quote farmers, in 100-lb. lots, as follows: Timothy seed, \$4.75 to \$7, f. o. b. Montreal; red clover, \$18 to \$20, and alsike, \$14 to \$17.

Hides.—The market on beef hides lost another cent, this being due, it is claimed, to lack of demand, resulting from the unsettled conditions in the United States. Prices here, at 9c., 10c. and 11c. per lb. for hides; 12c. and 14c. for calf skins; \$1 each for sheep skins; \$1.75 for No. 2 horse hides, and \$2.25 for No. 1 horse hides; tallow, 1 1/2c. to 4 1/2c. per lb., for rough, and 5c. to 6c. per lb. for rendered.

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 \$9; stockers and feeders, \$3.75 to \$5.40.

Hogs.—Choice heavy, \$8.85 to \$8.95; butchers', \$8.80 to \$8.95; light mixed, \$8.60 to \$8.75; choice light, \$8.75 to \$8.85; packing, \$8.75 to \$8.90; pigs, \$8.40 to \$8.70; bulk of sales, \$8.80 to \$8.85.

Sheep and Lambs.—Sheep, \$5.25 to \$7; lambs, \$7.25 to \$9; yearlings, \$7 to \$8.50.

Buffalo.

Cattle.—Prime steers, \$6.65 to \$7.25. Veals.—\$6 to \$11.50.

Hogs.—Heavy, \$9.10 to \$9.15; mixed, \$9.15 to \$9.20; Yorkers, \$9.15 to \$9.25; pigs, \$9.20 to \$9.30; roughs, \$8 to \$8.50; dairies, \$9 to \$9.25.

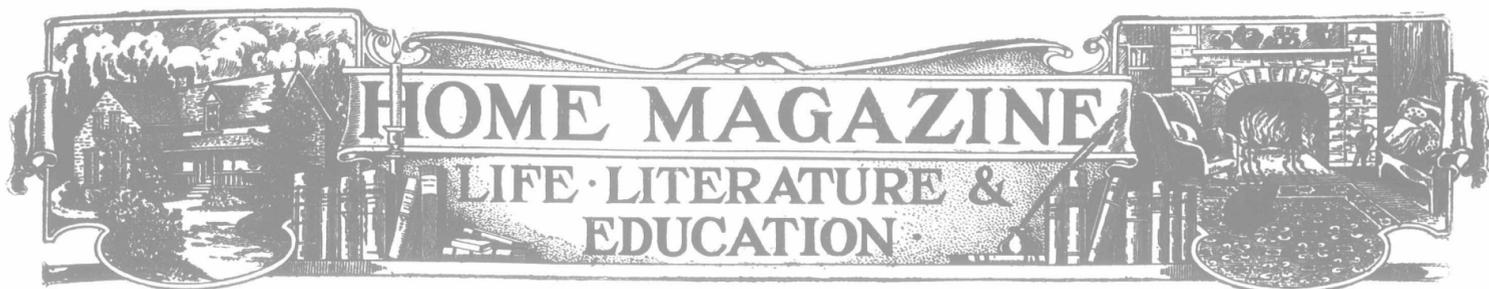
Sheep and Lambs.—Lambs, \$6.25 to \$8.70; wethers, \$6.75 to \$7.

British Cattle Markets.

Liverpool and London cables quote live cattle (American) at 12 1/2c. to 13 1/2c. dressed weight; refrigerator beef, 9 1/2c. to 10 1/2c. per lb.

TRADE TOPIC.

THESE TOP THE LIST.—O. A. C. No. 21, Mandescheuri barley and Regenerated Scotch-grown, Banner oats. Geo. Keith & Sons, seed merchants, Toronto, offer both these grand grains in five bushel lots at \$1.25 per bushel, bag free. Send for samples and catalogue. (Adv.)



TRIAL BANK CANADA
 REGISTERED 1875
 Capitalized, \$10,000,000.00
 Paid up, 5,000,000.00
 Reserve, 5,000,000.00
SAVINGS DEPARTMENT
 Open an account. Interest at current rate from time to time.
 All notes discounted.
 Branches throughout the Dominion.
 Loans to advance prices on
 steady and firm, at
 Quebec cheese, and 12½c.
 per lb.
 Advance in the price of
 continued last week, and
 5c. to 46½c. per bushel,
 No. 2 Canadian West-
 No. 2; 44c. to 44½c. for
 No. 3, and yet
 No. 4. No. 2 barley,
 No. 3, 58½c., and No. 4,
 54½c.
 first patents, \$5.80
 seconds, \$5.30, and
 \$5.10; Ontario winter-
 \$5.50 to \$5.60; straight
 \$5.25.
 n., at \$22.50 to \$23.
 for Ontario bran;
 middlings, \$31 to \$33
 \$27 to \$29 for
 toba bran \$22; shorts
 is quoted at \$31 to
 \$35.50 to \$36.
 dy; No. 1 hay, \$14
 cars, track; No. 2
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 note farmers, in 100-
 Timothy seed.
 Montreal; red clo-
 \$14 to \$17.
 on beef hides lost
 due, it is claimed,
 resulting from the un-
 the United States.
 10c. and 11c. per lb.
 14c. for calf skins;
 \$1.75 for No. 2
 \$0.4c. per lb., for
 c. per lb. for ren-
ago.
 to \$8; cows, \$3.50
 \$0 to \$6; bulls, \$4
 \$0 to \$9; stockers and
 \$0.
 \$8.85 to \$8.95.
 \$8.95; light mixed,
 light, \$8.75 to
 \$8.90; pigs,
 of sales, \$8.80 to
 sheep, \$5.25 to \$7.
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lo.
 \$6.65 to \$7.25.
 to \$9.15; mixed,
 \$9.15 to \$9.25.
 \$8 to \$8.50.
 Lambs, \$6.25 to
 \$7.
Markets.
 cables quote live
 12½c. to 13½c.
 for beef, 9½c. to
PIC.
 LIST.—O. A. C.
 ley and Regener-
 ner oats. Geo.
 chants, Toronto.
 grains in five-
 per bushel, bags
 and catalogue.

According to recently-published reports from the Middle West of the United States, a larger number of young men in that district are each year choosing farming for their life-work.

St. George's Church, New York City, has established a "Tuberculosis Class," whose especial work is to free the members, all of whom are more or less tuberculous, and others, as far as possible, from the disease. A physician is in charge, and the patients report marked improvement after a few months' treatment according to the methods of modern sanatoria.

Professor Coleman, Professor of Geology in the University of Toronto, in the January number of Canadian Magazine, sets forth his belief that Ontario and Quebec have been twice submerged by glaciers, with an inter-glacial period between, during which trees and animals flourished. He thinks the ice will again come down from the polar regions, not, however, it is comforting to know, before 20,000 or 30,000 years have elapsed.

According to Fernand Honore, a writer in Scientific American, "television," or the possibility of obtaining, almost instantaneously, optical images of distant objects, is in sight. The system is being perfected by the inventors, Messrs. Rignoux and Pournier, who have greatly improved Korn's device for electrically transmitting photographs.

A single performer, playing all the instruments of a band together may be a realization of the future. Already a device by which one musician may play a stringed and a wind instrument at the same time has been invented in England. He plays the violin, and it, in turn, controls the tones of the horn, the wind for the latter being produced by a current of compressed air.

A resolution of thanks to Mr. John D. Rockefeller has been passed by the Southern Health Conference for his gift of one million dollars to assist in stamping out the hook-worm disease. Twenty-five per cent. of the Southern cotton-mill workers are afflicted with this enervating and debilitating malady, which was imported into the United States when the American troops returned from Porto Rico.

During the recent political contest in England, a political "meeting," with an address by Mr. Balfour, and all attendant sounds, was carried by a sort of supersensitive telephone, called the "electrophone," over wires to the residence of Mr. Joseph Chamberlain, seven miles away, the former Liberal-Unionist leader being thus enabled to hear all that was going on.

The death is announced of Mr. William Livesey, last of the earliest English Teetotalers' Society, near Preston, Eng., in the ninety-fourth year of his age. He was a son of Joseph Livesey, of that place, who had accorded to him the designation of "The Father of Teetotalism."

It is to be hoped that the questions submitted to the Railway Com-

mission by the jury investigating the Webbwood wreck, will suggest a thoroughness of supervision of railways and cars that will render a repetition of the horrors of the Spanish River disaster less likely to happen. The questions were as follows:

1. Are three sectionmen sufficient to keep an eight-mile section in proper condition during the winter time, in the rigorous climate of Northern Ontario?

2. Should openings be placed in the roof of cars, capable of being opened from either inside or outside of the car, suitable for the escape of passengers in case of overturned cars?

3. Should emergency tools be carried at convenient places outside of cars, as well as inside?

An announcement from the Yerkes Observatory states that a spectrum of Halley's comet, obtained by the director and his assistants, shows very prominent bands of cyanogen, the deadliest poison known. The news is causing a great deal of discussion as to the probable effect on the earth should it pass through the comet's tail. Camille Flammarion, the distinguished French scientist, is of the opinion that the cyanogen gas would possibly snuff out all life on the earth. Other astronomers argue that this could not happen, owing to the fact that the tail of the comet is almost inconceivably rarified.

The cause of the recent disastrous floods in France is attributed to the clearing away of the forests along the uplands, which formerly retarded the onrush of water during sudden or protracted thaws. The too zealous clearing away of forest lands is ever attended by more or less disastrous results. Towns and buildings may not be always endangered, but denudation of the soil and of its fertility goes on incessantly and insidiously on all over-cleared farms and districts.

Britain may have need to watch the disaffection in India, as she is doing. A Calcutta correspondent of the London Times, writing recently in regard to the bomb conspiracy unearthed by Inspector Shams-ul-Alam (who was murdered in consequence), remarks that the reforms embodied in Lord Morley's legislation have never appeased the natives. He holds that no possible reforms can appease them, regarding the Indians as "irreconcilable, who boast that their hatred of British rule is implacable." The Indian press, it appears, has done much towards kindling discontent and spreading sedition, and it is generally held that the first step towards repression, foreshadowed by Lord Minto, in his speech from the throne last month, will be the "bridling of literary license."

The Board of Education, Toronto, has announced the abolition of homework in public schools. We believe this to be a step in the right direction. Keep the children at work during school hours, train them while school is "in" to concentration of mind, then leave them the evenings for rest and physical development, and the work as may be required of them at home. Such a system should not only in better health and lighter minds for the children, but as a solution of the problem of discipline during school-hours. Many children are inatten-

tive or ready for mischief in school chiefly because the continual "grind" day and night has made them "sick of books."

Cold-storage may be numbered among the good things that have been turned to evil account. According to figures taken from the "Ice and Refrigeration Blue Book," by the New York World, there were of late held in 558 cold-storage plants, awaiting higher prices, 14,000,000 cattle, 6,000,000 calves, 25,000,000 sheep and lambs, and 50,000 hogs. The investigation of one World reporter unearthed the fact that, during a single recent season of high prices, thousands of pounds of halibut, fowl, eggs and meat, which had lain in cold-storage during periods varying from seven months to three years, were put on the market at gilt-edge prices, as "strictly fresh."

President Taft, and the Governors of many States, have joined in a movement for a saner and safer 4th of July celebration, with less noise and the use of fewer explosives. In the last seven years it has been a day of national death, causing 1,513 persons to be killed outright, 33,073 accidents, and \$20,000,000 in fire losses.

The New York Independent, in commenting upon the apparent impossibility of placing a rein upon the forces that control the price of meat, etc., incidentally eulogizes the lot of the farmer: "For a multitude of city people who depend on city markets, the best relief is to go back to the land. As we have said before, we do not produce enough. We do not depend enough on what we raise on our farms and gardens. We ought to buy less and raise more. The most independent man in the world is the farmer, and the happiest. He has to work hard seven months in the year, but he has liberty, to be his own master, to rest on rainy days, to take a winter vacation. He is not tied all day, all the year round, to a shop or a desk. It is almost a holiday to the man tied for years to a shop to be his own master on his own farm. He will make blunders; his first year or two may be hard, but if he has intelligence and enterprise, and is willing to work, the farm will give profit and delight. It is healthy for him and his children. But it is no life for drones or stupid delinquents. It takes brains to be a good farmer. And such a one has no fear of rising prices. He gets the profit of them in what he sells, and he depends very slightly on the meat market. His food supply he brings from his own fields and barns into his own cellar. The time will come again when he who delves will be the gentleman."

It is interesting to note the side taken by the various literary men of England during the strenuous political campaign of the last few months. The chief of the Conservative champions, notes T. P.'s, has been the Poet Laureate, Mr. Alfred Austin. Among novelists, the Tories have their most formidable representative in the one-time Canadian, Sir Gilbert Parker. Mr. A. E. W. Mason, Miss Corelli, Mr. Kipling and Sir Conan Doyle are also ranged with the Unionists; while the Liberals claim Mr. Gilbert K. Chesterton, Mr. Harold Begbie, Mr. James Douglas, Mr.

Silas Hocking, Mr. Quiller Couch, Mr. Maurice Hewlett, Mr. Jerome K. Jerome, Mr. Lacon Watson, Mr. Morley Roberts, and Mr. Anthony Hope Hawkins (Radical). Most of the novelists who have spoken at all have spoken as Liberals.

The Improvident Improvement of Our Ontario School System.

Can it be possible to over-improve anything? Is it possible that the school system that we have boasted so much of has become so much improved that education is becoming a luxury, obtainable only by the rich, instead of a necessity, free to all, or as nearly free as we can get it?

Has it come to pass that the "little red schoolhouse" is all we are to get, and the higher education retained only for the moneyed men, with or without brains, who can afford to go four years to school without any returns coming in to help education expenses? Are we willing to sink into duplicates of the rustics of the Old Country, very good people in their place, but "un-aristocratic, don't you know!" a people of another sphere, and quite below the educated people of caste, a distinction, thank God, but little felt in this country, but only too much in evidence in the Old Land, whose conditions we are trying to escape, yet towards which our present school system is driving us more quickly than anything else?

Are the teachers to-day better than the ones who taught us twenty years ago?

Are the children of to-day farther advanced than those of a decade ago, or are they so degenerated that it takes a first-class certificate to teach them their "A. B. C.'s," or "Ta, Ba, Ca's," or whatever you call it? For my part, I say "No." Our cleverest men of to-day used the third-class certificate as a stepping-stone to something higher. The children had the service of men and women anxious to advance, and anxious to extend a helping hand to others to follow in their steps.

All this is now improved away. Our clever young people are left to hoe potatoes or to be full-grown before they can earn anything with their education to help to advance themselves. The children are left to the listless energy of a man who attained his education by the sweat or money of a father who kept him at school because he was no use anywhere else, or to the restless inattention of some love-sick maiden whose parents kept her at school in the hope that if she did not get married soon, she would at least be able to clothe herself till she did, and it "cost as much to keep her at home, anyway."

At present, it would cost to educate the average Ontario family of six-four years at school, board at three dollars per week, school fees and clothes—at least four thousand dollars: and in Quebec, with their larger families, they would have to give over their farms, and give a mortgage on the kids to educate them.

Is it not time the farmers (as it affects them most) did something, before they let a board of three or four men, take away the birthright of every loyal Canadian to educate his children, with equal rights to every man, special privileges to none. We pay taxes: let us have what we pay for.

Hoping to hear further on this question, as the farmer's paper is the farmer's friend, and the place for a discussion on so vital a question.

J. C. W.

[Does J. C. W. mean to imply that all the cleverest young people should be taken away permanently from the "potato-hoeing" business, or merely that every farm boy or girl needs a taste of the higher education, whether he or she choose to take up a profession or come back to the farm? We give J. C. W. credit for the latter, and trust that his opening-up of a very live topic may bring forth a response from others who are interested in seeing the farmer educated, especially looking to the influence which he may gain thereby in the government of the country and the promotion of farmers' rights.]

Hope's Quiet Hour.

When Opportunity Knocks!

"A pig may poke his nose into the trough and think o' nothing outside it; but if you've got a man's heart and soul in you, you can't be easy a-making your own bed an' leaving the rest to lie on the stones."—GEORGE ELIOT.

We are living in the daily enjoyment of the great privileges and glorious light of Christianity—are we going to be content to make ourselves comfortable, without caring about the difficulties and darkness of other people? Surely that is a very un-Christian proceeding!

Let us wake up to the truth of the saying: "When opportunity knocks, do not wait for it to break in your door." The downhearted people who seem to fear that the religion of Christ is losing its hold on the world, are taking too short views—that is all. They are not studying the history of to-day, and comparing it with the history of yesterday, as a whole; but only looking at a little bit of the world.

Of all attitudes of mind, pessimism is the most paralyzing. How can we win victories if our minds are always contemplating the probability of defeat? The Bible not only tells us to expect victory, it declares confidently that victory is certain to all who range themselves on the Lord's side. The kingdoms of the earth—all of them—shall become the Kingdom of the LORD and of His Anointed, and "the Kingdom and dominion, and the greatness of the Kingdom under the whole heaven, shall be given to the people of the saints of the Most High, Whose Kingdom is an everlasting Kingdom, and all rulers shall serve and obey Him."—Dan. vii.: 27. If I were to give you all the texts proving the certainty of victory, there would be no space for anything else. Study the Bible with the object of finding out what the prospects are for the Church of God, and you will see that our thanks are due to Him Who "giveth us the victory."

But when we turn from prophecy to history, do we find brightness or gloom? Is the church "terrible as an army with banners" to the hosts of darkness? Is the obeying the command: "Enlarge the place of thy tent, and let them stretch forth the curtains of thine habitations: spare not, lengthen thy cords, and strengthen thy stakes?"

Let Bishop Ingram—the world-beloved Bishop of Old London—give his testimony. He has been working for many years among the degraded and the world-hardened—is he disheartened? Not he! Shortly before Christmas he was giving weekday addresses to crowds of people, standing closely packed to hear him, mostly business men—and business men are not interested only in money-making! During one of these noonday services he said: "Immortality is far easier to believe to-day than it was when I was a boy. We had to believe against what we thought was the voice of science; but, to-day, every thinking man will tell you that 'the things which are seen' are only passing, and 'the things which are unseen' are the eternal ones. We thought we had to believe that only what we touched and saw were real; now we are told that the things we see and touch are not real. Therefore, you young men

who have to fight for your faith to-day, fight for it under far better conditions than we had in my day at Oxford. Why, you have got nearly every thinking man on your side, on the side of the angels, on the side of immortality."

I have heard people assert that there are no great leaders in the church to-day—no men who stand out above their fellows like Augustine, Luther, Wesley, etc. But it seems to me that the reason we don't see one man towering like a giant among Christians, is because there are thousands of splendid warriors fighting in the ranks of the King. Go where you will—north, south, east or west—and you will find that the world-wide opportunity of preaching the Gospel to all the nations, is being seized by men and women who are fired with devotion to God and love to their fellows, and who are as up-to-date and practical in their methods as any hard-headed business man.

I have before me a little book called "Modern World Movements," which was published about a year ago. It is optimistic from cover to cover. Here are a few quotations from it, which may convince you that opportunity is knocking at our doors, and is not knocking in vain:

"Look at Japan. There has been an increase of seventy per cent. in the number of Protestant church members there

and manifest an unprecedented readiness to hear the Gospel."

Then look at Korea! "Only a little over twenty years ago, all the Christians then in that country numbered seven, and together attended the first celebration of the Holy Communion. Dr. Underwood estimates that last year there were fifty thousand new converts, of whom twenty thousand were in connection with one mission alone. There is probably not a community in Korea where, if a genuine Christian would go and live and preach, he could not raise up an effective Christian church within less than a year. The eagerness manifested among the Korean people to learn of Christ is so resistless that the missionaries everywhere are overwhelmed in their attempts to meet the floodtide of opportunity.

Twelve hundred Korean laymen recently spent a month in a conference for Bible study, some of them walking for ten days to reach it. They are praying Christians. You have doubtless heard of one of their regular prayer-meetings, attended each week by over one thousand Christians. Thousands of them last year gave from one week to one month each to the work of propagating the Gospel in neighboring and distant villages. They are money-giving Christians. Many of their churches are already self-supporting."

"The Christward movement in China is

whole world in our day." I have only spoken of a very small part of the Opportunity that is calling to the Church, that is knocking at the doors everywhere. Some—many—are making good use of it. Are we willing to stand aside! Dare we bear the reproach of Meroy, who "came not to the help of the LORD against the mighty?"—Jud. v.: 23. Are we eagerly and joyously doing our best to bring our brothers and sisters nearer to our Lord and Master? The victory of His Kingdom is certain—are we to share in that victory? The heathen nations are running to meet the Christian church, let us act on the maxim of Phillips Brooks: "The true rule for meeting strangers is to meet them a little bit more than half-way." Real Christians must take a practical interest in missions.

DORA FARNCOMB

Current Events.

The new British Parliament was opened on February 15th.

The revenue of the Dominion for the last ten months shows an increase of \$12,572,886.

Australia's first warship, the *Parramatta*, was launched at Govan, Scotland, on Feb. 9th, Mrs. Asquith doing the honors.

Southampton will be the English terminal port of the steamship service to be inaugurated this spring by the Canadian Northern Railway Company.

A crew of 47 men was saved from the sinking ship *Kentucky*, of Cape Hatteras, through the instrumentality of wireless telegraphy, on February 4th.

Mr. L. J. Tarte, proprietor of *La Patrie*, Montreal, has announced that through *La Patrie* he intends to start a campaign in favor of Canada sharing at once in the naval defence of the Empire.

The order has been issued that all dogs in Ontario, west of a line drawn a little east of Toronto, must be, in the near future, either muzzled or confined. The step has been taken because of the recent rabies scare.

Herbert Gladstone, recently appointed Governor-General of United South Africa, has been Home Secretary since 1905. He is a son of England's "Grand Old Man," the late Rt. Hon. W. E. Gladstone.

The Beaver Circle.

Notice: An Offer to Our Photographers.

Two or three of our Beavers have spoken of owning cameras. Here is our offer. Sprinkle some food on the snow, and when a goodly cluster of birds has congregated, "snap" them. For any photos clear enough to publish, we will give prizes. Photos of birds other than sparrows (which are hard on our native birds, as well as destructive to our grain), will, of course, be preferred. Send photos to Puck.

A Wild-duck Story.

