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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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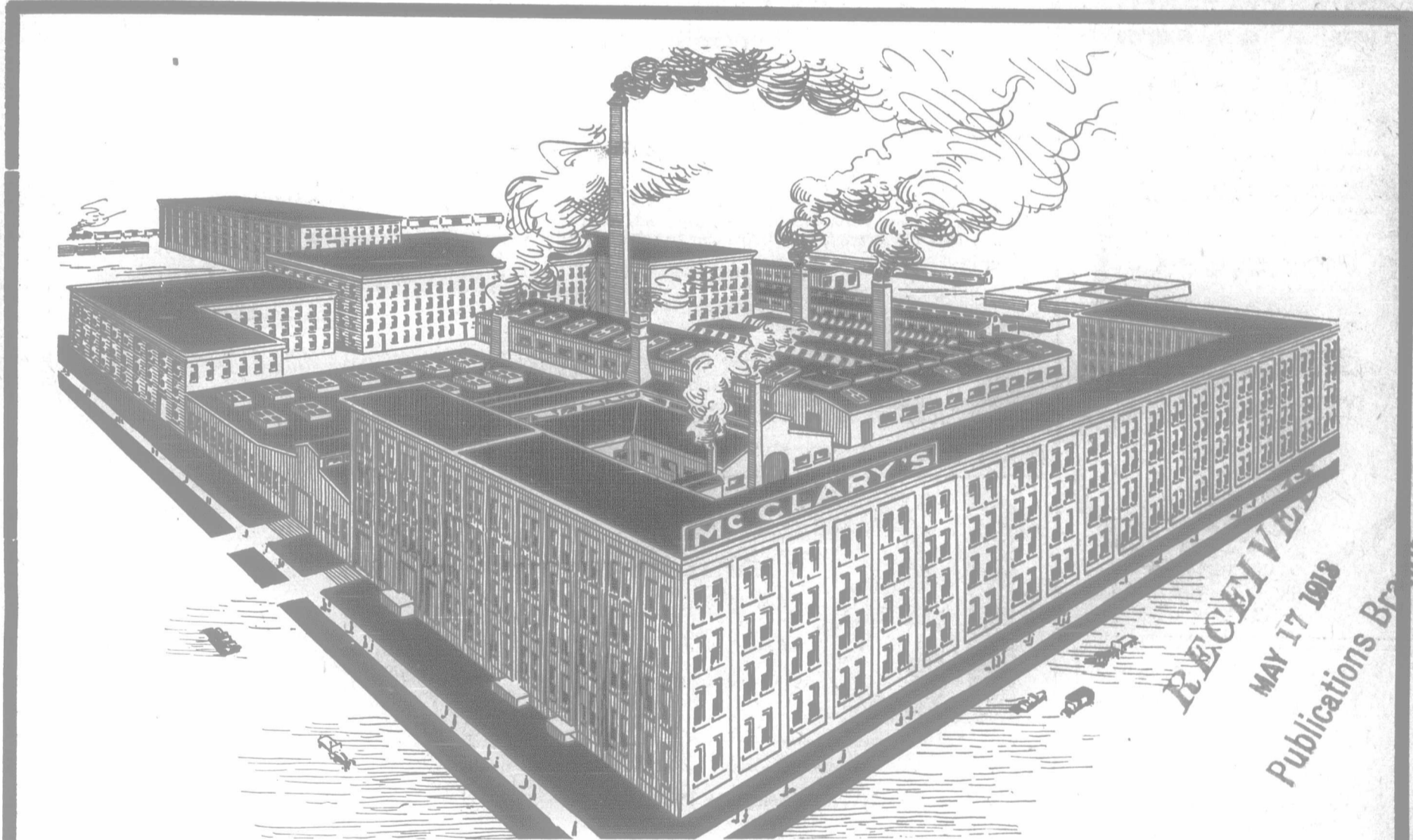
AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

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Vol. XLVIII.

LONDON, ONTARIO, MAY 15, 1913.

No. 1077



HERE you see the largest stove and range works in the British Empire. They are situated on the Grand Trunk track in London, Ontario. Flying sparks and hot cinders batter this roofing from without: fierce heat, charged with destructive acids, attack it daily from within. But the McClary people don't worry much—because their buildings are protected with

Brantford Roofing


It is reasonable to suppose that the McClary people specified **Brantford Roofing** after serious investigation. If they could have discovered a **more indestructible** roofing, they would have used it.

The lesson is plain: Cover that building of yours with **Brantford Roofing** and you'll rest content.

This **imperishable** roofing costs no more than ordinary roofing. A postcard will bring our Big **FREE** Book (with samples). It contains facts you should know.

BRANTFORD ROOFING CO., LIMITED, Brantford, Canada

Warehouses: - - Toronto - - Montreal - - Winnipeg



Beautiful is the Job when Minerva Paint is used.

Smooth and even is the Minerva surface—free of bubbles, cracks and imperfections.

The color is positive and lasting. Minerva Paint enters every crevice and grain of the wood, insuring real protection against weather and decay.

It's the high quality that counts—the exacting selection of the finest and purest paint ingredients, the scientific grinding and mixing that makes Minerva Paint superior.


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MINERVA
PURE PREPARED
PAINT

Painting becomes a pleasure. For floors, inside or outside, Minerva Paint withstands the hard wear for years, and retains its unbroken surface.

If your dealer cannot supply you, write us:

PINCHIN, JOHNSON & CO.
(Canada) Limited
TORONTO - ONT.
"It's so easy to paint with Minerva."
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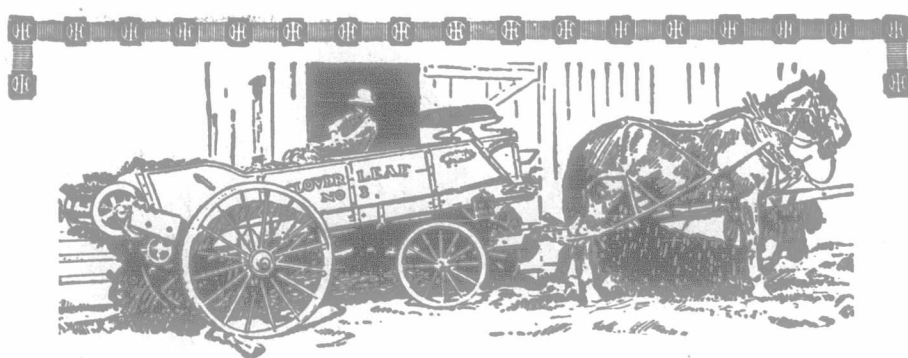
The Call of the North

Do you know of the many advantages that New Ontario, with its millions of fertile acres, offers to the prospective settler? Do you know that these rich agricultural lands, obtainable free, and at a nominal cost, are already producing grain and vegetables second to none in the world?

For literature descriptive of this great territory, and for information as to terms, homestead regulations, settlers' rates, etc., write to

H. A. MACDONELL
Director of Colonization
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An Unsolicited Testimonial

A CLEAR-EYED young farmer stepped up to a manure spreader demonstrator at the 1912 Chicago Live Stock Exposition and, pointing to one of the spreaders in the exhibit said:

"I own one of those machines. It is the strongest spreader I ever had on my farm, and I've had a number of different machines. I honestly believe that if I filled that spreader with soft coal it would spread the stuff for me. I wouldn't trade it for any spreader I ever owned or saw."

This unsolicited recommendation from a man who had used an I H C spreader, and therefore knew what it would do, carried weight with his hearers. They might have doubted whether an I H C manure spreader would spread soft coal—but there was no doubt in their minds that an I H C spreader had spread manure to this man's entire satisfaction. This is a typical case showing what users think about

I H C Manure Spreaders
Corn King and Cloverleaf

I H C manure spreaders are made in many sizes, running from small, narrow machines for orchard and vineyard spreading to machines of capacity for large farms. They are made with either endless or reverse aprons as you prefer.

The rear axle is placed well under the box, where it carries over 70 per cent of the load, insuring plenty of tractive power at all times. Beaters are of large diameter to prevent winding. The teeth that cut and pulverize the manure are square and chisel pointed. The apron drive controls the load, insuring even spreading whether the machine is working up or down hill, or on the level. I H C spreaders have a rear axle differential, enabling them to spread evenly when turning corners.

The local agents handling these machines will show you all their good points, and will help you decide on the one that will do your work best. Get literature and full information from them, or, write the nearest branch house.

International Harvester Company of Canada, Ltd
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At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton



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Thousands In Use giving splendid satisfaction justifies your investigating our wonderful offer to furnish a brand new, well made, easy running, easily cleaned, perfect skimming separator, one quart of milk a minute, warm or cold. Makes thick or thin cream. Different from this picture, which illustrates our low priced large capacity machines. The bowl is a sanitary marvel and embodies all our latest improvements.

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Shipments made promptly from **Winnipeg, Man., St. John, N. B., and Toronto, Ont.**

Write today for our catalog and see for yourself what a big money saving proposition we will make you. Address,

AMERICAN SEPARATOR CO., Box 1200 Bainbridge, N. Y.



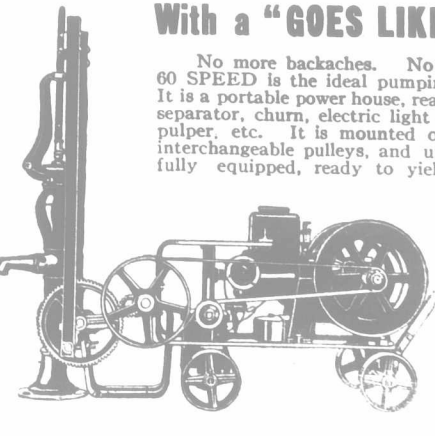
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With a "GOES LIKE SIXTY" Pumping Outfit

No more backaches. No more waiting for the wind. The Gilson 60 SPEED is the ideal pumping engine. It "GOES LIKE SIXTY." It is a portable power house, ready to operate your wash machine, cream separator, churn, electric light dynamo, wood saw, feed cutter, grinder, pulper, etc. It is mounted on wheels, complete with line shaft, five interchangeable pulleys, and universal pump jack. The only engine, fully equipped, ready to yield 100% service. A powerful, durable engine, built to last a lifetime. The simplest engine on the market. A child can operate it.

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Special Interest to FARMERS' CLUBS

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Makes all sizes of tile from 3 to 16 inches. Cement Drain Tile are here to stay. Large profits in the business. If interested, send for catalogue.

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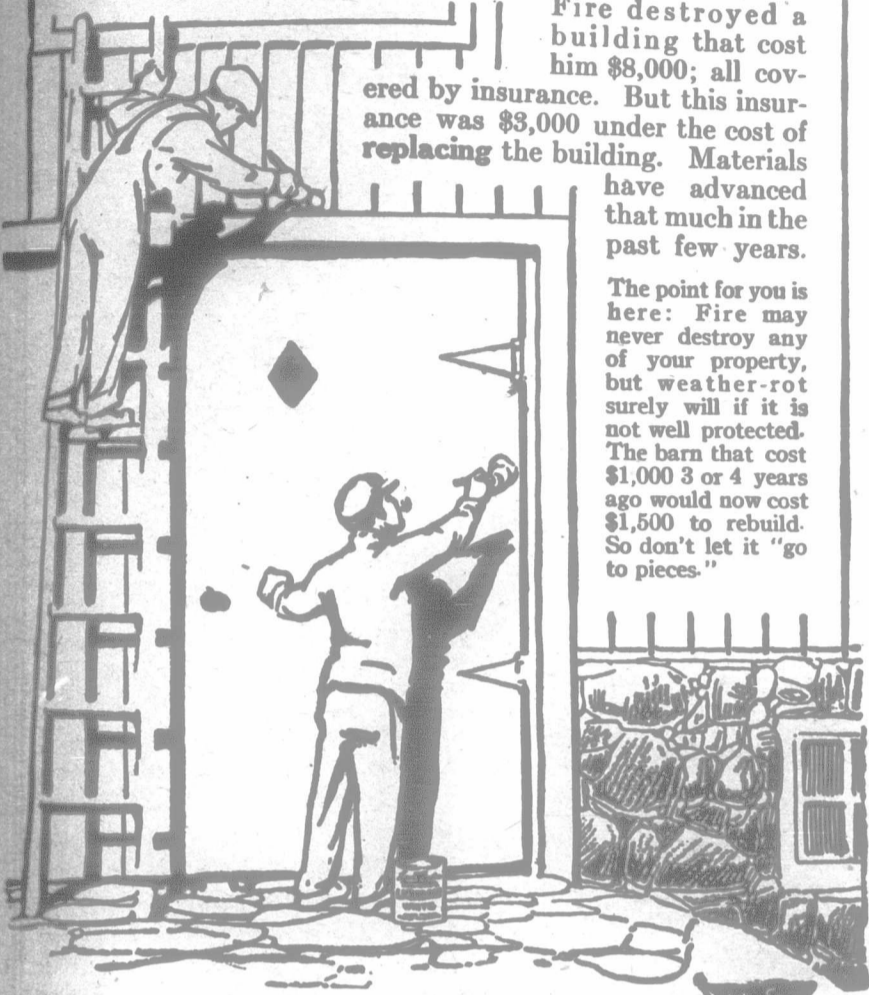
Largest manufacturers of Concrete Machinery in Canada.

Write for our new Instructive Illustrated Catalogue on Spraying and Apple Evaporating

It's free. Fruit Machinery Co., Ingersoll, Ont.



Fire Taught One Man the Value of Paint



Fire destroyed a building that cost him \$8,000; all covered by insurance. But this insurance was \$3,000 under the cost of replacing the building. Materials have advanced that much in the past few years.

The point for you is here: Fire may never destroy any of your property, but weather-rot surely will if it is not well protected. The barn that cost \$1,000 3 or 4 years ago would now cost \$1,500 to rebuild. So don't let it "go to pieces."

Look for the Little Blue Flag

Lowe Brothers FARM SERVICE PAINT

is the best for every utility purpose around your property. Easy to put on, hard to wear off, impossible to beat. Lowe Brothers Farm Service Paint accomplishes the one most important thing—absolute immunity from wet-rot. It will shield your buildings in a tough, weather-defying coat that will last for years. It will deliver 100 cents of honest service for every

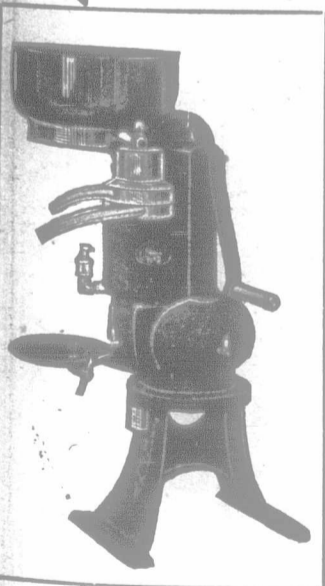
dollar you pay for it. You can't ask for more in any paint—you can easily get less in ordinary paint; so insist on Lowe Brothers Farm Service Paint at the best dealer in your town—or write to the manufacturers and get valuable paint books free, together with directions where to procure this paint.

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SIMPLEX CREAM SEPARATOR



The SIMPLEX skims closer and faster than most other machines. You will realize what a saving of time this means to you in the busy season.

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Tell us how many cows you milk, and we will give you estimates on what it will cost you to install the B. L. K. Mechanical Milker in your stables. Ask for booklet describing B. L. K. Milkers. Address :

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Or **G. A. GILLESPIE,** Peterborough, Ont.

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For instance, if you have an old table, or chair, or a bureau that is worn and scratched, give it a coat of S.-W. Varnish Stain. It will look as good as new.

Or if you prefer an enamelled finish, use S.-W. Enamel, which comes in fifteen delicate colors, suitable for woodwork, furniture, decorating, etc.

You can make ten dollars worth of improvement with one dollar's worth of reliable paint and varnish. See your local S.-W. dealer to-day.

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A finish for every purpose.

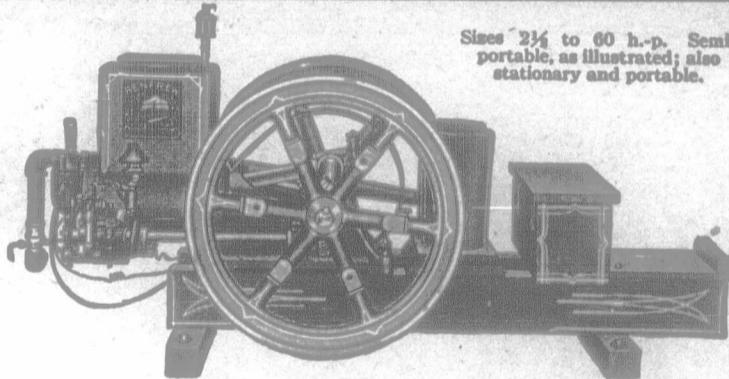
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Sizes 2 1/4 to 60 h.-p. Semi-portable, as illustrated; also stationary and portable.

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Every Renfrew-Standard Gasoline Engine is thoroughly tested before shipment. It must show at least 10% more horse-power than it is rated, by an actual brake test, with boiling water in the hopper. This test also proves the soundness of the workmanship. Every

Renfrew-Standard

Engine is also tested for balance. It must be so perfectly balanced that it will run with clock-like precision and smoothness. It must start easily without cranking. In short, the engine must be absolutely right in every particular before our inspectors affix their O.K.'s. If you were at the factory, you might think we were over-particular. But just think what our painstaking and care mean to the purchaser of a Renfrew-Standard Engine. It assures him getting an engine whose reliability has been proven under test—one that will give him great satisfaction.

Write for our engine catalogue. It describes the Renfrew-Standard in detail, and contains information about gasoline engines that every progressive farmer would like to know.

The Renfrew Machinery Company, Limited

Head Office and Works: RENFREW, ONTARIO

AGENCIES EVERYWHERE IN CANADA

Write for particulars about our 1 1/2 h.-p. Gifford Engines

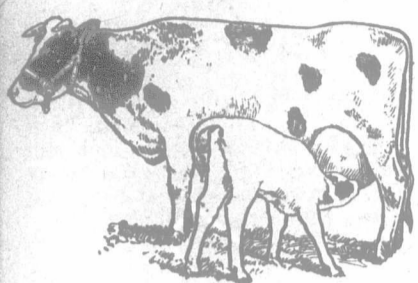
CONCRETE roads save the public money, their cost of maintenance is so low.

Concrete roads are within the reach of every community—the first cost is very little more than that of a good macadam road; the ultimate cost is infinitely less.



THE cost of maintaining 33 miles of concrete road in Wayne County, Michigan, does not exceed \$6.00 per mile per year.

It costs Peel County, Ontario, \$900.00 per mile to maintain macadam roads for the same period.



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Every farmer and stockman in Canada knows that. But whole milk brings a good price and you need the money. So you have sold and slaughtered your calves shortly after birth, getting little or nothing for them, and you have thought and thought reasonably that it was cheaper to buy than to raise to replenish your dairy herd.



CALDWELL'S CREAM SUBSTITUTE CALF-MEAL

has changed all that because it contains practically the same nutriment as whole milk at a fraction of the cost. In other words—the user of Caldwell's Calf-Meal finds it easy, economical and profitable to veal up or raise his calves for beef or to replenish his dairy herd. Its the modern way—the wasteless way and it will soon be the necessary way.

Now we know that Caldwell's Cream Substitute Calf-Meal is the best calf feed on the market.

We said the same about Caldwell's Molasses Meal and thousands of farmers know that we were right.

So we say our Cream Substitute Calf-Meal is the best money will buy—

We couldn't have made it better if we charged a dollar an ounce for it—

Being right in the heart of our customers here in Dundas, we have no long freight bills to allow for—

No duty to pay—

Nothing to tack onto the price we ask from you.

And we fearlessly guarantee our Calf-Meal—guarantee its purity and its nutritious qualities to the Canadian Government—

Our guarantee is printed on the tag attached to every bag we sell—

On the reverse side of the tag is a plain statement of the ingredients the Meal contains.

