

**PAGES
MISSING**



WHAT a vivid contrast there is in the appearance of a place which is fronted with a broken-down picket fence and one with a Frost Maple Leaf Ornamental Fence.

The former gives the place an appearance of untidiness and hard times, while the latter adds to it an air of neatness, refinement and prosperity.

And the contrast is not in the looks alone, but in the value of the property as well. A poor, unsightly fence detracts from the value of the property, while a neat, substantial fence increases its value largely.

So when putting up a fence it will pay you to secure the best—the Frost Maple Leaf Ornamental Fence. It's a distinctly ornamental fence at a price within the reach of every land owner. It is constructed after the same careful manner as the famous Frost Wire Fences—is substantial and durable, as well as handsome in appearance. We have an almost endless variety of designs—every particular requirement can be perfectly suited.

And this strong, substantial, attractive Frost Maple Leaf Ornamental Fence is cheaper than wood. It will outlive three or four picket or wooden fences will last a lifetime. Its first cost is insignificant compared with the additional value it gives to the land. In a few years a Frost Maple Leaf Ornamental Fence will pay for itself several times in the increasing dollar value it adds to your property.

Over 1,000,000 feet of Frost Maple Leaf Ornamental Fence is in use in Canada to-day. How many feet are you going to add to its total this year?

With an ornamental fence you want an ornamental gate. Frost Ornamental Gates have a special design in scroll work, and any owner will feel proud of his purchase.

You, of course, want to know more about Frost Ornamental Fences and Gates, and a request will bring a neatly-illustrated Catalogue.

FROST WIRE FENCE COMPANY
LIMITED
Hamilton, Ont.
Winnipeg, Man.

"Frost" Fence



"OSHAWA" Galvanized STEEL SHINGLES

Put them on with no tools but a hammer and tinner's shears,—can't go wrong. They lock on all four sides, are self-draining and water-shedding on any roof with three or more inches pitch to the foot. Make buildings fire-proof, weatherproof and proof against lightning. Cost least in the long run. Made of 28-gauge toughened sheet steel—only one quality used and that the best—cold and double-galvanized. Last longer with no painting than any other metal shingles heavily-

Painted. Guaranteed in every way until 1932. Ought to last a century. Cheap as wood shingles in first cost; far cheaper in the long run. "Oshawa" Galvanized Steel Shingles cost only \$4.50 a square, 10 ft. x 10 ft. Tell us the area of any roof and hear our tempting offer for covering it with the cheapest roof you can really afford to buy. Let us send you FREE booklet about this roofing question—tells some things you may not know.

Oshawa Galvanized Steel Shingles are GUARANTEED in every way for Twenty-Five Years Ought to Last a Century

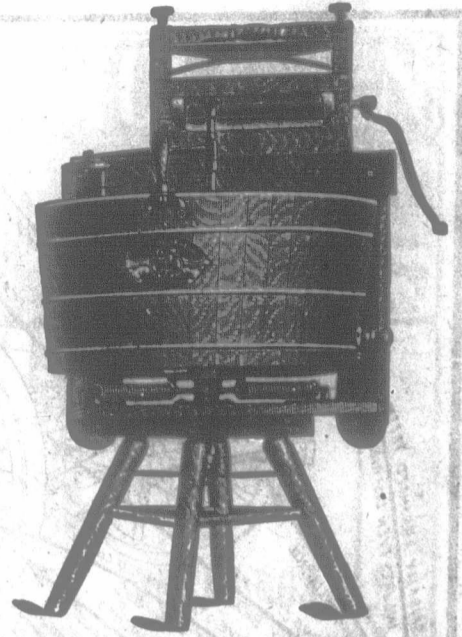
The Pedlar People

Address our Nearest Warehouse: MONTREAL 821-3 Craig St. W. TORONTO 11 Colborne St. OTTAWA 423 Sussex St. LONDON 89 Dundas St. WINNIPEG 76 Lombard St. VANCOUVER 615 Pender St.

Oshawa Canada

Send for FREE Book—"Roofing Right" Get Our Offer Before You Roof a Thing

PLEASE MENTION THE FARMER'S ADVOCATE.



Let this Machine do your Washing Free.

There are Motor Springs beneath the tub. These springs do nearly all the hard work, when once you start them going. And this washing machine works as easy as a bicycle wheel does.

There are slats on the inside bottom of the tub. These slats act as paddles, to swing the water in the same direction you revolve the tub.

You throw the soiled clothes into the tub first. Then you throw enough water over the clothes to float them.

Next you put the heavy wooden cover on top of the clothes to anchor them, and to press them down.

This cover has slats on its lower side to grip the clothes and hold them from turning around when the tub turns.

Now, we are all ready for quick and easy washing. You grasp the upright handle on the side of the tub and, with it, you revolve the tub one-third way round, till it strikes a motor-spring.

This motor-spring throws the tub back till it strikes the other motor-spring, which in turn throws it back on the first motor-spring.

The machine must have a little help from you, at every swing, but the motor-springs, and the ball-bearings, do practically all the hard work.

You can sit in a rocking chair and do all that the washer requires of you. A child can run it easily full of clothes.

When you revolve the tub the clothes don't move. But the water moves like a mill race through the clothes.

The paddles on the tub bottom drive the soapy water THROUGH and through the clothes at every swing of the tub. Back and forth, in and out of every fold, and through every mesh in the cloth, the hot soapy water runs like a torrent. This is how it carries away all the dirt from the clothes, in from six to ten minutes by the clock.

It drives the dirt out through the meshes of the fabrics WITHOUT ANY BUBBLING,—without any WEAR and TEAR from the washboard.

It will wash the finest lace fabric without breaking a thread, or a button, and it will wash a heavy, dirty carpet with equal ease and rapidity. Fifteen to twenty garments, or five large bed-sheets, can be washed at one time with this "1900 Junior" Washer.

A child can do this in six to twelve minutes better than any able washerwoman could do the same clothes in TWICE the time, with three times the wear and tear from the washboard.

This is what we SAY; now, how do we PROVE it? We send any reliable person our "1900 Junior" Washer, free of charge, on a full month's trial, and we even pay the freight out of our own pockets.

No cash deposit is asked, no notes, no contract, no security.

You may use the washer four weeks at our expense. If you find it won't wash as many clothes in FOUR hours as you can wash by hand in EIGHT hours you send it back to the railway station,—that's all.

But if, from a month's actual use, you are convinced it saves HALF the time in washing, does the work better, and does it twice as easily as it could be done by hand, you keep the machine.

Then you mail us 50 cents a week till it is paid for. Remember that 50 cents is part of what the machine saves you every week on your own, or on a washwoman's labor. We intend that the "1900 Junior" Washer shall pay for itself and thus cost you nothing.

You don't risk a cent from a first to last, and you don't buy it until you have had a full month's trial.

Could we afford to pay freight on thousands of these machines every month, if we did not positively KNOW they would do all we claim for them? Can you afford to be without a machine that will do your washing in HALF THE TIME, with half the wear and tear of the washboard, when you can have that machine for a month's free trial, and let it PAY FOR ITSELF? This offer may be withdrawn at any time it overcrowds our factory.

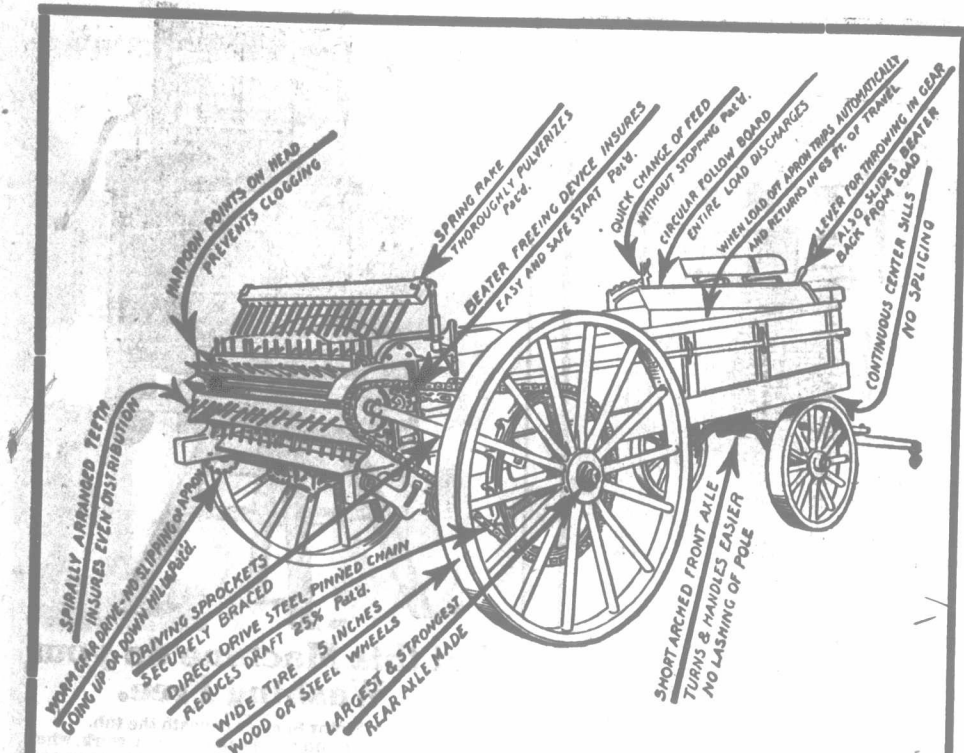
Write us TODAY, while the offer is still open, and while you think of it. The postage stamp is all you risk. Write me personally on this offer, via: F. A. A. Bach, Manager "1900" Washer Co., 855 Yonge St., Toronto, Ont.

Our Pony Mill 2,000 To 6,000 Feet a Day

SAW MILLS

From this size up to largest, standard mills with variable friction feed Favorites in every lumber district. Cut most with least power, easy to handle. Edgers, Trimmers, Lathe Mills, Shingle Mills, Out off and Rip Saws, etc. See our free catalogue.

American Saw Mill Machinery Co.
113 Hope St., Hackettstown, N. J.
624 Engineering Bldg., New York City.



Buy the Strongest Manure Spreader The "Success."

You never saw a "SUCCESS" Manure Spreader with the sides of the box bulging out, or the sills separated and sagging. They are more strongly built than other manure spreaders. Made of WHOLE UNSPLICED TIMBER and firmly braced, so that there is not a single weak spot in the whole machine. Indeed, so strongly constructed is the "SUCCESS" that it will stand the heaviest kind of strain without weakening. Bumping along uneven ground with a heavy load does not injure "SUCCESS" in the slightest. CENTER SILLS are continuous—not weakened by splicing as in most machines—but strengthened with heavy steel braces, so that the frame is exceptionally rigid and strong. Besides being the strongest machine, it is also the simplest. Consists of less parts than any other; easier to set up, easier to operate, less to get out of order. The "SUCCESS" will prove a profitable investment—not an annoying expense. Complete detailed information given in our Free Illustrated Catalogue. Write for it to-day.

THE PARIS PLOW COMPANY, LIMITED
Paris, Ont., and Winnipeg, Man.



Most economical and durable roof covering known. Easy to put on; requires no tools but a hatchet or a hammer. With ordinary care will outlast any other kind. Thousands of satisfied customers everywhere have proven its virtues. Suitable for covering any building. Also best for ceiling and siding. Fire-proof and water-proof. Cheaper and more lasting than shingles. Will not stain rain-water. Makes your building cooler in summer and warmer in winter. Absolutely perfect, brand new. \$1.75 is our price for our No. 15 grade of Flat Semi-Hardened steel roofing and siding, each sheet 22 ins. wide and 34 ins. long. Our price on the corrugated, like illustration, sheets 8 and 8 feet long. Steel pressed brick siding, per square, \$2.25. Fine Steel Beaded Ceiling, per square, \$2.25. Can also furnish standing seam or "V" crimped ing. **WE PAY THE FREIGHT TO ALL POINTS IN CANADA** Satisfaction guaranteed or money refunded. We will send this roofing to any one answering this ad C. O. D., with privilege of examination if you will send us 25% of the amount of your order in cash; balance to be paid after material reaches your Station. If not found as represented, you do not have to take the shipment and we will cheerfully refund your deposit. Ask for Catalogue No. 444. Lowest prices on Roofing, Eave Trough, Wire, Pipe, Fencing, Plumblings, Doors, Household Goods and everything needed on the Farm or in the Home. We buy our goods at Sheriff's and receiver's sales. **CHICAGO HOUSE WRECKING CO., 35TH AND IRON STS., CHICAGO**

Write for our circulars on

PORTABLE WELL-DRILLING MACHINES

AND

DRILLERS' SUPPLIES.

London Well-Drilling Machine Co.
LONDON, ONT.

WHEAT LANDS

Good values in wheat lands (improved and unimproved) in tested districts, near railways, elevators, churches, schools, etc., where water is easily obtained and homesteads are yet available. We have what you want. Write for particulars. Prompt attention given to all enquiries.

PEOPLE'S REALTY CO.
Box 737. REGINA, SASK.

FARM FOR SALE

and barns; large orchard. Price, \$10,500.

115 acres of choice land, 3 miles from City of Brantford. This is one of the best farms in the county. Buildings and fences are all nearly new. First-class two-story brick house, 20 rooms; cattle barn, 40 x 64, with cement floors and batters with water basins to each stall; horse barn, 50 x 35, modern plan; piggery 28 x 60; implement shed, 54 x 28; never-failing well with new windmill that drives water to both house and barn. For further particulars apply to **T. A. COX, Box 71, Brantford, Ont.**

Take my Poultry-for-Profit Outfit Without Spending a Cent of Cash

Tell me to ship you a **PEERLESS** Incubator and a **BROODER**, and you take three years to pay for them in



You never saw an Incubator so certain to hatch strong chicks—nor a Brooder so sure to raise them

You can start raising poultry for profit without spending a cent for the important part of your outfit.

Simply tell me to ship you a **PEERLESS** Incubator and a **Peerless** Brooder—you need them both to start right.

Promise to pay for them in three years' time—that's all I ask you to do.

I will tell you exactly what to do to make a success of poultry raising. I will work with you as your expert

advisor, if you want advice. I will see you through—show you just how to make most money quickest.

I will even find you a good high-paying buyer for all the poultry you want to raise.

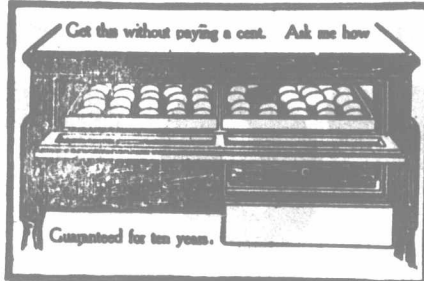
And I will put a Ten-Year **GUARANTEE** behind the incubator and the brooder—an absolute, plain-English guarantee that puts ALL the risk on me, where it belongs.

I can afford to, because I know for sure you can make money if you go at it right,—and then I will sell you more incubators and more brooders—

So I can afford to give you a ten-year guarantee—and three years' time to pay for the outfit in.

It will earn its whole cost and plenty besides in the very first year, if you will do your part—and it's no hard part, either.

I know every incubator that's sold on this continent. I don't hesitate to say that the **Peerless** has them all beaten a mile as the foundation for a poultry-for-profit enterprise.



Unless I can prove that to you beforehand I won't be able to sell you a **Peerless**. What I ask you to do is just to let me submit the

proof for you to examine.

You do your own thinking, I know. Read my free book—it's called "When Poultry Pays"—and think over what it says. Then make up your mind about my offer to start you raising poultry right—

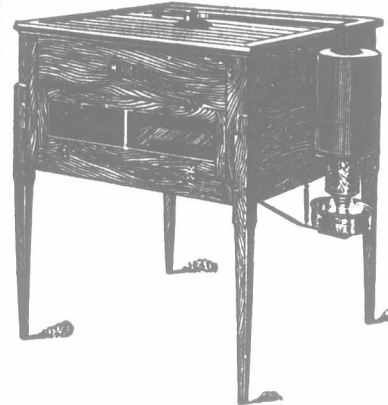
Remember that the risk is on me. The incubator and the brooder will easily earn you much more than their cost long before you pay me for them.

Suppose you send for the free book anyway—and send now. That commits you to nothing and costs you nothing

To save time and freight Western orders will be shipped from our Winnipeg warehouse; but all letters ought to be sent to Pembroke

The Lee-Hodgins Co., Limited
4 Pembroke Street, Pembroke, Ont.

OUR MODEL INCUBATORS AND BROODERS



Are the only panacea for failure past, present and future. Just take a few minutes and read the following two of many hundreds of unsolicited testimonials from our satisfied customers:

Bayham, Ont., Jan. 31, 1907.
After using Model Incubator for one year Mrs. Mitchell writes us: "I would not be without my Incubator for the price of two if I could not get another of the Model Incubators."

Yours truly, **MRS W. MITCHELL.**
Orangedale, N. S., Feb. 11, 1907.
Sirs,—No trouble to run your Model Incubator, as I was away from home for 11 hours each day and machine run itself, temperature of cellar changing 26 degrees in 12 hours; temperature of machine did not change in the least only the last days showed an upward tendency of half to one degree. Ran machine at 103, hatched 143 chicks from 178 eggs. There was only one chick dead in the shell in the lot. Dead germs of about 8 days in the rest. Eggs were very dark-shelled, making safe testing very difficult.
JOHN D. McNEIL.

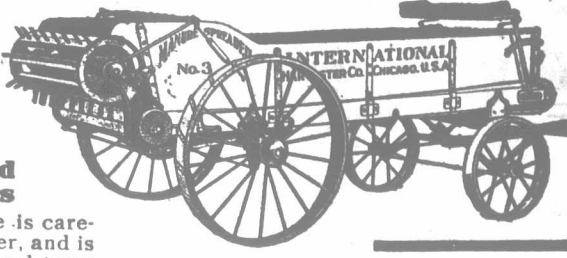
OUR CATALOGUE MAILED FREE.
MODEL INCUBATOR COMPANY, LIMITED, 193 River St., TORONTO, ONT.

Queenston Cement

successfully used by the farmers of Ontario for over 30 years. Direct from manufacturer to consumer. Positively the best and cheapest cement you can buy. Price, 70c per barrel, f. o. b. works. All information cheerfully given. Write us.

Isaac Usher, Queenston, Ont.

A Common-Sense Talk On Manure Spreaders



THERE'S no doubt that the right kind of manure spreader is a good thing for you to have. It is probably true that there is no other farm machine that, if rightly chosen, is as valuable to the farmer. If manure is spread properly and at the right time, its money value far exceeds what you're apt to think.

But when you buy a manure spreader have a care. There are many of them on the market, and many with various "special features"—fancy affairs that do them more harm than good.

When you buy a spreader look out for these things—and avoid them. What is chiefly to be desired is *strength and simplicity of construction*.

Strength is essential because a manure spreader has to carry a heavy load and the rear end—the *machine end*—has hard work to do.

Simplicity of construction lessens the chance of the machine getting out of order and gives *light draft*. You know there are a good many manure spreaders that don't get out of the shed after the first year. They are too troublesome; causing much delay.

I. H. C. Corn King and Cloverleaf Spreaders

are strong and simple. The frame is carefully selected, well seasoned lumber, and is strengthened by heavy cross sills and truss rods. They have steel wheels with staggered spokes, and both hind wheels have clutches.

The box is made of selected stock and is securely fastened to the frame by heavy steel cleats. Corners are re-enforced with steel plates. Everything is of the very best.

Both of the rear wheels are drivers, and insure plenty of power. A large sprocket with heavy chain drive transmits the power to the cylinder. The cylinder is large and strong, and the square teeth (extra long) are made of the best high carbon steel.

The power for driving the apron is applied on both sides, giving an even movement and making binding impossible. The rollers are attached to the under side of the slats instead of to the frame.

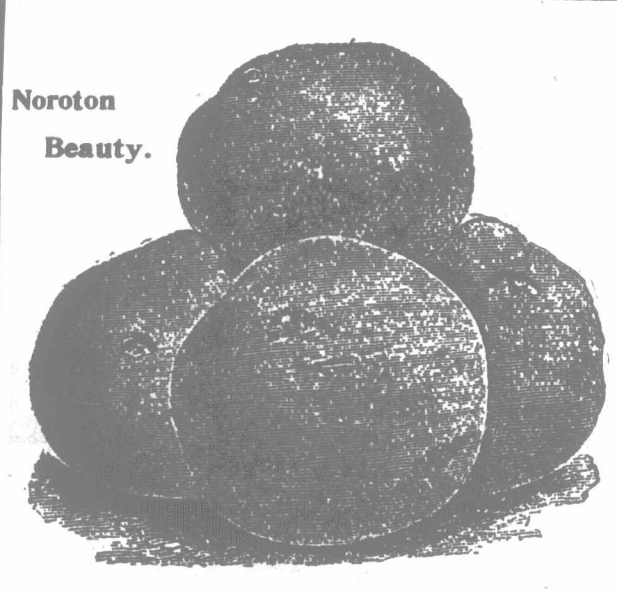
The vibrating rake is a most important feature, and is found only on Corn King and Cloverleaf spreaders. It levels the load and brings the manure squarely up to the cylinder—a thing which is absolutely essential to

proper spreading. The teeth on the vibrating rake are held in place by coiled steel springs so they never break but adjust themselves to the size of the load.

And as a result of simple construction, the operation is simple. Any one who can drive a wagon can operate an I. H. C. spreader, for one lever does it all. There are ten feeds, ranging from ten to thirty loads per acre. The apron stops of its own accord when the load is all fed out. By reversing the lever it returns and again stops when back in position. No need to watch it at all.

These are some of the reasons why you should investigate I. H. C. Corn King and Cloverleaf spreaders before you buy. There are many other good points about them that are explained in our catalogues. There are two kinds—Cloverleaf, an Endless Apron machine; and Corn King, a Return Apron machine; each made in three sizes.

Call on our Local Agent or write nearest branch house for catalogue.
CANADIAN BRANCHES: Calgary, London, Montreal, Ottawa, Regina, St. John, Toronto, Winnipeg.
INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.
 (INCORPORATED)



The Best All-Round Potato

NEW NOROTON BEAUTY.—It is a lineal descendant of the famous Peach-Blow, being a seedling from a seedling of that variety. We may summarize its merits as follows: It is the earliest potato ever grown. It is by far the most productive extra early, yielding as heavily as any of the medium early sorts. It is handsomer in appearance and more uniform in size and shape than any other variety. Its table quality is superb, and it keeps longer than any other sort, early or late. It is the best all-round potato in existence. We have grown this variety for two seasons, and highly recommend it.

Price: 1 lb., 20c.; 5 lbs., 85c.; postpaid to Canadian points; peck, 75c.; 1/2 bush., \$1.20; bush., \$2.10; bag, \$3.00, here. Shipment as soon as safe in spring. Order early.

NOW READY, our handsomely-illustrated 96-page catalogue of Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc., free.

Send for it to
JOHN A. BRUCE & CO.
 Hamilton, Ontario.
 Established 1850.



STOCK MEN



Advertise your fancy stock by means of first-class
DRAWINGS
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ENGRAVINGS

Send us your photos, and our stock artist will bring out the points.

THE
TORONTO ENGRAVING COMPANY LIMITED
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 DESIGNERS, ILLUSTRATORS, ENGRAVERS

SASKATCHEWAN LANDS

Wild and improved, in one of the best districts in the West. Write:
J. F. MIDDLEMISS,
 Wolsley, Sask.

Western Canada Land Co.

Large number of improved farms in Brandon district; also in all parts of Manitoba Saskatchewan and Alberta. Prices right. Terms easy. Address:
 Box 581, 38 Ninth Street, Brandon, Man.

THE DUNN HOLLOW CONCRETE BLOCK MACHINE.

Third year in the market, and every machine sold doing good work. Simple in construction and operation. Suitable for block-making for a single building, or for a regular block making business. A moderate priced machine; compact and portable. No power required. Has suited every purchaser, and will please you. Western shipments made from our Winnipeg warehouse.



Write us for catalogue.

Address Dept. O. THE JAS. STEWART MFG. CO., Ltd., Woodstock, Ont.

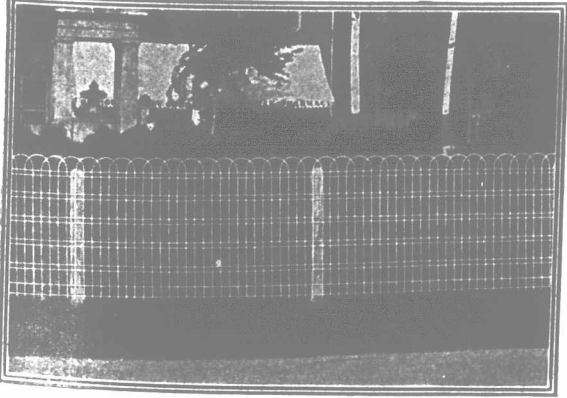
Practical Elasticity

"Maritime" wire fences are made of a coil-spring wire that holds the coil shape and not only makes the fence easily adaptable to rough, holey, ground, but prevents the possibility of sudden strain and breakage as well.



"Maritime" wire fences need few posts; twenty or thirty feet apart is near enough. Every post saved reduces the cost. Moreover a long panel between posts enables the fence to better encounter any sudden shock.

Write for catalogue and price list.
NEW BRUNSWICK WIRE FENCE CO
 11 MONCTON, N.B. Limited.

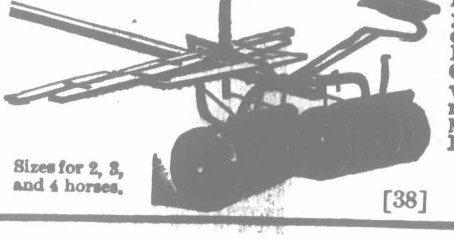


PAGE ACME White Fences

Any height to 8 ft. Any length you say. From 16 cents a foot. Gates to match, from \$2.25. Last longer. Easy to put up. Get booklet.

PAGE WIRE FENCE CO., Limited
 Walkerville - Toronto - Montreal
 St. John - Winnipeg

THE BISSELL



(None genuine without this name). This is our specialty. We've been at it many years and going to keep on longer. For quality of work and amount of work, this Disk is famous throughout all Canada. Construction is simple, compact, strong, with immense capacity. Pulverizes and makes a fine seed bed. Light of weight. No Neck Weight. Sold by our Agents. Manufactured by

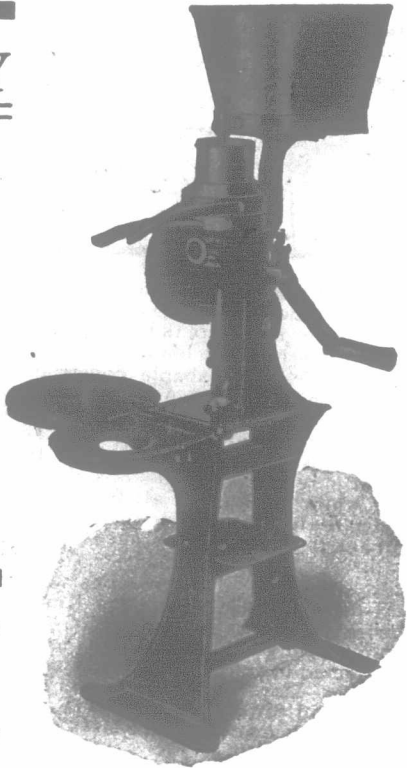
Sizes for 2, 3, and 4 horses.

T. E. BISSELL, ELORA, ONT.
 Write for Booklet " W

THE MILKY WAY

GOOD COWS AND A
**De Laval
Cream
Separator**

THE DE LAVAL SEPARATOR CO.,
173-177 William Street,
MONTREAL.

**A Sky Line of Carey Roofs**

ENOUGH MILES of Carey's Roofing have been put on buildings since 1873 to make a pathway across country from the Atlantic to the Pacific and back again! The house, barns and outbuildings of MICHAEL LINK, at Mitchell, Ills., shown above—are all covered with

CAREY'S FLEXIBLE CEMENT ROOFING

CAREY'S is the "Time-Proof Roof." It withstands the assaults of the elements; is fire-resisting, wind and moisture-proof, and will not ROT, RUST, MELT OR BREAK. It loses neither its life nor elasticity. Is equally adapted to flat or steep surfaces and may be laid over leaky shingles or metal roofs, without the expense of removal. Knife and hammer are the only tools needed in its application.

The Carey Patent Lap, an exclusive Carey virtue, covers and protects nail-heads, insuring a neat, everlasting, moisture-proof union of sheet to sheet and Roofing to roof-board.

In the composition of Carey's Roofing, only the highest grade of woolen felt of our own manufacture is used. This all wool felt, with a highly tempered asphalt cement, (also of our own manufacture) and strong burias, are run through heavy steam rollers and compressed into compact, flexible sheets—the weather side of which is treated with our fire-proof cement.

Sold and shipped from our conveniently located warehouses, at lowest freight rates. Write for FREE sample and illustrated booklet.

The Philip Carey Mfg. Co., Toronto (Ont.), London (Ont.), Montreal (Que.)

**Anchor Fences
Are Strong.**

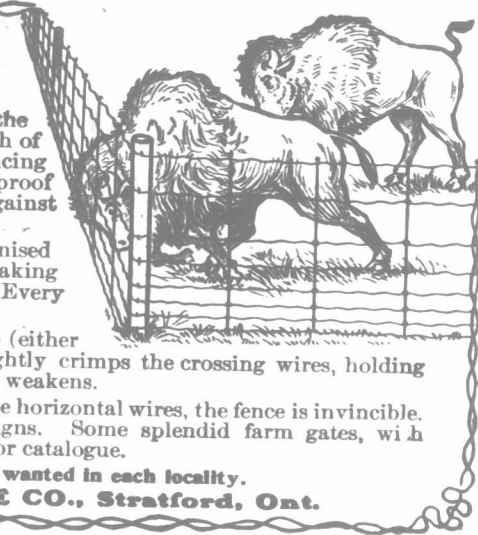
Strong enough to withstand the rugged head-and-shoulder strength of buffalo. (Actually used for fencing buffalo in a Western park). If proof against buffalo, they're proof against the strongest bull.

The upright wires are of galvanized steel (Nos. 7, 8 or 9)—with breaking strain of 1,507 to 2,136 pounds. Every clamp adds extra strength.

This celebrated Anchor clamp (either japanned or galvanized steel) slightly crimps the crossing wires, holding them firmly. Never slips. Never weakens.

With No. 9 coiled spring for the horizontal wires, the fence is invincible. Ornamental and plain designs. Some splendid farm gates, with hinges and fasteners. Write for catalogue.

First-class agents wanted in each locality.
ANCHOR FENCE CO., Stratford, Ont.

**Spramotor for WHITEWASHING
or PAINTING**

Two men with a Spramotor and a ladder will paint the largest barn in half a day.

It will apply any kind of paint or white-wash and spreads evenly and thoroughly.

It is a strictly high grade, high pressure machine, and will save its cost in the first operation. Made in four styles and 36 sizes, at from \$10 to \$300.

Spramotor, as shown, with cash complete ready to operate, \$22. Shipped on approval to responsible parties.

Gold Medal at the World's Fair and highest awards everywhere. Awarded first place at Government Spraying Contest. Send for booklet C.

SPRAMOTOR CO.,

BUFFALO, N. Y. LONDON, CAN.



Last Mountain Valley Lands

We own thousands of acres of **Choice Selected Land** in this district, which is in the heart of the

GREAT WHEAT PLAINS
OF
SASKATCHEWAN
Ample **TIMBER** for All Purposes

Prof. Thos. Shaw, after personal inspection, writes: "This rich and beautiful farming section lying in the vicinity of Last Mountain Lake, embraces one of the finest areas in the Northwest. The land is undulating in this region, mostly to injure the wheat, is virtually unknown. Being thus favored so highly by nature, it is not surprising that the production of wheat in this region is phenomenally high; in several instances forty to forty-five bushels per acre have been reaped. Oats, Barley, Flax and all small grains yield relatively as good as those of wheat. Potatoes grow most luxuriantly. Two or three years ago there were not more than thirty-five settlers in the entire area; now there are over a thousand, and others rapidly coming in."

Send 25c. for our beautiful new photographic souvenir, entitled "The Lake and Lands of Last Mountain Valley," which is not only a work of art, but a book of authentic information. We will also send Atlas of Canada, Maps, etc.

Wm. Pearson Co., Limited,
304 NORTHERN BANK BUILDING, WINNIPEG.

The Farmer's Advocate

and Home Magazine

"Persevere and Succeed."

Established 1866.

Vol. XLII.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

LONDON, ONTARIO, APRIL 4, 1907.

No. 758

EDITORIAL.

DIFFICULTIES MET IN ALFALFA CULTURE.

Last week attention was called to the merits of alfalfa as a crop and feed. We pointed out that not only does it yield, on suitable soil, from five to seven tons of hay per acre, but the hay is worth considerably more per ton than clover for producing growth and milk, especially when combined with the usual carbonaceous roughage of the farm, such as corn fodder or silage, roots, timothy and straw. In this issue we propose to explain some of the difficulties in growing it, taking up requirements of soil, culture and fertilization. Among the common preventable causes to which failures of alfalfa may be ascribed, are:

1. Lack of proper surface and subsoil drainage, resulting in unthriftiness, spring heaving, drowning, and winter-killing by ice.
2. Deficiency of lime, potash and phosphoric acid in the soil.
3. Lack of sufficient nitrogen-gathering bacteria.
4. Use of seed produced too far south.
5. Use of too little or of inferior seed.
6. Failure to clean the land of weeds and prepare a mellow seed-bed.
7. Use of too thick a nurse crop.
8. Failure to clip the young plants (if sown alone) the first summer.
9. Fall pasturing.
10. Experimenters too easily discouraged.

Alfalfa demands drainage, both subsoil and surface. Its long, tapering taproot is liable to be heaved out by spring frosts, especially during its first winter. These same long roots, which render it the most drouth-resistant of all our fodder crops, require a well-drained subsoil in which to range and seize upon the stores of phosphate and potash compounds in the lower strata. The water-table should not be higher than four feet from the surface, and lower is better. A wet soil is liable to be sour, and the bacteria upon which alfalfa depends to extract precious nitrogen from the atmosphere will not thrive in an acid soil. Surface drainage is also very important. Water standing for a few days about the crowns of the roots is liable to kill it, while a formation of ice over them in winter spells death. On most level land there is danger of some parts of the field being submerged at one time or other during the year, and many a promising piece has been injured or ruined in this way. In many localities hillsides are the only safe place to sow alfalfa. We have seen roots heaved out and lying naked a foot long on loamy knolls, in hollows, and on level land, while on the steep clay hillsides not a plant was hurt. Of course, it sometimes succumbs on hills, but not so often.

In the way of manures, the most common needs of alfalfa are lime, potash (wood ashes supply potash), and phosphoric acid, in the order named. It is true that, to secure a catch, top dressing with barnyard manure is a great help, though it should be applied a year ahead for a crop, like corn, that may be cultivated late to germinate and destroy weeds. It is also true that many a good catch of alfalfa has been obtained without manuring of any kind, but, on the other hand, many have been unable to grow alfalfa successfully till they tried two or three loads per acre of lime and wood ashes. In some cases lime and ashes are needed worse than manure. Alfalfa being a legume, can soon draw all the nitrogen it needs from the atmosphere. What it chiefly needs in the way of fertilizing is plenty of mineral elements. Of these, lime first.

For most crops, lime is not regarded as a direct fertilizer in itself, there being sufficient for this purpose in the average soil, but alfalfa uses an exceptionally large amount of calcium in its tissues, and therefore makes heavy drafts on the lime in the soil. Applications of lime are beneficial, also, in liberating potash. But perhaps the most important reason for liming alfalfa soil is to keep it sweet—i. e., alkaline—and therefore favorable for the nitrogen-gathering bacteria. To ascertain whether or not a certain soil needs liming, obtain from a drug store some blue litmus paper. Insert a strip here and there in the moist soil or into a mud made by mixing soil with water in a bowl. If, after a few hours, the paper shows a reddish tinge, be sure the soil is acid, and the thing to do is to apply 30 to 50 bushels of lime per acre. Many a soil underlaid with limestone rock would be greatly benefited by a dressing of lime, especially for alfalfa.

The second element most likely to be needed is potash. This is most easily and cheaply supplied in the form of unleached wood ashes. The ashes contain a little lime and phosphoric acid, as well as a large amount of potash. Commercial substitutes for ashes are sulphate of potash, muriate of potash and kainite. Phosphoric acid may be purchased in various forms, notably as bone meal, ground rock phosphate and acid phosphate, the latter being most soluble and the ground rock least soluble, therefore slowest, but most lasting. Potash and phosphoric acid cost 5 or 6 cents a pound, and a few dollars' worth will often go a long way in promoting increased growth and vigor of alfalfa, clover and other legumes. By not using them more largely for this purpose, we are neglecting a golden opportunity. Perhaps we should add that, as a rule, best results will be obtained by combining them, rather than using any one alone.

We should also add that, as a rule, clay hillsides contain abundance of the mineral elements of fertility, and this fact, combined with drainage, explains why on such sites alfalfa flourishes so well, defying all encroachment by grass and weeds, whereas on the loamier soils, which are more favorable to grass, and less suited to alfalfa, the latter is much more readily crowded out.

There is a great deal in the inoculation idea, but as this subject has been treated fully in our Farm Department, we need not dwell upon it here. Suffice to say that the nitrogen-gathering bacteria must be applied to the seed or land, either naturally or artificially. Some few bacteria are nearly always sown with the seed, and they rapidly increase, but there may not be nearly enough for the first year or two. The oftener alfalfa is sown on a piece of land, or the longer it remains there, the larger will be the number of suitable bacteria it contains, provided the soil is sweet and well drained, so that they can thrive and multiply with each sowing. It is found in practice that scattering over the field to be seeded, a load of surface mould from an old alfalfa field, or else from a patch of sweet clover, frequently invigorates the first and second year's growth, and helps to insure a successful catch. If one cannot obtain such soil conveniently, it may be worth while sending to the Bacteriological Department of the Ontario Agricultural College, Guelph, for a bottle of nitro-culture to inoculate the seed. Many have found this a decided benefit, though in other cases it has shown no appreciable results, either because the soil was already sufficiently inoculated, or possibly because of failure to follow instructions in using the culture; or maybe the soil was too sour, and was not made

sweet with lime. Especially favorable reports on nitro-culture come from the Maritime Provinces.

Though not generally known, it is a fact that there are varieties of alfalfa, as of other crops. Some are better than others; the common commercial variety, *Medicago sativa*, is the best. Apart from the question of variety, there is a difference in strains, owing to the locality where the seed was grown. That produced in comparatively northern latitudes is best adapted to the Canadian climate. This matter of variety and origin of seed is not always under the farmer's control, he having often to take what his seedsman sends him, but it is worth being posted, because it may account for some cases of poor success where the circumstances seemed to warrant better results.

To sum up: Sow alfalfa on hillsides if you have any; if not, try it on your best-drained field, and ditch carefully.

Precede the alfalfa with a hoed crop, manured and thoroughly cultivated. In spring prepare a fine, mellow seed-bed, working in a load of soil per acre from an old alfalfa field or from a patch of sweet clover.

Apply at least one load of lime per acre, and, if available, another of unleached wood ashes. If disposed to experiment further, use bone meal or acid phosphate.

Sow per acre 20 pounds of first-class seed, either alone or with a very light nurse crop of barley.

If the alfalfa is sown alone, run the mower over it (with bar tilted high) in time to prevent any weeds going to seed. Leave the clippings on the ground for a mulch. Don't pasture the first season. Many thousand acres of alfalfa are killed every year that might have been saved if stock had been kept off it in the fall.

Finally, keep at it. Success in alfalfa-growing is seldom for the faint-hearted. As one gains experience, and his soil becomes more plentifully inoculated, his chances increase wonderfully. Thousands of acres of alfalfa are thriving to-day in districts where it was long considered useless to try it. Unless the soil lacks drainage, or is sour, the second or third attempt is usually successful, even if the first is not; and so numerous and strong are the merits of alfalfa that no one should give up short of the tenth trial at least.

WOODLAND EXEMPTION ACT INTERPRETED.

In another column is a communication by D. M. Ross, of Oxford Co., who sets forth reasons for preserving his wood-lot and fencing out stock. In the course of his letter he states that the matter of passing a woodland-exemption by-law was brought before his local council this spring, but they took the view that, according to the act passed by the Ontario Legislature a year ago, a man would require to own 100 acres of bush before he would be entitled to exemption on 10. Our correspondent asks for an interpretation of the act in this regard.

The council was entirely mistaken. The act gives township councils the power to exempt from taxation farm woodland to the extent of one acre in ten of the farm area, but not more than twenty-five acres under a single ownership. It is stipulated that woodland so exempted shall contain trees in suitable quantities of the varieties named in the act. This condition is not very stringent, as any reasonably good stand of useful timber would qualify. Another condition of exemption is that grazing is absolutely prohibited. In townships where the necessary by-law has been passed, applications for exemption may be made in writing to the township clerk on

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or before the first day of February of the year in which it is desired that the exemption shall take effect, whereupon it becomes the duty of the assessor to examine said wood-lot and determine whether it fulfils the conditions as prescribed.

It will be seen, therefore, that a farmer with 100 acres of land, of which 5, 8 or 10 acres are bush, may have his whole wood-lot exempted from taxation. If he has 12 acres of bush, he is entitled to exemption on 10 of the 12 acres. If his farm is 150 or 200 acres in extent, he would be entitled to exemption on 15 or 20 acres, as the case might be. In short, a farmer is entitled to exemption on one acre of bush for every ten acres of land in his farm, provided that no one man may be exempted from taxation on more than 25 acres of woodland.

If every farmer in a township had one-tenth of his land in bush, and was disposed to maintain it, the act would be unnecessary, as the cleared land held by each would have to be assessed just so much heavier to make up the total levy of taxes. But in townships where some men have cut down their woods, exposing the neighborhood to the sweep of winds and the numerous evils of deforestation, it is only right and fair that those few who have had regard for the good of the country by saving and caring for the wood-lots, should be rewarded and encouraged in their laudable efforts by a slight easement of taxation such as the law affords. The exemption of ten acres of wood-lot is a very moderate measure. It does not amount to a great deal, but its tendency is in the right direction, and its principle is unassailable. Forestry experts everywhere commend it; every lover of nature, every one who values health and beauty; every man who lives for something besides making money, and every one, even, who look only to the dollar, should have an interest in seeing farm wood-lots preserved. The council of every township where over 50 per cent of the land is cleared will confer a lasting benefit on the present generation and a priceless one on posterity by passing a woodland-exemption law without delay.

THE THAW TRIAL TRAVESTY.

The trial and death sentence of Horace George Rayner, the slayer of William Whiteley, a merchant of Old London, England, in a single day, stands out in marked contrast with the nauseating trial of Henry K. Thaw, who shot to death an architect named Stanford White, which has been dragging along for a couple of months in New York. Rayner professed to believe that Whiteley was his father, and the defence set up the plea insanity; it was claimed that he shot under stress of brain trouble, evidence of relatives being given to that effect. Lord Chief Justice Alverstone, in summing up, made short work of the insanity plea, directing the jury that if the prisoner drew his revolver on Whiteley with the intention of killing him, they must find him guilty of wilful murder. In nine minutes the jury returned a verdict of guilty. The prosecutor did not oppose a recommendation to mercy, but the Lord Chief Justice, in pronouncing the death sentence, held out no hope that the edict would not be carried into effect, and most earnestly counselled the prisoner to spend the time, one month, left him in communion with his Maker.

The Thaw-White tragedy took place at a roof-garden entertainment, both principals being wealthy, but scandalously immoral characters, and the shooting was an outcome of jealous rage on the part of Thaw, whose wife, one Evelyn Nesbitt, of unsavory reputation, was the ill-starred genius of the evil play, terminating with that old-time tragedy—the wages of sin is death. By the baser section of the press, the proceedings of the trial were published in such degrading detail that at last public sentiment of the saner sort revolted, and, under stress of threats to withdraw postal privileges by the Governments of the United States and Canada, the stream of filth was checked.

To start with, the line of defence was insanity, in order to save Thaw from the electric death chair. When the testimony in that direction became too strong, the prosecution, fearing an acquittal, veered to secure a lunacy commission, so that Thaw would be locked up as criminally insane, if not electrocuted; then the defence tacked back and put in evidence to show that Thaw is entirely *compus mentus*, which drives the prosecution back to the original line of attack. Such conduct would probably not be tolerated for a moment in a Canadian court of justice.

Both for defence and prosecution incalculable sums have been lavished upon expert testimony of the most hopelessly contradictory character relative to the sanity or otherwise of the prisoner, until the public, and probably the jury as well, are reduced to a perfect maze on the subject of "brain storms," as an excuse for crime, and the trial has come to be regarded as a travesty, rather than an administration of justice. The result is a menace to the public weal through the growing fear of the power of wealth to delay the procedure of the courts and frustrate punishment.

NOW WE'RE READY, COME IN.

A National Packers' Exposition is to be held at the Coliseum, Chicago, May 1st to 11th, 1907, where the products of ranch, farm, garden, poultry-yard, dairy and orchard will be shown packed and being packed. There will be breakfast foods in course of preparation, picklemaking, and processes of all kinds going on, including musicmaking by a band hired for the occasion. It is not stated whether the music will be canned, but probably it will not, for, if we remember rightly, noise is about the only thing not saved and utilized in a modern packing-plant. We gather from press notices sent out that the object of the Exposition is to "show" the public how grossly the muck-rakers have exaggerated. It is a grand idea. A great public exhibition at this season, where the packers are to be seen with their best feet forward, their most "fetching" labels displayed, and their prettiest girls working, should make a very favorable impression on foreign visitors of the wholesome way in which American meat products are prepared. It is a neat way to draw a veil on the past.

HORSES.

Secretaries of local horse-show associations are invited to send us their dates for publication in this column.

THE MARE AT FOALING.

There are many reasons why a mare about to foal should be closely watched. While in a large percentage of cases the act is performed in a normal manner, and both dam and foal will do well without extraneous intervention, there are many cases in which the foal, and not infrequently the dam also, perish from want of intelligent and opportune assistance. The presence of an attendant during the act of parturition in some cases has a tendency to unduly excite the mare, while in others the presence of her master has the opposite effect. The attendant should be a reliable man, and one who has an intelligent knowledge of the phenomena of the act, and is able to discriminate between a case that, though somewhat tardy and prolonged, is progressing in a favorable manner, and one in which interference or assistance is indicated, for as much harm may be done by too hasty or inopportune interference as by a want of assistance when necessary. When his presence appears to excite the mare, he should keep out of her sight as much as possible, but at the same time should be so situated that he can observe carefully how she is acting. The greater knowledge he has of obstetrics, the better, and he should be prepared to give all the assistance his knowledge renders him capable of. If able to handle a case of difficult parturition, he should have his instruments in a convenient place, so that if required he will be able to use them promptly. He should, at all events, have a knife and a strong, soft string at hand, in order that he may be able to tie and then cut the navel cord, if necessary, and he should also have a bottle of an antiseptic solution, as corrosive sublimate, 15 grains to a pint of water. The mare should have a roomy, thoroughly-cleaned and well-bedded box stall. A stall in which a mare is expected to foal should be thoroughly cleaned out at least once daily, and it is good practice to scatter lime on the floor each time before the fresh bedding is spread. The lime tends to keep the floor dry, and at the same time destroys germs. All mangers, boxes, etc., in which the foal might drop in case she foaled standing, should be removed. In most the labor pains continue for some time before the act of parturition really commences; at other times this period is brief. The pains at first are usually slight and brief, and succeeded by a longer or shorter period of calm, during which the mare will eat and appear as though nothing was amiss. The severity and duration of these pains gradually increase, and the length of the periods of calm correspondingly decrease, until the act of parturition really commences, after which the pains should be constant, though of varying intensity, until it is completed. In most cases mares lie down when parturition commences, and it is not rare for them to lie so close to the wall that the act cannot be completed. The attendant should notice if this occurs, and if so, force her to get up and change her position. If labor pains have been present and somewhat severe for considerable time, and still no apparent progress has been made, the attendant should endeavor to ascertain what prevents delivery. In order to do this, it is usually necessary to make a manual examination through the genital passage, and in order that a man may be able to do this intelligently, he must have a reasonable knowledge of the anatomy of the parts and the manner in which the act of parturition is performed in normal cases. In other words, he must understand the normal proceedings in order to be able to appreciate or detect an abnormality. Having made the examination, and discovered the abnormality, he must decide whether his knowledge of and skill in obstetrics are such as to warrant his attempt to rectify it or remove the obstacle to delivery. If so, he should proceed with all possible promptness (but should not get in a hurry) to do so. It is probable he will require assistance to hold the mare, assist in traction, etc. If he decides that the case is beyond his skill, he should without delay send for his veterinary obstetrice. A great deal of valuable time is often lost and complications made by sending for a handy neighbor in such cases. When the attendant with average knowledge and skill in such matters meets a case beyond his knowledge and skill, he should waste no time in sending for those who know little or no more than himself, but go at once for his veterinarian. In many cases of easy birth the afterbirth is expelled with the fetus, and the connection between the two by means of the umbilical or navel cord is still intact, and should be severed. The cord and knife already mentioned are now needed. Unless the cord be severed, the whole weight of the afterbirth is on the colt's abdomen, and it interferes materially with his movements. Instinct is supposed to teach the mare

to sever the cord with her teeth, but she generally lies for considerable time after the colt is born, and in the meantime the little fellow is struggling to gain his feet, and undesirable complications may arise if the cord be not severed. The attendant should tie the string tightly around the cord about an inch below the abdomen, and then sever it with a scraping motion of the knife an inch below that. Now the parts should be dressed with the solution of corrosive sublimate. This should be done whether or not the cord be severed during parturition, and three or four times daily afterwards, until the parts are healed. This precaution is observed to prevent the entrance of the germ that causes that almost surely and incurable disease called "joint or navel ill." In other cases the foal and afterbirth are expelled together, and the latter not ruptured, in which case the foetus is entirely enclosed in an air-tight membrane, and will suffocate at once. Many valuable foals perish in this way. Again, instinct is supposed to teach the mare to rupture this with her teeth, but the foetus usually perishes before this is done. The attendant, in such cases, should at once rip the membranes open with his knife, remove them from the foetus, and remove the mucus from the mouth and nostrils. In case the mare has been pretty well exhausted, and lies for considerable time after the birth of the foetus, the attendant should rub it well with cloths or wisps of straw until the dam has sufficiently recovered to attend to it. He should assist the foal to its feet, and, if necessary, aid it in nursing. In cases where the foal is weak, this is absolutely necessary, and in cases where the dam is indifferent or vicious to the foal, unless this attention is given it will surely perish. The wet bedding should be removed from the stall, and dry, clean bedding supplied as soon as possible, and after the colt has nursed, the mare should be given a warm drink and a warm mash of bran and chopped oats. Other reasons why it is wise to watch a mare during foaling may be given, but we have, we think, given sufficient to warrant the trouble. "WHIP."

A MODERATE SYSTEM OF STALLION ENROLLMENT.

Editor "The Farmer's Advocate":

I have been studying the many letters appearing in "The Farmer's Advocate" with reference to the licensing of stallions, and many of the statements made do not agree with my experience, one, for instance, to the effect that many a mongrel stallion is the equal of a desirable pure-bred. No matter which breed is considered as evidence in this connection, no mongrel stallion ever produced as high a per cent. of desirable progeny as has Baron's Pride, Stroxtom Tom, Baron's Gem, Lord Charming, Sharp Catcher, Hillhurst Sensation, Electioneer, and many other pure-breds, too numerous to mention. Because some unregistered stallions have produced better foals than scrub pure-breds, bred through scrub families, and badly conditioned, is not just reason for condemning pure-breds nor exalting mongrels. The mongrel is a great injury to the horse industry, and should be prohibited in some way, if we are to take advantage of the opportunity Ontario has of making money out of good horses. As a pure-bred stallion or mare of desirable size, form and quality is worth many more dollars than a mongrel of equal size, form and quality, and high-grade mares of good form are worth and will sell for more money, all other things being equal, than will others of short or unknown breeding, therefore much is to be gained by pure breeding, and incalculable loss results from mongrel breeding.

That the prohibition of mongrel stallions for public use would interfere with private rights, is true, but it would be in the best interest of the horse industry; and the majority of men who handle mongrel stallions are not making, but losing, thereby, and causing great loss to the users of the same.