Mr. Miner, or, rather, as he prefers to be called, Jack Miner, of Essex Co., Ont., is a lover of birds. On meeting "The Farmer's Advocate" representative at the Ontario Corn Show held lately, he expressed most warmly his appreciation of articles that have appeared in the Children's Department, inculcating gentleness towards our feathered friends, and a desire for their protection. "I have seen," said Mr. Miner, "people that would go up to a horse, put their arms around his neck, and lay their



A Little Scotch Laddie.

during the past ten years. Moreover, Christianity in Japan, as you will recall, began with the Samurai or knightly class, so that its influence is a hundred-fold greater than its statistical strength. In talking with some of the most eminent men of the nation, I was impressed by the fact that when they spoke of the religions of Japan—Buddhism and Christianity—although the number of adherents of Buddhism reaches into the tens of millions, while the number of adherents of Christianity only into the tens of thousands, they always discriminated in their remarks in favor of Christianity. In the present Parliament of Japan, fourteen members, out of three hundred and eighty, are Christians, or twice as many as in the last Parliament. . . . In connection with the evangelistic meetings, and following the Conference of the World's Student Christian Federation held in Japan less than two years ago, there were not less than three thousand inquiries, chiefly among government students and schoolboys. Where can you point to anything like this among students in the Occident? . . . The Japanese are the most unimpaired people,

making quite as great progress among the students and influential classes as among the masses." John R. Mott says: "On my second visit to China, about seven years ago, I found it impossible to get access to students other than those of the mission schools and colleges, but last year large churches, halls, or pavilions, wherever I went, were crowded with young men, large numbers of whom represented the modern government student class. . . . Griffith John has said that when he reached China, it was difficult even to give away copies of the New Testament, and that this had to be done in secret. In 1907, the Tract Society in his region sold a million and a half copies of different pieces of Christian literature, and the Presbyterian Press in Shanghai during the same year disposed of one million six hundred thousand copies."

The book from which I have quoted so largely speaks of the "World's Student Christian Federation," started about ten years ago, which bands together Christian students in all parts of the world, and which has as its great object "the making of Jesus Christ known to the

ur day." I have only small part of the Op- calling to the Church, at the doors every any—are making good we willing to stand bear the reproach of e not to the help of the nighty?"—Jud. v. 23, and joyously doing our brothers and sisters rd and Master? The kingdom is certain—are that victory? The e running to meet the t us act on the maxim : "The true rule for is to meet them a litan half-way." Real se a practical interest

Events.

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Miner, "people arse, put their nd lay their

check softly against his. Now, I feel that way towards the little birds. I love to get one in my hands," said he, holding his hands as if he had a bird there, "and fondle it."

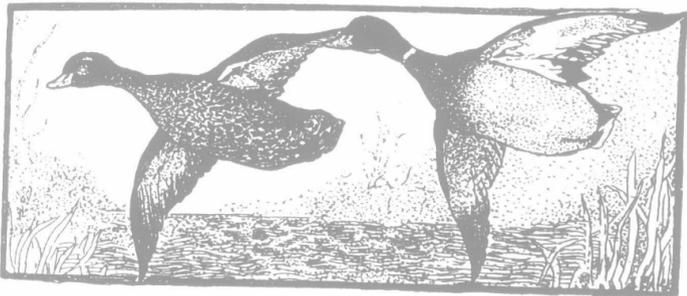
At his farm he has wild geese, wild mallard ducks, pheasants, partridges and quail, all of which are fed and quite tame.

"There is no magic about the taming of wild birds," says Mr. Miner, "simply throw grain instead of shot at them." He said that if he could get a bird to take a grain of corn that he threw to it, he could have it in his hands in a month.

Five years ago, a pair of swallows built a nest in his barn, and he saw to it that they were not molested by sparrows. He keeps a small-bore rifle with which he pops the sparrows as they come around. The swallows realized that they were being protected, and showed it by building their nests at the end of the outbuildings nearest the house, instead of three hundred feet farther away, as they might have done. They favor an implement house, which the men pass constantly, and many of the nests are placed so low that they can be reached from the ground. Five years ago one pair of swallows, last fall one hundred swallows migrated from there.

They hatch two broods in the season. The first time there are five eggs laid, the second time four, said Mr. Miner.

Last fall a wild black mallard duck lighted among his flock of domesticated ones—whose wings are kept cut so that they cannot fly away—the exact date being August 5th, 1909. By about September



Coming Back Northward.
(Drawing by J. Frise, Saintfield, Ont.)

1st, he was able to handle it, and it became, in time, even tamer than those of his own flock, and would follow him about. It flew away frequently, but returned again. It left for good about December 5th, but before that time, Mr. Miner had placed about its leg an aluminum band, on which his post-office address was inscribed. His thought was that he might learn something about the migration of wild fowl. On January 20th, 1910, he received a letter from Anderson, South Carolina, which read as follows:

January 17, 1910.

Dear Sir,—On January 14th, I was hunting on Rocky River, near this city, when I killed a wild duck with a band on its leg marked Box ———. If you will send me your full address I will return the band I took from his leg.

I commend the duck for its good judgment, as it came to the best country in the best State in America. Yours,

Mr. Miner, in reply, said that the duck's home was in Essex Co., Ont., the only heaven on earth.

One can scarcely help a feeling of regret that an innocent bird, which responded so readily to kind treatment, should be shot for sport.

DARLING LITTLE WILLIE.

Little Willie was missed by his mother one day for some time, and when he re-appeared she asked:

"Where have you been, my pet?"

"Playing postman," replied her "pet."

"I gave a letter to all the houses in our road. Real letters, too."

"Where on earth did you get them?"

questioned his mother, in amusement.

"They were those old ones in your wardrobe drawer, tied up with ribbon,"

was the innocent reply.—London Opinion

The Roundabout Club

Competition Awards.

The awards in the essay competition on "The Farmer as a Power in Government" have been placed as follows:

First Prize.—Justus Miller, O. A. C., Guelph. (Choice of the following: (1) Four copies, leather-bound, of standard literary works. (2) One copy, handsomely illustrated, of "Guide to the Wild Flowers." (3) One copy, handsomely illustrated, of Neltje Blanchan's "Bird Neighbors." (4) One copy, similar to above, of Dugmore's "Bird Homes." (5) One copy, similarly illustrated, of Clute's "Ferns in Their Haunts.")

Second Prize.—"Honor Bright," Halton Co., Ont. (Three copies, leather-bound, of standard literary works.)

Third Prize (equal)—A. Hunt, Algoma District, Ont.; W. Hargrave, Waterloo Co., Ont.; M. E. G., Peterboro Co., Ont. (Two copies, leather-bound, of standard literary works.)

Honor Roll.—Ada Lowder, T. R. Skippon, A Young Canadian, G. H. S.

The essays, which will appear in order, have been written by farmers and farmers' sons and daughters. Possibly every point advanced, and every assertion made, may not meet with the unqualified approbation of every reader, but the liberty of good-natured discussion is at all times permitted. In any case, it must be conceded that the work submitted in this competition has been highly creditable.

One essay only can appear to-day. The rest will follow.

The Farmer as a Power in Government.

FIRST-PRIZE ESSAY.
Competition II.

Politics is "the art or science of the administration of national or public affairs." Hence the political power invested in any rank of a people should depend upon their national importance, and that faction of most consequence to the nation should, as a logical sequence, have a corresponding amount of political influence. So far as the national welfare depends upon their prosperity, laws should be framed to further their interests, thus assisting by their development, the well-being of the people as a whole.

In Canada, the farmer occupies the position of paramount importance. Owing to his requirements, efforts and influence, our country has been reduced from an unorganized condition of savagery to a state of civilization, order and advancement. By him, vast tracts of land have been developed for productive tillage. The demand for agricultural implements has caused the creation of implement factories. These, in turn, have caused the demand for metals from the mines and wood from the forests, thus causing two dependent industries to become factors in the nation's development. The preparation of the food for the market has required the building and operating of manufacturing plants for refining the raw material, and the manufacture of sacks, boxes, tubes, ropes, twine, etc., for containing and binding the farm products. For the transportation and handling of agricultural commodities, horses and wagons, roads, elevators, railways, steamship lines, docks, warehouses, wholesale houses, etc., have been required, calling into service new groups of works. Hence the national importance of the farmer depends, not only upon the actual labor and capital he controls, but upon



W
ID YOU EVER FIGURE THE COST of a single day's baking — the material, fuel, time and labor—and consider that it is all wasted if the baking is a failure?

Is it economy, then, to use a flour of uncertain quality when a few cents more will buy

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The Canadian Independent Telephone Association will furnish the organizers of new systems or operating companies with advice, assistance or information on all subjects relating to the construction, operation or maintenance of telephone plants. In other words, if you are thinking of establishing a telephone system in your locality, or if your company is not operating under conditions which are satisfactory, you have only to state your case to the Association, and it will assist you in every way possible.

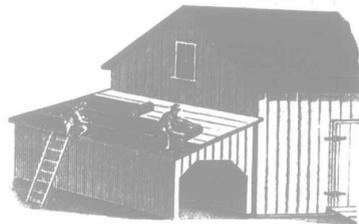
The Canadian Independent Telephone Association exists for the purpose of removing the evils of monopoly in telephones, and assisting the people, more particularly in the rural districts, to secure an unrestricted service by the establishment of systems under local ownership and control.

If you are interested in the organization of a local, municipal or rural telephone system, and require advice or assistance, write to:

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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.

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

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all the invested capital and operative labor of the varied industries dependent upon him.

In a still deeper sense, he is the supporter of national life. He is the great food producer, and without food, the masses, of course, could not exist. But he, on the other hand, is not so dependent upon any class or classes, for, by returning to the primitive methods of his early ancestors, he could live without their assistance. This very fact, then, that all other classes are dependent upon him, while he is not thus dependent upon them, constitutes, perhaps, the strongest argument that he is alike the foundation and the head of our economic structure.

But the farmer does not occupy a proportionately important position in politics. Indeed, in this way, rather than being the greatest, he is, of the great economic factors, the least. He comprises 60 per cent of our population, but has only a representation of 12 per cent, and of 9 per cent, in the House of Commons and in the Senate, respectively. He pays more revenue than does any other class, but he receives directly from the Government but \$2,690,296. "The great corporations have their lobbies in nearly every Provincial House, to influence legislation in their behalf"; but where are the farmers' lobbies and when has he strongly influenced government in his behalf? In short, the situation may be summed up by the noted words of Sir John A. Macdonald: "The farmers have never asked for anything, and they have never received anything."

Let no one suppose that these conditions are due to the fact that he doesn't require political aid. Of a truth, because of this very system heretofore employed, of favoring other factors of the people before him, there is no class in Canada to-day who more urgently needs this assistance—or who will have to strive more bitterly to secure it. Let us, therefore, consider some of the problems confronting the farmer which are controlled by the Government.

Let us first of all consider the question of education. Now, since farming is the prime factor of Canadian progress, it is evident that if public and high school education should trend along any special line, that line should be agriculture. But how different is the present state of affairs. For years, young people have been leaving rural surroundings for city attractions, simply because their education, in the first place, does not teach the true dignity and real power of the farmer, and the most profitable methods of agriculture; and secondly, because the education they do receive leads directly to business pursuits and to the learned professions. Why is the farmer looked upon, so often, with a certain amount of contempt, and why does his own heart sometimes echo the feeling? Why can not our young men and our young women as a class associate anywhere upon an equality with the society of the towns, when they are, in many cases, finer types of true manhood and true womanhood than the very ones who disdain them? Why is there such a marked absence of refinement, and such a dissatisfaction with rural life in so many farm homes? And, lastly, why are so many farms operated at so small a profit, and even, in some cases, at a loss? These questions, we believe, all hinge upon the question of education. Were some effective system devised by which the economic problems would be solved by rural children, and the true beauty and power of the farmer taught all children, farming would become more remunerative; the tide of young men and young women flowing to the cities would be checked, and the prevalent belittling ideas concerning this occupation would be broken down.

Next, let us briefly review the tariff question. So much has been written upon this subject in the pages of "The Farmer's Advocate" during the past months, that any lengthy discussion is unnecessary. Suffice it to say, then, that since the Canadian farmer, by his natural advantages, can always supply his home market, and since the foreign markets are not influenced by our tariff, it is of no benefit to him. But, on the contrary, because of it, he is compelled to pay from 20 per cent, to 35 per cent, dealer for the manufactured articles he uses. This amount, thus paid, either flows into the revenue coffers (or into the pockets of crafters), or it passes into the

hands of the capitalists. Now, these latter gentlemen, if the manufactured article be a natural product of the country, make, beside a fair profit, this tariff tax. As a result, they not only become unduly wealthy at the expense of the masses, but are also enabled to pay a wage to their hired labor that the farmer is unable to compete with, and the scarcity of farm laborers thus caused very greatly handicap his productive powers.

Another live issue with the farmer is that of the single tax. That is, that all public taxes be obtained by assessing to a sufficient degree the first value of all land, exclusive of buildings and improvements placed upon it. This would then relieve the progressive farmer of the burden of paying a tax upon the result of his business ability and his hard work. It would also tend to prevent the holding of large tracts of land for the purpose of speculation, hunting, etc., and would encourage the tillage of all available soil.

The next feature which we shall study shall be co-operation. A suitable system of education, and the abolition of the tariff would, doubtless, aid this work very much by broadening the minds of the farmers along the proper channels, and by strengthening their efforts with a larger financial return. A truly representative farmer Government might also appoint a special committee of inquiry to study the subject, and would make all reasonable concessions to further assist the undertaking.

An effective system of telephone control would be of great advantage to the farmer. All independent lines should have long-distance connection with the trunk lines at a reasonable rate. A bill to this effect has already been passed in Parliament, but an amendment to that bill makes it possible for the trunk lines to exercise too much power in giving connections to their weaker rivals. A closer inspection of this matter by the Government could not but be of great assistance to the farming public in satisfactorily settling this question.

The need of a free rural mail delivery system is also being felt in some districts. As a political gundrop to the farmers of certain sections of Ontario, an apology for such a system was inaugurated a short time ago, but something more effective, we believe, may be in justice expected by the farmer who pays so large a proportion of the public revenue. Many States to the South have a free rural mail-delivery system, and, we believe, the farmers in the more densely settled districts of this country should enjoy the same privilege. Certainly, in view of the fact that the cities have free delivery when, in any case, the distance for the citizens to travel to the post office would be comparatively slight, it seems only reasonable for the farmer to expect something of a similar nature.

And so we might proceed enumerating at great length the advantages the farmer, as a power in the Government, might secure. However, since neither time nor space permits this, let us now consider how best he may attain this power.

Control of the Government seems the only way this may be accomplished. The Government represents the strongest political factor of the people, and the interests of this faction and the interests of the farmer are not common. Hence, since no other class will grant him the measures he desires, he must place himself at the head of affairs and secure them for himself. Theodore Roosevelt has said that education must eventually raise the farmer to the position he should occupy. But since the standard of education is determined by the Government, how can he receive this education until he compels the Government to change the standard?

How to secure control (a fair share in the control—Ed.) of the political machine is the great question before us to-day. The "third party" scheme has proven a failure for many reasons, so something of a different nature must be employed. This, we believe, is in sending a representation corresponding to our population. According to the last census, the rural population of Canada was more than 60 per cent, of the total population of the country; yet, of 221 members in the Federal House of Commons, only 25 are farmers. Is it any wonder that the farmer is not more of a political power? A Farmers' Society should be formed, if possible, composed of every farmer in

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Canada. Each man should be sworn to vote, at the party conventions and general elections, for only truly farmer representatives, who, in their turn, would pledge themselves to act in the farmer's interests—or get unseated at the following elections. No attempt would be made to form a third party from this society, which would be independent, its members voting for either of the established parties they preferred. In this way, either party, when elected to power, would contain a majority of farmer members, who, because of their numbers, could speedily alter conditions to the farmer's advantage. Indeed, under these circumstances, each party would be very ready to make many concessions to the farming public, as their political supremacy would depend upon the rural vote. Nor is it likely that extreme measures would be passed by the agricultural faction, as there would always be sufficient representatives of other classes of the people to prevent many unjust and one-sided bills being carried.

We are quite sensible that such a society could not be formed easily, nor in a day. It would, doubtless, take much hard, discouraging work, and a considerable length of time to organize it. There would be many obstacles and disappointments to be overcome. Much prejudice would have to be eradicated, and many of our voters educated by the agitators of the project, to a realization of their power and its advantages. But some day we hope and trust leaders will arise from our ranks—disinterested men of long study and reflection, and great courage—who will lead this movement to a successful conclusion. Then, in that day, with the advance in education, tariff reform, taxation reform, co-operation and kindred principles, a new type of farmer will be slowly evolved. He will then be a man of broad mind, wide charity, and intensive methods, who, in conjunction with his national brothers, will raise this land and this people to the prime position of power in our Empire—its productive center in time of peace; its strong right arm in time of war.

JUSTUS MILLER.

O. A. C., Guelph.

Notice to Members.

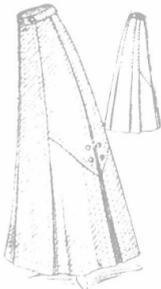
COMPETITION III.

Write an essay on "A Midwinter Reverie."—all essays to be received at this office not later than February 28. Announcement of prizewinners in last competition will appear in an early issue.

The "Farmer's Advocate" Fashions.



6521 Fancy Blouse, 32 to 40 bust.



6552 Eight Gored Skirt, 22 to 32 waist.



6542 Russian Blouse Coat, 32 to 40 bust.

Give bust or waist measure as required. Price ten cents per pattern. Address: Fashion Dept., "The Farmer's Advocate," London, Ont.

The Ingle Nook.

A Farmer's Wife Who "Finds Time."

Dear Dame Durden,—Along with all the host of other country folk, I enjoy the Ingle Nook very much, and gain a great deal of valuable information. Aunt Nan's idea of doing the odds and ends is good. She must be a good manager. I have not the difficulty of cold lunches, as we are a long distance from school, and I am teaching my little daughter at home. It is a tie that will last a lifetime. I am always planning my work so as to get a few hours for painting. I would love to paint a picture worth while, but at present I only attempt tiny water-colors and sepias. Your patterns are so handy for the children's clothes. I am going to embroider that baby-bonnet this week.

Here is my recipe for oatmeal cakes: 3 cups flour, 3 cups standard oatmeal, 1 cup warm water, 1/2 teaspoon soda, 1 cup shortening, 1 cup sugar.

I have another good winter cake for anyone who may be scarce of eggs.

Buttermilk Cake.—1/2 cup melted butter, 1 1/2 cups buttermilk, 1 cup raisins, 1 cup currants, 1 cup brown sugar, 3 cups flour, 2 teaspoons soda (small), lemon peel, cinnamon and nutmeg. Mix buttermilk, sugar and butter first, then add soda. Bake in moderate oven like a fruit cake.

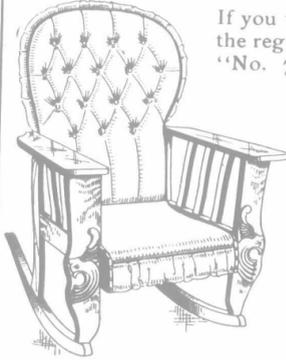
Thanking you for all past help, and may your cheer help many lonesome country wives. ELLEN. Grey Co., Ont.

From an Old Friend.

Dear Dame Durden,—Someone asked for oatmeal drop cakes, so I thought I would send you a few lines with it. I enjoyed reading Helponabit's letter; it was so cheery and full of good thought. I thought I would like to get acquainted and step in her home and have a chat. I always love to read Lankshire Lass's letters. I had the pleasure of visiting her in her home. She made me so welcome, and was so kind, and everything was so neat and cozy I felt right at home. It is wonderful how she manages and is so cheerful. She can pass a joke as well as anybody, and yet suffers so much; but, like Mary of old, has chosen that good part which shall not be taken from her. That is the secret of her happiness. Without that, no one can be truly happy. I often feel so ashamed of myself for ever feeling blue, when I enjoy good health and am able to go out. We don't appreciate our blessings as we ought. I received a seed catalogue the other day, and my thought turned to my garden. I love to raise flowers and vegetables, and like to try something new every year. Last year I tried Brussels sprouts, but was not very successful. It may have been too dry, or else our climate is not adapted for them. This year I will try eggplant. Can anyone tell me which kind is best, white or purple, and how to prepare them for the table?

We Can Save You Money When Buying Furniture

If you want to save from 20 to 30 per cent. on the regular cost, send for our large CATALOGUE "No. 7"—500 illustrations—newest features.



\$5.45 For This Handsome **ROCKER**

Exactly like the illustration. An example of the remarkable value we offer. The frame of this rocker is of selected quarter-cut oak, highly polished, with elaborate hand carving on front posts. Seat and back upholstered in morroccoline, with ruffled border. Spring seat. Regular price \$10. Our special price..... **\$5.45**

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Canada's Largest Homefurnishers, TORONTO, ONT.



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Wrappers and House Dresses 75c. up

It really does not pay a woman to make these handy garments for morning wear, when she can buy such pretty ones in the "Duchess" Brand for 75c. up. Every "Duchess" garment fully guaranteed.

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Just a small daub spreads over a big surface. Just a few light rubs with cloth or brush brings a shine you can see your face in—and the shine lasts for days—fresh, bright, brilliantly black.

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A big can, 10c.—at dealers or sent postpaid on receipt of price.

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Makers of the famous "2 in 1" Shoe Polish.

Teach Your Boy to Save

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It is a fact that a cup of Hot Bovril will ward off a serious disease.

When you are exhausted or run down, you are open to the attack of many ills.

A cup of Hot Bovril supplies immediate strength and puts the system in condition to resist any prevalent sickness.

BOVRIL is the most palatable of beverages, for all that is good in prime Beef is in

BOVRIL

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ECZEMA



Can Be Cured!

We are daily and successfully treating men and women throughout Canada for this distressing and tormenting skin trouble. We are usually appealed to after all other treatment has failed and the trouble has become chronic. The season is here when Eczema is often at its worst. Don't wait until the trouble has become intolerable before using

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Superfluous Hair

Moles, Warts, Ruptured Veins, Etc. Ladies afflicted with these embarrassing blemishes will find our personal treatment a most satisfactory one. Our booklet "F" explains everything—sent on request.

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Northern Ontario

The forest and mineral wealth of Northern Ontario has attracted many people from all parts of the civilized world.

One ninth of the world's reported output of silver in 1908 was taken from Ontario mines.

New discoveries of undoubted richness are being constantly reported from sections far distant from the far-famed Cobalt. Yet a more certain reward is insured to the settler who acquires for himself 160 acres of the rich agricultural lands now open for settlement and made accessible through the construction of railways and Colonization Roads.

The fertility of the soil is unsurpassed. The timber is in demand at a rising price. Mining, railway and Colonization Road construction, lumbering, etc., afford work in abundance to those who have not the means to remain on their farms continually. These also provide a market for far produce at prices unequalled anywhere.