You see we have no secrets—nothing to hide. Knowing that competitors cannot give you a meal with the sum total of the nutritious qualities possessed by our Cream Substitute we lay bare the facts so that you can make your own comparisons.

It will pay you to use Caldwell's Cream Substitute Calf-Meal—

Keep on selling your whole milk and feed this Meal to your calves—

It's just as good for them and— a lot better for your bank account.

Veal up your calves and raise them for beef or to replenish your dairy herd. It's the modern thing—the economical thing—the profitable thing to do. Your Feedman sells it.

THE CALDWELL FEED COMPANY, LIMITED, DUNDAS, ONT.

What The Dealer Can Show You

GO and see the Standard cream separator at our agent's in your locality. It will strike you as being a handsome, compact convenient-looking machine.

First appearances will delight you. And naturally you'll want to know more about the

Standard

You'll want to know why it has earned the title of "The World's Greatest Separator." Our dealer will be glad to show you.

He will show you the low supply can. You will smile cheerfully when you notice that it is over one foot lower than the supply cans on ordinary separators. The high and awkward lifting of a pailful of milk is banished with the Standard.

Then he will get you to step over and turn the crank. You will see right away that you don't have to do any back-breaking stooping. The Standard eliminates that, by having the crank shaft four inches higher than on other separators.

Easy TO Clean

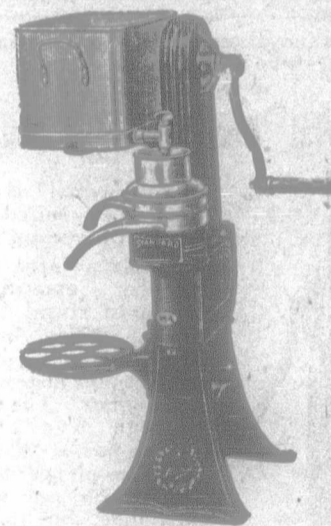
Next, he will show you the wide open bowl. You will observe that there are no milk or cream tubes to clog up. And the discs, on a special disc holder, can all be washed in a minute. If your wife is present, this feature will make her happy.

And when you are looking at the discs, the dealer will call your attention to the unusually wide space between the discs and the bowl. This space accommodates the impurities in the milk and prevents the discs getting clogged. It means absolutely clean cream and no waste.

He will next direct your attention to the fact that the only visible moving part of the separator is the crank, the gearing being entirely enclosed, which banishes all danger of the children getting clothes caught or fingers crushed should they venture to touch the machine when it is running.

Self-Oiling System

He will ask you if you can find any grease cups or glass lubricators on the machine. You can't, because the Standard hasn't any. Its self-oiling system automatically supplies the working parts with a continuous bath of oil. And the oil cannot drip on to the floor and be wasted either.



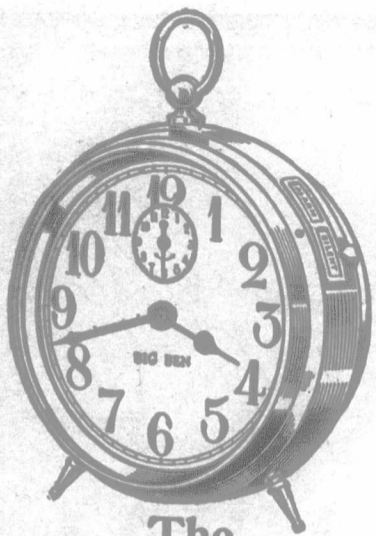
He will show you—but we've not the space here to tell you all you'll see. But we've a catalog that describes the Standard very fully; also a folder, entitled "Skimming Results," which gives what we believe are the world's records for close skimming accomplished by the Standard. If you cannot conveniently visit the dealer, write for this catalogue and folder. Of course, you'll want them right away, so mail us a card or letter promptly.

The Renfrew Machinery Company, Limited

RENFREW

HEAD OFFICE AND FACTORY
AGENCIES EVERYWHERE IN CANADA

ONTARIO



The Biggest Thing in the Clock Business

Big Ben is the biggest thing today in the alarm clock business.

He is only two years and a half old, but he's already getting more work from the Dominion than any clock alive.

In two years and a half time, 6,000 Canadian dealers have adopted him. Nearly half of the families in Canada leave it to him to call them up in the morning; nearly half the families in Canada use him all day long to tell the right time by. He is really two good clocks in one—a crackerjack of a time-keeper and a crackerjack of an alarm.

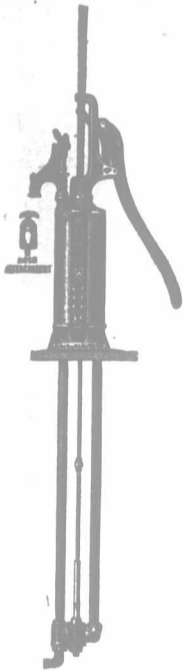
Big Ben stands seven inches tall. He is triple nickel-plated and wears an inner vest of steel that insures him for life. His big, bold figures and hands are easy to read in the dim morning light. His large, comfortable keys almost wind themselves. He rings five minutes steadily or ten intermittently. If he is oiled every other year, there is no telling how long he will last.

Big Ben's price is \$3.00 anywhere in Canada. If you cannot find him at your dealer's, a money order sent to *Windsor, La Salle, Illinois*, will bring him to you, carefully packed and duty charges paid.

BIG BEN

Pump annoyances never worry the farmers who are fortunate enough to be using the

Imperial Anti-Freezing Pump



The "Imperial" is the pump best suited for all farm purposes.

It has a large air-chamber, extending to top of stand, containing 127 1/2 cubic inches. Has 1 1/4-inch plunger-pipe instead of stuffing-box. The advantage over the stuffing-box is that it has three plunger-buckets which are self-expanding, and therefore require no attention. Can be used on any sized pipe from 1 1/4 to 2 inches in diameter, tapped for 1 1/4, 1 1/2, or 2-inch pipe. On tubular wells, the plunger can be withdrawn without removing the pump.

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Two Hours of Your Spare Time

and 25c. will get you the best \$4.00 pair of shoes for man or women ever made. Write for particulars to

THE BRANTFORD SHOE COMPANY
Brantford, Ontario

Ask Your Neighbor About his DE LAVAL

Wherever you find a De Laval user you will find a "booster."

The De Laval satisfies, pleases and makes money for its more than a million and a half owners.

There are probably quite a number of your neighbors who are using cream separators and in most communities a majority of these machines are De Laval's.

If you expect to buy a separator it will be worth your while to see what some of these De Laval users think of their machines.

If the evidence of your neighbors who use and recommend the De Laval is not enough to convince you of De Laval superiority, have the local De Laval agent put one in on trial for you and try any other machine you want to alongside of the De Laval.

Let the De Laval start saving your cream right now, this spring. It will soon pay for itself.



The new 72-page De Laval Dairy Hand Book, in which important dairy questions are ably discussed by the best authorities, is a book that every cow owner should have. Mailed free upon request if you mention this paper. New 1913 De Laval catalog also mailed upon request. Write to nearest office.

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Limited

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Five per cent. allowed on Debentures. Interest payable (by coupons) half-yearly.

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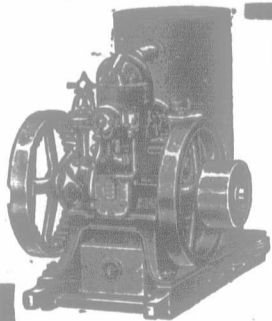
To Trustees and Executors

The deposits and debentures of this Company are especially authorized by an Order-in-Council, Province of Ontario, as an investment for trust funds.

The Great West Permanent Loan Company
(Incorporated by Dominion Charter)

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This Engine Runs on Coal Oil

Every farmer can afford an Ellis Coal Oil Engine. They give far more power from coal oil than other engines do from gasoline. They are safe, as well as cheap; no danger of explosion or fire.

The strongest and simplest farm engine made; only three moving parts: nothing to get out of repair. Anyone can run it without experience. Thousands of satisfied customers use these engines to grind feed, fill silos, saw wood, pump, thresh, run cream separators, and do dozens of other jobs. Cheaper than horses or hired men. Fill up the tanks and start it running, and no further attention is necessary; it will run till you stop it.

FREE TRIAL FOR 30 DAYS. You don't have to take our word for it. We'll send an engine anywhere in Canada on Thirty Days' Free Trial. We furnish full instructions for testing on your work. If it does not suit you send it back at our expense. We pay freight and duty to get it to you and we'll pay to get it back if you don't want it.

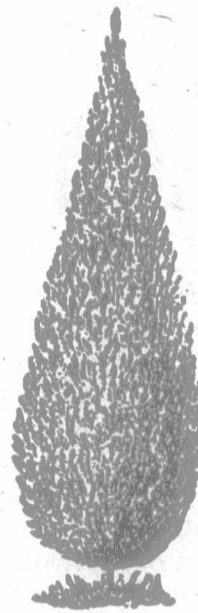
Absolutely guaranteed for 10 years. Write for free catalog and opinions of satisfied users. Special offer in new territory.

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We Pay Duty and Freight

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Evergreens FOR Everyone

We have the largest stock in Canada of Evergreen Ornamental Trees and Shrubs. Thousands and tens of thousands of Spruce and Arbor Vitæ for windbreaks and hedges at prices within the reach of everyone.



IRISH JUNIPER.

We have the stately Irish Junipers and Pyramidal Arbor Vitæ, which are well suited for planting on lots in cemeteries or for single specimens on the lawn. Write for prices and information which is always furnished cheerfully and promptly.

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WINONA, (900 Acres) ONTARIO

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Is a blessing to the man who carries sufficient Life Assurance so that when he is reaching the end of the allotted span he can rest on his oars, content in the thought that the foresight of his youth will take care of him now. How different is the man who has to slave till he is called away. Which class do you belong to? If the latter, remedy it at once by taking out sufficient Endowment Assurance to provide for your future years.

Federal Life

Assurance Company
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Amateur and professional photography taught right at your home in spare time UNDER CANADA'S EXPERT PHOTOGRAPHIC CRITIC AND TEACHER. Be an expert amateur or a capable professional. Don't experiment. Don't guess. Learn How. Write for prospectus.

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Max Stolpe, Landscape Architect—Artistic plans, sketches furnished for all kinds of landscape construction work. Ornamental Trees, Shrubs, Conifers, Hardy Perennials, etc. Ask for price list. 17 Main St East, Hamilton, Ont. Phone 148.

When Writing Mention Advocate

The Farmer's Advocate and Home Magazine

PERSEVERE
AND
SUCCEED

ESTABLISHED
1888

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875

Vol. XLVIII.

LONDON, ONTARIO, MAY 15, 1913.

No. 1077

EDITORIAL.

When the self interest of an organized class is pitted against the indifference of the unorganized mass, what is the logical result?

Thirty-seven fox companies, representing a capital of two and three-quarter million dollars, were incorporated at the last session of the Prince Edward Island Legislature. Beats real estate.

Nature's sweetest incense is the smell of the fresh-turned soil. The poet comes near to the same idea when he sings:

"And all the incense in the air springs from the speechless sod,
"Which has no other offering or way to worship God."

Do not forget the ditching of sown fields. However nice the land may look at seeding, it may be waterlogged in spots several times before harvest. An unfurrowed field is easy to run the binder over, but there is more satisfaction in reaping a heavy uniform crop than in riding smoothly with an idle knoter over the places where ditches should be. Drainage is a big part of good farming.

Live stock should command a good price, for there are almost innumerable chances of loss in breeding and rearing. An outbreak of contagious abortion, such as is outlined in another column in this issue, means a loss of thousands of dollars to stock breeders in the district. Too great care cannot be taken in mating animals to be sure neither is affected with a contagious disease which may be passed to the other, and, in case of the male, to many others.

Soil that is lumpy above but soggy below, so that one hesitates to put a roller over it, may be effectually pulverized with a plank clod crusher. We improvised one hastily this spring by spiking two three-inch plank to the bottom of an old corn marker with the rear edge of the forward plank lapping under the forward edge of the rear plank, and the rear edge of the latter blocked in such a way that when the marker was drawn forward the inclined faces of both planks ground the clods they passed over. It worked well, but we shall make a wider and heavier one for future use.

The question is occasionally raised whether copies of the many excellent bulletins issued by the United States Department of Agriculture are available without charge to Canadian applicants. Dr. Jos. A. Arnold, editor in chief of the Division of Publications, informs us that the publications of the Department are sent gratuitously to Canada, as long as the supply lasts, after which applicants are referred to the Superintendent of Documents, Government Printing Office, Washington, D. C., who is authorized under the law to sell publications for a nominal sum. The price for Farmers' Bulletins is five cents per copy.

Bacteriological Investigation Needed.

The article in the horse department of this issue on abortion in mares raises several important questions calling urgently for scientific investigation on lines concerning which practically nothing has been done, so far as we are aware, either by Provincial Departments of Agriculture or the one at Ottawa. This is also true of the much more widely interesting subject of infectious abortion in cattle. A year or so ago, we sent some material from aborting cows, to the Bacteriological Department of the Ontario Agricultural College. They made some brief study of it, but wrote regretting their inability to do more, explaining at the same time that they had recently had an excellent opportunity to make a study of infectious abortion in cattle, but had been unable to do so for lack of funds. Now, here are lines of investigation that might be prosecuted with immense advantage to farmers. There seems to be plenty of money available from Provincial and Federal sources for other lines of work of questionable advantage to the man on the land or in the stables, but here, where there is a chance to do something worth while, the answer is "no funds." We would suggest as the most urgent present-day need of agriculture along educational lines, a great extension of bacteriological investigation, and perhaps no subject is more urgent than the cause and prevention of infectious abortion in breeding stock.

A Public, Not a Party Issue.

Attentive reading of the Ottawa despatches in the newspapers makes it very clear that the revision of the Bank Act has been in no sense a party issue. Committee divisions upon the various amendments that have been proposed cut square across party lines, and it is satisfactory to note that a majority of the most aggressive champions of the public interest are Government supporters. Conspicuous among these is J. B. McCurdy, M. P., for Queens-Shelburne, N. S. who pressed a number of well considered amendments aiming to secure greater publicity in banking practice, providing more information as to existing assets, real estate and bank premises; Major Sharp, of North Ontario, who stood sponsor for an amendment in favor of a court or commission to inspect and regulate the banks; Nickle, of Kingston; Thornton, of Durham; Sexsmith, of East Peterborough; Steele, of South Perth; Thompson, of the Yukon; Rainville, of Chambly-Vercheres; Ball, of South Grey, and a few others. Among the Opposition members of the Committee who have fought more or less earnestly on the public behalf, we notice Thomson, of Qu'Appelle; Warnock, of McLeod; Douglas, of Strathcona, and Ross, of West Middlesex, who favored a fund to secure depositors. If anything, there has been a larger percentage of aggressive public champions on the Government than on the Opposition side. It is encouraging to find an earnest minority of members on both sides standing out against the pressure of influence by the Bankers' Association and its skilled lobbyists. The subtle influence of such lobbying, allaying opposition here, modifying it there, converting it into support in some other quarter, cannot possibly be realized outside of Ottawa. As one of the Ottawa despatches put it: "This influential body (The

Canadian Bankers' Association) though not directly taking any part in the discussion, saving in cases of apparent emergency, has been represented throughout by no less than five eminent King's Counsel. In addition, several parliamentary agents have been in attendance. The purpose of these men was to watch the proceedings, talk members into more 'reasonable' frame of mind, and see that amendments calculated to limit the powers of the banks or to injure the banking system should be voted down."

Voted down they were with a very few exceptions. When the division bells sounded the whip of the Bankers' Association would fill the back benches with members of the Committee who seldom appeared otherwise.

Who was there to drum up members on the public behalf, other than those who attended of their own initiative? All honor to the small but sturdy group of men on both sides who fought for the public cause!

Meantime, have you done your own duty by writing your member to express your views? Give him a word of encouragement or instruction as the case may be. You must be your own whip, and the post office is your present means of influence. After that the ballot. This revision is not the last one. There will be another coming ten years from now, if not sooner. By that time a strong pressure of public opinion will have been aroused. Even at the present revision there is still hope of amendments in the House. See that your member represents you. There is yet time to play a part. Write him to-day.

"Yellow" Agricultural Journalism.

Among present-day periodicals and newspapers throughout the United States there is a well-marked tendency towards "yellow" agricultural journalism, exploiting the unusual and exaggerating facts to make them sensational. Even some of the so-called agricultural journals are tinged with it. Fortunately the better class are edited by men with too much experience and common sense to be carried away in this manner. Writing in one of these better-class journals lately, an American agricultural professor told of having received from a city man a letter asking for full information upon the subject of what is the most profitable crop to grow. The inquirer confessed that he knew nothing of the matter himself, but desired the information that he might write an instructive (?) article for the agricultural press. The professor replied asking his correspondent whether he considered himself competent to write an article on a subject he knew nothing about. Indignantly the latter replied: "So we are to exclude all history not written by eye witnesses!" No doubt he considered his mental gizzard capable of digesting off hand the information he expected to get from the professor, and building it into a really valuable article. He did not know that it takes years upon years of experience to mature one's ideas concerning farm practice. The cheaper class of American farm journals contain plenty of articles by just such men. They "make up" well enough in the paper, but a practical farmer reading them can at once detect their hollow ring of theory without practice to give it weight.

More particularly, though, upon the subject of sensational journalism, read this from Dean H. C. Price, of the Ohio College of Agriculture:

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL
IN THE DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

Agents for "The Farmer's Advocate and Home Journal,"
Winnipeg, Man.

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LONDON, CANADA.

"Agriculture has come to be a term that is juggled with by the demagogue, and its worst enemies are its fool friends who are filled with half truths. Yellow journalism in agriculture is rampant, the magazines, the daily press and part of the agricultural press are eager for agricultural sensation, something new, something revolutionary. Judging from the tone of such journals, the American farmer has learned nothing from experience, he is a helpless ignoramus in regard to his own business and his only hope of success is through the aid of government-appointed experts, who are to teach him how to operate his farm, and city reformers, who are to show him how to reorganize country life."

Some Important Alfalfa Experience.

When commencing operations at Weldwood in 1911 we selected for alfalfa a gently rolling ten-acre field at the front of the farm, which had been fall-plowed after producing a very dirty crop of grain. All things considered, it was the most suitable field available. A few lines of shallow tile already ran through the hollows, which thus dried off early, while the high land remained wet for weeks after spring opened. On the centre third of the field, which was the highest part of all, the alfalfa was sown May 20th (after an all too brief period of weed-killing) at the rate of eighteen pounds per acre with a bushel of barley as a nurse crop. Notwithstanding the most extreme drouth of a generation, the alfalfa came on well, but so did the thistles and grass, especially after harvest.