There are some districts where it is difficult to get desirable stallions, and it would be a hardship to prevent the use of unregistered horses there. Again, some pure-breds are not the equal of some mongrels, so to base the standard on breeding only may at the present time be wrong. I believe much benefit would be derived from an enforced enrollment of all stallions doing public service, in a register controlled by the Government, giving name, description and breeding of pure-breds, and name and description of mongrels, and compelling all owners to have a copy of enrollment printed and pasted in a conspicuous position wherever the stallion is presented, and a copy of such enrollment given to the owner or manager of any mare bred to said horse; impose a severe penalty for false statements made, whether for the purpose of enrollment or otherwise, and require that all stallions be inspected as to soundness, prohibiting animals afflicted by hereditary unsoundness, and, where false statements are made, or an hereditarily unsound animal used, let the inspector be notified and he have the owner of every such animal charged before the

proper judiciary, and dealt with according to his misdemeanor. Further, the owner of a stallion should be compelled to properly condition the animal by giving sufficient regular exercise all the year, and not excessive service. Such a law would benefit many, and not unduly interfere with private privileges, and as soon as more good stallions are available a stricter law and licensing might be made to advantage. I sincerely hope the Government, in its good judgment, will devise some plan by which more good stallions will be patronized, and in that way the general horse stock of the country made more valuable. Bruce Co., N. S. J. STANDISH, V. S.

EVOLVING A BREED.

Editor "The Farmer's Advocate":

We have had horse-breeding pretty thoroughly discussed in "The Farmer's Advocate" recently, and, while I am a staunch believer in the pure-bred, yet what would the trotting men have done without Messenger, who was a cross-bred horse, to say the least—some might say a mongrel—yet he transmitted his good qualities with a wonderful degree of certainty. Mr. John Ogden imported one of his sons from Vermont, U. S., in 1828. Mr. Ogden lived at Morrisburg, Dundas Co. The horse was a dappled gray, with white mane and tail, and was only a half-bred, to say the most of him. He was mated with a pair of gray mares in Mr. Ogden's possession, which were of French extraction, and produced some good horses, some of which were kept for stud purposes, and they were all called Messengers in those days, and those are the horses that founded the Messenger family in Canada. They were very different horses to the present-day trotter; they were wide between the front legs, had short backs, and were stronger built than the present Hackney, but none of them were particularly fast trotters, but had any amount of pluck and endurance.

GLANDERS IN MAN.

From a human sanitary viewpoint, glanders is one of the most important infectious diseases of animals, because it is directly communicable to man. Slight abrasions of the skin, and especially of the hands, have been known to form a channel through which the human subject has contracted this most dreaded malady. The symptoms of glanders in man are of much importance to the veterinarian and horse owner. Although man's susceptibility to the disease is not very great, cases of human glanders unfortunately occur. It has been especially noted among veterinarians and those having the care of horses. The parts usually first affected are the hands, mucous membrane of the nose, lips and external portions of the eye. After a period of incubation of from three to five days, the affected part becomes swollen and painful, with subsequent inflammation of the lymph vessels and swelling of the glands. Fever is often the first symptom, and it is nearly always followed by a discharge from the nose, pustules in the skin, ulcers of the mouth cavity, larynx and conjunctiva. As a rule, death takes place in from two to four weeks, and occasionally in a few days. Treatment is usually of no avail. A few cases purely local in their manifestations have been reported cured by deep cauterization.

LIVE STOCK.

IMPROVING THE SHORTHORN BREED.

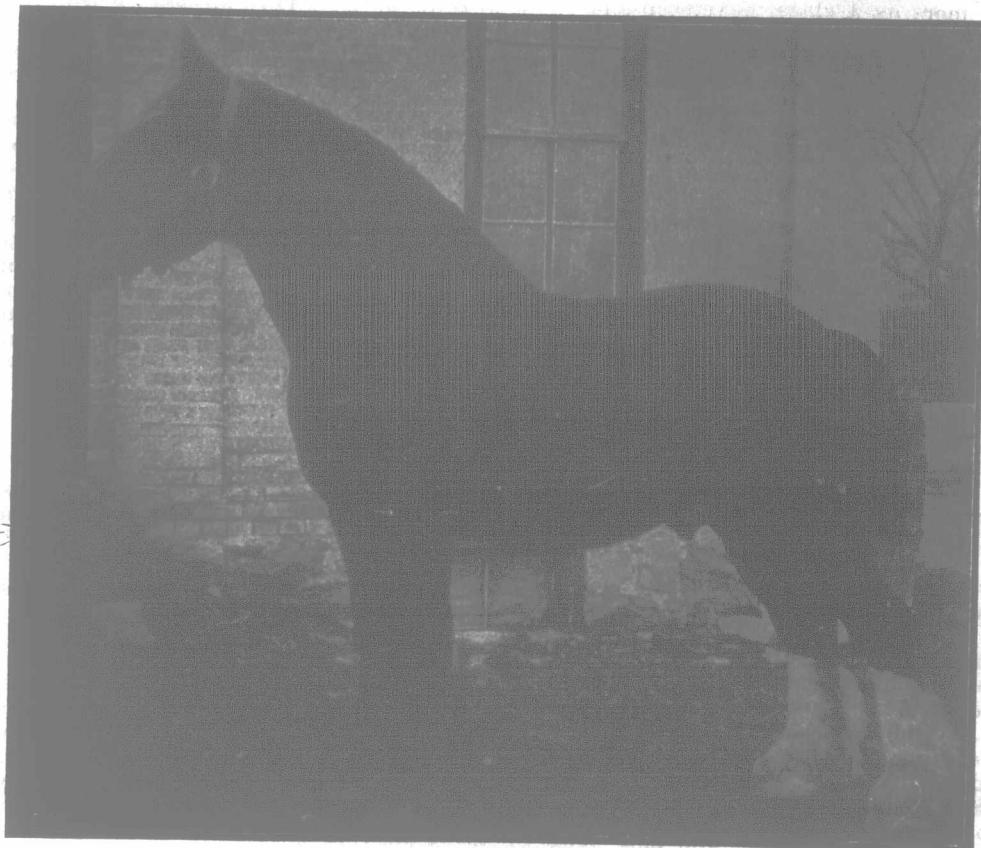
From an address by Prof. W. J. Kennedy, Iowa Agricultural College, before the Central Shorthorn Breeders' Convention, at Kansas City, February, 1907.

The secret of success in any line of work is to first find out exactly what the markets demand; and, secondly, to produce the same. If we do not know what the masses of people are demanding, we are not very likely, by haphazard methods of breeding, to produce the same. On the

other hand, if we do know what the masses are demanding, and do not make consolidated and systematic effort to produce the same, we are entitled to be classed as "back numbers" or "has beens," and have no place among progressive and up-to-date breeders and improvers of domestic animals.

While many people have had more extended opportunities than the writer to study the present-day demands of the American stockman, still he is going to give you the benefit of what he has gleaned during the past few years in this connection. The stockmen of America to-day may be divided into three rather distinct classes, so far as their work in the production of cattle is concerned, viz., beef-cattle men, dual-purpose-cattle men, and the strictly dairy men. The latter class confine their attention to the strictly dairy breeds. The first two classes have always been more or less interested in Shorthorn cattle. They constitute a very large class in America today, and their demands are worth catering to. Without these people, the Shorthorn breed would not be in demand at all.

Now, what do these people demand? The beef-cattle man is directly concerned in the production of meat. He must be guided in his operations by the demands of the packing-house man. Thus, we must start at the packing-house and work back to the farm. The packing-house men are demanding the low-set, wide, deep, blocky animals, with the highest possible percentage of high-price cuts and the least possible amount of waste and cheap meats. In addition, these animals must possess a very liberal amount of lean meat, intermingled with the fat, so as to present an evenly-marbled appearance. These steers are the kind that have been winning the championships and grand championships in the individual and carload-lot exhibits at the leading American



Berrywood Drayman (imp.) (22107).

Shire stallion; bay; foaled 1902. Winner of first prize, Ontario Horse Show, Toronto, 1907. Owned by Thomas Skinner, Mitchell, Ontario.

Then we turn to the Shorthorn, and what had our forefathers to commence with but a lot of mongrels? For instance, Dalton Duke (608) had black-and-white legs to the knees—a brindle, inclining to black. Mr. Chas. Colling's black-faced Foljambe was the sire of both the parents of Favourit (252), and Favourit himself had almost black horns; and yet we have often heard breeders state that no Shorthorn is pure-bred that does not trace to Favourit (252). Then, for instance, take Mr. Hutchinson. When he made the breed of pigs now known as the Yorkshires, he used two distinct breeds for many years, namely the large, old, lop-eared Yorkshire and what were many years ago called the Chinese. He used to say to me, "I can do it; I know I can," and that meant he could in time put the head of the Chinese pig on the Yorkshire body without shortening the body of the Yorkshire; and we see how well he did it. So, I think, the people must be allowed to go on cross-breeding, and perhaps someone will evolve a better breed of horses, cattle and pigs than we have at present. WM. LINTON, York Co., Ont.

fat-stock shows. If you expect to meet the best demands of the beef-cattle men, you must produce bulls of this type, because high-class steers have never been sired by an inferior bull. These are the market demands, and no attention whatever is paid to the color of pedigree of the steer, provided his form meets with the approval of the eye, and his flesh the touch of the butcher. Will the type of Shorthorn you are breeding fill the bill? If not, and this is the market you are breeding for, you should either make a change for the better, else get out of the Shorthorn-breeding business.

The dual-purpose-cattle man demands an animal that combines in a very liberal way the ability to convert food into milk and butter-fat when used in the dairy, and to freshen rapidly when placed in the feed-lot, and whose calves will develop into very acceptable fat bullocks. The fact that an animal does not meet the demands of the beef-cattle man is no criterion that it is a dual-purpose animal. In the great majority of instances it is unmistakable evidence that it does not belong to any profitable class of animals. Just because some good milking animals are rather high-set, and do not possess all those characteristics essential in the make-up of the ideal beef bullock, is no guarantee that every animal which does not possess the approved beef type must be desirable from the standpoint of milk production. That there is a dual-purpose animal, cannot be successfully contradicted. That these animals are far too few in numbers for the best interests of the farmers of the Middle West, is to be regretted. That the breeder who attempts to perpetuate both beef and milk in the same animal has a most difficult task to perform, cannot be denied; but it can be done, and the man who does it will be well repaid for his trouble.

This is one of the lines of work which breeders of Shorthorn cattle must take up. No other breed can compare with the Shorthorn from the standpoint of beef and milk, where proper care has been used in the selection and mating of the animals. But you must give this matter more consideration. Shorthorn men, as a class, have been working the bluff game too long. The time is at hand when the Shorthorn cow must be more reliable from the standpoint of a milk-producer, if she is to retain the position which she has so nobly occupied for almost a century—the world's most famous beef-and-butter cow. It is up to the breeders of this breed to say whether or not she must lose her place, but one thing is certain, and that is, there must be more milk, else there will be fewer of the red, white and roans.

Having discussed the essentials which are and will be demanded of the Shorthorn cattle, another important point has been reached. How are we to improve the breed, maintain a high standard of excellence, and let those outside of our own fraternity know what we are doing?

There are, perhaps, many things which might be discussed in this connection. But two will be treated at this time. In the first place, no breed of animals has ever been brought to a high standard of excellence, and that standard maintained for any considerable length of time, where a vigorous process of weeding out the inferior animals and the retaining of only those animals of the desired type was not pursued. Even where the most rigid precautions in this direction are pursued, inferior animals among the offspring are always too much in evidence. Too much attention cannot be given to this phase of the work. Breeders must castrate more of their young bulls. This is not poor economy. It is much more profitable to produce a \$75 steer than a \$60 bull. Just so long as you produce \$60 bulls you are depreciating the value of Shorthorn cattle and emphasizing the strong points of the other breeds whose breeders are more aggressive and wide awake to their own best interests. There are many breeders of Shorthorn cattle at the present day who are advertising from six to twenty young bulls for sale who should be feeding more than half of that number of pure-bred Shorthorn steers in the feed-lot, not with the hope of topping the market, because they would be most fortunate at marketing time if they got within a cent or two cents a pound of the extreme top. It is the sale of this kind of bulls that sooner or later ruins any breed. When you commence castrating your bull calves, don't stop when you have picked out the off-colored ones, or the cock-horned ones, but be sure and find every young bull that would not make at least a steer that would sell when fat for within a half a cent of the top of the market. Next year have a little higher standard, and, by continuing in this way, you will not only be benefiting yourself, but the entire community. Do not try to convince yourself, and then later on convince some new beginner in the business, that long legs, coarse shoulders, light bodies, flat ribs, cock horns and cat haws are sure indications of milking qualities in the young bull, especially if his dam did not have enough milk to half nourish him during the first five months of his life. Keep only those young bulls for breeding purposes which you would deem good enough to use at the head of your own herd, and then

you will be doing a noble and lasting work for the breed.

So much for the methods of improving and maintaining the same in the breed. The next step in our work is to demonstrate that we have the goods. How can this best be accomplished? There is a very true saying that "Nothing succeeds like success." Just apply this to the animals of the Shorthorn breed. The best way to demonstrate that the Shorthorn cow is capable of producing milk and butter is to keep a yearly record of the amount of milk and butter-fat she produces. Do this yourself, because no sane man will accept the calf's evidence of what the dam can do. The man who will keep such records, and who owns good producing cows will experience no difficulty in disposing of all of his bull calves at very remunerative prices as fast as they reach a serviceable age. There is a strong and growing demand for this class of Shorthorn cattle.

Shorthorn breeders must pay more attention to their exhibits at the various fat-stock shows. This is a feature which cannot be overlooked if the breed is to occupy a position in the very front rank of the beef breeds. These steer shows must be improved, both from the standpoint of the number of entries and the quality of the same. At the recent International Live-stock Exposition, the real good Shorthorn steers present could be counted on the fingers of one hand, and those possessing grand-champion requisites were conspicuous by their absence. Fully fifty per cent. of the steers brought into the judging arena were not good enough to be classed as good yard cattle, to say nothing of show-yard quality and condition. Such a condition of affairs must not prevail at future shows. The Shorthorn breeders of this country have the material to produce International grand champions, and it is up to them to show their colors.

It takes persistent and well-directed energy to win in any line of work. There is but one way for Shorthorn breeders to produce high-class steers, and that is to use the knife freely.

You cannot produce such an animal from inferior parents. You cannot produce him from large, coarse parents. This animal, when produced, will be low-set, wide, deep, good at both ends and in the middle, and as smooth as an egg from every viewpoint. Such is the type of steer demanded, and none other will fill the bill. A steer of this conformation need not be overly large, as from 1,650 to 1,800 pounds, at from two and a half to three years of age, is ample weight. It is type, condition and quality that wins, and not pounds of flesh; but the more weight the better, so long as the other requisites are present. Steers of this conformation and finish are most generally produced from the medium-sized sire and the rather undersized dam, but both sire and dam must be right in conformation, possess unusual quality, and carry an abundance of natural flesh.

FORMALIN IN CALF SCOURS, AGAIN.

The Maryland Experiment Station, after testing formalin for calf scours, announces that it has found 1 part of formalin in 4,000 parts of milk will almost invariably destroy the organisms in the bowels of the calf that produces scours. Dissolve half an ounce of formalin in 15½ ounces of water and add a teaspoonful of this liquid to each pound of milk fed the calf.

We have previously called attention in these columns to the formalin treatment for calf scours, pointing out, also, that to prevent that fatal disease of young calves known as white scours, the best treatment is to wash the navel of the newborn animal several times a day for two or three days in a solution of one part formalin in ten parts water. This should always be done as a precaution whenever there has been any abortion around the stable, or when a case of white scours has indicated the presence of the germ. It is believed that contagious abortion and white scours have something to do with each other; at any rate, where abortion occurs, it is well to be on the lookout for scours.

As for the internal administration of formalin, it is important to remember that it will not cure all cases of scours. Those due to overfeeding, irregular feeding, feeding cold milk, filthy quarters, or to mechanical irritation of any kind, can be treated only by removing the cause and by the administration of a mild purgative of castor oil, say two to four tablespoonfuls, according to age. The formalin treatment is useful only when there is a germ to destroy.

EXPERIENCE WITH ILL-TEMPERED HOGS.

In answer to J. G. L.'s question in issue of March 7th, re slaughter-house hogs worrying one of their number, I have, in twelve years' experience, had two cases of pigs worrying one in the bunch fed at my slaughter-house. I thought the reason was that they got too much blood and flesh or that I had too many in one pen. My remedy was to divide them up into smaller lots of about four in a pen. I thought that it was only "bunch" hogs that worried one of their

number, as I had never heard of any farmers' hogs doing it.
Peel Co., Ont. FARMER BUTCHER.

THE FARM.

MUST WALK BEFORE WE RUN.

Editor "The Farmer's Advocate":

I have attended the annual meeting of the Farmers' and Dairymen's Association of New Brunswick off and on for the last twelve or fourteen years, and am grieved to notice a gradual and increasing decline in the attendance, and a general want of interest in these meetings, which should be of the greatest importance to the farmer. Of many reasons given, I am afraid the one that has done most harm is the stand taken by our Department officials in regard to dairying. They have always held that dairying would be found the best-paying branch of farming by the New Brunswick farmer; and, until lately, that corn in a green state, or from the silo, was the principal feed for the dairy cow, after grass; and that if the farmer could not see this, or failed in growing corn, it only proved that his education along these lines had been neglected. To remedy this deficiency, gentlemen from a corn country were brought to these, and Institute meetings to instruct us how to grow corn, build silos, breed and feed dairy cows, etc., were held. They would not admit that the climate was unfavorable to a thrifty growth of corn; the trouble was all with ourselves, who must have failed to go about it in a proper manner. They could not see why we did not tile-drain our land, get sufficient vegetable matter in our clay land, as humus, to prevent the frost throwing out our clover; build up-to-date barns, with concrete basements, which only cost a few thousand dollars, or supply ourselves with the best time-saving machinery. I tell you it took the conceit out of some of us—the thought of who should own the farm before these improvements were well commenced. These things will come in time, but it will take years—in new settlements a lifetime, and in most of our Province agriculture is new. Meantime we have to get along somehow, as best we can. But anyone with only a little knowledge of our climate and conditions should know that such advice was neither practicable nor possible of being followed. Nevertheless, we owe thanks to these gentlemen for many good ideas in connection with these matters. I suspect they owe it to their fathers, that costly improvements give them so little thought. But of late we have had men who did not claim to understand our conditions, and confined themselves to general principles, and were highly appreciated.

For local men, it was natural that the most successful dairymen should be chosen as speakers at the Association and Institute meetings. But these men were generally from favored localities, more or less sheltered from the chilling vapors which envelop the greater part of the Province for days at a time in early summer. Besides, their farms were, in general, handy to some center of industry where milk and butter, carefully handled, brought extra prices. The experience of men so situated could not be expected to agree with that of men whose only market was the country store, where they had to take such barter as they could get. Beef cattle, lambs and hay were the only articles of produce which brought money, away from these centers. During the last few years there has been a great improvement in this direction. Money is paid for almost all classes of produce, and, of course, better prices. The cold winds which retard and often stunt such crops as corn and mangels, are healthful and bracing, and go far towards the making of the sturdy men, women and children common to our Province. I remember two summers that our friends the cool breezes deserted us; they are known as "the years of sickness." Corn throve and ripened, but there was much sickness amongst all classes, and many deaths amongst the young and the aged. We can grow such crops as are grown in the north of England, in Scotland, and in Ireland, and I think it will be allowed that farming pays in these countries, even after paying ten dollars per acre per annum for the use of the land; and that they make lots of very good butter and cheese without corn, but largely off turnips, which we can grow just as well as they can.

A good many followed the instructions given to grow corn, and persisted in it for years, but with very little success. Cheese and butter factories were built and operated. In favorable districts they are doing well; in others they were short-lived. In this neighborhood, those who went strongly into dairying, after giving it a fair trial, found themselves poorer than under the old system of mixed farming, and gave it and corn up together, wishing confusion to all theorists. This was under the system of collecting the whole milk. I believe it might give better satisfaction

under the new system of collecting the cream only.

I believe dairying would pay all right if our settlements were well filled up, bringing the people together. But time will be required to work up the land and to have it in regular rotation. This, with suitable buildings and other conveniences, requiring time and money, would make dairying more profitable and easy. Most of our land is new and rough. In most cases the older land has been robbed of its fertility by growing hay and oats and hauling to the lumber woods, and returning nothing to make up for the waste.

I have reason to believe that our Provincial agricultural officials realize that the lecturer has, in general, been too far advanced for the great majority of our farmers, and I have great hopes of these meetings becoming more and more suited to the needs of our Province. When this happens, the confidence of the farmer will quickly be restored.

W. L. McPHAIL.
Victoria Co., N. B.

FOLLOWS THE DRILL WITH THE WEEDER.

Editor "The Farmer's Advocate":

As the time for tilling the soil and sowing the seed has once more come around, it may be of some interest to your readers to know the results of a little experimental work carried on by the writer during the spring and early summer of 1906. I have used the implement known as a weeder for the past five or six years, but during that time I had confined its sphere of usefulness to the cornfield, and even then had not continued its use after the corn had grown to three or four inches in length. Last spring, however, I resolved to see what the weeder would do in other lines, and so, after having drilled in a field of grain, I went crosswise over it with the weeder. It wasn't hard to notice the beneficial result, for in the parts of the field where the ground had been rather too damp to permit of perfect covering, the weeder had done the work, and not a grain was to be seen. The ground was also left in a better condition, lumps being pulverized that no amount of harrowing seemed to affect. In this respect, it seems to me, the weeder, to a great extent, takes the place of the roller, with the added advantage of leaving an earth mulch that tends to prevent evaporation of soil moisture, whereas the roller, as generally used, is about the best implement I know of to create a condition favorable to the drying out and baking of the soil. Of course, the weeder must not be used when the ground is wet. I have found that the best time is shortly after a rain, when the earth is just dry enough to crumble under the implement. The soil is then left like a garden. How often this process should be repeated, depends on circumstances, such as time, frequency of rains, etc. It is not always practicable to go over a grain field more than once with a weeder, but even this will be found of great benefit if done soon after the drilling, so that all grain may be covered and get an equal start. On one field of new land that I sowed last spring the sticks and sods were so numerous that it was almost impossible to make the drill work to any advantage, so I took the drill hoes off entirely and sowed the grain broadcast, having in the meantime had a third horse attached to the weeder, and telling the boy to follow me with it. We finished nearly at the same time, once over the field with the weeder being quite sufficient to cover the grain and to leave the ground smoother than it would have been left by the harrows. As to results, it is a little difficult to speak with certainty, as I made no comparative experiments, but the yield of grain at threshing time, I think, justified me in believing that I had been well paid for the extra work that the use of the weeder had involved.

To sum up, the benefits resulting from its use are: Pulverization of the soil, perfect covering of the seed, retention of the soil moisture through the breaking up of the crust formed by heavy rains, and saving of horse-power, in that one horse is all that is necessary to do as good work, in many cases, as could be done by a team and set of harrows. But it must be understood that no hard-and-fast rule can be laid down for its use. The intelligence of the individual user must guide him as to time and place. As Wallace's Farmer says, "We do not know of a more useful implement on the farm than the weeder, provided the farmer understands how to use it properly. We don't know of any more useless article in the hands of a man who has not mastered its use and does not understand the principles of soil cultivation."

A good plan, I think, for the inexperienced is to start in in a small way, and then, as practical knowledge is gained the value or otherwise of the proposition will be apparent. However, I feel sure a fair trial at the hands of the farmers of this country will prove the value of the implement, and result in better crops and cleaner fields than we have at the present time.

J. E. M.
Glengarry Co., Ont.

KEEP HAMMERING AWAY.

Editor "The Farmer's Advocate":

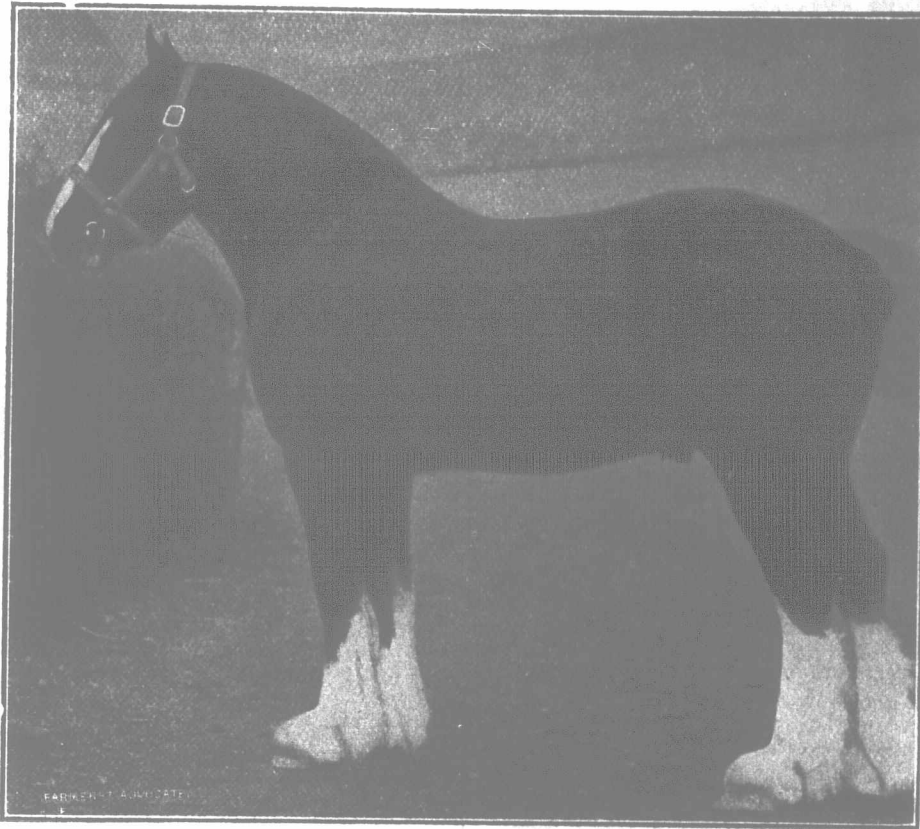
In reply to your communication of March 14th, I regret to say that, owing to the short-sighted policy of previous owners, our farm has no wood-lot, and I consider it a serious defect in any farm. If I were buying a farm now, I would make a special point of securing one with a well-preserved wood-lot. However, we are interested in the forest nursery in connection with the O. A. C., Guelph, and hope to make a small beginning at a plantation, chiefly on otherwise unproductive land.

I am glad to note your efforts to arouse owners to a sense of the necessity of shutting stock from wood-lots. I think few farmers realize how quickly a bush will become filled with a dense undergrowth of young trees after stock are fenced out. A neighbor began to do this eight or ten years ago, and now the lot is growing up thick with young maples. Here a few men are becoming alive to the situation, and are giving their lots a fair chance to become restocked with young growth.

The Downey Bill should be made effective by Municipal Councils passing by-laws, but whether it would have much practical result would remain to be seen. However, it could do no harm, and its tendency would be toward wood-lot preservation.

I trust you will keep hammering away at this subject, and that your efforts will arouse the public conscience. The only trouble is that many who need it most do not read "The Farmer's Advocate."

J. R. COLEMAN.
Middlesex Co., Ont.



Oyama (13118).

Clydesdale; bay; foaled 1904. Winner of Cawdor Challenge Cup in 1906, and Brydon Challenge Shield in 1907. Sire Baronson, by Baron's Pride.

FARM INCOMPLETE WITHOUT A WOOD-LOT.

Editor "The Farmer's Advocate":

I am very much in sympathy with any effort to save our woodland. I have about eight acres, nearly all hard maple, with a few beech and rock elm. Excepting a little distance around the edges, the grass does not grow in it. No stock of any kind have been allowed in it for ten or twelve years. We only cut the poorest trees, or those that die, but keep all fallen limbs gathered. The trees, although large and full-grown, are very healthy. We wished to see the bush remain where it is and become thicker. I would not like to own a farm without some bush. It is a fine place to wander in. I would also like to see the birds and squirrels, especially the black squirrels and chipmunks, left some cover and protection.

Although the monetary side was not considered in fencing off our bush, still I believe it pays us. My bush is on the north-west side of the farm and buildings, and the protection it affords is very noticeable. It is worth preserving for fuel and shelter. Then, too, it is partly on a side hill, of which we cultivate too much already. I believe it would pay us as well in syrup. The matter of a woodland-exemption by-law was brought to the attention of our council this winter, but they interpreted the act to mean that a man would require to have one hundred acres of woodland to get ten exempt. That would render the act useless. The exemption would not amount to much, and would throw that much more on the balance of the property. Still, it might show

more woodland cared for than is suspected. Would like an opinion as to what the act referred to means. Is the wording clear enough?

Oxford Co., Ont.

D. M. ROSS.

[Note.—The council is entirely mistaken. See editorial on the subject in this issue.—Editor.]

CARLETON COUNTY CORN CULTURE.

Editor "The Farmer's Advocate":

We generally grow about seven or eight acres of corn, and have a corn cutter and silo. In the fall we plow our ground deep, about four to five inches; then in the spring, about the middle of May, give the ground a good cultivating with a spring-tooth cultivator, after which we apply a good coat of manure—about twelve loads of a 55-bushel manure spreader. We use the spreader because we consider it the best way of handling manure. After a week or two we again put on the cultivator, going over the ground three times, as this is needful to work manure well into the soil. We consider this way better than plowing manure down, because it benefits the young plants sooner.

Having ground now in shape for planting, we first roll it, then use marker, which is made of a plank ten feet two inches long, to which is attached a pair of shafts. Plank is then divided into three parts, each being three feet two inches apart, divisions being made of short pieces of plank shaped like a sleigh runner. The two outside parts are hinged, so as to turn up over middle one for handiness. Weights consisting of bricks are placed one at each outside end of marker to keep it down; a short iron bar fastened to back holds

center down. A rope attached to the marker is used for lifting it when turning. We first mark the ground across, then lengthwise. As soon as the man who is marking gets a start lengthwise, planting is begun. We use the one and two-handle planters, both. If ground is in good condition, one handle is best, being the speediest.

As regards kind of seed, we find Longfellow and Early Learning best suitable for our land, which is clay loam; also because it ears so well, making the very best of silage.

When corn is just through the ground, we go over it with the drag harrow so as to kill any weeds which have taken root. When corn plants are up about three to four inches, we go through it with horse cultivator, ground being nice and mellow, and rows so even there is no danger of covering

or pulling out any plants. Through it once, we let it stand about a week and then cultivate the other way. Sometimes this is all it needs, but we generally give a third stroke, putting earth up to plants this time.

On about the last week of September we start to harvest corn. We do not use the corn-harvester for cutting our corn in the field, but by changing work with about four of our neighbors who have silos, we have a gang of about eight men, which is enough to handle corn, except when filling silos, when we have two extra men. This gang of men will cut eight acres in a half day with corn hooks, and if corn is a good heavy crop will fill silo in a day and a half. We use truck wagons, with corn racks, expressly for drawing corn. About the first of December we open our silo, which, if it has been well tramped, will be but very little spoiled on top. Would not handle corn at all if we did not have a silo. There is no feed as good for keeping cattle in good health as ensilage, or for making beef. It is also the very best feed for milk cows through the winter, and when three or four neighbors club together and get an outfit, it is not expensive.

Carleton Co., Ont.

FARMER'S SON.

Set aside this spring an acre or two of choice soil. Sow it with choice, hand-picked grain. Prepare this land extra well, and sow it thinly. In harvest, select from it the best heads from the most vigorous plants to sow on next year's seed-plot. Use remaining seed for general crop.

VARIETIES AND SEEDING METHODS IN P. E. ISLAND.

Editor "The Farmer's Advocate":

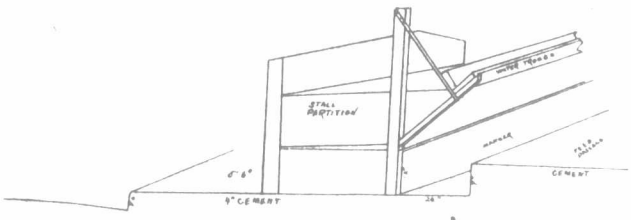
Regarding your inquiry concerning favorite varieties of farm crops grown in this section, I think, for oats, Banner appears to be a hard one to better, and is grown by a large majority, with Duckbill two-rowed barley and Fife wheat. All our land is pretty light, and if lodging is anticipated, we sow early and fairly thick. Peas, which were once a popular grain, sown with oats and barley, but abandoned some years ago on account of the ravages of the weevil, are being sown again, and usually prove a splendid producer with us. Longfellow corn is the variety grown for ensilage. We get some good crops, with well-matured ears, and some new silos are still being built. I think this crop can be successfully grown in most places on the Island. Our McIntyre potato is still the favorite late variety, but Green Mountain is being introduced, and may supplant it to some extent, especially for the American and Montreal markets. Mangels are not largely grown, the Long Red being the usual variety sown, but turnips are a very important crop here with every stockman (I was going to say dairyman, but remembered in time). I don't think they can be grown to better advantage in any country. Last season we actually hauled off more loads of these roots from their field than loads of manure were hauled on. Haszard's Improved is our old stand-by. Carrots, beets and cabbages are grown in considerable quantities for the Cape Breton market, and all are profitable crops. Our old rotation is sod, oats, roots, wheat (seeded with four pounds red clover and six quarts timothy), two crops hay, and two years' pasture. The usual preparation for grain is fall plowing, pulverizing well in spring with disk harrow. Only hoe drills are yet in service,

and, as our soil is exceptionally easy to cultivate, only two-horse and three-horse teams are used. Alfalfa is not making headway in this vicinity, but we hear encouraging accounts from other parts of the Province. WALTER M. LEA.
East Prince, P. E. I.

A PEEL COUNTY WATERING SYSTEM.

Editor "The Farmer's Advocate":

Enclosed you will find a rough sketch of our inside watering system, which will, we hope, be self-explanatory. We have had this system in use almost three years, and are well pleased with it. Water is forced by windmill through pipes 3½ feet underground (should be deeper if much exposed, as hillside, for instance) to wooden tank of 1,000 gallons' capacity in hay mow, from whence it is drawn by 1-inch pipes to troughs il-



lustrated. When threshing, filling silo, washing buggy, etc., we attach a 50-foot length of hose to tap in stable, and thus save much labor. Our cows do not shrink in milking when they have water before them, and they drink several times each day. The total cost of installation was \$160, watering 20 cattle, and tap in horse stable. Anyone installing a system, would do well to use galvanized pipe, have a "shut-off" under tank, use several "unions," not let the erector put in

ungalvanized "nipples" or short pieces of pipe, which soon rust out. Be careful not to have pipes against outside stone wall, if possible, as frost is easily conducted by wall.

The above manger and stall is suitable for either single or double stalls. We use no partition in manger, thus making it very easy to clean out. Trusting the above may help someone.
Peel Co., Ont. W. T. DAVIDSON & SON.

ANOTHER ALFALFA ENTHUSIAST.

Editor "The Farmer's Advocate":

I will tell you the reason we started to grow alfalfa. Five years ago I went to Colorado for three months, and there I fell in love with alfalfa. I never saw any kind of feed to equal it for all kinds of stock. There they cut it four times in a season, and it yields about eight tons at the four cuttings per acre. We have been growing it for four years, and have eight acres; we cut it twice, and then pasture. We get about two tons an acre the first time, and one and a half tons at the second cutting. We top-dress with barnyard manure with a manure spreader, and have had good results. We find it does best on high, dry land. We seeded with one bushel of barley to an acre for nurse crop. It pays to sow twenty pounds of seed to the acre. We think it is the most profitable kind of feed that can be grown for all kinds of stock. When green, it makes great feed for pigs and poultry of all kinds. I am sure the time will come when every farmer will be growing it, and will thank "The Farmer's Advocate" for what it is doing in advertising it. In some of the Western States they kiln-dry alfalfa, and grind it and sell it in bags for meal. It is counted equal to bran for stock. Hoping you will ever keep alfalfa before the public, to induce some farmers to try it.
Elgin Co., Ont. D. G. WILLSON.

Bean Production, Grading and Marketing.

Beans being one of the most convenient and nutritious of human foods, the consumption of which throughout the world is steadily on the increase, and probably in no other country more rapidly than in Canada, in its present remarkable era of development, it is not surprising that bean-growing should become an important branch of farming where the soil and other conditions are favorable. Unless the growth of beans should greatly forge ahead, men in the trade forecast that the Canadian demand will ere long overrun production, and the country will be importing instead of exporting beans. In the last fiscal year Canadian exports aggregated in value \$304,719.

Substantially, Ontario is the bean-growing Province of Canada, or, to be more exact, that portion of it lying south of a line running from Toronto to Sarnia, and the Counties of Kent, Elgin, Middlesex and Essex probably produce over seven-eighths of the entire crop. It is over fifty years since commercial bean-growing was introduced in Kent by some Americans named Ransom and Hardy, and the 920,000 bushels produced in 1906 would reach a valuation of considerably over \$1,000,000, or an average return of over \$17 per acre. Michigan is the biggest bean-producing State in the Union, the crop of 1906 amounting to over 5,000,000 bushels. It is claimed by some that a well-cultured crop of beans is as good a preparation for winter wheat as a summer-fallow; bean straw is used as a feed for cattle and sheep, and, with modern machinery for planting and handling the crop, the labor is very much reduced. But everything is not always lovely when the goose hangs high with the bean-grower, as the following letter from a Kent subscriber sets forth:

BEAN-GROWERS' GRIEVANCES.

Editor "The Farmer's Advocate":

As this part of Ontario, which is called East Kent, is noted for bean-culture, and for the benefit of the farmers who read your journal from week to week, I would suggest that you write up more about beans and the bean markets. I see by one issue, beans quoted from \$1.55 to \$1.60 for hand-picked, primes \$1.35 to \$1.40. Now, will you explain through your paper for the benefit of farmers what is meant by "primes," what they should pick away per bushel. Now, looking at the market quotations, a person would come to the conclusion that beans were certainly paying farmers; but they certainly are not, for the fact of the matter is they only averaged between 12 and 15 bushels per acre for the year 1906, owing to the dry season. Recently they were only paying \$1.05 for what people up there call prime beans, and there is no money to be made. A person can easily get from 50 to 60 bushels of oats per acre, and they are worth 40 cents a bushel now, and the outlay or expense in raising an acre of oats is nothing compared to beans. My beans did a good deal better than yours, they weighed up 24 bushels per acre, but the average is as I stated. In conclusion, I will say unless this bean combine will break up to some extent, they will find the farmers of the

will turn their attention to the growing of some other crop. Farmers are not a kicking lot when they know there is not too much difference between the producer and the consumer; by that we mean we don't like to see the middleman make as much for handling them as the farmer gets for growing them, everything thrown in.
Kent Co., Ont. WM. BLUE.

[Note.—We submitted the inquiries re grading beans to a number of leading dealers, as well as to our Toronto market-reviewer, and, from the correspondence received, it would appear that "prime" beans are those that will pick away not more than three pounds of dirt or unsound beans to the bushel, and that "hand-picked" are supposed to be free from all such impurities, and on the market are worth 15 cents per bushel more than "primes." The prices quoted in our market report are for broken car lots to wholesale dealers.—Editor.]

JUNE PRICES OF BEANS TO ADVANCE.

Editor "The Farmer's Advocate":

"Primes" are beans that will waste not more than three pounds to the bushel. By waste, we mean discolored or damaged beans. "Hand-picked" is the highest grade, and commands about 15 cents per bushel more on the market than "primes." The variation in price is regulated according to the supply and demand. The highest price paid for last season's crop was \$1.20 for one-pound pickers; this means that \$1.20 was paid for beans that did not waste more than one pound to the bushel. Beans of this quality are about as good as can be marketed by the farmer without being put through machinery that is used for the purpose of picking and brushing them. We expect that about June the market will advance about 10 or 15 cents per bushel, as June is the month for planting, and there is generally a good demand in that month.
Kent Co., Ont. JOHN A. CAMERON.

SUPPLY AND DEMAND GOVERN BEAN PRICES.

Editor "The Farmer's Advocate":

"Hand-picked" beans are our highest grade, and are practically clear of damaged beans, lumps of dirt or stones, or within 1½ per cent. of being perfectly clear of the above. They bring the highest price, which, at this writing, is \$1.25 per bushel, put up in jute bags, bags free, invoice on gross weight. The other quality of beans is what we call "primes," and designated as two, three, and four-pound pickers per bushel; i. e., there can be two pounds, three pounds, and four pounds of damaged beans, lumps of dirt or stones picked out or cleaned out through our graders and machines we have for that purpose. The value of "prime" beans is arrived at by deducting from the H. P. price for each pound of dirt or stones that can be taken out of a bushel. For example, if we had pickers would be 5 cents less

than the H. P., three-pound pickers 5 cents less than two-pound, or 10 cents less than H. P. For four-pound pickers, an additional 5 cents, is deducted from the value of three-pounders. All the beans sold are put up in jute bags at the above prices. If put in barrels, an additional 3 cents per bushel is added to the above value; or, in cotton bags, 4 cents per bushel is added.

There has been very little variation in the value of beans this season, as the crop was of uniform good quality, being saved in most sections without rain at harvest time, and the average is about two pounds waste after being cleaned. Values at the first of the season (which is in October) were the highest on the crop so far. As to what factors enter into the fixing of prices of beans, we reply, supply and demand invariably govern prices of beans, as well as other articles of farm produce. We look for values to go somewhat higher before the new crop appears. It all depends upon the number of acres planted and the yield per acre, and whether there is an export demand or only home trade to supply. There has been very little export trade this season.
Kent Co., Ont. J. B. STRINGER & CO.

CANADIAN AND AMERICAN BEAN TARIFFS.

Editor "The Farmer's Advocate":

By a "prime" bean is meant a quality of beans which will pick a certain percentage of dirt, split beans and colored beans. The limit of prime beans is that quality that would pick three pounds to the bushel. Beans are bought on hand-picked basis; for instance, if hand-picked beans are worth \$1.15, beans picking one pound to the bushel, 5 cents per bushel less; two pounds, 10 cents per bushel less; three pounds, 15 cents less—or, 5 cents a pound. This rule is always not strictly adhered to, and beans running within three pounds to the bushel would average a flat rate of \$1.10 this season. The highest price paid this season would be approximately \$1.20; the lowest, \$1.00.

There are many conditions which affect the price of beans: The demand for home consumption, the export requirement to foreign countries, and the demand in the United States; but the past two or three years we have been unable to put any beans in that market, owing to their price being so near our own. Against this we are handicapped by a duty going over there of 45 cents per bushel, while the duty on beans coming into Canada is but 25 cents per bushel. This was raised from 15 cents in the last adjustment of tariffs, but it is not sufficiently high yet, as all the country west of Calgary is being supplied by American beans. These beans come from California, which is one of the bean-producing States in America. They can load beans at San Francisco and other Pacific points, and ship them up to the northern mining countries at 10 cents per 100 pounds, against a rate from Ontario bean-raising districts of 85 cents per 100 pounds. So you can see they can afford to pay our duty and then land their beans cheaper into this market.

As we have had very little export demand this year, most of our beans have been consumed in Canada, and this market is soon filled up. At present time prices are nominal, at about \$1.10 per bushel. We consider there is about one-third of the crop in farmers' hands. Approximate estimate of the bean production in Kent, Elgin and Middlesex this season would be between 500,000 and 600,000 bushels; so if there is not some export demand to take this away before the new crop arrives, we do not look for any advance in prices.
F. B. STEVENS & CO.
Kent Co., Ont.

Editor "The Farmers' Advocate":

Nearly all the beans grown in Ontario are known as the "pea bean." Our estimated crop last year was 920,000 bushels. This was made up as follows: White Pea beans, 880,000 bushels; Yellow Eye beans, 20,000 bushels; Marrow beans, 8,000 bushels; Red Kidneys, 3,600 bushels; Black Turtle Soup, 3,000 bushels; total, 920,000 bushels.

Beans have been successfully grown in Ontario since about the year 1852, when bean-growing was introduced by some Americans from York State, who settled in the Township of Harwich, Kent. The area has been extended for raising beans, until now it reaches from Hamilton to London, and London to Sarnia, taking all the southern portion of Ontario to the lake shore. From 1852 until 1860 the white medium bean was grown entirely; then the pea bean was introduced, and has superseded the medium bean. Prices of the different kinds of beans vary a great deal. On a recent date prices at New York were as follows, all on H.-P. basis, in bags and barrels, included in price: Marrows, \$2.20 per bush.; Mediums, \$1.50 per bush.; Pea beans, \$1.55 per bush.; White Kidneys, \$2.90 per bush.; Red Kidneys, \$2.30 per bush.; Black Turtle Soups, \$2.05 per bush.; Yellow Eye beans, \$1.95 per bush.

Hand-picked beans must not contain any dirt, and not more than 1 1/2 per cent. discolored beans. Good "primes" are known as three-pound pickers; that is, 3 pounds of beans out of 60 pounds might have a stain, but not over 1 per cent. of bad beans. Choice primes should not pick over 2 pounds to the bushel, with 1 per cent. bad beans. Strictly hand-picked beans are sold from 12 to 15 cents per bushel over 3-pound pickers. Machine-picked beans, which can only be done with good stock, 10 cents per bushel over 3-pound pickers. Beans delivered in Eastern markets are 5 cents per bushel higher in barrels than in jute bags, as you have to pay the freight on the barrels as well as the beans; no charge for packages in any case. Where beans are sold f. o. b. at places of shipment, when in barrels, 4 cents per bushel over jute bags.

With a long experience both in growing and handling beans, would recommend that beans should be planted on gravel or loamy land, and, when possible, on spring plowing on old sod or clover; turn over soil as deep as possible, put on your harrow, smooth the ground ready for planting, and by the time the roots of the beans have reached down to the decaying sod, the bean will be in blossom, putting forth pods, and you are almost sure of a good crop. With heavy clay, from the nature of this soil, you have to plow it when it is in proper condition, and unless the soil will pulverize well, it better be sown to something else than planted to beans. Thick clay soil would be more profitable to plant Red or White Kidneys or Marrows, as the stock is stronger and higher. At a Bean Association meeting in Detroit, in January last, I had the honor of reading a report on "The Canadian Bean Crop," and the privilege of listening to several other reports read by the bean interest in Michigan. Over 100 delegates attended the meeting, and many good papers were read—one by K. P. Kimball on "Bean Rust," which is also getting very prevalent in this country, and may turn out to be as serious to the bean industry as the San Jose scale is to our fruit. The opinion expressed at the meeting was that everyone planting beans should use hand-picked beans, and not plant any bean that had a stain or in any way marred—only beans that had a perfect white skin. By using this quality of seed and planting on deep plowing of sod, we would not be much affected with bean rust, and our average crop would be many more bushels to the acre.
N. H. STEVENS.

[Note.—In the report of the Michigan Bean-jobbers' Association meeting, mentioned by Mr. Stevens in his letter, are noted several references to the "territory" of regular dealers, though it was expressly stated that there was no objection to legitimate competition in any territory, providing the parties so disposed will maintain an equipment necessary to clean farmers' produce and to let it as it may be offered twelve months in the year. In one of the papers presented it was stated that violent fluctuations in the bean market were the result of overbuying and overselling

—in short, speculation. "The Farmer's Advocate" would like to hear from some of our leading bean-growers on the chief points covered in the foregoing correspondence.—Editor.]

CORN - GROWING AND TARIFFS.

Editor "The Farmer's Advocate":

"The Farmer's Advocate" is urging the testing of seed corn. The importance of this will be accepted by all, and it would be well if all would follow this good advice. A full crop cannot be grown with inferior seed. We have been growing silage corn since 1881. Being the first in Canada to build a silo, I made many expensive mistakes. We have learned a few things about silos and silage. We feed it summer and winter. We have tried many kinds of green crops, but find nothing to equal corn for that purpose; and find, for Middlesex County, that the dents are better than the flints for silage; they give a heavier yield per acre. The stalks and leaves remain green till the corn is well dented, while the leaves of the flint become yellow and the stalks above the ear become dry and brittle as soon as the glazing begins. The three we like best are, Butler's Dent, White Cap and Wisconsin White Dent. Many are recommending the Leaming. We find it has a hard, woody stalk, with fewer leaves and less corn than on the three I have named. Silage corn in this section; embracing Coldstream, Ivan, Vanneck and Ilderton, is a most important crop. But few, if any, can see much profit in husking corn. Oats are \$1.15 per cwt. now. We sold last summer for \$1.30. As long as we can sell at these prices, and get American corn at 95 cents, I am quite content to buy and sell. The

NITRO - CULTURE IN NOVA SCOTIA.

Editor "The Farmer's Advocate":

Under the direction of Mr. Fuller, of the Agricultural College, Truro, N. S., who is endeavoring to work up a Maritime Experimental Union similar to the one at Guelph, some sixty Maritime farmers experimented with nitro-culture last year. We had purposed making the culture at Truro, but our work in connection with this new institution was so varied that we finally considered it wiser to make arrangements with the Bacteriological Department at Guelph to supply us with cultures.

The results reported are really surprising. Fifty per cent. of the experimenters state that, by inoculating the seed of red clover or alfalfa clover with the cultures they got stands of these plants far superior to that obtained from the untreated seed. Thirty-three per cent. report slightly in favor of inoculation. The remaining seventeen per cent. state that they could see no difference between the inoculated and uninoculated plots. However, it is significant that in every one of these last-mentioned cases the stand of clover on both the treated and untreated plots was excellent, indicating that the soil already contained the bacteria essential to the growth of these plants.

By way of illustration of favorable reports received, I quote the following from a letter which came to the College recently. The correspondent writes: "I have been trying to grow alfalfa for the past two or three years, with poor results. My neighbor, Mr. ——— secured, two years ago, some nitro-culture, with which he inoculated his alfalfa seed, and he now has a splendid stand of that crop. I would like to secure enough nitro-culture from you to inoculate seed for one acre." Our reply was that we would supply this gentleman with nitro-culture free of cost, provided he would report the result of the experiment to us. In this connection I might add that we will supply any other experimenters in the Maritime Provinces this spring with nitro-culture upon similar conditions. The most phenomenal results brought to our attention last year were obtained from a farmer living some 20 miles away from Truro, who inoculated his soil by means of a load of earth drawn from a field on the College Farm on which peas had been grown the previous year. He had previously been trying to grow peas, with only fair success. Last spring he sprinkled the peas which he sowed with water drained from the load of soil obtained at the College Farm. He sowed some of these on a hilly field where peas



An Irish Jaunting Car.

three great sources of wealth are agriculture, manufacture, and commerce. As a farmer, I wish to use commerce to carry my produce, and I want to have manufacturers to supply me with shoes, clothes, tools, implements, etc. Thus, each helping himself, helps the others. In Iowa, forty per cent. of the land is under corn, and far better corn than we can grow. No corn is cut, and in the middle of November not the half of it is husked. Everywhere we see the wagons in the fields, the bright, hard corn rattling in the box.

The Globe, of March 13th, quotes American No. 3, 53 1/2 cents, and Canadian 46 cents. I am feeding Iowa No. 1 corn, that cost us, by carloads, about 90 cents. In Iowa, 32 pounds is called a bushel of oats, and they seldom weigh that, while old farmers assure me that yield and quality are both better than fifty years ago. The great benefit of exchange is clear. What, then, shall we say of a Government that bonuses commerce with one hand, and with the other puts up a tariff to prevent exchange, hindering commerce to help manufacturers, and preventing agriculture buying in the cheapest market and selling in the dearest? If every tub were allowed to stand on its own bottom, political corruption would be deprived of one of its strongest props. Is Fielding's proposed bonus to iron not an enormous bid for patronage? The iron bounties would amount to \$20 per head in his own Province. Happily, our political, as well as our commercial, view is broadening; Canada for Canadians, is too narrow and selfish. This crawling into a bottle and pulling the cork in after us, is too small for Canada. Let us be open to trade with the world, not forgetting our own people to the south of us.
Middlesex Co., Ont. THOS. B. SCOTT.

had never grown before. He also sowed part of this same field with untreated peas. The latter grew very indifferently, and early in the season withered away, whereas the former, that had been treated, produced a magnificent crop.

On the College farm Mr. Fuller has obtained marked results in favor of inoculation when growing alfalfa. With red clover and other legumes, however, no difference could be observed between the treated and untreated plots. The reason for this, evidently, was that the soil contained the organisms essential to the growth of red clover and the other legumes, but did not contain the organisms essential to the best growth of alfalfa. Last year a strip about 150 yards long was sown with alfalfa. The first five paces were sown with treated seed, the next five paces with untreated seed. Then came five paces of treated seed, and so on, to the end of the field. One of the members of the editorial staff of "The Farmer's Advocate" will, no doubt, remember walking over this field, where could be seen, distinctly marked, the alternating plots. The inoculated plots produced a relatively thick, healthy growth, whereas the uninoculated plots produced a comparatively sickly, yellowish growth.

As already indicated, this line of experimentation will be followed up next year. We will watch the results with interest.

M. CUMMING,
Principal Agr. College, Truro, N. S.

[Note.—The member of "The Farmer's Advocate" staff has a distinct recollection of the appearance of this field, which furnished strong presumptive evidence that one reason alfalfa and clover have so often given poor results at

first, but succeeded afterwards, is that the soil did not contain sufficient of the species of nitrogen-gathering bacteria peculiar to the plant in question, but that these became more numerous with each successive sowing. This same principle is one of the very strongest reasons for the practice of a short rotation in which clover occurs once in three or four years. Such a rotation has been followed on the Truro College Farm, hence clover can now be grown there well without artificial inoculation. In time the farm will also become seeded with the bacteria that work on alfalfa roots, and artificial inoculation will not be required for it, either.—Editor.]