Cochrane the terminus of the T. & N. O. Ry. on the G. T. P. Trans-continental Railway, now under construction, is at the same latitude as the southern part of Manitoba, and 800 miles nearer the seaboard.

That the experimental stage is past is clearly demonstrated. The country is rapidly filling up with settlers from many of the other Provinces, the United States and Europe.

For information as to terms of sale, homestead regulations and for special colonization rates to settlers and for settlers' effects write to

D. SUTHERLAND, The Director of Colonization,
Parliament Buildings, TORONTO.
HON. J. S. DUFF,
Minister of Agriculture.



SHOEMAKER'S BOOK on POULTRY

and Almanac for 1910 has 224 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases, and their uses. All about incubators, their prices and how to build them. All about poultry houses and how to build them. It is a complete guide to chicken-keeping. You need it. Only 50c. C. C. SHOEMAKER, Box 874, Freeport, Ill.

When Writing Mention The Advocate

Now, Chatterers, don't you think Dame Durden might give us her picture in "The Farmer's Advocate," so we might get acquainted, and, if by chance we meet her, could shake hands. Now, please do.

Oatmeal Drop Cakes.—1 cup sugar, $\frac{1}{2}$ shortening, 2 eggs, 1 cup molasses, $\frac{1}{2}$ cup buttermilk, 1 teaspoon ginger, 1 of cinnamon, $1\frac{1}{2}$ soda, 2 cups oatmeal, and 3 of flour.

Here is a recipe for cookies without eggs: 4 cups of sugar, 2 of lard, 1 pint of milk, 1 tablespoon soda, 1 tablespoon alum. Put in milk, ginger to taste. Mix in the evening and stand overnight. Waterloo Co., Ont. ANNA.

Put my picture in "The Farmer's Advocate"? My dear, we editors are fearfully shy when cameras are in question. Perhaps that is the reason why we are so often regarded as "so many" machines for grinding out reading-matter for the public.

From Nellie Blye.

Dear Dame Durden,—Our dear friend, Lankshire Lass, spoke in her letter before Christmas of leaving room for Nellie Blye, and, although I feel rather timid in writing to the paper, still, if it would give her any pleasure to see that space filled up, I will try and write a wee bit, anyway. Doesn't she seem to have a beautiful Christian character, suffering so much, and shut in for so many years, still so full of faith in and love to her Saviour, and full of kind thoughts for others? It is a thought full of encouragement to us all, and to the future of our beloved country, to feel that wherever "The Farmer's Advocate" goes in all the land, her letters, and those of dear Hope, and all those other good ones, too, are thought so much of, for, as a man thinketh, so is he, and it is the same with the Nation.

Here is a cake recipe which comes in handy in the winter when milk and eggs are scarce: $1\frac{1}{2}$ cups cold unsweetened apple sauce, 2 small teaspoons soda stirred in the apple sauce, $\frac{1}{2}$ cup butter, and 1 cup sugar; butter and sugar creamed together; 1 teaspoon cinnamon, $\frac{1}{2}$ teaspoon cloves, and a little nutmeg. Stir in last a cup of chopped raisins and two cups flour. Bake in moderate oven three quarters of an hour.

Aunt Nan was speaking of something hot for school lunches. I read a suggestion along that line in some paper lately (I forget which paper it was). To take a tin can, perhaps a pound baking-powder one, and a glass, with tight-fitting lid, a pint can might suit; fill it with whatever you want to send hot, put a good paper pad in the bottom of the tin can, roll it in paper enough to fit in firm (if the paper is just the height of the can, the little ones could take it out easier without emptying the can altogether, and the same paper might do for days), then put in a good pad again on top of the glass and put your tin lid on. If it weren't too heavy to carry, I would think it ought to work well.

Well, I am afraid this epistle is getting too long, so I will close, wishing dear Lankshire Lass, little Pansy No. 2, and all the other sick ones, comfort and blessing; the well ones strength and hope to do the duties God has given them to do, and to all, happiness and cheer.

Elgin Co., Ont. NELLIE BLYE.

A Breeze from Scottie.

A Guid New Year, Dame Durden an' a' ye Chatterers.—You see the fruits of a good example, Forgetmenot, and A Lankshire Lass, and you, Helponabit, with all your cheery home news. It does one good these days. I had a birthday party Saturday, an annual affair when all the neighbors and all the babies, big and little, come one day every year, when I look forward to see them all, and have a good time. Unfortunately, it was the worst storm of the season, and they could not all get out. I got a doll, and left it in town to get dressed by a friend. Then it was a marvel in a pink princess dress. Velvet was sent for a coat, so I made the coat yesterday, muf and hat to match. I would not be afraid to let even our Dame inspect it. That is one of my ways of keeping young; another, I always change my dress after dinner. I think that is one thing one is apt to get careless about.

I think, Dame, if there were a prize given for the farmer's wife who does her own cooking, washing, ironing, sewing, boys' and girls' included, just beginning to take their places in the world, I might come in somewhere, at least, I would apply.

You remember your talk about that walk in the woods and your net waist; I'll reverse it now, and ask do you see the glories of this beautiful weather this morning? The hoarfrost on the trees, what a sight! and the piles of beautiful snow so pure and lovely! But then, snow from a city window does not appeal to one's sense of the beautiful. Yes, we country folks see the beauties of winter and summer, and enjoy them too. We have all met with the other one, who sees no beauty in country life, even when one's home is there. "Died for lack of air and sun." Is it not often the woman's own fault? It is her way, and she will scrub and clean. She does not care to read, and she can't be idle. Was the elder to blame, think ye? Although I think a little merited praise occasionally goes a long way, I sometimes wonder, do men think it would spoil us, or make them feel little to be more liberal that way. What is your opinion, folks?

Well, what about that Ingle Nook reunion. I thought we were to have "the shades" again. It would be fine, only it would make us feel mean. It is not too late yet for us all to try this year to do a little better than last, but is it not wonderful how the work keeps us going? Sometimes when we think we are to have an easy day sure, something comes, and there is the meat to prepare for summer use, and the butchering and poultry and turkey killing. Our winters are all full, no time for getting lonesome on the farm. Now, in closing, I will second Dame Durden's toast, Here's to the Babies! Long life and prosperity! The same to our Dame. SCOTTIE.

White Sauce.

Have taken "The Farmer's Advocate" for a number of years, and have often thought I would ask some questions. My first is, could you give me the recipe of white sauce for plum pudding?

My second is, how to take care of house plants after they have been slightly frozen; do you pinch off all the leaves, or let them drop off themselves?

K. Y. Z.

Cream Sauce.—Place 1 cup sugar and $\frac{1}{2}$ cup boiling water in a saucepan and boil 15 minutes. Beat 1 cup heavy sweet cream until stiff, and add gradually to the hot syrup. Remove from the fire, and add 1 teaspoonful vanilla. . . . When plants have been frozen, drench them at once with cold water, and keep in a rather cool place, not exposed to the direct light of the sun, until the leaves regain themselves. If they refuse to do this, it might be as well to let the leaves drop off, as in tearing them off there is always a chance of lacerating the stem. I am sorry it was impossible to insert this in first issue as requested.

Chicken Feathers.

Dear Dame Durden,—I noticed some time ago in the Ingle Nook columns, that some of the writers had sold chicken feathers at 25c. per pound. I would be much pleased if someone would tell me the address of a firm where feathers can be sold. I enjoy the weekly chats in the Ingle Nook very much. Waterloo Co. SNOW BIRD.

Can Anyone Answer?

Dear Dame Durden,—I am very much interested in "down comforters." I have a goose-feather bed that I do not need, and would like to know if the feathers would do for comforters, or is it necessary to have down only? INQUIRER.

Prince Edward Co., Ont.

Many letters are held over. Please do not become impatient.

STAGES OF DEVELOPMENT.

Johnnie Lemon at public school.
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J. Lemon at Collegiate.
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Stock Farm FOR SALE

200 acres in Nichol Township, County of Wellington, lots 8 and 9, Con. 11; on main road, $2\frac{1}{2}$ miles west of Elora, $1\frac{1}{2}$ miles from school, post office and mill; 190 acres under first-class state of cultivation; 4 acres hardwood bush, 6 acres ready for breaking; never-failing spring creek touches corner; no waste land, and well fenced; bank barn, 68 x 90, modern fittings and individual water basins; water supplied from drilled well by windmill; pigpen and strawshed, 26 x 46; driving-shed, 2 x 40; large stone house, surrounded by good orchard and evergreens. For particulars, apply on the premises, or to

WILLIAM HUNTER, Salem, Ont.

A WINDSOR LADY'S APPEAL

To All Women: I will send free, with full instructions, my home treatment which positively cures Leucorrhoea, Ulceration, Displacements, Falling of the Womb, Painful or Irregular Periods, Uterine and Ovarian Tumors or growths, also Hot Flashes, Nervousness, Melancholy, Pains in the Head, Back, Bowels, Kidney and Bladder troubles where caused by weakness peculiar to our sex. You can continue treatment at home at a cost of only about 12 cents a week. My book, "Woman's Own Medical Adviser," also sent free on request. Write to-day. Address Mrs. M. Summers, Box 821 Windsor, Ont.

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is made from the finest carefully selected cocoa beans, roasted by a special process to perfect the rich chocolate flavor. Cowan's is most delicious and most economical.

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ON

Spray Chemicals

containing pithy, practical information on this vitally important question will be sent on request to anyone who grows fruit or vegetables.

Our Booklet deals with Lime Sulphur Solution for spring and fall spraying—and with Arsenate of Lead, which has been proved superior to Paris Green for summer spray.

The "Vanco" booklet tells some sound reasons why it pays to use VANCO Brand Spray Chemicals.

Write for it now to

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148-158 Van Horne Street, Toronto, Canada.

The Golden Dog (Le Chien D'Or.)

A Canadian Historical Romance.
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CHAPTER LI.

Evil News Rides Post.

The sunbeams never shone more golden through the casement of a lady's bower than on that same morning of St. Martin's through the window of the chamber of Amelie de Repentigny, as she sat in the midst of a group of young ladies holding earnest council over the dresses and adornments of herself and companions, who were to be her bridesmaids on her marriage with Pierre Philibert.

Amelie had risen from pleasant dreams. The tender flush of yesterday's walk on the bank of the Lairet lingered on her cheek all night long, like the rosy tint of a mid-summer's sunset. The loving words of Pierre floated through her memory like a strain of divine music, with the sweet accompaniment of her own modest confessions of love, which she had so frankly expressed.

Amelie's chamber was vocal with gaiety and laughter; for with her today were the chosen friends and lifelong companions who had ever shared her love and confidence.

These were, Hortense Beauharnais, happy also in her recent betrothal to Jumonville de Villiers; Heloise de Lotbiniere, so tenderly attached to Amelie, and whom of all her friends Amelie wanted most to call by the name of sister; Agathe, the fair daughter of La Corne St. Luc, so like her father in looks and spirit; and Amelie's cousin, Marguerite de Repentigny, the reflection of herself in feature and manners.

There was rich material in that chamber for the conversation of such a group of happy girls. The bridal trousseau was spread out before them, and upon chairs and couches lay dresses of marvellous fabric and beauty—muslins and shawls of India and Cashmere, and the finest products of the looms of France and Holland. It was a trousseau fit for a queen, and an evidence at once of the wealth of Lady de Tilly, and of her unbounded love for her niece, Amelie. The gifts of Pierre were not mingled with the rest, nor as yet had they been shown to her bridesmaids—Amelie kept them for a pretty surprise upon another day.

Upon the table stood a golden casket of Venetian workmanship, the carvings of which represented the marriage at Cana in Galilee. It was stored with priceless jewels which dazzled the sight and presented a constellation of starry gems, the like of which had never been seen in the New World. It was the gift of the Bourgeois Philibert, who gave this splendid token of his affection and utter contentment with Amelie as the bride of his son and heir.

The girls were startled in the midst of their preparations by the sudden dashing past of a horseman, who rode in a cloud of dust, followed by a wild, strange cry, as of many people shouting together in lamentation and anger.

Amelie and Heloise looked at each other with a strange feeling, but sat still while the rest rushed to the balcony, where they leaned eagerly over to catch sight of the passing horseman and discover the meaning of the loud and still repeated cry.

The rider had disappeared round the angle of the Cape, but the cry from the city waxed still louder, as if more and more voices joined in it. Presently men on horseback and on foot were seen hurrying towards the Castle of St. Louis, and one or two shot up the long slope of the Place d'Armes, galloping towards the mansion of the Lady de Tilly, talking and gesticulating in the wildest manner.

"In God's name, what is the matter, Monsieur La Force?" exclaimed Hortense, as that gentleman rode furiously up and checked his horse violently at the sight of the ladies upon the balcony.

Hortense repeated her question. La Force took off his hat and looked up, puzzled and distressed. "Is the Lady de Tilly at home?" inquired he eagerly.

"Not just now; she has gone out; but what is the matter, in heaven's name?" repeated she, as another wild cry came up from the city.

"Is Mademoiselle Amelie home?" again asked La Force, with agitated voice.

"She is home. Heavens! have you some bad news to tell her or the Lady de Tilly?" breathlessly inquired Hortense.

"Bad news for both of them; for all of us, Hortense! But I will not be the bearer of such terrible tidings—others are following me; ask them. Oh, Hortense, prepare poor Amelie for the worst news that ever came to her."

The Sieur La Force would not wait to be further questioned—he rode off furiously.

The bridesmaids all turned pale with affright at these ominous words, and stood looking at each other and asking what they could mean.

Amelie and Heloise caught some of the conversation between Hortense and La Force. They sprang up and ran to the balcony just as two of the servants of the house came rushing up with open mouths, staring eyes, and trembling with excitement. They did not wait to be asked what was the matter, but as soon as they saw the ladies they shouted out the terrible news, as the manner of their kind is, without a thought of the consequences: that Le Gardeur had just killed the Bourgeois Philibert in the market-place, and was himself either killed or a prisoner, and the people were going to burn the Frippone and hang the Intendant under the tablet of the Golden Dog, and all the city was going to be destroyed.

The servants, having communicated this piece of wild intelligence, instantly rushed into the house and repeated it to the household, filling the mansion in a few moments with shrieks and confusion.

It was in vain Hortense and Agathe La Corne St. Luc strove to withhold the terrible truth from Amelie. Her friends endeavored with kindly force and eager exhortations to prevent her coming to the balcony, but she would not be stayed; in her excitement she had the strength of one of God's angels. She had caught enough of the speech of the servants to gather up its sense into a connected whole, and in a moment of terrible enlightenment, that came like a thunderbolt driven through her soul, she understood the whole significance of their tidings.

Her hapless brother, maddened with disappointment, drink, and desperation, had killed the father of Pierre, the father of her betrothed husband, his own friend and hers; why or how was a mystery of amazement.

She saw at a glance all the ruin of it. Her brother a murderer, the Bourgeois a bleeding corpse. Pierre, her lover and her pride, lost—lost to her forever! The blood of his father rising up between them calling for vengeance upon Le Gardeur and invoking a curse upon the whole house of Repentigny.

The heart of Amelie, but a few moments ago expanding with joy and overflowing with the tenderest emotions of a loving bride, suddenly collapsed and shrivelled like a leaf in the fire of this unlooked-for catastrophe.

She stared wildly and imploringly in the countenances of her trembling companions as if for help, but no human help could avail her. She spake not, but uttering one long, agonizing scream, fell senseless upon the bosom of Heloise de Lotbiniere, who, herself nigh fainting, bore Amelie, with the assistance of her friends, to a couch, where she lay unconscious of the tears and wailing that surrounded her.

Marguerite de Repentigny, with her

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- THOMAS.**—A very attractive 5-octave walnut organ by the Thomas Organ Co., Woodstock. Has 9 stops, 2 full sets of reeds, music rack, lamp stands, coupler, and 2 knee swells. Special Price, \$41
- GODERICH.**—6-octave piano-case organ, by the Goderich Organ Co.; in ebonized case, with fret-carved panels and lamp stands. Has 11 stops, 2 full sets of reeds, 2 couplers, 2 knee swells, mouseproof pedals, etc. Special Price \$59
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- VOSE.**—A very attractive small square piano, by James W. Vose, Boston; in rosewood case, with octagon legs, full 7-octave overstrung scale, iron frame. A first-class piano for practice. Special Sale Price \$78
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- NEWCOMBE.**—7½ octave square piano, by Newcombe, Toronto; in rosewood case, with carved legs and lyre, serpentine and plinth mouldings, overstrung scale and iron frame. Original Price, \$400. Special Sale Price \$105
- HAINES BROS.**—7½ octave square piano, by Haines Bros., New York; in exceptionally handsome rosewood case, serpentine mouldings around the bottom of case, also heavy plinth moulding at top, carved legs and lyre, full overstrung scale and iron frame, good action and resonant tone. Original Price, \$450. Special Sale Price \$117
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- DOMINION.**—A very handsome square piano, by the Dominion Co., Bowmanville. Has 7½ octaves, carved legs and lyre, serpentine and plinth mouldings, overstrung scale, and iron frame. A splendid tone square piano, and excellent value. Original Price, \$450. Special Sale Price \$123

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weeping companions, remained in the chamber of Amelie, watching eagerly for some sign of returning consciousness, and assiduously administering such restoratives as were at hand.

Their patience and tenderness were at last rewarded—Amelie gave a flutter of reviving life. Her dark eyes opened and stared wildly for a moment at her companions with a blank look, until they rested upon the veil and orange blossoms on the head of Agathe, who had put them on in such a merry mood, and forgotten in the sudden catastrophe to take them off again.

The sight of the bridal veil and wreath seemed to rouse Amelie to consciousness. The terrible news of the murder of the Bourgeois by Le Gardeur flashed upon her mind, and she pressed her burning eyelids hard shut with her hand, as if not to see the hideous thought.

Her companions wept, but Amelie found no relief in tears as she murmured the name of the Bourgeois, Le Gardeur, and Pierre.

They spoke softly to her in tones of tenderest sympathy, but she scarcely heeded them, absorbed as she was in deepest despair, and still pressing her eyes shut, as if she had done with day, and cared no more to see the bright sunshine that streamed through the lattice. The past, present and future of her whole life started up before her in terrible distinctness, and seemed concentrated in one present spot of mental anguish.

Amelie came of a heroic race, stern to endure pain as to inflict it, capable of unshrinking fortitude and of desperate resolves. A few moments of terrible contemplation decided her forever, changed the whole current of her life, and overthrew as with an earthquake the gorgeous palace of her maiden hopes and long-cherished anticipations of love and happiness as the wife of Pierre Philibert.

She saw it all; there was no room for hope, no chance of averting the fatal doom that had fallen upon her. Her life, as she had long pictured it to her imagination, was done and ended. Her projected marriage with Pierre Philibert? It was like sudden death! In one moment the hand of God had transported her from the living to the dead world of woman's love. A terrible crime had been perpetrated, and she, innocent as she was, must bear the burden of punishment. She had but one object now to live for: to put on sackcloth and ashes, and wear her knees out in prayer before God, imploring forgiveness and mercy upon her unhappy brother, and expiate the righteous blood of the just man who had been slain by him.

She rose hastily and stood up. Her face was beautiful as the face of a marble Niobe, but as pale and as full of anguish.

"My loving bridesmaids," said she, "it is now all over with poor Amelie de Repentigny; tell Pierre," and here she sobbed, almost choking in her grief. "Tell Pierre not to hate me for this blood that lies on the threshold of our house! Tell him how truly and faithfully I was preparing to devote myself to his happiness as his bride and wife; tell him how I loved him, and I only forsake him because it is the inexorable decree of my sad fate; not my will, but my cruel misfortune. But I know his noble nature; he will pity, not hate me. Tell him it will even rejoice me where I am going to know that Pierre Philibert still loves me. I can not, dare not, ask him to pardon Le Gardeur! I dare not pardon him myself! But I know Pierre will be just and merciful to my poor brother, even in this hour of doom."

"And now," continued she, speaking with a terrible energy, "put away these bridal deceits; they will never be worn by me! I have a garb more becoming the bridal of death; more fitting to wear by the sister of—O God! I was going to say, of a murderer!"

Amelie, with a wild desperation, gathered up the gay robes and garlands and threw them in a heap in

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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.

BROWN and White Leghorn cockerels and pullets for sale; prizewinners. Arthur Master, Highgate, Ont. BARRED Plymouth Rocks, Minorcas and Houdans; winners at Guelph, Toronto, Montreal, Napanee, Lindsay, Highgate and Ridgeway. Orders booked now for eggs. Cockerels and pullets for sale. Circular free. C Day, Highgate, Ont.

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SITUATION—By man and wife, to run farm, or manager on farm. Fifteen years' experience in general farming. Free 2nd April. Apply Alexander Grant General Delivery, Georgetown, Ont.

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the corner of the chamber. "My glory is departed!" said she. "Oh, Hortense, I am punished for the pride I took in them! Yet it was not for myself, but for the sake of him, I took pride in them! Bestow them, I pray you, upon some more happy girl, who is poor in fortune, but rich in love, who will wear them at her bridal, instead of the unhappy Amelie."

The group of girls beheld her, while their eyes were swimming with tears. "I have long, long kept a bridal veil in my closet," she went on, "and knew not it was to be mine!" Opening a wardrobe, she took out a long black veil. It had belonged to her grandaunt, the nun, Madeline de Repentigny, and was kept as an heirloom in her family.

"This," said she, "shall be mine till death! Embrace me, O my sisters, bridesmaids and companions. I go now to the Ursulines to kneel at the door and crave admittance to pass a life of penitence for Le Gardeur, and of prayer for my beloved Pierre."

"O Amelie, think what you do!" exclaimed Hortense Beauharnais; "be not hasty, take not a step that cannot be recalled. It will kill Pierre!" "Alas! I have killed him already!" said she; "but my mind is made up. Dear Hortense, I love Pierre, but oh, I could never look at his face again without shame that would burn like guilt. I give myself henceforth to Christ, not for my own sake, but for his, and for my unhappy brother's! Do not hinder me, dear friends, and do not follow me! May you all be happy in your happiness, and pray for poor Amelie, whom fate has stricken so hard and so cruelly in the very moment of her brightest hopes! And now let me go—alone—and God bless you all! Bid my aunt to come and see me," added she; "I cannot even wait her return."

The girls stood weeping around her, and kissed and embraced her over and over. They would not disobey her request to be allowed to go alone to the Convent, but as she turned to depart, she was clasped around the neck by Heloise de Lotbiniere, exclaiming that she should not go alone, that the light of the world had gone out for her, as well as for Amelie, and she would go with her.

"But why, Heloise, would you go with me to the Convent?" asked Amelie, sadly. She knew but too well why.