The east and west sides of the field were thoroughly summer-fallowed and tilled, most of the tile being placed two and a half to three feet deep and less than four rods apart, except across the crowns of a few knolls, where the spaces were wider. The field lies along the road, and the travelling public appeared to think we must be turning it upside down. The drained areas were seeded on July 20th with alfalfa alone at the rate of eighteen pounds per acre from the grass-seed box of a disk drill, the disks following and covering the seed. Cultivation

had kept the soil moist, barring the loosely filled earth in the tile trenches. Except on these narrow strips the alfalfa germinated promptly, and came up with scarcely any rain. Plenty of rain came after the middle of August, and the alfalfa made a fine even growth ten to twelve inches high. Deep snow protected it during the winter, so that it came through well, being heaved but little. Even the undrained portion suffered little, and the weedy piece in the centre, although a poorer stand, did not suffer much more than the July-seeded strips. The advantage from drainage that winter was less than expected. All last summer this field was a picture, with its even carpet of dark green. From the first cutting we took about fifteen tons of hay cured in first-class condition, the tile-drained and summer-fallowed areas running nearly two tons per acre. Then the wet weather set in. The second cutting was commenced August 6th, two acres on the west side being cut between showers, as it happened. This hay was out nearly a fortnight. The third growth started quickly but soon took on a bleached appearance, different from the yellow blight commonly affecting alfalfa. Rain prevented further haying until August 15th, when the east third of the field was cut and cured during three days of fair weather. Here the third growth started all right and remained green until cut for soiling in September, after which it started nicely for a fourth growth. On this portion neither grass nor weeds made any appearance worth mentioning. The centre third and the adjoining acre or so of the west tiled strip had its second crop removed August 27th, and here the third growth started weakly, soon bleached out and became crowded by grass and weeds, as did the piece that had been cut early in August. No third cutting was taken from this central portion of the field. The two acres where the second cutting was made on August 6th, were cut a third time but yielded a light crop, although this strip had more time to make a fourth growth than the piece on the east side of the field. What caused the alfalfa to blight and stunt on the areas where the second cutting was made August 6th and August 27th, but not on the area where it was made August 15th, is a mystery which no alfalfa authority has so far been able to explain. We suspect the trouble was due to excessively wet weather at the time of cutting and for a few days after. The contrast was extremely marked—as marked as anything we have ever seen in field practice. In one place, at the edge of the east strip, four swaths had been cut for green feeding. Two of these showed the blighted condition like regular bands across the field, while the alternate swaths were a comparatively healthy green, though the bleached and green swaths had been mown on the same day.

This spring (1913) the only promising alfalfa is over the tile drains, and on the hardest clay slopes. Every line of tile is plain as a furrow. Tiled hollows have a first-class stand while untiled slopes are not all so good, though undrained slopes are better than undrained knoll tops. The east third is decidedly better than the west third, while on the undrained centre the crop is almost completely killed out, except on two strips where lines of tile run up into this piece. Where the third growth was left uncut, the present condition is a little better than on the similar adjoining area where it was taken off. Strips that were limed or manured in the spring of 1912 are little, if any, better than those untreated. A small area top-dressed last winter has thus far been little, if at all, advantaged thereby. The main deductions from our experience are as follows:

Under certain conditions the stage or time of cutting would seem to be crucially important. It is usually advised not to cut until the buds for the next growth have started out from the crowns. This caution is not right, but is evidently not the only one called for. It looks as though cutting in very wet weather were risky. On this point we are seeking more light. Drainage is fundamentally important. Without it alfalfa is, at the best, short-lived. So

far we have had no reason to suspect blocking of the files.

Clean-till is also of the first importance. A field on which alfalfa is to be sown should be as clean as a whistle. Beware of grass.

Other things being equal, alfalfa will endure longer on hard-clay slopes than elsewhere. This is true, at least, of undrained fields.

On our farm artificial inoculation produced no observable benefit.

A thick, even stand is important. Sowing two ways is probably better than drilling only one way.

As green crop and as hay, alfalfa is the best forage we have. With us as with others alfalfa hay beats clover.

Our field last year averaged the equivalent of nearly four tons of hay per acre. We shall probably break part or all of the field this year, clean it, put in some more tile, and seed to alfalfa again.

Bank Inspection.

Editor "The Farmer's Advocate.":

I have been interested in your articles on inspection of banks. My idea of outside inspection is to have a government examiner permanently at the head office of each bank with clerical assistance. In that way no unsound practices could ever get a start. The examination of branches can safely be left to the banks' own inspectors, but a resident examiner would have access to all returns from the branches, and could, if necessary, in particular cases, inspect any branch. Another thing, a borrower at a branch, who might be using more than one bank, could have all his business looked into by one examiner consulting with others.

Welland Co., Ont. E. W. TENCH

[A Bank Commission on the lines advocated would be designed to serve the purpose you have in mind, but with a strong and competent head and with the officers of the Commission visiting various head offices in turn, there would be better chances of efficiency and impeccability than with a permanent resident inspector for each bank. Besides, an organized Commission would do much that individual inspectors could not.—Editor]

Bank Dividends.

Editor "The Farmer's Advocate.":

Your editorial of April 17th, on the money influence is most interesting, and will surely set the people thinking if anything will. It reminds me of Senator Beveridge's prediction in his review of the Canadian banking system, in the Saturday Evening Post. He showed plainly that the system was nothing more or less than a trust and a very dangerous one, with which sooner or later Canadians would find themselves compelled to deal. This was only a year or two ago, and already they are applying the screws.

It looks to me, however, as if your article in the April 24th number mistated the case somewhat. You say, "Every one of them, but the Weyburn bank, pays from six to eleven per cent in actual dividends." But do they? The only one of which I have any personal experience is the Sterling Bank, which nominally pays a dividend of six per cent on its stock. But how much did this stock cost? Every hundred dollars share of the original issue cost one hundred and twenty five dollars, and every share of the second issue cost a hundred and ten dollars, and six dollars interest on a hundred and twenty-five dollars, or a hundred and ten dollars is something quite different from six to eleven per cent in actual dividends, unless this qualification is borne in mind.

At the beginning of the article you state plainly of what the reserve consists, and that it amounts to practically as much as the paid up capital of the banks, and on this the stockholders get no dividend, even though it does nominally enormously increase the value of the shares.

Elsewhere you say—"In the last analysis the loss on circulation, after the stock holder is cleaned out, as he usually is when a failure occurs, comes on the depositor." So it would appear that considering his "double liability, the stock holder's position, as well as that of the depositor, was not a very attractive one; and you have shown in your article of April 17th, how the banker holds the borrower in the hollow of his hand, and how he puts the screws to the publisher on occasion, so we seem to be between the devil and the deep sea, all round. However, if it had not been for the arrogant King John we might have had no Magna Charta, and let us hope we are in sight of Runnymede.

As for the farmer, the subject of banking and its regulation is very much out of his line, so that he is either uninformed, or regularly mis-

informed by those interested in keeping him in ignorance, and when a paper like "The Farmer's Advocate" disregarding financial loss and risk, is able and willing to enter the lists in his cause it has every reason to expect his support.

Lambton Co., Ont. RUSSELL PHILLIPS.

[Our correspondent's explanations are true, but do not conflict, really, with our own, which were technically correct. Some further light is thrown on bank profits by an editorial in last issue, (May 8th.)—Editor.]

A Conscientious Bank Commission Needed.

Editor "The Farmer's Advocate."

In the April 17th. issue of "The Farmer's Advocate" an expression of opinion was invited as to the desirability of having a Banking Board of Commissioners. I may say I am favorable to a Government-appointed Board of competent men with a keen conscientious sense of duty, possessing all the powers of inspection and audit, to whom the various banks shall report yearly, and at any other time upon any specified matter desired by the Board. The Board should report from time to time to the Government and at any other time when requisitioned to do so, on all matters pertaining to the peoples interest and the requirements of the Government. A Board thus constituted should be an absolute protection to the depositor, and a safeguard to the shareholder as well. Mr. McLeod's suggestion of a salary is a staggering one, namely, two and one-half times the Premier's. We are of the opinion a great deal less would secure a better man sufficiently competent and possessing a conscience, which, you will admit, Mr. Editor, is a very important factor in the make-up of a good auditor. When all is said and done the powers which charter and govern should also protect and secure the absolute safety of deposits. I have little sympathy with any movement to secure easier methods of obtaining money for farmers loans, but would favor lower rates if possible. But the banks should not slacken one iota the strict compliance with furnishing satisfactory security. For legitimate enterprise every facility should be afforded where the bank has the proper security for the loan. The speculating borrower should not be encouraged. He is the plague of the period.

Huron Co., Ont.

M. LOCKHART.

Nature's Diary.

By A. B. Klugh, M. A.

The voice of the "spring peeper" is now heard in the land. It comes from low, marshy ground, in the open, from pools in the woods and from the "willow swales." These piping notes are commonly believed to be the voices of frogs, which is right, but because of the strength of the notes they are thought to come from the mouths of large frogs, which is wrong. The "spring peeper" is a tiny tree-frog, from three-quarters to one and a quarter inches in length. Its color varies from light fawn to dark brown or ashy-gray. It has a V-shaped dark mark between the eyes and an oblique cross on the back. The under-parts are light in color, and in the male the throat is brown. The fingers and toes have broad disks at their tips. These disks secrete a sticky substance which enables the tree-frog to cling to such smooth vertical surfaces as window panes.

Pickering's Hyla (or Hyla Pickeringii) which is the name of the "spring peeper" is found in and around water in the spring, for it is then the eggs are laid. The eggs are fastened, either single or in little groups, to plants in the water. They are one-twelfth of an inch in diameter, the upper portion being dark brown and the lower creamy-white. The tadpoles hatch in from six to twelve days, depending upon the temperature, and are full-grown in from six to seven weeks after hatching. Even while the tail is still long the tadpoles may leave the water. By the end of June their tails are usually completely absorbed and the young Hylas leave the water permanently. During July, August, September and October, Pickering's Hyla is to be found in the woods and occasionally utters its piping note.

As is the case with many frogs, and other amphibians, this species can assume numerous colors. At one time an individual may be light yellowish fawn and an hour later it may be dark brown or reddish-brown.

When Pickering's Hyla is calling it distends its throat into a large transparent sac, about one-half the size of its head and body together.

About the end of October this tree-frog hibernates under leaves or moss, to awaken the next March and become again the "Spring Peeper."

Some of our earliest spring flowers are now in bloom. Among these are the "Pussy-willows." These attractive objects are the catkins of the Glaucous Willow (Salix discolor). The "Pus-

sies" are of two kinds "Green Pussies" and "Yellow Pussies." The green ones are the catkins of pistillate flowers or flowers containing pistils only, the yellow ones are the staminate catkins or flowers containing stamens only.

The pistil is that part of the flower which has to do with the bearing of seed. Its main part is the ovary, which contains the ovules, which in turn contain the egg-cell. The pistil of the "Pussy Willow" is shown in Fig. 4; and in Fig. 5, as cut in half showing the ovules within. At the top of the ovary (in most flowers at the end of a stalk called the style) is the stigma. The surface of the stigma is sticky, so that pollen grains falling on it adhere to it.

The stamen is that part of the flower which produces the pollen. It consists of two parts, the anther, which contains the pollen-grains, and the stalk or filament. The stamens of the "Pussy Willow" are shown in Fig. 6.

The pollen-grain on reaching the stigma germinates and sends down a tube to the egg-cell

tion shows me that they are harmful. They get in between the stems in the blossom clusters where it is almost impossible to get at them with the spray. When they are plentiful the stems appear to soften and slough off, and even when they do not destroy the stems, they seem to weaken them so that the blossoms do not spring apart as they do under normal conditions. They remain glued together, as when the blossom buds first appear. After the blossoms began to open the aphids marched out on the petals, so that many of the blossoms are speckled with the little green pests. They have attacked the Spies more than the other trees, and the tree on which I noticed them last year, is affected the worst. I also see on the leaves and blossoms little drops of what I suppose is the "honey-dew" said to be secreted by the aphids, but I have not tasted it. If I did, in my present exasperated state of mind, I might share the fate of Kubla Khan of whom Coleridge wrote.

 "Beware! Beware!
 His flashing eyes, his floating hair!
 Weave a circle round him thrice,
 And close your eyes with holy dread
 For he on honey-dew hath fed,
 And drank the milk of Paradise."

But the aphids are not my only trouble. Something is pasturing on the blossoms at night and eating them clean as far as they go. I am told it is the June bugs, but I have not been able to find any of them at work, though the air is alive with them, every night after sunset. Anyway, whatever is eating the blossoms makes a thorough job of it. Everything is eaten right down to the stem, destroying any chances of apples from the blossoms that are attacked. As yet only a few of the earlier trees are in bloom, and it is impossible to say how much damage is likely to be done. As the blossoms must have considerable poison clinging to them since the spraying with lime, sulphur and arsenate of lead I have no doubt that the eaters have been killed, but that is no satisfaction to me if they manage to destroy the blossoms. One consolation is that the trees are so covered with blossoms, that there may be enough for all of us.

 This letter must stop right here. Word has just come that the apple and cherry trees we ordered arrived this morning, and not a minute is to be lost in going after them. The message is that they "are as dry as a bone." Between apples and cherries, there are two hundred and fifty trees, and I am worried about them. It is twelve days since they were shipped from Welland and the weather has been very hot. They must have come at the rate of about half a mile an hour. I don't know, but that does not strike me as very wonderful service on the part of the railroads in handling perishable freight. I wonder if I should accept the delivery; if the trees are so dried out that there will be no chance of them growing. Other people in the neighborhood have been refusing to accept trees for this reason. But there is no use crossing bridges before I come to them. I shall wait till I have a look at the trees at the station and then I shall consult an experienced orchardist whom I can reach by telephone.

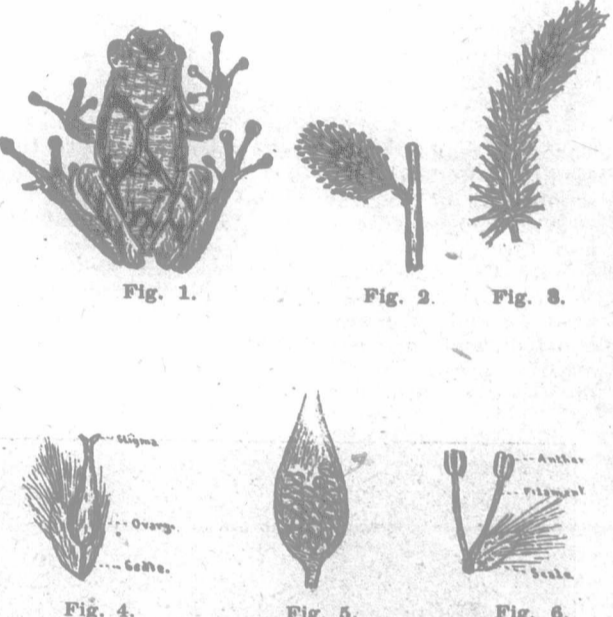


Fig. 1.—The Spring Peeper Hyla pickeringii.
 Fig. 2.—Staminate Catkin of Willow.
 Fig. 3.—Pistillate Catkin of Willow.
 Fig. 4.—Pistil of Willow.
 Fig. 5.—Ovary of Willow, containing ovules.
 Fig. 6.—Stamens of Willow.

within the ovule, and down this tube two nuclei pass. One of these fertilizes the egg-cell and the ovule then becomes a seed.

In many plants the pistils and stamens are borne in the same flower; in the willows they are in different flowers.

The pistils and stamens are the essential parts of the flower, as we can see from the above description of their functions. They may be accompanied only by a scale, as in the willow, or surrounded by brightly colored petals and green sepals as in many flowers.

New Pests.

By Peter McArthur.

This is a wonderful year for seedlings in the wood-lot. It seems as if every seed that fell last fall had sprouted. The ground is matted with young maples, and judging from the way the cattle attack them where they are growing in the pasture field by the woods, they must be good eating. They look so appetizing I imagine they would make better greens than nettles or dandelions, but I am afraid I would get into trouble if I suggested trying a mess of them. Still some brave man must have been the first to try each of the other herbs and vegetables we eat. But perhaps he was forced to it through hunger and was willing to take a chance. I guess I'll restrain myself for I do not feel like taking any chances with a digestive system, that is not what it used to be. But if I wanted to try a mess of tender young seedlings I wouldn't need to go to the woods for them. The culls that were left to rot in the orchard offer a bountiful crop, and under the crab-apple tree they are growing "as thick as they can stick." I am glad that the seedlings are coming up so plentifully in the woods, for now that the cattle are kept out they should have a chance to grow.

 The orchard is proving to be unusually interesting this year. It has an entirely new crop of pests that are making trouble for me. The kerosene emulsion with which I soused the buds last week, did not have much effect on the aphids, though it was made and applied according to directions. The bulletins on orcharding do not say much about the aphids, but my own observa-

HORSES.

Keep salt in the horse pasture.

Commence handling the colt from the time of his birth.

If possible do not use the stallion which is over worked.

The working horse should be kept stabled nights for some time yet.

Good jumpers over the hurdles are about as good "thrillers" as one could wish.

Have you returned the mare which is nursing a foal to the stallion? Do not be satisfied with one colt; keep her breeding.

Do not let the young colt remain out in a drenching rain until he is, at least, a few weeks of age, and he is better inside even at a few months of age if a long, cold downpour ensues.

Fancy high steppers were not as much in evidence at this year's Toronto Horse Show as at those of former years. Not a Hackney stallion came out. The high stepper has been hardest hit by the automobile, yet some of the best individuals ever seen in harness were forward.

A prominent business man, who has a large number of orders to deliver daily over all kinds

of roads, recently remarked that after looking into the matter in all its branches he believes that he can maintain horses and wagons much cheaper than he could an auto truck, and the initial outlay is much less. The horse has his place in town and city as well as in the country.

Monty, a valuable hunter, broke a leg while in one of the team events at the recent Toronto Horse Show. Three horses were put over the jumps following closely upon each other. One of these knocked down a top bar, and this horse following at his heels alighted on it, causing it to swing around and break the leg. It seems rather foolish to jump the horses in this manner. When a pole is displaced, for safety's sake it should be put into position before the next horse takes the barrier.

A Serious Outbreak of Abortion in Mares.

A short paragraph in our last week's issue conveyed the news that a very serious outbreak of contagious abortion has taken place in a district in northern Middlesex County, Ontario. While the infectious form of abortion is quite common in cows it is not often found in mares, this being the first serious case with which we have been personally acquainted. Horsemen in the section referred to are very much aroused over the outbreak, as it means a great deal to both mare and stallion owners.

A representative of "The Farmer's Advocate" visited the district one day last week, and called upon Dr. Wm. Dann, the veterinary surgeon, who has attended a large proportion of the mares which have aborted. In all his practice of many years he never before experienced a case of what he was sure was contagious abortion in mares, but the nature of this particular outbreak leaves no doubt in his mind that the trouble is due to an organism and not to injury or poor feed. Away back during last December an immature foal, the result of a miscarriage, was found in a church shed in a small village in the heart of the district where the disease is most prevalent, and about the same time another was found in the hotel stables, mares having cast them while standing for a short time in these places. On December twentieth Dr. Dann was called to deliver a mare of a dead foal—a premature birth. From that time up to the present mares have been aborting at the rate of two or three a week in the territory over which his practice extends. Within a radius of seven miles of the small village, around which he practices, he counted sixty-six mares which have lost their foals this season and this is not all, for some undoubtedly were never heard of by the veterinarians, and other practitioners attended several.

Up until about March first very few cases showed any signs of septic metritis, commonly known as inflammatory rheumatism—a poisonous inflammation of the uterus, but after March first fully fifty per cent of the aborting mares developed the very worst form of this post-partum trouble. This septic metritis is, according to Dr. Dann, due to an organism (streptococcus) which sets up irritation leading to a putrid supuration in the womb.

Another interesting point; a large percentage of the few colts foaled alive this season have shown well-marked symptoms of navel-ill (septic arthritis). Up to the fifth of May there were only ten living foals in the district in question, and of these three had been treated as showing symptoms of navel-ill. Five others were inoculated as a preventive.

One would naturally suppose that with abortion, septic metritis and septic arthritis so prevalent in the same locality and the former two often in the same individual mares, that there is some close connection between these diseases or that the same or associated organisms are responsible for all three. This is exactly what Dr. Dann believes, and he is, at present, working strenuously to isolate the organisms and prove or disprove this point.