TEACH BUSINESS PRINCIPLES IN RURAL SCHOOLS.

Editor "The Farmer's Advocate":

The teaching of agriculture in rural schools has had much said and written in its favor. So far, however, I have failed to notice that any one has advocated what, to my judgment, at any rate, is the most essential part of such teaching. For a young person, often of village surroundings, to teach a farmer's children the so-called rudiments of Agriculture, looks wise—at a distance.

Being a farmer by choice, making a living and a little more at it, may I be permitted to express the opinion that agriculture, in so far as it relates to the growth of crops, is much more readily learned at home. Imagine, if you will, a young person, often a girl, who never had, has not, and it would be strange if she should have, any desire to become a farmer, undertaking to teach from books something of which she has no practical knowledge. I call to mind at this moment the principal of a graded rural school who could, by diagram and illustration, demonstrate, to the bewilderment (?) of his pupils, the difference in foliage, tree and lumber of all Canadian woods; yet, when confronted with balsam and spruce in the forest, did not distinguish them apart. This is the so-called nature study. Does not the illustration typify the teaching of agriculture under circumstances already mentioned?

But to come to the crucial point. What a pity it is that our children cannot be taught that which observation in several Provinces and half a lifetime of experience leads me to believe is one of the greatest, if not the greatest, needs of successful farming. I refer to the financing or business side of agriculture. Thousands of farmers in the best farming districts of Ontario are, undoubtedly, as was recently urged before the Tariff Commission, "marking time." And this not because of poor crops or low prices, for the case is decidedly the reverse. Rather, I am sure, if the facts were known, because of the inability to properly handle the business end. How often the farmer gets behind, raises money by mortgage, and finally loses his place, which is redeemed again by another. Why does he "go behind," as the saying is? Is it not most frequently because of his inability to figure on the financial outcome? Let me illustrate: If the farmer has \$100 to invest, 3½ per cent. in the bank or 5 per cent. on a mortgage he is glad to get; yet, when he goes to borrow, say \$25 for a month, he receives from the private banker \$24, and pays back \$25 at the end of 30 days. Does not this work out at about 50 per cent. per annum? Nor would this be so bad if the money borrowed went to purchase some coming necessity at a low state of the market. There are times, perhaps, when such a condition of things might be turned to a profit. But when it is money to pay for an article already used up or well worn, and bought at a long credit price, the transaction cannot be borne many times by the same farm. The money-lender, the merchant, the implement man; in fact, every one with whom he deals, knows the farmer's circumstances. When he is hard up, which is, unfortunately, often enough, they know it. If he has anything to sell, they are not then anxious to buy. Many lines of his produce must be marketed forthwith, and the dealers have him at their mercy. It wouldn't be human nature not to take advantage of it.

How I wish I had words to burn into the understanding of those who are struggling in the circumstances pictured the relief they might feel were they just a little ahead in their financial transactions. Would it not be better to teach our children what is not so plain before their eyes as the growth of plants and the tillage of the soil? Teach them the value of time, which is the money or cash capital of the farmer; the value, or, in other words, cost, of every article of produce; to know how to find out the cost, selling price, value or quality of everything we have to buy. It is not necessary that we should carry about with us an ever-increasing load of figures of ever-varying values, but that we should know how and where to ascertain the value of the work of our hands at any given time, and apply it in buying as well as selling. And above all, the value of a dollar in hand and when properly expended.

Northumberland Co., Ont.

CROPS AND SEEDING METHODS IN PETERBOROUGH.

Editor "The Farmer's Advocate":

In East Peterborough, dairying, combined with the raising of the best type of hogs, is followed by the greater number of farmers. Oats are one of the largest crops grown, the American Banner and White Siberian being those most grown. They seem to flourish on almost any kind of land that has the usual good cultivation given by most of the farmers in this county. The Banner, I think, stands up the better of the two on very rich land, and is a few days earlier than the Siberian. The oats not used for feed find a ready market, with good prices, at the cereal works in the busy city of Peterborough. Mandscheuri, I believe to be the best kind of barley for this part of the county. It yields well, stands up well, and has a good length of straw. I believe salt can be sown with profit on barley, but, after conducting a series of experiments, believe it to be the only crop, with the exception of mangels, that it pays to sow it on. Spring wheat is sown less and less each year. I don't believe it pays to grow it at all. Peas of all colors and description are grown, as a great many of the fancy varieties are cultivated, with varied success. Of the common varieties, I think the Golden Vine and Canadian Beauty yield the best. Corn is sown mostly for fodder and to be used in the silo. This being a dairy section, a great deal of green corn is fed in the fall when the pasture is short. Leaming is the kind most sown; it matures early and ears well. The Mammoth Cuban is an excellent variety. It also matures early, and is an extra-heavy producer of cobs and a great quantity of leaves, making it an ideal corn for the silo. The Burbank potato, I think, taking one year with another, is the best potato to grow for a crop. Mammoth Long Red mangels are the heaviest yielders, but the writer has a weakness for the yellow varieties, and the Golden Tankard is an excellent variety and a good keeper.

About one-sixth of the grain crop is usually seeded down to clover and timothy, about from 10 to 12 pounds of clover and 5 pounds of timothy seed being sown, although a few farmers are commencing to sow from 2 to 3 pounds of clover with nearly all their crops, with the exception of peas, to be used as fall pasture. Lucerne (alfalfa) is slowly coming into use, and will, I think, be sown more extensively this year than previously.

There are several different rotations of crops practiced in this vicinity: Sod broken and sown with corn or peas; if peas, followed by fall wheat and seeded down; if with corn, followed by either oats or barley, and seeded. Potatoes are generally sown on sod in the same field as the corn, and comes under the same rotation. Another: Sod broken, well worked, and sown with turnips, mangels and potatoes, and followed by barley or oats, and seeded. Two crops of hay are nearly always taken off and then broken again, or pastured for one or two years before breaking.

Disk harrows, the common smoothing harrow, and spring-tooth cultivators, are chiefly used for getting the land into shape for seeding. The hoe drill is in general use, although there are a few shoe and disk drills in the neighborhood, but not having seen them working, cannot say with what success they are used.

Nearly every farmer is using three-horse teams, finding they can get more work done in the same time and with less help than with the old two-horse team. Farm laborers are very scarce, and wages asked out of proportion to the work done. Peterborough Co., Ont. F. BIRDSALL.

THE DAIRY.

NOT YET PERSUADED.

Taken to task for its judicial and judicious attitude on that much-debated subject, "The Practicability of the Milking Machine," Hoard's Dairyman replies, in part, as follows:

"Hoard's Dairyman has never persistently knocked milking machines. It has devoted a large amount of space to their elucidation. It has sent its special correspondent to study their work, and illustrated the same with cuts at its own expense. Not a penny has ever been paid the paper for what it said. All we said, in effect, was that we were not yet convinced that machine-milking was a demonstrative success. We have not dealt out uncompromising criticism of the milking machine. Our position is at once consistent and reasonable. When the milking machine is a demonstrated success, we wish to buy one for our own use, and unless we would buy it, we cannot consistently recommend it. That's all there is to it. If this be treason, make the most of it."

ENSILAGE AND ALFALFA FOR COWS.

The summer silo, writes Prof. D. Fraser, of Illinois, gives the best and most economical protection of all foods against drouth, and enough corn silage should be put up to have some held over from the last year to supplement pastures in a dry summer season.

One of the very greatest crops for the dairyman, and one which is now being successfully grown on thousands of farms, is alfalfa. Every dairyman should have a patch of alfalfa, and this will supply the finest of feed when the drouth has ruined ordinary pastures. The alfalfa at the University of Illinois yielded more than six tons of air-dry hay per acre last year.

The great advantage of corn in the silo and alfalfa is that they not only produce the largest yield of nutrients per acre of any crops, but are in the best condition for feeding at whatever date the pasture may fail, while it is difficult to have a constant supply of other soiling crops in the right stage of maturity at and during the uncertain time of drouth.

Never, under any conditions, allow the cows to go hungry and suffer loss of milk during summer drouth, which, for several reasons, is the most trying season for the dairy herd.

A GREAT JERSEY COW RECORD.

The seven-year-old Jersey cow, Peer's Surprise 144248, owned by W. S. Ladd Estate, Portland, Oregon, has finished a year's test for milk and butter production, under supervision of the Oregon Experiment Station, that is claimed to be the best authenticated record yet of a Jersey cow, her record, Feb. 1st, 1906, to January 31st, 1907, being 14,452.2 pounds milk, 643.61 pounds butter-fat (equivalent to 769 pounds 10 ounces butter in one year). The average per cent. of fat for the year was 4.523; the total fat, 653.6 pounds, or equal to 769 pounds 10 ounces butter; 85 per cent. fat; an average of 2 pounds 1.7 ounces butter per day, and 14 pounds 12 4-5 ounces butter per week for the entire year. The manager of the Ladd Estate, Mr. McElldowney, says he believes that if Peer's Surprise had been fed heavier her production would have been considerably larger, but it has been the aim, in developing their Jerseys, to not feed more than the ordinary farmer's ration, their purpose being to demonstrate to the farmer that the Jersey cow is the most economical cow. The sire of Peer's Surprise was Melia Ann's Son, who has 31 tested daughters. Her paternal grandam, Melia Ann, has a test of 18 pounds ¼ ounce butter in 7 days.

RESULTS "BIG."

Editor "The Farmer's Advocate":

I commenced keeping records as an experiment, as it was very simple, did not require an expensive outfit, and looked as though the results would be big; and they have been. Are milk records a benefit to a man who is already taking as good care of his herd as he knows how? Yes, that is just the man who should keep a record, as he doesn't want to lavish a lot of care on a cow that doesn't pay her board. It is impossible to guess the amount a cow will give, as some cows' milk will foam so much more than that of others, and the least thing will make some cows shrink in their milk, while others will keep right up. Have I learned anything by keeping records? Yes—no—just learning, and expect to be still learning a year from now. Have no chance to get the milk tested for butter-fat, so there is much to be guessed at yet; but about once a month we set a sample of each cow's milk in glass tumblers, and, by close watching, get an imperfect idea as to which is the richest and which the poorest milk. C. R. McKENZIE.
Westfield, N. B.

GOOD FEEDING SUMMER AND WINTER.

Editor "The Farmer's Advocate":

My herd consists of eight grade Holsteins. In the dairy-herd competition of the Western Ontario Dairymen's Association, last summer, they gave 37,125 pounds of milk; average per cow, 4,640 pounds. I fed a small amount of mixed chop morning and evening. I have good pasture, and feed early turnips as soon as fit. I wintered the cows well with roots, straw, corn, and a small amount of chop. I attribute the work of the herd to good care, cleanliness, plenty of water, feeding regularly and liberally, and to good stabling. I expect to do much better, as my stock is improving gradually. W. H. MEAD.
Oxford Co., Ont.

BOARDERS GENERAL.

Editor "The Farmer's Advocate":

I firmly believe in keeping records. Any man, if giving his cows the best attention, cannot tell how his cows are paying him unless he keeps track of how much each one is giving. I think there are boarders in nearly every herd where the test is not used. F. C. GOSLING.
Carleton Co., Ont.

COWS.

Fraser, of Illinois, successfully protected enough corn to be held over in a

the dairy- successfully alfalfa. Every alfalfa, and this drouth has at the Uni- six tons of

the silo and the largest crops, but are whatever date cult to have crops in the uncer-

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ORD.

's Surprise Portland, milk and the Oregon be the best cow, her 1st, 1907, pounds but- nes butter of fat for 3.6 pounds, ter; 85 per ounces but- nes butter manager of says he be- fed heavier considerably developing the ordinary to demon- cow is the 's Surprise ted daugh- nn, has a says.

periment, an ex- he results Are milk dy taking w? Yes, a record, care on a impossible as some in that of some cows keep right g records? be still chance to there is t once a milk in , get an chest and ENZIE.

NTER.

eins. In Ontario they gave w, 4,640 xed chop ture, and tered the a small k of the of water, ood stam- y stock MEAD.

any man, not tell e keeps I think here the SLING.

WESTERN DAIRY SCHOOL EXAMINATIONS.

The examinations at the Western Dairy School, Strathroy, Ont., for the term of 1907, are given below. The possible marks on each subject are 100. The standard for passing is 40 per cent.

Cheesemaking, Practical Work.—Fred McNeil, Listowel, Perth Co., 88; J. E. Stedelbauer, Fordwich, Huron Co., 87; W. O. Proudlove, Goldstone, Wellington Co., 87; J. A. Wintermute, Caledonia, Haldimand Co., 80; E. G. Jackson, Vienna, Elgin Co., 74; James Ireland, Camilla, Dufferin Co., 74; Ed. Roedding, Alsfeldt, Grey Co., 68; W. R. Payne, Strathroy, Middlesex Co., 58.

Cheesemaking, Written.—Stedelbauer, 75; Wintermute, 75; Proudlove, 70; Ireland, 71; McNeil, 69; Jackson, 59; Roedding, 49; Payne, 41.

Buttermaking, Practical Work.—F. A. Keyes, Exeter, Huron Co., 94; C. Cascaden, Oil City, Lambton, 92; J. Barnfather, Paisley, Bruce Co., 91; Ed. Roedding, Alsfeldt, 89; Wm. Hetsler, Cargill, Bruce Co., 87; J. E. Stedelbauer, Fordwich, 86; W. O. Proudlove, Goldstone, 85; R. F. Betts, Wheatley, Essex Co., 84; E. G. Williams, Holmesville, Huron Co., 84; J. A. Wintermute, Caledonia, 83; Fred McNeil, Listowel, 82; Jas. Ireland, Camilla, 75; W. R. Payne, Strathroy, 72; E. G. Jackson, Vienna, 71.

Buttermaking, Written Work.—Keyes, 96; Barnfather, 88; Cascaden, 84; Stedelbauer, 82; Betts, 79; Roedding, 76; Wintermute, 76; Proudlove, 75; Williams, 69; Hetsler, 67; McNeil, 61; Payne, 59; Ireland, 57; Jackson, 42.

Milk-testing, Practical Work.—Keyes, 85; Betts, 85; Cascaden, 85; Barnfather, 85; Proudlove, 85; McNeil, 85; Roedding, 85; Stedelbauer, 80; Payne, 80; Williams, 79; Wintermute, 78; Hetsler, 78; Jackson, 76; Ireland, 76.

Milk-testing, Written Work.—Keyes, 93; Roedding, 86; Barnfather, 79; Cascaden, 75; Hetsler, 71; Stedelbauer, 68; Proudlove, 66; Williams, 66; Wintermute, 62; Payne, 60; Ireland, 59; McNeil, 57; Jackson, 53; Betts, 53.

Separators, Practical Work.—Barnfather, 91; Roedding, 90; Keyes, 86; Hetsler, 86; Cascaden, 84; Betts, 78; Wintermute, 76; Jackson, 75; McNeil, 72; Stedelbauer, 70; Williams, 70; Proudlove, 65; Payne, 60; Ireland, 60.

Separators, Written Work.—Keyes, 93; Barnfather, 92; Cascaden, 90; Williams, 87; Roedding, 85; Hetsler, 84; Betts, 80; Stedelbauer, 80; Wintermute, 75; Proudlove, 74; Payne, 72; McNeil, 71; Jackson, 65; Ireland, 50.

Outside Lectures.—Keyes, 83; Barnfather, 75; Wintermute, 70; Stedelbauer, 63; Cascaden, 61; Proudlove, 59; Roedding, 59; Payne, 57; Ireland, 57; Williams, 53; McNeil, 51; Betts, 51; Hetsler, 49; Jackson, 42.

General Proficiency.—F. A. Keyes, Exeter, 1st, 90 per cent.; 2nd, J. Barnfather, Paisley, 86 per cent.; 3rd, C. Cascaden, Oil City, 81 per cent.; 4th, J. E. Stedelbauer, Fordwich, 77 per cent.; 5th, Ed. Roedding, Alsfeldt, 76 per cent.; 6th, J. A. Wintermute, Caledonia, 75 per cent.; tie for 7th, Wm. Hetsler, Cargill, 74 per cent., W. O. Proudlove, Goldstone, 74 per cent.; 8th, R. F. Betts, Wheatley, 73 per cent.; 9th, E. G. Williams, Holmesville, 72 per cent.; 10th, Fred McNeil, Listowel, 70 per cent.; 11th, Jas. Ireland, Camilla, 64 per cent.; tie for 12th, W. R. Payne, Strathroy, 62 per cent., E. G. Jackson, Vienna, 62 per cent.

TWENTY-FIVE YEARS OF IT.

Editor "The Farmer's Advocate":

I have kept cow records about 25 years, stopping two months during harvest. For the last five years have kept record of each cow daily for 12 months. I would guess time at 5 minutes per day.

I have learned, first, that a cow may be dry three months, and yet give 6,000 pounds in the season; second, that the lean, poor cows are the best milkers (I always feed my cows well); third, when I buy a 15-quart cow, she only weighs out 8 quarts to me. Records would be a benefit to anyone who raised their heifers. I might say I have learned that every cow does not produce as good a cow as herself, by the same sire. We use a registered A. J. C. C. Jersey sire.

Lambton Co., Ont. MISS HELEN LAWS.

DISCRIMINATION IN HEIFER CALVES.

Editor "The Farmer's Advocate":

I have kept a weighed record of my cows for five years. The time occupied in weighing is not noticed. I started as the only safe means of knowing what cows produced, and as I endeavor to conduct my farm on business lines, I found it needful to know what each cow was doing. This can only be done by weighing. I have found, while I have been unable to reach the standards laid down for a profitable cow, that it enables one to know which heifer calves to select for breeding, and to work on a definite line to improve stock. A man may be taking the best of care of his stock, but he cannot tell the result of that care unless he weighs his milk.

Algoma, Ont. W. H. BUTTERWORTH.

DAIRYING IN EASTERN ONTARIO AND QUEBEC.

Editor "The Farmer's Advocate":

Having just returned from attending Farmers' Institute meetings, I thought a few observations might be of interest to your readers. My work during January was in Eastern Ontario, in the Counties of Leeds, Grenville, Dundas, Cornwall, Glengarry and Russell. From Feb. 25th till March 12th, in the Province of Quebec, in the Parishes and Counties of Argenteuil, Vaudrieuil, Chateauguay, Huntingdon, Missisquoi, Brome and Shefford. If a man from Western Ontario, travelling through those districts, would arrive at conclusions as it appears to him, without further investigating, he would at once be impressed with the idea that there is either something the matter with the country or the people, in many cases. Dealing with Ontario first, judging by what a person can see in winter, and gather by coming in contact with the people, the land is not in nearly such a high state of cultivation and fertility as in the older and best-farmed sections of Western Ontario. The farm buildings, especially the barns and outbuildings, are not so modern, and have rather a dilapidated appearance in many places. This, however, is not true in all cases; some of the most modern, up-to-date buildings I ever saw were found in nearly every community. We find, on inquiry, that the farmers are fairly prosperous, and, in many cases, quite well-to-do. New banks going up in nearly all the smaller towns of any importance, shows that there is money in circulation. It is quite evident that a great change has taken place in recent years, by the many newer, more substantial and modern buildings. To have the pleasure to share any farmer's kindness and hospitality, at once convinces you that they live up to their privileges, enjoy life, and have good, comfortable homes.

year. With pure-bred sires, he raised the average up to 6,500 pounds per cow, 28 cows (including 12 two-year-olds), net return per cow in 8 months being \$66.45, giving no credit for calves, bacon hogs or milk sold out of factory season. This man has a silo, tests his cows, uses the milk scales and Babcock tester, and weeds and feeds his herd. Every farmer should adopt as his motto, "Breed, Feed and Weed"—the shortest cut to build up a profitable dairy herd. There is every evidence of too many boarder cows in all the dairy sections we travelled through. We tried to bring this home to their owners, and great interest was manifested at all the meetings by the many questions asked along the line of improving our dairy cows and the principles of breeding. Another mistake in evidence was the great number of dwarfed cows, largely due because of stinting the young calf, robbing it of a fair allowance of milk for a reasonable length of time, forgetting that the calf is the baby cow, and a few dollars' worth of milk fed to a calf, with some roots, bran, oil cake and clover hay, will be paid back an hundredfold when the cow matures. The need of the silo is also felt. Wherever corn and the silo was discussed, great interest was taken, especially the construction of the cement silo—the best silo for anybody to build, a fact I can vouch for after using one for five years. The need of the silo for summer, as much as for winter, or a mixture of oats, barley and vetches as a soiling crop to supplement short pasture in dry spells, was felt very keenly in many of the Eastern sections the past season. Another great hindrance is too many small cheese factories overlapping, not enough milk to employ the best skilled labor, and too high a cost of manufacturing in small quantities, for a man to make a decent living and guarantee a good article. Needed legislation cannot step in too quickly.

The Province of Quebec is a near kin in many respects to the Eastern counties of Ontario. Lumbering has been the great drawback to better farming. What has been said of the bordering counties of Ontario can be repeated about Quebec, especially the need of improving the dairy cow, which is their chief source of income. In the vicinity of Montreal (one level plain) selling hay is the principal source of revenue with many farmers. However, a great change has taken place in recent years. They are keeping cows instead, and are selling milk and cream in the city, making a handsome income, and improving their farms. Huntingdon was the best-farmed and best-improved section as a whole that we came through in Quebec. There were some magnificent farms, well fenced, and with excellent buildings. Farmers seem prosperous everywhere, especially in the better farming sections. No complaint was heard anywhere. In the Counties of Brome and Shefford, in many sections the land is very broken and mountainous, making farming more cumbersome, but the dairy cow is doing her work splendidly on those broken pastures; farmers are making lots of money out of her product. More silos are needed. Corn seems to do well in most places, and should be cultivated more extensively. Where Quebec needs making up most is in the bacon-hog industry. We find, out of the \$15,000,000 worth of bacon exported from Canada, Quebec realizes only about \$500,000, although this does not represent all the hogs sold; the balance have to go for local consumption, owing to improper type. There is much room for education right here, and the farmers are very eager to learn and willing to improve their hogs, if the means are only properly put before them. The Government sales have done much to improve the type of hog already, and I think it will be only a matter of a little time to bring about a wonderful change. Farm help is very scarce, interfering very much with the dairy industry. There is considerable exodus to the West, farmers leaving fine homes to take chances in the prairie country. I am informed, however, that there are not nearly so many as in former years. There are good chances for farmers right in the older settlements; all that is necessary is to adjust themselves to changed conditions, keeping abreast of the times, studying the requirements of the markets, catering to the demands of the consumer, specializing along certain lines, better farming, better cattle, more intense farming, larger returns per acre, which will mean an income to more than equal the glowing pictures of the verdant West, with a great deal more comfort and genuine happiness.

A. C. H.



Colantha 4th's Johanna.

Holstein cow; eight years old; holds the world's record for any breed for a 7, a 30, and a 60 days' official test.

DAIRY RESEARCH.

"The Milking Machine as a Factor in Dairying," is the title of a bulletin recently published by the Department of Agriculture, Washington, D. C. Part I., "Practical Studies of a Milking Machine," by C. B. Lane, B. S., Assistant Chief, Dairy Division, Bureau of Animal Industry, involves a consideration of the practicability, utility and economic use of the machine as a factor in dairy operation. In Part II., the author, W. A. Stocking, Jr., M. S. A., Bacteriologist at the Storrs Agricultural Experiment Station, discusses the sanitary character and bacterial content of machine-drawn milk, as compared with that of milk drawn by hand, in the same stables, and under similar conditions.

Part I., as the bulletin states, is rather of the nature of a preliminary report, and is necessarily somewhat tentative in the character of its conclusions. The period of experimentation extended through only a limited time, and did not involve the operations for a full year, and therefore the author is scarcely in a position to offer any conclusive argument upon the result of his work. In scarcely less than two years' time, involving two lactation periods with the same cows, could any valuable comparison be made, and we shall therefore await the developments of further investigations.

Relative to the mechanical operation of the machine, more valuable data is given. The results of the experiments may be briefly summarized, and the author's statements will probably receive the support of most men who have had practical experience with the machine. But very little difficulty has been found in accustoming nervous cows, kicking cows and heifers to its use; the cows did not seem to suffer inconvenience in any way, and the work of the machine appeared to be very natural in its method of operation. Hard milkers responded in time, and usually with very little trouble, when sufficient care was exercised in adjusting proper-sized teat-cups to the udder of each cow, and the cows were found to be milked as clean as they ordinarily were by hand. It was distinctly proved that machine-milking was an improvement over the old method in both the time and labor saved. It was estimated that for a herd of thirty cows, with two machines being used, the cost of equipment would be in the neighborhood of \$13.00 per cow. For a herd of forty cows, with three machines, the cost per cow would be \$12.00; for a herd of sixty cows, with four machines, \$10.00; and for a herd of seventy-five cows, with five machines, \$8.50. The initial outlay was an objection, as viewed from the standpoint of the small dairy. Other difficulties were observed, resulting through careless or improper use of the machine, trouble with the engine, and through stoppages and breakdowns, and a suggestion was offered that the machine would scarcely be thought complete until it was so constructed that individual milk records could be determined for each cow. These were the leading elements of consideration in Part I. of the bulletin.

In Part II. is given the substance of experiments designed to test the sanitary character of machine-drawn milk. The question of the improvement of the wholesomeness and cleanliness of the milk supply is one of large interest, and the efficiency with which the milking machine lends itself as a factor in such improvement is a desirable test by which to judge of its utility. Without taking up the experiments in detail, we may simply indicate the results of Prof. Stocking's work, and give a digest of his conclusions. Greatest difficulty was experienced in keeping the machine in a sterile condition. Provided that this could be done, the machine-drawn milk was found to contain decidedly smaller numbers both of the acid-producing and of the more injurious liquefying bacteria than the corresponding hand-drawn milk. But, "unless sufficient care is used in cleaning the machines, decaying milk and bacteria accumulate in the rubber tubes and contaminate the milk as it passes through them. The few dairymen now using these machines are not exercising sufficient care in washing and sterilizing the machines to keep them in a sanitary condition. Their milk is, therefore, of poorer quality, from the sanitary standpoint, than that drawn by hand, under the same stable conditions. Washing the machines with cold water, and then with hot water containing sal soda, is not sufficient to keep the rubber tubes clean. Under this treatment, the inside of the tubes become coated with decaying milk, thus forming ideal conditions for the multiplication of various species of bacteria. Scalding the machines by pumping boiling water through them just before use, had little or no effect in reducing the germ content of the milk. Boiling in clear water for three-quarters of an hour, or subjection to steam without pressure for thirty minutes, was not sufficient to sterilize the rubber tubes. Placing the rubber parts in brine for several hours after being washed, or boiling in water containing a small amount of powdered borax, reduced the germ content of the machine-drawn milk to about one-half that of the milk drawn by hand, but the use of borax is danger-

ous, unless extreme care is exercised. The machines may be very effective in the production of sanitary milk, if they are properly cleaned and sterilized." The experiments indicate, also, that the keeping quality of the milk may be either seriously impaired or materially improved in correspondence with the sanitary condition of the machine. In summary, it may be said that, when strictly following the instructions of the manufacturers relative to the cleaning of the machine, viz., washing with cold water, and then with hot water containing sal soda, Prof. Stocking observed that he was by no means able to keep the machine in anything like a sanitary condition. By experiment, however, he was able to find methods that were satisfactory in this regard. But whether these methods are practicable on the average dairy farm, is evidently open to question. It would seem, from the report of this bulletin, that the milking machine is yet in a transitional stage, and that a number of additional improvements are desirable and necessary before it, as a factor in dairying, can be considered complete.

BRUCE.

THE RECORD-BREAKING HOLSTEIN COW.

The phenomenal milk and butter record of the Holstein-Friesian cow, Colantha 4th's Johanna, bred and owned by W. J. Gillett, Rosendale, Wisconsin, has excited much interest in dairy circles.

The official test of Colantha 4th's Johanna was made under supervision of the Wisconsin Agricultural College, and Prof. F. W. Woll, the officer in charge of tests of dairy cows in Wisconsin, in speaking of this record, writes as follows: "Wisconsin can now boast of possessing the champion butter-fat producing cow of the Holstein-Friesian or any other breed. Colantha 4th's Johanna, bred and owned by W. J. Gillett, Rosendale, Wis., recently finished an official test, begun 49 days after calving, in which she produced, in seven consecutive days, 651.7 pounds milk, containing 28.176 pounds butter-fat, equivalent to 32.86 pounds of commercial butter, thus placing her at the head of the list of cows with seven-day official records. She also captured the 30-day record by her production of 110.833 pounds butter-fat, equivalent to 129.3 pounds commercial butter; as well as the 60-day record, by producing 208.398 pounds butter-fat, equivalent to 243.13 pounds butter."

Regarding the cow herself, Prof. Woll writes: "It goes without saying that the wonderful performance of this cow would not have been reached except under almost ideal conditions, with everything as favorable as possible for a large production. Colantha 4th's Johanna is eight years old, and dropped a fine, strong bull calf on December 19th, 1906. The care she received at the hands of her owner, feeder and milker, Mr. Gillett himself, was, of course, such as would be conducive to an excellent performance, and weather conditions were also favorable, it being moderately cold weather nearly all the time. Her daily feed during the seven-day test was about 30 pounds silage made from well cared and matured corn, 10 pounds clover hay, 30 pounds sugar beets, 21 pounds of a mixture of equal parts, by weight, of bran, ground oats and gluten feed, with three pounds of linseed oil meal. This was her maximum feed at six weeks from calving, the allowance of grain having been gradually increased to this amount from 12 pounds at the beginning of the test. According to the standard reference tables, this ration contains about 40.88 pounds dry matter, 4.94 pounds digestible protein, 24.44 pounds digestible carbohydrates and fat; the nutritive ratio being 1 to 4.9. At the time of the visit of the writer to the farm, the cow had been eating a daily ration like this for a week, and one consisting of only a few pounds less grain for a period of several weeks, and she was ready for her feed at every meal time. Her bright eyes and soft, glossy coat testified that she was in the pink of condition, and apparently rather enjoying herself. Her production on the last day of the 60-day test, of 101.5 pounds milk, containing 3.611 pounds fat, also furnishes evidence that she was not played out by the heavy feeding and her phenomenal production during the preceding two months. She was kept in a large, comfortable box stall, blanketed after Feb. 6th, and had lukewarm water within reach all of the time."

UNITED STATES DAIRY SHOW.

The stockholders of the United States National Dairy Show Association, at a recent meeting in Chicago, decided to hold a second exhibition in that city in October of the present year, and elected the following officers: President, H. B. Gurler, De Kalb, Ill.; Vice-Pres., H. E. Van Norman, State College, Pa.; Treasurer, G. Farwell, Chicago, Ill.; Secretary and Manager, E. Sudendorf, Clinton, Ill.; Superintendent of Live Stock, A. J. Glover, Ft. Atkinson, Wis., with a board of seven directors representing different dairy interests. The management of preparations for the show was referred to an executive committee, consisting of J. A. Walker, president of

the Fruit Show; A. O. Austin, of the Illinois State Fair, and W. S. Goodhue, of Chicago. The Secretary, E. Sudendorf, will have his office in the Herald Building, Chicago.

POULTRY.

POULTRY - KEEPING AT GRAVENHURST.

THE WASTE OF A MUSKOKA HOSPITAL TURNED INTO EGGS.

By A. G. Gilbert, Poultry Manager, Experimental Farm, Ottawa.

Through the persistent efforts of Mr. E. Turville, of the Muskoka Free Hospital for Consumptives at Gravenhurst, kindly aided by Mr. Wm. Marks, Secretary of the Agricultural Society of that district, I had the pleasure of addressing a meeting on the 23rd of February, in the Town Hall of the pretty town of Gravenhurst, on "Profitable Poultry-keeping." Another meeting was held on the evening of the following day in the hall of the Hospital. For two afternoons I was at the Hospital, for the reason that, in connection with that admirably-conducted institution, there is a poultry plant of more than average proportions, managed by Mr. Turville. When I say that it is well managed I mean what I write, for well managed is to manage to a profit.

THE PLANT.

There are two large poultry houses, containing over 250 fowls, if I remember aright. These houses are up-to-date in arrangement, having cotton fronts and a glass window facing southwards in each pen. And this is certainly right, for while the cotton fronts permit a diffusion of fresh air throughout the pen at all times, without draft, the glass window permits the sun to shine into the interior, which is most desirable. Too frequently we see the window taken out and replaced with cotton, certainly giving air, but excluding the precious sunshine. Now, both fresh air and sunshine are requisite, and may be had as arranged in this case, or by having the cotton at top and bottom of window.

The hopper system, in combination with the feeding of whole grain scattered in the litter on the floor, is adopted, for the reason that Mr. Turville believes in exercise for the birds, as well as plenty of fresh air. This result is secured as follows: The lips of the hoppers are covered with cloth every evening. This cloth, which is tacked to the upper part of the hopper, is not taken up till 9 a. m. Meanwhile, the birds, on coming off the roost as soon as daylight permits, begin to search for whole grain thrown the evening previously in the litter, always on the floors. Only a small quantity of oats or wheat is so scattered, for there must be no waste. The floors of the pens are of earth, but dry. The time may be when they will be made of cement. An important feature is the conversion of the waste of the kitchen and tables of the sanatorium into eggs. This waste is comparatively free from greasy or too salty substances. Much of it is vegetable. It is sometimes mixed with a small quantity of ground grains. Other times it may be so solid as to require nothing to mix with it. It is fed on broad, low-setting troughs, or, rather, boards. It is a grand means of furnishing variety, and it is fed in small quantity each day.

WHAT THE HOPPERS CONTAIN.

The hoppers contain dry ground wheat (shorts), ground oats, and bran, of the best description I have seen in this country. Other hoppers contain broken oyster shell and grit. Water is furnished in pails. I saw the fowl go to the hoppers containing the ground grains and eat heartily. This, to me, was vindication of the method of dry feeding. What I had seen clearly showed me the several points of up-to-date poultry-house arrangement and management of birds, viz.: The utilization of the sanatorium kitchen and table waste; the compromise whole-grain and dry-ground-grain method of hopper-feeding, and the cotton-front-and-window combination, whereby fresh air and sunshine are secured.

QUESTIONS AND ANSWERS.

Q.—Do you like the feeding of dry ground grains in hoppers? A.—Yes, for more than one reason. It saves the labor of mixing a mash. Then every bird can get its own share whenever it wants it.

Q.—You prefer to scatter the whole grain in the litter on the floor? A.—Yes, for the sake of giving the fowls exercise. They do not want much whole grain, for we give the waste stuff at noon. They search in the litter during the morning for the whole grain before I take the cloth off the lips of the hoppers. If I think they want a little whole grain before going to roost, I give it to them. If any is left over, they find it in the morning.

Q.—Do you cover the lips of the hopper every evening? A.—Yes, to prevent the birds from getting to their contents in the early morning un-

til they have had exercise in searching for the whole grain.

Q.—Your fowls are certainly in good condition and health. Do you find them eating too much by the hopper method? A.—I do not. Mine is really a compromise system of feeding.

Q.—Do you find the cotton fronts too cold in low temperatures? A.—I cannot say that I do. I let down the cotton screen if I think it is necessary on very cold nights; or I completely shut up the windows, which, as you see, are open on moderate days. [Note.—Same in the shacks where patients live—cotton sides to houses, windows open, beds around sides of rooms, stove in center of room; windows also open in hospital proper. Fresh-air treatment, indeed!]

OTHER POINTS.

Many other questions were asked and answered. It was further learned that all assistance given Mr. Turville is charged to the "poultry department," as a strict account is kept of receipts and expenditure. The assistance is at present being given by a convalescent patient.

On the day I arrived 126 eggs were collected. They are used by the patients, as prescribed by the doctor. Eggs are simply invaluable in the treatment of pulmonary affections, so I was told. But there is a great distinction to be made between the strictly new-laid eggs from the hospital poultry department, with their delicious flavor, and the "store" egg. One is acceptable, the latter of very doubtful quality. Is this fact appreciated as it ought to be both inside and out of the sanatorium? I am sure if the shrewd business men who compose the Board of Directors of this well-managed institution only realized the value of the poultry department, it would receive more encouragement from them.

Mr. Turville is himself a patient, and is allowed to work only three hours daily. What he has accomplished, and what he is doing at so little cost, has to be seen to be fully appreciated.

As may be inferred, my visit was full of interest. The courtesy and very great kindness of the staff of the hospital were most marked, and will be long remembered by me.

A GOOD WEEK'S BUSINESS IN EGGS.

Editor "The Farmer's Advocate".

Seeing by your valuable paper that you are interested in good egg-laying records, I thought perhaps you might like to know what my pen of Barred Rocks have just done. These hens have been laying splendidly all winter, and during the week that has just passed they laid 248 eggs, an average of over 35 eggs per day, and three days out of the seven every hen laid. There were just 40 hens in the pen. Now, I think this is pretty good, and would like to hear from others who have good-laying hens. JERRY DAVIES. York Co., Ont.

THE COLUMBIAN WYANDOTTE.

The origin of the Columbian Wyandottes dates back some seventeen years. The Rev. B. M. Briggs was the originator, and gave them their name. They are now a standard variety. Who doesn't admire the Light Brahma markings? But the large size, leg feathering, and slow maturing, without doubt made them unpopular. The Columbian seems to fill their place, without these objectionable features. The Columbians are a cross of a White Wyandotte male on a Light Brahma female. E. E. McIntosh, Hope Valley, R. I., is secretary of the National C. W. Club.

APIARY.

EARLY SPRING NOTES.

The best time to set out cellar-wintered bees, is a matter which receives considerable discussion in the bee journals. A few years ago some of the leading beekeepers advocated setting them out just as early as there was a chance of weather in which they could fly occasionally. It seems to be the general opinion now, however, that if the bees are wintering well in the cellar, resting quietly, and with no sign of discomfort, they are better left inside until the first flowers of spring, the elms, soft maples, willows, etc., are in bloom, so that the bees may go right to work. If the bees in the cellar are noisy and restless, flying out, spotting their hives, and showing general signs of uneasiness, it is considered advisable to give them a flight as early as possible, even if they have to be put back in the cellar again for a couple of weeks. If bees which are wintering perfectly are set out, and then returned to the cellar, they will not settle down properly again, whereas bees which are restless and uncomfortable will, after a flight, become quiet, and continue so for a considerable time. If conditions are right in the hive, it does the bees no particular good to fly until they can get pollen and honey from the spring flowers. Even after the opening of the first flowers, there is frequently considerable

weather when the bees would be better off if they stayed at home instead of going to work. In the writer's locality last spring there was a period of such weather, and thousands of bees that went out to work never returned. The sun was bright and the air near the ground was warm, but when the bees went to work on the elms, a hundred feet or more from the ground, they received the full force of a cool wind, and were chilled beyond recovery. This, of course, is a condition that cannot be governed, but it goes to show that, even in apparently good flying weather in the early spring, the bees would be better off in their hives; so that, if they are quiet and contented in the cellar, don't be in a hurry to get them out, however impatient you may be to see them fly and hear them roar. The general usefulness of the colony in the main honey flow depends upon the percentage of bees which live from three to six weeks after they commence flying in the spring, rather than upon the number that are in the hive when the bees have their first flight. Therefore, we should do everything possible to prolong the lives of the old bees in the spring, by protecting them from conditions that will tend to shorten their lives. Bad spring weather and a shortage of honey in the hives, are two of these conditions. E. G. H.

GARDEN & ORCHARD.

HORTICULTURAL PROGRESS.

Prepared for "The Farmer's Advocate" by W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa.

Experimental Fruit Stations of the Province of Quebec, Report for 1906:

This report is prepared by M. Auguste Dupuis, the Director of the Quebec Experimental Fruit Stations, that veteran fruit-grower and nurseman, whose success in growing fruits along the lower St. Lawrence is well known outside his own Province.

There are twelve fruit stations controlled by the Quebec Government, representing 11 counties, which are: Beauce, Compton, Chicoutimi, Gaspé, L'Islet, Maskinonge, Quebec, Temiscouata, Charlevoix, Montmorency, Rimouski. Stations in the first six counties were established in 1898; the rest were started in 1903, with the exception of that in Rimouski, which was not opened until 1905.

These stations were established for the purpose of testing varieties of fruit, and for determining the best methods of cultivation and the control of injurious insects. The information thus obtained was to be made known to farmers. In addition to testing varieties of fruits, a large number of root-grafts have been grown at these stations, and when they become old enough, are sold to farmers in the county, it being believed that trees grown near at home are more suitable than those got from a distance. It is reported that there is a growing demand for these trees. Reports are made by the experimenters at the stations in L'Islet, Temiscouata, Montmorency, Quebec, Charlevoix and Rimouski. The Trappist Fathers at Oka also report on the condition of their orchards in 1906.

Mr. Dupuis, who has charge of the L'Islet station, has a very interesting place, the writer having visited it three years ago. It is situated about 75 miles below the City of Quebec, near the St. Lawrence River, in latitude 47 degrees. He grows European plums equal to those grown in the best plum districts of Ontario, and is quite successful with pears, not to mention apples, cherries, and the small fruits, which do well. Mr. Dupuis reports a good crop of European plums in 1906. The varieties which did best were Early Yellow, Mirabelle, Bradshaw, Moore's Arctic, Reine Claude Doree, Pond's Seedling, Grand Duke, Gueii and Early Red Russian. He reports having obtained high prices for his plums. The two most popular plums among the people are Blue Damson and Reine Claude Montmorency, which are raised from suckers, and reproduce themselves fairly true from seed also. Mr. Dupuis has imported a large number of varieties of pears from France and Belgium, some of which have done well with him. He finds those which produce the most regularly to be Fondante des Bois, Baltet Pere, Louis Bonne d'Avranche, Durondeau, Fondante Theriot, Clapp's Favorite, Foukouba and Bessemianka. He speaks very highly of the Baltet Pere, which is extremely hardy. He also reports on other fruits, and on the reproduction of forest and ornamental trees. Mr. Dupuis can grow successfully fruits and ornamental trees and shrubs which are not hardy at Ottawa. This is no doubt due to the favorable influence of the St. Lawrence River, which, at Village des Aulnaies, is about twenty miles wide.

Jos. T. Bertrand, Isle Verte, Temiscouata, reports a good crop of cherries and plums, mentioning, among the latter, the Lombard, Pond's Seedling and Gueii. The Flemish Beauty pear has begun to fruit with him. He writes: "I strive every day to prove to the people and to

make them understand that everyone can, at a small outlay, plant and maintain a little orchard. I try to prove to them that, apart from its useful and profitable side, apart from the advantages to themselves and their families of a healthy and cheap food, the orchard forms the principal ornament and the greatest attraction of a well-cultivated farm, and that it is the surest way to attach the children to their home and to the land."

Mr. F. Xavier Gosselin has charge of the station at Ste. Famille, on the Island of Orleans. He gives a list of the varieties of plums, cherries and apples which have been found best. These are:

Apples.—Tetofsky, Red Astrachan, Yellow Transparent, Duchess, Peach, St. Lawrence, Alexander, Wealthy, Fameuse, McIntosh, Wolf River, Gideon, Magog Red Streak, Longfield, Pawaukee, and Ben Davis.

Plums.—Blue Orleans, Imperial Gage, Lombard, Arctic, Washington, Shipper's Pride, General Hand, Grand Duke and Gueii.

Cherries.—Early Richmond, Montmorency, Duc de Mai, and Morello.

In closing his report, Mr. Gosselin writes: "I am not afraid to say that, in a few years, if it (the demand for trees) continues, this Island, which has been called the Isle of Bacchus by our discoverers, will come to be called the Isle of Apples."

There is a short report by Mr. Maurice LeMoine, who has charge of the station in Charlevoix Co. It is his fourth report, and he writes that the Duchess, Yellow Transparent, Peach and some other varieties of apples are a great success, as are also the blue plums of the country and the Reine Claude and Lombard, although these have not yet fruited. He reports good success with strawberries. Many farmers have made plantations of trees.

The Quebec station is reported on by M. Etienne Paradis, who has charge of it. He reports the plantation generally as being fine, and the young nursery trees as doing well. The apples which he considers best for his locality are: Tetofsky, Yellow Transparent, Duchess, Peach of Montreal, Wealthy, Longfield, Bailey Sweet, Alexander and Fameuse. The "country white plum," (which we take to be the Reine Claude de Montmorency) is his favorite, but he considers the Lombard, Damson and Golden Drop to be good varieties. In concluding, he writes: "Many persons came for information as to the manner of the cultivation of fruit trees. With pleasure, I placed myself at their disposal, and they were pleased, and I think they also found it to their advantage, as an agent who passed through Charlesbourg soon after sold them from 12,000 to 15,000 fruit trees. If they all turn out well, Charlesbourg will be one of the largest fruit centers in the Province of Quebec."

Not content with establishing fruit stations in the counties considered favorable to the growing of tree fruits, the Quebec Government established a station in 1904 in Rimouski County, in latitude 48 degrees, along the lower St. Lawrence, in a climate where few would think the tree fruits could be successfully grown. Reporting after the second season's growth, Rev. Frere Evariste, who is in charge of the station at Rimouski, states he lost only six trees out of 170. Three varieties of apples fruited in 1906, namely, the Transparent of Croncel, the Wealthy, and the Reine des Reinettes. The Early Favorite and the Reine Claude plums, imported from France, both fruited, also "almost all the cherries." A row of spruce trees has been planted on two sides of the orchard to protect it against the strong winds of the north and west.

There is a short report from M. G. Reynaud, in charge of the orchards of the Rev. Trappist Fathers, Oka. He reports the crop of apples below medium in 1906. Flemish Beauty pears were in abundance, and fruit was also obtained from the Seckel, Clapp's Favorite, Bartlett, St. Lawrence, and Hardwell. The Perdrigon plum, introduced from France, is very favorably mentioned. There is an agricultural school in connection with the Trappists' establishment at Oka, and the scholars are trained in the theory and practice of horticulture.

Insecticides and Fungicides, by R. Harcourt, Professor of Chemistry; and H. L. Fulmer, Demonstrator in Chemistry, Ontario Agricultural College, Guelph, Ont.:

This is a timely bulletin, and, while it does not contain much new matter, it brings together, within thirty-two pages, practically all the insecticides and fungicides used or read about by Canadians at the present time.

While a fruit-grower may, by adhering strictly to the formulas recommended in the spraying calendars, and to the methods of making and time of applying the mixtures and solutions, successfully combat injurious insects and fungous diseases, he cannot do this intelligently and with the fullest confidence of success unless he knows the life-history of the insects and fungous diseases with which he has to deal and the composition of

the materials he uses. It is to make the fruit-grower familiar with the composition of the materials he uses, and the way in which they affect the insects or diseases which he treats, that this bulletin is written, and the authors have done this in an explicit and satisfactory manner. In addition to publishing mere formulas, analyses of materials and explanations are given which render the formulas much more valuable.

The insecticides treated of in this bulletin are: Paris green, London Purple, Black Death, Potato-bug Finish, Kno Bug, Slug Shot, Bug Death, Arsenate of Lead, Arsenite of Lead, Calcium Arsenite, Sulphur, Lime-sulphur Washes, Crude Petroleum, Kerosene Emulsions, Several Soluble Oil Emulsions, Soap Washes, Hydrocyanic Acid Gas, Carbon Bisulphide, Carbolic Acid, Tobacco, White Hellebore, Pyrethrum.

Fungicides.—Bordeaux Mixture, Soda Bordeaux, Copper Carbonate, Ammoniacal Copper Carbonate, Eau Celeste, Copper Sulphate, Formalin, Corrosive Sublimite, Potassium Sulphide.

AUSTRALIAN FRUIT TRADE AND THE CODLING MOTH.

Mr. J. S. Larke, Canadian Commercial Agent in N. S. Wales, draws attention to the fact that a shipment of American apples sold in Australia for from 12 to 17 shillings per case of one bushel. These apples were of a quality that could be supplied by British Columbia or by Ontario, were it not for the fact that in Ontario some of the apples are likely to be affected by codling moth. Mr. Larke says that \$2.50 would readily be paid in Vancouver for five-tier apples. This is certainly a better price than can be obtained in the Northwest or in Great Britain. The essential condition is, however, that the apples must be free from codling moth. This is not prohibitive to the careful grower.

The experience at the Experimental Farm, Ottawa, goes to show that it is quite possible, with careful spraying, to practically banish the codling moth from Canadian orchards. Last year it was impossible to find a specimen of the codling moth in the orchards of the Experimental Farm, and what was done there can be duplicated in any good orchard in Canada. Neighboring unsprayed orchards were infested with the codling moth, and no more spraying was done at the Farm than could and should be done in every commercial orchard. The apple-growers of Eastern Ontario are not paying sufficient attention to the high-class trade—the trade that gives the largest returns.

LYE NOT RECOMMENDED FOR OYSTER-SHELL BARK-LOUSE.

Is concentrated lye a safe treatment for oyster-shell bark-louse? is a question we have been frequently asked of late. Although knowing it was not to be recommended, we have taken the trouble to obtain the opinion of Prof. Harcourt, O. A. C., Guelph, who writes as follows: "Weak lye will destroy oyster-shell bark-louse, but, to be very effective, it must be used of such a strength that it is destructive to vegetation, especially to peach trees, and even to the young twigs of the more hardy apple and pear trees. When diluted so that it will not injure foliage, it is not efficient as a scale-destroyer. For that reason it cannot be recommended." The lime-sulphur wash, or even plain lime wash, without the sulphur, is very much more effective, and the cost is moderate. Either of these should be applied in the dormant season, preferably in the fall or early winter. If lime wash is used, two coats should be applied, the second immediately after the first is dry.

WHERE ORCHARDING PAYS.

A. E. Sherrington, one of the delegates attending the series of meetings in the interest of the Co-operative Fruit-shipping Association movement, writing "The Farmer's Advocate" from Newcastle, recently, said: "Co-operation is the live subject yet. The people are very much interested in all lines regarding the fruit industry here in the East. Spraying is interesting the apple-growers. It has not been practiced of any account as yet, but is being taken up by the best growers. Several power sprayers are being contracted for. Planting is being done here very extensively. The best varieties only are being planted. The Newcastle Co-operative Shipping Association has only seven members, but a combined acreage of 225 acres of apple orchard. Hundreds of acres are being planted here. The prospects for apple-culture in this district are beyond an estimate."

According to the official report of the Dominion Conference of Fruit-growers, held at Ottawa in March, 1906, there were then in Canada some 24,000,000 fruit trees, and that the income from these trees, counting the home market as well as the export trade, amounts to some \$10,000,000 or \$12,000,000 annually.

CODLING MOTH AND OYSTER-SHELL BARK-LOUSE.

What is meant by bandaging apple trees to trap the codling moth? Give the material used and mode of applying it.

Of the many remedies for the bark-louse which do you consider the cheapest, most efficient, and most easily applied? Would a thick spray of lime be of any use? If so, give quantity of lime to 40 gallons of water. If one used concentrated lye, how much should be used to 40 gallons of water?

M. S. A.

The purpose of bandaging is to trap and destroy the worms or larvæ. Perhaps a word about the life-history of the insect will make the purpose of the treatment clear. The egg of the early brood of codling moth is laid on the calyx of the young apple while it is turned up. From this hatches a worm or larva which attains a length of half an inch. It begins at once to burrow into the apple, feeding until fully developed. It then crawls out to enter the pupa stage, which lasts three or four weeks. Affected apples fall to the ground, and often contain the worm in them, though more often it has already escaped. The worms or larvæ that leave the apples while still on the trees, either crawl down the branches to the trunk, or else let themselves down to the ground by a fine silken thread. In either case, whether they crawl up or down, the majority of them find their way to the trunks of the trees, where, under the rough bark, and in cracks and crevices, they spin their papery-looking silken cocoons and pass into the pupa stage, from which the imago, or mature moth, escapes after about two weeks. In Western and Southern Ontario there is a second brood of codling moth each summer; in the Eastern part of the Province there is only one.

It is found that, by wrapping around the trunks of the trees bands of old sacking, carpet or cloth of any kind, and securing it with a tack, string or knot, the larvæ will choose this protection in which to pupate. The bands should be applied not later than June 1st, and visited every eight or ten days until the last of August, each time taken off carefully and examined, and all the worms and chrysalids found under them destroyed. They should also be visited once after the crop is gathered. It is folly to apply the bands unless one is prepared to attend to them, for a neglected trap becomes a friendly shelter; but its use in the hands of attentive orchardists is a cheap and effective means of reducing the numbers of this pest and the extent of its ravages.