"Oh, my cousin! I too would pray for Le Gardeur! I too—but no matter! I will go with you, Amelie! If the door of the Ursulines opens for you, it shall open for Heloise de Lotbiniere, also."

"I have no right to say nay, Heloise, nor will I," replied Amelie, embracing her; "you are of my blood and lineage, and the lamp of Repentigny is always burning in the holy chapel to receive broken-hearted penitents like you and me!"

"Oh, Heloise, do not you also leave us! Stay till to-morrow!" exclaimed the agitated girls, amazed at this new announcement.

"My mind is made up; it has long been made up!" replied Heloise. "I only waited the marriage of Amelie before consummating my resolution to enter the convent. I go now to comfort Amelie, as no other friend in the world can comfort her. We shall be more content in the midst of our sorrows to be together."

It was in vain to plead with or to dissuade them. Amelie and Heloise were inexorable and eager to be gone. They again kissed their companions, with many tears bidding them a last farewell, and the two weeping girls, hiding their heads under their veils, left the bright mansion that was their home, and proceeded with hasty steps towards the Convent of the Ursulines.

(To be continued.)

Laughing cheerfulness throws sunlight on all the paths of life. —Richter.

GOSSIP.

We have an advertisement in this issue from a beekeeper who wishes to locate an apiary in a district where alsike is grown for seed, and where no other beekeeper lives. Look up his address and correspond.

The London (England) Hackney Show will be held on March 1st, 2nd, 3rd and 4th. The prizes offered amount to £2,150. The date for the Thoroughbred Show, at the same place, is March 8th, and for Hunters March 9th and 10th.

S. J. Prouse, Ingersoll, Ont., announces that he has a select importation of about 35 Clydesdales, which were to sail on February 12th, and will be sold on or about March 4th, at the Union Stockyards, Toronto. The consignment is said to be an extra-good one, comprising a number of prizewinners. Further announcements may be looked for in our next issue.

D. C. Flatt & Son, Millgrove, Ont., in their new advertisement of the Summer Hill herd of Yorkshire hogs, announce a new importation of selected Yorkshires expected soon to be landed, including high-class show and breeding stock, some 50 head being young sows in farrow, selected from leading herds in England and Scotland.

MARKHAM SHORTHORN SALE. Ed. W. Robinson, Markham, Ont., advertises a dispersion sale of his herd of 30 Scotch Shorthorns, to take place at his farm, close to Markham village, G. T. R., and three miles from Locust Hill, C. P. R. The herd represents a number of popular families, and includes the Duthie-bred stock bull, Royal Fancy, of the favorite Cruickshank Secret tribe.

SALE DATES CLAIMED. February 23rd.—Hammer & Hodgson, Brantford, Ont.; Shropshires. February 25th.—Neil Smith, Brampton, Ont.; Clydesdales. March 1st.—R. & S. Nicholson, Sylvan, Ont.; Shorthorns. March 2nd.—Provincial Auction Sale at Guelph; Shorthorns and Herefords. March 4th.—At West Toronto, S. J. Prouse, Ingersoll, Ont.; imported Clydesdales. March 8th.—Arthur Johnston, Greenwood, Ont.; Shorthorns. March 9th.—Nelles & Woodley, Boston, Ont.; Holsteins. March 11th.—Ed. W. Robinson, Markham, Ont.; Shorthorns. 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.

SHROPSHIRE AT AUCTION. One hundred and forty pure-bred Shropshire sheep, as advertised in this issue, the property of Hammer & Hodgson, Brantford, Ont., are to be sold by auction at Belmont Farm, four miles west of Brantford, on Wednesday, Feb. 23rd. The offering comprises 100 ewes, a number of which are imported, and all bred to first-class rams. There are also 20 beautiful ewe lambs and 20 ram lambs, in fine condition. Conveyances will leave principal Brantford hotels for the farm at 11 a. m. Here is a favorable opportunity to secure stock of first-class quality and breeding to found or improve a flock. Sheep are profitable stock, and a fine market is open for them in any numbers in the U. S. at present. Note the date and terms in the advertisement.

TRADE TOPIC.

The Adams Furniture Company, of Toronto, whose advertisement appears in this paper, have probably the largest and best supply of household furniture in any one store in the Dominion. Their stock comprises the newest features in furniture, and includes varieties to suit the needs and means of all classes of the public. Their catalogue, containing 500 illustrations, is mailed free to all applicants. See the advertisement, and send for the catalogue, mentioning that you saw the ad. in "The Farmer's Advocate."

BARN ROOFING

The "Eastlake" Steel Shingle is the only absolutely weathertight shingle on the market. Let us tell you why. A shingle to be proof against the severest storms must have at least a three inch overlap. The

Eastlake Steel Shingle is the only shingle that has that much. The so-called four-lock shingles have only an inch and a quarter overlap—not enough to keep out the drifting snow and rain, so this proves the "Eastlake" the only waterproof shingle. The roofing problem solved. Our free booklet, "Eastlake Metallic Shingles," tells how. "Eastlake" shingles can be laid in one quarter the time it takes to lay a four-lock shingle.—The Philosopher of Metal Town. MANUFACTURERS 4753 The Metallic Roofing Co. Limited

We Cure Eyes

(Free Advice and Free Cure Book)

Cure Yourself At Home With Our Natural Home Treatment.

Costs You Nothing for Our Free Cure Book. Tells You How. Send For It To-day.

We tell you how to treat yourself right in your own home with our Natural Method Treatment, without undergoing an operation, seeing a doctor, or leaving the house. There's no pain, no trouble, no danger, no knife; just the simplest and most natural method possible. No matter how serious your eye trouble is, or how long you have had it, or who has treated you before, or whether you have cataract, falling eyesight, optic nerve disease, scums,



sore or watery eyes, or ulcers, or any other eye trouble, we will advise you free of charge. We have cured hundreds of cases like that of Rex Haughey, of Snyder, Okla., who says: "My sister had cataract and was almost blind. They entirely cured her in three months." M. C. Aldrich, Alva, Okla., says: "My doctor wanted me to go to Chicago. I was almost blind, could not see to read or sew or write. I could not go to Chicago because I was too poor. I saw the ads, and they quickly cured me with their simple, painless method." Let us tell you how you can treat yourself, and be sure of results. We do not treat people who were born blind, or who are so blind from any cause that they have no perception of light. Where there is light, however, there is hope. If you are interested and want our book, write a description of your case the best way you can and we will tell you how you can treat yourself at home and be sure of results, telling you things your doctor never told you, and that you ought to know. Cut out the coupon below, fill out blank lines, or copy it and mail to us to-day.

FREE BOOK AND ADVICE COUPON

North American Eye Specialists. 162 North American Bldg., Chicago, Ill. I enclose letter herewith explaining my symptoms and wish you to please send me at once, absolutely free of all charges, your great Eye Book, proof of cures and advice about my case. MY TROUBLE IS..... NAME..... ADDRESS.....

When Writing Mention This Paper.



MOVING PICTURES OF DAN PATCH 1:55

ABSOLUTELY **FREE** POSTAGE PAID

If you are a Farmer, Stockman or Poultry Raiser and correctly answer, in your postal card or letter reply, the specified questions.

THIS IS THE LATEST, SENSATION AND GREATEST TRIUMPH IN THE GREAT 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 a burst of speed. The original film contains

2400 INSTANTANEOUS PICTURES OF DAN PATCH

and every picture shows the King of all Horse Creation as plainly as if you stood on the track and actually saw Dan Patch 1:55 in one of his thrilling speed exhibitions for a full mile, 2400 distinct moving pictures taken of Dan in one minute and fifty-five seconds means twenty-one pictures taken 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 for a supreme effort and then you can watch every movement of his legs as he flies through the air with his tremendous stride of 29 feet. You can see his thrilling finish as he strains every nerve to reach the wire, 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 crowd and throw a beautiful woolen blanket over Dan to prevent his catching cold and then you can follow him up the track before the madly cheering multitudes. As a study of horse motion it is better than the actual speed mile because you can see Dan right before you for every foot of the entire mile. When first shown to the public this marvellous picture caused people to stand up all over the theatre calling "Come on Dan!" "Come on Dan!"

This remarkable moving picture is the most realistic and the most thrilling ever presented to the public. We have taken a part of these 2400 wonderful and sensational pictures and made them into a *Newly Invented Moving Picture* that you can carry 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.

THIS MOVING PICTURE WILL BE MAILED TO YOU ABSOLUTELY FREE, WITH POSTAGE PREPAID, IF YOU ARE A FARMER, STOCKMAN OR POULTRY RAISER, AND CORRECTLY ANSWER THE THREE QUESTIONS.

YOU MUST ANSWER THESE 3 QUESTIONS IF YOU WANT THE MOVING PICTURES FREE

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 and honestly answer the 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, one before my supply is exhausted.

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.

Largest Stock Food Factories in the Entire World
Cash Capital Paid in \$2,000,000

Address E. B. SAVAGE, Proprietor of
INTERNATIONAL STOCK FOOD CO., TORONTO, CAN.

48

TRADE TOPICS.

O. A. C. NO. 21, Mandescheuri Six-rowed barley is the best that can be got. You will grow it sooner or later—why not now? Geo. Keith & Sons, seed merchants, Toronto, are offering this grand barley in five-bushel lots at \$1.25 per bushel, bags free. Send for sample, also catalogue. (Advt.)

DON'T WAIT until your neighbor is growing better crops than yourself, but commence this season to raise a stock of Scotch-grown Regenerated Banner oats, you will increase your yield 25 per cent. Geo. Keith & Sons, seed merchants, Toronto, are offering these grand oats in five-bushel lots at \$1.25 per bushel, bags free. Send for sample, also catalogue. (Advt.)

DON'T PUT OFF.—Start in now to secure your seed wants.—Don't wait till your neighbor is growing better crops than yourself. Now is the time when you can get the best selection in seed oats, seed barley, clovers, grasses, roots, etc. Geo. Keith & Sons, seed merchants, Toronto, at present are offering No. 1 Government Standard Red Clover at \$10.00; Timothy at \$3.00; Alsike at \$8.50, and Alfalfa at \$12.50 per bushel. To the most particular growers, they offer their "Sun" brand Red Clover, "Ocean" brand Alsike, "Gold" brand Alfalfa, and "Diamond" brand Timothy at 50c. per bushel advance on the above prices. These are the purest that can be got, and will suit the most exacting. No Ragweed, no Buckhorn, no Mustard. Less than 1 per cent. of the seed offered will go into these grades. Send for samples, also catalogue. (Advt.)

GOSSIP.

Volume 2, of the Canadian State Horse Studbook, compiled and edited in the office of the Canadian National Livestock Records, at Ottawa, has been issued. It is a substantial and well-executed volume of 178 pages, more than twice the size of Vol. 1, containing the pedigrees of 381 stallions and 378 mares, a total of 762. Also the rules of entry, a list of members of the Association, and a complete index. The record shows a gratifying increase of registrations and members, and speaks well for the growing popularity of the breed in Canada.

EWING'S Seeds Pay

Even if someone offered them free it wouldn't pay you to sow seeds of poor or doubtful quality.

Your crop should be worth 10 to 100 times the cost of the seed. Inferior seed will easily lose you half the crop, or from 5 to 50 times the cost of reliable seed.

Economizing on seeds is most expensive economy.

If you sow Ewing's seeds—and the weather is anyway reasonable, and you give them a fair chance in the way of soil and tillage, you can depend on **FULL CROPS** of **AI** quality—crops that will pay handsomely for the land used and the work done as well as for the small investment in the seeds themselves.



Ewing's Seeds have proved their reliability by forty years of bumper crops.

Insist on Ewing's. If your dealer hasn't them buy direct from us.

Our big Illustrated Catalogue is Free—write for it to-day.

Wm. Ewing & Co., Seedsmen, McGill St., Montreal.

SHORTHORNS AT AUCTION

ON

Friday, March 11th, 1910

E. W. ROBINSON, Markham, Ont.,
will sell by auction

30 Head of **SHORTHORNS**

All Scotch including cows, 2-year-old
and yearling heifers.



Some cows with calf at foot. Also the imported Dutch-bred bull, Royal Fancy (63227), a noted stock bull. The families represented in the sale are: Broadhocks, Jilly, Lady Dorothy, Roan Lady, Jessamine, Bellona.

For catalogue and fuller particulars address:

ED. W. ROBINSON,

Markham, Ontario.

QUESTIONS AND ANSWERS. Miscellaneous.

FEEDING YOUNG PIGS.

Please give me a good ration for a litter of eight pigs, just ready to wean. Have plenty of oats, barley and corn, with mangels, but not much skim milk.

L. W.

Ans.—A mixture of three or four parts shorts to one of oil-cake meal, is excellent for pigs receiving little or no milk. To this might be added some of the other grains, making a ration somewhat as follows: Shorts two parts, finely-ground oats (preferably with the hulls sifted out) two parts, barley meal and corn meal one part each, oil-cake meal two parts. Feed in a thick slop, mixed with skim milk or water. The mangels may, if desired, be pulped or cooked and mixed with the slop.

WORMS IN HOGS.

I put away nine hogs a few days ago, I fancied for some time they were not doing as well as they ought. I found out the trouble after they were dressed, their insides were just full of worms. What is a good cure for them, as I have some more that may be affected the same way? They had been fed shorts, corn chop and oil cake, in proportions 3, 2 and 1, respectively, and a few apples or mangels every day, with wood ashes and a little salt two or three times a week.

C. B.

Ans.—Give an ounce of oil of turpentine to each pig, in four ounces of raw linseed oil, or with milk, after starving 24 hours. Repeat the dose in three days.

STIFLED.

Last spring, colt seemed very sore on the stifle joints. I think it is stifled on both joints, as it sometimes lies down and has to be helped up. Is there anything that can be done for it, or will it ever be any good to work?

W. H. G.

Ans.—Blistering the stifles repeatedly is the only cure for this trouble. It is quite possible the colt may grow into a useful horse. Take 1½ drams each biniodide of mercury and cantharides, and mix with two ounces vaseline. Clip the hair off front and inside of stifle joints, and rub the blister well in. Tie so he cannot bite the parts. In 24 hours, rub well again with the blister, and in 24 hours longer wash off with warm water and soap and apply sweet oil; let him loose now in a box stall. Keep as quiet as possible, and apply sweet oil every day. Blister once every month in this way for four or five times.

STOCK-YARDS MANURE VS. FERTILIZER.

I have land plowed last fall, with not enough manure to go over it. I want to seed to timothy and clover, with grain. What would be the value of stock-yards manure per carload, compared with commercial fertilizers? Would have three miles to draw, but this would not cost very much.

Quebec. SUBSCRIBER.

Ans.—Anyone who has followed the discussion in this paper on the value of manure, will appreciate the difficulty of suggesting a comparative value for manure, especially when we do not know how much litter or how many weed seeds it may contain. The latter is an important point. However, making a discount of \$1 per ton on this score, we should say an average sample would be better value at \$2 a ton in the fields, than would commercial fertilizers. This estimate, however, is not by any means absolute, but more like a leap in the dark. So much depends upon the need of your soil for humus and bacterial activity. The manure might be better value at four dollars a ton, and then again it might not.

Arthur Johnston, Greenwood, Ont., having sold his farm, wishes it clearly understood that the auction sale of his herd of Shorthorns advertised to take place on March 8th, not March 9th, as at first announced, is a dispersion sale of the entire herd, absolutely, and without any reserve.

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.

TELEPHONE ACROSS RAILWAY.

I live one-quarter mile from road, the railroad runs between my house and road. I want to have a phone installed, and have written the Railroad Company, and the Telephone Company has also, but get no reply. Is the Railroad Company obliged to let a wire across if it is wanted, as in my case? If so, will you please inform me how to proceed to get permission? It is over six months since I first tried, and cannot get a reply. Ontario.

Ans.—We would suggest your writing the Secretary of the Board of Railway Commissioners of Canada, Ottawa, for the desired information and relief.

PROBATE.

1. If a man wills his property to one of his sons that is living with him, does he fall into possession after father's death?

2. Can he sell the property without the will being probated?

3. What is the meaning of the will being probated?

4. Is it not lawful without it?

5. What is the cost of it?

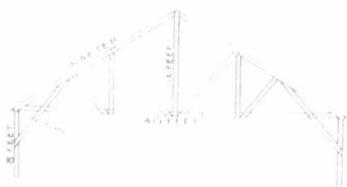
Ontario. SUBSCRIBER.

Ans.—1. Yes; provided the will is valid and is admitted to probate in due course.
 2. No.
 3. It means that the will has been exhibited and proved in the Surrogate Court of the County, and a copy made out under the seal of the Court, and delivered to the Executor, with a certificate that the original (which is left on deposit in the office of the Registrar of the Court) has been duly proved.

4. Yes; but for various practical purposes probate is necessary.
 5. It varies, according to the length of the will, the number of Executors, the size of the estate, and many other circumstances. It is, therefore, impossible to state any amount.

FRAME FOR ROOF SUPPORT.

We purpose building a shed for horses at the church, 40 x 150 feet, on cement foundation, wall to be 8 feet from foundation to top of plate, roofed and sided with corrugated galvanized iron. How would you support the roof, so as not to have the timber below in the way of horses and rigs driving in? The building to be closed in on both sides, with a door in each end to drive in or out. We intend to use pine or hemlock plank or scantling throughout. H. C.



Frame for Roof Support.

Ans.—The accompanying sketch will answer the question, and explains itself. It is taken from an actual roof on a building over 45 feet wide. As will be seen, the rafters form part of the supporting frame. Pairs of rafters, number 2, 4, 6, 8, etc., are thus fixed, the odd-numbered pairs between being unsupported. The rafters and most of the cross ties and braces are of 2 x 5-inch elm, the shorter braces being 1 x 6 inches. The horizontal cross tie is in two pieces, overlapping and nailed together. The brace shown, attached to post, tie and rafter, is put on every fourth rafter. Three strips of inch lumber, one near the center, and one on each side half-way to plate, are nailed on cross ties lengthwise of building, to keep frame from swaying.

UNPAID WAGES—NOTE WITHHELD.

A boy in Ontario leaves home and goes to Saskatchewan and hires with B for eight months, at \$28 a month. He works two and a half months, and then leaves, as B was so cross that he could not get along with him. A was without work until harvest time. A goes to B in November for his wages for the time he worked, and B refuses to pay. A has come home, and we sent a draft through the bank, and B was notified, but took no notice of it.

1. Can I, his father, collect his wages, as A was not of age (nineteen)?

2. If so, how?

3. If I won a lawsuit, could I get mileage?

4. A man had a note against B and B came and paid it. A refused to give up note, or receipt for money. What could B do to get it? A says B owes him some more. A SUBSCRIBER.

Ans.—1. The father is probably in a position to recover a portion, at all events, of his son's wages from B.

2. By suit. He should instruct a solicitor in the matter.

3. In such suit, we do not think you would be awarded, or be justified in incurring mileage.

4. B could bring an action against A for the delivery up of the note.

A MATTER OF TITLE.

In 1856, part of lot 12 was surveyed into building lots, then only part of a village. In 1857, the village was incorporated as a town by special charter. The lots are described as running from the 50-ft. roadway to an alley at the easterly end of the lots. The original owners of lot 11 let the fence decay on the easterly side of the alley, and about 18 years ago the fence was removed entirely. This part of lot 11 has exchanged owners several times since the fence was removed. A gate has been at the entrance of the alley about 40 years, generally open in winter and closed in summer, put there by one of the owners of lot 29, who built a barn fronting on the alley. The plan of these lots was registered in the County Registry office, and is included in the map of the town. About a year ago, the man who had owned lot 11 for two or three years, gave a quit-claim deed of this alley to the present owner of lot 11, who now claims the alley as his private property, although the alley is part of lot 12, and has never been assessed in with part of lot 11, and no taxes ever paid on it. Also, every few years, some owner of lots in part of 12 have applied to the council to have the alley opened and improved, but nothing was done in the matter. The man holding the quit-claim deed claims that his predecessor gained a right by possession.

1. Can a man gain a right to an alley marked on the map of an incorporated town by letting his fence along the alley decay, and remain down for ten years?

2. If possession gives a title, must it be undisputed possession, and, when part of two different lots, must the one claimed be assessed as part of lot 12, or the fence being down, can it be assessed, say eight acres (merely including the alley in his mind), although the alley would make one and one-third acres more land?

3. Can the town, although negligent as to their right in the past, now take possession of the alley and deal with it in the interests of the town, dispossessing the quit-claim holder?

4. Does the application of owners of lots in lot 12, to have the alley opened, affect the claim of possession of the alley, or that no one has owned the part of 11 more than four or five years in succession? Ontario.

Ans.—1. That of itself would certainly not be sufficient for the purpose.

2. Possession of the sort mentioned is, generally speaking, essential; but the matter of assessment is not very important.

3. We do not see that the municipal corporation has the right suggested.

4. These are circumstances that call for consideration in determining the question of title. It does not appear to us, upon the statement of facts furnished, that the owner of lot 11 has acquired a valid title to the land represented by the alley.

Telephone Information



No rural community should be without its local telephone line or system.

If you are interested in telephone matters, if you are thinking of building a telephone line, if you would like to know what local telephone systems cost, or how they are organized, write us, and we will be glad to discuss the question with you.

Our No. 2 Bulletin is illustrated and gives reliable information how to build telephone lines. We will send you a copy if you ask for it.

THE INDEPENDENT PIONEERS

We are the pioneer Independent Telephone Manufacturing Company of Canada, and the only Canadian Company which is not controlled or owned by the Bell Telephone Co., that is actually manufacturing telephone equipment for the Independent operators of the Dominion.

A HIGH STANDARD

We had the full benefit of the years of experiment and manufacture of the manufacturers of telephone equipment in the United States. We established a high standard of quality, and have, at great expense of time and money, equipped our factory so as to ensure the maintenance of this high standard.

TELEPHONES THAT SATISFY

Thousands of satisfied persons are using our telephones today. Scores of companies who had been using other makes of telephones have adopted ours on account of its high standard of quality. If you are in the market for telephones it will be to your interest to communicate with us.

SPECIAL TRIAL OFFER

To any operating company that has not given our telephones a practical test, we will make a special trial offer if they will communicate with us.

CONSTRUCTION SUPPLIES

We carry a large stock constantly on hand of everything required for the construction of telephone lines. It will pay you to let us quote prices.

Prompt Shipments and Guaranteed Satisfaction are Making Our Success

Canadian Independent Telephone Co'y Ltd.
 18-20 Duncan Street, TORONTO, ONT.