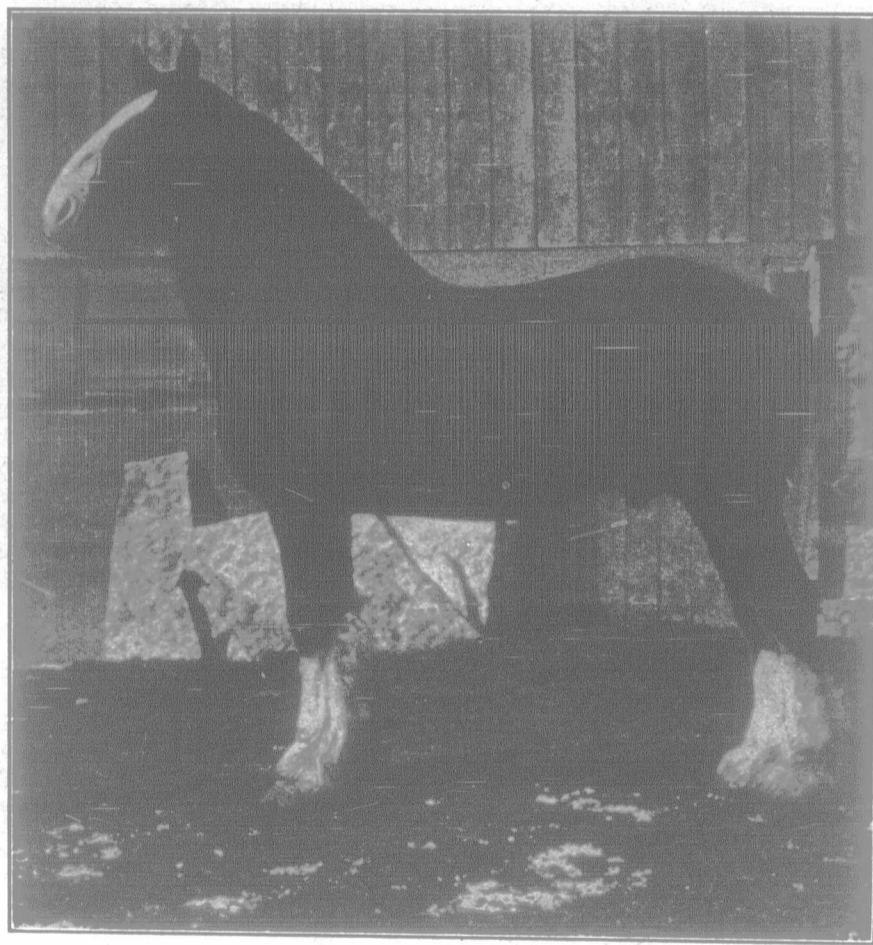
Some interesting, and so far successful, we might say, experimental treatments have been carried on by Dr. Dann in connection with septic metritis and septic arthritis. He is a firm believer in, and a staunch advocate of, serum preventives and curatives, and stated that it was his opinion that before ten years the great bulk of veterinary medicine will be given as a preventive treatment in the form of a serum. For navel-ill (septic arthritis) Dr. Dann uses the serum treatment of the dead bacteria which produce the disease. One hypodermic injection is given as a preventive, and where the disease has developed three injections are given, increasing the quantity of serum at each injection. A substance to tone up the blood is also given; this latter increases the leucocytes which it is supposed devour disease-producing bacteria in the blood. That the treatment is valuable Dr. Dann

is sure, as in 1912 he inoculated thirty-five foals with the serum and not one case developed, and, at least twenty-five cases where the disease had developed were treated, and ninety-five per cent of these recovered. One colt, just a few weeks ago, was, at thirty-six hours old, very badly affected with the disease, the joints of three of his legs being badly swollen. He was first treated on a Saturday, the second dose being administered on Monday and on the following Friday, when the veterinary called to inject the final treatment, it took two men to catch him in a box stall. Recovery was rapid, and the colt is now doing well. The greatest drawback to all serum treatment is the expense, and some horse owners hesitate to take the chance.

Following out his ideas in connection with this disease, Dr. Dann is applying the same principle in the treatment of septic metritis. The mare's reproductive organs are thoroughly sterilized, and the mares are inoculated and given a five-days' treatment to improve the condition of the blood. The cultures for the serum are taken directly from the foetal membranes of a diseased mare, and the disease, in its worst form, is yielding to the treatment.

This treatment is comparatively new, according to Dr. Dann. He commenced using the navel-ill serum three years ago, and the following winter his assistant, W. B. Coon, who was then a student at the Ontario Veterinary College, Toronto, read a paper on this subject before the faculty, and succeeded in winning the \$75.00 scholarship of his year.

At the beginning of the present outbreak it was thought that the poor quality of the feed or possibly some ergot in the feed had something to do with the loss of the foals, but as time went on and as many as five mares in one stable aborted, and mares fed on feed of first-class quality grown in 1911 cast their foals, the disease was at once stamped as contagious.



Cawdor Laird (14621) [11455].

Clydesdale stallion, by Baron Hood. Owned by A. F. O'Neil, Birr, Ont. See Gossip.

Virgin mares, old mares, young mares, mares bred to light and mares bred to heavy horses have lost their foals at all stages of gestation, even up to full time. Mares which have aborted at full time made no preparation for foaling, and the foals were invariably dead when delivered. It was noticed that the nearer the mare approached to carrying her foal the full time the greater the danger of septic metritis, showing that the germs of the disease grow stronger as gestation advances. The greatest majority of the foals were found to have been dead at least forty-eight hours before the abortion.

How does the abortion spread? As it is due to an organism the most likely means of gaining access to the mare are through the vagina and the alimentary canal, the latter, according to Dr. Dann, being the most probable, as the organisms might be carried on feed or watering pails, etc. It would be an easy matter for an attendant to handle a dead foal or the after-birth or even some of the litter, upon which some of the fluid has been deposited, with a

fork and afterwards feed the mares and thus distribute the deadly contagion. Very little abortion of any kind was known in this particular district one year ago.

The eradication of the disease is a serious problem. Stallions are being travelled through the district, and unless great precautions are taken there is a possibility of even more abortion next year than has taken place this year. Dr. Dann believes that after a mare has been thoroughly treated by the process outlined, that it will be necessary for new organisms to gain access to her before there would be any danger of further abortion, but, of course, time will tell.

Abortion does not seem to be generally prevalent in mares this year, as veterinarians in other sections inform us that few cases have been met with in their practice this season. Previous veterinary investigation showed that navel-ill and abortion are each due to an organism, but that the organisms are of different species. It may be that with the organism producing abortion, there is associated another organism which is capable of producing navel-ill and septic metritis, and that the streptococci causing abortion produce, at the same time, a favorable condition for the growth and work of these organisms. Whatever is the case the work that Dr. Dann and his assistant, T. B. Carter, are doing this season is important, and the final results of their investigation will be awaited with interest.

Making a Mare Own Her Foal.

This may appear to be a fake, but, nevertheless, it was tried with success by the writer. A heavy draft mare gave birth to her first foal, and was so ugly with it that two men were required to compel her to allow the colt to nurse each time. She would bite pieces out of the colt's hide to the size of twenty-five cent pieces, and was very vicious. A neighbor happened along the road one day and remarked that if the mare and colt were turned in a paddock with a bunch of calves she would likely own the colt. Thinking that no harm could result the experiment was tried, although with very little hope of success. Five calves were running together in a two-acre plot, and the mare with her foal was taken from the box stall, in which she had been confined, and turned in this plot. Before the halter was removed from her the colt was "romping" with the calves. The calves ran and the colt ran after them. As soon as the mare was loosened she galloped whinnying after the colt as if in fear that something would happen to it. Colt, calves and mare raced wildly around the paddock, the colt and calves in play, the mare fearful for the welfare of her progeny. She took to the colt from that moment and made one of the best of mothers, protecting her offspring ever afterward and never again offering to injure it. This mare raised six colts, and owned every one of them from that time on. While the experiment may not work in all cases it did in this one, and is worth a trial as no danger of injury is involved.

Several inquiries have come to hand during the past winter and spring regarding mares running milk before foaling. When a mare runs milk several months before foaling and then dries up and her mammary glands again become active at the proper time for parturition, a prominent veterinarian informs us that his experience has invariably been that twins are foaled, one being normal and generally alive, although weak, while the other is very small and mummified. This latter foal is believed to have died at the time the mare's mammarys were first active. Horse raising presents many peculiar circumstances.

LIVE STOCK.

Get the pigs out-doors.

The calf paddock is worth while.

The grass came early, but this is no excuse for too close pasturing.

Give the calves some water besides the milk allowed. It is surprising how much they will drink.

Of all the live stock on the farm none have paid better than the pigs. The price of pork alive and dressed has been high, with that of grain comparatively low. This should result in a boom to the business.

If the cow has a chronic cough try the tuberculin test. Appearances are often deceiving and many cows which, as far as fleshing is concerned give no reason to suspect disease, have tuberculosis developed in them.

If the sheep are to be washed before being shorn, do it early as possible, so they may be clipped before the hottest weather sets in. And in washing do not dip them in cold running water while they are warm from driving on a hot day.

A peculiar fact in pasturing stock is that with cattle when there is plenty of grass and they are kept well filled they are contented, whereas, as soon as a horse gets all he can eat, he commences to wander in search of something new. Good fences are absolutely necessary at all times.

Sweet milk, skim milk, sour skim milk, and buttermilk, says an American authority, are of practically equal value when fed to hogs in the proportion of two and a half to three pounds of milk to one pound of shelled corn. A bushel of shelled corn when fed with water produced an average of 11.9 pounds of pork, but when fed with 153 pounds of milk, the average weight of pork produced in the same length of time was 17.7 lbs. In many factories, continues the authority, the secret of success has been found in the discovery and application of some method of turning former waste into a profitable by-product. The same principle can be well applied to the farm, and farmers should not be slow in making use of any extra milk.

Our English Correspondence.

AN IRISH SHORTHORN SHOW AND SALE.

The 16th of April, 1913, will long be remembered in the green isle of Ireland as a red-letter day among Shorthorn breeders at Ballsbridge, where all previous Irish records were three times broken, and the high price of 5,000 dollars was paid for an Irish-bred bull at the sales held in connection with the Royal Dublin Spring Show. It would seem that the long-looked-for dawn has appeared, and the Argentine was turning her eyes to Ireland in search of high-class stock. Certainly it is directly due to Don MacLennan, the Argentine exporter, that the bidding rushed up so rapidly to figures of 3,000, 4,000 and 5,000 dollars, and these three transactions were begun and ended within the space of a couple of minutes. For the past few years Irish-bred bulls have made sensational prices at Palermo sales, on two occasions coming second to the top at figures between 15,000 and 20,000 dollars, and earlier in the spring Argentine buyers were known to have been operating in the north of Ireland. Let us hope that the present occasion is only the opening of a lucrative trade direct with South America that will give a hall-mark to the Royal Dublin Society's well-deserving sales at Ballsbridge, and bring them up to the standard of Perth or Birmingham. But Captain Ogilby's 3,000 dollar first prize and champion yearling was got by Count Crystal, a bull which, as a calf, fetched 6,500 dollars at the Newton sale, and this was the record price paid for a Shorthorn bull calf up to that time.

The aged bulls made up a fine lot of substantiated animals at the Dublin show in question. Mr. Macan's winner, Garbity Count, was a red of great depth and scale, and was afterwards placed reserve for the Chaloner Plate. Second rosette fell to Alexander Robinson's Rubicon, a roan of less depth and quality, though more level and better over the quarters. In the class for two-year-olds there were two exceptional entries. Toler Aylward's richly-colored roan, Ashgrove Carnival, which was placed first, won the Chaloner Plate, the silver medal, and after-

wards sold at 5,000 dollars, and William Black's deeply-ribbed red Augusta's Champion, which sold for 3,000 dollars.

It was really among the auction classes that the strongest competition took place; and the first of note was R. L. J. Ogilby's Pellipar Dandy, which was placed first among January yearlings, won the championship prize of 100 dollars, and the Phoenix Challenge Cup as the best yearling Shorthorn bull, and was afterwards sold at 4,000 dollars. He was a bull of rich color, fine touch, and great breed character. Pellipar Dandy is extremely well shaped. Of different type from the champion, he is low-set and blocky, with great rib and girth, and better furnished over the quarters, though he is not quite so level as the older bull over the back. In the same class there was another good bull in John Leslie's Rowena's Star, a level, sappy-looking roan, that was deeply substantiated, and had good quarters, though he did not finish so well over the rump. He fetched the fourth prize of the day at 1,000 dollars. The youngest class of bull calves were really an attractive collection, and presented a closely-matched group of winners, headed by George Dickson's Mile Cross Hawlmark, a compactly-moulded youngster that had plenty of substance for his age. In older cows, Mr. George Harrison won with Gainford Rosemary, a mossy-coated roan of great quality that had plenty of girth.

The Perpetual Challenge Cup, value 500 dollars, for the best group of three Aberdeen-Angus bulls, the property of an exhibitor resident in Ireland, was awarded to Frank J. Robb, Castle, reagh, Belfast.

The Queen Victoria Cup in the Hereford class went to T. H. Montgomery, the Leinster Cup to Sir Nugent Everard, the Hereford Challenge Cup to T. H. Montgomery, and the Nutley Challenge Cup, for the best Hereford heifer, to Major R. W. Hillas.

In Clydesdale stallions foaled in 1911 or 1912 Edward O'Malley got first place with his bay Gloucester, bred by Andrew Biggar. Edward O'Malley's Dublin Diamond Mine was the best Clydesdale stallion foaled before 1911.

But it was the cattle and not the horses which have given Irishmen the chance to shout "whirroo" across the water at the sister isle.

A run through Ireland is sufficient to show that tillage farms but a small part of the life of rural Ireland in comparison with the numbers of acres that are given up to the rearing of sheep, cattle, and horses. And here is a department of industry in which it may fairly be said that Ireland is pre-eminent. Irish folk are fond of saying that there are no horses like Irish horses, and, judging from the way they are sought for by buyers all over the world, the boast is not very wide of the mark. The land,

with undulating slopes of sweet herbage and well-watered plains, suggested to the poetically inclined the name of the Emerald Isle, and is, beyond all others, suitable for the rearing of live stock, and cattle and horses may now be regarded as Ireland's staple produce. Within the last decade, as everyone who compares former shows with that just referred to will admit, the improvement in the breeding and rearing of live stock has gone on by leaps and bounds, and with that improvement as a natural result of the enhanced prosperity of our staple trade, the advance of Ireland's prosperity has gone hand in hand. And this constant improvement is due almost entirely to the exertions of the Royal Dublin Society. Nowadays the cry is all for education and improved scientific methods. Old-fashioned "chuck it and chance it" ways of farming have been completely discredited, and science has been called in to give her aid in the tilling of the ground. And as with science, so also with the breeding and rearing of live stock. The Royal Dublin Society deserves the thanks of everyone who has the welfare of Ireland at heart for their noble work in setting a high standard of excellence, and endeavoring successfully to secure by encouragement, precept, and example, the continued improvement of horses and cattle.

Thus is Ireland coming to her own—can you not understand the "elation" of the press who are singing the praises of the green isle? Sir Gilbert Greenall is breeding milking Shorthorns over there; Thoroughbred breeding is flourishing, and Hackneys are fetching better prices over there than they have ever done. "'Tis a most distressful country," says the old song. I don't think—add I.

SOME CALF AND MILK EXPERIMENTS.

The R. A. S. E. has issued a report upon the calf-rearing experiment conducted at the Woburn Farm, 1912-13. The experiment was begun at the Woburn Farm in the spring of 1912 on the best way of rearing calves from birth. Twenty bull calves (Shorthorns) were selected and purchased in the open market when they were two or three days old, and were brought on to the farm. They all had whole milk only for the first three weeks, taking on the average one gallon per head daily. At the end of three weeks they were all weighed, and were divided up, according to their weights, into five lots of four calves each. The five lots were then put on their several different foods as follows:—cod-liver oil and separated milk; a purchased "calf-meal"; gruel (linseed and oatmeal) with separated milk; whole milk, and crushed oats separated milk. The costs of the several foods were:—whole milk, 14 cents per gallon; separated milk, 4 cents per gallon; cod-liver oil, one dollar per gallon; "calf meal," three dollars per cwt.; oatmeal,



A New Type of Saddler.

Encourage the boys to make friends of the live stock and increase their love for agriculture.

three and a half dollars per cwt.; linseed, five dollars per cwt.; crushed oats (home grown), one and a half dollars per cwt.

According to Dr. J. Augustus Voelcker, who signs the report, the interesting general result is apparent that not only did the crushed oats and separated milk feeding give the highest gain at the least cost during the feeding of nine weeks with the special foods, but that subsequently, when the calves were turned out in the fields and all fed alike, the gain of live weight continued to be higher with this feeding than with any of the other foods. This would lead to the valuable conclusion that the influence of the early feeding of calves has an important bearing on their after development, and that a "good start" is very essential.

The improvement effected by the early feeding with dry crushed oats was well maintained for a period of quite seven months after the special feeding had been dropped. The next best result, as regards increase of weight, was obtained with the whole milk calves, and it must be freely said that in February, 1913, they looked the best of all the lots, having more "bloom" than any of the others. In fact, it was then quite possible for anyone looking over the calves when all together to pick out which were the "whole milk" ones. The "crushed oats" lot similarly stood out above the remainder, and undoubtedly the poorest of all were the calf meal lot. These relative appearances had practically been maintained throughout. It is intended to carry on the experiment until the bullocks are ready to be sent to the butcher.

An experiment in manuring grass land for milk was carried out by the Midland Agricultural and Dairy College in 1912 as the fourth year in succession. Eight acres were dressed in 1909 only with ten cwt. per acre of ground lime to get rid of moss, and half of the eight acres was manured in addition with four cwt. of high-grade superphosphate and one and a half cwt. of sulphate of potash per acre. On the manured plot the herbage was more abundant than on the other, and contained a much larger proportion of clover. Two lots of cows, as equal as possible, were fed on the two plots, being shifted fortnightly. It was found that the usual reduction in the milk yield as the season advanced was much greater in cows when shifted from the manured to the unmanured plot, than when the change was in the opposite direction. At the end of the three months of the trial it was found that 119 gallons of milk more from the manured than from the unmanured plot were obtained per acre. This compares with 81 gallons in 1911, 86 in 1910, and 84 in 1909. At 12 cents a gallon the extra milk in 1909 left a profit of a little more than two and a half dollars. In the other years, as there was no expense for manure, the gains were all profits, and for the four years the profit per acre was 38 dollars. There must have been a further profit from grazing after the trial had ended in each year.

London, England.

G. T. BURROWS.

Crippled Pigs.

Weakness of the hind quarters is a condition frequently seen in growing pigs. It is a form of paralysis, and the exact cause cannot be stated for all cases, says H. P. Hoskins in a Wisconsin news item.

One of the most plausible explanations of paralysis in young pigs is improper feeding. A deficiency of mineral matter, especially lime salts in the diet, is believed to be responsible for the majority of cases. The shortage of lime salts results in the improper development of the bones of the growing pig, and the condition known as "rickets."

On the other hand, the diet may be all right, well-balanced and wholesome, and yet the pigs may not be able to assimilate their feed and get the proper nourishment from it. In this case, the fault lies with the digestive organs. Pigs raised in damp quarters may develop weakness of the hind parts, often said to be a rheumatic nature. In this case the remedy is self-apparent.

So it is evident that paralysis, rickets, malnutrition and rheumatism are similar conditions as far as symptoms are concerned. The same general line of treatment is indicated in all these conditions. Good, wholesome feed, a well-balanced ration, plenty of fresh air and sunshine, with dry, clean, roomy, well-drained and ventilated pens, are the first requisites.

Then see that the pigs have access to a supply of mineral matter in the form of charcoal, bone meal, crushed limestone, wood ashes, and salt. For medical treatment, tonics are indicated, nuxvomica being generally accepted as the best. The bowels should be kept moving freely by laxatives, as constipation is generally present. If treatment is started early, recovery may be expected; but quite often these conditions are allowed to progress too long before receiving proper attention, and then treatment is usually of no avail.

Why Some Female Stock Do not Breed.