Other means of treatment are the destruction of rubbish in the orchard. The larvæ of the second brood mature during the autumn or early winter months; if they escape before the fruit is gathered, they seek some sheltered nook under the loose bark of a tree or other convenient hiding place, but if carried with the fruit into the cellar, they may often be found about the barrels and bins in which it is stored; a favorite hiding-place is between the hoops and staves of apple barrels, where they are found sometimes by hundreds. Here the larva spins its little cocoon, and within this remains in the larval stage until the following spring, and shortly afterwards the moth appears, ready for spring work. Fallen fruit should be promptly gathered, and the orchard cleaned up in the fall. Hogs, by eating fallen fruit, destroy many worms in their larval stage.

Spraying soon after the fruit is set, while it is still upright on its stem, with 4 ounces Paris green in 40 gallons of water, or, better still, with Bordeaux mixture, to which has been added 4 ounces of Paris green to the 40-gallon barrel, will very effectively prevent the ravages of codling moth.

We cannot too strongly emphasize that the spray should be put on promptly. After the young apple has formed, it remains erect for a week or ten days, with its calyx-tube open upwards. It is right here and at this time that most of the eggs are laid by the moth. If the poison has been applied early, it gets into this tube, and is ready to destroy the larva when it hatches. If the spraying is delayed, the larva will have already eaten its way into the apple, where it would be safe, though half an inch of spray were applied. Moreover, once the young apple has turned over, it is almost impossible to get spray into this calyx cup or basin. There is, thus, a twofold reason for spraying immediately after the petals fall.

2. The lime-sulphur mixture is probably the most effective treatment for oyster-shell bark-louse, and it is also very useful against other fungous and insect pests, but plain lime wash alone answers well for the bark-louse. It is advised to apply it as soon as winter has set in, but it may be done yet. Use one pound of lime to each gallon of water. Spray thoroughly, putting on two coats, the second immediately after the first is dry. You have a second chance to combat the pest in June, when the dust-like yellow mites emerge from their mother's scales. The exact time should be watched for, and immediately the

mites are noticed the trees should be sprayed with weak kerosene emulsion or a whale-oil-soap solution—one pound soap to six gallons water. Lye is not recommended.

The oyster-shell bark-louse is especially troublesome in neglected orchards. It helps, in coping with this scale, to plow the orchard shallowly, harrowing repeatedly till July, keeping the surface mellow as a turnip field. Then sow a cover crop of red clover, hairy vetches, buckwheat, oats or rape, to be left over winter and plowed under the following spring. Applications of manure and of unleached hardwood ashes also do much to invigorate the trees.

INSECTS WHICH APPEAR BEFORE THE BUDS OPEN.

A fact which is not generally known is that some of our insect enemies commence their destructive work before the opening of the leaf and flower buds, and, by devouring these at a critical period in the tree's growth, may check it rather severely. At this time of the year, then, it might be well to call attention to the more important enemies of our fruit trees, which may be upon them before they are aware.

BUD MOTH (*Tmetocera ocellana*).—The larva of this insect, which appears early in spring, is one of the most formidable insect enemies of the orchardist. It works in the opening leaf and flower buds, and is thus perfectly liable to destroy the whole of a prospective crop. Besides the apple, which is its chief object of attack, it also infests pear, plum, cherry, quince and peach trees, and blackberry buds. The larva of this insect is a small brown caterpillar, about one-sixth of an inch in length when first hatched, with a black head and thoracic shield, and when fully grown is about one-half inch in length. It commences work early in the spring, about May 1st, and feeds on the opening leaf and flower buds. If the bud is not sufficiently developed, so that the larva can enter, it eats a way into it, and then proceeds to devour the tender leaves and flowers. These it ties together with silk, which it secretes, thus forming a protective nest for itself. Sometimes in young nursery stock the larva bares down the young shoot, thus injuring the tree severely. Its unsightly nests are often seen in large numbers on the trees, especially in neglected orchards, and look like bunches of distorted leaves. About the middle of June the larva pupates, and emerges as a dark-gray moth in about ten days. Soon after emerging it begins to lay eggs, from which in about ten days the little larvæ develop, and, after passing a short time feeding upon the skin of the leaf, construct silken cases, in which they pass the winter.

Treatment.—Owing to the habits of this insect, it is a very difficult one to treat, and must be fought in the larval stage. Hand-picking the nests before June 1st may be practicable in case nursery stock is affected. However, in large orchards, the best treatment is Paris-green spray, applied frequently and thoroughly. This will necessitate at least two thorough applications before the buds open. If possible, keep the swelling and opening buds coated with Paris green, so that the little caterpillar's first meal may be a poisonous one. In case the trees are affected with apple-scab, this spray may be used in combination with Bordeaux mixture, in the proportion of 1 pound of Paris green to 100 gallons Bordeaux mixture. This will also make the Paris green adhere better.

The Bordeaux mixture is made as follows: Copper sulphate, 4 pounds; lime (fresh), 4 pounds; water, 40 gallons.

Suspend the copper sulphate in a coarse bag in 4 gallons of hot water. Slake the lime in the same quantity of hot water. Put one of the solutions into a barrel, add a few pails of water, then add other solution, and enough water to bring it up to 40 gallons. Use only fresh Bordeaux mixture, and only the best fresh stone-lime. Don't mix until required for use.

If only Paris green is used, apply 1 pound Paris green in 200 gallons water, and 2-3 pounds slaked lime to prevent burning foliage. Do not spray when the trees are in bloom, as the honey-bees may be killed, and it is forbidden by law.

CASE-BEARERS.—This class includes two important pests:

1. The Cigar-case Bearer (*Caleophora Fletcherella*).—This curious insect attacks apple, plum, pear, and some of our forest trees. After hatching, about the middle of July, and passing a short time as a leaf miner, the larva constructs a peculiar little cigar-shaped case for itself from pieces of leaves, and about 1/4 inch in length, in which it passes the winter. In spring it constructs a new one, and moves about within it, devouring the tissue of the opening leaf and flower buds.

Treatment.—Two or three sprayings with Paris green. The first application is made as soon as the little cases are seen on the opening buds, and a second or third at intervals of six or seven days on badly-infested trees.

Pistol-case Bearer.—Not generally so common

as above. Distinguished by the shape of its case—pistol-shaped. Treatment similar to above.

SPRING CANKERWORM (*Paleacrita vernata*).—This is one of the loopers or measuring-worms seen so commonly on the trees in spring and summer, so called from their peculiar looping mode of progression. Varies greatly in color, but generally darkish-brown, with eight faint lines on the back. When disturbed, lets itself down suddenly by a silk thread. Hatches about the time the leaves expand.

Treatment.—Spraying with Paris green shortly after the leaves appear.

AMERICAN TENT CATERPILLAR (*Clisiocampa Americana*).—This is one of the caterpillars that spin the webs or tents on the trees in the summer. The young caterpillars hatch in early spring, just before the buds open, and feed on the buds until the leaves expand, keeping together and spinning a web, in which they live when not feeding. They are somewhat hairy caterpillars, with a white stripe down the back.

Treatment.—(1) Spraying with Paris green; (2) hand-picking and destroying the webs.

APHIDES OR PLANT LICE.—Large numbers of these little insects appear in early spring, and suck the juices of the buds. They are small, pear-shaped green or black insects, mostly wingless, with sucking mouth-parts. On account of the fact that they insert their sucking tubes into the tissue of the leaf, they cannot be killed by insecticidal poisons, like Paris green, sprayed on the surface, but must be treated by contact poisons, like kerosene emulsion, which kills by closing up the breathing pores of the insects.

Treatment.—As soon as noticed, spray with kerosene emulsion, made up as follows: Kerosene, 2 gallons; water, 1 gallon; hard soap, ½ pound. Shave the soap into the water, and heat to boiling to dissolve; when completely dissolved, add the kerosene, after removing from near the fire. Churn together in the spray pump till of a creamy consistency. To use, add 10½ gallons of water.

PEAR-TREE PYSLLA (*Psylla pyricola*).—This is a minute insect, about 1-10 inch in length, with transparent wings, which often occurs in such numbers as to destroy large pear orchards, by sucking the juices of the twigs. It looks like a very minute Cicada or Dog-day Harvest Fly.

Treatment.—Thorough spraying with kerosene emulsion immediately after the leaves expand.

N. B.—Remember, that success in controlling this and all other insect pests depends upon persistent and thorough spraying.

"SPHINX."

THE FARM BULLETIN

IMPORTED STOCK AND BOYS.

Editor "The Farmer's Advocate":

I was perusing your valuable paper, and happened to cast my eyes on a paragraph written by "A Subscriber." Might I be allowed to point out to "A Subscriber" that his opinion, re imported cattle, is only the opinion of one Canadian. Many Canadians hold that there are better bred horses, bred by Canadians, in Canada than were ever imported from Great Britain. Does "A Subscriber" think that Great Britain would, or does, send over her very best bred horses and mares, and leave itself with the inferior class? I hope not! Has "A Subscriber," himself, been taken in on a horse, or is he really a competent judge of horseflesh? As far as cattle are concerned, if "A Subscriber" thinks the home-bred stock are the best, can he tell me why so many competent judges buy imported ones? Re imported boys, might I say that the Englishmen, not boys as my friend classes them, are human beings, not cattle, and are not imported like cattle, but are either sent out by some society, or they come out of their own accord to swell the population of one of Great Britain's colonies. He talks of the Canadian boy being better than and worth half a dozen English boys. Does "A Subscriber" know that 99 out of every 100 English boys never saw a plow or milked a cow before they emigrated? I venture to suggest that if six Canadian boys, who had never been on or seen a farm, were placed beside six English boys, who neither had experience, and were set to work on a farm, the British boys would soon leave the home-bred boys behind. Perhaps "A Subscriber" has employed a British boy, and he hasn't turned out exactly as he wished him to. If so, might I say "They are not all tarred with the same brush," and would, also, point out that there are a few Canadians that would like to go to sleep beside their work. AN ENGLISHMAN.

Oxford Co., Ont.

PRACTICE "THE SIMPLE WAY."

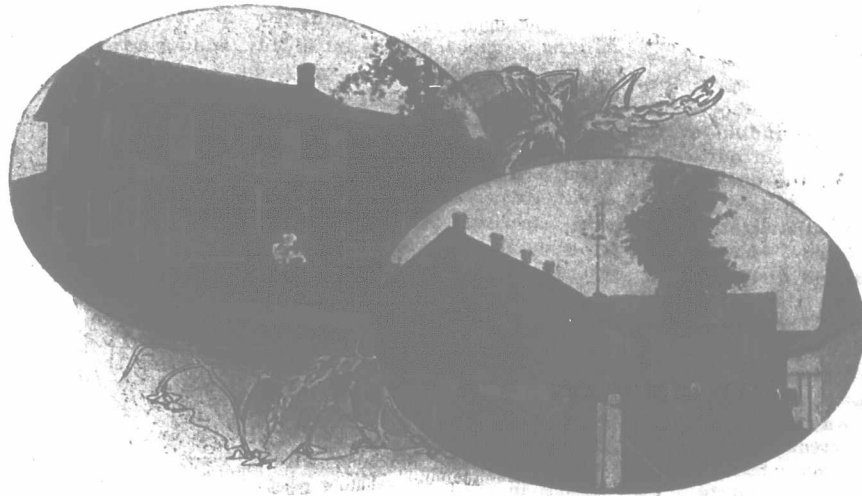
Editor "The Farmer's Advocate":

I thought I would like to tell you that I very much enjoyed your editorial, "The Simple Way." I thought it was exceptionally good, and so true. If we would all believe and practice it, I am sure Canadians would be a happy people. I hope you may again write along that line. OLIVE KIDD.

Simcoe Co., Ont.

A WATERLOO COUNTY HOMESTEAD.

The photogravure given herewith is of the old Detweiler homestead, Waterloo Co., Ont., blazed out of the virgin forest by Jacob Detweiler, who emigrated from Pennsylvania early in the twenties of last century, and has never passed out of the hands of his direct descendants. Mr. Ira D. Kinzie, who has leased the farm, is a great-grandson of his, and an up-to-date and practical farmer. The farm consists of about 150 acres of the finest soil, twelve acres in the best of hardwood bush. This is not a district where dairying is especially prominent. Only six cows are kept, calves running with four of them for seven or eight months. Although not engaged in pure-stock raising as a specialty, there is a fine herd of Hereford cattle. They also fatten from 20 to 30 head of export cattle in winter, feeding ensilage from a large silo inside the barn, and find it a good investment. A power mill on the barn supplies power to run the chopper, while a 60-foot pumping mill pumps the water into a large supply tank in the barn, from which it is distributed to small cast-iron troughs in each of the cattle stalls. Stable floors are all of cement, excepting that of horse stable, for which wooden flooring is preferred. From 100 to 200 hogs per year are raised on the farm, and find a ready market for them at their shipping station at Ayr. From 100 to 125 tons of hay are put away for the year's use, with the aid of the latest haymaking machinery. Fall wheat is extensively raised, averaging from 1,200 to 1,500 bushels per year; while from 3,000 to 4,000 bushels of other grain is raised for feeding purposes. In summer all young cattle, calves, etc., are put out on the river flats, where pasturage is considerably cheaper than at home. Being only about 13 miles distant from the Ontario Sugar Refinery at Berlin, Ont., they raise from 5 to 10 acres of beets each year, and find it pays very well, averaging about \$70.00 per acre in 1906.



"Sunny Braes" Farm.

MANITOBA AGRICULTURAL COLLEGE HAS SUCCESSFUL YEAR.

By the time these lines greet the reader, the first year of the Manitoba Agricultural College will have closed. Much that was a matter of conjecture last year is now established beyond doubt. Only a few months ago, some speculation was indulged in by those most interested as to how the College would be received and patronized by the young Western farmers. The Government, in their buildings, provided dormitory accommodation for about sixty-five students, doubtless thinking they would not be justified in exceeding that for the present. The favorable manner in which the institution has been patronized is a testimony to the progressive spirit of the Western farmer.

At the opening last fall, eighty young men registered for the regular course, while a number of other applicants did not come in on account of the limited accommodation. Of those in attendance, seventy-four are from Manitoba, the other six from Saskatchewan and Alberta. All are from the most progressive sections of the country. Their ages range from sixteen to thirty-five; average, twenty-one. As the only qualifications for admission were that a boy be over sixteen years of age, and have spent two years in practical work on a farm, boys of very widely differing educational standing have been in attendance. Some have a very ordinary common school education, a few not having passed beyond the sixth grade, while others present third- and second-class teachers' certificates or matriculation certificates. Two classes have been made—known as classes A and B. In all subjects, except English and mathematics, the same lectures are delivered to both.

It has been very gratifying to see the interest taken in the work. Few of those who are taking the lectures had any idea of the nature of the course in an agricultural college. Some said they wanted to "brush themselves up" in composition and arithmetic, others to learn a little farm bookkeeping. Some even had thought it an opportunity to get away from the farm, and, once away, never to go back to stay. The opinions now being expressed by several, who seemed most desirous of leaving the farm, are probably a fair index of the attitude of all, viz., the desire to return again to put into practice something of what they have learned. The interest aroused in dairying, veterinary science, animal husbandry, forestry, plant life, composi-

tion of soils, eradication of weeds, etc., has been very marked. In blacksmithing and carpentry, great enthusiasm has been shown, and, after regular shop hours, boys will be found at bench or anvil working away.

In nothing has more interest been taken than in the grain department. At Christmas, the boys were instructed to bring back with them representative samples of their grains, just as they came from the machine. These have been judged under Pro. Rutherford's direction. It was an impressive lesson to find a beautiful sample of wheat counted out because of the smell of smut on it, or a grain of wild oats, or some noxious weed seed, and yet they had decided it must be. The boys are now anxious to get home to examine, with a more trained eye, their seed grains. Some have already written, advising those at home as to the treatment their seed must receive.

The literary-society work is considered equal in importance to class-room instruction, and is compulsory. All take part in their turn in debates and discussions. The Student Body are a self-governing institution. They were instructed by the principal at the opening of college to appoint an executive to be responsible for the conduct of the students in dining-room, dormitories and halls, and to represent the students in all matters of importance. Punishments for improper behavior are first recommended by this executive to a special committee of the faculty.

During the winter, three very important conventions were held in the auditorium of the College: the convention of representatives of Farmers' Institutes and Agricultural Societies; the meetings of the Western Horticultural Society, and the convention of dairymen. While these meetings were on, lectures were withdrawn in order to give the students an opportunity of attending the meetings. The effect of these on the boys was to give an added interest to their studies and research work.

Latterly, an organization was effected, which will probably play an important part in agricultural interests in the West. The society is to be known as the "Manitoba Agricultural College Research Association," to be chiefly composed of the students and faculty of the College. A list of subjects on which observations are to be made, and information acquired during the coming summer, has been prepared. This work appeals strongly to the students. Officers elected for the year are: Hon. President, the Hon. Minister of Agriculture; President, Principal Black, B. S. A.; Vice-President, T. J. Harrison; Sec. Treas., G. A. Sproule, B. A. Councillors—Messrs. H. N. Thompson, G. A. Todd, A. J. Matheson, B. Attrill, and W. W. Thompson.

The prospects for a larger class next year are very favorable. A class of perhaps one hundred and fifty is expected. To make room, the Advisory Board is calling for tenders for the erection of a large dormitory, to give sleeping apartments to 225 students, and include a dining-room, reception-rooms, matrons' apartments, gymnasium, etc. It is proposed also to build a Domestic-science Building, either this summer or next.

The buildings on the grounds at present are: The main building, dairy and science building, ice-house and refrigerator, power-house and workshops, stock-judging pavilion, cattle and horse barns, piggery, implement and machinery barn, farm foreman's cottage, and the principal's residence. The greenhouses are in process of construction.

The College term begins the first of November, when the rush of work is over on the farm, and ends the last of March, in time to admit of the students getting home for seeding. The short course, as at present outlined, covers two winters. Although no arrangements as yet have been made for advanced work in agricultural science, a number of men have expressed their intention of taking this work, if it may be obtained without going further from home. Of the class at present in attendance, too much cannot be said by way of commendation. With the exception of one or two, they are the brightest and most intelligent the farm can produce. The energy they have displayed in all their work has been very gratifying, indeed, to the principal and his staff, and great things are expected of these young men, who, in a few years, will be at the head of their profession in the various parts of Manitoba and the West.

G. A. SPROULE, B. A.,
Department of English and Mathematics.

RURAL PUBLIC SCHOOLS.

Editor "The Farmer's Advocate":

I think "Mac." ought to feel quite encouraged in launching out as a writer for the press. His article, in your issue of March 14th, which evidently is his first attempt in this line, is rather good, and, after he gets a little older, no doubt, he will be able to produce something better, so that he can sign his own name, instead of assuming the name "Mac." There are some points in his letter with which I heartily agree. For instance, he says, "What use is a man in any vocation in life, even a farmer, without an education?" If an education is not worth \$400 to any man, it is not worth a cent. Now, that is one of the ideas I am

contending for, viz., that the farmers' sons and daughters should have a better chance to secure an education. The question is not whether the education is going to be worth \$400 to the boy or girl, in life, or not, but the want of \$400 with which to secure the education along with the other various reasons, suggested in my former letter, prevents the boys and girls in rural districts, or at least 90 to 95 per cent. of them, from getting this education.

Then, again, with regard to Latin, French, etc., I know, by experience, that they do assist the pupil, as he says, in the study of English grammar and literature; but not to such an extent as to make it absolutely necessary that the boy or girl should go to high school and devote a lot of time in the study of these languages, as hosts of them in the past have been extremely successful as students of English grammar, and, even literature, without very much knowledge of either Latin or French, especially the latter. Another point introduced by him is advising me to take a half holiday and visit the local school. Now, this is an idea that I have always advocated, and have, on many occasions, done so, and frequently, at the request of the teacher, have taken charge of a class or classes, thus keeping somewhat in touch with public-school work. As parents and ratepayers, we should visit our schools more frequently. Should we do so, we would find, perhaps sometimes, as in all lines of work, persons teaching who had missed their calling; whilst, in many instances we would find teachers who were laboring faithfully and successfully for the education of our children. So, in trying to reply to my former letter, he lays, if possible, a little more emphasis on some of the points advocated by me. But he accuses me of being a bachelor, or a husband without children. Well, I cannot see any great crime in a man being either a bachelor or husband without children, as we have lots of good and great men, some of whom are bachelors, and some of whom are husbands without children, but I cannot see what that has to do with the question at issue.

However, I am not a bachelor, and, as a matter of fact, my home has been made joyous and happy by having sons and daughters, some of whom have partaken of the benefits accruing from attendance at the high school and collegiate institute, whilst one of them has been successful in securing certificates—and in every case with honors—in one of the best colleges in our land. But it matters not who or what I am, the question is "Rural Public Schools," and how we can best secure the education of our children in rural districts? Facts are stubborn things, and must be faced. Mac. says that 90 or 95 per cent. of these boys and girls in rural districts never get any more schooling than that acquired in the public school. So say I. Then, why compel that education to cease at thirteen years of age? Why not raise the standard of our rural public schools, and thus enable them to pursue their studies in advanced classes? This would in no way interfere with any of the five per cent. desiring to attend high school, and, to use the words of Mac., just think what the outcome would be! All through our rural districts we would have an educated people. W. H. KIPP.
Oxford Co.

ONTARIO VETERINARY COLLEGE CLOSING.

At the 45th annual closing exercises of the Ontario Veterinary College, Toronto, the graduating class, last week, was extraordinarily large, probably the very largest in the history of the institution, all parts of Canada and the United States being represented. The gold medalist was C. W. Fogle, of Williamsburg, Kansas. Dr. Andrew Smith, the principal, presided at the function, while among those with him were: Dr. Elliott, of St. Catharines; Dr. Duncan, Colonel Lloyd, of Newmarket; Lieut.-Col. Roberston, Dr. Cowan, of Galt; Dr. Amyot, Dr. Graham Chambers, and Dr. Cotton, of Mount Vernon, all of whom delivered addresses.

MILK SHIPPERS IN ANNUAL SESSION.

The largest and most enthusiastic meeting of the Milk Shippers' Association, of Montreal, was held in the Oddfellows' Hall, St. James St., Montreal, March 28th, being the seventh annual session. Representatives were in from almost every station from which milk and cream is shipped to Montreal. The president, Mr. Jas. Bryson, presided, and in his opening remarks spoke of the successful work the Association was doing.

The secretary reported a larger number of members than any previous year, and referred to the assistance the Association had given to aid in getting legislation governing the inspection of milk cans. He had been advised that many of the old cans had been wrongly stamped, holding more than the capacity called for. A committee was appointed to look into the matter.

Also he presented the regulations, lately passed by the Provincial Board of Health, governing the production of milk in dairies, shipping and delivery in the city. This calls for a general cleaning up of dairies in country and city, better cow barns, and milk-rooms, etc. It also requires milk cans to be returned from the dealer in the city clean. This means that many shippers now in the business, rather than go to the expense of building new stables, or even repairing old ones, will rather go out of the business of producing milk for city trade. Almost as much profit will be realized at the cheese or butter factory, with much less expense and labor.

On account of this factor, and the high prices of mill feeds, farm labor and milch cows, it was unanimously agreed that members must have a higher price for milk and cream. Prices were fixed at 15 cents per gallon for milk delivered in city for the five summer months, commencing the 1st of May, and for cream testing 22 per cent. butter-fat, 75c.; 26 per cent. butter-fat, 90c.; for cream testing 30 per cent. butter-fat, \$1.05 per gallon, delivered in the city. Dairy farmers consider, even at these prices, they are not making as much profit as when feed stuffs and labor were lower. These prices are about 10 per cent. lower than other Canadian cities, or even American cities. Sub-associations have been formed at a number of points, and it is expected the shippers will be more united in the future.

Although the expenses were heavy during the past year, yet the treasurer reported a balance on hand of \$88.00.

In conversation with the shippers after the meeting, some of them were asked if those prices were not too high. They all said no, and were not very particular whether they shipped to the city or not, as it meant more labor and expense, with a very little more of a return in cash than when sent to the cheese or butter factory; no by-product was left on the farm with which to feed young stock, hence the prices set were not too high.

The following officers were elected: President, Jas. Bryson, Brysonville; Vice-President, G. D. Walker, Lachute; Secretary, W. F. Stephen, Huntingdon; Treasurer, H. S. Tamahill, Trout River. Directors—Thos. McIntosh, Lancaster; J. C. Hall, Cornwall; John McPhee, McAlpine; W. R. Stewart, Athelstane; Dr. Lyster, Richmond; Alex. Cunningham, Howick Station; Malcolm Smith, Lachute; J. J. Riley, Graham; H. W. Thompson, Hudson Heights; E. Stringer, Hemmingford; T. Anderson Bishop, Lachine Locks; David Black, St. Hermas; Wilfred Leuay, St. Valentine; Jas. Boden, Danville; Geo. N. Beach, Cowansville.

In the future, it was decided to hold the annual meeting in month of September.

PROFIT IN THE MAPLE BUSH.

Once more it is Eastertide, commemorative of the greatest event in the world's history, when, by the giving up of one life, life to all men was freely given. The winter of life had vanished, and the new spring-time humanity blossomed out. Eastertide tells us that our winter must soon disappear, our earth's mantle of white must soon change to a mantle of green; all life, seemingly dead, suddenly bursts into living organisms, refreshing and gladdening the heart of man.

The past winter, with its severe cold, has been less stormy than previous ones—just sufficient snow for good sleighing, and it has been well utilized. As usual, a certain amount of lumbering has been done. Now all varieties of trees are used for lumber, and our forests are being depleted more and more each year. On some of our hilly and stony soil, I fear we are making a mistake in cutting our forests off too close. Better keep this land in forest, as it will be an asset which will grow in value as the years go on. And the effect of our forests on the climate is certainly marked. Very few in this section protect the growing forests, unless it be the sugar orchard. This latter is truly a good asset, and our farmers are now in the midst of this sugar harvest. With the improved appliances for sugar and syrup making, many more maples are made to yield the watery fluid from which is made the rich golden syrup, which is such a delicacy, and without which our griddle cakes seem flat and unwholesome.

The prospects are good for a large make of both syrup and sugar. Prices for both are good, and much higher than a few years ago, as the market for this product is widening out. Much of it is exported to the Southern States, and one of our best markets is the Northwest. Syrup is selling at about 90c. per gallon, and sugar at 8c. to 9c. per lb., wholesale. Hauling is well completed, and it is well it is so, as our sleighing is gone, and we take to wheels once more. In some other points in our Province there is still good sleighing. Most of our creameries shut down for January, February and March, only the one in the town here remained in operation. Most of the milk went to the condensing factory, or was shipped to the city of Montreal, where there was a great scarcity. The creameries are opening on April 1st, when it is expected there will be a large delivery of milk. The prospects are good for higher prices this season. Millfeeds and bran never were so high here, hence the prices of milk going to the city have been increased from 12c., last summer, to 15c., this season. Labor is scarce and dear. Many are going to depend on the immigrant this season again to help them out. This seems the only way out of this serious problem. Good milch cows are selling all the way from \$40 to \$65; inferior ones are selling as low as \$25, at auction sales. Beef cattle moved freely during the Easter markets, and at higher prices, but it will not last long. Hogs have been quoted at from \$6.75 to \$7.25 for selects, with few offerings. Horses have been fairly active, drafters bringing top prices. Several carloads of ordinary work horses were bought for the Northwest. A few of our boys have "gone West," believing that there are greater possibilities in the great West than in our old Province. We wish them success. Huntingdon, Que. W. F. STEPHEN.

HARROW MANURE HEAPS BEFORE SPREADING.

I have often thought of writing "The Farmer's Advocate" about spreading manure that has been put out in small heaps in the winter. By taking a team and a set of diamond harrows, and going over the heaps, it will greatly help in the work of spreading. It is as good as another man at the job.
Ontario Co., Ont. GEO. R. A. MILLER.

QUESTIONS AND ANSWERS Miscellaneous.

AGE LIMITS AT SHOWS—DIPPING SHEEP.

1. Have all leading shows the same exact limit of ages for cattle eligible for all the different classes? If so, what are they, and if not, what is the age limit for the different classes at the Canadian National Exhibition?

2. What would you recommend as the best book for the ordinary farmer on the diseases and remedies of domesticated animals?

3. When is the best time to dip sheep? What is the best appliance, as regards tank, and a place for them to drip into, for a flock of twenty or thirty?

J. R. W.
Ans.—1. In the rules of the Canadian National, Toronto, the Ottawa and London exhibitions, ages of cattle of the dairy breeds are calculated to August 1st, and of the beef breeds to Sept. 1st. Under this rule, a calf of the dairy breeds, 12 months and a week or two old, can show in the class under one year, and an animal may be a little over two years, and yet show in the yearling class. The Toronto Exhibition has sections for senior and for junior calves, in the dairy

breeds, and the Shorthorn class, in which case senior calves must have been born before January 1st, and juniors on or after January 1st. At Ottawa, senior and junior calf sections are provided for Holsteins, Jerseys and Ayrshires, and must be over six months, or under six months, respectively, and ages are calculated to August 1st in these breeds.

2. The Farmer's Veterinary Adviser, by Law, price \$3, is, perhaps, the best; but Veterinary Elements, by Hopkins, price \$1, is good value. Either may be ordered through this office at the prices named.

3. About one week after shearing the ewes, the lambs should be dipped, as the ticks will transfer to the lambs, where they find more wool to hide in. It is a good plan to dip the ewes at same time, or to pour some of the solution left over on the backs of the ewes, and rub it in with the hands. A tank, about 44 feet long, 12 inches wide at bottom, 26 inches at top, and 24 feet high, answers very well for dipping. A slatted tank, with tight bottom, the top of tank, one end resting on the ground, the other slightly elevated and made to run, leading or board on side of tank, and a drip, on which

lambs are laid while the surplus of solution is squeezed out of their wool, and they are rolled off on to a bundle of straw to let them down easy.

CHEAP TEMPORARY ROOT-HOUSE.

Publish a plan for a cheap temporary root-house that would hold, say, 400 bushels when filled. D. B.

Ans.—We have seen serviceable root-houses, such as might suit, built of split logs or stout sawmill slabs. These were cut about eight feet in length, and were set on end on the surface of the ground, or a little below, the upper ends being brought together and fastened, the lower being spread about eight feet apart. The whole was covered with earth to a sufficient depth to keep out frost, and an entrance door placed in one end. A structure of the dimensions given would need to be twenty-five feet in length inside to give room for 400 bushels. T.

KEEPING MEAT IN ICE HOUSE.

Would some of the readers of your valuable paper please give advice if fresh beef or pork will keep till on in summer, if packed in the ice house in large crocks or wooden pails without injury to crocks? SUBSCRIBER.

HORSE STOCKS.

What will cure a horse, whose legs stock standing in the stable? It all goes out when working or driven. L. C.

Ans.—No drug is of much or any use. Prevention consists in giving as regular exercise as possible, feeding moderately, and reducing the grain feed (substituting bran largely) whenever the horse is about to be idle. Keep the bowels always free. Some horsemen practice giving a small handful of Epsom salts in the feed once or twice a week when horses are idle, and liable to stock.

DISTILLERY SLOPS.

Farmers in this vicinity are feeding slops from a distillery to their milch cattle. What effect has this in the milk, and is it good feed for pigs? J. G.

Ans.—Distillery slops should not be fed to cows giving milk. Nearly all authorities are agreed that this form of feed should never be fed to cows giving milk, as it gives a very undesirable flavor to the milk, and makes it practically useless for all dairy purposes. I do not know its effect as feed for pigs. H. H. DEAN.

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than Interest-money, when you have once made a start. One Dollar (or more) will open an Interest-bearing Savings Account at The Bank of Toronto, and you will quickly realize that this is the most profitable account you have, and your money will be safe at this Bank.

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Capital, - - - \$ 4,000,000
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MARKETS.

TORONTO.

LIVE STOCK.

Receipts of live stock at the City and Junction markets were not large, but sufficient to supply all demands, both in the export and butcher classes. Junction receipts of cattle on Monday were only 800 head; quality not good, but trade brisk.

Exporters.—Trade dull, owing to scarcity of shipping space. Prices ranged from \$4.90 to \$5.50, but only one load brought latter price, the bulk selling at \$5 to \$5.30; export bulls, \$3.75 to \$4.25, with one or two at \$4.40.

Butchers.—Trade brisk, with prices firm as follows: Prime picked lots, \$5 to \$5.25; loads of good, \$4.75 to \$4.90; medium, \$4.25 to \$4.60; cows, \$3 to \$4.25 per cwt.; canners, \$1.50 to \$2.75 per cwt.

Feeders.—A few lots of short-keep feeders were picked out of those brought on the market as exporters, weighing from 1,100 to 1,250 lbs. each, at prices ranging from \$4.40 to \$4.80 per cwt.

Milch Cows.—The quality of milkers and springers was not as good as usual, and prices ruled lower, accordingly, at \$30 to \$55 each. One load of 25 cows was bought by a St. Mary's dairy at an average of \$39 each.

Veal Calves.—Receipts large, with prices easy for common to medium quality, but as firm as ever for prime, new, milk-fed calves. Prices ranged from \$3.50 to \$6.50 for the bulk, and \$7 to \$7.50 per cwt. for the best.

Sheep and Lambs.—Receipts light. Prices firm. Export ewes, \$5 to \$5.50 per cwt.; export rams, \$4 to \$4.50 per cwt.; yearling lambs, \$6 to \$7.95 per cwt., the latter price for selected ewes and wethers. Spring lambs, \$6 to \$10 each.

Hogs.—The run of hogs at both markets has been light, and prices have remained firm at \$6.90 for selects, and \$6.65 for lights and fats; sows, \$4 to \$5 per cwt.; stags, \$2.50 to \$3.50.

Horses.—AM the leading dealers report the trade in horses as being good; in fact, never better; that is, there never was a greater demand than now. Heavy-drafters and general-purpose horses are especially in demand at firm prices. Burns & Sheppard are using the Jarvis-Street stables mainly for heavy horses, and the Nelson-Street stables for the finer classes. At the close of the week, over 600 horses were reported as having changed hands at following prices: Single roadsters, 15 to 16 hands, \$125 to \$175, and \$200 to \$225 for choice horses; cobs, 15 to 16.1 hands, \$160 to \$180; matched pairs, \$250 to \$475 and \$500; delivery horses, 1,100 to 1,200 lbs., \$135 to \$165; general-purpose and express horses, 1,200 to 1,350 lbs., \$145 to \$175; draft horses, 1,350 to 1,750 lbs., \$170 to \$220; second-hand workers, \$65 to \$95; second-hand drivers, \$70 to \$100 each.

BREADSTUFFS.

Grain.—Wheat—No. 2 white, 72½c.; No.

2, mixed, 72½c.; No. 2, red, 72c.; No. 2, Goose, 66c.; Manitoba, No. 1 Hard, 90c. Corn.—No. 3 American yellow, 52c., free on board cars, at Toronto. Oats.—No. 2 white, 39½c.; No. 2 mixed, 38½c. Rye.—No. 2, 68c. Barley.—No. 2, 52c.; 3X, 50½c.; No. 3, 50c. Peas.—No. 2, 79c. Buckwheat.—56c. Bran.—Scarce, at \$23 at city mills. Shorts.—Hard to get at \$23 to \$24, at city mills. Flour.—Manitoba patent, \$3.85, on track, at Toronto; Ontario, 90 per cent. patents, \$2.67 for export; Manitoba patent, special brands, \$4.50; strong bakers', \$4.

COUNTRY PRODUCE.

Butter.—Supplies not equal to demand. Prices firm, but unchanged. Creamery pound rolls, 28c. to 30c.; creamery boxes, 26c. to 27c.; dairy pound rolls, 24c. to 25c.; tubs, 21c. to 22c.; bakers', tub, 19c. to 20c.

Eggs.—Market easy at 20c. to 21c. Cheese.—Market firm. Prices unchanged. Large, 14c.; twins, 14½c.

Honey.—Market strong; strained, 12c.; combs, per dozen sections, \$2.60 to \$2.75.

Evaporated Apples.—9c. per lb.

Potatoes.—Market easier. New Brunswick Delawares, 95c. to \$1 per bag, by the car lot, on track, at Toronto.

Poultry.—Receipts light. Turkeys, 18c. to 20c. per lb.; chickens, 16c. to 18c.; fowl or hens, 12c. to 15c. per lb.

Hay.—Baled.—Market strong. No. 1 timothy, \$12 to \$13 per car, on track, at Toronto; No. 2 timothy, with a sprinkling of clover, \$10 to \$11.

Straw.—Baled, \$6.50 to \$7, by the car lot, at Toronto.

SEEDS.

Toronto seedsmen are quoting the following prices to the trade for cleaned seeds for spring sowing as follows: Red clover, \$14.50 to \$16.50 per 100 lbs.; alsike, \$10.50 to \$13 per 100 lbs.; timothy, \$5 to \$7 per 100 lbs.

HIDES.

E. T. Carter & Co., 85 Front St., have been paying the following prices: Inspected hides, No. 1 steers and cows, 10½c.; No. 2 steers and cows, 9½c.; country hides, cured, 9c. to 9½c.; country hides, green, 8c. to 8½c.; calf skins, No. 1, city, 13c.; calf skins, No. 1, country, 11c. to 12c.; sheep skins, each, \$1.55 to \$1.65; horse hides, \$3.50 to \$3.75; horse hair, No. 1, per lb., 30c. to 32c.; tallow, per lb., 5½c. to 6c.

MONTREAL.

Live Stock.—A stronger feeling has prevailed in the English cattle market of late. The situation in the export livestock market continues much the same as formerly. The outlook for trade between now and the opening of navigation does not appear very encouraging. Prices on this side are somewhat too high as compared with those in England, even when the present advance is taken into consideration. So far as known, there have been no freight engagements made for May sailings from here, and agents are finding it hard to fill space from Portland, Me., and St. John, N. B., even at present low freights. A few loads of fancy steers and heifers were purchased at 6½c. to 7½c., and some of the top grades sold at 7½c. A good range for fancy stock was 6c. to 6½c. The average run of stock continued at much the same prices as formerly, being 5½c. to 5½c. for choice, 5c. to 5½c. for good, 4½c. to 4½c. for fair, and lower grades, 3c. to 4c. Although there is a very good demand for sheep and yearling lambs, the supply of them is quite light. Prices were accordingly firm, some of the sheep selling at 5c. to 5½c. per pound, yearling lambs being 6½c. to 7c. Spring lambs were offering in rather larger numbers, at \$6 to \$10 each, according to size. A few very choice calves were also offering, and these brought 8c. to 8½c. per lb., the remainder ranging from \$1.50 to \$2.50 each, being very poor. Hogs were in demand, and none too plentiful, so that prices advanced somewhat. A fairly-active trade was done, at \$7.25 to \$7.50 per 100 lbs.

Horses.—Prices hold firm as follows: Heavy-draft, weighing 1,500 to 1,700 lbs. each, \$250 to \$300 each; light-

draft, 1,400 to 1,500 lbs., \$200 to \$250; express horses, \$175 to \$225; common drivers, \$50 to \$100, and choice driving and saddle horses, \$300 to \$500.

Dressed Hogs and Provisions.—The market for dressed hogs is firm, in sympathy with that for live, and sales are taking place at 9½c. per lb., and sometimes 10c. for abattoir-fresh killed. Bacon and ham are in brisk demand, just now, and prices for bacon are steady at 15½c. to 16c. per lb. for choice smoked, and 13c. to 14c. for green and for undergrades. Hams are also in request, at 13½c. to 14c. for extra large, weighing over 25 lbs.; 14c. to 15c. for medium, 18 to 25 lbs.; 14½c. to 15½c. for 12- to 18-lb. weights, and 15½c. to 16½c. for smaller. Barrelled pork is steady, at \$21.50 to \$25 per bbl., according to quality. Demand for barrelled pork is on the dull side.

Potatoes.—There has been a further weakening of the market for potatoes during the past week. Best white stock is quoted at about 75c. to 78c. per 90 lbs., on track, and dealers are able to resell at an advance of 3c. or so, on track. These are selling at about 90c. or 95c., bagged and delivered into store. Red potatoes are 60c. to 70c., on track.

Eggs.—The market has ranged around the same prices for a week past, being about 23c. per dozen. Some of them are selling over that figure at times, and a few below. The latter are thought to be American eggs, of which some four cars have been brought in during the past few days. This week the demand for eggs is very active, and the supply is none too large. The stock seems to be costing about 20c. in the country.

Butter.—The market continues steady to firm. The stock in Montreal is now in very small compass, and if it had not been for the butter returned from England, there would have been a famine before this. Quite a little of this returned butter has been selling of late, the creamery bringing 26c. to 27c., and the dairy about 20c. per lb. Fresh-made rolls—not new-milk—are quoted at 24c. to 25c. per lb. In another week, the supply of new-milk creamery ought to show a material increase.

Cheese.—The market for old cheese is very dull, and there is almost nothing left. Prices are probably 13½c. to 13½c. Hay.—Local prices are \$13.50 to \$14 per ton for No. 1 timothy, \$12 to \$12.50 for No. 2, and \$11 to \$11.50 for clover and mixed.

Hayseed.—Dealers still quote \$1.75 to \$2.75 to shippers, f. o. b., per bushel of 48 lbs. Probably 75 per cent. of the sowings this season will be American, the Canadian crop having been very short. Dealers are selling alsike, Montreal, at \$15 to \$16 per 100 lbs.; red clover at \$15.50 to \$17.50, and white at \$14 to \$20.

Grain.—Conditions and prices are the same as a week ago.

Maple Syrup.—It is claimed that the run of sap has not been so free as usual, and it is not thought that the season will be a good one. Receipts have been very light, and prices are about 7c. per lb., or 90c. per gallon. There is still time for a good run of sap.

Hides.—Dealers are paying 10c., 11c. and 12c., respectively, for Nos. 1, 2 and 3, for beef hides, Montreal, and selling to tanners at an advance of ½c. per lb. Calf skins are 13c. per lb. for No. 2, and 15c. for No. 1, this being a little higher than a week ago. Spring lambs are not wanted, but yearlings and sheep skins bring \$1 each. Rough tallow is 1½c. to 4½c. per lb., and rendered, 6c. to 6½c. per lb.

CHICAGO.

Cattle.—Beeves, \$4.20 to \$4.75; cows and heifers, \$1.75 to \$5.35; calves, \$5.50 to \$7.65.

Hogs.—Mixed and butchers', \$6.30 to \$6.50; good to choice, heavy, \$6.40 to \$6.50; rough heavy, \$6.15 to \$6.30; light, \$6.30 to \$6.50; pigs, \$5.70 to \$6.40; bulk of sales, \$6.40 to \$6.45.

Sheep and Lambs.—Market steady. Sheep, \$4.25 to \$6.50; lambs, \$6.25 to \$7.35.

BRITISH CATTLE MARKET.

Liverpool and London cables are steady at 11c. to 12½c. per lb., dressed weight; refrigerator beef is quoted at 9c. per lb.

BUFFALO.

Cattle.—Prime steers, \$5.50 to \$6. Veals.—\$4.25 to \$8.75. Hogs.—Heavy, \$6.70 to \$6.75; mixed and Yorkers, \$6.75 to \$6.80; pigs, \$6.80; roughs, \$5.75 to \$6. Sheep and Lambs.—Steady. Lambs, 25c. higher; \$5 to \$9.

QUESTIONS AND ANSWERS. Veterinary.

TORPIDITY OF KIDNEYS—WORMS.

1. Colts, three and four years old, pass thickish, milky-like urine.

2. Horses have worms. C. H. O.

Ans.—1. This can be corrected by giving 4 drams nitrate of potash once daily in damp food for three days.

2. Take 1½ ounces each of sulphate of iron, sulphate of copper, tartar emetic and calomel. Mix, and make into 12 powders. Give a powder night and morning in damp food. After the last one has been taken, give a purgative of 8 drams aloes and 2 drams ginger. Feed bran only for twenty-four hours after administering purgative. V.

Miscellaneous.

LICE ON COLT.

What would be good to kill lice on a yearling colt? D. P.

Ans.—Try one part insect powder or hellebore in three or four parts oment. Dust along the back, and keep him dry till the mixture has settled down his flanks and suffocated the lice.

VARIOUS QUESTIONS.

1. Give best feed for Hackney and Thoroughbred colts to keep them in best growing order, and good condition.

2. Give remedy for lice and nits on colts and horses.

3. Can you give cause of mare not breeding?

Ans.—1. We could not advise better feeding than what you describe as your practice.

2. The coal-tar sheep dips are generally effective. A solution of tobacco is sure death to lice.

3. We can only advise an early run on grass, and the opening of the entrance to the uterus before service is allowed.

PLOWING UNDER COVER CROP.

I sowed barley in an orchard towards the end of August, 1906, and only got a stand of about three inches. For the purpose of best cultivation this year, when would you recommend that this should be plowed under? Should it be as soon as the ground permits, or would it be advisable to wait until the cover crop got some growth?

Ans.—Unless you have been able to obtain a fall variety of barley, which is not at all common in this country, it is mostly likely all of the barley plants will be dead by the time the ground is dry in the spring. In any case, however, it would be best to plow the orchard as soon as the ground is fit to work, in order to conserve soil moisture, and give the trees the benefit of the early cultivation, which would stimulate early, vigorous growth, and enable them to mature their wood well before next winter.

H. L. HUTT.

INFECTION FROM TUBERCULOSIS.

I had a cow die with what was believed to be tuberculosis. Will the rest of my herd be likely to be affected, they having had access to the same water tank until the symptoms were very pronounced, as that disease was not suspected at first. A number of the cows are giving milk. Is it safe to use the milk and butter from the herd, symptoms not having developed? Is there any compensation given by the Government for animals destroyed on account of said disease? SUBSCRIBER.

Ans.—We do not think there is any appreciable danger of infection from drinking from the same trough or tank; nor do we think there is danger from using the milk of affected cows, except where there is evident disease of the udder. There is no Government compensation for animals destroyed on account of this disease.



Life, Literature and Education.

(Contributions on all subjects of popular interest, whether relating to the Literary Society discussions or not, are always welcome in this Department.)

OUR LITERARY SOCIETY.

A Farewell.

As the long days have seemed to come on us apace, crushing out the long evenings with their opportunities for reflection and study by the fire and under the lamp-light, it seems time to bring the Literary Society of this term to a close. We consider that the session has been a successful one. No doubt we have left many things undone which might have been done; but there are many years ahead in which to retrieve these opportunities. The Literary Society is not perfect yet, nor is it likely ever to be, but it has done what it could, and is looking forward to doing still better. What can a man or a Society do more than that?

At all events, we have seen evidences of keen literary appreciation in the answers and essays submitted by many of our students, and not-to-be-mistaken traces of awakening interest in those of others; and this is just what we have been working for. . . . Our list of members also shows two hundred and thirty names, a creditable showing, we think, and one which justifies our claim to being one of the largest literary societies in Canada. Many of these members have written us to say how they have enjoyed and been benefited by the work of the Society; yet we feel that our thanks should go to them, rather than theirs to us. It was our students who brought to the Society its elements of success, and we thank each and every helper very sincerely.

And now, although as a society we must withdraw, chrysalid-like, for a season, we trust that we shall not spend the intervening time in idleness, but that we may continue to ruminate in secret, maturing plans, by virtue of which the Society may emerge next fall with stronger and brighter wings than ever.

Just here, perhaps, it may be necessary to say that we are, by no means, forbidding any member to write for us during the summer—we are always glad to consider any ideas worth putting in print—but we merely wish to have it understood that the systematic Society work will take a rest.

With very best wishes to all, then, au revoir.

Our Last Competition.

The best essays upon the subjects set for the Society in our issue of Feb. 21st, were sent by J. D. Taylor, Waterloo Co., Ont.; J. Miller, Jr., Oxford Co., Ont.; and L. M. C. Kent Co., Ont. Possibly a few of the statements or views in some of these essays may be open to question. We do not criticise, but leave that for any of our readers who may be interested enough to write.

Other very good essays were sent

by Mrs. Earle, who, however, wrote on "The Farm as an Ideal Home," rather than on the given subject, "The Ideal Farm Home"; Miss Earle, V. Rowell, and F. Fansher. Mr. Way's essay from a former study is also printed.

THE NATIONAL DESTINY OF CANADA.

In discussing Canada's national life, it would, of course, be impossible to accurately determine our destiny. History has proven time and time again that the growth and development of empires and colonies is often checked or diverted by misfortunes and contingencies unforeseen until the time of their actual occurrence. However, considering our past development, the roseate prospects of the future, and the development of the U. S. A., which in many respects Canada will greatly resemble, we are able to form a fairly reliable opinion of Canada's national destiny.

At present the Crown exerts practically no influence on Canadian home politics, so the ties that chiefly bind us to the Empire are loyalty to the throne, a love of the motherland, and a pride in the Empire. Considering the strong national spirit that has been of late years developing, and the immense population Canada must some time contain, there can be no doubt that at some time in the future (though probably a still distant future) Canada will be separated from the Empire.

What may happen when this state of affairs transpires, is somewhat doubtful. Many fear and some few hope that Canada will then be joined to the United States, either by peaceable annexation or as a conquered territory. That such might well be the case in the event of a war in the near future between the U. S. A. and Great Britain, is only too apparent. However, there is little danger of such a calamity taking place, and if Canada is allowed to gain the population and power that under natural circumstances she is sure to, there will be no reasons for her willingly joining the U. S. A., and she will be too powerful to be forced into such an alliance.

We must also discuss the commercial and industrial destiny while discussing the national, as the weakness or strength of a country depends largely on its commerce and industry. While the growth in population in the last twenty years has been certainly disheartening, it is comforting to think that our commercial importance as a nation is far in excess of what our population would warrant. Roughly speaking, the U. S. A. has been the cause of our slow increase in population, partly by drawing thousands of Canadians to that country, but principally by attracting the vast bulk of European immigrants from Canada. However, the tide of immigration is turning, and has already turned toward Canada, and in the next twenty-five years there can be no doubt that such vast numbers of both Europeans and Americans shall reach this country as will make us take giant strides in wealth, trade, and all useful arts and sciences. Trade, even now, is rapidly increas-

ing, and industries springing up in all parts of the land. One very important help to Canadian trade will be the trouble between the United States and Japan. If the Americans are unwise enough to exclude the Japs, what would be more natural than that the Japanese would, in retaliation, place all the Eastern trade that they control and that travels via the Pacific into Canadian hands? This would, of course, develop Canada much more quickly.

The true strength of a country is based on its agriculture. The country that can grow enough to feed its population in time of war, is the strongest of countries. Without a doubt, Canada will be able to supply its people with provisions, either in war or peace. It is cheering to note the great advance in scientific farming that has taken place in late years. Canada will unquestionably be one of the leading agricultural countries of the world.

Thus, when Canada, with an immense population, and very powerful in wealth and commerce, breaks away from the Empire, there can be but little doubt that a new republic shall be formed that shall rank among the great powers of the world. As great in commerce, industry, finance, population, science and military power, or even with our purer politics, better-administered laws, more strictly-selected immigrants and greater area of arable land—greater than our southern neighbor.

JUSTUS MILLER, Jr.

Oxford Co., Ont.

THE SUPREME FACT.

"After all, as we look back over the records of history, after all, in the far view of the future, all the differences of each day and generation are but trifling compared with the great fact that the two nations (Canada and the United States) are pursuing the same ideals of liberty and justice, are doing their work side by side for the peace and righteousness of the world in peace with each other.

"The differences of each generation loom large held close to the eye; but, after all, the fact that for ninety years, under a simple exchange of notes limiting the armament of the two countries, in terms which have become an antiquated example of naval literature, to single 100-ton boats with single 18-pound cannon; after all, the fact that for ninety years, under that simple exchange of notes, we have been living on either side of this three thousand miles of boundary in peace, with no more thought or fear of hostilities than if we were the same people—(ap- plause)—is a great fact in history, and a great fact of potential import for the future."—U. S. Secretary Root, at the Canadian Club, Ottawa.

MR. WAY'S ESSAY ON THE ABOVE TOPIC.

In Secretary Root's eloquent utterances we have not only a statement of the "supreme fact," but we have also a synopsis of the law of national greatness, and the keynote of the philosophy of human advancement and enlightenment.

The great fact enunciated is an exemplification to the world by two great nations (Canada and the

United States) of the uplifting, humanizing influence and practical operation of the principles of fraternity, peace and concord. The attitude of the two nations, both absolutely and relatively considered, attests the truth of the doctrine that "Righteousness exalteth a nation." The law is universal. Good-will, liberty, justice and peace tend toward union, progress, prosperity and expansion; while envy, oppression and strife produce disunion and disaster. Harmony is the highest and ideal condition in all relations of life.

War, aggression and conquest have played their parts in the evolution of individual and national forces. The weaker have been crushed; the stronger have generally survived. But what of the effect of war upon the peaceful arts and the building of nations? What of the success of agriculture and commerce during a time of war or insurrection? Those essentials of a nation's greatness—a nation's very existence—are paralyzed, or suspended.