BARN ROOFING

The "Eastlake" Steel Shingle is the only absolutely weathertight shingle on the market. Let us tell you why. A shingle to be proof against the severest storms must have at least a **three inch overlap**. The

Eastlake Steel Shingle

is the only shingle that has that much. The so-called four-lock shingles have only an inch and a quarter overlap—not enough to keep out the drifting snow and rain, so this proves the "Eastlake" the only waterproof shingle. The roofing problem solved. Our free booklet, "Eastlake Metallic Shingles," tells how.



"Eastlake" shingles can be laid in one quarter the time it takes to lay a four-lock shingle.—The Philosopher of Metal Town.

MANUFACTURERS 1753

Metallic Roofing Co.
Toronto, Ontario, Canada

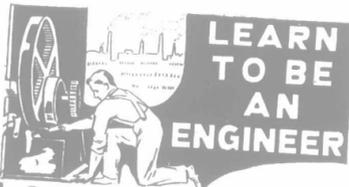


Bicycle Ball bearings and rigid stand make the "LEADER" easy running—and there is nothing to interfere with pail being placed beneath bar to drain off the butter-milk.

"Leader Churn"

can be used either by foot or hand—sitting or standing. Made of strong white oak—sweet and clean—won't crack or chip like glass and crockery—and will last for years.

If your dealer does not handle them write for information. 54
CUMMER-DOWSWELL LIMITED, - Hamilton, Ont.



LEARN TO BE AN ENGINEER

Complete course of instruction on Stationary Engineering given you by mail at your home. Learn in your spare time. Special instruction also in Traction Engineering, Gas and Gasoline, Marine and Locomotive Engineering. We guarantee to fit you for any examination for Government license. Free booklet on request. Write today. **Canadian Correspondence College, Limited, Dept. E., Toronto, Can.**

CHURCH BELLS

CHIMES AND PEALS

MEMORIAL BELLS A SPECIALTY

FULLY WARRANTED

McSHANE BELL FOUNDRY CO.,

BALTIMORE, Md., U. S. A.

Established 1856

CIDER PRESSES

The Original Mt. Gilead Hydraulic Press

produces more cider from less apples than any other and is a

BIG MONEY MAKER. Sizes 10 to 40 barrels daily. Also

older evaporators, apple butter cookers, vinegar generators, etc.

CATALOGUE FREE.

THE HYDRAULIC PRESS MFG. CO.

110 Lincoln Ave., Mt. Gilead, Ohio.

Boys for Farm Help

The managers of Dr. Barnardo's

for the boys who are arriving periodically from Eng-

land to be placed in this country. The young immi-

grants 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 particu-

lars as to the terms and conditions upon which the

boys are placed may be obtained upon application

to Mr. Alfred B. Owen, Agent Dr. Barnardo's

Homes 50-52 Peter St., Toronto.

QUESTIONS AND ANSWERS

Miscellaneous.

CONTAGIOUS ABORTION.

I have had considerable trouble in getting my cows in calf. I bred one in May, and she never came over until September. I was very busy then, and did not breed her until the last of December. I then bred her, and she is all right so far. The other cows are coming over the same way. What would you do in the case?

H. A. J.

Ans.—We suspect there is contagious abortion in the herd. Cows, under such conditions, are liable to abort at any period after conception, and the fetus voided may be so small as to escape notice. If it is found, it should be burned or buried. There is little use in breeding a cow in less than three months after aborting, as, though she may conceive to an earlier service, she will be liable to abort again. The carbolic-acid treatment is the most likely to be effectual as a preventive. When given in feed, or as a drench, the dose is two drams, or two teaspoonfuls, in water, every other day, for two weeks, begun at about two months after conception and continued at intervals of two or three weeks, until the last month of pregnancy.

BUILDING QUESTIONS.

1. My barn was first built 56 feet by 36 feet; then, about fifteen years after, there was built a lean-to 12 feet wide, the full length. Twelve years ago I shingled the main barn, the lean-to, being still good, I did not bother with it. Now the roof is all rotten on the lean-to, and I would like to raise the lean-to side as high as the other side. Should I tear off all the roof, or is it possible to save the roof of the main barn?

2. I am putting a new foundation under, as the stables are too cold. Would you recommend a full-height wall of concrete, or just part?

3. I am building a root-house under the approach. Kindly let me know what is required in the covering of the root-house.

J. S. D.

Ans.—1. Under the circumstances, it would be true economy, we believe, to tear off all the roof, at least on the side next to the lean-to, before reshingling and raising the lean-to part.

2. If you have timber and lumber handy, it might be wise to have upper part of wall of wood. Where a concrete wall is built to the full height of the basement, some form of hollow construction should be used, either well-made cement blocks, large, hollow building brick, or solid cement, built with a core.

3. Many farmers now have a concrete roof for root-house, covered over with a few inches of earth.

SILQ QUERIES.

1. What would be the cost of a concrete silo 14 feet wide inside, and 24 feet high?

2. How thick should I make the wall, and how much gravel will it require?

3. How much cement will I need to mix one part cement to seven of gravel?

4. How many tons of silage would such a silo hold?

5. I would also like to know your opinion of steel silos. Would you recommend me to build one in place of a concrete?

6. What would be the cost of erecting a steel silo of these dimensions, and is there danger of their rusting?

J. P. Lambton Co.

Ans.—1. In certain sections, where builders make a business of erecting cement silos, they will do the work and supply everything except gravel and board for the men, for \$1.50 per foot for silo 14 feet in diameter.

2. If the concrete is mixed fairly rich, and gravel is of good quality, six inches thick is perfectly safe. It might be wise to say eight inches on the average. For your proposed silo, almost seven cords of gravel would be required.

3. About 32 barrels.

4. If full of settled silage, it would contain 75 tons or more.

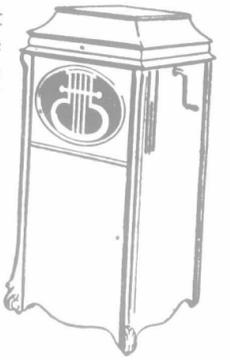
5 and 6. An article on steel silos appeared in Feb. 10th issue, which gives about the most definite information available.

Amberola

The newest EDISON

—A wonderful musical instrument, a beautiful piece of furniture—a Phonograph with the horn built in as a part of the cabinet.

A trained musician may purchase a piano, simply for the beauty of its tone and the lightness of its action. The real home maker will purchase for this and more. The instrument purchased must be a delight to the eye as well as to the ear—a part of the home. And that is just "the why of the Amberola"—combining as it does, all the tonal beauty of the Edison Phonograph, with the added richness, simplicity and charm of a masterpiece of cabinet work comparable only to the highest grade piano.



The Amberola comes in several finishes of Mahogany and Oak to harmonize with surroundings in your home. It has drawers in the lower part for holding 120 records. The price is \$240.00. Hear the Amberola at your dealer's today play both Amberol and Standard Records.

Slezak—And be sure to ask to hear the new Grand Opera Amberol Records by Slezak—the great tenor of the Metropolitan Opera House, New York, who is the greatest Grand Opera sensation since the days of Jean DeReske.

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 Ave., Orange, N. J., U. S. A.

One Hundred and Fifty Songs FREE

BOYS AND GIRLS

Nothing to Sell, Nothing to Pay.

All you have to do is to hand a few circulars to the young people of your neighborhood. Give us your word that you will distribute the circulars faithfully. For this slight service we send you postpaid a collection of 150 Old Time Favorite Songs, Words and Music complete. Gems from every land—Scotch, English and Irish Ballads, Operatic Hits, American Popular Songs, Comic and Pathetic Songs, Coon Songs, Love Songs, Songs of the Sea, Patriotic and Sacred Songs, etc., etc., 150 of the best ever written, in a neat paper-covered book, 6 x 8 inches. Only one is good only till March 15. The Gold Medal Premium Co., Dept. D. A., Toronto.



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AND HOME MAGAZINE

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Send for terms and sample copies. Specially liberal commission allowed for obtaining new subscribers.

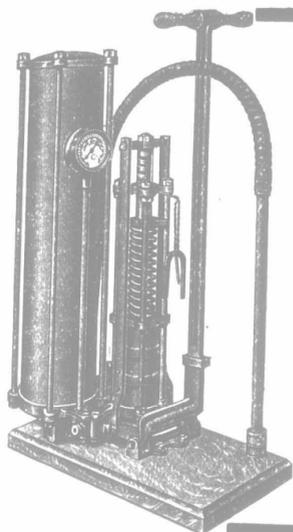
The Farmer's Advocate, London, Ont.

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.



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.
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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.

QUESTIONS AND ANSWERS.

Miscellaneous.

SKIM MILK VS. PASTEURIZED WHEY.

Which is better feed for young calves and pigs, milk from a cream separator or pasteurized whey?

Ans.—We would prefer the milk, especially for calves. Pasteurized whey has been used, however, with fairly good results from both calves and pigs.

A LEAKING TEAT.

Kindly let me know what is best for a cow with a leaking teat. She is due to calve again in April.

Ans.—If the leak is from the normal opening, the only suggestion we can make is the application of an astringent, such as alum, to the opening. If it is through a hole on the side of the teat, scarifying the edges of the opening with a sharp penknife, before the cow calves again, may cause the edges to unite.

Veterinary.

ENLARGED HOCK.

Horse got his foot pricked and was unable to stand on it for two months. The other leg swelled, but the swelling has all disappeared, except at the hock, which is still swollen. It measures an inch more than its fellow.

Ans.—Repeated blistering will probably reduce this. Take 2 drams each of biniodide of mercury and cantharides, and mix with two ounces vaseline. Clip the hair off the hock; tie so that he cannot bite it. Rub well, once daily, with the blister for two days; on the third day apply sweet oil. Turn in loose box now, and oil every day. As soon as the scab comes off, blister again, and, if necessary, after this, blister again in a month.

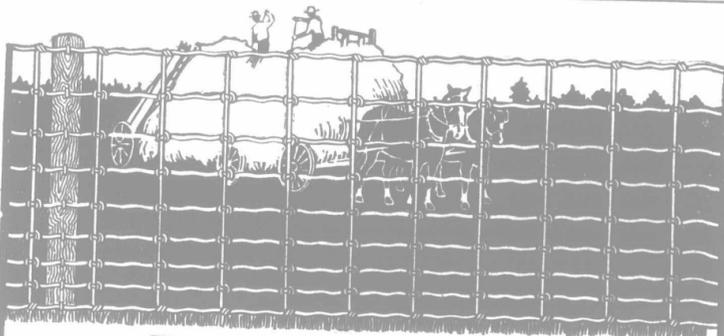
GROWTHS IN MILK DUCTS.

There seems to be a little lump, like cristle, in each of my cow's front teats. Sometimes the first substance that comes from one teat is dark, but the rest all right. Is there danger of the teat going blind, and is the milk fit for use? She will calve again in April.

Ans.—These are fibrous growths. So long as you can milk, even though slowly, I would advise you to leave them alone. If the duct becomes entirely closed, as it may, a veterinarian may be able to operate successfully with a special instrument, but in some cases a successful operation cannot be performed, especially when the obstruction is high up in the teat. The milk is healthful. It would be wise not to breed her again, as you will probably have trouble.

TRADE TOPIC.

ROCK SALT for farm stock is advertised by the Toronto Salt Works. Rock Salt, kept in the manner where the animals may lick it at will, is the safest and most natural way of satisfying the demand of the system for this condiment.



Here's a fence that is strong and springy—remains taut and will not rust—

Peerless the Fence that saves expense

Put a Peerless fence around your farm and you'll get real service.

It will last through years of the hardest kind of use.

It will not rust—and rust is the greatest enemy of wire fencing.

It will not sag—when struck by a wagon or unruly animal it springs right back into position.

Our No. 9 Peerless fence is made of heavy English galvanized wire—all No. 9 gauge.

We tested all kinds of wire and found this English wire the best of all. No other wire we have tested

is drawn and galvanized with such care and thoroughness.

For this reason Peerless Fence will not rust—the spelter never chips off. The fence will last for years.

You can test and know how good any fence is before you buy it. Write for our simple formula for testing wire. We'll also send samples of Peerless Fence to test.

We know there is no fence made that will last as long and give you as much satisfaction as the Peerless Fence. Write to-day for our simple test and samples.

THE BANWELL HOXIE WIRE FENCE CO., Limited
 Makers of Farm, Poultry and Ornamental Fence and Gates
 Dept. B, Hamilton, Ont., Winnipeg, Man.

Save Your Dollars!

Think of the nice, round sum you will own if you deposit with us the quarter here—the dollar there—you unconsciously waste every day! One dollar opens an account. 3½% interest compounded.

Temporary address: 434 Richmond St., London, Ont., Can.

THE ONTARIO LOAN AND DEBENTURE CO.

A. M. Smart, Manager
 Dundas St. - Market Lane.

Subscribe for The Farmer's Advocate

TRADE TOPIC.

Just a few weeks more, and the busy, prosperous horse-buyers will be searching the country again. And these buyers will know a good horse when they see one, be sure of that, so it will be a wise move to take the chances offered by the present slack time, and see if there are any blemished horses in the stable. If there are, now is your time to clean and cure them up, ready for the buyer's keen examination. Many successful horse-breeders use Absorbine, relying on it to remove blemishes. Absorbine does not blister or remove the hair, and a horse can be used while being treated. \$2.00 at dealers, sent express prepaid, upon receipt of price. Write for booklet. W. F. Young, P. D. F., 258 Temple street, Springfield, Mass. Canadian agents: Lymans Ltd., St. Paul St., Montreal, Que.

GOSSIP.

ARTHUR JOHNSTON'S SALE, MARCH 8.

In addition to the Kilblean Beauties, the Cruickshank Nonpareils and Lavers, and the Marr Claras, there are in the sale a number of charmingly-bred Bruce Mayflowers, Cruickshank Butterlys and Duchess of Glosters, Kenellar Clarets, Miss Ramsdens, Minas, Crimson Flowers, an English milking tribe named Duchess Anns, of which there are six head, five females and one bull calf; Bruce Fames, of which there are three, all females, and they are splendid milkers. These cattle will be found in the very nicest condition—neither fat nor lean—but in quite as good condition as they ought to be. The bulls, which number nine head, Mr. Johnston writes, are also in the very best form to do credit to the herd, and the breed, and, more particularly, to the purchasers. They range in ages from ten months to nearly two years, excepting the imported bull, and he is past three years old. Of the imported bull, Benholm Butterfly, it can be truly said that he is certainly one of the three very best bulls ever owned in the Greenwood herd, and he is assuredly one of the two best bulls, individually, ever owned in the herd, a show bull from the ground up, and not far from being in show condition. He is a quick server, a sure getter, and a good sire. He is a Butterfly of capital breeding. He is massive, low-down, thick, and even. It would be difficult to find a better-balanced bull in any country. The young bulls, of which there are nine, are a smooth, well-fleshed lot, and in the very best condition to do customers most good—that is, they are in fine condition, without being fat. Mr. Johnston received very great praise from all who attended his former sale of three years ago, on account of the ideal condition in which he presented his cattle—none poor, and none loaded—and we think there will be no disappointment in the present lot. Mr. Johnston assures us that every animal that is on the farm will be sold at whatever they may bring. The farm itself is sold, and, as he puts it, "I do not own one foot of land." He asks his customers and friends to come and see the cattle sold, even if they do not buy.

NO WATER TO FREEZE

A Marvel of Simplicity The "Goes Like Sixty" Engine is always ready for work. Splendidly adapted for operating all light farm machinery, such as Pump, Churn, Separator, Wood Saw, Feed Cutter, Grinder, etc. Positively guaranteed. Free trial. Ask for catalogue. All sizes. **Gilson Mfg. Company, Ltd.** 912 York St., Guelph, Ont. 1905

GOES LIKE SIXTY GILSON ENGINE

THE EASY-RUNNING CAPITAL



THE CAPITAL CREAM SEPARATOR is not only the EASIEST-RUNNING separator made, but it has the most practical SKIMMING device in the world.

EASE OF TURNING and CLEAN SKIMMING are two IMPORTANT features in a separator.

Write to-day for catalogue.

The NATIONAL MANUFACTURING CO., Ltd.

Factories: OTTAWA AND BROCKVILLE
BRANCHES: Regina, Sask. Edmonton, Alta. Moncton, N. B.

Money to Loan

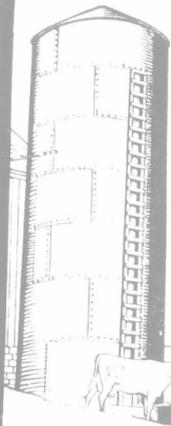
We will lend you money on your farm or city property. The interest will be at the lowest current rates. No charge for application forms, land inspection or renewals. If you cannot call, your letter will receive prompt and courteous attention. All business transactions strictly confidential.

**HURON AND ERIE
LOAN AND SAVINGS CO.**

442 Richmond St., London.
366 Talbot St., St. Thomas.

Incorporated 1864 - Assets over \$11,500,000

In the ordinary cement or wood silo there is usually formed about the wall a rim of ensilage of considerable width, which is frozen and decayed, and therefore unfit for use. This waste is reduced to practically nothing and the ensilage is kept sweet and clean for the whole feeding season in the



Waterous Steel Silos

These silos are composed of heavy steel plates firmly riveted together to be tight and absolutely waterproof and when set on a cement foundation are self-supporting. They are shipped out complete with plates rolled and punched and rivets for same, all ready for assembly. The erection can be done in any weather and is comparatively easy. Four or five men should do the work without trouble in about three days.

The initial cost of the steel silo may at first appear to be somewhat higher than the ordinary cement silo, but when you consider the fact that it takes at least three times as long to erect a cement silo, that it is impossible to work when the frost sets in, and that the cost and time taken for hauling gravel—often a considerable item—you will see that the final costs are practically identical, and if anything in favor of the steel silo.

They can be added to at any time, and if necessary, can be dismantled and moved at little cost. Write and let us tell you all about them.

Waterous Engine Works Co., Ltd., Brantford, Can.

GOSSIP.

Aberdeen-Angus bulls and females of all ages; also a first-class Clydesdale stallion, are advertised for sale by J. W. Hurt, Coningsby, Ont.

Among recent importations from Scotland are three stallions and two mares, selected by Wm. Colquhoun, Mitchell, Ont., referred to in detail elsewhere in this issue; and seven by Spence & Son, Clachan, Ont., including the Glasgow prize horse, Ganymede, a six-year-old mare by Hiawatha, and half a dozen fine fillies by first-class sires.

J. H. M. Parker, Lennoxville, Que., advertises in this paper, for sale, pure-bred bacon-type Chester White hogs of first-class breeding, and 100 to choose from, including young stock, sired by his noted imported boar, Ohio Chief, and other first-class sires, from which pairs and trios not akin can be supplied. Parties interested will do well to visit Mr. Parker, or write for prices and particulars.

B. Rothwell, Hillsdale Farm, Ottawa, Ont., advertises for sale imported Clydesdale stallions and mares, from four to six years old, two of the stallions being sons of the noted sire, Silver Cup, by Baron's Pride; one out of a Sir Everard mare. The prizewinning Hackney stallion, Dainty Duke of Connaught, by the great Garton Duke, dam by Denmark, is also in the offering.

For the Domo Cream Separator advertised in this paper by J. H. Morrow, Brighton, Ont., manager of the International Carriage Co., at Brighton, Ont., many advantages are claimed, which are stated in a booklet and testimonials published by the advertiser, and which will be mailed free on application. A perfect and a practical guarantee is given with each machine. They are said to be light, yet strong, durable, and easily worked, while the price is very moderate, and the terms reasonable. A report from the Ontario Agricultural Dairy School of milk-testing by the Domo Separator is very satisfactory.

CASKEY'S HOLSTEIN SALE.

Following up the notes in our last issue re bulls used in the herd of Holsteins belonging to J. A. Caskey, of Madoc, Ont., whose herd is to be dispersed by auction on March 25th, we here append notes regarding the female end of the herd. Mr. Caskey writes: The females I imported are as follows:

(1) Pietertje Hartog De Kol, sired by De Kol 2nd's Butterboy, the bull that has done more for the breed than any other bull that ever lived, especially through his sons, Hengerveld De Kol, Pietertje Hengerveld's Count De Kol, and Pietertje Alban De Kol.

(2) Belle Burke Mechthilde, whose dam Clothilde Artis Bell, has an equivalent 7-day butter record of over 20 lbs.

(3) Korndyke Queen De Kol, whose dam, Belle Korndyke, is too well known to need further comment.

(4) Inka Darkness 3rd's Jessie, a cow that produced 83 lbs. 3 ozs. of milk in a day; 2,224 lbs. milk in 30 days, and over 15,000 lbs. milk in 8 months. Two daughters of this cow are included in the sale.

(5) Inka Darkness 3rd's Pietertje 2nd, a sister of the preceding cow, which, in her palmy days, produced about 70 lbs. milk per day. Three descendants of this cow are in the sale.

(6) Jesse 2nd's Inka, a great machine for the continuous production of milk and butter, and who has left me four daughters, two of which produced this year, in Record-of-Performance test, over 12,000 lbs. milk each, and are milking yet.

(7) Panarista Pauline, a granddaughter of the famous cow, Pauline Paul, better in 1 year 1,153 lbs. 15 ozs.

(8) Inka Darkness Pet, a cow that produced 74 lbs. milk in a day, and a dandy.

(9) Inka Pietertje Zoo, another good one, carrying the same blood as Inka Darkness 3rd's Jesse and Inka Darkness 3rd's Pietertje 2nd.

(10) De Dikkert's 3rd De Kol, a fine type of a dairy cow, and from whom I have bred some excellent daughters.

ITCHING ERUPTIONS QUICKLY COOLED

Just a few drops of the famous D. D. D. Prescription applied to the skin will take away instantly the worst kind of an itch. We positively know this.

Oil of wintergreen, a mild, soothing liquid, combined with such healing substances as thymol and glycerine, will penetrate to the inner skin, kill the germs, and heal. The D. D. D. Prescription, made at the D. D. D. Laboratories of Chicago, seems to be just the right compound, as thousands of remarkable cures prove.

Don't go on suffering from eczema or any other itching skin disease, when relief is so easily obtained.

Just write the D. D. D. Laboratories, Dept. A, 23 Jordan street, Toronto, and they will send you, free, a trial bottle. This sample will relieve the itching at once, and prove to your satisfaction that here at last is the cure for your torture. Write for a trial bottle to-day.

For sale by all druggists.

Why Not Put "BT" Stanchions In Your Stable?



They will make it brighter and neater, are stronger, more durable, and cost less than any other tie when all is considered. Your cows will be kept clean and comfortable. Ask us how to lay out your stable, and why it pays to use

"BT" Stanchions

BEATTY BROS., FERGUS, ONT.
HAY CARRIERS, LITTER CARRIERS, ETC.