One of the causes of loss in all live-stock breeding is sterility. Animals in every breed, of all classes of live stock, are found from time to time to be barren, and the percentage is larger than the casual observer may think. From an article by G. Heslop, L. V. Sc., published in the Journal of Agriculture of Victoria, Australia, we glean some valuable information. Sterility, he defines as the incapacity on the part of an animal to reproduce its species. It may be permanent, relative or transient. Absolute when fecundation does not take place; relative when fecundation occurs only very occasionally, and when development of the young animal is arrested by accident or abortion. A relative sterility may occur in animals in low condition, when owing to malnutrition, there is imperfect development of ovum in the ovary and absence of sexual desire. It may also occur in fat, obese animals, where there may be fatty changes in the generative organs themselves. Relative or transient sterility is produced by causes which are removable, and is therefore amenable to treatment. Absolute sterility, as the name implies, is incurable. Fertility in animals is dependent upon normal structure and function of the generative organs, and any abnormality may be productive of either partial or complete sterility.

The generative organs which are most likely to be subject to abnormalities which cause sterility are the ovaries, womb, uterine tubes and the vagina. The ovaries are concerned in the development of ova or eggs, at the various periods of "season" throughout the generative life of the animal. Two horns run from the womb, the hollow muscle sac in which development of the young takes place, one to each ovary. Connecting these horns with the ovaries are the uterine or fallopian tubes. These tubes convey the ova or eggs to the womb. A portion of the hinder part of the womb projects into the cavity of the vagina and is somewhat constricted where it joins the vaginal wall forming the os or neck. In a normally developed os this constriction does not bring about occlusion of the passage between the vagina and womb, although a great reduction of size of the opening is occasioned. The vagina leads from the neck of the womb and opens externally. Prior to age at which the generative organs are functionally capable of reproduction, these organs are inactive, but when this age comes inactivity gives place to periodical activity and seasons of "heat" take place. Immediately prior to the appearance of heat or season, an ovum or egg undergoes ripening in the ovary and escapes along the uterine tube towards the womb. If a male and female animal become mated at this time the egg will become fertilized by one of the living particles contained in the semen of the male. The union of these male and female elements will result in the formation of a new individual, which will subsequently undergo development in the womb of the female until expelled at birth.

PREVALENCE OF STERILITY

Statistics furnished by English authorities go to show that from 25 to 30 per cent of mares used for stud purposes fail to produce foals; and figures supplied by one of the large German studs go to show that the percentage of sterility in that stud was 28 before artificial insemination was practiced, and that after artificial insemination was introduced this percentage of sterile mares was reduced to 21 per cent. The degree of sterility varies in different breeds. For instance, in Great Britain, in Shire mares, the average percentage of sterility was shown to be about thirty-seven, while in Clydesdales, the percentage was about 32, and in Welsh and polo ponies, the percentage was about 30.

An examination of the figures available goes to show that an enormous annual loss is occasioned by this high degree of sterility in the larger domesticated animals, and, therefore, any means to remedy the evil will commend itself to breeders.

CAUSES OF STERILITY

Injudicious breeding and management.—A great number of cases of sterility have as their casual agent some error in dieting and exercising. "Condition" in an animal intended for stud purposes bears an entirely different relationship to "condition" in an animal intended for slaughter and food. Grossness should never be confounded with good-breeding condition, it being a well-established fact that very fat animals, especially females, often fail to conceive when mated.

Sterility is frequently seen in animals specially prepared for show purposes, where obesity and grossness are often associated with idleness and lack of exercise.

In race-horses there is often noticed a remarkable degree of sterility, especially in females. As these animals are not usually allowed to breed until after the completion of their racing career,

a condition of sexual inertia is established; in addition, the hard, dry food given in a racing stable, tends to hold in abeyance the powers of procreation. Such animals, in the majority of cases, require a long spell of grass before they are mated, in order that they may be capable of reproduction. Food, although probably only an accessory cause, exercises a remarkable influence upon the production of sterility. Unbalanced rations containing excesses of foods which are rich in carbohydrates (starch and sugar) are capable of producing varying degrees of sterility, such foods as brewers' grains being especially notorious in this respect. Foods, such as peas, beans, lucerne, and clovers, containing large quantities of nitrogenous substances, are said to increase fertility. This they probably do to a limited extent by increased sexual desire and assisting in rousing up a sluggish and inert condition of the ovaries to the production of ova and season.

Poverty and overwork are conditions which are often associated, and which tend to lower the fertility of the animal by bringing about ovarian inertia.

The influence upon fertility exercised by age is worthy of consideration. The ability to reproduce the species becomes gradually less as age increases beyond the period of full physical development, until, finally, in old age, the sexual function ceases altogether. Animals which have been mated soon after the attainment of puberty are more likely to conceive than animals which have been kept sexually idle until old age is reached and then mated.

In-breeding exercises an influence upon fertility, it being found that continued in-breeding results in the production of animals possessing varying degrees of barrenness.

Hybrids, such as mules, are generally regarded as being sterile. Cases have been recorded where mules of both sexes have been capable of reproduction, but these cases are exceptional, the rule being that hybrids are sterile.

In mares of an exceedingly excitable temperament it is often noticed that immediately after service the semen is ejected by a series of violent straining motions of the genital organs. In these cases the effect of exhaustive work before service is beneficial. This fact was probably first noticed by the Arabs, as it was a common practice with them, in dealing with excitable mares, to submit them to fatiguing gallop immediately before service, and afterwards to leave them quietly at rest.

In vicious draft mares, brisk exercise and the pouring of cold water over the hind quarters, and loins after service has proved a benefit in preventing the ejection of semen.

Climate, as well as exercising an influence upon puberty in animals; may influence fertility. Animals subjected to sudden changes of climate are often rendered temporarily sterile until acclimatized. It has been noticed that animals are more fertile in countries where the climate is fairly even, and is not subject to sudden extremes of temperature.

In animals affected with chronic debilitating diseases or fevers a temporary and sometimes a permanent sterility is present, in which there is dullness of sexual desire and faulty development of ova in the ovary. In the treatment of this condition, certain drugs having a stimulating action upon the generative organs are indicated. These drugs include strychnine, compounds of phosphorous, arsenical compounds, and several non-official drugs. Another favorite drug among some horse-breeders, but one falling rapidly into disuse among veterinarians, is cantharides (Spanish flies.)

In the use of any of these drugs for ovarian inertia the breeder should be guided by the advice of his veterinarian, for owing to injudicious use, they have been responsible for the production of sexual and other disorders more serious in their consequences than those for which they were originally administered.

A large number of cases of sterility have their origin in alterations in, and diseases of, the ovaries. This is especially true of the majority of cases of sterility occurring in cows, where alterations in the ovarian substance are common. These alterations usually take the form of cysts, which, by enlargement and pressure, destroy ovarian tissue and prevent the development of ova. It is not usual for both ovaries to be cystic at the same time, excepting in well-advanced, old-standing cases. When one ovary is cystic and the other one is healthy it is quite possible for the healthy ovary to take up the whole function of production of ova and for the animal to conceive. Usually, however, a cystic condition of an ovary gives rise to irritation in other parts of the genital tract, causing straining and expulsion of the semen at the time of service. The remedy for this condition is surgical, and has for its object the breaking of the cyst wall and the liberation of its contents; or, in some cases, the removal of the diseased ovary and cyst, leaving the normal

ovary to carry on the whole function of development of the ova.

In pampered, obese animals a condition of fatty degeneration of the ovaries frequently exists. Fat animals are notably infertile, and where fatty changes take place in either the ovaries or the uterine tubes the animal is permanently sterile. Except in the early stages the condition is incurable. Dieting on foods poor in starch, sugar, and fats, together with constant and properly regulated exercise, is about the only treatment likely to have any beneficial effect.

Diseases of the generative organs, such as tuberculosis, and malignant tumors or growths affecting the ovaries, are rare, but when present give rise to sterility. In the case of growths the only effective treatment is surgical removal.

Among sterile mares the majority have at some time in life been pregnant, or have been capable of procreation; the number which have been totally barren throughout life being relatively small. The cause of these cases of sterility in one-time pregnant animals is referable to the previous parturition, at which there was either partial or complete retention of the afterbirth, with or without injuries (abrasions and lacerations) of the genital organs themselves. Retention of the afterbirth is attended with much more serious consequences in mares than in other animals on account of the susceptibility of mares to "blood poisoning" and "founder." Retention of the afterbirth usually occurs in those births in which the expulsion of the young animal from the womb is unduly hurried. It may also occur in cases where birth has been unduly retarded. The semi-attached afterbirth becomes putrid owing to bacterial infection, and this gives rise to catarrhal conditions of the lining membranes of the womb and vagina. The presence of this catarrh may, in some cases, be demonstrated by the occurrence of discharges of more or less thickened fluid material from the vagina. In the majority of cases, however, owing to closure of the neck of the womb by plugs of catarrhal material the fluid is retained within the womb and no vaginal discharge may be seen. Sometimes a catarrhal condition of the membranous lining of the vagina may co-exist with catarrh of the womb, in which case the discharge is profuse. In chronic catarrh the lining membranes become considerably thickened, and permanent sterility results. Even in mild cases the presence of this catarrhal fluid, which is usually acid in reaction, is fatal to conception on account of its destroying action upon the living elements contained in the sperm of the male. If pregnancy does occur it is usually followed by early abortion. Treatment should consist of frequent flushing of the womb with weak antiseptic and alkaline solutions to destroy the bacteria or germs and to correct the acidity.

Occlusion of the opening at the neck of the womb, which may be present in catarrh of the womb, or may occur as a separate condition, acts as a mechanical barrier to the passage of semen towards the ovum, and fertilization cannot take place. Under normal circumstances when season is present in a female animal there is sufficient dilatation of the os to allow the semen to pass along into the womb and meet with and fertilize the ovum elaborated at this time. Very often occlusion is brought about by injuries, such as tearing and abrasions, received at the time of a previous parturition, when, on the healing of these wounds taking place, there is a formation of thickened tissue around the os which obliterates the opening communicating between the vagina and womb. Some of these injuries are caused by the straining efforts of the mother in expelling the young animal at birth, while others are produced by the injurious use of ropes, hooks, knives, and other instruments by persons in attendance upon the mother at the time of parturition. In simple occlusion of the os, unaccompanied by catarrh of the womb or vagina, the treatment adopted should be in the direction of dilating the passage. This can usually be accomplished by passing the hand, previously well oiled, into the vagina and directing it forward until the fingers come in contact with the neck of the womb. By gentle pressure with one finger over the centre of the os, at the same time giving the hand a rotary motion, an opening can be made which can be further dilated by insertion of other fingers until it is large enough to allow the whole hand to pass through into the womb. Perfect cleanliness is necessary in order to insure success. The vagina should be flushed out with weak antiseptic solutions both prior and subsequent to dilatation. The hands of the operator should be well washed and disinfected, and the nails trimmed in order to prevent injury to the womb. The use of instruments in order to bring about dilatation, in the majority of cases, is quite unnecessary, and, unless used with extreme caution, may bring about fatal results. Their use should not be undertaken by any one other than a qualified veterinarian. In cases of occlusion of the os, the use of the inseminator is of considerable value in bringing about pregnancy.

Abortion, either contagious or non-contagious, may cause sterility, as retention of the afterbirth often accompanies it.

Standard for Advanced Registry of Shorthorns.

The following standards of milk and butter-fat production produced under official supervision entitling Shorthorn heifers and cows of various ages to admission into the newly established Record of Performance, have been adopted by the Dominion Shorthorn Breeders' Association and accepted by the Dominion Department of Agriculture.

Bulls—Admitted after having four daughters in the Record of Performance, each from a different dam.

Cows—Admitted after fulfilling the following requirements of production and breeding as supervised by the Live Stock Branch of the Department of Agriculture.

All cows admitted must equal or exceed both the records specified below:

	lbs. Milk.	lbs. Butter Fat.
Two-year-old class	4,000	140
Three-year-old class	4,500	157.5
Four-year-old class	5,000	175
Mature class	5,500	192.5

The per cent of butter-fat shall be determined by Babcock test.

Year's milk record—If the test be commenced the day the animal is two years old, or previous to that day, she must produce within 365 consecutive days from the date, 4,000 pounds of milk. For each day the animal is over two years old at the beginning of her milk test, the amount of milk she will be required to produce in the year will be determined by adding 1.37 pounds for each such day to the 4,000 pounds required when in the two-year-old class. This ratio is applicable until the animal is five years old, when the required amount will have reached 5,500 pounds, which will be the minimum amount of milk required of all cows five years old and over.

Year's butter-fat record—If the test be commenced the day the animal is two years old, or previous to that day, she must produce within 365 consecutive days from that date, 140 pounds of butter-fat. For each day the animal is over two years old at the beginning of her year's test, the amount of butter-fat she will be required to produce in one year will be determined by adding .048 of a pound for each day to the 140 pounds required when in the two-year-old class. This ratio is applicable until the animal is five years old, when the required amount will have reached 192.5 pounds, which will be the minimum amount of butter-fat required of all cows five years old and over.

Every cow accepted for registration of performance must drop a calf within fifteen months after the commencement of the test. In the four-year-old class and the mature class, no cow will be accepted for registration if the beginning of her previous lactation period was more than fifteen months before the commencement of the test.

All applications for the test must be mailed to W. G. Pettit, Freeman, Ont., Secretary of the Dominion Shorthorn Breeders' Association.

THE FARM.

Lambton Corn Growers Organize.

In response to an invitation from W. H. Porter, the District Agricultural Representative for Lambton Co., Ont., an enthusiastic number of Lambton County Corn Growers met in convention at Oil Springs on Saturday early in May, Mr. Anderson, Warden of the County Council, presiding.

Addresses by John Hunter, Wyoming; R. L. Moorehouse, Cairo; B. W. Fansher, Florence; Alex. Wark, Wanstead; S. C. Smale, Oakdale; brought out many important points. In 1911 there were over 23,000 acres under corn, producing an average of 76 bushels per acre. The growers present agreed that 100 bushels per acre was not worthy of the County. Could the crop be increased even to 100 bushels per acre it would mean an increase of over 550,000 bushels of corn per year. Seed corn produced in Lambton County will mature from one week to ten days earlier than corn imported from Essex, Kent or United States. It is not only better for home use, but superior as well for the counties which lie to the east and north of Lambton.

Mr. Porter explained the object of the Association, and suggested how good seed might be disseminated over the country through the instrumentality of corn shows, schools, farmers clubs, corn clubs and experimental plots. Chas. Fleck moved that a Corn Growers' Association be organized, whose object it shall be to enhance the quantity and quality of corn grown in

Lambton County. A constitution and code of by-laws were at once agreed upon, and an Executive appointed, comprising, as President, Chas. Fleck, Corumma; 1st. Vice-President, R. L. Moorehouse, Cairo; 2nd. Vice-President, S. C. Smale, Oakdale; Treasurer, John Hunter, Wyoming; Secretary, W. H. Porter, Petrolia.

Many growers not able to be present communicated their interest in the move and desire to become members. All were emphatic of the importance of a high standard for the seed corn produced by the Association. If interest and enthusiasm be any criterion for judgement, success is assured to the Association, and much good will eventually accrue to the County of Lambton through this organization.

Wiring Rafters to Plate.

Editor "The Farmer's Advocate":

In going through the country last week, I was amazed at the extent of havoc done by the storm on Good Friday. Few stables but are injured, by loss of chimneys, fences or something else, ranging from twenty dollars to hundreds, and in a few cases, to thousands of dollars. Excepting the injury to the crop by the excessive rains of last summer, nothing in our annals has ever caused such a loss. Barns and houses unroofed, windmills blown down, are to be seen everywhere. Some barns are blown down entirely, others, just as bad, but having two or three bents left standing, and of no more use than the parts blown down. Some roofs of houses and barns had the shingles blown almost entirely off, and the wet weather following, destroyed a great quantity of feed.

Shingles are now coming in in fair quantity, but for two weeks almost nothing could be done to patch up, for lack of lumber, shingles and nails.

In looking over many of the wrecks it is plainly seen that some very bad work had been done by mechanics. Shingles imperfectly nailed were most visible. Too many workmen boast of the amount of roof they can shingle in a day; and, after looking over the roof, and seeing the shingles,—for they are now tell-tales of the integrity of the builder,—I have come to the conclusion that it is almost impossible to get an honest workman. This may sound too harsh, but contractors have run their estimates so close, by counting so much on slighting work or putting in poor material, that a thoroughly honest workman need not tender, for he knows he could not do the work at the price and have anything left.

Bricklaying as well as carpenter work is badly done. Chimneys with poor mortar, where the wind has blown it out from between the bricks, and no bond of brick and mortar to keep them from falling.

There was no doubt that the wind was terrific. Only a small percentage of the damage actually done was due alone to the wind. The nailing of the roofs gave way first. The nails from the rafters to the plate, in some cases, pulled out and there was nothing left to hold. Some roofs were saved before being blown off, after lifting a foot or two off the plate, by the owner tying the roof down with wire or some other contrivance at hand.

I am giving you a simple way of tying the rafters to the plate, which may be of benefit to some of your numerous readers.

A terrific storm about twenty years ago had got the lower end of the rafters flopping up and down of a barn 50x100, and with neighbors' help I saved it by wiring. I twisted a double piece of wire about eighteen inches in length, making one piece about nine inches, and nailed one end to the rafter and the other to the plate, and the roof has never moved since. This device is easily made, will not work loose, and should be on every barn.

Bruce Co., Ont.

WM. WELSH.

No Rodded Buildings Burned.

In the article "Lightning and Lightning Rods" on page 765 of "The Farmer's Advocate" of April 24th, the omission of a word converted a negative into a positive assertion. Near the end of the second paragraph was the sentence "They had nineteen buildings burned, of which one was rod-ded." It should have read "of which not one was rod-ded."

Six field agents for agricultural education have been appointed for 1913, their work being to visit, inspect, and report upon the schools undertaking to give systematic instruction in agriculture, and thus qualify for special grants. The Province is divided for this purpose into districts of several counties each, and the men engaged are: R. H. Abraham, W. J. Austin, A. M. McDermott, R. A. Finn, E. L. Small and J. E. McLarty.

An Elgin County Barn.

Editor "The Farmer's Advocate.":

In 1912 H. V. Mann used the timbers of his two old barns to build a new and modern barn. His old barns were 50 feet long, and he put the frame of an old barn across each end of his new barn, and let the long way of the old barn go crosswise or the (50 feet) narrow way of his new barn. The space between the two old frames is used as the drive floor. A granary is situated in the south-east corner of the barn. This barn is situated about one mile east of Aylmer in Elgin County, Ont. Nearly all the barns in this section are large, hip-roofed, dairy barns with modern conveniences. Any farmer expecting to build a good barn could get much useful information by taking a trip to this part of the country, and going through some of the best barns.

Our barn, illustrated in last week's issue of "The Farmer's Advocate", is 60 feet by 100 feet, and built on the truss system with no beams inside. It has two hips on each side. Mr. Mann's barn is just east of ours. It is fifty feet by eighty-four feet, and all measurements are given on the plan of the basement produced here-with. He has patent wooden cow stanchions constructed on a swivel at top and bottom so as to revolve, but not move from side to side. A barn like this would cost \$3,000, and Mr. Mann finds it very convenient to work in. Everything is well finished and of good material. The roof is galvanized iron. The windows have iron gratings over them, so the stock cannot break the glass. This barn is a good size for a 100-acre farm.

Elgin Co., Ont.

THOS BRADT.

Fences and Fencing.

Editor "The Farmer's Advocate.":

It was no uncommon sight this spring to see rail fences blown down by the storm. Many days' work were required to fix up same, and still some rails are scattered beside the fence lines.