After peace has been established, comes the era of nation-building. There is no force, power or influence that can so bind together, uplift and ennoble the nation, the race of mankind, as the principles of peace and brotherhood. The sublime note, "Peace on earth, good-will among men," which first on Bethlehem's plains heralded the new birth of the true religion, is no less the keynote of the true philosophy of nations and of government; it is no less the governing principle in all laudable and lofty national achievements and inter-relations.

W. J. WAY.
Kent Co., Ont.

THE IDEAL FARM HOME.

A man was once having a house built for himself. It was a house of generous proportions and beautiful architectural design. Two men were one day passing that way, and one of them was heard to remark, "That man is going to have a fine home." The other replied, "I don't know what kind of a home he is going to have, but he is going to have a fine house in which to establish his home."

This illustrates the point we would desire to emphasize—that an ideal home, whether farm or city, is not always found in a magnificent mansion. In fact, we would express the opinion that the home that approaches the nearest to what an ideal home should be, is more often found in a humble dwelling. The kind of home depends, after all, more on its human inmates than on its exterior surroundings; and this brings us to another point: There must be inmates, and "the more, the merrier." "What is home without a mother?" and what is a home without children? It is more like a boarding-house—a place to eat and sleep. The ideal home will have children, and plenty of them; and it will be a place, while kept clean and tidy, that will not be so scrupulously, forbiddingly clean and tidy that the children will be uncomfortable in it. Every room in the house will be free to the use of the whole family—not to their abuse, however.

Having said this much, nevertheless, it still remains true that the

ideal farm home will not lack material comforts, and beautiful and elevating surroundings. It will have just as beautiful and elevating furnishings within as the taste and financial position of the family dictate. It will not be without music of some kind. It will not be without works of art and literature of a pure and ennobling character. As to its outside surroundings, it will have the beauties of nature, utilized by the ingenuity of man to make its surroundings attractive and beautiful. Then, too, we have frequently been impressed with the fact that the ideal farm home will be a home whose privacy will be sacred to the members of the family. No hired man or other stranger will be constantly within it to destroy the sacred privacy of its home life.

Crowning it all—the beautiful surroundings, the ennobling works of art and literature and music within—there will be, brooding over the ideal home, that "love that suffereth long and is kind; that envieth not; that vaunteth not itself, is not puffed up, doth not behave itself unseemly, seeketh not its own, is not provoked, taketh not account of evil; rejoiceth not in unrighteousness, but rejoiceth with the truth; that beareth all things, believeth all things, hopeth all things, endureth all things." This love will be made stronger and purer, will be intensified by religion, wherein love finds its purest essence. The religion of the home will be made stronger and purer, and intensified by the daily recognition of the fatherhood of God in family worship.

A home such as we have endeavored to describe will be a veritable haven of refuge for every member of the family, as well as for the stranger who may have a claim on its hospitality. It will be a lodestar, drawing the members of the family back in loving memory to its roof-tree long after they have left the old homestead and have established ideal farm homes of their own.

Waterloo Co., Ont. J. D. TAYLOR.

THE FUNCTION AND PLACE OF THE KITCHEN IN HOME-LIFE IMPROVEMENT.

The kitchen is, or rather should be, the most important room in the house. It is there that a great part of the homemaker's time is spent, preparing the necessities of life. Some one, when asked who was the greatest woman, said, "The one who can best provide wholesome and daintily-prepared food." Success or failure in life depends much on the food we eat; and more efficient and better work can be done if the body is well nourished. Great care and thought should be given to the diet of the household, and children, especially, should be carefully looked after in this regard. If a child's stomach is weakened by improper eating, it is almost impossible to cure it. Too much ice cream and candy in childhood often lay the foundation of dyspepsia. A noted divine said that the condition of a man's stomach had much to do with his religion.

It is best to have the kitchen on the north-east side of the house, so that the room will be light and cheerful in the morning and cool in the afternoon in summer. All necessary conveniences should be provided, thus saving strength and making the work more pleasant. The ceiling and floor can be easily kept clean if oiled or painted, and flowers placed in the windows are conducive to health and good to look at. The sink should be placed at such a height as to avoid stooping in washing dishes, with shelves near, on which are soap, brushes, etc. Cupboards placed in the wall are a cheap and satisfactory way of providing places of storage for food and utensils in daily use. A farmer's kitchen should have a lounge, and cushions covered with leather or denim, on which he can rest after the day's work; and his wife would find it a convenience to have a comfortable chair near, in which she may sit to read or sew during spare moments.

If a choice must be made between

the furnishing of the kitchen and a parlor, let the kitchen have first place, as more real happiness can be had from a well-prepared dinner, and it is more essential to our well-being than a furnished parlor. Much happier, indeed, would be the present generation if more attention were given to the training of daughters in domestic economy in homes of the rich, as well as those of the poor, and it would be a safeguard against sudden and unexpected misfortunes which come to many in this fast-living age.

L. M. C.

READING ALOUD.

Are we losing the art of reading aloud? One sometimes fears that this is the case. At any rate, there is no doubt that reading for the benefit of other members of the family, or for the entertainment of social gatherings, is sadly neglected. To be sure, we have professional "elocutionists," but they do not take the place of the plain reader whose one ambition is to convey the author's meaning in the simplest and most direct manner possible. Then, we have plenty of people who love to capture a book or magazine and to snuggle down into a quiet corner for a delightful hour's absorption in the messages of a favorite writer. Much benefit is thus secured, but the benefit thus derived is for but one alone. Had the reader taken pains to share his book, with the family group as listeners, more benefit would have accrued to himself, and the family would have been helped as well.

One result of reading aloud is that the reader must pay better attention to his reading than he is likely to do when he reads silently. His own ear will tell him, moreover, if what he is reading is really worth while. In this way his literary taste will be aroused, and his judgment quickened, with the happy consequence that he will discard many a useless book and idle story. The fearless criticism of the listeners will compel a critical verdict, and the reader becomes a thinker.

Few realize the delight they give by reading aloud. In the long winter evenings, nothing will give better zest to the hour than the reading of a lively story or the perusal of an interesting bit of history or neighborhood news. The discussion that usually follows such a reading affords room for the exercise of the finest debating qualities, and paves the way for effective public-speaking.

There is, too, the value of reading aloud in entertaining one's friends. Many a hostess is in despair as to the way in which she will give her company a pleasant evening. Cards and dancing and games have been the usual resorts heretofore. Would not the reading of a fine bit of literature afford a wholesome variety? One has visions of an evening in which some of our poets might be thus treated. The poetry set to music might be sung, while the stirring passages for which no music has been set might be read. There are delights ahead for the hostess who will plan an entertainment of this sort. "But I am such a poor reader," we hear someone say. That defect may be due to lack of practice. To remedy this defect, begin now. Begin by reading the neighborhood news aloud, and before you know it you will be reading articles a column long. Doing so will add a new charm to home life, and it will do not a little to introduce whole families and neighborhoods into a new world, the delightful and ennobling realm of books and good literature, and bring in a richer manhood and a more charming womanhood.

Wentworth Co., Ont. O. C.

IN A GARDEN.

Thought is a garden wide and old
For airy creatures to explore,
Where grow the great, fantastic flowers
With truth for honey at the core.

There, like a wild, marauding bee
Made desperate by hungry fears,
From gorgeous If to dark Perhaps
I blunder down the dusk of years.

—Bliss Carman.

The Quiet Hour.

PROFIT GAINED FROM FAILURE.

If I must needs glory, I will glory of the things which concern mine infirmities. —2 Cor. xii. 30.

More
The battle's loss may profit those who lose,
Than Victory advantage those who win."

Real Christianity is like a magic wand, transforming everything it touches and revealing beauty everywhere. Think of the way our Lord began His preaching. Why, His first recorded sermon seems to turn all one's natural conceptions of the value of things upside down. We naturally desire to be rich and prosperous, and to be liked and admired by our fellows. Yet the Greatest Teacher the world has ever known declares that the poor and hungry and suffering are really the blessed people; and He calls on those who are reviled and persecuted for His sake to "rejoice, and be exceeding glad." If Christianity can fill a soul with joy under such circumstances, then it is worth far more to us than any magic gift which the fancy of men can picture. St. Paul says that he finds it possible to "glory" in his infirmities, and to take "pleasure" in reproaches, in necessities, in persecutions, in distresses for Christ's sake. St. Paul is not a man to indulge in "cant" talk or high-flown religious sentiment. When he says a thing like that, it is not because he considers it the correct thing for a professing Christian to say, but because he has found it to be true in his own experience. He is an honest witness, no one who reads his letters and St. Luke's account of his missionary journeys can doubt that. If he could find pleasure in very unpleasant things, and could triumph in the midst of failure and defeat, why can't we do the same? His was no secret talisman, no mysterious alchemy. On the contrary, he was eager to show everyone this fresh spring of joy which could bring gladness into the most dreary life. His reason for glorying in his infirmities is that the power of Christ may rest upon him. Let us see whether such a position of security in trial and difficulty may be possible for us too. We all like to succeed, which is only another way of saying that failure in anything we are trying to accomplish is very painful and unpleasant. Of course, if our aims are low we may not have to face failure to any great extent, but one who aims high will find failure—or, at least, apparent failure—constantly dogging his steps. How can we rise above the depression which is the natural result of failing to gain what we are striving for? How can we, like St. Paul, wring victory from defeat and find it possible to rejoice in things which are naturally most distasteful? We may own, as a matter of theory, that the poet is right when he says that low aim, not failure, is criminal; but, as a matter of fact, most of us fear failure and find it almost impossible to extract joy from it. The failure may be only in such a small matter as the baking of a cake or the making of a shirt-waist. Or we may feel disappointed and discouraged if we fail (or think we fail) to make any real impression on the children we are trying to teach and help. Or it may be the failure to pass an examination, or possibly the feeling that we are not making a success of our life-work that is troubling us. We feel not only discouraged, but also humiliated. Why? Can it be possible that even in teaching a Sunday-school class we have cared more to win the approval of our little world than to please God and help souls to grow nearer to Him? If our motives have been stained and spoiled by the love of the world, then we may well thank God for the humiliating failure which—by its very pain—opens our eyes. If our object were purely to please God and to help our neighbor, then outward failure could never make us feel humiliated or discouraged. Our Master knows whether we have prayed and worked loyally and patiently, and His "Well done!" is not in the least dependent on outward results. Our Lord presented a perfectly-finished life-work to His Father, quite apart from any outward result which might or might not appear on the surface. And we

should look up, rather than around us, to see whether our life is a failure or a success. To have one's work held up as a model for others to admire and copy is no proof of success. It is possible to win a great reputation for sanctity and good works, and to be well satisfied with that shallow success, really caring very little whether God is well pleased. And it is possible—perhaps more common than we think—for men and women to toil and struggle on patiently and quietly, winning little attention and admiration from the world, yet warmed and strengthened by the approving smile of their Master. They may fail again and again, but each failure only brings them to their knees, giving them a chance to win a real victory over pride and worldliness. They are ready to start out again on their Master's business, knowing that He is both able and willing to supply them with all the wisdom and strength they need. They never go to battle at their own charges, and they know that real failure is impossible if GOD is working through them and with them. The pain of humiliation is hailed as a danger-signal, warning them that they have been seeking honor more from men than from God. So they grow stronger every time they are defeated in their plans, because failure in accomplishing what they desire makes them lean more on God. They cannot lose hope or grow discouraged if they never depend on their own power, but draw always fresh supplies of strength and wisdom from an Infinite Source. How can they own themselves beaten when they are fighting in the ranks of the KING OF KINGS, and leaning on His omnipotent arm? Why, in such a case, defeat is utterly impossible. God's side must be the winning side, and the true victor is one who conquers his own pride and self-will rather than he who can do everything well, and make an outward success of everything he undertakes.

"I know
How far high failure overleaps the
bounds
Of low successes."

Some are so afraid of failing that they shrink from attempting great things for God. Like Moses and Jonah, they think the probability that their message will be disregarded is a sufficient excuse for not trying to deliver it. How many people refuse to help in choir or Sunday-school, making the easy excuse that they "have no gift for that sort of thing." In making such an excuse, it is well to feel quite sure that God will accept it. He did not accept the excuses offered by Moses and Jonah. God sometimes chooses to use weak and inefficient instruments—as He conquered the great host of Midian by Gideon's little army—so that no one can fail to recognize His hand. Jonah at first turned his back on duty because he feared failure and possible danger for himself, but such a saving of one's life is really losing it.

"'Tis man's perdition to be safe,
When for the truth he ought to die."

If we seem to be succeeding easily in all we attempt, let us be very watchful, for such easy success is often the direct failure. Perhaps it may be the result of not aiming high enough. If a boy of twelve is satisfied to do the school-work which is hard enough for his little brother of nine, he may accomplish the work with easy pleasure and yet be really failing. To win success easily is very unsatisfactory, and, like failure, should bring us humbly to our knees. A life of easy luxury is not the most healthy for soul or body. Can we not be brave and wise enough to thank God for the difficulties and failures over which we must climb if we are to force our way upward? For by continual exercise our spiritual muscles grow strong, and we can rise from strength to greater strength, looking ever more and more eagerly for the approval of God, and only caring greatly for the approbation of men, when it is evidently a reflection of His. The approval of God's true servants is not a thing to be lightly regarded, for those who consecrate their lives in loving service may expect, like the Child Jesus, to increase in favor with God and man. But, though the approval of God's saints should be prized, it must not be allowed to become an ab-

solute necessity. If God should see fit to withdraw even that stimulus for a time, that trial is also a sign of His love. A soul that can dare to stand alone with God on the mountain, and can even look up and thank Him for that chance of gaining strength in the loneliness of battle, is a victorious soul indeed, and may well rejoice that the Captain has chosen him for a hard but glorious enterprise. It is worth while to be in the darkness for awhile, if Christ is there too. As Bishop Brooks says: "The ordinary depressions and discouragements of life are forever different from that darkness in whose center, at whose heart, hangs Christ on His cross. They are full of weakness. He throbs out strength—His own strength—through all the darkness which He pours around the soul."

Let us try to be brave enough to stretch out both hands for all God's gifts to us—pain and failure are His gifts as much as joy and success, even though they may be the result of our own fault.

"Only grant my soul may carry high through death her cup unspilled, Brimming though it be with knowledge, life's loss drop by drop distilled, I shall boast it mine—the balsam, bless each kindly wretch that wrung From life's tree its inmost virtue, tapped the root whence pleasures sprung, Barked the bole, and broke the bough, and bruised the berry, left all grace Ashes in death's stern alembic, loosed elixir in its place."

HOPE.

COMPENSATION.

By Liza A. Fletcher.

Our failure may be gain;
Some wisdom gathered up,
Some patience in life's cup
Drawn from the stress of pain.

Our loss may be a wing
To urge the spirit's flight
Into the realms of light
Where God's own angels sing.

Our thorns may bloom to flowers;
Some sorrows we have worn,
Some cross with meekness borne
Blossom in heavenly bowers.

Our tears may jewels be
Set in a crown of love,
In that pure realm above
To shine eternally!

"Attention makes the genius; all learning, fancy, science and skill depend upon it. Newton traced his great discoveries to it. It builds bridges, opens new worlds, heals diseases, carries on the business of the world. Without it, taste is useless and the beauties of literature unobserved."—Willmott.

OUR ENGLISH LETTER.

SOME MORE LINKS.

(Continued.)

This time my link is between Teignmouth itself and Port Arthur, Ontario. "We have a son in Ontario.

At first he was in Sarnia, but now he is in Port Arthur, or was when last we heard from him. Do you know those places?" was said to me by a lady at our principal library here. Of course I knew them, as one should who has lived nearly thirty years in the Dominion, and who has not been quite a stay-at-home during that period. Having been in both places within recent months, I felt quite ready to speak about them, especially of the rapid growth of Port Arthur as a port of call, and the center of a vast traffic, on the shores of Lake Superior. I could assure the parents that, being, as it were, in the very heart of things, there need be no lack of opportunities for a young fellow of pluck and determination, especially as they had given him a good commercial education, with a knowledge of bookkeeping, and a previous experience in an English bank. From what was told of this young lad, I predict for him a successful career, and, as he is likely to see "The Farmer's Advocate" in the office in which he works in Port Arthur, I would even hope that the picture of Teignmouth, which I send with this, may, by its reminder of the chimes from the belfry-tower of the old Fortress Church, close to his old home, come to him as a message from his parents, whom he can make either sad or sorrowful, or glad and happy, according to what he makes of his life in Canada.

SIDMOUTH.

My fourth is a link just missed, but I send a picture of Sidmouth, near-by to which a Canadian friend, a lady farmer of London Township, has spent with relatives a large part of her somewhat long visit to England. Her brothers take "The Farmer's Advocate," and they will probably recognize the Devonshire Cliffs and know all about the beauties of the lovely coast. I fully intend to go across to Sidmouth, whether my friend has already left it for Canada or no, so that I may judge of its charms from my own observation.

Nor are those the only links which seem almost constantly arising to knit, as it were, my present life to my old life in Canada, but I will break for a while the thread which joins them together, and share with you, instead, some of the "odd lengths," which, in the shape of clip-

pings, or in the course of conversation, have drifted my way.

To give you an account of the sufferings brought upon the poor families of men out of work by the severe cold of this unusual winter, would be to write a tragedy, the conditions of which Canada is doing her best to alter by offering a welcome to those able and willing to work, who may come to her through accredited channels. Therefore, I will leave the topic alone, except to give you what one might almost call the serio-comic plea of a man who, if somewhat overburdened by a plethora of babies, could not be said to be left without mental resources, and who certainly deserves success. This clipping is taken from the Saturday paper of this week, so its result is as yet unknown to me:

"My wife has presented me with five children in thirteen months—triplets and twins," says a Southport resident appealing by circular on this account to his fellow townfolk for extra work.

I would commend the above not only to the notice of the tender-hearted, but also to those who have had their fears aroused, and not without reason, by facts proved by statistics, that nowadays there are fewer and fewer babies arriving yearly upon this mortal scene.

I note, too, that things seem fairly evened up on this side of the Atlantic, anyway, by the great ages reached, not only by those who have led sheltered and luxurious lives, but by those who have made full and frequent acquaintance with privation and misery.

My gatherings have all been made within the last fortnight, and, besides these, there are very few days when the newspapers do not give the names of those who have passed away between 80 and 100 years old. My clippings, therefore, are chiefly of those whose deaths would not be recorded in the obituary columns of the daily press.

Centenarian's Many Descendants.

January 30, 1906.

Mrs. Mary Carnforth, an inmate of Northallerton Workhouse Infirmary, has just died at the age of 100 years and nine months. She has a son aged seventy-nine and a daughter seventy-five. She had fifty-three grandchildren, 116 great-grandchildren, and several great-great-grandchildren. Mrs. Carnforth belonged to Knaresborough, but, after marrying, she worked as a linen weaver at Brompton, Northallerton. She retained all her faculties to the end.

The death took place at Northallerton Workhouse yesterday of Mrs. Mary Cornforth at the age of 103.

At Risby, Suffolk, Mrs. Susan Carter has reached her 100th birthday. The old lady remembers her father having been forced by the pressgang upon the Temeraire. He saw five of the Normans hung at the masthead.

Record Married Life.

What is believed to have been the longest duration of married life in England was terminated by the death of Mr. Robert William Crocker, at Taunton, on Saturday. In August last he and his wife celebrated the seventy-second anniversary of their wedding.

Their ages totalled 191 years, while the average of themselves and their four living children was over seventy-six years.

Mr. Crocker, who was formerly a farmer at Wayford, near Crewkerne, and was ninety-seven years old, has a distinct recollection of the rejoicings after Waterloo.

I know there are some "Crocker" in Canada—maybe one of this remarkable family.

The death has occurred in her 102nd year of Mrs. Sarah Frostick, of little Bromley, near Colchester, who has left a son aged seventy-seven and two daughters aged seventy-four and sixty-eight, respectively.

Henry Hayward, who had been employed on the Battle Abbey estate for sixty years, has died at the age of ninety-one, being the last of a series of five men who have died at Battle recently, the average of whose ages was ninety.

I have many more, but will only include the following in my shortened list:

Mr. David MacBrayne, who has just died at the age of ninety-two—which was also the age of the late Baroness Burdett Coutts—was the surviving representative of the firm of Hutcheson, who were the tourists pioneers in the West Highlands. It was of this firm that Professor Blackie wrote in his "Oban in the Season":—

"Praise be to noble Hutcheson,
Who made the Celtic seas, sir,
A highway smooth for any man
To travel on at ease, sir!
Like moving towns his vessels go,
And no one ever dreams now
Of staggering with a face of woe,
So steadily he steams now."

To wind up, and I do so with full apologies to any and all of those recorded above, who probably had very different views of cleanliness and comfort, my last mention shall be of the aged Irishwoman who was up against the Keynsham Guardians in the matter of a bath. They desired that she should take the statutory bath. She refused. She alleged that she had not done such a thing for fifty years. And she had reached the age of eighty-three without any truck with this modern fad of washing.

Many aged peasants are known in Kentish villages. One typical old fellow, of vague but advanced age ("might be an 'undred," was the general opinion), was worried about his hair, which was thinning. The doctor had advised washing the head. "Wash my 'ead!" said the old fellow. "Why I'd as soon think o' washing my feet!"

But it is time to say good-bye for the present.
H. A. B.

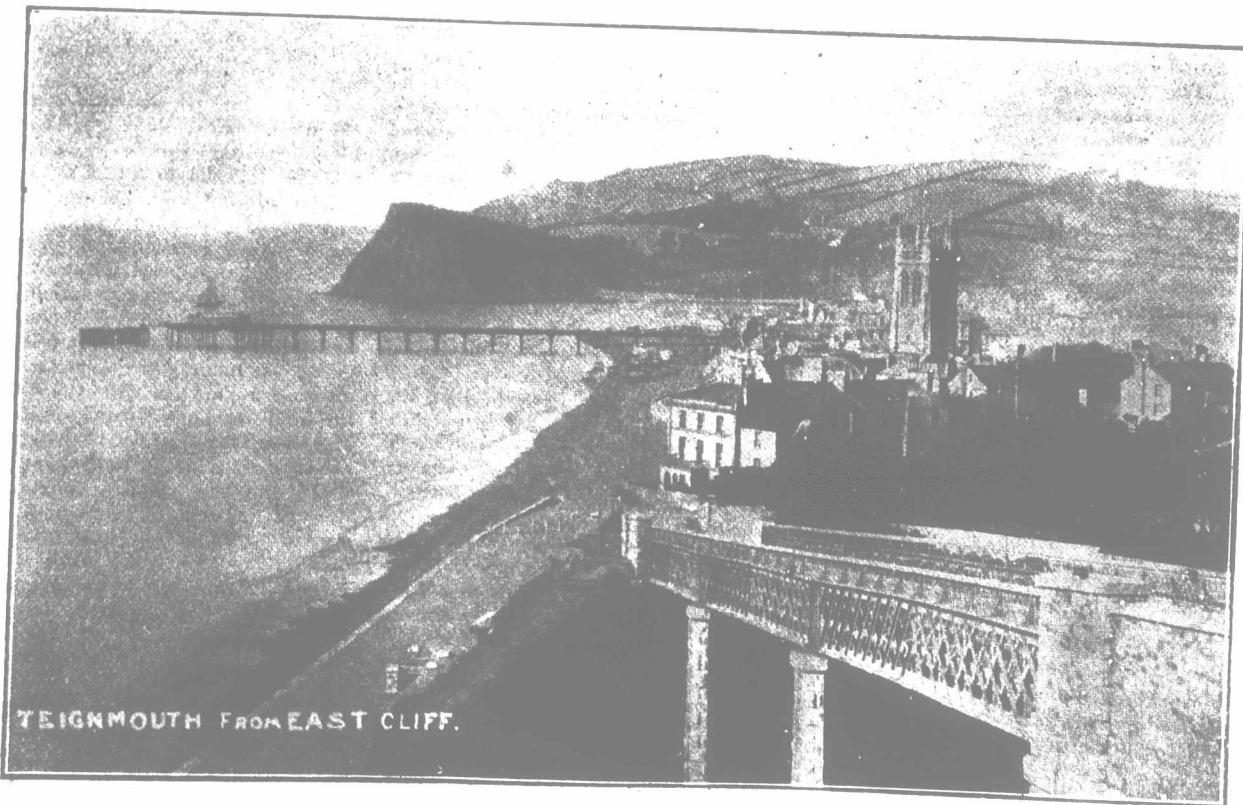
The small boy entered the shoe store and appeared to be bewildered.

"What will you have, my son?" asked the clerk.

"I—I have forgotten what I was sent for," replied the boy, bashfully, "but—it is something we have at home every time ma goes into the kitchen while the cook is there."

The clerk smiled knowingly.

"Oh, I see. You want spats."
"Yes, that's it, mister," replied the lad, his face brightening. "I came after a pair of spats."



TEIGNMOUTH FROM EAST CLIFF.

Teignmouth, from East Cliff.

(See H. A. B.'s article.)

Children's Corner.

OUR DEBATES.

Dear Cousin Dorothy,—The discussions which are now being carried on in the Corner, have drawn my attention, and I cannot refrain from giving my opinion on a few subjects. In the issue of March 14th, I saw another letter from Fred Black. I think that he ought to be tendered a vote of thanks for having instigated such fine discussions. In the same issue I saw a letter from Roy Robertson. I do not agree with him in his opinion of China and Japan, because, even if China did make the advancement of Japan, the two countries could in no way face the enormous strength of the powers of Europe. I was also interested in the discussion on Canada and the United States, and heartily agree with the opinion of Fred Black. I have not yet seen anything on the advantages of education for farmers, but I suppose that I am in too much of a hurry. I believe that all farmers should have a good education, because it enables them to read with knowledge books treating on agriculture and other topics interesting to them. With best wishes for "The Farmer's Advocate," I remain,

JOHN L. MEEK.

There are several letters on the advantages of education, which will be printed in a week or two, and I hope we shall have a good discussion of the subject.

C. D.

THE LETTER BOX.

Dear Cousin Dorothy,—I, too, enjoy reading the Children's Corner, and thought I would like to write a few lines. I go to school every day. I had a prize given me for regular attendance last year. I am eleven years old, and I will try the Entrance next summer. I would like to correspond with Blanche Fuller, Bible Hill, N. S., if she would write first.

IRENE SIMPSON.

Morpeth, Ont.

Dear Cousin Dorothy,—I cannot agree with Fred Black as to China becoming greater than Great Britain, but Fred is very brave to start out on a subject like that. I would like to correspond with any girls of eleven or thereabout, as I am nearly eleven.

ALMA McCUTCHEON.

Croton, Ont.

Dear Cousin,—My father has taken "The Farmer's Advocate" for four years, and thinks it a fine paper. I enjoyed last week's Corner very much, especially Fred Black's letter. I think Canada is very kind to all countries; when the people are in need, she sends money to them, and helps them in other ways. I have never seen any letters from my playmates in the Corner.

ISABEL DOYLE (age 13).

Clachan, Ont.

Dear Cousin Dorothy,—We live a mile north of Cannington. We have a windmill; it is an Ideal Brantford. We do all our own grinding, pulping of roots, and cutting feed. We have two silos; both were filled last fall. We have a De Laval separator, which we think is the best on the market. We have a dandy year-old colt; its color is black; his name is Brock. We also have a pure-bred calf, two months old. I go to school every day.

EVERETTE L. SACKVILLE (age 11).
Hillcrest.

Dear Cousin Dorothy,—I will tell you what I have for pets. I have one cat, whose name is Pussy. One cow that I call Scarlet. I have three sheep, and the three of them will have little lambs this spring; one sheep I call Peggy. Jeff and Lorne are my dogs' names. They are great friends of mine, and come to meet me when I come from school. I attend school section No. 4, Anderson. I go to school nearly every day, and have a mile and a quarter to walk. I like my teacher very much.

DAN GREEN (age 13).

McGregor.

She sat as quiet as a mouse,
And looked at everything;
She listened to the minister,
And helped the people sing.

But when the plate was passed around,
She shook her curly head—
"I want my penny for my bank!"
The little miser said.

—Little Folks.

Dear Cousin Dorothy,—This is my first letter to the Children's Corner. My father has taken "The Farmer's Advocate" since the new year, and likes it fine. I enjoy reading the letters so much that I thought I would like to write one. We have a dog named Buff, and some rabbits. I go to school, and am in the Senior Second Class. We have a nice teacher, and we have a book-case with some very nice books in it.

LILLIE WHITE (age 11).

Owen Sound, Ont.

IN APRIL.

Do you ever think, as I think, when the April sunshine falls

In a flood of yellow splendor on the gray old city street,

Lighting up the narrow houses, with their smoke discolored walls,

And the pavement ever grimy from the tread of many feet—

Do you think of leafy woodlands, where the hidden cuckoo calls,

And the primroses gleam faintly, and the hyacinths are sweet?

Do you ever hear, as I hear, 'mid the hubbub of the town,

Soft music made by silvery waves upon a quiet shore;

Or the laughter of glad winds that rush across the open down

To dry the tearful blossoms when an April shower is o'er?

Do you ever know, as I know, how these undertones can drown

All the strident sounds of labor and the traffic's ceaseless roar?

Do you ever long, as I long, for a glimpse of wide blue skies,

Which no creeping fog will darken, where no steep roofs intervene?

But the snowy clouds part softly as the home-bound swallow flies

Through their drifting sunlit fleeces, with the azure space between—

Do you ever long, as I long, with a mist before the eyes,

And a prayer that trembles on the lips: "Lord, keep such memories green!"

—E. Matheson, in Chambers' Journal.

"After all," remarked the old bachelor, "there's no place like home."

"That's right," rejoined the married man, sadly, "and there are times when I am glad of it."

About the House.

HOUSECLEANING TIME.

To Clean Carpets.—Take a bar of laundry soap, and shave it into enough water to melt it. Put on the stove, and let remain until it boils. When cool, add half a bottle household ammonia. Apply to the carpet (which has been well beaten and swept, then tacked down again) with a stiff, clean scrubbing brush, slightly dampened, then wipe off the soap with a damp cloth, and see that the carpet is not walked over until dry. Not a drop more water than is necessary should be used. This treatment is said to brighten the carpets wonderfully. To "dry-clean" carpets, rub well with dry corn meal.

To Make Sealers Sweet and Clean for the Summer.—Wash, scald and dry in the oven so that they may not become musty. The covers may be made look like new by soaking a few days in sour milk, then scrubbing them well. When thoroughly dry, they should be screwed on the dry sealers, and set away ready for use.

Cleaning Windows.—Use very hot water in which a spoonful of coal oil has been mixed. Wring a cloth out of this quite dry, rub over the glass, and let stand a minute; then polish with clean, dry cloths.

To clean nickel, scour with pulverized borax, using hot water and very little soap. Rinse in hot water, and rub dry with a clean cloth.

To remove soot that may have been spilled accidentally on a carpet, sprinkle well with salt, and sweep along the grain of the carpet. Repeat, until every trace of soot has disappeared.

To fill cracks in floors, make a paste of 1 lb. flour, 3 quarts water, and a tablespoonful of alum. Mix, and boil. Soak small bits of newspaper in this, until the mixture is as thick as putty, then force into the cracks with a knife. When dry, paint the floor.

Staining Wood Floors.—(Excellent, but the floor must be new.) Take tube paint, and thin with turpentine until it will sink into the wood as easily almost as pure turpentine. Apply one good coat, working it well into the wood with a cloth dipped in the stain. When dry, apply a thin coat of shellac.

If a waxed floor is desired, melt a piece of beewax, the size of an egg, and add a pint of warmed turpentine. As the turpentine is very inflammable, it must be warmed by setting the vessel containing it in hot water. Apply with a paint brush, following the grain of the wood, and, when dry, polish with a horse brush. Any old floor that has not been painted can be stained with walnut or cherry stain and waxed and polished.

If there are cracks in floor, fill with putty or paste made as above, colored with paint to match the stain, and go

over all with fine sandpaper. Always try the stain for a floor on a piece of wood, and give a second coat, if necessary.

FURBISHING OLD CLOTHES.

To make wash silk look like new, put a teaspoonful of wood alcohol to every pint of water when rinsing, and iron while damp. Remember that wood alcohol is poisonous, and must be kept away from children.

To freshen-up black satin and taffeta, sponge with very strong tea, and a teaspoon of ammonia, and press on the wrong side, over a dampened cloth.

To freshen mused velvet, hold a hot iron to the back of the velvet, with a damp cloth between the iron and the velvet.

Almost any goods or garments may be perfectly cleaned by soaking in a crock of gasoline tightly covered. Rinse a little, putting into a fresh bath of gasoline, if necessary, shake out, let dry in the open air, then press on the wrong side. The operation must not be done in the same room with fire or light, else an explosion may be the consequence. Gasoline must never be kept near a fire, nor must the vessel in which it is confined be placed in the hot sun.

To Dry-clean White Silk.—Spread on a white cloth, rub well on both sides with a mixture of three-fourths starch and one-fourth fine salt, cover, leave for 24 hours, then shake and brush out.

To remove the ring left when a spot has been removed by gasoline or benzine hold over the steam of a teakettle.

If you wish to blacken tan-leather shoes, rub every part with a juicy raw potato cut in slices, and, when dry, apply two or three coats of liquid blacking.

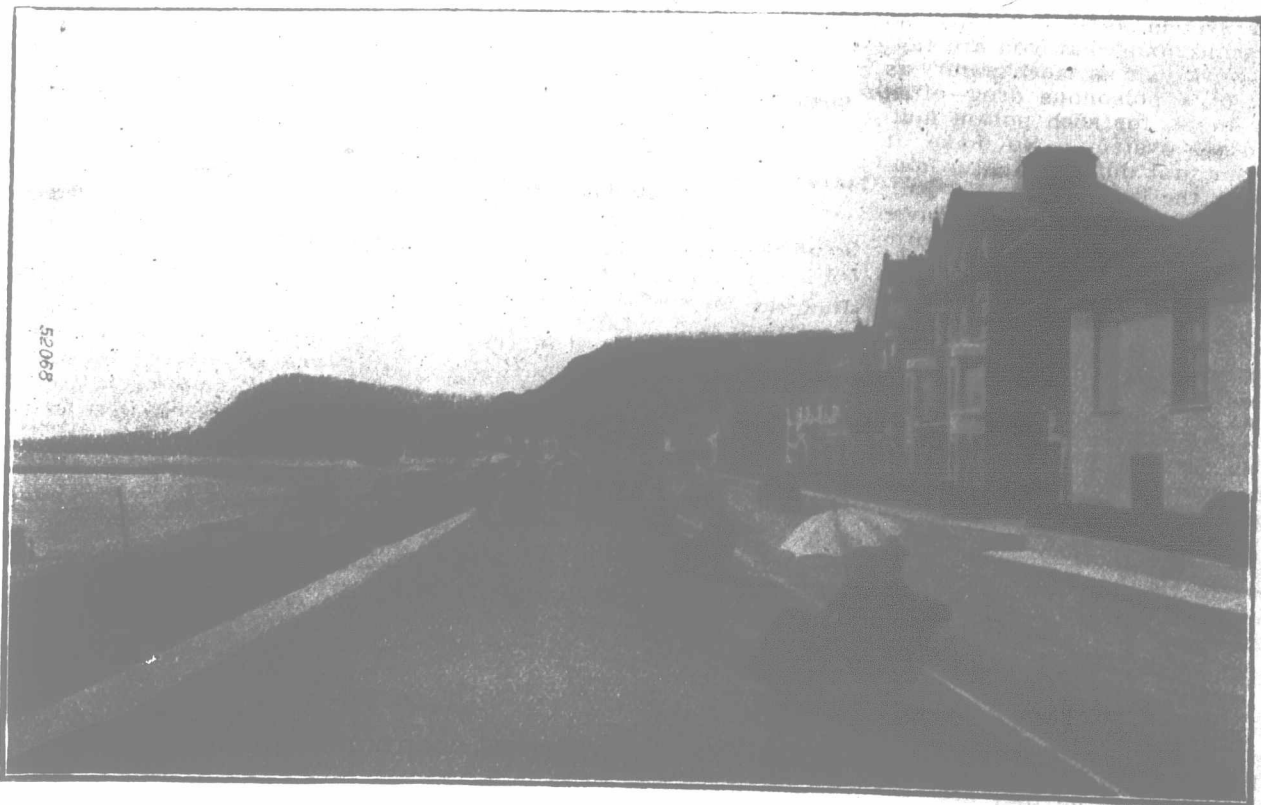
To clean white chiffon, spread on clean muslin, and rub into it a mixture made of two parts finely-powdered starch and one of powdered borax. Shake out after a time, and repeat, leaving over night. Shake out, and the chiffon should be found quite spotless.

For stains on a white silk waist, rub with gasoline over blotting paper, then, immediately, with magnesia.

Change a faded muslin dress into a white one by bleaching with chloride of lime, using a tablespoonful to a quart of water. Let stand a little, then wash.

Dingy white silk gloves that have become yellowed may be dyed delicate tints by using tube paints dissolved in gasoline. A very little of the paint must be used, or the color will be too deep. Lace to match costumes may be dyed this way, also old white silk waists, which may be afterwards used as slips under thin lingerie waists.

Son.—How did Julius Caesar die?
Papa.—Shure, I didn't know the poor man was sick at all; at all.



Sidmouth Esplanade, Looking West.

(See H. A. B.'s article.)

Health in the Home

HOME SANITATION.

CHAP. II.—WELLS, PRIVIES.

What is the source of your water supply? Have you got a good well, and is it clean and in good condition? Pure water is most essential. The house well should be removed as far as possible from contaminating agencies. In the last talk it was pointed out that the house should never be supplied from the barn well. The reason is that it is almost impossible to protect a well that cattle have access to from animal excrement and from contamination from liquid manure, especially during the spring thaws. At this time, too, the human body is somewhat weakened by the winter's shut-in, and is less able to throw off poisonous influences. Now, I ask my readers to think, each for himself. What is the condition of your well at this moment? Is it protected from surface soakage and filth? Is it tightly covered in, or can cats and mice and such small deer find a watery grave in its shining depths? Have you ever found malodorous and unpalatable solids in your liquid refreshment? Such things have been. Are there scum-covered duck or geese ponds, house ditches or barnyards in dangerous nearness to your well? If so, some day you will dip up a dose of death for your children in the shape of an attack of diphtheria, typhoid, dysentery, or just a general systemic poisoning that will lower their vitality and render them subject to an attack of any disease going. Such a well might have been excusable in your hard pioneer days, but now everyone in town or country is able to provide a good well if he is only enough alive to the importance of pure water. Notice how a child drinks eagerly and often. Why? It is nature's way of cleansing and cooling his whole internal working machinery, washing out the stomach and the whole digestive tract, flushing out the liver and kidneys, sending a contingent to the blood to keep it at its best, and at last carrying off, through bladder and lungs and skin, a great quantity of waste material that must be thrown off if the body is to be healthy. Do you realize the importance of keeping this digestive tract healthy? Here is a tube, six times the length of your body—say thirty feet long—with an immense absorbent surface, which is specially prone to infection. This surface should be kept cool and clean by frequent washings of pure water, to do its best work. But is it? Few people drink enough water, and not half enough people care about the quality of the water, or give it any thought at all. If you drink impure water, you are just as surely poisoning your system as if you took so much arsenic, and what you are taking will work just as much injury as so much of a poisonous drug—often infinitely more, for such poison multiplies in the system. So make it one of your first duties to your family to have the best well to be had. Put in a good iron pump, and cover in your well by a double platform of two-inch planks. Be careful to cover the seams of the lower row of planks. See that these fit snugly round the cylinder of the pump. Guard against the pump freezing in winter, as that cuts off the water supply at a time when it is most needed. A good way to prevent all trouble is to have a temporary platform for winter put in below the upper one, and, of course, above the water, and to wrap the cylinder between the floors with canvas, removing these in the spring. Of course, too, the plug in the cylinder must be taken out, so that no water will remain up.

WATER CLOSETS.

Here, again, I must beg for the privilege of plain, very plain, speaking. I cannot be helpful unless I can speak of things as they are. It would be a splendid investment in health and comfort, both in town and country, to pay thirty dollars

for an odorless crematory winter closet. A small space could be walled off for it either up or downstairs, and the seven-inch pipe connected either with your kitchen pipe or directly into the chimney. This, I believe, is sanitary, as no odors can escape. This closet will last for years, and it provides a clean way of disposing of the contents, as all solids are burnt.

What are your closets like in summer? The best farm closet is one with a very deep pit. It should be a good size, say five by six feet. A ventilating shaft should run from beneath the seat, above the roof. The seats should be closely lidded and the lids always kept down to compel odors to pass up through the ventilating shaft, and to prevent the ingress and egress of flies. A box of earth or quicklime should always be kept in the closet, and every time it is used all excrement should be covered over with lime, preferably, and the lids shut down at once. Have you ever noticed the swarms and swarms of brown flies that just cover the excrement in unlined closets? Why the color? Examine one of these flies, and you will find its six hairy legs just loaded with the excrement it has been crawling over. Your closet is, perhaps, near your kitchen door. It should not be, for the reasons now to be given. These flies go directly from their filthy feast to crawl over the food on your table, leaving a part of their load on everything they touch; to take a hot bath in your tea, or a cold one in your children's milk or water; or to crawl into your helpless baby's mouth and eyes, spreading disease germs wherever they go. You wouldn't think of throwing this filth in your baby's eyes, or onto your children's food; yet, by having exposed closets or other filth around, you are accessory to the crime, and the flies are your numberless, tireless coadjutors. The same care should be taken with the town closets, and when emptied, all the inside of the box should be thickly coated with lime. The adage, "Eternal vigilance is the price of safety," was never truer than in the case of caring for the disposal of sewage. Take time and thought to make the closets that they will not be a contaminating agency, and so a terrible enemy to the health of the household. See that they are kept clean, comfortable and odorless, and so provide a place ready for use at any time, without repugnance or discomfort to the user. Many people to-day are cursed with constipation because of lack of these facilities at some time of their lives.

The next talk will be on the house cellar.—(Mary E. Allen Davidson, M. D.)

SPRING.

Spring! Spring!
Ecstasy's sting!
Birth in the wildwood, and birds on the wing,
Living cries out to you,
Fragrances shout to you,
What is all doubt to you,
—When it is Spring?
Birds! Birds!
Flocks of them—herds!
How can we welcome them merely with words?
Up from the sod to us
Daffodile nod to us,
Message of God to us
Brought by the birds!
Love! Love!
Cloud-ships above!
Trees are a-tremble with messages of Love!
One who will mate with us,
Sharing our fate with us,
Who will be great with us,
Giving us love!
Spring! Spring!
Wonderful thing!
Waves on the shore of it clamber and cling,
Blossoms about in it,
Rapture is pressed in it,
Earth is impressed in it,
Fragrance is in it,
—Ethel M. Allen, in *Esch's Monthly*.

Bob, Son of Battle.

BY ALFRED OLLIVANT.

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

CHAPTER XXX.—Continued.

The Venus ranged alongside him. No preliminary stage for her; she never walked where she could stand, or stood where she could lie. But stand she must now, breathing hard through her nose, never taking her eyes off that pad she had marked for her own. Close beside her were crop-eared Grip and Grapple, looking up at the line above them where hairy neck and shoulder joined. Behind was Big Rasper, and close to him Lassie. Of the others, each had marked his place, each taken up his post.

Last of all, old Shep took his stand full in front of his enemy, their shoulders almost rubbing, head past head.

So the two stood a moment, as though they were whispering; each diabolical, each rolling back his eyes to watch the other. While from the little mob there rose a snarling, bubbling snore, like some giant wheezing in his sleep.

Then like lightning each struck. Rearranging high, they wrestled with striving paws and the expression of fiends incarnate. Down they went, Shep underneath, and the great dog with a dozen of these wolves of hell upon him. Rasper, devilish, was riding on his back; the Venus—well for him—had struck and missed; but Grip and Grapple had their hold; and the others, like leaping demons, were plunging into the whirlpool vortex of the fight.

And there, where a fortnight before he had fought and lost the battle of the Cup, Red Wull now battled for his life.

Long odds! But what cared he? The long-drawn agony of the night was drowned in that glorious delirium. The hate of years came bubbling forth. In that supreme moment he would avenge his wrongs. And he went in to fight, revelling like a giant in the red lust of killing.

Long odds! Never before had he faced such a galaxy of foes. His one chance lay in quickness; to prevent the swarming crew getting their hold till at least he had diminished their numbers.

Then it was a sight to see the great brute, huge as a bull-calf, strong as a bull, rolling over and over and up again, quick as a kitten; leaping here, striking there; shaking himself free; swinging his quarters; fighting with feet and body and teeth—every inch of him at war. More than once he broke right through the mob; only to turn again and face it. No flight for him; nor thought of it.

Up and down the slope the dark mass tossed, like some hulk the sport of the waves. Black and white, sable and gray, worrying at that great centre-piece. Up and down, roaming wide, leaving everywhere a trail of red.

Gyp he had pinned and hurled over his shoulder. Grip followed; he shook her till she rattled, then flung her afar; and she fell with a horrid thud, not to rise. While Grapple, the death to avenge, hung tighter. In a scarlet, soaking patch of the ground lay Big Bell's lurcher, doubled up in a dreadful ball. And Hoppin's young dog, who three hours before had been the children's tender playmate, now fiendish to look on, dragged after the huddle up the hill. Back the mob rolled on her. When it was passed, she lay quite still, grinning; a handful of tawny hair and flesh in her dead mouth.

So they fought on. And ever and anon a great figure rose up from the heaving inferno all around; rearing to his full height, his head ragged and bleeding, the red foam dripping from his jaws. Thus he would appear momentarily, like some dark rock amid a raging sea, and down he would go again.

Silent now they fought, dumb and determined. Only you might have heard the rend and rip of tearing flesh; a hoarse gurgle as some dog went down; the panting of dry throats; and now and then a sob from that central figure. For he was fighting for his life. The Terror of the Border was at bay.

All who meant it were on him now. The Venus, blinded with blood, had her hold at last; and never but once in a long life of battles had she let go. Rasper, his breath coming in rattles, had him horribly by the loins; while a dozen other devils with red eyes and wrinkled

nostrils clung still.

Long odds! And down he went, smothered beneath the weight of numbers, yet struggled up again. His great head was torn and dripping; his eyes a gleam of rolling red and white; the little tail stern and stiff like the gallant stump of a flagstaff shot away. He was desperate, but indomitable; and he sobbed as he fought doggedly on.

Long odds! It could not last. And down he went at length, silent still—never a cry should they wring from him in his agony; the Venus glued to that mangled pad; Rasper beneath him now; three at his throat; two at his ears; a crowd on flanks and body.

The Terror of the Border was down at last!

"Wullie, ma Wullie!" screamed M'Adam, bounding down the slope a crook's length in front of the rest.

"Wullie! Wullie! to me!"

At the shrill cry the huddle below was convulsed. It heaved and swayed and dragged to and fro, like the sea lashed into life by some dying leviathan. A gigantic figure, tawny and red, fought its way to the surface. A great tossing head, bloody past recognition, flung out from the ruck. One quick glance he shot from his ragged eyes at the little flying form in front; then with a roar like a waterfall plunged toward it, shaking off the bloody leeches as he went.

"Wullie! Wullie! I'm wi' ye!" cried that little voice, now so near.

Through—through—through!—an incomparable effort and his last. They hung to his throat, they clung to his muzzle, they were round and about him. And down he went again with a sob and a little suffocating cry, shooting up at his master one quick, beseeching glance as the sea of blood closed over him—worrying, smothering, tearing, like fox-hounds at the kill.

They left the dead and pulled away the living. And it was no light task, for the pack were mad for blood.

At the bottom of the wet mess of hair and red and flesh was old Shep, stone-dead. And as Saunderson pulled the body out, his face was working; for no man can lose in a crack the friend of a dozen years, and remain unmoved.

The Venus lay there, her teeth clenched still in death; smiling that her vengeance was achieved. Big Rasper, blue no longer, was gasping out his life. Two more came crawling out to find a quiet spot where they might lay them down to die. Before the night had fallen another had gone to his account. While not a dog who fought upon that day but carried the scars of it with him to his grave. The Terror of the Border, terrible in his life, like Samson, was yet more terrible in his dying.

Down at the bottom lay that which once had been Adam M'Adam's Red Wull.

At the sight the little man neither raved nor swore; it was past that for him. He sat down, heedless of the soaking ground, and took the mangled head in his lap very tenderly.

"They've done ye at last, Wullie—they've done ye at last," he said quietly; unalterably convinced that the attack had been organized while he was detained in the tap-room.

On hearing the loved little voice, the dog gave one weary wag of his stump-tail. And with that the Talless Tyke, Adam M'Adam's Red Wull, the Black Killer, went to his long home.

One by one the Dalesmen took away their dead, and the little man was left alone with the body of his last friend.

Dry-eyed he sat there, nursing the dead dog's head; hour after hour—alone—crooning to himself:

"Monie a sair daurk we twa hae wrought.

An' wi' the weary warl' fought!

An' monie an anxious day I thought

We wad be beat."

An' noo we are, Wullie—noo we are!"

So he went on, repeating the lines over and over again, always with the same sad termination.

"A man's mither—a man's wife—a

man's dog! they three are a little

M'Adam iver had to back him! D'ye

mind the auld mither, Wullie? And her,

Niver be down-hearted, Adam; ye've aye

down he went,
 eight of numbers,
 His great head
 his eyes a gleam
 ; the little tail
 gallant stump of
 e was desperate,
 e sobbed as he

not last. And
 h, silent still—
 wring from him
 s glued to that
 neath him now.
 at his ears; a

er was down at

got yer mither.' And as day I had not.
 And Flora, Wullie (ye remember Flora,
 Wullie? Na, na; ye'd not) wi' her
 laffin' daffin' manner, cryin' to one:
 Adam, ye say ye're alame. But ye've
 me—is that no enough for ony man?
 And God kens it was—while it lasted!
 He broke down and sobbed a while.
 "And you, Wullie—and you! the only
 man friend iver I had!" He sought the
 dog's bloody paw with his right hand.

"An' here's a hand, my trusty fier,
 An' gie's a hand o' thine;
 An' we'll tak' a right guid willie-
 waught,
 For auld lang syne."

He sat there, muttering, and stroking
 the poor head upon his lap, bending over
 it, like a mother over a sick child.
 "They've done ye at last, lad—done ye
 sair. And noo I'm thinkin' they'll no rest
 content till I'm gone. And oh, Wullie!"
 —he bent down and whispered—"I
 dreamed sic an awfu' thing—that ma
 Wullie—but there! 'twas but a dream."
 So he sat on, crooning to the dead dog;
 and no man approached him. Only Bessie
 of the inn watched the little lone figure
 from afar.

It was long past noon when at length
 he rose, laying the dog's head reverently
 down, and tottered away toward that
 bridge which once the dead thing on the
 slope had held against a thousand.

He crossed it and turned; there was a
 look upon his face, half hopeful, half
 fearful, very piteous to see.
 "Wullie, Wullie, to me!" he cried;
 only the accents, formerly so fiery, were
 now weak as a dying man's.

A while he waited in vain.
 "Are ye no comin', Wullie?" he
 asked at length in quavering tones.
 "Ye've not used to leave me."

He walked away a pace, then turned
 again and whistled that shrill, sharp call,
 only now it sounded like a broken echo
 of itself.

"Come to me, Wullie!" he implored,
 very pitifully. "'Tis the first time iver
 I kent ye not come and me whistlin'.
 What ails ye, lad?"

He recrossed the bridge, walking blindly
 like a sobbing child; and yet dry-eyed.
 Over the dead body he stooped.

"What ails ye, Wullie?" he asked
 again. "Will you, too, leave me?"
 Then Bessie, watching fearfully, saw
 him bend, sling the great body on his
 back, and stagger away.

Limp and hideous, the carcass hung
 down from the little man's shoulders.
 The huge head, with grim, wide eyes and
 tolling tongue, jolted and swagged with
 the motion, seeming to grin a ghastly de-
 fiance at the world it had left. And the
 last Bessie saw of them was that bloody,
 rolling head, with the puny legs stagger-
 ing beneath their load, as the two passed
 out of the world's ken.

In the Devil's Bowl, next day, they
 found the pair: Adam M'Adam and his
 Red Wull, face to face; dead, not divided,
 each, save for the other, alone. The dog,
 his saturnine expression glazed and ghast-
 ly in the fixedness of death, propped up
 against that humpbacked boulder beneath
 which, a while before, the Black Killer
 had dreed his weird; and, close by, his
 master lying on his back, his dim dead
 eyes staring up at the heaven, one hand
 still clasping a crumpled photograph; the
 weary body at rest at last, the mocking
 face—mocking no longer—alight with a
 whole-souled, transfiguring happiness.

POSTSCRIPT.

Adam M'Adam and his Red Wull lie
 buried together: one just within, the
 other just without, the consecrated pale.
 The only mourners at the funeral were
 David, James Moore, Maggie, and a gray
 dog peering through the lych-gate.