HILLSDALE FARM

OFFERS FOR SALE

**Clydesdale
Stallions and Mares (5)**

From 4 to 6 years old, two of the stallions by the famous Silver Cup, one out of a Sir Everard mare, another bred through the dam of Darley (222); big, sound horses, and selected with a special view to their stock-getting qualities. A prize mare by Marcellus, out of a Montrave Mac mare, is part of the offering. Also the prize Hackney, Dainty Duke of Connaught, by the great Garton Duke, dam Dainty by Denmark. Write me for further description and prices, and compare with others for similar quality of offering.

B. ROTHWELL, Hillsdale Farm
Ottawa P.O. Ontario.

Messrs. Hickman & Scruby,
Court Lodge, Egerton, Kent, England.

EXPORTERS OF PEDIGREE LIVE STOCK

of every description. Owing to the rapid increase in business, Mr. L. C. Scruby has been taken into partnership. During the spring months the export of horses of the light and heavy breeds will be a specialty. Write for prices, terms and references.



ROCK SALT for Stock. \$10 PER TON.
Toronto Salt Works, 128 Adelaide St. E.
Toronto, Ont. G. J. Cliff, Manager.

Don't Throw it Away

USE **MENDETS**

They mend all leaks in all utensils—tin, brass, copper, graniteware, hot water bags, etc. Nosolder, cement or rivet. Anyone can use them; fit any surface; two million in use. Send for sample pkg. 10c. Complete pkg. assorted sizes, 25c. postpaid. Agents wanted. Collette Mfg. Co., Dept. K, Collingwood, Ont.

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. Outwear the harness. Money back if not satisfactory. Write today for confidential terms to agents. F. Thomas Mfg. Co., 744 Wayne St., Dayton, Ohio

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

IMPORTANT AUCTION SALE

Neil Smith, Maple Grove Farm, near Brampton, Ontario, WILL HOLD A CLEARING-OUT SALE AT HIS FARM.

Friday, February 25th, 1910,



Commencing at 1 o'clock, consisting of registered Clydesdale mares and fillies, and the imported Clyde stallion, Baron Hiawatha, the best bred horse in the Clydesdale Studbook. Come and see this horse if you want a horse, and the best to be had. One three-year-old home-bred, but an At colt; one Thoroughbred stallion, good type of a running horse; also 6 cows; 16 fat cattle; and farm implements. All will be sold, as the proprietor is giving up farming. Conveyances will meet all trains on forenoon of day of sale at Brampton.

Ben Petch, Auctioneer.

Neil Smith, Prop., Brampton, Ont.

22 Imp. Clydesdale Stallions



Just landed, ages from 2 to 5 years old. A number of them are premium horses. Several are over the ton, or will make it. A number of them are grandsons of Baron's Pride. All are for sale. Prices are reasonable. Intending purchasers will find it to their interest to see these horses before purchasing. Farm two miles from the end of street-car line.

O. SORBY, Guelph, Ont.

Long-distance 'phone.

20 Imp. Percheron Stallions 20



Our 1909 importation of 20 Percheron stallions, from 1 to 5 years of age, are now in our stables. Up to over a ton in weight. Big, stylish, choke-full of flashy quality, and faultless movers. Prizewinners among them. The best lot ever imported to Canada. All are for sale on terms to suit.

HAMILTON & HAWTHORNE, Simcoe, Ontario.

Maher's Horse Exchange

16 to 28 Hayden Street TORONTO (Near cor. Yonge and Bloor)

AUCTION SALES of Horses, Carriages, Harness, etc., every MONDAY and THURSDAY at 11 a. m. PRIVATE SALES every day. We have always a large quantity of horses on hand for Auction or Private Sale. We have the biggest and best sale ring and stables in Canada. We hitch and try all horses for out-of-town buyers, and guarantee satisfaction. WE SELL STRICTLY ON COMMISSION.

P. MAHER, GEO. JACKSON, Proprietor, Auctioneer.



UNION STOCK-YARDS Horse Exchange

WEST TORONTO, CANADA.

The Greatest Wholesale and Retail Horse Commission Market.

Auction sales of Horses, Carriages, Harness, etc., every Monday and Wednesday. Horses and harness on hand for private sale every day. 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.)



T. H. HASSARD'S NEW IMPORTATION!

MY NEW IMPORTATION OF

Clydesdale Stallions and Fillies



are now in my stables at Markham, Ont., and, as usual, I have a big range for selection of a type, breeding and quality seldom equalled, never excelled, by any previous importation. Call and see them. Phone connection. T. H. HASSARD, Markham, Ont.

Imported Clydesdales We have a number of newly-imported stallions on hand in our stables in London, Ont., including some very large and heavy horses, several prizewinners. Another consignment, stallions and fillies, sailed Saturday, October 16th, from Glasgow. DALGETY BROS., LONDON, ONTARIO.

MY NEW IMPORTATION TO HAND. In my new importation of 4 Clydesdale Stallions and 6 Clydesdale Fillies, I have material that will stand comparison with anything ever imported. They have great size, beautiful mould, full of quality, right fashionably bred and perfect action. JOHN A. BOAG & SON, QUEENSVILLE, ONTARIO.

Imported Clydesdales My first importation for 1910 has just arrived. Stallions up to a ton in weight, from 1 to 5 years of age. Draft character and faultless underpinning are a predominant feature. Also a few big choice fillies 2 and 3 years of age. WM. COLQUHOUN, MITCHELL, ONT. Phone connection.

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. Bell 'Phone.

QUESTIONS AND ANSWERS. Veterinary.

POLYURIA.

Mare has been out of condition for a year. She has inordinate thirst, drinks large quantities of water, and voids large quantities of urine of a very clear color.

W. M. G.

Ans.—She has a disease of the kidneys called polyuria, or diabetes insipidus. Feed on food of first-class quality, and give her one dram iodine dissolved in a pint of warm water (not hot), three times daily, until her thirst becomes normal and her urine voided in normal quantities and quality.

V.

AILING BULL.

Bull had lump in his throat last spring, but it has almost disappeared. Occasionally a green fluid runs from his nostrils. His sheath and penis have been swollen for three months, and he cannot serve. There are ulcers on sheath and penis.

D. R.

Ans.—It would be well to have your local veterinarian attend to this bull. The condition may be serious, and probably contagious. I would advise dressing the ulcers, once daily, with butter of antimony one part, tincture of myrrh two parts. Apply with a feather. The application of hot poultices to the sheath, suspended by a wide bandage, will have a tendency to cause the swelling to subside. Inject the sheath, twice daily, with a warm solution of sulphate of zinc, three drams to a pint of water.

V.

ABORTION.

Four of my cows have aborted. I know of three of them having received injuries which might have caused the accident, but know of no cause for the fourth. Twelve other cows are, apparently, all right. One, due to calve at full term, and one calved at full term, about two months ago. I am white-washing the stable, and have sprayed the aborted cows with a solution of mercury bichloride, 1 to 1,000.

R. J. C.

Ans.—It is probable all the cases of abortion were accidental. I would advise the use of the bichloride solution on all pregnant cows, but would use it half the strength, viz., 1 to 2,000; heat it to 100 degrees Fahr. before using. If any discharge is taking place from the aborted cows, inject a little of the solution into the vagina, once daily, until it ceases. Give each aborted and pregnant cow a small teaspoonful of carbolic acid, mixed with a pint of water, and sprinkled on food, or as a drench, twice daily. It would also be wise to inject the bull's sheath, once daily, with the solution, for a few days. If any more abort, burn fetuses, afterbirths, etc., and continue the use of the solution and carbolic and do not breed the bull to any more cows for at least six months.

V.

MISCELLANEOUS.

1. I have an imported Clydesdale mare that I want to breed next spring. I have a choice of two stallions, one is a splendid horse, but his sire and the mare's sire are by the same sire. The other stallion is no relation to the mare, but is an inferior animal. Which sire would you advise me to breed my mare to?

2. Three-year-old colt, fed on 1 1/2 quarts each of bran and oat chop, and 1 quart shelled corn, three times daily, has semi-diarrrhea. I want to fit him for spring work. What would you advise?

3. Mare aborted twins at seven months. Her foal, seven months old, was still nursing. Do you suppose this caused abortion?

A. J. S.

Ans.—1. Breed to the good horse. The relationship is not sufficiently close to make it advisable to breed her to an inferior stallion rather than to him.

2. Feed one gallon of whole oats, three times daily, and add to his drinking water one-fifth of its bulk of lime water.

3. While it would have been wise to have weaned the colt at five or six months' old, especially when the dam was again pregnant, the fact that the foal was still nursing did not cause abortion, unless it was very rough, and hunted the mare severely when nursing. No doubt the mare received an injury of some kind.

V.

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A Safe, Speedy and Positive Cure for Curb, Splint, Sweeney, Capped Hook, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

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MOON BLINDNESS and all Diseases of the Eye successfully treated with this NEW REMEDY. Money Back if it fails to cure. \$2.00 per bottle postpaid on receipt of price. Visio Remedy Ass'n, Dept. C, 1033 Wabash Av., Chicago, Ill.

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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.

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CLYDES—2 four-year registered stallions, one imported. AYRSHIRES—3 very choice bull calves, all registered. All good colors, and from good milking dams. Prices right.

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Three years old; 15 1/2 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.

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High-class Imported Clydesdales! I have lately landed at my stables at Milverton, Ont., an exceptionally choice selection of Clydesdales—stallions and fillies. They are all prizewinners at the leading shows in Scotland. From one to five years of age. Full of quality and royally bred. Jno. Semple, Milverton, Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

PARALYSIS OF SOW.

Have a sow which has lost power of her hind quarters after weaning her litter, and seems to be paralyzed in the back. She eats well, but is not able to rise up. Has had it before farrowing. Advise treatment, as it is a high-priced animal.

Ans.—Purge her with a half-pint of raw linseed oil, in feed, or as a drench, and follow up with 20 grains of nux vomica, three times daily. This is the prescription of a V. S. This trouble is, in some cases, treated by a free use of spirits of turpentine on the loins, or of mustard, moistened and well rubbed in on the back. Both treatments may be used at the same time.

BRAN, FLOURY OR FREE FROM FLOUR?—MANITOBA OR ONTARIO?

1. Which is more valuable for feeding? First, for milking cows; secondly, for young cattle or pigs; very thin, clean bran, or that having a larger percentage of flour or middlings adhering to it? 2. Is bran from Manitoba or Ontario wheat more valuable to the dairyman?

Ans.—The sample of bran containing the larger percentage of floury material has a higher feeding value than that which contains a smaller proportion. In the case of dairy cows, the difference in value of the two kinds of bran would not be so noticeable as it would be in the case of fattening animals or pigs. The floury part contains less crude fibre than the other portion of the bran, and consequently, the sample of bran which contained the lower percentage of crude fibre would be most valuable for pigs, and also fattening animals.

Generally speaking, bran from spring wheat has a little higher feeding value than that from winter wheat. This being the case, we would expect bran from Manitoba wheat to be worth somewhat more than that from Ontario wheat. We must remember, however, that most of the bran manufactured in Ontario contains a considerable quantity of bran from Western wheat, so that the difference between Manitoba bran and Ontario bran is not very marked.

AN AFFECTION OF POULTRY—BLACK-HEAD.

1. A short time ago I killed a couple of hens that were, apparently, in the best of health, and quite fat. Upon opening them, I found in each a sort of lump about half the size of the gizzard, and almost as hard. These growths were not connected at all with the intestines, but were in the egg-producing part, and one of them seemed as though it might have been formed of the same material as an egg, only that it had become more solid and cheesy. What causes such growths to form? Does such a condition render the flesh unfit for food? 2. What is the cause of the yellow diarrhea in turkeys, or blackhead, I suppose it should be called? Are hens liable to contract the same disease?

Ans.—1. Would advise the sending of a live, but sick fowl, to Dr. Higgins, Biologist, Veterinary Department, Experimental Farm, Ottawa, for examination and report. The symptoms point to tuberculosis, or an unusual condition of the oviduct, and expert diagnosis is requisite to arrive at a correct determination. It is important that correct conclusions should be arrived at in this case, not only for the sake of the enquirer, but poultrykeepers throughout the country. I would not care to eat the flesh.

2. Blackhead may be prevented, but is seldom, or ever, cured. The diarrhea is caused by the action of bacteria on the internal organs. The organisms are present in the excreta of the birds, and their voidings contaminate the soil and spread the infection, which is infectious. Thorough disinfection of soil and premises is absolutely necessary if the germs are to be destroyed. All ailing birds should be rigidly weeded out as soon as they exhibit symptoms of the disease. It is well not to expose the hens to contamination. Put them on new ground, but first see that they are in sound health.



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and some females of all ages. Also a first-class Clydesdale stallion. J. W. Burt, Coningsby, Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

PERIODIC OPHTHALMIA.

Colt's eye got dull and sore last winter, and has been so at times ever since, sometimes appearing all right. Lately, a thin scum has formed over the eye, and the other eye is affected also. What treatment would you recommend.

T. S.

Ans.—Keep in a partially-darkened stall, excluded from sunlight and drafts. Bathe the eyes well, three times daily, with warm water, and, after bathing, put into the eyes a few drops of the following lotion: Sulphate of zinc, 10 grains; fluid extract of belladonna, 20 drops; distilled water, 2 ounces.

OPHTHALMIA.

I have a mare that had a milky scum come on her eye about a year ago. I used a mild wash, got from a vet., and it went away. It came back a couple of times in the summer, but went away, and now it is on again. I think the eye is getting smaller, and the sight looks dull.

- 1. Is she likely to go blind in the other eye?
2. Are other horses in same stable likely to take the same from her?
3. Is it infectious or contagious?
4. Is this what is called moon blindness?

W. D.

Ans.—1. This is a constitutional disease called periodic ophthalmia. The attacks cannot be prevented, and all that can be done is to treat them when affected. It is probable that, after a few attacks, cataracts will form, which will cause blindness. When affected, keep in a partially-darkened stall. Bathe eyes well, three times daily, with warm water, and, after bathing, put a few drops of following lotion into each eye: Sulphate of zinc, 15 grains; fluid extract of belladonna, 20 drops; distilled water, 2 ounces.

- 2. Not necessarily.
3. No.
4. Yes.

ALFALFA—PASTURE ON NEW LAND.

1. Is alfalfa good to pasture? It has never been grown around here; some people say it is not to be pastured. I sowed some last spring; it came up well. I intended to pasture it, but thought I had better find out before from others more experienced.

2. Would it do to sow in front of a bush where the most of the timber is taken off fresh? Would it have to be harrowed, or would it catch without? What time of the spring would it be best to sow it?

3. Would it be best sown alone, or with a mixture of seeds, and what mixture?

H. B.

Dufferin Co., Ont.
Ans.—1. Alfalfa may be pastured, but grazing is liable to injure the stand, often leading to its complete killing out. Grazing with sheep is worst, and late autumn pasturing is especially bad. Ruminants pastured on alfalfa alone, without access to grass, are in more or less danger from bloating, especially when the alfalfa is pastured with rain or dew on it. It is, perhaps, rather more liable to cause bloating than is clover.

2. This might do if the land were clean and well drained. We would certainly advise harrowing. On ordinary land, the seed is best covered pretty well. Some disk it in. Sow as soon as the land is in good condition to work, and before weed seeds get a start.

3. If you want hay, sow it alone, at the rate of 15 pounds of good seed per acre, on rich soil, in fine condition, or 20 pounds on ordinary soil. If it is a permanent pasture you want, we can recommend no seed mixture more likely to give good results than the one recommended by Prof. C. A. Zavitz, O. A. C., Guelph. It is orchard grass, 4 pounds; meadow fescue, 4 pounds; tall oat grass, 3 pounds; timothy, 2 pounds; meadow foxtail, 2 pounds; alfalfa, 5 pounds; alsike clover, 2 pounds; white clover, 2 pounds; making a total of 24 pounds of seed per acre. On new land, we think you might safely reduce this amount by a quarter, or perhaps a third.

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SHORTHORNS for Sale—I am offering for sale a number of females of various ages, and four first-class bulls. One two-year-old, one yearling and two bull calves. All good ones, and breeding as good as the best. Come and see me. HUGH THOMSON, Box 556, ST. MARY'S, ONT.

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Present offering: A few females of breeding age, also 1909 young stock, both sexes, at reasonable prices. L. A. Wakely, Bolton, Ont. Bolton Junction, on C. P. R., within one-half mile of farm.

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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.)—\$995.00; also Shorthorn females and Yorkshire cows. Brin shipping station, C. P. R.

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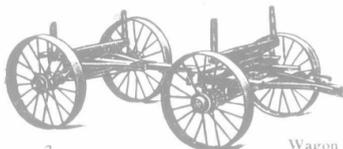
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Dominion Low, Wide-tire Steel Wheels are guaranteed not to break in coldest weather or on roughest roads. Strongest, lightest, cheapest. Pay for themselves first season. Last lifetime. Save roads and horses. Can be taken apart.

Our Low-wheel Handy Wagon makes loading twice as easy. Saves labor and time. Parts arranged for easiest draft. Great strength. Best material, finest workmanship. Wide tires don't sink into soft soil. Easy on horses. Guaranteed. Write to-day for free catalogue.

Dominion Wrought Iron Wheel Co., Limited, Orillia, Ontario.



RAW

TORONTO, 1815.

WALKERTON, 1895

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.

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.
F. W. EWING, SALEM P. O., ONT., ELORA STATION.

SALEM SHORTHORNS!

moderate prices. If you see them you will want to own them. I can show some of the best young things in the country.
ONT. ELORA STATION, G. T. R. and C. P. R.

Young bulls and heifers, sired by the great show and breeding bull, Jilt Victor (imp.) at **J. A. WATT, SALEM,** Long-distance Telephone.



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.**

GOSSIP.

The 200-acre farm in Wellington County, Ontario, only 2 1/2 miles from Elora, G. T. R. and C. P. R., and fifteen miles from the city of Guelph, advertised for sale in this paper, should attract the attention of parties looking for a good farm in a desirable district, where railway stations, school, post office, and mill, are near, and buildings are up-to-date, water supply ample and convenient, and a good orchard included.

WM. COLQUHOUN'S NEW IMPORTATION.

W. Colquhoun, of Mitchell, Ont., has no difficulty in selling the class of Clydesdales he brings over. His fall importation was all sold some time ago, and he has just landed with a new lot, which have only to be seen to be appreciated; great big horses, standing on strong, flat bone, well-sprung ankles, and big, wide feet, is what this country wants, and Mr. Colquhoun has them. Three stallions and two fillies composed this lot. Viscount Adniston [10439] is a bay, rising five, by the great sire, Sir Hugo, by Sir Everard, dam Rosie of Ronachan [20879]. This horse is a tonner, and a right good kind. Arnprior [10437] is also rising five, brown, by Baronson, the sire of champions, by Baron's Pride, dam Queen of Arnprior [6256], by the Cawdor Cup champion, Royal Gartley. This horse is exceptionally well bred, up to a ton in weight, and stands on a faultless bottom. Bianca Pride [10438], bay, rising five, by the Glasgow Premium horse, Casabianca, by Baron's Pride, dam Muriel [19355], is another big, smooth horse, of ideal character and grand underpinning. The fillies are Bright Maid [20814], bay, rising three, by Gilt Edge, by Hiawatha, and Maggie Mitchell [20813], bay, four years, by Baron Mitchell, a right nice pair, with size, character and quality.

BOOK REVIEW.

MANAGING AND FEEDING CATTLE.

Prof. Thos Shaw, in conversation with one of the editors of "The Farmer's Advocate" at the Minnesota Experiment Station some years ago, remarked that one of his chief desires as an agricultural investigator and teacher was to leave on record, in permanent form, something of the stores of information which he was constantly accumulating. America has had no more indefatigable collector and classifier of knowledge bearing on the practical side of farming and live-stock husbandry than Prof. Shaw, and the list of books now standing to his credit shows how tenaciously he has adhered to his life purpose. In fact, he has created almost a library, including such volumes as "Soiling Crops and the Silo," "The Study of Breeds," "Animal Breeding," "Grasses, and How to Grow Them," "Farm Weeds," "Feeding Farm Animals," and to these he has lately added another, published by the Orange Judd Co., "The Management and Feeding of Cattle," which covers the subject, as it relates both to beef and dairy cattle, from birth, until they have fulfilled their mission in life. It is free from scientific technicalities, but comprehensive, covering some 460 pages, including a 22-page table of contents. It embraces stabling, minor operations, insects affecting cattle, and the treatment of the more common ailments. It will be noted that he puts the cost of keeping a cow at from \$25 to \$30 per year, and is most emphatic, that, in order to profit, the farmer who grows meat from birth onward, on an arable farm, must obtain it from the dual-purpose cow. Comparing a year's accounts of the cow that rears a calf by suckling, and the hand-milked cow, he gives the latter a net cash return of \$31 more than the former. The value of pasteurized whey as a calf food, as demonstrated in Canada, seems to have escaped Prof. Shaw's notice, but more than once he puts corn silage as without a rival as a succulent cattle food, and one that has not yet received its full share of appreciation. In Canada, a simpler style of cattle manger is now greatly in favor than those illustrated in this book, which, however, is to be commended for its detail, and the fairness with which both sides of debatable practices are presented. Copies may be ordered through this office at \$2.

I Cured My Rupture

I Will Show You How To Cure Yours FREE!

I was helpless and bed-ridden for years from a double rupture. No truss could hold. Doctors said I would die if not operated on. I fooled them all and cured myself by a simple discovery. I will send the cure free by mail if you write for it. It cured me and has since cured thousands. It will cure you.

Fill out the coupon below and mail it to me today.

Free Rupture-Cure Coupon

CAPT. W. A. COLLINGS,
Box 30, Watertown, N. Y.

Dear Sir:—Please send me free of all cost your New Discovery for the Cure of Rupture.

Name.....

Address.....

ELECTRIC BEANS

ARE A BRACING

BLOOD & NERVE TONIC.

They are unequalled for Biliousness, Sick Headache, Constipation, Heart Palpitation, Indigestion, Anemia. Write for sample and booklet of testimonials. 50c a box at all dealers, or The Electric Bean Chemical Co. Limited, Ottawa

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.) = 50842 = (98065) 2967/66 A. H. B.; *Gloster King* = 68795 = 283804 A. H. B. Young stock for sale. Long-distance phone in house.

Shorthorn Cattle

Would price my stock bull, Star Prince = 53900. Red. It would pay anyone 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-1899

Shorthorn bulls and heifers of extra quality and breeding, and from best milking strains.

Leicesters of first quality for sale. Can furnish show flocks.

A. W. SMITH, Maple Lodge P. O., Ontario.
Lucan Crossing Sta., G. T. R., one mile.

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 station, also Waldemar station.