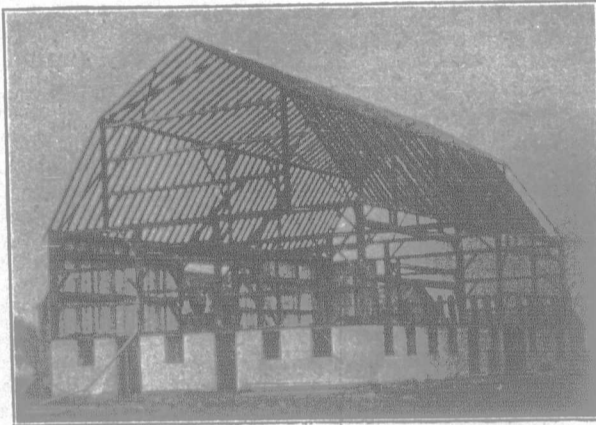
Here again we see the superiority of wire fencing. If properly built, they need no repairs for several years. The time is approaching when the last rail will have been decayed, and the wind then will have no chance to ruin fences. Nature's destructive agent then will be "rust." Poorly galvanized wire rusts out within a few years, and should always be avoided. To test the galvanizing, take a piece of the wire and bend it to a short angle. If the galvanizing breaks, the latter was poorly done.

When building a wire fence, the first thing is to set the end or corner posts well. For long fences I use a ten-foot post, eight inches in diameter, and make notches at the bottom for two scantlings, four feet long, which are nailed securely with six-inch spikes. The hole for this post is made four feet by three feet and about five feet deep, the post is put in and the hole filled up level with the scantlings. I place small boards, three feet long, over them to make a large anchor platform, and fill the hole up to the top, tramping thoroughly. A flat stone or a board can be put crosswise in front of the post near the surface if desired but this is not necessary.

Next comes the bracing. A post (an ordinary cedar post is ideal) five inches in diameter, is placed twelve feet from the end post in the fence line. I always nail a plank, two feet

long, crosswise in front of the brace post, about four inches below the surface, to keep former from shifting while stretching. For a brace I use a cedar pole, four inches in diameter at small end, placing it three feet from ground at the end post and eighteen inches at the brace post, and nailing it securely in notches with spikes on both sides of brace. Four strands of wire are passed around the two posts, (No. 9 soft) and stapled up as high as possible on brace post and as low down on end post as possible. After this the wire is cabled with a piece of wood or a hammer handle till tight.

After having prepared both ends as above and the line posts set, I proceed with wire. Some use woven fences the majority of which are all right, but I prefer the following method of making fence. No. 9 coiled wire is passed around post and wrapped around itself about four times with a wire splicer. To unroll wire I always put the reel on a stone boat, and drive with the boat along the fence line. In this way the wire draws gently from the roll and lies quietly on the ground. Some place reel on the ground, and fastening singletree to wire draw it over the ground. Drawing the wire over the ground and



An Elgin County Barn, Showing Construction.

small stones, as is often done, disturbs and scratches away a great deal of the galvanizing, which is the wire's protection from rust. I only set reel on ground for very short fences, where I pull wire out by hand.

Stretching is usually done with a block and tackle and a wire grip, but I prefer the stretcher made at home by the aid of a blacksmith.

Two pieces of chain and a maple scantling three inches by three inches by ten or twelve feet are necessary. The pieces of chain should be about three feet long, and must have a grab hook at one end and a ring at the other. In one end of the lever or scantling three holes are bored through about one foot apart. In the middle hole of the lever a chain is fastened with a clevis (not one of the chains mentioned above, but another chain or strong rope), and with the other end to the anchor post. The small chains mentioned above are fastened on the lever by clevises with the grab hooks pointing the opposite way than with the chain mentioned before. The wire grip is then placed about ten feet from stretcher and an ordinary logging chain fastened on it and pulled towards the stretcher, one grab hook of the latter is hung on it and the lever pulled back and forth; an attendant hanging the other

grab hook on every time the lever is pulled till wire is tight enough.

If fence is built over rolling or rough ground, the wire must be stapled enough on hills and in hollows to keep it in place. Use galvanized staples entirely, because others rust out and even start rusting the line wire. It is also not good policy to hang old, rusty wire on new fences.

Some complain that cattle, pressing against the fence, pull out the upper staples. This can be prevented by wrapping a No 12 soft wire around strand on one side of the post, passing around post, wrapping the other end of the wire around the strand on the opposite side of post. Another preventive in use, for the top, is a barbed wire. Some would likely think this is dangerous, but it is not so dangerous as a fence without it, and it stops horses fighting over the fence and getting shoes caught, etc. For uprights I generally use stays of No. 7 or No. 9 wire with wedge, which I procure from a firm in London. Some farmers use wooden stays and fence hooks, which are all right with the exception that they soon rot and break so easily.

As to the post-hole-digging machine doing entirely away with hand work, I do not believe that such a machine would pay the average farmer except for doing work for others. For my own use I prefer the ordinary digging tool, but if one has to buy fence posts he would do better buying iron posts. Such posts should, however, be galvanized. Some used in this locality are not, and the result is the wire starts to rust where it touches the post and soon afterwards breaks.

Waterloo Co., Ont.

SIMON KUNTZ.

POULTRY.

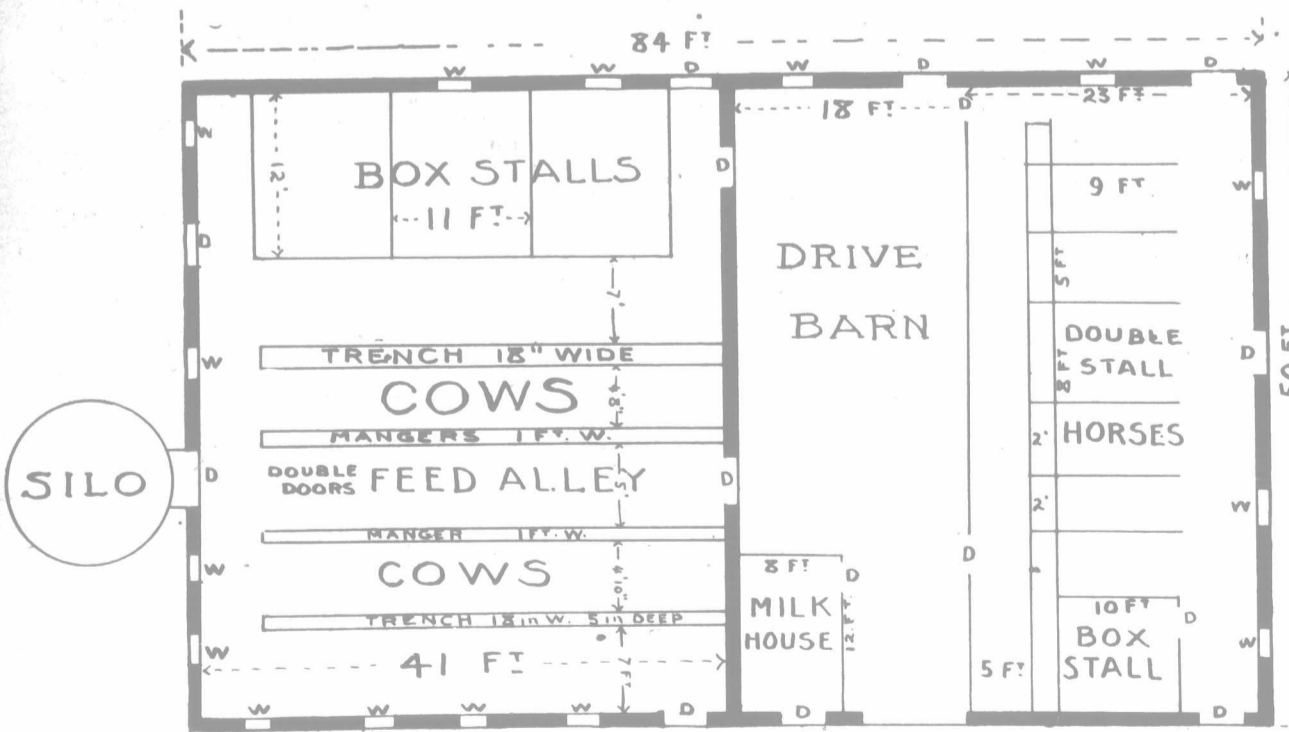
Poultry Keeping in the City.

Editor "The Farmer's Advocate.":

I beg to submit for your readers' consideration my experience in keeping poultry in a city. At the outset I may say that judging from the net profit it would appear that the "game wasn't worth the candle." However, an urban amateur poultryman is not in the business simply for the money he can get out of it, but on the other hand he doesn't care to dabble in it as a losing proposition even if he gets some pleasure in the bargain. If one can combine a good deal of pleasure with a modicum of profit in any side-line as a hobby the venture is worth while. In the tremendously strenuous fight one has to put up these days to make both ends meet it is a mighty good thing to have some recreative pursuit that will relieve the tension for a while with the least possible outlay. Poultry-keeping fills the bill for this purpose in my humble opinion at least.

When we hear the rooster crow and the hens cackle it makes us forget all the worries and care of the office, workshop or school-room. For the time being we are back on the old homestead hunting eggs in the straw-stack, under the manglers and in the mows. There is a great deal of wisdom in the man who does some things "just for the fun of it" and not "for what is in it."

Now for a few facts and figures. During the past year I have learned a few things that are worth recording. In the first place it is not wise to keep a large flock of chickens in a limited space. Twenty-five hens is enough for any ordinary sized city lot. It is absolutely necessary also to keep the hen-house dry and clean. I was advised to have a dirt floor, but I soon discovered when the fall rains set in that it was necessary to put in a board floor. In doing this, however, I made a sad mistake. In the scratching pen, in order to save time I laid the sleepers on the ground. This made a fine resort for rats, a cat couldn't get at them. By means of traps I prevented the rats from increasing very rapidly until last summer, when I had an experience that I shall not soon forget. We had hatched out about sixteen chickens, most of them pure-breds, and when they were old enough to wean (is that the proper term?) I put them in the scratching pen. I was afraid the rats might get in so I nailed up every possible opening. All went well for a few days. One morning, however, I missed five chickens and noticed that another one was nearly dead. I looked around for the cause and soon found a rat hole in the floor big enough to pull a small pullet through. Well wasn't I mad? That evening I poured out my tale of woe to a sympathetic neighbor who was hoeing in the garden. "Let us tear up the floor," said he, I took him at his word and at it we went. Such a sight! There were little rats, medium rats and big rats. The ground was fairly honey-combed with tunnels. One shout soon brought reinforcements and the fun began. Everybody had a club and the fur began to fly. We killed about twenty rats and probably more than that number escaped. I had been feeding those young robbers all winter and spring, although I had caught nearly a dozen in the feed-bin in traps.



Plan of H. V. Mann's Barn, Elgin Co., Ont.

In the early part of the fall I foolishly put the floor down again, and about a month after the rats came back and one night killed three big chickens. I was determined not to be beaten so I lined the floors along the walls with a fine meshed poultry netting and have had no trouble with them since. The rats are there however, but their end is near. I would strongly advise anyone who contemplates building a henhouse which requires a floor, to put the floor high enough above the ground for cats to enter. Cats are the natural enemies of rats. Nearly every morning one or two old tabbies can be seen sneaking round the pen.

Another very important point I learned during the past year is, that the eggs of hens that are good layers will not always produce a good laying strain of pullets. When I commenced the poultry business I bought three Columbian Wyandottes and they were hustlers to lay. I naturally decided to breed a flock of pullets from these Columbians that would astonish the community by their egg-production. I placed them in a pen by themselves, with a pure-bred white Wyandotte cockerel; saved all the eggs and hatched out two settings of as fine-looking chickens as ever delighted the eyes of a hen fancier. I could hardly wait for those pullets to grow up, so anxious was I to see the results of my experiment. To make a long story short I wish to state I never owned such poor layers and such inveterate "sitters." It was almost impossible to break them off the habit. They had one redeeming feature, however, which enabled me to make the most out of a disastrous experiment. They would sit any place, hence, I made some good trades with my neighbors who wanted "cluckers."

Last year I determined to make a change in the breed and so invested in a setting of black Minorcas, two settings of brown Leghorns and a setting of Rhode Island Reds. But as luck would have it, half of the chicks were cockerels, so that with rats and roosters my stock of pullets was disappointingly small, and the funny part of the experiment is that two of the Rhode Island pullets are always wanting to "sit."

Another fact that I have learnt worth noticing is this, it doesn't pay to keep a hen more than two years. After that age they do not lay as well, as a rule, and are more likely to take some disease. Another fact worth remembering is that hens should have a varied diet in which corn should predominate. I feed a mixture of corn, wheat, oats, barley and buckwheat. Of the foregoing cereals barley is of the least value and corn of the greatest value for egg-production. It is no wonder that people who feed their hens nothing but barley get very few eggs. At noon our hens are fed with a mixture of shorts and alfalfa, into which has been sprinkled a little condition powder. Our hens are also kept well supplied with ground charcoal, grits, oyster shells and cut-bone. It is sometimes possible to get fresh cut-bones with just enough meat on them to furnish the necessary animal diet. Plenty of litter, preferably straw, should be kept in the scratching pen, and it must not be forgotten also, that hens should have ready access to a box of clean ashes or dust. I find it necessary to clean off the dropping boards at least once a week, to put coal-oil on the roosts occasionally, to change the litter in the nests quite often, to separate sick hens from the rest of the flocks, and to take a live up-to-date journal like "The Farmer's Advocate."

In conclusion, I wish to say that I am quite sure there is money in keeping poultry if the business is managed carefully and intelligently.

As I intimated at the beginning of this too lengthy article I have not found the secret of making hens "lay golden eggs," as the following statements of receipts and expenses will prove, but I am far from discouraged, for the balance, even if small, is still on the right side of the account.

Disbursements: 1,050 lbs. of mixed feed, \$19.70; 15½ bushels of wheat, \$14.70; 9 bushels of corn, \$7.35; 6½ bushels of barley, \$3.65; 4 settings of eggs, \$3.25; 205 lbs. shorts, \$3.03; 3 bushels of huckwheat, \$2.45; 4 packages of poultry food, \$1.25; 100 lbs of screenings \$1.15; 35 lbs. of chick-feed, 85c.; bag of tailings, 75c.; 50 lbs. oyster shells, 50c.; 1 bushel of oats for sprouting, 40c.; 12 lbs of cut bone, 36c.; 12 lbs. alfalfa, 35c.; 20 lbs. grit, 20c.; ground charcoal, 10c.; making a total of \$60.04.

Receipts: 588 eggs, April, \$11.76; 510 eggs, May, \$9.35; 380 eggs in June, \$3.96; 394 eggs in July, \$7.04; 282 eggs in September, \$4.66; 147 eggs in October, \$3.06; 51 eggs in November, \$1.77; 90 eggs in December, \$2.75; 108 eggs in January, \$2.50; 303 eggs in February, \$6.80; 459 eggs in March, \$9; and 22 broilers worth \$9.80, making a total of \$75.45. As there were 35 chickens in the flock in the beginning of the year and only thirty at the end of the year my net gain was only \$13.41.

Perth Co., Ont. W. J. BLAKESTON.

[Note.—Corn is all right for egg-production when it does not make the layers too fat, but to

avoid this it must be used in very limited quantities, especially in mild weather. Even in cold weather the feeding of much corn in confinement is attended with the risk mentioned.—Editor.]

Some Poultry Hints.

Farmers' Bulletin No. 528, of the United States Department of Agriculture contains some good advice for poultry keepers. Among other useful hints are the following:

Be sure that the male at the head of the flock is pure-bred.

Toe-mark all the chicks as soon as they are hatched. This enables one to tell their ages later.

Powder the chicks occasionally during the first eight weeks.

Chicks should not receive feed until they are 36 hours old.

In cool weather 10 to 13 chicks are sufficient for one hen, while in warmer weather 15 to 20 can be cared for successfully.

Never mix chicks of different ages.

Confine the hen until the chicks are weaned.

The coop for hen and chicks should be well ventilated, easy to clean, and of sufficient proportions to insure comfort.

In connection with the poultry house:

Select a location that has a natural drainage away from the building.

A dry, porous soil, such as sand or gravelly loam, is preferable to a clay soil.

In most localities the buildings should face the south, as this insures the greatest amount of sunlight during the winter.

Proper ventilation and sunlight mean a dry house and healthy birds.

The partial open-front house is conceded to be the best type for most sections.

The colony plan of housing poultry may be adopted to good advantage on many farms. This system does away with the danger of tainted soil.

The roosts should be built on the same level, 2 feet 6 inches from the floor, with a dropping board about 8 inches below them.

Good roosts may be made of 2 by 2 inch material with upper edges rounded.

The nests may be placed on the side walls or under the dropping boards. It is best to have them darkened, as the hens prefer a secluded place in which to lay.

A splendid mixture for laying hens is equal parts of cracked corn, wheat, and oats, which should be scattered in the litter.

Bran or middlings and beef scraps should be kept in receptacles to which the fowls have access at all times.

Plenty of exercise increases the egg yield.

Provide 4 or 5 inches of good, clean litter in which to scatter the grain.

Cabbages, mangels, potatoes, sprouted oats, etc., make excellent green feed.

When wet mashers are fed, be sure they are crumbly and not sticky.

For the first three days chicks may be fed a mixture of equal parts of hard-boiled eggs and stale bread, or stale bread soaked in milk. When bread and milk are used, care should be exercised to squeeze all the milk out of the bread. From the third or fourth day until the chicks can eat wheat and cracked corn, commercial chick feed is a good ration.

Plenty of pure, fresh water, grit, shell, and green feed should be available from the first day.

There is very little danger of overfeeding young stock.

Feed the chickens about five times daily and only what they will eat up clean in a few minutes, except at night, when they should receive all they want.

In regard to egg production the bulletin says:

Produce the infertile egg.

The hen's greatest profit-producing period is the first and second years, and unless a hen is an exceptionally good breeder she should be disposed of at the end of her second laying season and before starting to molt.

Few eggs can be expected until the pullets are matured.

If possible, mark the pullets that lay in the fall, and use them in the breeding pen for the following spring.

Soft-shelled eggs are often caused by fowls being confined, becoming over-fat, and from lack of mineral matter.

Uniform products command the best price on the market. Pure-bred fowls produce uniform products.

Begin marketing the cockerels as soon as they weigh 1½ pounds or attain a marketable weight.

When selling eggs to the country merchant or cash buyer, insist that the transaction be on a quality basis.

Ship or deliver eggs twice or three times weekly.

Small or dirty eggs should be used at home.

When taking eggs to market they should be

protected from the sun's rays.

Infertile eggs will withstand marketing conditions much better than fertile eggs.

The free use of an effective lice powder is always in order.

A dust bath is very essential.

In applying powder hold the fowl by the feet, head down, and work the powder well down into the feathers.

The free use of kerosene on the roosts and in the cracks will exterminate mites.

Whitewash is very effective against vermin.

For common diseases the following treatments are recommended:

All diseased birds should be isolated.

Colds and roup.—Disinfect the drinking water as follows: To each gallon of water add the amount of potassium permanganate that will remain on the surface of a dime.

Canker.—Sprinkle a little flowers of sulphur in the mouth and throat of the bird, and put some chlorate of potash in the water. Also carefully remove the exudate with the aid of warm water and apply a two per cent solution of creolin to the diseased tissue.

Chicken pox.—Apply a touch of iodine and carbolated vaseline to each sore.

Gapes.—New ground and vigorous cultivation will often remedy this trouble.

Scaly legs.—Apply vaseline containing two per cent of creolin to the affected parts, and after 24 hours soak in warm soapy water. Repeat treatment until cured.

Diarrhea in hens.—Low-grade wheat flour or middlings is good for the trouble. Also give teaspoonful of castor oil containing five drops of oil of turpentine to each fowl.

Bowel trouble in chicks.—Well-boiled rice mixed with a little charcoal will often check this complaint. Dissolve fifteen grains of crude catechu in each gallon of drinking water.

It is urged that all poultrymen adhere strictly to the following rules in handling their poultry and eggs:

1. Keep the nests clean; provide one nest for every four hens.
2. Gather the eggs twice daily.
3. Keep the eggs in a cool, dry room or cellar.
4. Market the eggs at least twice a week.
5. Sell, kill, or confine all male birds as soon as the hatching season is over.