During the service a carriage stopped at
 the churchyard, and a lady with a state-
 ly figure and a gentle face stepped out
 and came across the grass to pay a last
 tribute to the dead. And Lady Eleonour,
 as she joined the little group about the
 grave, seemed to notice a more than
 usual solemnity in the parson's voice as
 he intoned: "Earth to earth—ashes to
 ashes—dust to dust; in sure and certain
 hope of the Resurrection to eternal life."

When you wander in the gray hill-
 country of the North, in the loneliest

corner of that lonely land you may chance
 upon a low farm-house, lying in the
 shadow of the Muir Pike.

Entering, a tall old man comes out to
 greet you—the Master of Kenmuir. His
 shoulders are bent now; the hair that
 was so dark is frosted; but the blue-gray
 eyes look you as proudly in the face as
 of yore.

And while the girl with the glory of
 yellow hair is preparing food for you—
 they are hospitable to a fault, these
 Northerners—you will notice on the man-
 tiepiece, standing solitary, a massive
 silver cup, dented.

That is the world-known Shepherds'
 Trophy, won outright, as the old man
 will tell you, by Owd Bob, last and best
 of the Gray Dogs of Kenmuir. The last
 because he is the best; because once, for
 a long-drawn unit of time, James Moore
 had thought him to be the worst.

When at length you take your leave, the
 old man accompanies you to the top of the
 slope to point you your way.

"Yo' cross the stream; over Langholm
 How, yonder; past the Bottom; and oop
 th' hill on far side. Yo'll come on th'
 house o' top. And happen yo'll meet Th'
 Owd Un on the road. Good-day to you,
 sir, good-day."

So you go as he has bidden you;
 across the stream, skirting the how, over
 the gulf and up the hill again.

On the way, as the Master has foretold,
 you come upon an old gray dog, trotting
 soberly along. Th' Owd Un, indeed, seems
 to spend the evening of his life going thus
 between Kenmuir and the Grange. The
 black muzzle is almost white now; the
 gait, formerly so smooth and strong, is
 stiff and slow; venerable, indeed, is he of
 whom men still talk as the best sheep-
 dog in the North.

As he passes, he pauses to scan you.
 The noble head is high, and one foot
 raised; and you look into two big gray
 eyes such as you have never seen before—
 soft, a little dim, and infinitely sad.

That is Owd Bob o' Kenmuir, of whom
 the tales are many as the flowers on the
 May. With him dies the last of the im-
 mortal line of the Gray Dogs of Kenmuir.

You travel on up the hill, something
 pensive, and knock at the door of the
 house on the top.

A woman, comely with the inevitable
 comeliness of motherhood, opens to you.
 And nestling in her arms is a little boy
 with golden hair and happy face, like
 one of Correggio's cherubs.

You ask the child his name. He kicks
 and crows, and looks up at his mother;
 and in the end lisps roguishly, as if it
 was the merriest joke in all this merry
 world, "Adam Mataddum."

The End.

IS LIFE WORTH LIVING ?

Is life worth living? Yes, so long
 As spring revives the year,
 And hails us with the cuckoo's song
 To show that she is here;
 So long as May of April takes,
 In smiles and tears, farewell,
 And windflowers dapple all the brakes,
 And primroses the dell;
 While children in the woodlands yet
 Adorn their little laps
 With ladysmock and violet,
 And daisy-chain their caps;
 While over orchard daffodils
 Cloud shadows float and fleet,
 And ouzel pipes and laverock trills
 And young lambs buck and bleat;
 So long as that which bursts the bud
 And swells and tunes the rill
 Makes springtime in the maiden's blood,
 Life is worth living still.

—Alfred Austin.

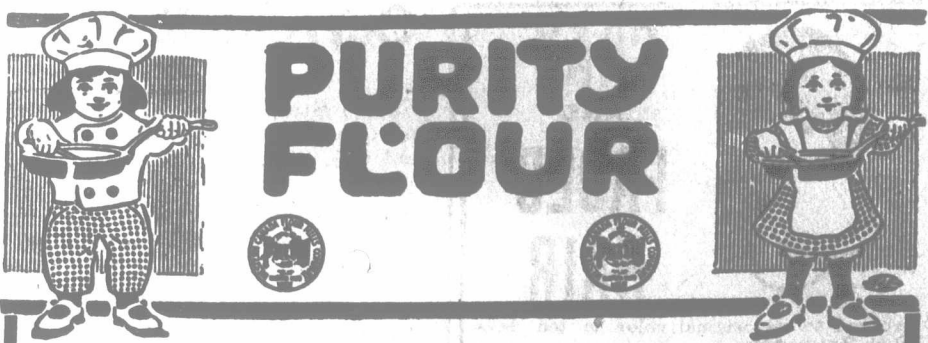
FINANCIALLY WEAK.

Tramp (piteously).—Please help a crip-
 ple, sir.
 Kind Old Gent (handing him some
 money).—Bless me; why, of course. How
 are you crippled, my poor fellow?
 Tramp (pocketing the money).—
 Financially crippled, sir.

A VIRTUE OF NECESSITY.

Manager.—I can't do a thing with
 Smith, the new clerk. I've had him in
 three departments, and he dozes all day
 long.

Proprietor.—Put him at the pajama
 counter, and fasten this card on him,
 "Our night-clothes are of such a superior
 quality that even the clerk who sells them
 cannot keep awake."



THESE ARE THE REQUISITES of tasty, wholesome
 bread—a good oven, good sense, and PURITY FLOUR.
 Absolutely the best Household Flour obtainable, because it is
 produced by the most skilled milling from the very choicest
 Western Canada Hard Wheat.
 Full of nutriment and always dependable in the baking,
 PURITY FLOUR makes the best bread with least trouble.

SOLD EVERYWHERE IN THE GREAT DOMINION
 WESTERN CANADA FLOUR MILLS CO. LIMITED
 MILLS AT WINNIPEG, GODERICH AND BRANDON

As Pure As Five Roses

is the same as saying "as pure as a flour can be
 made." This is because "Five Roses" is made by
 methods which are practically perfect. The wheat is
 first thoroughly cleansed, then it is ground finer and
 finer in the rolls, and is sifted through the most
 delicate silk cloth to remove the minutest impurities.
 It is weighed and packed by machinery, and thus it
 comes to your kitchen, sweet and pure and all un-
 touched by human hands at any stage of its making.

Ask your grocer for a bag to-day.

LAKE OF THE WOODS MILLING CO.,
 LIMITED.

"Safe Lock" Shingles can't leak.

They are the original interlocking metal shingles
 and the only ones which leave absolutely no nail holes
 exposed to the weather. They are proof against
 lightning, fire and water.

When we first brought out the "Safe Lock" Shingle,
 other makers were selling *cleat shingles*. Several imitations
 have appeared, but they have not solved the vital problem of
 concealing all the nail holes.

Remember that "Safe Lock" Shingles are nailed above the lock.
 Others are nailed through the lock, thus leaving nail holes exposed to
 the drifting snow and moisture.

Being heavily galvanized, "Safe Lock" Shingles will never
 rust. No dust or dirt can lodge on their smooth surface, and
 the result is clean rainwater in the cistern. Besides, our
 galvanized "Safe Lock" Shingles may be counted upon
 to outlast a generation, without one cent for repairs.
 Don't take our word for this, alone. Ask our
 customers in your neighborhood, how they
 like our goods and our liberal treatment.
 We'll send you a list of users in your
 county, if you write us.

48

The Metal Shingle & Siding Co., Ltd., Preston, Ont.

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 Place an Ad. in the Farmer's Advocate



GRAY AND FADED HAIR

restored to its original color in ten days when Princess

Hair Rejuvenator

is used. It is neither greasy nor sticky, clear as water, free from all injurious ingredients, prompt to act, easy to apply, safe to use, sure in its results. Price \$1.00, express paid.

PRINCESS DANDRUFF CURE

prevents premature grayness and baldness, promotes a healthy condition of scalp, and clears it of dandruff. Price \$1.00, express paid.

Superficial Hair, Moles, etc., eradicated forever by our method of Electrolysis. There is positively no other treatment that will destroy hairs on face and arms. Satisfaction guaranteed. Send stamp for booklet "P." Established 15 years.

Graham Dermatological Institute,
508 Church Street, Toronto.

Allegheny General Hospital

TRAINING SCHOOL FOR NURSES

Offers to young women of education and refinement, between the ages of 21 and 30, a three-years course of nursing in a hospital of the first-class under State supervision.

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Superintendent of Hospital,
Allegheny, Pa.

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a better Cocoa than

EPPS'S

A delicious drink and a sustaining food. Fragrant, nutritious and economical. This excellent Cocoa maintains the system in robust health, and enables it to resist winter's extreme cold.

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in ½-lb. and ¼-lb. Tins.

\$12 WOMAN'S SUITS, \$5

Suits to \$12. Coats, raincoats, skirts and waists at manufacturers' prices. Send for samples and fashions. Southcott Suit Co., Dept. 27 London, Can. Send for our catalogue, which lists everything you use.

RECIPES.

White Muffins.—One tablespoon butter, 2 of sugar (rubbed to a cream), 2 beaten eggs, pinch salt, 1 cup sweet milk, 2 cups "Five Roses" flour, 2 teaspoons baking powder.

Popovers.—One egg (beaten stiff), 1 cup "Five Roses" flour mixed in 1 cup milk, pinch salt. Bake quickly in hot, buttered muffin tins.

Current Events.

United States capitalists are beginning operations in the mines of North Hastings, Ont.

An association to look after British immigrants has been formed in Toronto by the Sons of England.

Dr. Schleck's apparatus, the gyroscope, designed to prevent ships from rolling, has been pronounced entirely satisfactory by high authorities in shipbuilding.

Judge Fitzgerald, of the famous Thaw case, has appointed a commission to enquire into the mental condition of Thaw, thus taking the case from before the jury.

One thousand four hundred and ninety-two miles of railway will be built this year by the C. P. R. Of this length, 534 miles will be taken up in double-tracking from Winnipeg to Fort William, and from Ste. Anne, Que., to Smith's Falls, Ont.

Upward of 4,000 people in Toronto will, it is estimated, be set adrift in a search for new homes by the tearing down of houses rendered necessary for the building of new factories, warehouses, freight sheds, etc., during the current year. As the buildings which must make way are, however, chiefly of the cheaper and

less sanitary grades, the change is likely to react for the better, both for Toronto and for those thus temporarily put to inconvenience.

The Transvaal Colonial Parliament met for the first time on March 21, in the old Volkraad Hall, where President Kruger formerly presided over the deliberations of his people. The Premier, General Botha, and the majority of the members are Boers—Boers, too, many of them, who fought against Great Britain in the eventful South African war. The first step of the Parliament was to pass a measure prohibiting the use of Chinese, Japanese or Hindu laborers in any part of the Colony.

The prompt action of King Charles of Roumania, has probably done much towards checking the peasant revolt which recently broke out in that country. By proclamation, he immediately promised to suppress some of the heavy taxes, and to make arrangements by which farm lands will in future be cultivated by the State or leased directly to the peasants, no syndicate being allowed to control more than 8,000 acres. King Charles is noted for being the most Democratic sovereign in Europe.

That Canada is building up a strong trade with Mexico, seems to be evident from the fact that her commerce with that country for 1906 almost doubled that of 1905. With a view to making still further capital of the opportunity, the Minister

of Trade and Commerce has instructed Mr. A. W. Donly, Canadian Commercial Agent in Mexico, to return to Canada this summer to visit various Canadian commercial centers and see what can be done towards further extension of trade. Hitherto communication between Canada and Mexico has been carried on almost entirely via the Atlantic, but it is expected that a Pacific line will be established in the near future.

Mr. James Bryce, British Ambassador at Washington, and Mrs. Bryce, have been in Canada for the past week. The presence of the Statesman probably points to a further discussion of many points of great importance to Canada and the United States, among which may be mentioned adjustment of the tariff, the preservation of Niagara Falls, the use of lake water by Canadian and American cities, preservation of the seal herd in Behring Sea, regulation of fisheries, the question of warships on the Great Lakes, the definition of any part of the boundary lines under dispute, and several minor matters. These questions have already been under serious consideration at Washington, and it is said the solution of many of them has already been mapped out by Mr. Bryce and Secretary Root. According to the Evening Post, "unless Canada adopts a militant course, conventions will be signed within a very short time which will remove absolutely all friction between the United States and Great Britain."

The Ingle Nook.

Although Easter will have come and gone before you read this, I am writing it on the 18th day of March. Last Saturday, I went out to the country to stay over Sunday. On the way out, I did not hear a single song-bird, nor a bird of any kind, save the ubiquitous English sparrow twittering about the cottage eaves in the suburbs. If there were any others about, the cold had driven them into seclusion, or frozen their desire for song. Next morning, before getting out of bed, I heard the well-known laughter of a robin, and thought of old teaching days, in which I strove to instil into a wriggling row of little white-headed and black-headed mortals (or immortals?) a proper appreciation of the fine old school ditty:

"Rollicking robin is here again,
What does he care for the April rain?"

—with a proper emphasis on the "he." The robin may eat a few of our cherries, but he also eats an enormous quantity of harmful bugs and grubs. Even if he did not, I would rather, for my own part, never eat a cherry, nor a bite of cherry pie, good as it is, than miss the good cheer of his truly "rollicking" song.

Coming in this morning, I heard song sparrows all along the way, two quite close to the road, and another away over in a field, all plaintively singing their "Dear-dear-dear! Tra la la loo loo loo," as though half complaining that the white frost still lay thick on the grass and fence rails. And yet this sweet little song made one's heart glad with the hope of summer, for it is the same which they sing when all the earth is green, and the warm south winds sway the grasses above their lowly nests. There was another embryonic warble, too, that sounded as though it came from a meadow lark that hadn't the heart to finish its song. One listened in vain for the concluding note to the preliminary, "Two-see, twee-ee," but it did not come. However, spring was in the air, telling as loudly as it could that the balmy time which must coax any bird to the end of his madrigal would soon be here.

And, then, as the city streets were entered, and the birds left behind, there came to mind the memory of what a friend, who had once lived for a time in a mining town, high up in the Colorado mountains, had said in regard to the birds of that altitude: "There are no songsters; there are birds, but they do not

sing. There is something in the thinness of the air that seems to dry song. Even people who go out there, in time lose the gift of it."

And so I fell to thinking of what our dear Canada would be were there no song-birds; what it would be during the long spring months to go along silent highways, never enlivened by the trills and warbles which help so much to make life seem good. There is something strangely suggestive about bird-songs, something ethereal, a refinement of daintiness, an expression and suggestion of purity and gentleness. It would almost seem as though they might be a sort of connecting link between prosaic human life and something higher.

I do not think our little Canadian boys are much given to shooting birds, but surely it rests with the mothers, and sisters, and teachers to see that they do not do so. Economically (since birds, by eating injurious insects, help to preserve our crops) and aesthetically our birds are a priceless boon. Let us give them the friendship and appreciation they deserve.

DAME DURDEN.

A Novel Idea.

What I am going to tell you is not exactly in season, but I am afraid of forgetting if I wait until next fall. At a house where I visited lately, the family kept themselves supplied with green onions all winter through, and in the easiest possible way—it seemed a wonder that more people had not thought of the plan. Rather large-sized onions were used, they looked like Yellow Danvers, and they were simply grown in water. Hyacinth glasses, old sugar bowls, pitchers, wide-mouthed bottles, pint sealers, any vessel which would hold the onion at its mouth was used. The onions were not submerged in the water, just the lowest or root-growing part being allowed to enter it, precisely as though the bulbs were hyacinths. Some of them were growing on the same shelf with house-plants, and the fresh green leaves looked quite as pretty as lily-leaves. In fact, it did not at first occur to me that they were onions, although I remarked that they looked like them.

Long ago, at cooking school, a girl asked me one day: "Do you like green onions?" "Yes," I said. "Well, so do I," she responded, sotto voce, and shading her face with her hand from the girl on the other side of her, "and I just know it's horribly vulgar to like them, don't you?" "Vulgar or not, a good many people are likely to sympathize with my little friend, and will be

glad, I am sure, to get hold of the above wrinkle. Besides, onions are so very good for one, the sulphur in them rendering them a veritable blood purifier.

And—oh, yes, I forgot—by growing the bulbs as above, using warm water, and keeping them in a warm, light place, one may have delicious green onions just three weeks from starting.

D. D.

On Shopping.

Don't be shy when shopping. Insist on seeing things—unless, indeed, you happen to find exactly what you want at an early stage of the game. A girl, the other day, went to buy a hat. She was shown a goodly number, and some of them suited her fairly well, but, with a sudden inspiration, she said, "Haven't you any more at all?" The clerk, who had apparently ceased operations, extracted yet two or three from some unknown depths, and among them was one which was exactly what the girl wanted, the one that seemed to have been just "made for" her. Had she taken any of those first shown, she would never have had the genuine satisfaction which she has with this.

Insist, if possible, on trying on hats before a full-length mirror. A large-sized hat may possibly be quite becoming to your face, but if you are possessed of a diminutive figure, it may only succeed in transforming you into the semblance of an animated mushroom. Again, a small tuque-like affair may chance to be admirable, as seen in the two-foot-square mirror, but if you happen to be long and thin, it might possibly be making you look longer and thinner than ever, a fact which you may realize one sad day, when some small boy, in sweet disregard of your feelings, shouts after you, "Slivers!" Of course, the shopmaid will tell you everything is "lovely," and "very becoming." But don't be led into temptation by her. Ask quietly for a full-length mirror, and if the store is at all up-to-date, you will be taken to one. Then form your own judgments.

By the way, did you ever see so many flowers on hats as this spring? Some of them are very pretty, others are in all the comparisons, "loud, louder, loudest." Very elaborately crinkled brims are much in evidence, and have a style of their own, especially suited to fresh, youthful faces. Numbers of "mushroom shapes" are also shown, but it takes a very fine figure and bearing and exceptionally tasteful and well-made clothes to bear them well; such drooping hats, as ordinarily worn, have a somewhat "sloppy" appearance, and a tendency to make the

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wearer look dowdy, and the majority of people will do wisely to turn on them the cold shoulder, and choose something more sprightly and " chic." The most of us, alas, need all the helps possible in attaining " chic-ness," and can afford to take no risks.

Just in closing, do you know that you can re-blacken an old black hat splendidly with liquid shoe polish? If you asked a milliner to do the work for you, she would just do this, and charge you a quarter for it. A white hat may be bleached by rubbing it with lemon juice and sulphur, then placing in the sun. Old white hats, according to a writer in Harper's, may be colored quite easily. To do this, she says, take 4 ounces alcohol, and dissolve in it 1 ounce sealing wax (powdered) of the color you wish. If the wax does not dissolve easily, place the bottle in warm water and shake gently. Have the hat well brushed, and apply the dye with a brush, and in the sun. As the alcohol is very inflammable, it must not be used near a stove, light or fire of any kind. This method of renovating hats is said to stiffen the straw, and give a coloring which is not affected by rain.
D. D.

Contributed Recipes (Tried and True).

California Cake.—Two cups sugar, 1 cup butter, 1 cup milk, 2 eggs, 3 teaspoonfuls baking powder in three cups sifted flour. Flavoring and lemon peel. Bake in a square tin.

Raisin Pie.—Boil 1 pound raisins, 1 cup of molasses, 1 quart of water, together for one hour. Then add 1 tablespoonful of flour, a small piece of butter; spice to suit the taste, and bake with two crusts. This quantity makes three pies.
M. A. T.

Cottage Pudding, etc.—One cup sugar, 1 cup milk, 2 spoonfuls melted butter, 2 cups flour, 1 teaspoonful cream tartar, 1 1/2 teaspoonfuls of soda. Bake one hour. To be eaten with sauce.

Muffins, for Good Ones.—Three cups flour, 1 cup milk, 1 egg, 1 tablespoon sugar, 2 teaspoonfuls of cream tartar, 1 teaspoonful of soda (dissolved in the milk), 1 tablespoon butter or lard. If lard is used, add a teaspoonful of salt.

Raisin Pie.—Cover 1/2 lb. raisins with water; stew until soft. Add 1/2 sliced lemon, 2 tablespoonfuls flour or cornstarch, 2-3 cup cold rice, 1 cup sugar, and 4 cup cold water. Bake with two crusts.
A SUBSCRIBER.

A Bunch of Queries.

Dame Durden.—I always look forward for "The Farmer's Advocate" to come, and see what the Nookers have to say. I find many useful recipes. I also like to read the Quiet Hour. It is just the paper that all farmers and their wives need.

May I ask for a recipe for drop cakes, made with fruit and sour cream? When is the best time to sow wild cucumber seed? Also, what will I do with my fern, as the pot it is in is full of roots and little bulbs?
FERN.

I have no recipe for making the drop cakes with cream, but the following is an exceedingly good recipe.

Sift together 3 cups flour and 3 tea-spoons baking powder. Mix in 1 1/2 cups sugar (or less, if preferred), then rub in butter or beef dripping to make like pie crust, and add currants and lemon peel to suit the taste. Mix with milk to a very stiff batter, and bake in small rough heaps. The batter must be unusually stiff, else the cakes will flatten out too much. Eat while fresh.

Wild-cucumber seed should be sown in the fall, as they seem to be helped by the action of frost. You might try some in the spring, however, first soaking them 24 hours in warm water. Your fern certainly needs shifting. Dampen the soil just enough to make it cling together, turn the pot sideways, and rap it sharply on some hard surface to loosen the soil, then turn out, soil, roots and all in a ball. Have a larger pot with some drainage material and soil in the bottom of it; set the ball on this, and fill all around with fresh soil, preferably leaf-mould or good garden loam, made friable with a little sand.

To Use a Bread Maker.

Dear Friend, J. E. T.—I saw your request for a successful way of making bread with the "universal bread maker," and, as I have a good way, thought I

would send it. The yeast is made as follows: Take 2 teacupfuls of hot potato drainings at noon, and pour over a cup of flour, and stir; then add four table-spoonfuls mashed potatoes. I don't put this in the bread maker. Set in rather a warm place to rise till evening; then, for five loaves put four teacupfuls luke-warm water in bread maker; add yeast, and five cupfuls flour, and stir together with spoon. Let rise till morning; then add 3 tablespoonfuls salt, and a good tablespoon lard, dissolved in a cup of boiling water. Then add 13 cups flour, slightly warmed. Turn crank till well mixed, and set in a warm place till ready to mould into loaves. I use Five Roses flour. This bakes in three quarters of an hour, and is always done before noon. Let it get nice and light before baking. This amount of yeast is all right for less bread or even more.
Elgin Co. ALICE.

MORE SCHOOL-BOY BLUNDERS.

"John Wesley was a great sea-captain. He beat the Dutch at Waterloo, and, by degrees, rose to be Duke of Wellington. He was buried near Nelson in the Poets' Corner at Westminster Abbey."

"The sublime porte is a very fine old wine."

"The possessive case is the case when somebody has got yours and won't give it to you."

"The plural of penny is twopence."

"In the sentence, 'I saw the goat butt the man,' 'butt' is a conjunction, because it shows the connection between the goat and the man."

"Mushrooms always grow in damp places, and so they look like umbrellas."

"The difference between water and air is that air can be made wetter, but water cannot.—[World Wide.

GOSSIP

SALE DATE CLAIMED.

May 23rd.—G. A. Gilroy, Glen Buell, and G. H. Manhard, Fairfield East, Ont., consignment sale of 35 Holsteins, at Fair Grounds, Brockville, Ont.

April 17th is claimed as the date for an auction sale of imported Clydesdale fillies and stallions by J. L. Clark, Norval, Peel Co., Ont.

The eight imported Clydesdale fillies, advertised in the March 21st issue of "The Farmer's Advocate" by Mr. James Elliott, of Oxford Centre, will be included in the great combination sale of 60 imported Clydesdales, to be disposed by auction, at Woodstock, Ont., on April 16th. Three of Mr. Elliott's fillies are rising three years old, and the remainder coming two. Two of them were prize-winners in Scotland, and five of them are show timber. They are sired by such high-class horses as Balmiedie Queen's Guard, The Dean, Baron Britton and Royal Stewart, full brother to the champion, Cassabianca. Those rising three weigh 1,400 to 1,500 lbs., and those rising two, from 1,150 to 1,300 lbs. They are browns and bays, and are a fine lot that were intended to be kept for breeding purposes in Scotland, one of them having been booked to a £14 horse, half at service, and balance when proven in foal. These are worth looking after.

TRADE TOPIC.

THE MAPLE LEAF FOREVER.—The above line does not refer to the popular Canadian song, but to the "Maple Leaf Cream Separator," advertised elsewhere in this issue. The centrifugal separator is all but universally recognized as an essential in up-to-date buttermaking, whether on the dairy farm or in the creamery. The Maple Leaf is a Canadian-made implement, the product of the Canadian Manufacturing Co., Limited, Montreal, P. Q., in which establishment skilled workmen and modern machinery, with competent superintendence, combine to turn out a machine which the makers feel warranted in claiming as practically perfect in every important particular. Though on the market only a short time, the company state that they are already receiving numerous letters from dairymen, testifying to the splendid satisfaction which the "Maple Leaf" is giving them. At present, but one size—500 lbs. per hour capacity—is manufactured, and the price is a popular one. Write the Canadian Manufacturing Co., 182-186 Shearer St., Montreal, P. Q., for a descriptive catalogue at once.

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 50 cents.

AT Valley Mills Poultry Ranch—Fertile eggs from Single-comb White Leghorns, Buff Orpingtons, \$1 per setting, \$4.50 per hundred. Mottled Anconas, settings only, \$1. No better winter layers. Free circular. Edmund C. Apps, Box 224, Brantford, Ont.

BARRED Rocks for utility purposes. Eggs, \$1 per 15. W. E. Potts, P.O. Dept., London.

BARRED ROCK eggs from superb matings. Write for mailing list and prices before placing orders. W. W. Dods, All'n Ont.

BARRED ROCKS—Choice stock Eggs dollar per setting. Miss Emily Spillsbury, Colborne Ont.

BARRED ROCKS—Eggs for hatching; \$5.00 for 108. M. C. Herner, Mannheim, Ont.

BUFF ORPINGTON eggs for hatching from extra heavy layers \$1 per 15, \$5 per 100. Good hatch guaranteed. Hugh A. Scott, Caledonia, Ont.

BREEDER and exhibitor of Barred Plymouth Rocks, exclusively. Eggs for hatching Stock for sale. Prices right. Leslie Kerns, Freeman, Ont.

BARRED Rocks exclusively—Eggs for hatching from selected stock for utility and egg production, one dollar per setting. Orders booked now. A. E. Sherwin, Walkerton Ont.

BLACK Minorcas; White, Brown, Black, Buff, Leghorns; Buff Orpingtons; Barred, Buff, White Rocks; White Wyandottes; Silver Hamburgs; Pekin ducks. Eggs from winners, \$1 per setting. R. Laurie, Drumbo.

BUFF ORPINGTONS—Yards 3 and 4—Headed by males who see grandams had records of from 240 to 283 eggs in one year. Eggs, \$1.25 per 15; \$5 per 100. Circulars. C. Everard Brown, Haysville, Ont.

CHOICE White wyandottes—Great layers. Eggs \$1.00 per 15; \$5 per 100, Chas. A. Goulding, Vinemont Ont.

EGGS for hatching from extra laying strain Single-comb White Leghorns, \$1 per 12, \$1.50 per 24. Enos M. Beer, Bethany, Ont.

EGGS—White Wyandottes (McKellar strain), Barred Rocks (Thompson strain) Per two settings one dollar. W. Bryant Cairngorm, Ont.

EGGS—Buff Orpington, White Wyandottes (Duster strain), B. Rocks. Bred for winter laying \$1 per 15; \$4 per hundred. J. E. Fordon Beachville.

EGGS Single-comb White Leghorn and Buff Wyandottes; good strains; \$1 per 15. George Lewis, Ballville.

EGGS for hatching from McCormack's prize-winning White Leghorns at \$1 per 15 upwards. Send for mailing list. Jas. L. McCormack, Brantford, Ont.

EGGS for sale from a choice, well-selected heavy-laying strain of Barred Rocks. Eggs, \$1.50 per 15; \$5 per 100. John McKenney, Lyons, Ont.

EGGS FOR HATCHING from choice birds. Barred Rocks, Pekin ducks, Bronze turkeys. Mrs. Howard, "St. Julians," Sutton West, Ont.

EGGS—Special y-mated Wyandottes, Rocks, Orpingtons Leghorns, 50, \$2. Pekin, Rouen duck eggs, 50, \$3. Mammoth Bronze turkey, Toulouse, Embden, African geese eggs, settings, \$3; two settings, \$5. Wade & Son, Barnia, Ont.

EGGS FOR SALE—My birds won at the Ontario, Hamilton, Owen Sound and Meaford, and seven fall shows, over 300 first prizes. Barred and White Rocks, White and Silver Wyandottes, Brown and White Leghorns, Buff and Black Orpingtons, Black Javas, \$1 per fifteen or \$5 per 100. Blue Andalusians and Rhode Island Reds, \$1.50 per fifteen. F. W. Kroas, Guelph.

FREE—Handsome mating catalogue, Canada's best White Wyandottes Address: Wright Bros., Box 7, Brockville, Canada.

FOR SALE—Eggs for hatching from pure-bred Barred Plymouth Rocks, W. Wyandottes and S. C. B. Minorcas, \$1 per setting of 15 Pekin duck eggs, \$1 per 9. R. A. Carson, Alisa Craig, Ont.

FOR SALE—White Wyandotte eggs from prizewinning stock. Fertility guaranteed. The Daniels Bros., V'lers, Ont.

FOR SALE—Eggs for hatching from pure-bred prizewinning Rose-comb, Brown and Single-comb White Leghorns, White African guinea fowl, Cayusa and Rouen ducks, at \$2 per setting, reduction on larger orders. Look up my winnings on above varieties at last National, Toronto. Miss Davidson, Blairwick Poultry Farm Collingwood, Ont.

INGLENOOK Poultry Farm offers eggs from selected pens of choicest laying strains of White and Brown Leghorns, Black Minorcas and Buff Orpingtons, also a select pen of White Wyandottes for show birds, but not tested for laying quality. Eggs either separate or assorted. \$1 per 15; \$5 per 100. W. H. Smith, 41 Spruce St., Toronto.

LOCHABAR Stock Farm and Poultry Yards offers eggs from the following varieties: Barred Rocks (Latham's strain), Buff Orpingtons, S. L. White and Partridge Wyandotte, \$1 per 13 Imperial in duck eggs, \$1 per 9. Eggs from imp. Bronze turkeys, 30 cents each. D. A. Graham, Wainstead, Ont.

MAMMOTH Bronze Turkeys, Silver-Gray Dorkings, Barred Rocks, from prizewinners. Pairs not skinned. Alfred E. Shore, White Oak, Ont.

PINE HILL POULTRY FARM offers eggs for hatching from selected pens of choicest laying strains of Barred Rocks and White Leghorns, \$1 per 15. John Cowan, Box 223, Galt, Ont.

RHODE Island Reds—Rose-comb (exclusively), bred eight years from carefully-selected heavy winter layers; large, brown eggs; \$1.50 per 15. Good hatch guaranteed. Jno. Luscombe, Merton, Ont.

SELECTED White Wyandotte and R. I. Red eggs \$1 per setting. Toulouse goose eggs. Eusebio Tafts, Welland Ont.

WHITE Wyandotte eggs one dollar. Prize-winners in breeding pen. W. D. Monkman, Bond Head, O. t.

WHITE ROCKS—Eggs from my prizewinners at \$1.50 per 15, \$6 per 100. Geo. R. A. Miller, Vallery, Ont.

150 BUFF Orpingtons (pure-bred); pullets and yearling hens laying now. Good stout cockerels. Prices reasonable. Eggs in season. Satisfaction guaranteed. Hugh A. Scott, Caledonia, Ont.

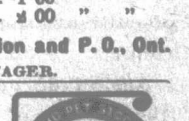
Eggs for Hatching

White Wyandotte.....\$1 00 per setting.
Barred Rock.....1 00 " "
Buff Orpington.....1 00 " "
Special mating Buff Orpington. 1 00 " "

The Glenhaden Co., Wryite Station and P. O., Ont.
LORNE FOSTER, MANAGER.

MEAT MEAL.

For Egg-production Poultry should have meat every day. Meat makes eggs. It is good for growing chicks, ducks, turkeys, calves and hogs. Use Morgan's Roup Cure, 25c. Ask for Free Article on Feeding Chicks and Poultry.



POULTRY PAYS Sur Profit showing the best paying varieties mailed for 10 cents. Holman Poultry Farm, P. E. E. Co., Manager, Box 25, Delavan, Wis.

POULTRY PAYS

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, Pet Stock, and miscellaneous advertising.

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

AS NAP—Choice Single-combed White Leghorn eggs; 13, 75c; 30, \$1.50; 100, \$4. Geo. Easton, Jr., Whitney, Ont.

BUY rich farming and grazing lands in the Edmonton District, the most fertile district of Alberta. Pendleton Co., Lamont, Alta.

FORTY leading varieties of strawberry, raspberry, blueberry plants. Seven varieties of seed potatoes. Catalogue free. Jno. Downham, Strathroy, Ont.

FARM lands of all description in Manitoba, Saskatchewan and Alberta. Some excellent propositions in improved farms with small cash payment, balance in half crop. Write for particulars to Western Canada Realty Co., Bouris, Man.

GREAT bargains in fruit, stock and farm lands; in very center of garden of Canada; grapes, peaches, etc., abundant; profitable. H. V. Robb, S. Brantford, Ont.

SCOTCH collies, sire imported prizewinner; also nine-months-old bitch. Paul Morris, Beamsville, Ont.

SEED POTATOES—The great Scotch potato, Evergood—the potato that doesn't rot. Grown last season from imported seed. Fine flavor, great producer, rot proof. Good shape, shallow eyes, perfect keeper, midseason. Especially adapted to heavy soils. Five pounds post-paid \$1. Post, \$1. Bachel, \$5. By express, W. Hargrave, Linwood, Ont.

WANTED—Station by married man as herdman; life experience; dairy cattle; Babcock test; abstinence; first class references. Calverley, Roseville, Ont.

WANTED—Farms in all parts of Ontario. The Big Cities Realty & Agency Co., Limited, 6 College St., Toronto, Ont.

WHEAT lands in the great golden West, where free homesteads are still available. Clean open prairie in tested localities; good water and near railways; splendid investment. You may double your money in one year. Call on me when you reach Regina, or write me. Geo. S. Houston, Box 9 Regina.

WANTED at once—Single man to work on curing hops. Must understand growing and curing hops. Apply with references, stating wages required to H. Conby Distillery Co., Limited, Belleville, Ont.

Mr. H. M. Vanderlip, Cainsville, Ont., writes that the announcement of the sale of his Shorthorn stock bull, Prince of Stars—49804—, in a recent issue of this paper, was premature, the supposed buyer proving to be a faker, who travels the country, masquerading as a breeder, securing free board and lodging and making purchases which are not consummated by payment of the price, but by promises to pay when shipment is ordered. Prince of Stars is, therefore, for sale, owing to his heirs coming of breeding age. He is a rich roan three-year-old son of the noted Star of Morning, by the champion Pride of Morning, his dam being by Blue Ribbon (imp.), and grandam Estelle (imp.), a Rosemary, by Challenger. He is of the low-down, thick-fleshed, mellow-handling, good-doing sort that will do good work in any herd.

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 must be enclosed.

Miscellaneous.

STRAWBERRIES FOR THE FARM GARDEN.

Which are the two best varieties of strawberries for the farmers' own use, to be grown on dark loam soil in Waterloo County, hardness, quality and ease of cultivation being taken into consideration?

H. G.

Ans.—I do not think it is well to limit the number of varieties of strawberries in the farm garden to two varieties. Three or four varieties would better cover the season from early to late. For these four varieties, I would select Splendid, Warfield, Ruby, and Parson's Beauty. These would cover the season well. If restricted to two varieties, I would select Splendid for early, and Ruby for late. On good heavy soil, which is retentive of moisture, the Warfield might do better than Ruby. Warfield is one of the best varieties for canning, and does well wherever the soil is heavy enough to hold sufficient moisture. H. L. HUTT.

SON CLAIMING WAGES.

Can a boy that has always stayed at home collect wages from the age of 21 until he was 30 years of age? I have always stayed at home, with the promise of the farm after parents were through with it, or "that I was to have the farm." Now I have been given notice to leave home, and actually kicked right out without anything, and never received anything from home. E. V. OUT. Ontario.

Ans.—You are not in a position to enforce payment of any amount as for wages; but, under the circumstances, and assuming that you are in a position to prove, to the satisfaction of a court, the promise you allege, we think you should be able to recover a reasonable sum by way of compensation for services rendered.

SAN JOSE SCALE.

I planted an orchard two years ago, and last year, on some of the apple trees, the leaves turned brown, and curled up, and now some of the twigs seem dried up. The land is clay loam. Please tell me what is the matter with them, and the remedy. I have plum trees that made from three to four feet of wood last year. Would they be better cut back? They are Imperial Gage. SUBSCRIBER.

Ans.—From the specimens of branches received, it is evident that you are in for a fight with the San Jose scale, as these branches are heavily encrusted with the scale. If it is not already upon the plum trees, it will be only a short time before they, too, will be infested, unless prompt measures are taken to destroy it. The best remedy is to spray as soon as possible, before the buds open, with the lime-sulphur wash. The formula for this was is:

Fresh stone lime20 lbs.
Flowers of sulphur15 lbs.
Water40 gals.

The sulphur should be made into a paste with warm water, and the lime, after being slaked, may be added by stirring and making up to about 15 gallons. This should be boiled for about an hour and a half. It may be boiled over an ordinary fire, or in a barrel by turning in steam from a boiler. When thoroughly boiled, water should be added to make up to 40 gallons, and the whole strained into spray tank and applied while warm.

It would be well to head back the plum trees which have made such vigorous growth, in order to make them branch out, and prevent growing too tall. Any pruning necessary should be done before the spray is applied, so as to remove as much scale as possible in that way. H. L. HUTT.

RED ROSE TEA "IS GOOD TEA"

The more particular you are,
The better you will like it

The fine quality of Red Rose is most appreciated by those who are the most particular.

Notice the clear, amber color in the cup and the delightful fragrance when poured from the teapot.

Will you try a package to-day? Ask your grocer to send you one!



BINDER TWINE FOR 1907

The 4 Maple Leaf Brands

THE BEST YET



Manufactured only from suitable materials, properly Prepared, Spun and Baled.

Clean, Bright, Strong FIBRE, made into Round, Smooth, Even CORD.

Twine baled in a strong sack, tied with a useful laid rope (no paper or other balast).



BINDER TWINE.

Registered Trade-mark Remember These Brands:

Gilt Edge, 650 ft., pure Manila.
Gold Leaf, 600 ft., Manila.

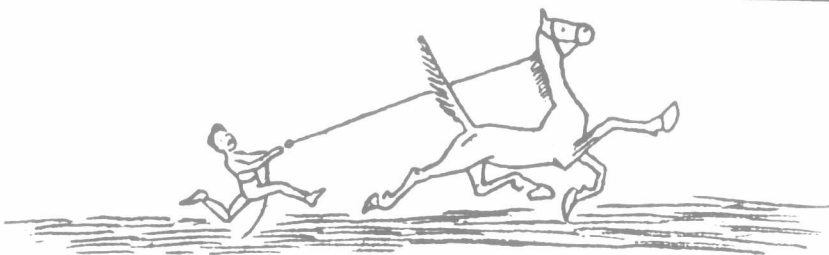
Silver Leaf, 550 ft., Standard Manila.
Maple Leaf, 500 ft., Standard.

Made in Canada by

The Brantford Cordage Co., Limited
Brantford, Ont.

For Sale by Reliable Dealers Everywhere.

Agents wanted in localities where we are at present not fully represented.



Unreserved Sale of Rawlinson Bros. Hackneys.

In consequence of MESSRS. RAWLINSON BROS. having sold their ranch, and who are leaving the country, their entire stock of highly-bred pedigree Hackneys must be disposed of, and will be sold by auction in JULY next, at the ranch, 11 miles west of Calgary. The pedigree Hackneys consist of 3 IMPORTED STALLIONS, 6 HOME-BRED STALLIONS, 48 BROOD MARES, 12 FOUR-YEAR-OLD FILLIES, 12 YEARLING FILLIES, 8 TWO-YEAR-OLD FILLIES, 8 THREE-YEAR-OLD HEAD OF UNREGISTERED MARES, FILLIES AND GELDINGS. Nearly all the best mares the champion Robin A'air ever got in this stud are included in this sale, together with the full sisters to Saxon, Pricilla and Minona, who won every thing World's Fair. It is the greatest collection of high-class Hackneys that is ever likely to be offered again in Canada for many years. Catalogues of sale will be ready for distribution on June 1st, 1907, and may be obtained from

Jordison Bros., Auctioneers, P. O. Box 1172, Calgary, Alta.



SMITH'S OVARY TONIC MAKES HENS LAY

It makes hens lay in Spring, Summer, Autumn and Winter. Every month is a good month for hens that are kept in prime condition with Smith's Ovary Tonic.

It costs only 8c. a year per fowl to give each hen the required amount every week. When eggs are selling for 50c. a dozen, this 8c. a year is paying a big profit.

At dealers everywhere. 25c. and 50c. a bottle.
NATIONAL DRUG & CHEMICAL CO., LIMITED, MONTREAL.

BEE SUPPLIES.

In reply to an inquirer, we announced in our issue, March 28th, that Gould, Shapley & Muir Co., Ltd., of Brantford, Ont., handle beekeepers' supplies. We have since learned that this well-known firm is now out of the bee-supply business, which is now in the hands of Ham & Nott, of the same city.

TREATING SEED OATS FOR SMUT.

Give a good treatment for smut in oats, and how to apply the treatment, say, to about ten bushels. E. W.

Ans.—Spread the oats on the barn floor, and sprinkle with a solution of 2 ounces formalin in 4 gallons of water. Shovel while the sprinkling is being done, till all are thoroughly dampened. Then shovel into a conical pile, cover with old blankets, and in three hours shovel out, and keep stirred till dry. If possible, do the treatment within three days before sowing.

WANTS EXPERIENCE IN HAND-RAISING OF FOALS.

Would any of the readers of your paper give their experience of raising a colt on cows' milk? We have a mare with colt, and I don't think she will have any milk. BRUCE COUNTY.

Ans.—While seconding the request for readers' experience, we may as well repeat the recipe usually recommended: Mix the cow's milk with one-third its bulk of water and add sugar at the rate of a good-sized teaspoonful to the teacup of diluted milk. Give about a cupful at a time, at a temperature of 98 to 100 degrees. Use the milk of a fresh cow.

BEET PULP.

I have been using beet-root pulp for my cows, and like it better than bran. Now I have a sow that is due April 3, and I am short of grain, and will have to buy. Which will be the better, beet pulp or bran for pigs? the price here is \$1.25 for 120 lbs. of beet pulp; \$1.10 for 100 lbs. of bran.

2. What is the address of beet-sugar factory nearest to Welland, Ont., where I could buy this pulp?

CONSTANT READER.

Ans.—1. According to analyses, by Prof. F. T. Shutt, chemist, Experimental Farms, Ottawa, dried beet pulp falls considerably short of being the equal of bran, judged by chemical composition. However, the feeding value may be greater than thus indicated. Those who have used both should be in a position to know. It is not wise to draw hasty conclusions, and it may be well to make some allowance for the fact that Reader's cows relished the beet pulp for a time by way of a change. From such information as we now possess, beet pulp at \$1.25 per 120 lbs., would be dearer than bran at \$1.10 per cwt. Few sows, a mixture of bran and shorts, or bran and middlings, would seem preferable to either. But try the pulp, and report results.

2. The Ontario Sugar Co., Berlin, Ont., has the factory nearest to Welland, but we do not know whether they have any pulp for sale or not. Write the Wallaceburg Sugar Co., Wallaceburg, Ont.

GOSSIP.

Attention is directed to the advertisement in this issue of an auction sale, at Newmarket, Ont., on April 6th, of imported and Canadian-bred Clydesdale mares, fillies and stallions, belonging to Messrs. John A. Boag & Son, of Ravenshoe, Ont. There are nine imported mares and fillies in the offering, 2 Canadian-bred fillies, and one Canadian-bred stallion, two years old. These are richly-bred stock, sired by notable stallions, and should be well worth looking after. Newmarket is on the Toronto to Barrie branch of the G. T. R. The electric cars on Yonge Street leave Toronto every hour for Newmarket, and the terms of sale are easy.

Official records of Holstein-Friesian cows, accepted by the American Holstein Association during the period from Feb. 15th to March 2nd, 1907, show that the 110 animals so reported produced in seven consecutive days 44,486.3 lbs. milk, containing 1,525.647 lbs. butter-fat; showing an average of 3.43 per cent. fat. The average yield for each animal was 404.4 lbs. milk, containing 13.87 lbs. butter-fat; equivalent to 57.8 lbs., or 28 quarts milk per day, and 16 lbs. 3 ozs. of creamery butter per week. In this list are the following Canadian-owned cows: Calamity Jane Duchess 2nd 61013, age 5 years 5 months 2 days; days from calving, 13: Milk, 362.6 lbs.; per cent. fat, 3.52; fat, 12,791 lbs. Owner, Geo. Rice, Tillsonburg, Ont. Adelaide Brook De Kol 2nd 79667, age 2 years 2 months 9 days; days from calving, 25: Milk, 216.8 lbs.; per cent. fat, 3.93; fat, 8,514 lbs. Owner, Geo. Rice.

QUESTIONS AND ANSWERS. Miscellaneous.

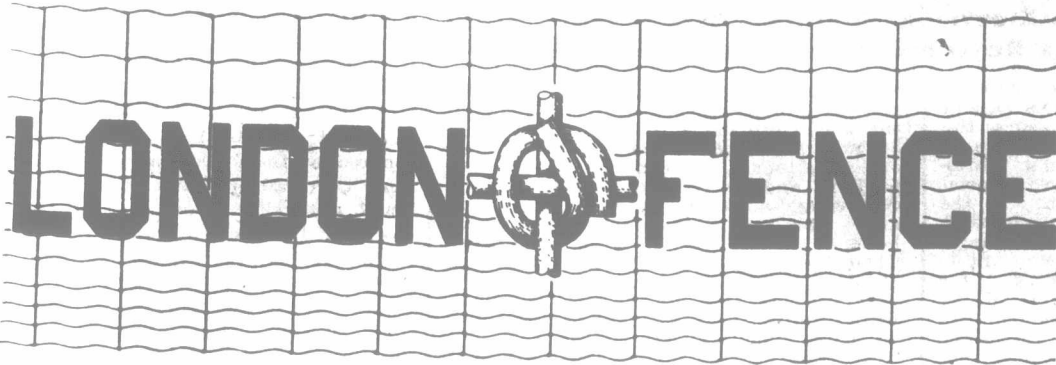
BUFFALO MOTHS.

A subscriber, Huron Co., Ont., asks for a method of destroying Buffalo moths. Ans.—To exterminate Buffalo moths from carpets, take the carpets up and beat them well. Afterwards, pour benzine on the carpet. Cracks in the floor should be filled with plaster of Paris. When the pest appears in chests, etc., lay a saucer on top of the clothes in the chest and pour a small quantity of carbon bisulphide into it, then close the box tightly and leave it. As carbon bisulphide is very inflammable, the bottle containing it must not be opened near a light or fire, nor should it be used in a room where there is light or fire of any kind. After the chemical has done its work, windows and doors should be opened so the draft may carry the fumes away.

ALFALFA ON FALL WHEAT—RAPE VS. TURNIPS FOR PASTURE.

1. Would it be advisable to sow alfalfa with fall wheat, or would the wheat be likely to smother it out? 2. I have a piece of new land that I intend sowing with rape. My neighbor says, "Why don't you sow white turnips, you will have more feed, and will not take half the seed, besides they will not scour the cattle." READER. Ans.—1. So far as we have observed, alfalfa seeding on fall wheat is not much of a success. Better sow it alone, or with a nurse crop of a bushel of barley per acre. If you try it on fall wheat at all, wait till the ground can be loosened up after sowing, with harrow or weeder. 2. As a pasture plant, rape is decidedly preferable to turnips. It will stand grazing better, turn off a large quantity of feed, and give no more trouble with scouring than turnips, if as much. It may require a pound or two more seed, but the cost will be little or no more. In one of the catalogues this year, we find Essex rape seed quoted at 10c. a pound, or ten pounds for 90c., or 25 pounds for \$2. White and Red Globe and Grey-stone turnip seed is listed at four pounds for 80c., and Cow-horn turnip seed at 35c. a pound. Rape seed, when broadcast, should be sown at the rate of three or four pounds per acre, costing, say, 35c. Turnip seed, at the rate of 15 pounds per acre, would cost about the same, or, say, 35c. per acre. Shaw says that fall turnips, sown together, in small quantities of seed, make an excellent pasture for sheep. It might be worth trying in a small way for cattle.

Special to introduce LONDON WOVEN FENCING (In the roll) For a short time only



Forty-rod roll high-grade, all No. 9, heavy fence, freight paid, \$18.00, to any Western Ontario point. Style 9/51, nine strands, 51 inches high, stays 168 inches apart. Made from highest grade wire. A solid strong fence. No. 9 wire throughout. Guaranteed first-class. Ready to stretch. Write quick. Only one roll to one man at above price. If you cannot obtain London Fence, from your merchant, write us.

LONDON FENCE MACHINE COMPANY, LTD., London, Ontario.

Imported and Canadian-bred CLYDESDALES By Auction

The property of JOHN A. BOAG & SON, Ravenshoe, Ont., to be sold at Prector's Hotel, Newmarket, Ont., on

SATURDAY, APRIL 6th, 1907.

Eight imported fillies rising 3 years old, one imported filly 2 years old, two Canadian-bred fillies 1 year old, one Canadian-bred stallion 2 years old. Some of these are prizewinners. They are sired by such stallions as Lord Londonderry, Sir Everest, Marmion, Sir Mark, and other notable horses. Will be sold without reserve. TERMS: Six months' credit on approved joint notes, or 5 per cent. per annum off for cash. Metropolitan electric cars leave Toronto every hour for Newmarket.

JOHN A. BOAG & SON, Ravenshoe, Ont.

STAMMERERS

Stammering Positively Cured

The Arnott Method is the only logical method for the permanent cure of stammering and speech defects. It treats the cause, not merely the habit, and thus insures natural speech. The Arnott Method easily and permanently cures the failures of other institutes and schools. Full information, pamphlet and references sent free upon request. Write today.

THE ARNOTT INSTITUTE, BERLIN, ONT.

Advertisement for Poultry Yards of Canada, Limited. Features a central logo with 'FC' and the text 'These Birds Will Pay'. Lists various breeds: Barred Plymouth Rocks (The General Purpose Breed), White Plymouth Rocks (Rollable Early Layers), Buff Plymouth Rocks (Best bred strain in Canada), Silver Laced Wyandottes (They stand the cold), Golden Wyandottes (Beauty and Utility), Buff Orpingtons (Big and Handsome), White Wyandottes (All Market Bird), Buff Wyandottes (True Color—Quick Growers), S. C. Brown Leghorns (The 200 Egg Hen Breed), R. C. White Leghorns (Bred for Egg Production), Rhode Island Reds (Heavy, Hardy, Profitable). Includes contact information for John Brown, President, F. C. Elford, 1st Vice-Pres., Peter White, 2nd Vice-Pres., John I. Brown, Secretary, and Thos. W. Lee, Managing Director. Address: 25,000 bird farms at PEMBROKE, Ont., Dept. 12.

The only medium which conveys weekly to the farmers of Canada, the advertiser's place of business, 52 times a year, is THE FARMER'S ADVOCATE AND HOME MAGAZINE. Subscription, \$1.50.

WATER-TIGHT WALL FOR CISTERN.

I am going to build a house in the spring, with basement two feet in ground; can drain it that depth, only when there is a freshet water will back up tile to basement. Can a concrete wall and floor be made to keep water out? H. O.

Ans.—Make a fairly-strong mixture of concrete for wall, using one of the best brands of Portland cement, 1 part cement with 3 parts clean, sharp sand and 6 parts clean gravel or crushed stone to build walls. Point carefully outside, and plaster inside with 1 part cement to 2 parts clean, sharp sand. This wall should be practically water-tight. A mistake often made in constructing walls is to leave the outer surface rough and honeycombed where filled in against the earth excavation. Into this, water enters and gradually soaks through the wall, especially at the point where one day's work is built on to that of the day before. In laying the floor, use one part best Portland cement with 3 parts clean, sharp sand and 6 parts coarse gravel or crushed stone. Finish with 1 part cement to two parts coarse sand or fine sifted gravel.

HOG PASTURE AND ORCHARDING.

I intend plowing up my orchard this spring, and sowing it with seed to be used for green feed for pigs for most of July and August. What is the most suitable feed to grow? A SUBSCRIBER.