More Strength

The World To-day Calls for Men of Strength, Men of Action.



Why do you drag along listlessly from day to day and week to week, brooding over the loss of your former strength and vigor? Get it back. You can do it. No man is so run down that he can't be built up. You can recover your old-time vim and courage.

There's strength in Electricity for such as you. It is a builder, an invigorator, a strength-giver. Its glowing energy fills your nerves and veins with the spirit of youth. Your over-worked organs respond immediately with new life and energy. It fills you with ambition, animation, and happiness.

That's the way you were intended to be, the way you ought to be, and the way you can be. Make your body into a storage battery by filling it every night with the gentle current from the DR. SANDEN ELECTRIC HERCULEX, and the results will surprise you. The world will look rosy to you, and you'll have the strength and courage to tackle any task.

Send for the DR. SANDEN ELECTRIC HERCULEX, and the results will surprise you. The world will look rosy to you, and you'll have the strength and courage to tackle any task.

FREE UNTIL CURED

Call or write to me and I will at once arrange to let you have the Belt on trial, not to be paid for until cured. No deposit or advance payment. Send it back if it doesn't do the work. Liberal discount for cash, if you prefer to deal that way.

Electric Suspensory or other attachment free, and guaranteed for one year.

It is a quick and lasting cure for Weakness of any Organ of the body, for Nervousness, Rheumatism, Pains in the Back and Hips, Lumbago, Indigestion, Constipation, Kidney trouble, Loss of Memory, Poor Circulation, and all evidences of breakdown. It cures where everything else has failed.

SEND FOR MY FREE BOOK

If you cannot call at my office personally, write for my book. It is full of things every man ought to know, and gives full particulars. Sent free, sealed, by mail, in plain envelope. Write to-day.

DR. A. F. SANDEN, 140 Yonge Street Toronto, Ont.

Entrance: 6 Temperance Street.

OFFICE HOURS: 9 to 6, SATURDAYS UNTIL 9 P.M.

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 ¼ mile from Burlington Jct. Sta., G. T. R. J. F. Mitchell, Burlington, Ont.

SHORTHORN BULLS

We are offering 15 choice young of serviceable age. Among them are high-class herd-heads. 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.

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

GOSSIP.

A BIG TRADE IN CLYDESDALES.
Smith & Richardson, Columbus, Ont., report the demand for Clydesdales for breeding purposes as exceedingly active, and sales as the best in their many years' experience. This is certainly most satisfactory, and a strong guarantee to intending purchasers, that the quality of the horses they handle are the kind the country and people want, as well as speaking volumes for the straightforward way in which they do business. They have still for sale a number of imported and Canadian-bred stallions, and Canadian-bred fillies. Among the imported stallions are such big, good ones as Royal Gretna, the bay four-year-old son of Royal Citizen; this horse was champion at the late Ottawa Show. Baron Russell is another rising five, by the Cawdor Cup champion, Baronson. Pride of Newmills, another rising five, is a son of the Glasgow Premium horse, Casabianca. These are all horses up to a ton in weight, on ideal underpinning. In three-year-olds, there are such right good ones as Captain Vasey, by the great Silver Cup; Dunure Acknowledgment, by the renowned sire and H. & A. S. winner, Baron of Buchlyvie; Look Again, by the great show horse, Durbar. This colt is well named, for he certainly draws the second look at his beautiful form and flashy quality. Then, there are a number of two-year-olds, by such great sires as Baron O'Dell, Baron of Buchlyvie, Baron's Pride, etc.

WAVERLY CLYDESDALES AND HACKNEYS.

Hon. Robert Beith, of Bowmanville, Ont., has lately landed an importation of an exceptionally-choice lot of Clydesdale and Hackney stallions and fillies. The Clydesdales are, one stallion and five fillies, and the Hackneys, one stallion and several fillies. Nothing need be said of the quality of Mr. Beith's importations, a gentleman with a world-wide reputation as a judge, and whose former importations have won premier honors in every show-ring of note in America. This lot are among his very best selections, both in the light and heavy breeds. The Clydesdale stallion is Favorite Ruby [10183], a brown two-year-old, by the noted Baron Ruby, by Baron's Pride, dam by Royal Favorite; he is a colt of quality and character most marked, and will reach the ton in weight. The fillies are four yearlings and one two-year-old, the latter, Baroness Insch, by Casabianca, is a show filly of a high order, a flashy quality kind, and the man that gets her will have one of the best in the country. The yearlings are an exceptionally big, smooth lot, a show proposition, every one, and bred on gilt-edged lines, from such great sires as Baron's Best and Flora's Favorite. One of the best is Lady Harvey, by Baron's Best. This is a filly of superb quality, that will certainly win championship honors at no very future date. The Hackney stallion is Filgrave Royal John 531, a chestnut, rising four, by Waldon Squire, dam by His Majesty. This horse will show them all the paces next fall; his all-round action and breezy appearance is the kind that makes the sensational show horse. Individual mention of the thirty or more head of Hackneys now in the Waverly stables would require more space than is at our disposal; the several splendidly-matched pairs; the wonderfully sensational-acting and beautifully-moulded singles, whose breezy appearance and sleek satin coats, win words of admiration on all sides; that great gelding, Yapham Fashion, winner of 54 first prizes, 36 second prizes, and three champion silver cups, at the leading English shows, beating the Olympia and London Hackney Show winners, recognized as the greatest and most sensational harness horse that England has ever seen. This is the kind of horses that make up the great Waverly stud of Senator Robt. Beith, of Bowmanville, at the present time, and it must be remembered that none of these horses are kept here to look at, all are for sale, including high-class Hackney fillies and geldings, singles and doubles, thoroughly broken; ponies for the little folks; also the great show stallion, Cedar Go Bang, chestnut, six years, by Garton Duke of Connaught. Prices are right.

Had Weak Back.

Would Often Lie in Bed For Days, Scarcely Able To Turn Herself.

Mrs. Arch. Schnare, Black Point, N.B., writes:—"For years I was troubled with weak back. Oftentimes I have lain in bed for days, being scarcely able to turn myself, and I have also been a great sufferer while trying to perform my household duties. I had doctors attending me without avail and tried liniments and plasters, but nothing seemed to do me any good. I was about to give up in despair when my husband induced me to try Doan's Kidney Pills, and after using two boxes I am now well and able to do my work. I am positive Doan's Kidney Pills are all that you claim for them, and I would advise all kidney sufferers to give them a fair trial."

DOAN'S KIDNEY PILLS are a purely vegetable medicine, realizing quick, permanent relief, without any after ill effects. A medicine that will absolutely cure Backache and all forms of Kidney and Bladder Disease.

Price, 50 cents per box, or 3 for \$1.25, at all dealers or The T. Milburn Co., Limited, Toronto, Ont. In ordering specify "Doan's."

Maple Grange Shorthorns

An offering of 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. R. J. DOYLE, Owen Sound, Ont. Phone connection.

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.

BRAMPTON JERSEYS

Canada's greatest Jersey herd offers male or female stock; imported or home-bred; show type or producers; one or a carload. 150 for sale. Phone. B. H. BULL & SON, BRAMPTON, ONT.

W. S. Gilbert was lunching once at a country hotel, when he found himself in company with three cycling clergymen, by whom he was drawn into conversation. When they discovered who he was, one of the party asked Mr. Gilbert how he felt "in such a grave and reverend company." "I feel," said Mr. Gilbert, "like a lion in a den of Daniels."

HE FOUND THEM THE BEST OF ALL

What Rufus Harris Says of Dodd's Kidney Pills

After Trying Five Doctors for His Kidney Disease He Found Relief in the Great Canadian Kidney Remedy.

Hurdville, Ont., Feb. 14.—(Special.)—"After trying five doctors for Kidney Trouble, from which I had suffered for three years, I find that Dodd's Kidney Pills relieve me best of all. If I keep on feeling as I have since I began taking Dodd's Kidney Pills, I shall be well pleased, and I am hoping they will cure me."

So says Rufus Harris, well known in this village. "I had stiffness in the joints," he continues, "cramps in the muscles, backache, and was heavy and sleepy after meals. I was depressed and low spirited, perspired freely, was often dizzy, and always thirsty, but since taking Dodd's Kidney Pills I am feeling very good."

If you have any of the symptoms Mr. Harris tells of, it is time for you to beware. They are the symptoms of Kidney Disease, and may be forerunners of Rheumatism, Dropsy, Lumbago, Heart Disease, or even the dread Bright's Disease itself. Take warning, and guard against suffering or even death itself, by putting the Kidneys in good-working order with Dodd's Kidney Pills.

OFFER TO WEAK MEN!



I make this offer to weak men, particularly those men who have spent their earnings for years on dope (the drugs that make them feel like a young colt one day and like an old, broken-down hack the day after), those men who have tried so many things, that they are tired of fooling and want a cure. These are the men I appeal to, and to any man who will give me reasonable security I am willing to give my

Electric Belt on Trial Until You Are Cured.

I claim that I can cure weak men; that I can pump new life into worn-out bodies; that I can cure your pains and aches, limber up your joints and make you feel as frisky and vigorous as you ever did in your life. That's claiming a good deal, but I have got a good remedy, and know it well enough to take all the risk if you will pay me when you are cured.

No man can lose on this. If the cure is worth the price you don't have to pay for it until you get it. When you are ready to say you are a big, husky and frisky specimen of vigorous manhood; that you haven't got an ache or pain in your whole body, and that you feel better than you ever did in your life, I get paid. If you can't say it after using my Belt for three months, then give me back my old Belt and I won't ask a cent.

A short time ago I took a case that I couldn't cure, and I didn't see why, as I had cured hundreds like it. Anyway, my patient returned the Belt and said I hadn't done him any good. He said he thought I had treated him honestly and wanted to pay me the cost of the Belt, because it could not be used again. I refused, and told him that I had made a contract to cure him or get nothing, and I wouldn't take a dollar I hadn't earned.

Take my Electric Belt for what it will do for you. Wear it when you sleep at night, or while you are resting after your work. You will find it a vitalizer, a tonic to your nerves, a rejuvenator of waning vitality. Use it for any ailment which drugs have failed to cure, and you will never cease praising it.

I've cured lots of men who have paid over a thousand dollars to doctors before they came to me.

This is the Way They Feel

The men who had given up hope, who thought there was no cure for them, until they came upon Dr. McLaughlin's Electric Belt. Now they are full of life and overflowing with joyous spirits. Pains are gone, weakness has gone, and full vigor is in every action.

Do you want to feel like that? Then wear the grand life-giving appliance for two months at night. It will charge every nerve with electric life, and you will feel rejuvenated and invigorated. It puts steam into your run-down body, drives away pain, and renews youth.

Tell me where you are and I'll give you the name of a man in your town that I've cured. I've got cures in every town.

That's enough. You need the cure. I've got it. You want it. I'll give it to you or you need not pay me a cent. Come and get it now. The pleasurable moments of this life are too few, so don't throw any away. While there is a chance to be husky and strong, to throw out your chest and look at yourself in the glass and say, "I'm a man," do it, and don't waste time thinking about it.

FREE BOOK: I've got a beautiful book, full of good, honest talk about how men are made big and noble, and I'll send it to you free, sealed, if you send this coupon. Call for consultation free. Office hours, 9 a.m. to 6 p.m.; Wed. and Sat. to 9 p.m. Write plainly.

Get Some Life Into You

What's the use of dragging your legs about like a wooden man? Feel like a man of spirit. Away with the pains and aches; off with this wretched feeling as if you were seventy years old and had one foot in the grave. Come and let me put life into your nerves; let me give you a new supply of youthful energy. Let me make you feel like throwing your chest out and your head up, and saying to yourself, "I'M A MAN!" Let me give you back that old feeling of youthful fire, vim and courage. I can do it so that in two months you will wonder that you ever felt so slow and poky as you do now. Act to-day. Life is sweet, so enjoy every minute.

Dr. McLaughlin:

Dear Sir,—You will, no doubt, be wondering why you have not heard from me, but I wanted to give your Belt a thorough test before I gave my testimonial, and now I can safely say that your Belt has made a well man of me. I never feel any of the effects of Rheumatism, and I am as strong and well as ever. You can make this as strong as you wish, and use my name to it, for your Belt is certainly worth more praise than I know how to give it. RONALD LEITCH, Osprings, Ont.

Dear Sir,—I take great pleasure in recommending your Belt to anyone suffering from Nerve Trouble or Loss of Sleep from causes so frequent to men. D. ANGEISH, Lambeth, Ont.

Dear Sir,—I am pleased to say that I have not felt any return of my ailments, and have not felt better for years than I have done this summer, for which I thank you and your Electric Belt. ROBT. COMBE, St. Catharines, Ont.

Dear Sir,—Some time ago I purchased one of your best Belts for a weak back. My back was also sore, but your Belt cured me completely, and I am very pleased to recommend it to anyone suffering from weak or lame back. ROBERT MOTT, Bath, Ont.

Put your name on this coupon and send it in.

DR. M. S. McLAUGHLIN,
112 Yonge St., Toronto, Can.

Send me your Free Book, closely sealed, and oblige.

NAME.....
ADDRESS.....

The "STAY THERE"
Aluminum Ear Markers
are the best. Being made of aluminum they are brighter, lighter, stronger and more durable than any other. Fit any part of the ear. Nothing to catch on feed trough or other obstacle. Your name, address and any series of numbers on each tag. Sample tag, catalogue and prices mailed free. Ask for them. Address: WILCOX & HARVEY MFG. CO., Dept. D., 325 Dearborn St., Chicago, Ill.

CRAIGIE LEE 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 show-ring form.

H. C. HAMILL, Box Grove P.O. Markham, G. T. R. Locust Hill, C. P. R. Bell phone connection from Markham.

SPRINGBROOK Ayrshires are large producers of milk, testing high in butter-fat. Young stock for sale. Orders booked for calves of 1909, male and female. Prices right. Write or call on W. F. STEPHEN, Box 163, Huntingdon, Que.

HILLCREST AYRSHIRES. Bred for production and large teats. Record of Performance work a specialty. Fifty head to select from. Prices right. FRANK HARRIS, Mount Elgin, 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, Cambellford St., Menie P. O. Ont.

CALVES Raise Them Without Milk. Booklet free. The Steel, Briggs Seed Co., Toronto, Ont.

TRADE TOPIC.

RENNIE'S SEED ANNUAL.—A handsome catalogue, giving full descriptions of the best seeds that can be grown, as proved by the yearly increasing sales throughout the Dominion, neatly bound in lithographed covers, with bright colors, illustrated by 250 engravings devoted to vegetables, flowers, field roots, grains, etc., showing good crops of some special varieties taken from nature. In the great Northwest, the short-season varieties bring good results to every one that plants them. No seed-buyer can afford to be without the Rennie Seed Annual, referred to in their advertisement in this paper, which tells you just what to plant in your garden for 1910. Write for it to-day.

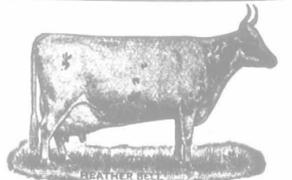
GOSSIP.

R. T. Brownlee, Hemmingford, Que., makes a change in his advertisement of Clydesdales and Shorthorns, in which he offers for sale two four-year-old registered stallions, one imported, also three very choice bull calves, all registered, all good colors, and from good milking dams. See the advertisement, and write or visit Mr. Brownlee if needing anything in his line.

Burnside Ayrshires

Having disposed of my 1909 importation, I intend leaving about March 1st for another lot. I expect to have a number of bulls through quarantine by first week of June. Orders entrusted to me will be carefully attended. We have a few young bulls fit for service on hand of choice breeding, and females of all ages. Phone, etc.

R. R. Ness, Burnside Stock Farm, Howick, Que.



AYRSHIRES AND YORKSHIRES

Can fill orders for car lots of Ayrshires, or for good grade dairy cows. Young bulls, cows, heifers or calves of choice breeding. Orders taken for imported stock for 1910. A few young Yorkshires. Write us for anything you need in above lines.

Long-distance Phone ALEX. HUME & CO., MENIE, ONT.

Stonehouse Ayrshires

all ages. Am now booking orders for bull calves.

Hector Gordon, Howick, Quebec.

ISALEIGH GRANGE AYRSHIRES!

Our herd were all selected on their ability to produce a heavy yield of milk. We have a number of 40, 45 and 50 lb. cows, imported and Canadian-bred. From them are young bulls and heifers for sale. None better. JAMES BODEN, DANVILLE, QUEBEC. ISALEIGH GRANGE FARM.

Shannon Bank Ayrshires and Yorkshires. Am now offering young bulls and heifers, true to type and high in quality. Young Yorkshires of both sexes.

W. H. Tran & Son, Locust Hill P. O. & Sta., Ont.

Ayrshires—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.

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. 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 price is 25¢ per bottle. 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,
78 Church St., Toronto, Ontario

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,
Farm Phone
Bell 2471, Hamilton, R.F.D. No. 2, Millgrove, Ont.

WOODBINE STOCK FARM

Offer a number of Holstein cows, heifers and young bulls at moderate prices, sired by Sir Creamelle, whose breeding combines the blood of DeKol Creamelle, world's champion milk cow, with that of Duchess Ormsby, highest-testing family of the breed. Write for anything you want. Telephone connection.

A. KENNEDY, Ayr, Ont.

Imperial Holsteins!

For sale: Bull calves sired by Tidy Abbe Kirk Mercedes Posch, whose seven nearest dams have records within a fraction of 27 pounds, out of show cows with high official records. A most desirable lot of coming herd-headers. **W. H. SIMMONS,** New Durham P. O., Ont., Oxford County.

Glenwood Stock Farm—Holsteins and Yorkshires

Holsteins all sold out. Have a few young Yorkshire cows 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 months 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.

EVERGREEN STOCK FARM offers choice young Holstein Bulls, from 10 to 11 months, sired by Sir Mercena Favorite, whose dam and gr. dam averaged 80 lbs. milk per day, and 24.60 lbs. butter per week. Their dams also in A. R. Also choice females for sale. **F. E. Pettit, Burgessville, Ont.**

The college professor who was always ready for a joke, was asked by a student one day if he would like a good recipe for catching rabbits. "Why, yes," replied the professor. "What is it?" "Well," said the student, "you crouch down behind a thick stone wall, and make a noise like a turnip." "That may be," said the professor with a twinkle in his eye, "but a better way than that would be for you to go and sit quietly in a bed of cabbage heads and look natural."

Quaker Oats

is the world's food

Eaten in every country; eaten by infants, athletes, young and old.

Recognized as the great strength builder.

Delicious and economical.

QUESTIONS AND ANSWERS. Miscellaneous.

WILD OATS—TO BRING COW IN SEASON.

1. Have some Manitoba oats which I intended to use for seed, but find there is a lot of wild oats in them. Our soil is a heavy clay loam, and there are no wild oats in this neighborhood. If these oats are sown, will the wild oats turn out to be a bad weed?

2. What can be done to get a cow to come in season? Four years old, and was fresh last November.

CONSTANT READER.

Ans.—1. About as well bring small-pox into your home as to think of sowing these oats.

2. Nothing much, except to turn her out on grass when it comes. Letting her down in condition, and then flushing her up, may help. Forced service is sometimes recommended for such cases, but it is a questionable expedient.

CHOICE OF HOLSTEIN FAMILIES.

From which of the following families would you advise me to select stock, Pietertje, Posch, Calamity, or De Kol? That is, which has the best milking record, and where could I purchase?

R. E. G.

Ans.—This query does not admit of an answer in the way desired, as a little consideration will show, but it raises some interesting thoughts. Pietertje 2nd has been dead some fifteen or eighteen years, and her daughters and sons are also gone, but even they would not have over, as is generally said, 50 per cent. of her blood. There are a great many that can trace to her, but we could hardly consider any of them closer than "42nd cousins," to use an old saying. These would belong as much to other families as to the Pietertje. The blood of Pietertje was very prepotent, and is highly esteemed by well-informed breeders of Holsteins. De Kol 2nd has been dead some years, though she lived until 21 years old, and she produced sons and daughters, and they begot or produced many others. Her descendants are almost as the "sands of the sea," but those animals sometimes called De Kols have many other strains of blood. Her blood has been also very prepotent, and she is warmly remembered by all Holstein breeders. The name Posch would refer to either Aaltje Posch 4th, the oldest, or to her daughter, Alta Posch. The latter came into prominence, as she made the world record for a two-year-old, which still stands for record under three years. She met with an accident at five years; another cow stepped on her udder, and she did not breed any more. She left three sons, which have many descendants. One was used two years in Canada, two years in New York, also in Wisconsin, and ended up in Washington Territory, which serves to show how the breeds are scattered. Aaltje Posch 4th, her dam, lived to a good age, 19 years, we believe, and had many sons and daughters. It is doubtful if any are now living, but there are many descendants. Calamity Jane came on the scene at a later date than any of these. She is the only one still living (now 20 years old). She has had several sons and daughters that have in turn left many descendants that are holding up the fame of the name, but there are only two or three of her daughters living now. They are in hands that do not leave any chance that they could be purchased. One of these daughters gave, less than a year ago, 106 pounds milk in 24 hours; 5,250 pounds milk in 60 days. It will be seen, it would not be possible to get any animal containing more than a percentage of the blood of any of these great cows. The easiest way out, if our inquirer cannot decide, is to buy animals containing the blood of all of these, and it is a fact that there are animals living that can trace to all four, and a great many can trace to two or three of them.

GEO. RICE.

Chum (at college)—"Shaver, what are you going to write your thesis on?"
Shaver—"The Erudition of Whistlers."
—O. A. C. Review



A BOON TO FARMERS

—a fence that won't break, and a post that won't rot.

Standard Woven Wire Fence

is heavy steel wire, well galvanized, and locked with the "Tie That Binds"—our exclusive invention, which being an oval loop allows a long bend in the running wires.

STANDARD STEEL FENCE POST is No. 12 gauge steel, bent at right angle, and punched so that the fence is held secure without staples. Lots of fence facts in our book that you ought to know. Write for free copy and sample lock.

The Standard Wire Fence Co. of Woodstock Limited, Woodstock, Ont. and Brandon, Man. 15

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.

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.**

For Sale—7 Holstein bulls; Tamworth pigs from 2 to 6 months old. White Wyandotte cockerels and Buff Orpington hens. **BERTRAM BOSKIN, The Gully P.O., Ont.**
Phone connection via Cobourg.