Period of Fertility in Poultry.

Have pure-bred R. C. R. I. Red hens. As our male birds of same breed died and we couldn't get another of same breed, we mated them with a buff Orpington on the 24th, and have now obtained a red cock; we have ten hens, six of them laying at present. By mating red hens and cock how soon would the eggs be pure-bred?

Ans.—We would not take chances by setting these eggs as pure-breds until three weeks had elapsed. Had there been no male bird with the flock it is probable that the eggs would be alright to save by the fifth day, as most of them should be fertilized by that time, but it is the effect of the previous fertilization that you have to guard against. To fill out an incubator this year, the first setting, we bought some eggs from a fancier, whose white Wyandotte pullets had been running with a Rhode Island Red cockerel until five days before commencing to save the eggs for hatching, after which date they were penned with a White Wyandotte male. The eggs we got were laid from the fifth to the thirteenth day after the change in mating. The percentage of fertility was fairly good, but out of twenty chickens hatched from these eggs, sixteen showed some color marks of the Rhode Island Red.

THE DAIRY.

In selecting cows to keep or breed from, do not fail to allow a few extra points for the one which is nice to milk, not too easy and not too hard. In the course of a year this means a good deal in convenience and saving of time.

Either the straight-sided or the narrow-topped milk pail has much to commend it, but the pail with a wire screen through which the milk streams have to be squirted, is an invention of very doubtful value. It seems as though the principal advantage of such a pail would be to dissolve as much as possible of the soluble dirt and bring the bacteria-laden particles into more intimate contact with the milk.

The quantity of milk a cow will yield in any given year is largely influenced by the daily average to which she is brought up during the first few weeks after freshening. The tendency is for the flow to diminish, from various causes, as lactation proceeds. The higher the point at which it starts off, the longer it has to run be-

fore getting down to an unprofitable minimum. The cow which does not milk pretty well during the early period of lactation is difficult to increase much, till she freshens again. After the first few weeks, extra feed is liable to go on her back.

The average prices per pound of fat paid patrons by the Guelph Creamery Co., were: 26.49 cents in 1909, 26.61 in 1910, 26.71 in 1911 and 29.95 in 1912. The make of this creamery has showed a rapid increase during the past four years, 564,425 pounds of butter having been made in 1912 and total sales amounting to \$166,446.05. The average selling price of butter was 28.72 cents. The March statement shows a make of 44,896 pounds of butter, in addition to nearly a thousand pounds of fat used by the O. A. C. Dairy Department. The net price paid patrons per pound of fat during March was 33 cents. The average for the month was 19 per cent.

W. G. Pettit, Freeman, Ont., Secretary of the Dominion Shorthorn Breeders' Association, informed "The Farmer's Advocate" last week, that fifteen applications for official tests for the newly established Shorthorn Record of Performance had already been forwarded to Ottawa by him and a good many more are expected soon. One application had been made and additional forms asked for by the Department of Agriculture, Edmonton, Alta., which bought two carloads of heavy-milking Shorthorns last fall, and proposes, it is understood, to give special attention to that class of cattle, with a view to demonstrating the suitability of the dairy Shorthorn for the Western farmer.

Our English Correspondence.

CHEESE MAKING IN CHESHIRE

H. M. King George and his august wife, Queen Mary, have been cheesemaking. They recently visited the Cheshire County Dairy Institute, situated at Wbrieston, three miles from Nantwich. Some years ago Cheshire farmers experienced a lack of good dairymaids. At the time of the great cattle plague, Cheshire had grievously suffered by the decimation of its fine stocks of dairy cattle, and the cheese trade had, of course, suffered too. As a matter of fact the London market for Cheshire cheese has never been fully regained. There have always been fine dairies in Cheshire but the art of making cheese was not a growing one; indeed it stood still. It occurred to a few of the foremost men concerned in the Cheshire cheese trade in those days that something might be done to improve the uniform quality of the staple article. Whenever there was a slump in the cheese trade some of the inferior sorts became a glut on the market, and farmers suffered severely. The cheesemaker did not trouble himself very much about science or scientific methods; in many cases the "rule of thumb" was practically followed, and the results varied in greater or less degree. Good land and good cattle did not necessarily mean the primest of cheese.

In 1877 Canadian and American cheese had driven the medium and common qualities of real Cheshire-made cheese out of the market, even today Canada is still a forbidding competitor.

The launching of the school or institute scheme had this excellent effect—it directed the attention of many of the landowners to the importance of the great dairy interest in the county, and to the desirability of encouraging their tenants in every

way, by the provision of suitable buildings and apparatus to produce dairy products of the highest quality. More attention was devoted by tenants to the breeding and feeding of the best cattle for the dairy, and for improving dairy rooms in every possible way, and there is no doubt that with the opening of the institute the cheese-making industry received a great impetus. In quite a short time not a few farmers admitted, that, as a result of lessons received at the Institute, by wives or daughters, they were making from ten to twenty shillings a cwt. more for their cheese. The Institute is a farm on the estate of Colonel Sir Edward Cotton-Jodrell. The kitchen has all the character of an old farm-house kitchen. Its low ceiling and massive oak beams supporting it at once charmed Her Majesty, Queen Mary. There was some character about this, and its roominess and its oak beams, which prompted Her Majesty to exclaim "What beautiful old beams. This is the loveliest kitchen I have ever seen." A little later the King and Queen entered the dairy where Miss Foster, the manageress, explained the process of cheesemaking. The treatment of milk and curd through all the five stages when coloring and rennet are added to the ripening milk, when the milk becomes coagulated, the curd is stirred, and put into cloth and aerated, turned and tested, and milled, salted and put into moulds, and lastly ironed and bound with calico, was demonstrated by the dairymaids engaged at the five vats. The final demonstrations took place in the press house, where the cheese was ironed and calicoed. From the dairy the King and Queen proceeded to the butter dairy, where again, their Majesties saw the making of butter from the initial to the final stages. Hence, butter was shown in grain, when being worked, and when made up and packed. The king expressed his admiration of the cream cheese, and said he would like to take away a packet of these, and also a pound of butter. Samples of each Lord Stamford chose, and stowed away in his pocket. These and a sixty-pound colored cheese, made on the long-keeping principle, passed to the King as mementoes of his and her Majesty's visit to the Dairy Institute of Cheshire. The cheese was formally presented by Miss Foster on behalf of the County Council of Cheshire.

One can repeat that the work of the Worleston Institute has given a stimulus to the Cheshire cheese trade. In Leicester and Derbyshire cheesemaking has been going down, but during the past twenty years the weight of cheese produced in the Cheshire cheese-making district has doubled. Shropshire is perhaps the county nearest akin to Cheshire in its pastures, and for some years Cheshire farmers have been going into that country in increasing numbers, and making cheese on the Cheshire principle. The land is well adapted for it, and at present a great weight of Cheshire cheese comes from Shropshire, where there are fewer sheep and less corn growing than formerly.

Nearly as much Cheshire cheese is now made in Shropshire, Denbighshire and Flintshire combined as in Cheshire, the quantities being roughly, County of Cheshire, 25,000 tons, and the other four counties combined 20,000 tons, or approximately a total output for the whole five counties of 45,000 tons annually of the Cheshire article. Canada is now sending to this country 90,000 tons of cheese a year. Its merit lies in its being of level regular quality; it falls short of the finest Cheshire; but it makes at the present moment £65 per ton in the market, and it is a serious competitor with the common sorts of Cheshire. Dutch cheese comes in considerable quantities, but its attraction is not high quality

so much as its lowness of price. New Zealand has lately entered this marathon-like race of cheese-making, and her goods are increasing in favor each year.

London, Eng.

G. T. Burrows.

HORTICULTURE.

If a number of the plants in the strawberry patch are wilting and dying, dig down at the root, and it is more than likely the white grub will be found doing the damage. The only remedy is to kill the grub after found.

A trip from London to Toronto via Hamilton, which takes one through some of the finest fruit country in Ontario, viz., the Burlington district, showed a few days ago, a wonderful prospect for fruit, but sharp frosts following may have materially lessened the setting, and the crop may not be as heavy as at first promised.

The tent caterpillar is said to be prevalent in some districts this season. These worms hatch out early in the spring and begin feeding on buds or young leaves. They always build a silken tent in a fork of the branches of the tree, in which they remain while not feeding. The nests are readily seen, and when small are easily removed and the contents crushed. In orchards which are regularly sprayed with arsenate of lead for the codling moth, these, and all other leaf eaters are killed.

Many tree pruners would be more appropriately termed "wood butchers." An orchard was visited the other day, which, previous to pruning, was very thick, and which, after pruning, had very little left but a few of the larger branches—scarcely enough foliage-bearing wood to keep the trees alive. A pruner must, to make a success of his work, have some knowledge of the fruit trees upon which he works, the fruiting habits and form of growth.

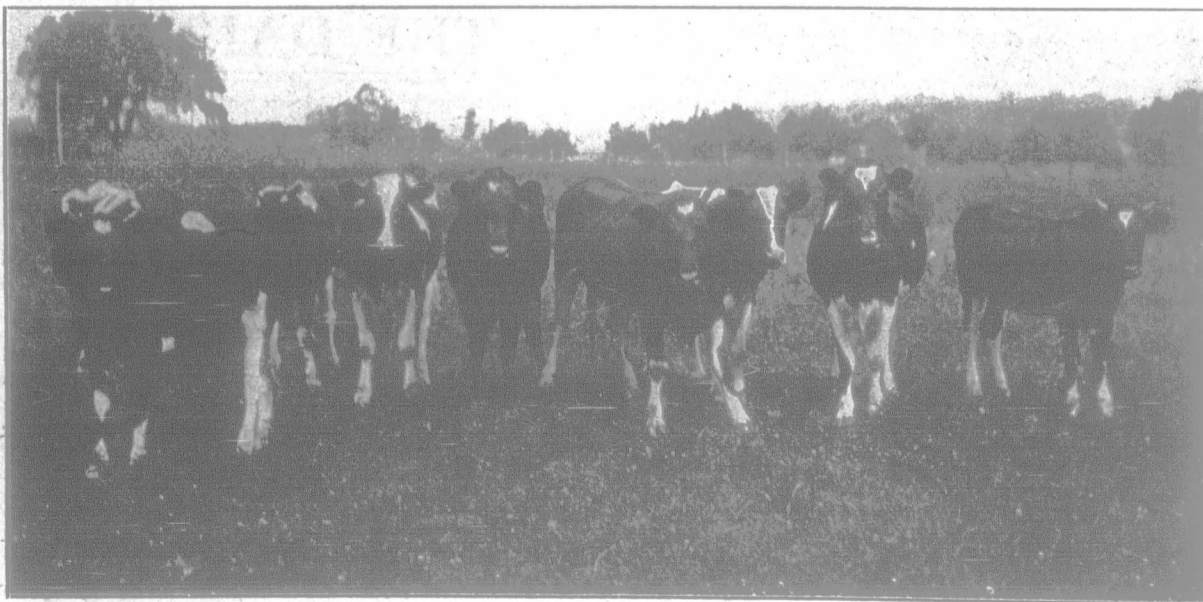
Spray the Potatoes this Season.

If you are growing potatoes plan to spray them. Potato growing demands spraying almost as much as fruit growing. Three distinct advantages are to be had from spraying potatoes: (1) It insures against loss from blight; (2) It protects against insect damage; and (3) it stimulates the growth, and thus increases the yield. The Vermont Experiment Station after twenty years of work, has this to say with regard to how to spray:

"In general commence spraying when the plants are six to eight inches high, and repeat the treatment at intervals of ten to fourteen days, in order to keep the plants well covered with Bordeaux throughout the season. During epidemics of blight, it may be advisable to spray as often as once a week. Usually six applications will be required. The Bordeaux should contain four pounds of copper sulphate to which 40 gallons in the first two sprayings, and six pounds to forty gallons in subsequent sprayings. Whenever (potato) bugs or flea-beetles are plentiful, add 1 or 2 pounds of Paris green, 2 quarts of arsenite of soda stock solution or 3 to 5 pounds of arsenate of lead to the quantity of Bordeaux required to spray an acre.

"Thoroughness of application is to be desired at all times, but is especially important when flea-beetles are numerous or the weather favorable to blight. The more frequently and thoroughly the plants are sprayed the better. There is no danger of injuring the foliage by too much spraying. Using the same quantity of Bordeaux, frequent light applications are likely to be more effective than heavier applications at long intervals; that is, when a horsepower sprayer carrying but one nozzle per row is used. It is better to go over the plants once a week than to make a double spraying once in two weeks. In the first two sprayings, while the plants are small, one nozzle per row may be sufficient, but when the plants become large, at least two nozzles per row should be used. Large vines are especially liable to blight and should be sprayed very thoroughly. Such vines will be somewhat injured by the wheels of the sprayer, but the benefit from spraying will far outweigh the damage done.

"A single spraying is better than none, and will usually be profitable, but more are better. Spraying may prove highly profitable, even, though the blight is only partially prevented. It is unsafe to postpone spraying until blight appears. Except, perhaps, on small areas, it does not pay to apply poisons alone for bugs. When it is necessary to fight insects Bordeaux mixture and poison should be used together. For the best results spraying should be continued as long as the plants live. It is a mistake to discontinue spraying be-



The Young Herd.

One of the surest methods of increasing production is by keeping the best heifers from the best cows.

cause the weather is dry and no blight present. A late attack of blight may result in heavy loss from rot. As a rule those who spray most obtain the largest net profit."

Cultivate the Orchard.

One is struck, when travelling through the country, by the number of orchards kept in sod. The sod-culture method has its advantages, but orchards cultivated during the early part of the summer make better growth than those in sod, and all young orchards should certainly be cultivated. The greatest danger in cultivating an orchard is, provided care is taken not to injure the trees or their root systems during the operation, that of a very hard winter, with unusually severe frosts injuring tender growth. This danger may be effectually overcome by a system of cover-cropping, and few are the orchards that would not be benefited by being broken up and cultivated for a few years. Common cover crops are red clover, peas, rye, buckwheat, cow peas, common vetch and hairy vetch. Clover makes a good crop, as it adds nitrogen to the soil for future growth. Cow peas make one of the best crops for this purpose, where they are grown well, and vetches are quite satisfactory. Hairy vetches are somewhat expensive, and for this reason are not extensively used. They live over winter, and should be plowed down early in the spring. Rye and buckwheat are quite extensively used and serve alright to ripen up the wood, but, of course, do not add nitrogen to the soil, as in the case of legumes. Many are the orchards which could be revived by proper cultivation, and, of course, with this should go spraying and fertilizing.

FARM BULLETIN.

Legislation in Prince Edward Island -- 1913.

Amid the booming of guns, and with the usual interesting ceremonial and impressive military display, the second session of the thirty-seventh general assembly of Prince Edward Island was prorogued by His Honor the Lieutenant-Governor, on April 24th., after having been in session for one month and twelve days, during which eighty-three bills were passed and received the Royal assent, and five failed to reach the third reading. Of these, thirty-seven were bills incorporating fox companies, two oyster companies, and eleven industrial concerns, twenty-two were public measures and eleven miscellaneous.

The thirty-seven fox companies represent a capitalization of \$2,760,000; the two oyster companies of \$95,000, and the eleven industrial companies \$250,000; making a total of \$3,105,000. This is not intended to represent the capitalization of all the companies that have been incorporated in this Province during the year. Others were incorporated by letters patent, representing a total capital of \$2,150,000.

Of the eleven industrial concerns, two are worthy of notice. One incorporating the Bedford Farmers' Co-operative Company, and the other the Charlottetown Summer Resorts, Limited. The former is for the purpose of buying and selling farm produce of all kinds, live stock of all kinds, coal, fertilizers, dressed meat, fish of all kinds, lumber, and conducting a general business in merchandise, and is co-operative to the fullest degree. It had its origin in the Farmers' Institute, which for the last few years has been buying supplies for its members and selling their produce. The business has, however, out-grown an Institute, and an incorporated company is the result.

The latter is, as its name indicates, a summer resorts company. They have purchased a large tract of land across the harbor from Charlottetown and intend to erect summer cottages, hotels, etc., etc., and to make suitable provision for the entertainment of tourists.

Of the miscellaneous bills the one incorporating the Charles Dalton Sanatorium merits consideration. During the last ten years the Hon. Charles Dalton, of Tignish, Prince Edward Island, accumulated a fortune in ranching black foxes, and, in acknowledgment to the "Bountiful Giver of all good," he wished "to erect, furnish and equip a sanatorium for this Province in which the inhabitants thereof afflicted with incipient tuberculosis without regard to class, creed or nationality, may be treated by the most recent and up-to-date methods." It is particularly intended for the treatment of those patients who have no means of payment, and to this end, Mr. Dalton has promised to contribute \$1,000 per year for ten years, and at the end of that time, if further provision is needed, it will be forthcoming.

Of the public bills, the one amending the Prohibition Act will be considered by the temperance workers as of most importance. The chief

amendments are that drinking intoxicating liquors or treating is prohibited in public places and in public conveyances or at public gatherings of any description; that vendors convicted of violating the Prohibition Act shall lose their licence, and shall not again be eligible for appointment; and that druggists shall file the certificates on which liquors are sold monthly in the office of the Provincial Secretary.

The school teachers would perhaps say that the amendments to the School Act are the most important. By one of them all teachers shall receive in addition to what they are now getting, \$1 per pupil in average daily attendance for each half year, not to exceed \$50 per annum.

There is a great variation in opinion in regard to the bill repealing the Motor Vehicle Act. At the present time no motor vehicles are allowed to run on the public roads of the Province. By the new act the Governor in Council may allow them to run on certain roads three days of the week, under stringent restrictions. This was the only bill of the session that caused a division. Several attempts were made to prevent its passage, and there were divisions on both the second and third readings.

To many, the new Election Act, will make a strong appeal. Up to the present time open voting has prevailed at Provincial elections. From the present time voting will be by ballot.

The estimates of the Department of Agriculture for 1913 as compared with 1912 are as follows:

THE ESTIMATES OF THE DEPARTMENT OF AGRICULTURE FOR 1913 AS COMPARED WITH 1912 ARE AS FOLLOWS:—

	1912.	1913.
Salary, Professor of Agriculture.....	\$1400.00	\$1400.00
Travelling expenses, Commissioner.....	850.00	850.00
Farmers' Institutes and Educational work.....	1900.00	1900.00
Farmers' Institutes.....	\$1800.00	\$1800.00
Lecturers' expenses.....	800.00	800.00
Encouragement of field crops.....	1850.00	1950.00
Seed fairs.....	750.00	875.00
Standing grain competition.....	630.00	700.00
Good farm competition.....	120.00	75.00
Judging above.....	300.00	250.00
Judging classes.....	50.00	50.00
Encouragement of Horticulture.....	404.00	400.00
Fruit Growers' Association.....	144.00	125.00
Co-operative Co.....	110.00	110.00
Orchard work.....	150.00	165.00
Encouragement of Dairying.....	486.00	475.00
Encouragement of poultry raising.....	50.00	110.00
Exhibitions and live stock judging.....	6908.72	6960.00
Exhibitions.....	6848.72	6900.00
Judging, prizes.....	60.00	60.00
Scholarships to Agricultural Colleges.....	890.00	870.00
Vital statistics.....	505.00	650.00
Printing and stationery.....	795.00	800.00
Printing.....	70.00	400.00
Stationery.....	225.00	400.00
Departmental expenses and contingencies.....	1575.00	1575.00
Horse hire.....	50.00	50.00
Stamps.....	300.00	300.00
Miscellaneous.....	875.00	875.00
Office assistance.....	850.00	850.00

In the Department of Agriculture the salary of the Commissioner, who is at the same time Provincial Treasurer, was formerly charged to the Treasury; this year one-half is to be charged to Agriculture. Other appropriations remain practically the same. It is expected that the grant from the Federal Department will be sufficient to carry on the new work that will be undertaken.