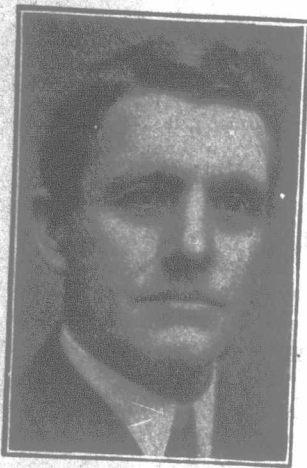
Ans.—There are two things to consider, the orchard and the pigs. One of the best crops of pig forage we have ever seen was a mixture of rape, vetches and Soy beans, sown in the fore part of May. We do not remember the proportions of seed, but it was something like 1 pound of rape, 1 peck Soy beans, and 2 pecks common vetch. It was sown in an old orchard, where the soil was mellow and rich. It produced a luxuriant growth, which was cut and fed to the pigs in yards, and was greatly relished. Three bushels of a mixture of peas and oats would also answer well.

Let us, however, advise against the growing of any such crop in an orchard, unless in some special case where the land is over-rich, and the trees making too much wood-growth. Ordinarily, an orchard should be cultivated without a crop at all until July; cultivated as one would cultivate a corn field or piece of turnip land. In early summer the trees need every particle of moisture and plant food they can get, and should be fertilized liberally with barn-yard manure and ashes besides. In July and August, there should be a crop growing to reduce the supply of moisture and plant food available to the trees, thus checking the growth of wood and ripening it for winter. Growing a crop in early summer to be removed in July and August is exactly the wrong thing for trees. We do not give our orchards half a chance. An acre of good orchard, given the land to itself, properly cultivated, fertilized, pruned and sprayed, will yield paying fruit that will be in demand, and the profits from such culture would exceed the returns from three times the area of hog feed. Our advice is to sow nothing in the orchard till July, then sow clover, vetches, buckwheat, oats or rape, to be plowed under early in 1907.

THE DEAF MAY HEAR.

The Simple Story of an Electrical Engineer, Geo. P. Way, Whose Lost Hearing was Restored by His Own Invention.

That "truth is stranger than fiction" is most forcibly illustrated in the case of Mr. Geo. P. Way, for many years the electrical engineer of the Detroit Young Men's Christian Association, in the accidental, yet remarkable, discovery he made of a scientific principle, through the application of which his lost hearing was completely restored.



GEO. P. WAY, Inventor.

For more than 25 years Mr. Way was a deaf man, unable to hear his wife's voice across the table, unable to enjoy social converse, or take any active part in social life. For him, as with every deaf person, life was a gloomy, individual matter. He was so deaf that he could scarcely hear the roar of his engines and dynamos as he passed among them daily. For ten years he carried an ear trumpet, and had tried every device known; had almost constantly been under medical treatment in the vain effort to get back his hearing. To-day he is possessed of perfect hearing, and takes an active and enjoyable part in the general life which surrounds him. Yet, when he removes two tiny devices from his ears, he is quite as bad off as before—he is again deaf. The story of his discovery which resulted in his hearing being restored is marvellous.

It happened, as Mr. Way tells it, that he was at his post in the dynamo-room one day, nearly nine years ago, and as the buzzing in his ears bothered him more than usual, he placed a curiously-shaped tuft of waste in his right ear. Immediately a thrilling experience came to him. In the midst of the silence that is the torture of one shut off from the sounds of the busy world, there came a crashing sound as of an earthquake, and Mr. Way bounded across the room, terror-stricken. Then the amazed man sat down in his chair, and tried to remember what had happened. Unconsciously he pulled the tuft of waste from his ear. Instantly

he returned to the awful silence that had enveloped him for years. The sound of the machinery came to him as far away, his questions. Suddenly the truth came to him, and he realized that he had uncovered a scientific principle which would give him back his hearing. He rushed home to tell his wife the good news. Then for five years he experimented constantly to put his accidental discovery to practical use. He studied the human ear from a mechanical standpoint, in an effort to make practical the principle he had discovered. At last, success crowned his efforts. The Way Ear Drum was the result of his labors, and he wore it with splendid results. Others heard of the marvel, and he was overwhelmed with requests for one of the little devices from friends, as well as from people whom he had never known.

A number of wealthy business men in Detroit, who have known Mr. Way for years, knew of his deafness and the marvellous results which his invention had brought, gave him full financial backing and endorsement, that he might extend, to the largest possible limit, the blessings which his wonderful ear drums bring to those who are suffering from impaired hearing and deafness. Patents have been granted in all foreign countries, and thousands of the drums have been sold in every part of the world, and every day witnesses a large increase in the volume of demand, as the sale of one pair of the drums in any locality produces many other sales. Nine persons out of every ten, who have tried the Way Ear Drums, have been benefited by them, and naturally are quick to testify to their value to fellow-sufferers.

The Way Ear Drum is scientific, constructed of a peculiar, sensitive material molded to fit exactly the opening to the inner ear. It is entirely invisible, is easily placed and removed, is painless, cannot collapse, is very durable, and best of all, it does bring back the hearing. Think of it, nine out of every ten deaf people have had their hearing benefited and restored by the use of the Way Ear Drum.

Do not confound the Way Ear Drum with any other drums on the market. They are entirely different, distinctively different in every way. If you suffer from deafness, if you have noises in the head, if you feel your hearing is becoming imperfect, just write to Mr. Way. He has been deaf himself, and he will be plain and honest and frank with you, and will tell you whether or not the Way Ear Drum will benefit you.

Address your letter personally to Geo. P. Way, 380 Majestic Bldg., Detroit, Mich.

GOSSIP.

THE CARGILL SHORTHORNS.

Cargill, the home of the great herd of Shorthorns, is in Bruce County, a few miles north of Walkerton, on the G. T. R. For twenty years, the firm of H. Cargill & Son have been importing and breeding Scotch Shorthorn cattle. Today, the herd is 175 strong, nearly a hundred of them breeding cows, imported from the leading herds in Scotland, selected not only on account of their rich breeding, but as particularly on account of their superior individuality, the thick, evenly-fleshed, early-maturing, strong-constitutioned and good-doing sort being the type ever kept in view as the model for selection, and the herd, as it stands to-day, without a doubt, will stand comparison with any on this continent. Price was never an object taken in consideration in the purchase of stock bulls to breed from, and nothing but the very best obtainable have been used on the herd. A great many of the younger animals now in the herd are the get of such grandly-bred and extra good bulls as Imp. Golden Drop Victor, a Golden Drop, son of the Nonpareil bull, Nonpareil Victor; Diamond Rex (imp.), a Roan Lady, son of the Primrose-bred bull, Bapton Diamond; Merchantman (imp.), a Missie-bred son of the Broadhooks-bred bull, Lovat Champion, and Lord Mistletoe (imp.), a Missie-bred son of the same sire. The last named two are still at the head of the herd, assisted by Blood Royal (imp.), bred by Wm. Duthie, sired by the Rosebud bull, Pride of Avon, dam Beaufort Beauty 3rd, a Broadhooks, by the Roan Lady bull, Royal Star. Besides being so richly top-bred, he carries the blood of such noted bulls as Bachelor of Arts, Champion of England and Baronet. This bull is Mr. Cargill's latest purchase and importation, and we consider him one of the best all-around bulls we have ever seen. The other in service is Diamond's Crown, bred by D. R. Hanna, Ravenna, Ohio, sired by the Primrose-bred bull, Imp. Bapton Diamond, dam Imp. Village Belle, a Village-bred cow, by Prince Victor, a Princess Royal. These constitute a quartette of stock bulls scarcely excelled in any other herd in the world for rich fashionable breeding and high-class individuality. The cows, too, are equally as high a class of animals. Among the great number there is not one inferior type, but all are of that thick-fleshed, early-maturing, good-doing sort, so much looked for, and that has placed the Scotch Shorthorns in the enviable position they occupy to-day. And on paper, they represent every family or strain that is notable in modern Shorthorn lore. In younger stuff, there are 30 heifers, one and two years of age, that as a thick, even, high-class lot will certainly open the eyes of anyone looking for choice stuff. Besides these, there are about 50 heifer and bull calves. All the heifers old enough are bred to the new arrival, Imp. Blood Royal. In young bulls, fit for service, there are still on hand 11, all out of imported dams, and eight of them sired by Imp. Lord Mistletoe, one by Imp. Merchantman, one by Imp. Diamond Rex, the other by Lord Crocus, a son of Lord Mistletoe. Although a large number of bulls have been sold during the last few months, these still on hand are by no means culls. Among them are some exceedingly good ones, among which we may mention Lord Annan, a roan son of Lord Mistletoe, and out of Imp. Lady Ann 12th; and Heather Robin, a roan son of Lord Crocus, and out of Imp. Robina C. Here are a pair that would be hard to beat in any showing. These bulls are going rapidly, and anyone wanting a herd header should be looking after them, as they can be bought well worth the money. The whole herd, under the skillful management of Mr. John Clancy, is in remarkably fine condition. Mr. Cargill reports the demand for Shorthorns as exceedingly satisfactory.

GESTATION PERIOD OF SOW.

If a sow carries her young over 112 days, how many days will she go after being served?

Ans—Sows in good healthy condition will generally farrow on the 112th day after service, or within a day or two of it. When a sow goes more than five days over the sixteen weeks, her pigs are generally weak and unable to hustle for a living, and as a rule die in a few hours after birth.



WM. RENNIE, SR. PIONEER OF CLEAN FARMING

Among the thousands who are now using Rennie's Seeds, in this and other lands, I see with pleasure that many are still on the list who were customers thirty-seven years ago.

Wm. Rennie

Farmers and Gardeners of acknowledged standing—men of intelligent discrimination—have used

RENNIE'S SEEDS

every year for thirty-seven years, each year's results proving convincingly the wisdom of their selection.

Dependable quality—certain germination—and expert selection, have thus gained for Rennie's Seeds the confidence of Canada's premier agriculturists.

Remember this when deciding on seed supplies for 1907.

In the meantime, write our nearest address for a free copy of the Rennie Seed Annual.

Wm. Rennie Co. Limited
TORONTO
 and
 190 McGill Street - Montreal
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Now is the Time to Ship Butter, Eggs & Poultry.

Prices good. Returns quick.
QUEEN CITY PRODUCE COMPANY, LTD.
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 WM. AGAR, MANAGER.

MONEY IN CANARIES

More profitable than poultry. Experience unnecessary. We give advice free. Our new egg book, "Money in Canaries," tells all about it. With book we send free, if you name this paper, a roc packet BIRD BREAD. Also, "How to Rite Birds of Lice," and "Bird Magazine." Send 3 egg 10-day stamps or coin. Refunded if you buy birds from us. Birds shipped anywhere any time. Write us before buying. Address:

COTTAM BIRD SEED
 28 Bathurst St., London, Ont.
FOR SALE!
 3 young Shorthorn bulls.
 30 young Berkshire boars and sows.
 30 Buff Orpington pullets. Eggs \$1 per 15.
 Address: E. JEFFS & SON, Bond Head, Ontario.

"The Maple Leaf" CREAM SEPARATOR.



The separator that gives the best results.
 Perfect skimming. Smooth cream.
 Enclosed gears. Easy to operate.
 Reliable active agents wanted where not represented.
 Write now.

The Canadian Manuf'g Co., Limited,
 182-186 Shearer St., MONTREAL.

Capacity 500 lbs. Guaranteed.
 Price, \$65 00.

Seeds for the Farm

You Want Good Clean Clover and Timothy.

"Sun" Red Clover.....	Per bushel.	\$10 50
"Ocean" Alsike.....		10 00
"Gold" Lucerne.....		10 50
"Diamond" Timothy.....		3 50

MY BEST BRANDS.
 You can not make a mistake in ordering these. Send for samples and see for yourselves.

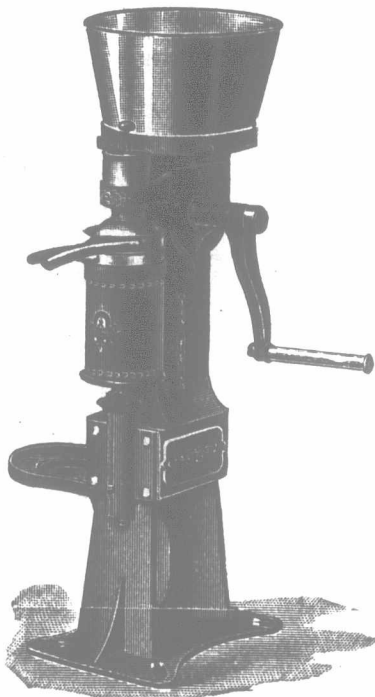
SEND FOR 1907 CATALOGUE.
GEORGE KEITH, 124 KING ST. EAST, Toronto, Ont.
 Established 1866. Mention this ad. when writing.

WE NEVER DID

BUILD A

MAGNET CREAM SEPARATOR

Expressly for trial testing. All our tests are taken from our standard machines in their every-day work. That is the reason why the **MAGNET** gives entire satisfaction to its buyers, as they find its performance is equal to the promises made in its behalf.



You will notice our style of advertising is different, because we give the special points on which superiority is claimed for the **MAGNET**.

1st.—Bowl supported at both ends (Magnet patent), keeping the bowl in balance.

2nd.—Strong spur or square gear giving no friction, and therefore easy turning.

3rd.—O e-piece skimmer, giving complete separation of butter-fat from the milk (the disease germs from both) and, being in one piece, easy cleaning.

4th.—Strong, solid frame, making the machine durable, so much so that it will surely last a lifetime.

These points alone put the **MAGNET** in a class by itself, besides which it has many others in keeping with the above, all contributing to make it a perfect machine to do the every-day work required of it.

Our claim for superiority over every other separator rests on these points in construction and on the good every-day work the **MAGNET** does owing to them.

Be fair to yourself and us, and investigate the **MAGNET** before buying a cream separator.

Write for Catalogue 1907.

THE PETRIE MFG. CO., LIMITED,
Hamilton, Canada.
Winnipeg, Man.; St. John, N. B.; Calgary, Alta.

POTASH

may be obtained from all the leading fertilizer dealers in the highly-concentrated forms of

MURIATE or SULPHATE of POTASH

For Tobacco, Sugar Beets and Potatoes apply Sulphate of Potash. On all other field crops, as well as in the Orchard, Muriate of Potash will give entirely satisfactory results. Potash is not merely a stimulant, it is a direct plant food, and has a beneficial after-effect. As a rule, to secure best results, Potash ought to be applied along with a Phosphatic Fertilizer early in spring. Any reader of "The Farmer's Advocate" desiring to obtain copies of the publications: "The Importance of Potash in the Culture of Sugar Beet," "The Improvement of Poor Permanent Pastures," "The After Effects of Fertilizers," or "Potash for Tobacco and Tomatoes," and other similar publications, may secure the same **GRATIS** by addressing

THE DOMINION AGRICULTURAL OFFICES OF THE POTASH SYNDICATE,
Rooms 1102-1105 Temple Building, TORONTO, CANADA.

SCHOOL LANDS SALE

The School Lands of Manitoba are nearly all sold, but we can sell you farms on practically the same terms, viz.,

Ten Per Cent. Cash and Balance in Nine Yearly Installments,

with interest on deferred payments at six per cent. per annum. These farms are all in the Province of Manitoba, and are within three miles of railway stations, markets and schools. Write to us for catalogue and maps.

McINNIS & CLARK,

Bank of Commerce Building, BRANDON, MAN.

ADVERTISE IN THE ADVOCATE.

GOSSIP.

Messrs. H. & J. McKee have made an important sale recently of a number of Ayrshires to Mr. Geo. Rice, the celebrated Holstein breeder, who has now possession of the great Annandale farm at Tillsonburg, Ont. Messrs. McKee sold him eleven head of cows and heifers from their very best strains. Included in the lot are two daughters of the celebrated cow, Annie Laurie of Norwich—17837—, winner of the first prize at the Ontario Winter Fair dairy test, 1905, and second at the National Dairy Show, Chicago; also a daughter of the sweepstakes winner, Sarah 2nd—13192—, as well as the two-year-old heifer, Belle, winner of sweepstakes over all breeds under 36 months at the last Ontario Winter Fair Dairy Test. This was the heifer exhibited by A. E. Hulet, and bought back by Messrs. McKee. More attention will also be given to breeding horses on the Annandale farm. Three good mares are now in foal. Some imported Clydesdale mares have been added, and from 200 to 400 hogs are kept on this farm, of the baron type, making, all told, a very large and valuable lot of stock. The Ayrshire cows will, when fresh again, be officially tested, same as the Holsteins. Utility, with a big U, is the standard that all stock on the Annandale farm has to measure up to. Thorough business methods to secure the most profit from growing the crops, growing such crops as are most suitable to feed the stock, and keeping stock that can turn the feed into the most profit, are some of the aims.

THE QUEENSTON SHORTHORNS.

Queenston cement and Queenston Shorthorns are noted for superior excellence throughout the length and breadth of the land. A few days ago it was again the privilege of "The Farmer's Advocate" field man to visit this noted Shorthorn herd, the property of Mr. Hudson Usher, and, if we noticed any difference in the complexion of the herd, it was that of improvement; particularly was this the case in the calves, and the conviction was forced on us that Queenston Comet, the sire of most of them, is par excellence of Canadian sires, and one that will certainly have an obituary that will be an honor to Shorthorn lore. The females represent the Kinellar Bessies, Kinellar Minas, Bellonas and Nonpareils, and are strictly up-to-date in type, and in grand condition. The bulls on hand and in service are Queenston Comet—82986—, a red two-year-old son of the Cruickshank Secret bull, Imp. Derby, one of the greatest sires that has figured in Canada, dam Bessie's Maid, by the Golden Drop bull, Imp. Royal Prince, grandam Beatrice 2nd, by the Cruickshank Secret bull, Imp. Sittytton Stamp. Queenston Comet is, therefore, not only an exceptionally richly-bred Bessie, but he is one of the best individuals we have seen, and a show bull and a sire of the highest order. Queenston Archer—48898— is a massive, thick, mellow roan, son of Imp. Derby, dam Imp. Veronica, by the Miss Ramsden bull, Brave Archer. This bull was bred by Mr. Usher, purchased by Bell Bros., of Bradford, and repurchased by Mr. Usher at the recent sale of Bell Bros., his superior individuality and wonderful success as a sire making him especially desirable to use on the herd. Still another, and of the same high order of excellence, is a red-roan yearling, a full brother to Queenston Comet, and nearly as good an individual. And, just now, Imp. Veronica, has a red bull calf, by Queenston Comet, that promises to be a coming champion. In heifers, are three Kinellar Minas (one of them two years old, the other a yearling), one two-year-old Bellona, and three others bred from cows tracing to Imp. Louisa. They are an extra nice lot, and sired by Imp. Derby and Queenston Montalis, a son of Lord Montalis. Besides these, there are a number of younger ones, among which can be found show stuff good enough to go anywhere. Mr. Usher reports the demand for Shorthorns as eminently satisfactory. All the above-mentioned bulls are for sale, and, considering their superior excellence, can be bought at very moderate prices, as they are all high-class herd-heads.

QUARTER CENTURY SUCCESSFUL RECORD

A WONDERFUL REMEDY DOING A WONDERFUL WORK.

Money can buy advertising space, but it can't buy twenty-five years' successful record in curing the most difficult and intricate diseases—many of them pronounced incurable by the ablest doctors. This is the remarkable record of **Psychine**. It has probably accomplished more really marvellous cures than any medicine placed before the public. It quickly and permanently cures all forms of coughs, colds, catarrh, pleurisy, pneumonia, night sweats, emaciation and consumption. It is certain and reliable in its action, aiding digestion, strengthening the stomach, building up the entire system. Try it, and be convinced.

"Years ago I was suffering with lung troubles. Friends and neighbors thought I would never get better. I began to despair myself. Losing faith in my physician, I procured another one who recommended the use of **PSYCHINE**."

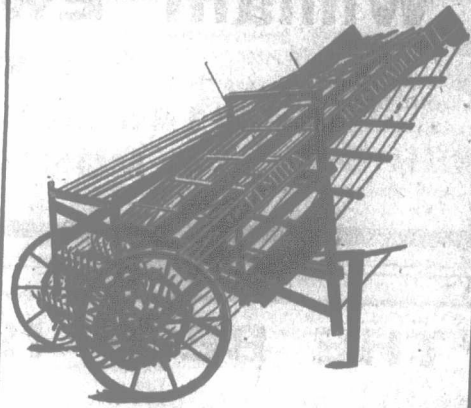
"It was surprising beyond description the effect it had. I seemed to gain with every dose. Inside of two weeks I was able to attend to my housework again. There are no symptoms of Consumption about me now."

"MRS. HENDERSON.

"South Musquash, N. S."

Psychine, pronounced *Si-keen*, is for sale at all druggists at 50c. and \$1 per bottle, or at Dr. Slocum's Laboratory, 179 King Street, West, Toronto.

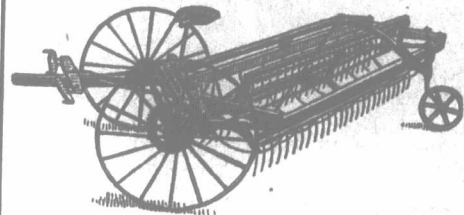
THE ELMIRA HAY LOADER



We are the oldest makers of Loaders and Side Bakes in Canada.

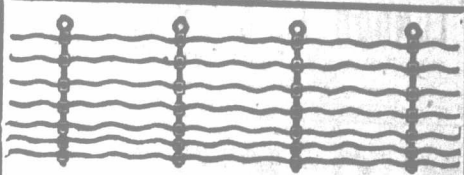
"Ever striving to improve" is our motto.

We can supply you with either a Rotary Side Delivery Bake, as shown below, or a Fork Side Delivery Bake.



We invite your correspondence.

Elmira Agricultural Works Co., Ltd.
Elmira, Ontario.



Write for our wholesale prices. We can save you 25% to 40%.

National Wire Fence Co.,
Merrickville, Ont.

8 SHORTHORN BULLS FOR SALE from 10 months to two years old. Several of their dams or grandams winners in Toronto. Prices very moderate. J. & W. RUSSELL, Richmond Hill, Ont.

EWING'S Superior SEEDS

As Used by Thousands of Successful Canadian Sowers

Unrivalled Stocks, the result of many years' careful selection.

Seeds are thoroughly matured, high percentage of growth, and, if sown and covered equally, all germinate at the same time,

Producing Strong, Healthy Plants,

capable, if the land is in good order and weather conditions favorable, of yielding

Full Crops Every Time.

Sow "Ewing's Seeds" this season and get bigger and better crops.

We want you to write for our '07 catalogue.

The brands by which our select qualities of Timothy and Clover have been offered for so many years have become synonymous with what is "Genuine Pure Seed," and the very best obtainable.

Ask for and be sure you get:

"Ewing's Best," "Eagle" and "Snipe" brands of Mammoth Red Clover.

"Ewing's Best," "Canary" and "Linnet" brands of Western Red Clover.

"Ewing's Best," "Ostrich" and "Maggie" brands of Alsike Clover.

"Sun" and "Moon" brands of "Ewing's" famous unhulled and re-cleaned Lower Canada Timothy.

"Trout," "Salmon" and "Bass" brands of choice Western Timothy.

William Ewing & Co.,
Seedsman,
142-146 MCGILL STREET,
MONTREAL.

THE BEST IS CHEAPEST



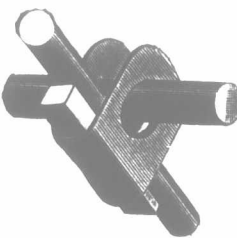
IT PAYS TO USE

**LONDON
HIGH - GRADE
SPIRAL
COILED
SPRING WIRE**

Lots of imitations, of course. You want genuine "London." Made from select Cleveland stock. Don't take anything else.

We've a way of our own of making it, and are almost the oldest makers of Coiled Spring Wire in Canada, nearly 10 years. London Spiral Coiled Wire has the tensile strength and holds the spring. That's what you want. If not, you may as well use any cheap soft wire. London Field Weaving Machines save you money and build the best of fences. Buckeye Locks, Stays and Gates are best in their line. Send for catalogue.

LONDON FENCE MACHINE CO'Y, LTD.
London, Ontario



W. C. KIDD, LISTOWEL, ONT.

Importer of Clydesdales, Shires, Percherons, Belgians, Hackneys, Standard-breds and Thoroughbreds

of highest possible quality and richest breeding. Have sold as many stallions the last year as any man in the business with complete satisfaction in every case. I have always a large number of high-class horses on hand. My motto: "None but the best, and a straight deal." Will be pleased to hear from any one wanting a rare good one. Terms to suit. Long-distance phone LISTOWEL P. O. AND STATION.

ADVERTISE IN THE ADVOCATE.

QUESTIONS AND ANSWERS. Miscellaneous.

CRIBBING—DISTEMPER—ITCHY LEGS.

1. Colt, rising two years old, started to crib about four months ago. Give cause and cure.

2. What is the best thing to give horses for distemper?

3. I have a young team with very itchy legs. What would be good for them?

J. T. T.

Ans.—1. Cribbing is a vice. Perhaps the most common cause is standing idle near a cribber. Once a horse is addicted to it he can seldom be cured of the habit. The best plan is to buckle a strap about his throat while in the stable, rather snugly, but not tight enough to hinder his breathing. Sometimes this strap induces roaring, and care should be exercised. This will prevent him from cribbing, so long as it is on, but will not prevent him from going back to the habit again. Other devices are: smearing the manger front with aloes or other bitters; covering exposed woodwork with sheet iron, and placing a small roller above the front of the manger so that the teeth will soon slide off. Muzzles are sometimes recommended.

2. Attend to comfort; give soft, nutritious food; steam the nostrils; poultice the throat, and apply ammoniacal liniment. This is composed of liquor ammonia fortior, 2 fluid ounces; oil of turpentine, 3 fluid ounces, and raw linseed oil, 3 fluid ounces. Give hyposulphite of soda, one- to three-dram doses, three times daily. If the appetite is gone, give milk and eggs. Open any abscesses, and treat as ordinary wounds, by keeping clean and injecting antiseptics. Follow up with tonics and good food. Do not drench.

3. Eczema; give a purgative of 8 drams aloes and 2 drams ginger. Follow with one ounce Fowler's solution of arsenic, three times daily, every alternate week. Wash the legs, once weekly, with strong warm soft-soap suds, applied with a stiff brush, and rub until dry. Dress the affected parts, twice daily, with corrosive sublimate, 20 grains in a quart of water.

GOSSIP.

Mr. Joshua Lawrence, breeder of Large English Berkshires, writes: "Having sold all the Polgate Doctor sows and boars I have to spare, I wish to make a change in my advertisement. I am now offering for sale King-of-the-Castle sows, bred to British Duke (imp.), and young sows and boars, mine and ten weeks old, from British Duke (Imp.). I wish to say that my sales have been first-class since I put my advertisement in 'The Farmer's Advocate.' I have sold a lot of good, straight pigs, and they have given good satisfaction, and I intend to please my customers as long as I am in the business. I have not failed to make a sale where the customer came to my place and saw the stock. My sows have wintered well, and are having large litters from British Duke (imp.)."

Mr. Israel Groff, Elmira, Ont., writes: "My herd of Shorthorns are in fine shape; have the best lot of young calves I ever had on the farm at one time. Already, 10 calves are nursing in the Maple Leaf herd. I have recently purchased from Mr. Joseph White, St. Mary's, four females and his stock bull: The imported cow, Bessie Wenlock, with a beautiful roan bull calf by her side; Joy Belle, by Joy of Morning, with red heifer calf; Rosemary, by Joy of Morning, with a red-roan heifer calf, by Springhurst; also a roan two-year-old, by Springhurst, and a good two-year-old red heifer from Adam Flemming, Milverton; Diamond 23rd, by Royal Matchless. All my young bulls, over nine months, are sold, but have some choice young cows and heifers for sale, sired by Victor's Roan Duke, the sire of the grand champion steer at the Guelph Winter Fair. The twenty bulls, which I shipped to the West, landed all right, and I received a telegram that owners were well pleased. Chancellor's Model, by Hapton Chancellor (imp.), is now at the head of herd."

Back So Lame Could Not Walk

Doctor's Efforts Were in Vain, but Cure Came With the Use of Dr. Chase's Kidney-Liver Pills.

It is not always the doctor's fault when he tries to give temporary relief instead of lasting cure. Sometimes patients demand it.

The thorough, far-reaching and lasting effects of Dr. Chase's Kidney-Liver Pills are well illustrated in this case, in contrast with the doctor's failure to even bring relief:

Mr. Geo. Tryon, Westport, Leeds Co., Ont., writes: "For two years I was completely laid up with lame back, and could neither walk nor ride. I tried many treatments, and the doctor put on a fly blister, which only increased the suffering, and did not do me the slightest good."

"A friend told me about Dr. Chase's Kidney-Liver Pills, and I had not finished the first box before I was completely cured. I have never had a lame back or kidney trouble since, and it has been the means of selling dozens of boxes of Dr. Chase's Kidney-Liver Pills. We are never without them in the house, and think there is no medicine like them."

Dr. Chase's Kidney-Liver Pills, one pill a dose, 25 cents a box, at all dealers, or Edmanson, Bates & Co., Toronto.

SCOURS

KOW-KURE

FOR COWS ONLY

This dreaded disease which sweeps off hundreds of thousands of calves every year and strikes terror to the heart of the dairyman is the result of a weak stomach.

KOW-KURE

makes calves' stomachs healthy, vigorous and strong. Should scours develop immediately after birth Kow-Kure will effect an immediate cure. One teaspoonful of Kow-Kure given as directed will cure scours in calves and the disease can be effectually prevented from entering your herd by giving each animal a small dose regularly. It's the greatest cow remedy on earth, as thousands testify. Write for free booklet, "The Cost of a Lost Cow,"—just what you need if you are a cow owner; it's full of helpful hints.

DAIRY ASSOCIATION CO., Mfrs.
Lyndonville, Vt., U. S. A.

Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be limited. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

FLEMING BROS., Chemists,
75 Church Street, Toronto, Ontario

Clydesdale Stallions and Mares.

For sale: Lyon Stewart (3732), too well known in Canadian show rings to need any comment. The Nobleman (imp.), 4 years old, sired by Hiawatha, MacKinley 2nd (imp.), by MacKinley, dam by Prince of Wales (673). The mares are big, flashy animals, 3 years old, and were imported by myself. All are registered in Clydesdale book. Prices reasonable. Long-distance phone.

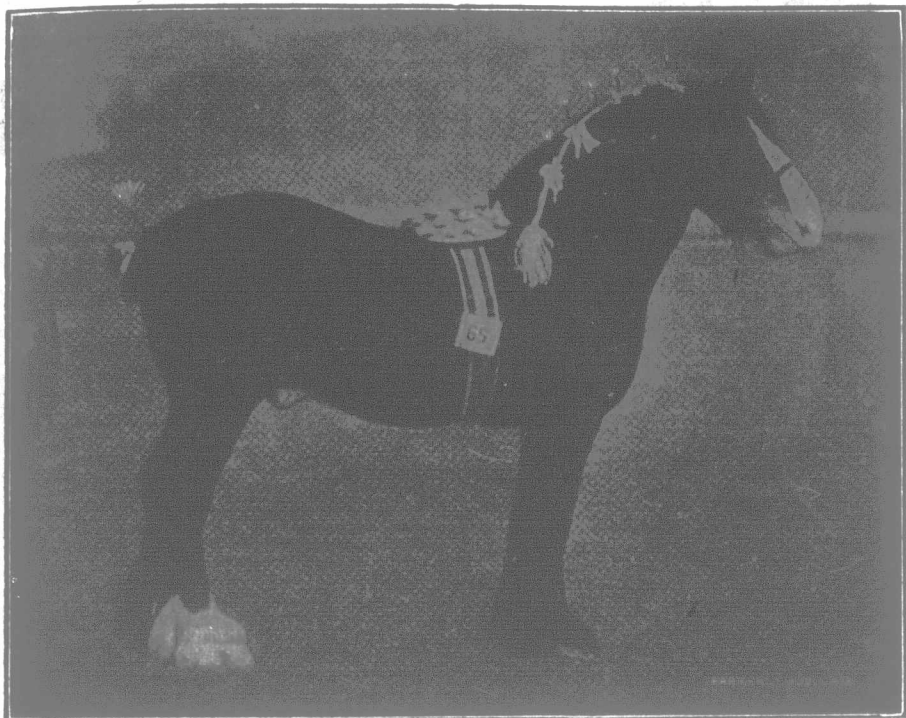
H. G. Boag, Barrie, Ont.

60 Imported CLYDESDALE MARES AND FILLIES

And Several Imp. Clyde Stallions

By Auction

At the CAISTOR HOUSE STABLES, Woodstock, Ont., on TUESDAY, APRIL 16, 1907.



Including the champion, Baron Kitchener, whose cut appears in this ad. These mares and fillies are essentially a high-class lot the get of Scotland's most noted sires; they are from 1 to 4 years of age; many of them winners in Scotland; many of them safe in foal; many matched pairs among the lot; they range from the medium-sized flashy kind to the very large drafty kind. The property of Messrs. Butler, Innes, Shaver & McClary. Terms: Cash, unless other arrangements are made before the sale.

CAPT. T. E. ROBSON, Auctioneer. For catalogues address: W. E. BUTLER, Ingersoll, Ont.

40 WAVERLY HACKNEYS 40

Imported Stallions and Fillies.



Every one a high-class actor and a show animal. Splendidly-matched pairs and singles. Positively the highest class lot of Hackneys to be found on any one farm in America. All ages. Also 4 imported Clydesdale fillies. A big flashy lot, full of style and quality.

ROBERT BEITH, Bowmanville P. O. and Station. Long-distance Phone.

323 PERCHERONS FRENCH COACHERS

Best Collection Stallions in America Most Reasonable Prices Safest Guarantee

4 IMPORTATIONS SINCE JULY 1, 1906.

SEND FOR CATALOGUE.

WE PAY FREIGHT AND BUYERS' FARE.

DUNHAM & FLETCHER, Wayne, Ill.

Clydesdale Stallions!

I have on hand for sale another choice lot of Clydesdale stallions, newly imported, ranging in age from two to six, with plenty of size, style and good true action. Also one first-class Hackney.

Wm. Colquhoun, Mitchell, Ont. Phone to residence.



Graham & Renfrew's CLYDESDALES and HACKNEYS

Our Clydes now on hand are all prizewinners, their breeding is gilt-edged. Our Hackneys, both stallions and mares, are an exceedingly high-class lot. We also have a few high-steppers and carriage horses. Yonge Street cars pass the door every hour. Phone North 4488.

GRAHAM & RENFREW, BEDFORD PARK, ONT.

QUESTIONS AND ANSWERS. Miscellaneous.

BAXTER AND STARK APPLES.

A nursery agent has been selling and recommending Baxter and Stark apple trees around here. Would you kindly let me know your opinion of them as winter apples—quality and keeping qualities—also, whether they will do well in our locality—South Brant (soil, medium light, good depth, well drained under. What kinds would you recommend for home use and shipping as well? E. H. S.

Ans.—Baxter and Stark are both good apples, but it is questionable if the Baxter would prove as valuable in Brant County as it has in the St. Lawrence Valley, where it originated. As it grows in the eastern part of the Province, it is a handsome red apple, which makes a good appearance on the market, and brings a fairly good price. Its season is early winter, although it may be kept till midwinter. In the western part of the Province, it is apparently much more subject to scab than in the eastern sections, and does not take on such high color. I would not recommend it for Brant County, where better varieties might be grown.

The Stark is a profitable commercial variety, something after the type of the Baldwin, but is a little more oblong in shape, and does not take on such a dark color. It is, however, a very heavy yielder, and although of only fair quality, it is an excellent keeper, and I think should prove profitable in Brant County. By reference to bulletin 147 of the Ontario Department of Agriculture, giving lists of fruits recommended for planting in Ontario, you will find lists recommended for the Niagara District, which would no doubt answer equally well for your section. H. L. HUTT.

GREEN MANURING.

I, as a young farmer, find I can get more out of one issue of "The Farmer's Advocate" than I could get out of ten years' subscription to some other papers, so I am on your subscription list, and intend to stay as long as you keep up the standard.

Every once in a while, you advocate plowing down a crop of green clover as a fertilizer. Some old gray-haired men, good successful farmers, say that they have killed a field by plowing down a mat of green clover. What I mean by "killing" is that it seemed to sour their land, or produced some chemical action so that the land did not produce as well as formerly. They say that if it were allowed to ripen before plowing it is a great benefit; but to plow down when very green would be a detriment. G. P. S.

Ans.—While the plowing down of clover aftermath and other crops for green manure is usually a decided benefit, it sometimes has a temporarily adverse effect. Before a green crop, turned under for manure, can be made available for plant food, it must become more or less decomposed. This requires heat, air and moisture. In a dry time, such a crop plowed under, and the surface of the soil not well cultivated, the mat of green stuff would dry out more or less, and remain unrolled, holding the furrow slice off the furrow bottom, and letting it dry out, till it became next to useless. Whenever a crop of this kind is turned under in spring or summer, the plowed field should be at once rolled, and harrowed frequently thereafter to conserve moisture and rot the sod. There is sometimes another untoward effect of green manuring. It may tend to make the soil slightly acid, and on a soil already inclined this way, the results might be more or less serious for a time. The nearer the crop was to maturity, and the drier it was, the less would be the tendency in this direction. The Maryland Experiment Station found that lime was excellent to use after applying green manures. It acts chemically and unites with some parts of the organic matter, and leaves the remainder in a disorganized condition, which rapidly decomposes. The lime also corrects or neutralizes any acid condition of the soil. We might add that we do not ordinarily advise the plowing down of fodder for manure. As a rule, it is better to feed the crop to stock, saving and applying the manure. There are cases, however, where green manuring is an economical method of restoring and increasing fertility.



GOMBAULT'S CAUSTIC BALSAM

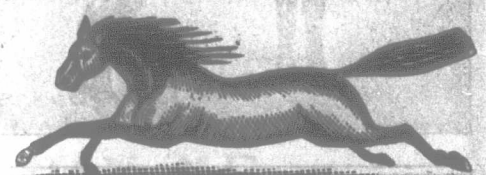
A safe, speedy and positive cure for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circular, testimonials, etc. Address THE LAWRENCE-WILLIAMS COMPANY, Toronto, Ont.

The Repository

BURNS & SHEPPARD, Proprs.



Cor. Bloor and Nelson Sts., Toronto. Auction Sales of

Horses, Carriages, Saddles, Harness, etc., every Tuesday and Friday, at 11 o'clock. Special Sales of Thoroughbred Stock conducted

Consignments solicited. Correspondence will receive prompt attention.

This is the best market in Canada for either buyer or seller. Nearly two hundred horses sold each week.

SHETLAND PONIES!

P. McQuillan & Son Breeders and Importers of Shetland ponies, Markdale, Ont. We showed 8 ponies at Toronto Exhibition in 1906, and got 5 prizes: 3 firsts, 4 seconds and 1 third. All our ponies are imported. Our stallion, Foxglove, took first prize at Toronto. Our mare, Bessie, took first prize, and their foal, Bruce, took first prize also. Good accommodation for mares sent from a distance to breed. Ponies for sale. Our address: Markdale P. O., Ont.

Imp. Clydesdale Fillies!

Have now on hand about a dozen, nearly all imported. A high-class lot and very richly bred. Combine size and quality, and all in foal. Also one-year-old stallions. Write me, or come and see them. Nelson Wagg, Clarendon P.O. 25th.

Imported Clydesdales

Two 4-year-old and two 3-year-old stallions; one 3-year-old and two 1-year-old fillies; positively the best bunch I ever imported; richly bred, full of quality, abundance of size, and nice, true actions. Will sell them right. Terms to suit.

Telephone con. Geo. S. Stewart, Newick, Que.

IMP. CLYDESDALES

Three stallions, rising 3 and 4 fillies, rising 3; the big heavy kind, full of character; a superior lot, every one a show animal; will make over-a-ton horses, and breeding the most fashionable. Prices a little below any of the others.

J. A. SOAG & SON, Ravenshoe P.O. Brown Hill Sta.

CLYDESDALES AND SHORTHORNS

Canadian-bred, registered. One stallion, rising 3, by Imp. Macqueen. Two stallions, rising two, by Imp. Primrose. One filly, rising 2, by Imp. Macqueen. These are a choice lot. Show stuff among them. Also my stock bull, Gilbert Logan 36424; roan; weighs 2,500; seven years old. Safe and sure. W. D. PUGH, Clarendon P. O. and Station.

CLYDESDALES AND SHORTHORNS

Two Imp. Clyde mares, 2 and 3 years old, bred in the purple and both in foal. Two fillies rising a year, both sired by the great Macqueen, both will register—a grand pair. Three Shorthorn bulls from 4 to 11 months of age, Scotch, and a few heifers. JOHN FORGIE, Clarendon P. O. and Station.



30 PERCHERONS

Also Shires, Hackneys and Clydes, have just arrived with our new importation from Scotland, England and France, of high-class stallions and mares. Many of them prizewinners in their native lands. Bred by the best breeders. Percherons, blacks and grays, weighing 1,600 to 2,000 pounds. Shires at two years old weighing 1,700 pounds. Clydes, bays and blacks, 4 and 5 years old, weighing 1,800 to 2,000 pounds, bred by the best in Scotland. Our Hackneys are bays and chestnuts, combining size, quality and breeding that cannot be beaten. We have a few first-class young stallions that we will sell at cost, to make room for our next importation; and all for sale at reasonable prices.

HAMILTON & HAWTHORNE, Simcoe, Ont.
35 miles south-west of Toronto on the G. T. E.



The La Fayette Stock Farm

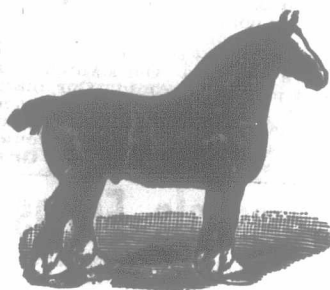
J. Crouch & Sons, Props., La Fayette, Ind.
Largest importers in America of German Coach, Percheron and Belgian stallions. Over 200 head on hand at all times. All have the best of bone, style and action, and on which we will put a gilt-edged guarantee they must be satisfactory, sure breeders. Won more prizes in the American show-ring in 1908 than all other importers combined. Our guarantee is the best. Terms to suit buyers. Importations arriving every few weeks insure prospective buyers a large selection from which to make a purchase.
J. CROUCH & SON, La Fayette, Ind.
La Fayette is but six hours' ride from Detroit via Wabash Railroad.
Just got in 100 head of Percheron and Belgian stallions and Percheron and Belgian mares.



Clydesdales, Percherons and Hackneys

I have still on hand 12 Clydesdale stallions, 4 Clydesdale fillies, all imported; Scotland and Canadian prizewinners; 3 years old, that will make 2100-lb. horses of choicest quality and richest breeding; 4 black Percheron stallions, 3 years old, big, flashy, quality horses, and 6 Hackney stallions, 1st-prize and championship horses among them. Will sell reasonable and on terms to suit.

DR. T. H. NASSARD, Millbrook P.O. and Stn.



GRAHAM BROS.

"Cairnbrogie," CLAREMONT,
IMPORTERS OF
HACKNEYS and CLYDESDALES

Established 30 years, and winners at all large shows in Canada and United States. Best of stock always on hand for sale. New importation of Royal winners just arrived.

DUNROBIN STOCK FARM

BREEDERS OF
CLYDESDALES, SHORTHORNS and YORKSHIRES

Besides our high-class Clydesdale fillies, we are offering some well-bred SHORTHORN HEIFERS at reasonable money for a quick turnover.

DONALD GUNN & SON, BEAVERTON P.O. & STN.
Farm Three-quarters of a Mile from Station.

SMITH & RICHARDSON, COLUMBUS, ONT.,

have now on hand a choice selection of Clydesdale Stallions, combining size and quality with straight, true action. Breeding unsurpassed. Individuality unequalled. Scotland prizewinners. Also a few Canadian-bred stallions, and imp. and Canadian-bred fillies.

Long-distance Phone Myrtle Station, C. P. R.
Brooklin or Oshawa, G. T. E.

Imported Clydesdale Stallions and Fillies.

Having sold most of my last importation of CLYDESDALES, I am leaving for Scotland for another importation of stallions and mares, the arrival of which will be announced in this space in the columns of "The Farmer's Advocate." Come and see me on my return.

Andrew Althison, - Guelph, Ontario.

Advertise in the Farmer's Advocate.

QUESTIONS AND ANSWERS.

Miscellaneous.

INSURANCE UNDER MORTGAGE.

A holds a mortgage of \$1,700 on a \$3,000 farm. Is A entitled to hold the insurance policy? **YOUNG FARMER, Ontario.**

Ans.—The indenture of mortgage probably contains the usual clause providing that the mortgagor will insure the buildings on the mortgage premises. In that case, A would be entitled to have the insurance money made payable to him as mortgage in case of a fire loss, and to hold the policy while the mortgage remains unpaid. But, if there be no such clause, and no other agreement that he should have the custody of the policy, he would not be legally entitled to it.

WIREWORMS.

I plowed 16 acres of sod, and sowed it in barley and oats, and the wireworm ate about one-third of it, and I sowed fall wheat in same field, last fall, and the worm ate about one-half of the wheat. What can I do to get rid of them?

A. G.

Ans.—Wireworms are usually most troublesome upon land which has been in sod for some time. The best way to deal with them is to adopt a rotation of crops in which the land will not be in sod more than two years. In the meantime, the best thing to do would be to seed down the wheat with clover, as this crop is less affected than the grain crops with the wireworm. After the clover, the land should be put in roots or potatoes, or some such crop; the land in this way should be rid of the worms, without serious loss of crop. **H. L. HUTT.**

SICK SHEEP.

Have a sick sheep. When first noticed it, she would eat all right, but seemed to be unable to get up without quite a bit of effort. Was this way for a couple of weeks, then could not get up without help, and was clumsy walking. Finally, quit eating, and refuses to get up at all. Does not seem to be in any pain, except breath seems short, and breathing a little hard; bowels, apparently all right, and water same. Have been feeding on clover hay and oats, with plenty of water and salt.

A. L. H.

Ans.—It would be difficult to name the ailment in this case. It is not stated whether it is an in-lamb ewe. If so, it may be a case of dead lambs, and the case would be hopeless. A purgative of three or four ounces of Epsom salts, and a dessertspoonful of spirits of nitre, given carefully as a drench, or a half pint of raw linseed oil, instead of the salts, is usually given in the case of a sick sheep.

BITTER MILK.

Jersey cow has been milking seventeen months. Milk gets bitter when one day old. She gives three quarts milk per day. Milk twice a day. Feed on clover hay and barley chop three quarts of chop in a pailful of warm water, three times per day. She is in good order, and will come in about the middle of June. She hasn't been out of her stall since winter set in.

A. N.

Ans.—Bitterness, developing in milk when twenty-four hours old, is invariably due to the growth in such milk of some bacterium or yeast; it would not be possible to say which without an examination of the milk itself. There are a number of different bacteria, and at least one species of yeast, which have this property of producing bitterness. The source of daily seeding of the milk probably lies in some of the dairy utensils, though the germ may possibly be derived from the teats, growing just within the teat opening. It would be advisable to thoroughly clean all dairy utensils, pails, etc., and sterilize them by boiling, or by a prolonged use of boiling water. Also thoroughly cleanse the milk shelf, and keep the milk on the shelf away from other foods. If, after repeating this for three or four days, the bitterness continues, it is safe to assume that the infection comes from the cow. In such a case, it would be found almost impossible to get rid of the trouble, though if the cow is dried, she probably will be free from the infection when she starts milking again.

W. T. CONNELL, M. D.

Bacteriologist, Eastern Dairy School, Kingston, Ont.

VETERINARY ADVICE FREE



Dr. E. A. Tuttle, a veterinary surgeon of long experience has written a book entitled "Veterinary Experience" on the diseases of horses, giving symptoms and treatments in plain terms. It is fully illustrated with diagrams showing the skeleton and circulatory and digestive systems with references that make them plain. Tells how to buy a horse and knot whether it is sound or not. Every horse owner should have one. It is sent to any one.

TUTTLE'S ELIXIR

Is the only guaranteed cure for Colds, Cough, recent Sore Throat and Catarrh. It locates lameness, relieves and cures Sprains, Ring Bone, Cockle Joints, Green-heel, Scrape, etc. Send today and get the book free and information about Dr. Tuttle's specifics.

TUTTLE'S ELIXIR CO.

66 Beverly Street, Boston, Mass.
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HOMES.

For Settlers

IN
WESTERN ONTARIO
MANITOBA
SASKATCHEWAN
ALBERTA

How Made and How Reached

Write for free copies of **SETTLERS' GUIDE** giving full particulars of special train service for settlers travelling with live stock and effects to the North-west in March and April, with passenger and freight rates. **WESTERN CANADA** Up-to-date description of the west and western conditions. 80 pages of information invaluable to settlers. Useful maps and statistics.

TIME TABLES showing double daily passenger train service to Winnipeg and Calgary.

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Leave Toronto daily. Comfortable, roomy berths at moderate rates. Fully equipped with bedding, cooking range and every convenience. Berths should be reserved (through nearest C.P.R. Agent) at least two weeks before departure.

Write to-day for free books and anything you want to know about the west and how to reach it. Address

C. B. FOSTER,
Dist. Pass. Agt., C.P.R., Toronto

Largest Stud in the World of American-bred

Percheron Shire and Hackney

STALLIONS AND MARES.

Have won more gold medals and championships than any other exhibitor. Stallions two to four years old, and mares in foal three to six years old.

Stallions \$700 to \$1,000; on easy terms.
Mares \$300 to \$600 for choice.

LEW. W. COCHRAN,
Crawfordsville, Ind.

For Sale: A Registered Clydesdale Stallion First-class, coming 3 years. Color, rich brown; small stripe and little white on two feet. Sired by Imp. Pioneer [1131] (3374), of Darnley breeding. Dam out of the imp prizewinner, Culmain Lass (1913), and granddaughter of old Prince of Wales (673), sired by imp. Queen's Own (7176) [1708], winner of several gold medals in Canada. A promising colt, of the very choicest combination of breeding, with near ancestors leading winners in keeneest competitions. Price moderate for quick sale. **JOHN CAMPBELL,** Fairview Farm, Woodville, Ont.

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.,** 184 Lake St., Chicago, Ill.

Angus Cattle

The kind that get market top pers. We have for sale 7 young bulls from 9 to 16 months old; also females all ages. All eligible for the American Herdbook. From good families and good individual merit. **J. W. BURT, Aberdeen Farm, Coningsby P. O. 3 1/2 miles from Erin stn., C.P.R.**

ABERDEEN - ANGUS

Erica and Blackbird families Young bulls and females. All ages. Write: **JOHN UNDERWOOD, GRAFTON, ONT.**

READ THIS!

We are offering a dark red Durham bull 14 months old, weighing 1,000 lbs., for \$75. A two-year-old bull, light roan, heavy boned, extra good getter \$85. Females equally cheap. **W. R. BOWMAN, Mt. Forest, Ontario.**

QUESTIONS AND ANSWERS. Veterinary.

PARALYSIS IN SOW.

Young sow farrowed eight pigs. I fed bran, shorts and barley meal. A week ago, when the litter was a week old, she lost power of her hind legs, and apparently suffered considerable pain when she tried to rise. I am feeding her bran, with a spoonful of salts and sulphur.

C. C. N.

Ans.—Purge her with 6 ounces raw linseed oil, and follow up with 20 grains nux vomica, three times daily. Feed on shorts, chopped oats (with hulls sifted out), milk and raw roots. V.

CAPPED ELBOW.

Horse has a shoe boil as large as a large cup. How can it be treated, and how prevented? D. G. M.

Ans.—It must be lanced, and the fluid allowed to escape. Then the cavity must be flushed out daily with a five-per-cent. solution of carbolic acid until healed. If a tumor forms, it must be dissected out. As the trouble arises from the elbow coming in contact with the heel of the shoe, prevention consists in avoiding this, which can be done by removing the shoes, or by getting, from your harnessmaker, a "shoe-boil roll." If he has not one in stock, he can make one, or get it from the wholesale dealer. It consists in a roll that buckles around the pastern, and is sufficiently deep to keep the elbow off the shoe when the horse is lying. V.

CASTRATING FOUR-YEAR-OLD.

I have a four-year-old entire horse that I want to have castrated. Would it be safe to operate now? If not, when would you advise? W. R. A.

Ans.—There is always more or less risk in castrating a horse. Under the most favorable circumstances, untoward results will occur; but when the animal is in a healthy condition, and the operation carefully performed, it is seldom that trouble results. The most favorable time is from the middle of May to the middle of June, but the operation is performed at all seasons, and there is little risk in operating now. There is no reason why this fellow should not work until the most favorable season for the operation, and then be operated on. In fact, work will have a tendency to prepare him for the operation. V.