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 20.34 lbs. butter at 23 months. We also offer some fine young Yorkshire pigs of choice breeding. **ARTHUR C. HARDY, BROCKVILLE, ONTARIO**

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 100 days. Also for sale daughters of De Kol's 2nd Mutual Paul, sire of Maid Mutual De Kol, which gave over 81 lbs. butter in 7 days, also granddaughters of Hengerveld De Kol. Other leading breeds represented. Putnam station, near Ingersoll.

H. E. GEORGE, CRAMPTON, ONTARIO.

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 13.95 lbs. butter in 7 days at two years. Price, \$150.00.

E. H. Dollar, Heuvelton, N. Y.
NEAR PRESCOTT.

Lakeview Holsteins Herd headed by Count Hengerveld Fayne De Kol, son of 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. near Hamilton Radial close to farm. Visitors met by appointment. **E. F. OSLER, BRONTE, ONTARIO.**

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 Abbe Kirk Mercedes. Write for particulars.

M. L. & M. H. Haley, Springford, Ont.

Lawncrest Holsteins

or come and see us. Good railway connection. Long-distance phone.

F. R. MALLORY, FRANKFORD, ONT.

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.

CENTRE AND HILLVIEW

Holsteins 140 head, 45 females in R. O. M. Herd headed by Brookbank Butter Baron, Bonheur Statesman and Sir Saddle Cornucopia Clothilde. The average of dam, sire's dam and grandam is: milk in 7 days, 66.85 lbs.; butter in 7 days, 30.58 lbs. We have bulls born Mar., '09, to two weeks old for sale, from Record-of-Merit dams. Long-distance telephone. **P. D. Ede, Oxford Centre, Ont. Woodstock Sts.**

High-class Holsteins—Head of herd, Pietje Korndyke Lad. Two nearest dams average 26.09 lbs. butter in 7 days. His sire's dam, Pietertje 22nd, has a record of 31.62 lbs. butter in 7 days. Present offering: 2 heifers, due to calve in April, at a bargain before Dec. 1 to make room; also 2 bull calves by Manor Johanna DeKol, out of officially-tested cows.

WM. C. STEVENS, PHILLIPPSVILLE, ONT.

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.

F. R. MALLORY, FRANKFORD, ONT.

MUSKRAT

ALL KINDS RAW FURS, CALFSKINS, HIDES, ETC. HIGH PRICES. Write for our com. **E. T. CARTER & CO.** We pay all express and freight charges. Prompt returns in cash. 84 Front St., E., Toronto, Ont.

"Bronchitis."

THE SYMPTOMS ARE

Tightness across the Chest, Sharp Pains and a Difficulty in Breathing, a Secretion of Thick Phlegm, at first white, but later of a greenish or yellowish color coming from the bronchial tubes when coughing, especially the first thing in the morning.

Bronchitis is generally the result of a cold caused by exposure to wet and inclement weather and when neglected will become chronic.

Chronic Bronchitis is one of the most general causes of Consumption. Cure the first symptoms of Bronchitis by the use of Dr. Wood's Norway Pine Syrup

Miss Martha Bourget, Little Pabos, Que., writes: "Last spring I was very poorly, had a bad cough, sick headache, could not sleep, and was tired all the time. I consulted two doctors, and both told me I had bronchitis, and advised me to give up teaching. I tried almost everything but none of the medicines gave me any relief. One of my friends advised me to try Dr. Wood's Norway Pine Syrup. I had scarcely taken the first bottle when I began to get better and when I had taken the fourth bottle I felt as well as ever, my cough had left me and I could sleep well."

Dr. Wood's is the original Pine Syrup. It is put up in a yellow wrapper, three pine trees the trade mark, and the price 25 cents. There are many imitations of "Dr. Wood's" so be sure you receive the genuine when you ask for it.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

FARNHAM OXFORD DOWNS.

The Champion Flock, The Oldest 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.

To Our Many Customers:

Kindly allow us most heartily to thank you for the many nice statements made regarding Shropshires sent to your orders. We fully appreciate your frank kindness in telling us of your satisfaction.

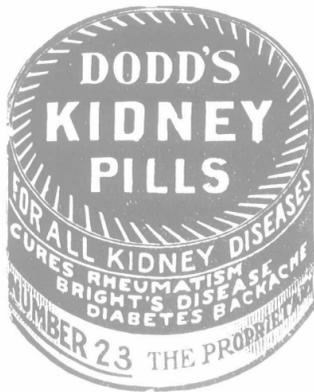
J. & D. J. Campbell, Fairview Farm, Woodville, Ont.

Shropshires, Shires and Clydesdales—High class Shropshires, shearing rams and ewes, ram lambs and ewe lambs, from imported and Canadian-bred stock, show stuff; Shire and Clydesdale fillies; White Wyandotte cockerels and pullets. Prices right. W. D. Monkman, Bond Head P. O., Bradford or Beeton Stations.

POPLAR LODGE SOUTHDOWNS AND BERKSHIRES—For sale: A high-class show flock of Southdowns, also shearing rams and ewes, and ram and ewe lambs. Berkshires of both sexes and all ages; right good ones. An honest representation is my motto. SIMEON LEMON, Kettleby P. O., Ont., Aurora Station.

Oxford Down Sheep, Shorthorn Cattle, Hogs—Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Buena Vista Farm, Harriston, Ont.

"The trip had its discomforts," said Noah, as the ark settled on Mount Ararat. "Yes," replied his wife. "But it is a comfort to land without being troubled by the customs inspectors."—Washington Star.



GOSSIP.

The "Stay There" aluminum ear markers for cattle, sheep and hogs are advertised in this paper by the Wilcox & Harvey Mfg. Co., of Chicago. These markers are cheap, and are a great convenience in the identification of stock, and for keeping records of age and breeding.

As advertised in this issue, Neil Smith, Brampton, Ont., who is giving up farming, will hold a clearing sale of his stock, including the grandly-bred imported Clydesdale stallion, Baron Hiawatha, a brown horse, coming five in May, sired by the champion Hiawatha, by Prince Robert, by Prince of Wales (673), dam by the great Baron's Pride. Also a high-class three-year-old home-bred stallion colt, and a Thoroughbred stallion, a good type of running horse. Brampton is 20 miles west of Toronto, on G. T. R. and C. P. R., and morning trains will be met by conveyances to the farm 1 1/2 miles distant.

NEW RULES OF ENTRY FOR SWINE.

Following are the rules of entry adopted at the annual meeting of the Dominion Swine-breeders' Association, held in Toronto on February 3rd, specifying the conditions entitling animals of the several breeds to registration in the Dominion Swine-breeders' Record:

Article 15—Rules of Entry.

1. The following animals may be admitted to registry:

Berkshires:

(a) Animals the sires and dams of which are recorded in the Dominion Swine-breeders' Record.

(b) Animals recorded in the British Berkshire Herdbook.

(c) Animals recorded in the American Berkshire Record, in which case all ancestors back to and including ancestors imported from Great Britain must be recorded.

Yorkshires:

(a) Animals the sires and dams of which are recorded in the Dominion Swine-breeders' Record.

(b) Animals recorded in the Large White section of the English National Pig-breeders' Association Herdbook.

(c) Animals recorded in the American Yorkshire Record, in which case all ancestors back to and including ancestors imported from Great Britain must be recorded.

Tamworths:

(a) Animals the sires and dams of which are recorded in the Dominion Swine-breeders' Record.

(b) Animals recorded in the Tamworth section of the English National Pig-breeders' Association Herdbook.

(c) Animals recorded in the American Tamworth Swine Record, in which case all ancestors back to and including ancestors imported from Great Britain must be recorded.

Essex:

(a) Animals the sires and dams of which are recorded in the Dominion Swine-breeders' Record.

(b) Animals imported from Great Britain, bred by reputable breeders.

(c) Animals recorded in the American Essex Swine Record.

Poland-China:

(a) Animals the sires and dams of which are recorded in the Dominion Swine-breeders' Record.

(b) Animals recorded in the American Records, certified by the Secretary of Agriculture of the United States.

Chester White:

(a) Animals the sires and dams of which are recorded in the Dominion Swine-breeders' Record.

(b) Animals recorded in the American Records, certified by the Secretary of Agriculture of the United States.

Duroc-Jersey:

(a) Animals the sires and dams of which are recorded in the Dominion Swine-breeders' Record.

(b) Animals recorded in American Records, certified by the Secretary of Agriculture of the United States.

Hampshire:

(a) Animals the sires and dams of which are recorded in the Dominion Swine-breeders' Record.

(b) Animals recorded in American Records, certified by the Secretary of Agriculture of the United States.

The Seventh Annual Sale OF BELMONT

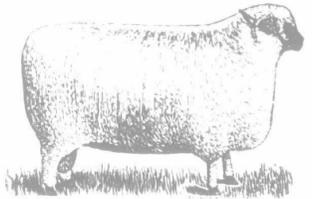
SHROPSHIRES

WILL OCCUR

Wednesday, February 23rd,

AT THE BELMONT STOCK FARM, Four Miles West of the City of Brantford, Ontario.

The offering will consist of 100 bred ewes from one to five years old, a number of which are imported from Scotland and England, and all are bred to imported sires of excellent quality.



20 beautiful ewe lambs and 20 ram lambs. These sheep are a very superior lot, and in pink of breeding condition.

The entire lot will be sold to the highest bidder, without the slightest reserve.

Terms: 8 months' credit will be given on approved security.

Conveyances will leave the Kerby House, Belmont, and New American on day of sale for the farm at 11 a. m. Sale at 2 p. m.

AUCTIONEER: WELBY ALMAS.

HANMER & HODGSON, Props., BRANTFORD, ONTARIO.

I HAVE GREAT, THICK, ROBUST SHROPSHIRE

YEARLING AND TWO-YEAR-OLD RAMS

and a lot of grand Shropshire and Cotswold ram lambs, ewes and ewe lambs of high class, both breeds, and all of the best breeding. Will sell them in large lots or singly at prices you can afford to pay. Short-horn bulls and heifers, two good registered Clydesdale mares, and a few beautiful Welsh ponies will also be priced at attractive figures.

Robert Miller, Stouffville, Ontario

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. CBESWELL, BOND HEAD P. O., ONT., BRADFORD or BEETON STAS.

CHESTER WHITE SWINE FOR SALE



100 to choose from. I have several litters sired by Ohio Chief, my latest importation, a magnificent boar of the long improved bacon type; also a number of litters from other choice boars, and my sows cannot be beaten. I import only the best.

J. H. M. Parker, Lennoxville, Quebec. "Willowdale Stock Farm."

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 Holsteins and Tamworths.

Present offering: 6 yearling heifers and several younger ones. All very choice. Of Tamworths, pigs of all ages and both sexes, pairs not akin. R. O. MORROW & SON, Hilton, Ont. Brighton Tel. and Sta.



Improved CHESTER WHITES

Young sows of breeding age. Some already bred. Also choice young pigs of both sexes, 6 to 8 weeks old. Joe No. 5629, first-prize boar at Toronto and London, 1909, at head of herd. Also two grand young Jersey bulls. Chas. E. Rogers, Thames Valley Farm, Dorchester, Ont.



OHIO IMPROVED CHESTER WHITES.

—Largest strains. Oldest-established registered herd in Canada. Young sows in farrow. Choice pigs 6 weeks to 6 months old. Pairs furnished not akin. Express charges prepaid. Pedigrees and safe delivery guaranteed. E. D. GEORGE, Putnam, Ont.

Tamworths

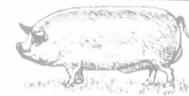
A grand lot of young boars from 2 to 4 mos., also young sows (dandies). Some just bred. Some in farrow to first-class boars from best herd in England. Prices reasonable. Chas. Currie, Morrilton, Ont.



PINE GROVE YORKSHIRES

including all the firsts and sweepstakes for best dressed carcasses, both at Guelph and the Ottawa Winter Fat-stock Shows of 1908-09. Young pigs for sale, mated not akin, all the progeny of imported stock of superior excellence.

Joseph Featherston & Son, Streetsville, Ont.



MONKLAND YORKSHIRES

With very nearly 100 sows in breeding, of modern type and high-class quality, our herd will stand comparison with any in Canada. We are always in a position to fill large or small orders with despatch. Long-distance phone. JAMES WILSON & SONS, FERGUS, ONT.

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.



PINE GROVE BERKSHIRES!

Sows bred and ready to breed. Nice things, three and four months old. W. W. BROWNIDGE, Milton, C. P. R. Ashgrove, Ont. Georgetown, G. T. R.

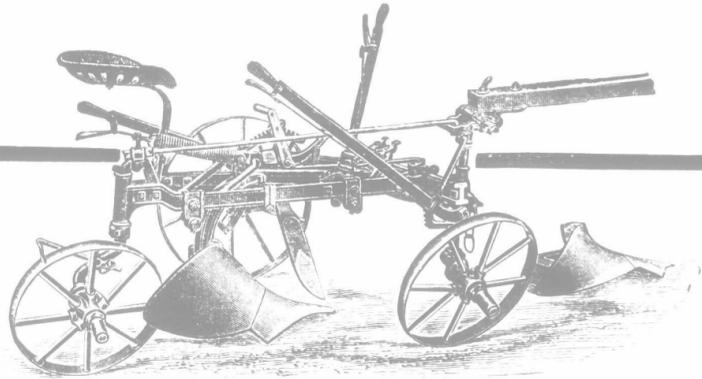


Newcastle Herd of Tams and Short-horns

For quick sale at very reasonable prices, 6 sows sired by Imp. Cholderton Golden Secret, bred to farrow in Jan., Feb. and March, to a Toronto prize boar. Nearly all my brood sows are sired by that noted prize hog, Colwill's Choice, or Newcastle Warrior, champion boar at Toronto, 1901, '02, '03 and '05. I also offer 50 boars and sows, from 2 mos. to 4 mos. old. Two bull calves one year old. Half-a-dozen heifers, from 1 to 3 years old. Long-distance Bell phone in home. A. A. COLWILL, Box 9, NEWCASTLE, ONT.

DUROC - JERSEY SWINE

Imported and home-bred. Sows ready to breed. Boars fit for service, and younger ones either sex. Also Embden geese. MAC CAMPBELL & SONS, HARWICH, ONT.



Cockshutt's New Footlift Sulky.

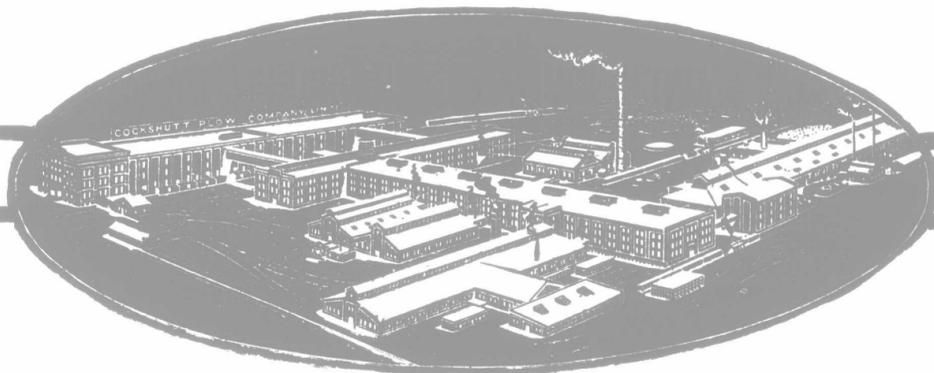
Showing Wide and Narrow Bottom

Built to stand all Conditions. A Boy can handle it

THIS Footlift Sulky is a great favourite with farmers in Ontario and the Maritime Provinces. In design, it is very much like our Jewel Sulky, which has become the standard of Sulky Plows in Western Canada. It can be fitted with bottoms suitable for any kind of soil—for clay land the Judy bottom is used, and for loamy soil the No. 21. These bottoms have already made a great name for themselves, and farmers know of them so well, that detailed description is unnecessary. But what places this Sulky plow in a class by itself—makes it distinctive and better than any other make—is the Footlift Attachment, making it so simple to operate, that any boy who is able to drive a team of horses can handle it.

The levers are all conveniently arranged, but are only used for adjusting the plow when starting in the field, for once it is set to width and depth it is operated entirely by the footlift attachment, leaving the operator's hands free to manage the horses. A special device locks the plow when raised from the ground and locks it down when set for work. The plow can be raised by the footlift attachment when obstructions are met with, preventing breakage, which is very useful in stony land. Can be fitted with rolling colter, knife colter or jointer.

This Footlift Sulky embodies every requirement necessary for plowing any kind of soil, and the farmer who buys one will be investing his money where it will bear good interest. Another point—when the operator jumps off this plow at night, he won't feel tired out, but will be well able to do his chores.



Will You Do This Now—To-day?

YOU have probably read about the reliability, durability and efficiency of Cockshutt implements in this paper scores of times, but reading about these things is poor satisfaction, if you have never had an opportunity of testing the implements themselves.

We are constantly receiving letters from farmers along these lines—"If I had only known how good your 'so-and-so' was, I would have bought one years ago."

The farmer who buys an implement bearing the name "Cockshutt," not only realizes that he has got honest value for his money, but after putting it to every test, he feels

that he should write and tell us how delighted he is with his bargain.

And you will be no exception if you invest your money in any Cockshutt product, whether it be a Plow, a Drill, Cultivator, Harrow or any of the numerous implements which we manufacture.

There is a Cockshutt dealer in your neighbourhood, who will gladly show you our line of goods, but the first step you should take is to get one of our new Catalogues.

Write us to-day and we will send you one by return mail.

**WRITE FOR
CATALOGUE
TO-DAY**

COCKSHUTT PLOW COMPANY LIMITED **BRANTFORD**

Send NOW for Free Book and Sample!

"For more than five years I have been experimenting with our experts to find the BEST culvert for all-around uses. We sought



the markets of the world for one that was just right; and we didn't find it. If we had, we'd have bought the patent rights for Canada. Finally, last Spring, we struck the idea. Then we put in some expensive months in making that idea better,—and NOW we've got a cul-

vert that is so far ahead of any other there's no comparison.

You'll read something about it here; but to KNOW how 'way ahead it really is, you'll want to see the sample (sent free) and read the booklet (free, ditto). With that before you, you will soon see why every reeve, or warden, or town councillor, or anybody who has any use for culverts at all,—will find it pays to get in touch with me right NOW. I am asking you to lay aside your notions of what makes a good culvert, and a cheap culvert, and find out about this NEW culvert. I don't expect you to buy a foot of it until it PROVES to you that Pedlar Culverts are in a class by themselves, and that you can't afford to overlook them. Let us start that proof toward you soon—address place nearest you.

G. A. Pedlar



A few hours' work and a few dollars will put a modern and permanent culvert structure in place of a ramshackle bridge like this.

A structure like this, with Pedlar Culvert, won't wash out nor need repairs.



Learn about the strongest most practical and easiest-laid culvert ever made

PEDLAR PERFECT GALVANIZED CORRUGATED CULVERT

Frost-Proof, Rust-Proof and Wear-Proof

This triple-rib flange-lock principle, found only in Pedlar Culverts, not only adds greatly to the strength of the piping and makes a perfect joint—practically as good as if welded—but it also allows for expansion and contraction under cold or heat. Though a Pedlar Culvert, of any length, be frozen solid full of ice, it will not spring a leak. Send for sample and booklet and you will see why. State your probable needs and we will gladly quote prices.

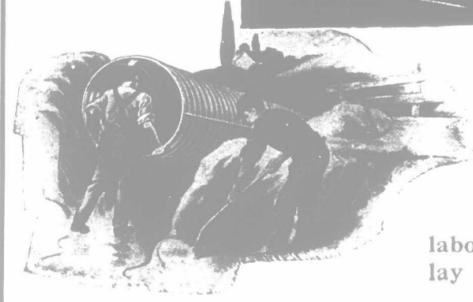
Made of Special Billet Iron, Extra Heavy

In every size of Pedlar Culvert, which comes in all standard diameters from 8 inches to 6 feet, we use nothing but the best grade of Billet Iron, specially made for us, of extra-heavy gauge (14 to 20 gauge according to the diameter). This Billet Iron is curved into semi-cylinders—curved COLD, so there will never be any variation from exact dimensions; and it is then deeply and smoothly corrugated on a special press that puts a pressure of SIXTY TONS on every square inch of the metal. The corrugations, therefore, are uniform and very deep.

Galvanized AFTER Being Pressed Up

When the corrugating process is done, the sections are galvanized by our exclusive process that covers the entire surface with a thick coating of zinc spelter. Every edge, every crevice, is heavily coated with this rust-proof, corrosion-proof galvanizing; not a spot is left unprotected. This is the ONLY culvert galvanized AFTER being shaped. It is ABSOLUTELY RUST-PROOF.

Two men can ditch for, and lay more lineal feet of Pedlar Culvert in a day than four men can with any other culvert.



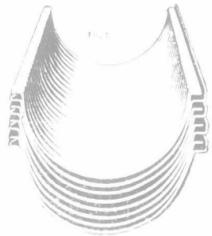
Can be readily laid by unskilled labor. Can't lay it wrong.

Will Stand Incredible Strains

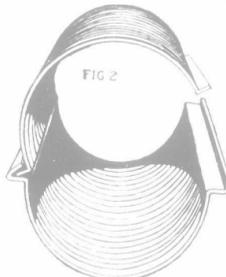
The heavy-gauge Pedlar Billet Iron sections deeply corrugated and locked together without bolts or rivets by our compression triple-rib (this rib is flat, not corrugated), make a culvert that will stand enormous crushing strains and neither give nor spring. A thin cushion of soil on top is all the protection such a culvert needs against traffic; and no special precautions need be observed in laying it,—it will stand what no other culvert can.

COMPACT—PORTABLE—ENDURING—ECONOMICAL

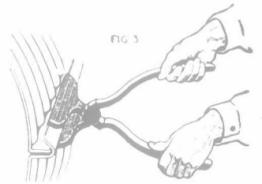
This Shows How It Is Put Together



Pedlar Culverts are shipped in half sections, nested—saving freight and making carriage easy in roughest country. Quickly and easily transported anywhere. Fig. 1 shows the half sections or semi-cylinders, nested one within the other for shipment. One of the ribs is a radial flange, the other a curved flange. Sections are assembled as shown by Fig. 2. Note that the ribs are flat, and the curved ribs of the cylinder deeply corrugated. These ribs add to the culvert's strength. Unskilled labor, with a simple



tool, quickly clamps the flanges together, making a triple fold joint that is tighter and better than any riveted or bolted joint could possibly be. Fig. 3 illustrates the simplicity of the Pedlar Perfect Culvert flange-lock—no bolts, no rivets, no makeshifts. This is the only culvert that is laid with broken joints—the overlap between ends comes in the centre of each length. No chance of leakage.



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W. W. WALKER, CHAS. W. BROWN, L. J. WALKER

WRITE FOR DETAILS

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