CHRONIC SORE.

Mare got kicked on hock joint last April. I had my veterinarian treating it for a long time, and then undertook to heal it myself, but failed. The joint is swollen as large as the crown of a man's hat. She is not lame. There is a raw surface about six inches across. A thin scab forms, and then drops off, leaving a slimy surface beneath it. D. W. A.

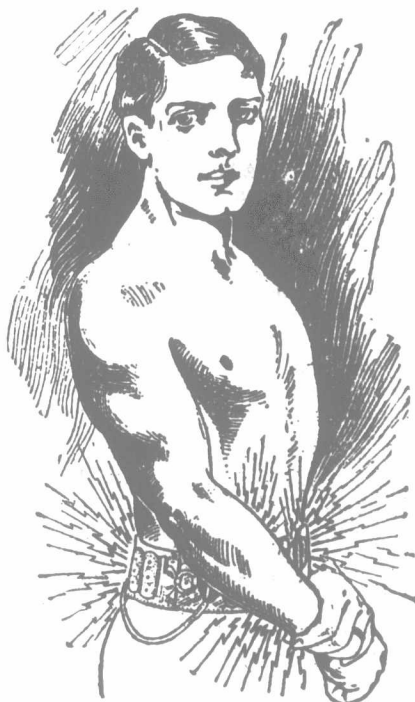
Ans.—Sores in front of the hock are very hard to heal, on account of the motion of the joint. Keep her as quiet as possible, and apply butter of antimony with a feather, once daily for a week. Then dress, three times daily, with a lotion composed of 1 ounce each sulphate of zinc and acetate of lead, and 4 drams carbolic acid to a pint of water. If this dries it up too quickly, dress, once daily, with carbolic acid, 1 part; sweet oil, 30 parts, and twice daily with the lotion. V.

SPLINT.

Mare has a large splint just below her knee. She strikes it with the foot of opposite limb, and it has puffed up. What is the best way to remove it and shoe her so that she will not strike? R. J. B.

Ans.—In many cases splints gradually disappear by absorption, and this can be hastened by repeated blisterings. The only way in which it can be removed quickly is by an operation, which consists in casting and securing the patient, skinning the enlargement, and removing it with a bone chisle or forceps, stitching the skin, and healing as an ordinary wound. The operation is not in all cases successful, as the irritation set up in some cases causes results worse than the splint. It is probable she stands with the toe of the opposite foot turned outwards, and if so, it will be very hard to remove the tendency to strike. Shoeing with quite a light shoe may so reduce the height of action that she will not go high enough to strike. If this does not succeed, you will have to wear a shin-boot on her. V.

THIS IS TO YOU!



Young or Old, Whose Strength is Wasted, Who Feel Old and Rusty, with Pains and Aches, Who, from Any Cause, have lost the buoyant spirits, the courage and confidence which belong to perfect health. To you I offer new life, fresh courage, and freedom from the effects of past neglect.

Show me the persons who would not be better than they are. It matters not how the rocks and shoals of life have dulled the enthusiasm of youth, and left the nerves less vigorous, the eyes less bright, the step less springy, the mind less forceful and the general vitality less powerful than they ought to be at your age, you want to be strong.

Hard work wears, dissipation and worry, disappointment and the other cares of life drain away the vim and snap of perfect health. Electricity applied my way restores them. It makes you feel young; it renews the fire of youth, the spice of life.

DR. McLAUGHLIN'S ELECTRIC BELT

Has made thousands of homes happy. It is as good for women as for men. Man and wife can use the same Belt. The regulator makes it strong or mild to suit the wearer. It is the only Electric Belt in the world that can be regulated while on the body. You feel the power, but it does not burn and blister, as do the old style bare metal electrode belts. If you are weak or in pain it will cure you. Will you try it?

I HAVE AN ELECTRIC BELT THAT DOES CURE, and I am offering it to you in such a way that you take no chances whatever. Give me your name and address, with a statement of your case, and I will at once arrange a Belt suitable for your case, and

WHEN YOU ARE CURED, PAY ME

All I ask is reasonable security for my Belt while you are wearing it.

Dr. McLaughlin:

Dear Sir,—I have worn your Belt for four weeks, and am well pleased with it. It has done me a great deal of good. My back don't bother me so much, and I have no losses this last fortnight. Wishing you success with your Belt, I remain, yours truly, JAMES FOWLER.

Dr. McLaughlin:

Dear Sir,—I have been wearing your Belt for 30 days, and I feel that it has done me a lot of good. The losses have stopped almost altogether, and my nerves are much stronger than they were. Yours very sincerely, GORDON DUNN.

Dr. McLaughlin:

Dear Sir,—I purchased one of your Belts some time ago, and it has done me a great deal of good. I did not think anything would help me as it has done. I have told nearly every one that I know of your wonderful Belt, and a lot of them have got one and are not disappointed. Yours truly, MRS. T. WHYTE.

MR. JEROME SCANLON, ANCASTER, ONT., writes: I have been wearing your Belt a month, and I am very much improved in health. I have gained over 7 lbs. in weight. Those pains have never returned since wearing the Belt. I have developed quite a bit in muscle and strength. I do not desire to urinate so often, and I have had only one headache since. My bowels keep regular. Wishing you every success in your grand undertaking.

CALL TO-DAY

FREE Consultation, Book, Test.

If You Can't Call Send Coupon for Free Book.

Put your name on this coupon and send it in.

Dr. M. S. McLaughlin, 112 Yonge St., Toronto, Ont.

Send me your Free Book, closely sealed, and oblige.

NAME

ADDRESS

Office Hours—9 a.m. to 6 p.m.; Wednesday and Saturday till 9.00 p.m. SUNDAY 10 a.m. to 1 p.m. Write Plain.

ABSORBINE

Removes Bursal Enlargements, Thickened Tissues, Infiltrated Parts, and any Puff or Swelling. Cures Lameness, Allays Pain

without laying the horse up. Does not blister, stain or remove the hair. \$2.00 a bottle, delivered. Pamphlet 1-C free.

ABSORBINE, JR., for mankind, \$1.00 bottle. Cures Synovitis, Weeping Sinew, Strains, Gouty or Rheumatic Deposits, reduces Varicose Veins, Varicocele, Hydrocele. Allays pain. Book free. Genuine mfd. only by

W. F. YOUNG, P. D. F., 73 MONMOUTH ST., SPRINGFIELD, MASS. Canadian Agents: LYMAN, SONS & CO., Montreal, Que.

HEREFORDS—We are now offering a few thick, smooth young bulls and a number of females—a low-down, even, beefy lot. If in want of something extra good, correspond with us. We can please you. J. A. LOYERING, Coldwater P.O. and Sta.

POTATO DIGGERS.

Tell me who are makers of the potato digging, sorting and bagging machine in use in some parts of California and the States. R. P.

Ans.—Manufacturers should advertise this implement in "The Farmer's Advocate."

Please Mention this Paper!

Put Good Grazers on Your Grass!



The HEREFORDS are the range cattle par excellence. They grow near the ground. They make flesh rapidly and easily, and they will make money for you. Over 100 head of breeding stock of the most approved strains on hand at low prices.

A. S. HUNTER, DURHAM, ONTARIO.

Sunnyside Herefords



Present offering: 10 bulls, serviceable ages; 4 of them over 3 years; big, strong, sappy fellows; ready for heavy service or rough usage on the ranch; also breeding cows at prices that will move them. Must make room for this year's crop of calves. Come and see them, or write and tell me what you want. ARTHUR F. O'NEIL, Maple Grove, Ont., Middlerex Co.

Broxwood Herefords

Cows, heifers and calves

For Sale.

R. J. PENHALL, Naber, Ont.

FOREST VIEW FARM HEREFORDS

Four bulls from 8 to 18 months old; prize-winners and from prize-winning stock. Several heifers bred on the same lines; choice individuals for sale. JOHN A. GOVENLOCK, Forest Sta. and P.O.

Belmar Parc Shorthorns

WE think we have as great a lot of young show animals as has ever been on one farm in Canada. Our herd is large, the individuals are choice and of the richest Scotch breeding, and our prices are moderate. 15 young bulls, 25 heifers under three years. A splendid group of breeding and show matrons. Mostly in calf to the champion Marigold Sailor = 53258 = and the prizewinning Nonpareil Archer (imp.) = 45202 =. Pembroke is on the main line of the G. P. R. and the Canada Atlantic Division of the G. T. R. You can leave Toronto 11 a. m., arrive Pembroke 12.05 p. m., see the herd, and arrive Toronto next morning at 7.20. We prefer you to see the cattle, but if you can't spare the time we take special pride in filling mail orders satisfactorily.

John Douglas, Manager. PETER WHITE, Pembroke, Ont.

R. A. & J. A. WATT

Offer special inducements to buyers of SHORTHORN BULLS For the next few weeks. They also price females of rare quality. Elora Station, G.T.R. & C.P.R. SALEM, ONTARIO. Visitors always welcome.

AT "MAPLE SHADE"

Our young bulls are the best that our herd has ever produced. We can furnish Cruickshank bulls of high quality to head the best herds, and some that should produce the best prime steers. We have a bull catalogue. Send for one. JOHN DRYDEN & SON, Brooklin, Ont. Stations: Brooklin, G.T.R. Myrtle, C.P.R. Long-distance telephones.

Valley Home Shorthorns and Berkshires

Special offering at very low prices for immediate sale: Eight young bulls 10 to 15 months old, five cows from 3 to 5 years old, with calves at foot; four 2-year-old heifers in calf to Royal Diamond 2nd = 58450 =; also eight heifers one year old. The above are straight Scotch and a choice lot; and 10 young Berkshire sows, just bred to Myrtle's Prince (imp.) - 14133 -, and 30 young pigs of both sexes, from one to two months old. Visitors welcomed for personal inspection. S. J. PEARSON, SON & COMPANY, Meadowvale, Ontario. Stations: Meadowvale and Streetsville Jct., C.P.R.



Special Offering of Scotch SHORTHORN BULLS

2 just past two years old; 15 just over one year old; 7 just under one year old. The best lot we ever had to offer in individuality and breeding, and prices are right. Catalogue. John Gianoy, H. GARGILL & SON, Manager. Gargill, Ont.

WESTSIDE SHORTHORN HERD AND BORDER LEICESTER FLOCK.

All Registered in the Herd and Flock Books of Great Britain. We invite all interested to inspect the cattle and sheep on this farm. The Shorthorns are long-tried families, tracing to the pioneer herds of Scotland through channels of repute. The Border Leicester flock is one of the oldest in Scotland, and embraces blood of the highest breeding. Selections for Sale. Visitors from the States and Canada will be cordially welcomed. A. Cameron & Sons, Westside Farm, Brechin, Scotland.

SIX IMPORTED SHORTHORN BULLS

One bred by Duthie, one by Marr, and one by Durno. Show bulls and sires every one. Imported cows and heifers, home-bred bulls and heifers, all of high-class. THREE IMPORTED CLYDESDALE MARES, all in foal. Shropshires and Cotswolds in large numbers. Will price anything I have at a living profit. Write me. ROBERT MILLER, STOUFFVILLE, ONTARIO.

Clover Lea Stock Farm SCOTCH SHORTHORNS

Superior breeding and individual excellence. For sale: Bulls and heifers—reds and roans, some from imp. sire and dam. Visitors met at Ripley station, G. T. R. R. H. REID, PINE RIVER, ONTARIO.

STRUAN SHORTHORNS

For sale: Choice young bulls from four to ten months old, sired by Scottish Bean (imp.) (36099); also cows and heifers of different ages. Write for prices, or come and see my herd. N. S. ROBERTSON, Ontario.

JOHN LEE & SONS, Highgate, Ont.

SHORTHORNS & LINCOLNS The champion herd of Elgin, Kent and Essex counties. For Sale: 6 choice young bulls, 5 reds and 3 roans, of grand type and quality; also good selection of young cows and heifers. Visitors welcome. Maple Hill Stock Farm. A special offering of a red bull calf of Missie family, sired by Rustic Chief (imp.) = 40419 =; also some choice females by Wanderer's Star = 48685 =, and Lucerne (imp.) = 50053 =. WM. R. ELLIOTT & SONS, Guelph, Ont.



Pure Scotch Shorthorns

WE ARE OFFERING FOR SALE IMP. SCOTTISH PRIDE - 36106 -.

3 bulls just two years old. 8 bulls one year old. 7 bull calves from 8 to 18 months. (12 of these bulls are from imp. cows.) Choice females of all ages; 100 to choose from. 2 Imp. Yorkshire sows due to farrow in March. 10 young sows 5 months old. Write for catalogue and prices. Our farms are only one-half and one and one-half miles from Burlington Junction, G. T. R. Long-distance telephone in residence. W. G. Pettit & Sons, Freeman, Ont.

HOLLYMOUNT SHORTHORN

Pure Scotch, Imported, and the get of Imp. stock. 25 HEAD Anything for sale. 1 young bull. Breeding gilt-edged and unsurpassed. A few heifers. Prices right. W. J. Thompson, Mitchell P. O. & Sta



QUESTIONS AND ANSWERS Miscellaneous.

DIVIDING PARTNERSHIP PROPERTY.

A and B are in partnership on a farm. Both own farm equally. Each pays half expenses. Each gets equal share of gain. B now takes his share out of farm. Both parties agree to divide machinery, stock, etc. Can B compel A to consider hay fork, car, ropes and pulleys, or any part of them? I might say that in order to get some pulleys, screws have to be loosened; in order to get car off track, a wooden pin has to be drawn out. Ontario. Ans.—Yes.

EXPRESS ON EGGS FROM U. S.—WORKING AND SHOEING COLTS.

1. About how much would the duty and express be on two settings of eggs from the United States?
 2. Please give me the address of a good poultry journal printed in Canada.
 3. Does it in any way do any harm to two-year-old colts to work or drive them moderately?
 4. Would they be too young to be kept shod?
- Ans.—1. From Suspension Bridge or Detroit to London, the express would be about 50 cents. The regular duty on eggs is 3c. a dozen; but there is no duty on settings of eggs accompanied by a certificate proving them to be from pure-bred fowl.
2. The leading poultry journal in Canada is the Canadian Poultry Review, 124 Victoria St., Toronto, Ont.
3. No; they are all the better for it.
4. Keep shoes off of colts as long as possible; it is better for their feet.

TRAPPING FOX, MINK AND MUSKRATS.

Editor, "The Farmer's Advocate": In trapping fox, mink and muskrats, experience is the best teacher. Mink and fox are very sly animals to trap. Foxes are most easily captured by a pair of good hounds and a gun, being very hard to trap; but can be snared very easily. As to skinning, cut the skin, starting at the inside of the foot, and run the knife to root of the tail. Then, take the skin off of the hind legs (you don't skin the rats' tails); turn the fur inside out on the tail and pull tail-bone out, then pull fur over the body to front legs, pull legs out, and then right over head to end of nose. Leave your fur inside out, and stretch over boards. For fox-snare, get No. 64 brass wire, about three feet long, and make loops in it six inches wide. Find where foxes are going, through fences or cow paths, or any narrow places, fasten your snare to some limb or fence rail; have it secure; make as few foot-prints as possible, and don't spit tobacco around. Narrow the openings with dry brush, or something. When setting trap, set it and get away without leaving any human scent. Chicken makes the best bait you can get. For mink, you must set in water, in and around stumps along the water. Muskrats or fish make good bait for a mink. Cover trap with vines, or anything to make it look natural. Mink or fox are not any good now; it is too late in the season for them. While, on the other hand, rats are at their best. In trapping rats, find out where the rats come out of the water to feed, and set your trap. Cut a good long bush, and put the ring on it so as it will catch some of the branches and can't slip off. Fasten well out in the water so your rat will drown, or it will twist its foot off and get away. A TRAPPER.

GREENGILL HERD of high-class SHORTHORNS

We offer for sale 8 young bulls, a number of them from imp. sire and dam; also females with calf at foot or bred to our noted herd bull, imp. Lord Roseberry.

R. MITCHELL & SONS, Nelson P.O., Ont.; Burlington Junc. Sta.

SCOTCH SHORTHORNS

Best bull, just 3 years old, purchased from Messrs. R. A. & J. A. Watt; also one white bull calf 9 months old, two roan cows, 4 and 5 years, purchased from Messrs. J. Watt & Son; also 5 red heifers, 3 mos., 1 year and 3 years old. Will sell cheap, as I am going out of business. Am also offering two well-bred Ayrshire bulls, 14 mos. and 3 years, the younger is sired by Leasbrook King of Beauty (imp.); also two Ayrshire cows. For particulars and prices write D. ALLAN BLACK, Kingston, Ontario.

T. DOUGLAS & SONS

STRATHROY, ONT.

Breeders of Shorthorns and Clydesdales. 15 bulls, 10 cows and heifers, 10 imp. stallions, imp. and home-bred sires. Write us what you want or come and see our stock. Farm 1 mile north of town.

Huntlywood Shorthorns.

Young bulls for sale. The best lot we ever had, by imported Cicely's Pride (1894), out of imported dams. Broad-locks, Lavenders, Lancasters, etc. Prices reasonable. W. H. Gilson, Manager, Huntlywood Farm, Beausoleil, Que.

John Gardhouse & Sons,

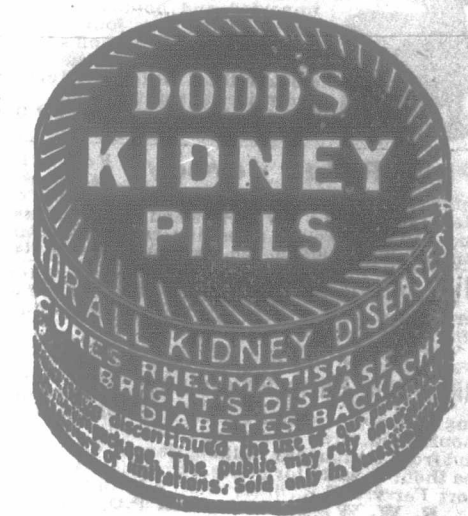
Importers and breeders of Scotch Shorthorn cattle, Shire and Clydesdale horses and Lincoln sheep. Just now we are offering a few extra choice heifers—show stuff among them; also three rare good young bulls, bred from imp. sire and dam. Highfield P. O., Weston station 3 1/2 miles. Telephone.

KENWOOD STOCK FARM. SHORTHORNS.

Bred by (imp.) J. H. Victor - 4117 -. Offerings are two bull calves, an 11-months Miss Hamden, from imp. sire and dam; a 18-months Missie, by Clydesdale Bull, and other bulls; also heifers of choice breeding. A few choice Berkshire pigs just off the sow. HAINING BRSS., Michsco, Ont. Kent Co.

SHE KNEW SOMETHING.

"If you marry John," said the woman (John is a farmer), "you'll have to get up at 4 o'clock of mornings and milk 17 cows."
"I'd rather get up and milk a hundred cows," the girl declared, "than hang out the window of some New York flat till 4 o'clock of mornings, waiting for my husband to come home to me."



DURABILITY


STRENGTH

SIMPLICITY

A cream separator that is worth buying must give long service. To do that, it must be built strong and the construction must be simple. To have simple construction in a separator you must have a Sharples Tubular. There is no other cream separator made that will perform its work so well for so long a time as the Tubular because there is no other separator so strongly built, or so simple in construction.

Sharples Tubular Cream Separators

get all the cream, have low supply can, are easy to run, easy to clean, because there is only one little piece in the bowl to cleanse after each running, and the machine oils itself. It combines Utility, Simplicity and Durability. A glance at the pie-plate construction of most separators will give you a fair idea of what we mean by "simple construction" and "strength." For full information about the Sharples Tubular write for booklet E. 193



Mr. E. Carpenter, Davenport, Wash., says "Having used a Sharples Cream Separator over sixteen years can say it is just fine."

THE SHARPLES SEPARATOR CO.
Toronto, Can. WEST CHESTER, PA. Chicago, Ill.

BRAMPTON JERSEYS

Canada's Premier Herd

Strengthened regularly by importations from United States, England and the Island of Jersey.

We have animals of all ages and both sexes for sale, and the largest herd in Canada to choose from.

Write for prices and particulars.

Long-distance 'phone at farm.

B. H. BULL & SON, Brampton, Ont.

SHORTHORNS

Just closed out the season's crop of bulls of breeding age, but have a few very nice youngsters coming up. Anyone wishing a stock bull from the noted Derby imp., send orders ahead, as they are all picked up as soon as ready.

W. J. SHEAN & SON,
Box 856, Owen Sound, Ontario.

A. EDWARD MEYER

Box 378, Guelph, Ont.

Offers for sale, at prices you can stand, young SHORTHORN BULLS

Four of them from imported sire and dams several cows with heifer calves at foot by imp. Scottish Hero, and a few yearling heifers. All are of the choicest Scotch breeding. Write, or better come and look them over.

Long-distance 'phone in house.

MAPLE GROVE SHORTHORNS

My present offering consists of imported and home-bred cows and heifers, also four young bulls bred by Lord Banfil's Governor. He is one of the best stock bulls of his breed. Terms and prices to suit the times.

C. D. WAGAR, Enterprise Stn. & P. O., Addington Co.

Pine Ridge Jerseys

For sale very cheap some choice young bulls, bred in the purple, of ideal type; also a few heifers and heifer calves and some Cotswold shearing rams and ram lambs.

Wm. Willis & Son, Newmarket P. O. & Stn.

High Grove Jerseys

Choice young bull for sale, 18 months; fit for service; a prizewinner at Toronto last fall.

"Bim of High Grove 73688."

ROBT. TUFTS & SON, Tweed, Ont.

Ridgedale Farm Holsteins

Present offering: One yearling bull, also six bull calves, from one to four months old, sired by Prince Pauline De Kol 6th and from rich, heavy milking dams. Come and see them or write for prices. Shipping stations: Port Perry, G. T. R., or Myrtle, C.P.R., Ontario Co.

R. W. WALKER, Utica P. O., Ont.

HOLSTEINS FOR SALE

Four imported and one home-bred bulls from 8 to 18 months old; also our entire crop of spring bull calves from week old up.

sired by the grandly-bred imp. bull, Sir Howitt B. Fleberie, whose dam record is over 82 lbs. milk in one day, and from great-producing cows of the most fashionable strains. Can spare a few cows and heifers, from one year up; 75 head to select from. Cheese 15c. Don't delay if you want one from this herd.

H. E. GEORGE, Crampton, Ont.

RECORD OF MERIT HOLSTEINS

Herd 110 strong. Over 40 head now in the Record of Merit. Two of the richest-bred bulls in Canada at head of the herd.

For sale: 18 bulls, from 2 months to 1 year of age, all out of Record of Merit cows and sired by the stock bulls.

P. D. EDE, Oxford Centre P. O., Woodstock Station.

Evergreen Farm Holsteins

is headed by Prince Pauline DeKol, which we are offering for sale; sire of 10 daughters in Record of Merit; also a choice lot of young bulls fit for service, from Record of Merit cows with large records.

P. C. PETTIT & SON, Burgessville Ont.

HILTON STOCK FARM—Holsteins, Cotswolds and Tamworths—Present offering:

Some young cows; a nice lot of young pigs; few boars six months old, and sows in pig.

R. O. MORROW & SON, Hilton, Brighton Tel. and Stn.

Slenswood Stock Farm—Holsteins and Ayrshires

Have a few young York shires, some 2 months old, for sale cheap. True to type and first class. Bred from imported stock.

W. G. CARLAW & SON, Warkworth P. O., Ontario.

QUESTIONS AND ANSWERS. Miscellaneous.

HORSE-STABLE PLAN.

Could you send me, through your valuable paper, a plan for a horse stable to accommodate seven horses, also three box stalls for mares foaling; loft room or mow for about 30 tons of hay; also list of lumber required for same? Your paper is greatly appreciated throughout this section. It is, no doubt, the best farm journal printed in Canada.

J. S. P. E. I.

Ans.—It is difficult to give a plan that would suit in all parts of our country, but the following is our idea of what is wanted: Let the building be 36 feet by 54 feet, with 16-foot posts. At one end, there would be a mow from roof to ground 16 feet wide; next, floor for hauling in and for feeding from, 12 feet; then a row of seven stalls across building, with passage behind, 14 feet, and, lastly, three box stalls, each 12 by 12 feet. Loft over stable should be at least 8 feet high. A stall at one side could be made wider than the others to allow of passing by and through a small door to feed floor. There would still be sufficient room for hay required if a small granary were built in one end of mow. Your local carpenter could, better than we, make out a list of lumber needed.

T.

LEUCORRHOEA—PASTURE.

1. My ten-year-old mare had her first colt last June. The colt died. Since then, she has had a white discharge. My neighbor tells me she has whites. Kindly give me a cure.

2. I have two fields seeded with clover and timothy. One was seeded the spring of 1905; the other, 1906. Which would you advise pasturing this summer?

F. R.

Ans.—1. She has leucorrhœa (whites), a chronic disease of the womb that is very hard to treat. She is not likely to conceive again until the disease is checked. It is advisable to employ a veterinarian; but if you wish to treat her yourself, flush out the womb, twice a week, with a solution of about one gallon of a two-per-cent. solution of Zenoleum, or a solution of 40 grains of bichloride of mercury (corrosive sublimate) to a gallon of water, or with some other disinfectant solution of the kind. Heat the solution to about 100 degrees Fahr., and inject into the womb, twice daily, with an injection pump, or large syringe with a long nozzle. Give her, internally, 30 drops carbolic acid mixed with a cupful of water, sprinkled on her grain, twice a day for two or three weeks, or until discharge ceases. If she become constipated, administer a pint of raw linseed oil. Recovery is slow, and treatment must be continued until the discharge ceases.

2. Other conditions being similar, we should prefer to pasture the older seeding, keeping the newer meadow for hay.

CHAINS VS. STANCHIONS.

1. Please tell in your valuable paper the advantages and disadvantages of stanchions and chains for tying cattle.

2. Have bought a stave silo, which is 12 x 20. Would you advise digging a pit, and have mason-work around the pit, or would you build a foundation, and have bottom level with ground?

3. Intend keeping 15 to 18 head of cattle. How much ground should I plant with corn—land heavy clay in good order—and what variety; locality, 15 miles north of Toronto?

4. Is there a lantern that uses large burners, without breaking globes? Have broken a dozen or more this winter.

Ans.—1. Many dairymen prefer stanchions because the cows, having less liberty to move forward and back, are thereby kept cleaner. Swinging stanchions are an improvement over the other, as the cattle can turn their heads around to lick themselves. Chains are preferred by many because with them there is more liberty to move a little and turn, and cattle can get up and down more easily.

2. Have bottom level with ground.

3. Your silo full of settled silage would hold but 45 tons. That, at 40 lbs. each per day, would feed 15 cattle for five months. Three and a half acres of good Longfellow corn (the variety we would recommend) would probably give that amount.

4. Oh, yes. You will likely have better luck the next one you buy.

T.

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 plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser. Most complete veterinary book ever printed to be given away. Durably bound, indexed and illustrated. Write us for a free copy.

FLEMING BROS., Chemists,
75 Church Street, Toronto, Ontario.

ANNANDALE FINE STOCK FARM

TILLSONBURG, ONT.

Premier sire, Prince Posch Calamity, whose dam and sire's dam average in official test 86 lbs. milk in 1 day and 26 lbs. butter in 7 days.

No stock for sale at present.

GEO. RICE, Tillsonburg, Ont.

LOOK HERE!

Now is the time to place your order for young stock from choice dams, and sired by a son of the greatest cow in Canada, Boutaje 2nd tiertertie De Kol (643 lbs. milk in 7 days; 96 lbs. in one day) His sire's dam, Calamity Jane, 25 1/2 lbs. butter a week; sir-dam, Alta Posch, 27.07 lbs. butter a week. World's record under 3 years. Write for prices.

FRED ABBOTT, Fairview Stock Farm, Harrietsville, Ont.

MAPLE HILL HOLSTEIN-FRIESIANS

Korndyke Teske, calved Aug. 16, 1904. Thir nine sires in his pedigree have sired 503 daughters with official seven-day butter records. Twenty dams in his pedigree have official butter records averaging 23 lbs. 1 oz. of 85.7 per cent. butter in seven days. For extended pedigree, price, etc., write

G. W. CLEMENS, St. George, Ont.

Imperial Holsteins—An Advanced Registry herd for sale.

One-year-old bull, a Toronto champion, four bulls from 5 to 8 months of age. A. B. on both sides. Imp. in dam from the U. S.

W. H. SIMMONS, New Durham P. O. & Sta.

"GLENARCHY" HOLSTEINS

43 head of big, deep-flanked, heavy-producing Holsteins, many of them milking from 50 to 60 lbs. a day on grass. Young stock of both sexes for sale. A straight, smooth lot.

G. MACINTYRE, Ranfrew P. O. and Sta.

LYNDALE HERD

Offer a number of young bulls fit for service, out of Record of Merit cows, and sired by Beryl Wayne Paul Concordia, four of whose nearest dams have official records averaging 23 lbs. 11 ozs. each. Eight heifers coming two, and due to calve in spring. Younger stock, either sex.

BROWN BROS., Lvn, Ont.

Holsteins and Yorkshires

R. HONEY, Brickley, Ont. offers a very choice lot of young bulls, also boars and sows fit to mate.

Greenwood Holsteins and Yorkshires

For sale: A few richly-bred bulls from one to eighteen months old. Also a few choice females of all ages. Yorkshires of either sex.

D. Jones, Jr., Caledonia P. O. and Sta.

Grove Hill Holstein Herd

Offers high-class stock at reasonable prices. Only a few youngsters left. Pairs not akin.

F. R. MALLORY, Frankfort, Ontario.
G. T. R. and C. O. Railway connections.

"THE MAPLES" HOLSTEIN HERD

Is made up of Record of Merit cows and heifers with large records, and headed by Lord Wayne Mechtild Calamity. Bull calves from one to five months old for sale.

Walburn Rivers, Folders, Ont.

SPRINGBROOK AYRSHIRES

gave an average of 7,000 lbs. of milk, testing 3.9 per cent. butter-fat in 1905. A few bull calves for sale. Prices quoted for females.

W. F. STEPHEN, Box 163, Huntingdon, Que.

Ayrshires

3 prizewinning bulls fit for service at reasonable prices, also younger ones for quick buyers.

N. DYMENT, Hickory Hill Stock Farm, Dundas Stn. and Tel. Clappison, Ont.

Ingleside Ayrshires

won more prizes in 1906 than all other competitors combined. Young stock of either sex for sale.

H. C. HAMILL, Islay P. O., Ont.
Fenelon Falls or Lorneville Stn.

QUESTIONS AND ANSWERS. Miscellaneous.

SUCCESSION DUTY.

Supposing a farmer has property valued at over \$10,000, and wills it to his family, will the Government claim succession duties out of it? G. T. Ontario.

Ans.—It depends on how much the property exceeds in value ten thousand dollars. No estate is dutiable which does not exceed in aggregate value \$50,000, and the whole of which passes to, or for the use of, the father, mother, wife, child, daughter-in-law or son-in-law of the deceased. "Child" includes adopted as well as lawful children, and lineal descendants.

KING SYSTEM OF VENTILATION.

Seeing a piece in "The Farmer's Advocate" under the name of H. & H. A. Baird, Brant Co., Ont., in reference to the King system of ventilation: where could I get a catalogue of said system? Where is it made? SUBSCRIBER.

Ans.—The King system of ventilation is not patented, therefore not catalogued. It has often been described in this paper. In it, the air is admitted through apertures in the walls, near the ground, and conducted upwards to the ceiling in close boxes or pipes, and there discharged into the stable. The foul air is carried off by flues at the side or in the center of the stable, or both at the sides and in the center. The flues start near the floor so as to carry up the heavy carbonic acid gas, but they also have openings at the ceiling of the stable to admit the lighter gases and vapors. The openings have registers that may be closed wholly or partially at will. The flues are carried to the peak of the barn, and there connected with a main shaft extending to the top of the cupola, where the foul air is discharged from a revolving cowl that turns from the wind, or else under a simple cap that serves to keep out rain and snow.

TENANT IN DEFAULT.

A rented a new farm to B for a term of three years, for the yearly rental of \$100 and taxes, the whole of the \$100 to be improvements made by B. B gave A chattel mortgage on three horses and four cows, a wagon, harness, etc., for security that he would perform the improvements as mentioned in the lease. A schedule described one of the horses, and not the other two, nor any of the other chattels. The chattel mortgage contained a blanket clause. B disposed of all the horses and got others in their places. He failed to perform the improvements, and A seized horses, harness, wagon, etc., then in B's possession. A settlement was effected, and the same chattel mortgage renewed. B then disposed of the horses seized, and has old valueless animals in their place. He again failed to make the improvements.

1. Can A seize the horses seized a year ago, or must he take the two valueless ones in the place of the three? The one horse described in the schedule was sold by A to B, and to be paid for in bringing 25 acres under cultivation—8 acres per year the first two years, and 9 acres the third year. At the end of two years, no land is cleared?

2. What horses is A entitled to seize? 3. Can B continue possession of the farm for a third year under the lease? All of the cows have been disposed of (seized for taxes and store debt). The horses seized a year ago would satisfy A's claim. The horses B now owns are not worth \$10 each. B lives on the farm, which has comfortable house and good barn, with basement stables, and about 40 acres cleared when he went on it. The balance of the hundred acres was bush pasture land. B has kept 8 cows on the farm each summer, and draws a milk route. Sells his cows in the fall, and does not cultivate the farm at all. Ontario.

Ans.—1 and 2. Under the circumstances stated, A could only seize the horses now owned by B, and upon the premises mentioned in the mortgage, making such seizure by virtue of the "blanket clause" referred to.

3. Probably not, as the lease most likely contains a provision for re-entry by A upon default by B in respect of the covenants on his part.

It Tells at the Pail

Give the cows what they need and they will give you what you want. No mystery about it. We don't claim to balance the ration, but we do claim to improve digestion by supplying the animal with exactly what the noted medical colleges and authorities claim the animal needs to increase production. No one can doubt that all growth depends upon digestion—we know that only about fifty-five per cent. of the food of a healthy animal is digested. What the average animal digests we don't know—but Dr. Hess Stock Food will make every cow, steer and hog digest the largest possible amount of food and convert it into profit. If we fed a cow or steer for the same purpose we feed ourselves, they perhaps would not need a tonic continuously. But we make it a business to overfeed the steer, crowding him to an early market, and that's why they should have something to aid digestion.



DR HESS STOCK FOOD

the medicinal stock tonic and prescription of Dr. Hess (M.D., D.V.S.) is just what the overfed animal needs. It does not supply additional protein to make bone, muscle, etc., but it does make the food of the farm produce the maximum amount of growth and milk production, besides curing and preventing stock diseases.

Professors Quitman, Winslow, and Finlay Dun, the most noted medical writers of the age, tell us that bitter tonics improve digestion, iron makes blood and the nitrates assist nature in expelling poisonous material from the system. These ingredients make up Dr. Hess Stock Food—isn't this pretty strong proof? But besides this every pound is sold on a written guarantee.

100 lbs. \$7.00 25 lb pail \$2.00

Smaller quantities at a slight advance. Duty paid.

Where Dr. Hess Stock Food differs in particular is the dose—it's small and fed but twice a day, which proves it has the most digestive strength to the pound. Our Government recognizes Dr. Hess Stock Food as a medicinal tonic, and this paper is back of the guarantee.

Free from the 1st to 10th of each month—Dr. Hess (M.D., D.V.S.) will prescribe for your ailing animals. You can have his 96 page Veterinary Book free any time for the asking. Mention this paper.

DR. HESS & CLARK, Ashland, Ohio, U.S.A. Also manufacturers of Dr. Hess Poultry Pan-a-cia and Instant Louse Killer.

INSTANT LOUSE KILLER KILLS EGGS.



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Annual Ram Sale.

Three Challenge Cups and other valuable cash prizes offered.

The annual show and sale of registered Kent or Romney Marsh rams, consisting of selected specimens from the leading flocks of the breed, will be held on

FRIDAY, 27 SEPT., 1907, AT ASHFORD, KENT, ENGLAND.

Catalogues and full information from

W. W. CHAPMAN,

Secretary Kent or Romney Marsh Sheep Breeders' Association, Mowbray House, Norfolk St., Strand, London, England, W. C.

SOUTHDOWN SHEEP

Unequaled for fine quality of both mutton and wool, hardness of constitution and earliness of maturity.

STRIDE & SON

will sell by auction at

Chichester, on Wednesday August 7th, 1907

6,000 Pure-bred Southdown Ewes, 450 Pure-bred Southdown Rams and Ram Lambs.

Including consignments from nearly all the leading registered flocks in England. Commissions carefully executed. Telegrams—Stride, Chichester. Postal address:

Stride & Son, Chichester, Sussex, England.

HAMPSHIRE DOWN SHEEP

"Reserve" for Champion in the Short-wool Classes, Smithfield, London, 1905, 1906 and 1906.

SPLENDID MUTTON GOOD WOOL GREAT WEIGHT

This highly valuable English Breed of Sheep is unrivalled in its

Wonderfully Early Maturity.

Hardness of constitution, adapted to all climates whilst in the quality of mutton and large proportion of lean meat it is unsurpassed, and for crossing purposes with any other breed unequalled. Full information of

JAMES E. RAWLENCE, Secretary Hampshire Down Sheep Breeders' Association, Salisbury, England.

W. W. CHAPMAN,

Secretary of the National Sheep Breeders' Association. Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address: MOWBRAY HOUSE, Norfolk St. LONDON, W. C., ENGLAND. Cables—Sheepcote, London.

Burnside Ayrshires



Imported and Canadian-bred. Prizewinners at all the leading shows. I hold the award of merit given by the Bd. of Dir. of World's Fair, St. Louis, to the breeder of largest number of prizewinning Ayrshires at said Exposition. Females of all ages for sale, imported and Canadian-bred.

R. R. NESS, JR., HOWICK, QUE., P.O. AND STATION.

Springhill Ayrshires.

Over 25 heifers from 6 months to 3 years of age. Nearly all of them imported, the balance bred from imported stock. A high-class lot of show stuff. A few older ones imported and Canadian-bred. Three bull calves, 1 of them imported in dam, the others bred from imported Cross of Knockdon. Anything in the herd is for sale.

Robt. Hunter & Sons, Maxville, Ont.

Ayrshire Bulls Two very choice, nearly 13 months old, and from dam that gave last year more than enough to qualify for "Record of Performance." W. W. BALLANTYNE, Long-distance 'phone. Stratford, Ont.

Wardend Ayrshires We are offering young bulls from 1 to 3 years old; also a choice lot of spring calves from deep milking dams. Sired by White Prince of Menie No 1895; bred by A. Hume, Menie. F. W. TAYLOR, Wellman's Corners, Hoard's Stn., G. T. R.

Glenhurst Ayrshires

Oldest established herd in Ontario. Imported and Canadian-bred. Average B. F. test for the whole herd, 42; milk yield, 40 to 50 lbs. a day. For sale: females of all ages, and several young bulls; all by Imp. sire and some out of Imp. dams. James Benning, Williamstown P. O., Lancaster Sta.

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CALFSKINS

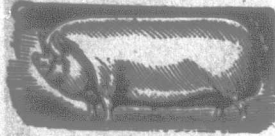
Write for our prices.

E. T. CARTER & CO., Toronto, Ont.



Sheep and Cattle Labels. You will need them soon. See about them now. Write to-day for circular and sample. F. G. JAMES, Bowmanville, Ont.

YORKSHIRES of Choicest Type and Breeding.



I have on hand 75 brood sows of Princess Fame, Cinderella, Clara, Minnie, Lady Frost and Queen Bess strains. My stock boars are true to type and richest breeding. For sale are a large number of sows bred and ready to breed, boars fit for service, and younger ones of both sexes. Pairs and trios not akin. **J. W. BOYLE, Woodstock, Ont.**

Woodstock Herd of Large English Berkshires

I have for sale pigs of all ages, both sexes, from prizewinning stock. I am booking orders for spring delivery from my Imp. and home-bred sows. Come and see or write for prices. My herd was in the front rank of prizewinners at the leading exhibitions this fall. **DOUGLAS THOMSON, Box 1, Woodstock, Ont.**

Rosebank Berkshires.—Present offering:

Sows ready to breed. Choice young stock ready to wean, sired by Maple Lodge Doctor and Sallie's Sambo (Imp.), a Toronto winner. **Lafroy, G.T.R. JOHN BOYES, JR., Churchill, Ont. Long-distance Phone**

HILLCREST BERKSHIRES

Stand unrivalled for individual merit in the herd. Our business for 1906 surpasses former years. The enquiry for choice things increases from year to year. Some choice sows for sale due to farrow in the spring. Also a few boars on hand. **Vine St. G.T.R. near Barrie. JOHN LAHMER, Vine P.O.**

BERKSHIRES

50 IMPORTED AND CANADIAN-BRED 50

Motto: "Good as Represented." Mail orders receive careful attention.

H. M. VANDERLIP, GAINSVILLE, ONT.

OAKDALE BERKSHIRES

Largest Berkshire herd in Ontario. Stock boars and several brood sows imported. For sale: Sows bred and ready to breed, boars ready for service, and younger ones, all ages, richly bred on prizewinning lines and true to type. Everything guaranteed as represented. Long distance phone. **L. E. MORGAN, Milligan P.O., Co. of York.**

SOUTHDOWNS

AND **Sootch Collies.**

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Long-distance Phone.

Canadian Agents for the Original **McDougal's Sheep Dip & Cattle Dressing**

Imported direct. Price: Imperial pint, 50c; Imperial half gallon, \$1.25; Imperial gallon, \$2.50. Sold by druggists, or charges prepaid on one gallon tins. **THE WORTHINGTON DRUG CO., Toronto, Ontario.**

Maplehurst Herd of Tamworth Swine, Bronze Turkeys, Toulouse Geese, Pekin Ducks, S.-C. W. Leghorns.

For sale: A large herd of Tamworths, of excellent breeding and ideal bacon type. This herd won sweepstakes at Toronto and London, 1905-6. Among our winnings at World's Fair, St. Louis, 1904, both premier championships, sweepstakes aged and junior herd, and two grand championships. Inspection and correspondence solicited. For further particulars apply to **D. DOUGLAS & SONS, Mitchell, Ont.**

ORCHARD HOME TAMWORTHS

Herd headed by Newcastle Warrior. This hog won first prize and silver medal at Toronto, 1905, and defeated his sire, Colwill's Choice (1943), who has won these honors three years in succession. Our brood sows are large and of the same high quality. If you want choice stock, we can satisfy you at a reasonable price. Young boars fit for service; also young pigs now on hand. All stock shipped in comfortable crates. Express prepaid and satisfaction guaranteed. **GRANDALL BROS., Cherry Valley, Ont.**

Newcastle Herd of Tamworths and Shorthorns. We have for quick sale a choice lot of boars and sows from 2 to 6 months old, the produce of sows sired by Colwill's Choice and Newcastle Warrior, both our own breeding, and winners of sweepstakes and silver medal at Toronto, 1901-02-05. Several very choice sows due to farrow in March and April. Pedigree furnished with every pig. Several choice heifer calves and heifers in calf to our present stock bull. All of high show quality. Prices right. Daily mail at our door. **COLWILL BROS., Newcastle, Ont.**

MOUNT PLEASANT TAMWORTHS and HOLSTEINS. For sale: An extra choice lot of pigs of either sexes, from one to six months old, and two sows bred to farrow in March. They are nearly all sired by Colwill's Choice No. 1343; won sweepstakes and silver medal at Toronto in 1901-2-3. Also four bulls and one heifer from one to ten months old. Phone in residence. **BERTRAM HOSKIN, The Gully P. O.**

MAPLE LEAF BERKSHIRES!

Now offering King of the Castle sows bred to British Duke (Imp.) also young sows and boars, 9 and 10 weeks old, from British Duke (Imp.). **Joshua Lawrence, Oxford Centre P.O., Woodstock Station.**

Maple Lodge Berkshires—A number of nice thrifty Berkshire sows, bred and ready to breed. Stock on hand of both sexes. Stock registered and crated f.o.b. Prices reasonable. **JOSEPH NAUMAN, Fisherville, Ont. Nelles' Coraers Sts., G.T.R.**

When Writing Please Mention this Paper

Cedar Lodge Yorkshires

100 head brood sows (Imp.) and the product of Imp. stock, weighing from 500 to 800 lbs. each. Stock hogs by Imp. sires and dams, very large and full of quality. Young stock of both sexes constantly on hand for sale. Pairs not akin. Satisfaction guaranteed.

P. O. COLLINS, Bowesville P.O., Ont. Manotick Sta., C.P.R.

LARGE ENGLISH YORKSHIRES

We have a limited number of choice young pigs for sale, bred from our choicest sows, and got by the imported boars, Dalmeny Joe 13077 and Broomhouse Beau 14514. Pigs from the latter won all the first prizes at the Ottawa Fat Stock Show last March for the best dressed carcasses and sweepstakes over all breeds or grades. We guarantee satisfaction in all our orders. **Joseph Featherston & Son, Streetsville, Ont.**

Cherry Lane Berkshires

Are strictly high-class Toronto winners. Of all ages. Young stock of both sexes for sale. Pairs supplied notakin

Sam Dolson, Alcoa P. O., Norval Stn. COUNTY PEEL.

CHESTER WHITE HOGS

The largest herd of bacon-type Chester White hogs in Canada. Strictly high-class have won highest awards. Young stock of both sexes always on hand. Satisfaction guaranteed.

ROBERT CLARKE, 41 Cooper Street, Ottawa, Ont.

Willowdale Berkshires

Young boars and sows 3 and 6 months of age out of Imp. sows, and sired by Imp. Poligate Doctor, Royal Master boar, a son of the \$2,500 boar, Masterpiece, and some of them Imp. in dam. Satisfaction guaranteed.

J. J. WILSON, Milton P.O. and Sta.

ELMFIELD YORKSHIRE!

Have 40 young pigs from 2 to 5 mos. Some young boars ready for service; also young sows bred and ready to breed. Pairs supplied not akin. **G. B. MUMA, Ayr, Ont.**

Duroc Jerseys—Imported and home-bred sows and boars ready for service. Pigs fit to wean; also Buff Orpingtons and Buff Leghorn cockerels. **MAC CAMPBELL, Harwich, Ont.**

IMPROVED YORKSHIRES

Choice young stock from imported prizewinning stock for sale.

GEO. M. SMITH, HAYSVILLE, OPT.

For Sale—Ohio Improved Chester Whites, the largest strain, oldest established registered herd in Canada; young sows in farrow; also young pigs, six weeks to six months old; also young boars, express charges prepaid; pedigrees furnished very complete. Address: **R. C. GEORGE, Estam, Ont.**

QUESTIONS AND ANSWERS. Miscellaneous.

TREES ON ROAD ALLOWANCE.

I have a snake fence along the front of my farm. I wish to plant trees on the line of the fence to answer for posts for a wire fence when large enough. Would I be safe in building a straight rail fence about two feet outside the line to protect trees from stock on the road until trees are large enough to put on wire? **Ontario. SUBSCRIBER.**

Ans.—Not without permission from your township council.

WEIGHTS AND MEASUREMENTS.

1. How many tons of hay do you reckon there is in a mow 20 feet high, 18 feet by 18 feet—timothy, last year's, and nothing been on top of it? How many cubic feet do you reckon approximate to make a ton of such hay?

2. In measuring grain in a bin, how much space to a bushel, or how many cubic feet to a bush?

3. Where could one get a book with the most reliable data concerning weights, measurements, rules, tables, etc., of all kinds? **SUBSCRIBER.**

Ans.—1. It is a pretty risky business venturing one's reputation for judgment by estimating the weight of hay he has never seen. The rule covering this point prescribes a normal latitude ranging from a cube of 7 feet, or 343 cubic feet, up to a cube of 8 feet, or 512 cubic feet for a ton. In this case, we should think 400 or 425 cubic feet ought to weigh a ton, although the use of the scales would be much safer.

2. A cubic foot contains 25 quarts. Stating it the other way a bushel is equivalent to 1.28 cubic feet.

3. Prof. Wald's Handbook, for farmers and dairymen, issued a few years ago, is one of the most comprehensive we have seen, but many of his statistics are American. The trouble with most books of that character is that they soon get out-of-date.

LIME SLAKED OR UNSLAKED—FERTILIZER FOR CLOVER.

1. Is lime that is slaked before you get it as valuable to put on the land as that which you get in barrels unslaked?

2. Is slaked lime a good thing to put in the gutters behind the cows and to scatter around the stable?

3. What is the best fertilizer for clover?

4. How much more is a ton of clover hay worth than a ton of timothy hay, if it is used in feeding milch cows? **W. C.**

Ans.—1. To get an even distribution of lime over the ground, it would have to be slaked before spreading. Therefore, if the slaked lime is fresh, it would be approximately equal to the unslaked lime, but if the lime has been slaked for some time, it is quite possible that a good deal of it has combined with the carbon dioxide of the atmosphere, forming calcium carbonate. In such a case, it would not be so active as the fresh lime.

2. Slaked lime will liberate ammonia from manure and liquids which would be got in the gutters, and, therefore, it would not be the proper thing to use in the stable. By doing so, a large amount of nitrogen would be lost.

3. It is well known that clovers have no difficulty in gathering nitrogen from the atmosphere. The particular substance which the clovers have difficulty in collecting, is potash, and, as a rule, the application of no one constituent will give such returns as potash. Lime acts as a liberator of potash, and it may be used with profit on clovers. It not only liberates potash, but supplies lime, a constituent which clover feeds liberally upon. I would, therefore, state that, as a general rule, potash and lime are the best fertilizers for clover.

4. It is practically impossible to say how much more clover hay is worth per ton than timothy hay. So many points come into consideration that it is hard to get figures to truly answer the question. As proteins are a very important constituent in the feed of milch cows, I think that we can state that clover hay would have at least one-third greater value than timothy hay when fed to cows producing milk.

R. HARCOURT, Ontario Agricultural College.

WEAK TIRED WOMEN

How many women there are that get no refreshment from sleep. They wake in the morning and feel tired when they went to bed.

They have a dizzy sensation in the head, the heart palpitates; they are irritable and nervous, weak and worn out, and the lightest household duties during the day seem to be a drag and a burden.

MILBURN'S HEART AND NERVE PILLS

are the very remedy that weak, nervous, tired out, sickly women need to restore them the blessings of good health.

They give sound, restful sleep, tone up the nerves, strengthen the heart, and make rich blood. Mrs. C. McDonald, Portage la Prairie, Man., writes: "I was troubled with shortness of breath, palpitation of the heart and weak spells. I got four boxes of Milburn's Heart and Nerve Pills, and after taking them I was completely cured."

Price 50 cents per box or three boxes for \$1.25, all dealers or the The T. Milburn Co., Limited, Toronto, Ont.

MONKLAND Yorkshires

Imported & Canadian-bred. We keep 35 brood sows, and have constantly on hand between 100 and 200 to choose from. Can supply pairs and trios not akin. Quality and type unsurpassed. Prices right.

JAS. WILSON & SONS, FERGUS, ONT.

G. T. R. and C. P. R. Long-distance Phone.

Large White Yorkshires.

A number of excellent sows, direct from imported stock, in pig to Worsley Duke, Imp.; also imported sows of different ages. Young boars and sows can be supplied not akin. Orders taken for young pigs. Write for what you want.

H. J. DAVIS, Woodstock, Ont. Importer and Breeder of Yorkshires and Shorthorns.

GLENBURN HERD OF YORKSHIRES

Winner of gold medal three years in succession. Offers for sale: 13 young boars, 4 months old; a large number of sows, same age; also 30 suckling pigs, both sexes. Also a grand good Shorthorn bull (roan), 10 months old.

David Barr, Jr., Box 3, Renfrew, Ont.

Maple Grove Yorkshires

are among the leading Canadian herds for size, quality and true-ness to type, and are prizewinners all around. For sale are both sexes, all ages. Bred from Imp. and home-bred stock. There are none better.

H. S. McDIARMID, Fingal P. O., Shedden Station. Breeder and Importer.

Fairview Berkshires

Are second to none. My herd has won high honors wherever shown. Am now offering sows bred and ready to breed, and younger ones of both sexes, the get of Masterpiece and Just the Thing. An exceptionally choice lot.

JOHN S. COWAN, Donegal P. O., Milverton Sta.

SUNNYMOUNT BERKSHIRES.

Sunnymount Berkshires are unsurpassed for ideal bacon type and superior breeding. For immediate sale: A few choice boars from 5 mos. up to 15 mos. old.

JOHN McLEOD, Milton P.O. and Sta., C.P.R. & G.T.R.

Fairview Berkshires

Bred from imported and Canadian-bred sires and dams, and bred on prizewinning lines. My brood sows are large, choice animals. Young stock of both sexes. Some sows bred to Imp. boars. **HENRY MASON, BARBORO P. O. Street cars pass the door.**