In the Public Works Department the Commissioner receives an additional salary of \$300 and \$100 additional for expenses. The salary of the secretary has also been increased from \$1,000 to \$1,500.

Small increases have been made in other departments.

The features of the session were: the amount of business transacted, the large number of companies incorporated, the fees derived from the same, which amounted to, this year \$2,500, or five times as much as in any previous year, and the small number of divisions, which was only surpassed by last year when no divisions were taken.

Sharp May Frosts.

An extraordinary burst of early spring growth was followed in Ontario last week, by a reversion to April temperatures with cold north winds and sharp frosts on Friday and Saturday nights; thermometers on Friday night dropping from four to five degrees and more below the freezing point. The effect, however, was tempered by cool weather before and very gradually moderating temperatures afterwards, so that comparatively little injury appears to have been done, in most localities, except to early strawberries and tender tree fruits. However, the full effect upon fruit blossoms is not known as we go to press. Barley, timothy and clover, show little signs of

damage at London, while, in a number of gardens, such tender crops as beans appear to have been unscathed.

Immigrant Agencies Licensed.

With the object of preventing unscrupulous employment agents imposing upon immigrants seeking work,—the Dominion Government has passed an order-in-council requiring that every person, firm or company, engaged in the business of an intelligence office or employment or labor agency and having business dealings with immigrants shall first obtain a license for this purpose (issued without a fee,) from the Superintendent of Immigration, Ottawa. The license will be non-transferable and shall remain in force for the calendar year unless cancelled for cause. Intelligence offices and labor agencies are forbidden to make false representations as to opportunities or conditions of employment. Licensees are required to book records of the immigrants with whom they have dealings.

The Mail & Empire recently contained a short editorial commenting upon the formation of a central selling agency for the co-operative marketing of fruit, which the Okanagan, B. C., growers have formed. This central agency is to have full control of the selling of the fruit from all the various local associations. This move should enable the home grower to meet the competition from American fruit on a better basis.

Shareholders' Audit Still.

After considering the Bank Act Revision Bill for nearly two months and hearing some sixteen witnesses, of whom a majority, and all the later ones, were bankers, the Banking and Commerce Committee has reported the bill back to the Commons in substantially its original form. Of the scores of amendments offered only some half dozen have been accepted, and none of these are of a very radical nature. The chief one was proposed by the Minister of Finance himself, who now proposes that the bank shareholders be required to select auditors from a list of forty chosen by the Bankers' Association, and approved by the Minister of Finance. If one-third of the shareholders are opposed to the auditor selected they may appeal to the Minister for the appointment of another, and the Minister may appoint any outside auditor he pleases for a special report on any bank. Another amendment requires the registration of liens upon a farmer's or rancher's grain or cattle.

One of the most prominent and highly-respected seed merchants in Canada has passed away in the person of William Ewing, head of the Montreal firm which bears his name. The late Mr. Ewing was widely known as a liberal-hearted, staunch supporter of agriculture in many lines, and the seed house of William Ewing & Co., has borne a particularly good reputation among farmers and businessmen, not only for the quality of its seeds but for the upright manner in which it has been conducted. Personally and in business Mr. Ewing was a stalwart who can ill be spared.

The United States Crop Report for May 1st. gave the area of winter wheat to be harvested in that country as 30,938,000 acres or 4.5% less than the area sown last autumn.

Early May in Middlesex Co., Ont.

There is much to be learned from observations made on a drive through the country at any season of the year, but spring with everything bursting into new life, is the season of greatest interest. The grass and grain are rapidly changing the sere and brown acres into a rich green; the stock scenting the appetizing odor of pasture are frolicking in the yard, or perhaps are out on grass for the first time this season, filled with the spirit of the time, and too impatient to eat, they grab a mouthful here and there, but spend the most of the time in a playful manifestation of the feeling of freedom. Every available horse and man is busy. There is action everywhere, and what does human nature like better than action, or abhor more than inaction? Life, both plant and animal, in its most active form is seen on all sides, and life, for which no very appropriate definition has yet been given, always has commanded, and always will claim the interest of the thinking world.

Western Ontario had considerable wet weather earlier in the spring, but for some time previous to writing it has been dry. The first few days in May were unusually warm, the thermometer going as high as 80 degrees in the shade, but frosts occurred on the nights of May sixth to tenth. During a forty-mile drive, through portions of Middlesex County on the sixth of May, it was observed that in the district within about fifteen miles of London, most of the seeding was completed, and the greater number of the fields were showing green, the grain apparently getting a good start. Not much barley has been sown in this district, and most of the grain has been drilled in. In the north-eastern portion of the county, some of the land still seemed quite wet, was badly run together and considerable seeding was still to be done, the land working very heavy, and tearing up in large clods, so rough, that in many cases, it was found necessary to roll before a seed bed could be prepared. This section was visited by a veritable cloud-burst, after about one-third of the grain had been sown and the fields sown previous to this downpour were badly damaged, the soil being compacted, and run together very solidly, and when seen, a crust had formed and the grain was coming up slowly and with difficulty. A stroke with a light harrow would have done these fields good, or rolling might break the crust and let the grain come through.

Never before does the writer remember having seen so many excellent fields of new-seeding red clover in the same distance, as on this trip. The clover is making an excellent growth, and having wintered so well, and with such a good start it should produce abundantly. Only one or two poor patches were noticed in the entire trip, and a large acreage on a majority of these farms is devoted to this crop. The wet summer of 1912, followed by the mild winter just passed, must have suited red clover well, even though some other crops suffered.

Judging from the large amount of red clover growing in this district, and the small acreage of alfalfa, these farmers are pretty well satisfied with the former crop, and unacquainted with the latter. During the entire forty miles only one plot of alfalfa of any size was noticed. The field possibly contained about two or three acres. This and a small garden plot is the extent of the alfalfa crop on the roads traversed. After all that has been said and written about this crop, it is still new to a vast majority of farmers. The land to all appearances, seemed quite suited for growing this crop, but whether it is due to the success growers of red clover are having or not, alfalfa is not a widely-grown crop in the part of Middlesex visited.

Winter wheat and rye never looked more promising. Field after field of the former was cov-

ering the ground, showing that dark green color which goes with rank growth, and gave every indication of a bumper crop if the weather keeps favorable. Not much rye was noticed, but the few fields of this crop were doing well, and at the time were in the shot-blade stage.

One is struck by the very rapid increase in wire fencing. The high winds of early spring levelled many rail fences, and almost invariably these are being replaced with wire. Many rows of beautiful maples are now being utilized as fence posts, and the wisdom of the man who plants a tree and plants it on the fence line is doubly proven.

There is a great showing for fruit if late frosts do not have injurious effects, but Northern Middlesex is not devoted to any considerable extent to fruit growing. Some very useful apple orchards were seen on this drive if they were only cared for. Very few indeed were the orchards noticed which had been pruned and sprayed this season. Apples wasted in this district last year and those having small or even larger orchards are not very enthusiastic over apple growing. With better care good profits are possible in apple growing. Some are doing well with this branch of their farm operations, but most of the orchards in the district are neglected.

Like most other sections of Ontario, the farm-labor problem is serious. Farms are undermanned and wider implements and three and four-horse teams are making up as far as possible, for the scarcity. Even more large implements could be used to advantage. More land is devoted to pasture, and to put it in the words of one of the busy farmers "We are doing the best we can." Some of as fine farms and farm buildings as may be found in any part of the Province are in this section, and if the warm and cool and wet and dry weather is properly distributed for the next few months a good crop in 1913 should be the reward of the hard labor bestowed upon the land.

Farmers and Their Children.

Editor "The Farmer's Advocate":

I have read articles in your paper from time to time on the subject. As a young farmer who is interested in watching how other people live I would like to say a little on this subject. It always seems to me as I read articles in "The Farmer's Advocate" along this line that it is the old men who are speaking.

Let us examine a few things to be found in the nature of each one of us. One thing that has been handed down from generations back and something you can see in a child before he is able to talk is noticeable on the brightened face of the wee laddie as you drop the smallest coin (a copper) into his hand. You have at once made your peace with him and are his friend thereafter. He surely at that age does not know the value of money. Then it must be instinct. And as he grows the idea of laying by or saving, which we consider a virtue, comes into his mind. And there comes a day when he gets out with a team and can do a day's work and can add to the income of the farm. From that day on he is a money-maker. He toils hard from morning till evening. You ask a farmer's son to let you look at his bank account. Bank book! why he has not got such a thing! "Why," you say in astonishment, "where is the reward of all those long days of labor he has put in, that help he has given his father that he could not have gotten elsewhere?"—What has he to show for the best part of his life, all in his father's name? What is the average wage of a son? A bed and food to keep him going. Why a horse gets that. And where good ones are kept the farmer is very careful not to over-work or over-heat them or do anything that will age or make them of less value. I am not saying this in a fault-finding way. I am merely stating facts for which there is plenty

of evidence in my own neighborhood. The average son's muscles are well developed by daily exercise the year round. But he is not treated fair. He is not trained in carrying on the business transactions of the farm, nor is his social education broad enough. What does he know about the buying and selling of the produce? The father looks after all that. True a boy is usually around when a beast is sold, but everything requires practice. There are some things you could watch all your life but couldn't do them properly until you had tried them several times. Then again it is often such a painful task for a son to ask for a little money from his father that he prefers to go without it. The parent acts as though he were giving him something he never earned.

Parents always like to do all that is possible for their children, but they fail to see that there are other investments besides buying more land. There are some men who die and the only good thing we can say of them is "They were good to save money." No doubt it is a fine virtue in man or woman. But surely we are capable of developing other good qualities. Try to crowd into your children's minds all that is good and pure. Encourage good wholesome sport in winter time. Be good to your son's friend. Friends outside of the family are necessary to our lives. When you go to town drop into a book store and bring home a magazine instead of ten cents' worth of sweets. See that your children as they grow into manhood and womanhood get a little way from farm once a year just for variety sake. Keep good literature in your home and encourage the reading of it. And by all means let us try to see nature. What a beautiful country we live in! Let us listen to the music of the brook, the birds and the wind. It's all out there for us to enjoy and sweeten man's toil. It is part of God's goodness to mankind.

Yes, parents, give your sons and daughters a fair chance. Give them something to call their own, some reward for their labor as the years go by, that they may take a real interest in the farm and life in general. And my idea is that you will not find them seeking employment in the city. Help them to feel that there is no place like home.

Oxford Co., Ont.

DONALD.

Express Rates Reduced.

A sweeping order of the Dominion Board of Railway Commissioners has been issued, reducing express rates in accordance with an analysis of cost of transport. It is said the reduction in rates in the West, will mean to the Dominion Express Company 35.36 per cent of its net revenues.

The order of the Board (No. 104) dated May 8th, says:

"It is ordered:—

(1) That the express companies under the jurisdiction of the Board be, and they are hereby, required to submit new standard tariffs, of maximum mileage rates to be charged for express freight classified as merchandise between points west of and including Sudbury, Ontario, making a reduction of approximately twenty (20) per cent. from the maximum mileage rates in excess of fifty cents per 100 lbs., now being charged; the said reduced maximum rates to carry with them the appropriate tolls of the 'graduate' table, scales 'K' and 'N' and the special tariff for single shipments of 500 lbs. or over.

(2) That the said maximum rates, so reduced for the mileage group from 900 to 1,000 miles, do not exceed four dollars (\$4) per 100 lbs. in the sections between Sudbury, Ont., Sault Ste. Marie, Ont., and Crow's Nest, Canmore, and Thornton, Alberta, and four dollars and seventy-five cents (\$4.75) per 100 lbs. in the section west thereof in place of \$5 and \$6 respectively, as now charged."

Gossip.

The Shorthorn bulls which N. A. McFarlane, of Dutton, Ont., is offering in an advertisement in another column, are good, thrifty individuals, sure stock-getters, and fit to head any herd. They are out of imported dams, and are by a choice sire, Blossom's Joy 73741, a son of the great Joy of Morning (imp.). Look up the advertisement.

TREASURE VALLEY SHORTHORNS.

Lying about two miles north-east of the village of Hensall, Ont., on the London-Wingham branch of the G. T. R., is the well-arranged stock farm, Treasure Valley, the property of A. G. Smillie, whose specialty for many years has been Shorthorns, and the result of a most careful selection of stock bulls during all these years, coupled with an equally carefully-selected foundation, and an ever-generous ration, is a herd of more than ordinary merit and uniformity. On blood lines, part of the herd is pure Scotch,

the balance Scotch topped, the former representing the Wimples, Marchionesses, and Cordays, the latter tracing to Young Mary (imp.) 557. Mr. Smillie makes no extravagant claims as to the milking qualities of his cows, but they speak for themselves, as forty pounds a day is well within their capacity for months after calving. On the sire's side, the herd represents the blood of such well-bred bulls as Sailor's Peer 49463, a Mildred-bred grandson of the great Royal Sailor. Following him was Scottish Signet 61342, a Jilt-bred son of the famous Old Lancaster (imp.). Then came Royal Brand 80456, a Charlotte Corday-bred son of Imp. Blood Royal. The present stock bull is Bandsman's Model 88661, a roan son of the great breeding bull, Bandsman (imp.), dam Cherry Lass, by Greengill Victor (imp.), grandam Cranberry 4th (imp.). For sale, are one extra good white yearling bull, and a particularly good roan seven-year-old bull, both by Royal Brand, the former Scotch, the latter Scotch topped; also a

number of right nice heifers. Look up Mr. Smillie's advertisement.

WHAT WESTERN BREEDERS WANT.

Apparently some dissatisfaction has existed of late among breeders of pure-bred stock in Western Canada with respect to representation on the boards of the various Dominion breed societies. The matter was brought to a head at a meeting held in Calgary in April, when representatives of the four Western Provinces—Manitoba, Alberta, Saskatchewan, and British Columbia—met to discuss the outlook. These delegates were appointed by the various Provincial breed societies, and, in conference, launched what they call the Western Canada Live-stock Union. The Committee on Representation decided that the only equitable and sound basis upon which to work is that of membership fees. The objects of the new union are many: To encourage

and develop all branches of the live-stock industry, and to advance the interests of record associations; to improve transportation facilities; to stand together in all matters of common concern; to initiate, promote, and influence legislation relating to the welfare of the live-stock industry. The union consists of the full membership of each duly-affiliated live-stock association in the four Provinces, the annual fee for each association being \$25. Each Province is to be represented at the annual meeting of the union by one delegate each for horses, cattle, sheep, and swine. A president and four vice-presidents are to be elected at each annual meeting, each vice-president to represent a Province. It was decided to meet again at a later date to complete organization work. Special general meetings will be called during the time of the summer fairs in these Provinces. It seems that the Western breeders are prepared to show a united front at the time of the next Dominion breed association meetings.

THE ROYAL BANK OF CANADA

Capital Authorized - \$ 25,000,000
 Capital Paid Up - 11,560,000
 Reserve Funds - 13,000,000
 Total Assets - 180,000,000

HEAD OFFICE: MONTREAL

Branches throughout every Province of the Dominion of Canada.

Accounts of farmers invited. Sale Notes collected.

Savings Department at all Branches

Markets.

Toronto.

REVIEW OF LAST WEEK'S MARKETS

At West Toronto, on Monday, May 12, receipts at the Union yards numbered 83 cars, comprising 1,790 cattle, 220 hogs, 26 sheep, and 83 calves; no business was transacted. At the City yards there were 12 carloads, comprising 202 cattle, 98 hogs, 106 lambs, and 102 calves. Butchers' steers and heifers sold at \$6 to \$6.85; cows at \$5 to \$5.60; calves, \$5.50 to \$8.50; sheep, \$6 to \$7; yearlings, \$8 to \$9; spring lambs, \$5 to \$10 each; hogs, \$9.50, f. o. b. cars, country points.

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

	City.	Union.	Total.
Cars	19	301	320
Cattle	328	3,574	3,902
Hogs	470	8,853	9,323
Sheep	108	816	924
Calves	58	800	858
Horses	8	62	70

The total receipts of live stock at the two markets for the corresponding week of 1912 were as follows:

	City.	Union.	Total.
Cars	175	226	401
Cattle	2,005	3,194	4,199
Hogs	4,402	4,787	9,189
Sheep	353	55	408
Calves	987	112	1,099
Horses	2	126	128

The combined receipts of live stock at the City and Union Stock-yards, show a decrease of 81 cars, 1,302 cattle, 366 hogs, 191 calves, and 58 horses; but an increase of 551 sheep, in comparison with the corresponding week of 1912.

Receipts of live stock last week, as will be seen by the above tables, were not nearly as large as for the same week of last year, especially cattle, but the supply was equal to the demand, as there were few buyers from outside places. Trade, however, was more active, and prices were generally 10c. to 15c. per cwt. higher for fat cattle.

Exporters.—There were none exported, but there were several hundred of export quality and weights, and these sold to the local abattoirs, at \$6.90 to \$7.25 per cwt.

Butchers.—Good to choice butchers' cattle, steers and heifers, sold at \$6.60 to \$6.85; medium to good, \$6.15 to \$6.50; common, \$5.50 to \$6; choice cows, \$5.50 to \$6; good cows, \$5 to \$5.45; medium cows, \$4.25 to \$4.75; common cows, \$3 to \$4; canners, \$2.50 to \$2.75; bulls, \$5.50 to \$6 for choice, heavy bulls; medium bulls, \$4.50 to \$5.25; common, \$3.75 to \$4.25.

Stockers and Feeders.—Steers, 825 to 900 lbs., sold at \$6 to \$6.35; stockers, 600 to 700 lbs., sold at \$5.60 to \$5.80; common stockers, 500 to 600 lbs., \$5 to \$5.50.

Milkers and Springers.—There was a moderate supply of milkers and springers on sale, which met a fair demand, at prices ranging from \$45 to \$75 each. The bulk of sales ranged from \$55 to \$65 each.

Veal Calves.—Receipts were moderate; the demand strong, and prices from 50c. to \$1 per cwt. higher. Choice calves, \$9 to \$10 per cwt.; good, \$8 to \$8.50;

medium to good, \$7.50 to \$8; common, \$5.50 to \$7; bobs, \$2.50 to \$3 each.

Sheep and Lambs.—Receipts were light, and prices remained strong. Sheep, ewes, \$6 to \$7.25 per cwt.; yearling lambs sold at \$9 to \$9.50 per cwt.; rams, \$5.25 to \$5.75; spring lambs sold from \$5 to \$9.50 each. One lot of 25 lambs, weighing 52 lbs. each, sold at \$9.25 each.

Hogs.—Receipts were fairly large, and prices firm. Selects, fed and watered, sold at \$9.75 to \$9.85, and \$9.40 to \$9.50 f. o. b. cars at country points; and \$10 to \$10.10 weighed off cars at the market.

Horses.—There was a good trade in horses at the Union Horse Exchange, West Toronto, for the past week, although prices were not as high. There were buyers from Montreal, Ottawa, and Hamilton, as well as from many points in Ontario. The local trade was also good, quite a few horses being bought by different Toronto business men. Drafters of good quality and weights sold at \$220 to \$250; general-purpose horses, \$175 to \$225; express and wagon horses, \$160 to \$220; drivers, \$100 to \$150; serviceably sound, \$40 to \$100.

BREADSTUFFS.

Wheat.—Ontario, No. 2 red, white or mixed, 95c. to 97c.; outside; inferior grades, as low as 70c.; Manitoba No. 1 northern, 98½c.; No. 2 northern, 96c., track, lake ports. Oats—Ontario No. 2, 38c. to 34c., outside; 38c., track, Toronto. Manitoba oats, No. 2, 40½c.; No. 3, 39c., lake ports. Rye—No. 2, 60c. to 63c., outside. Peas—No. 2, 90c. to 95c., outside. Buckwheat—51c. to 52c., outside. Corn—No. 2 yellow, 58c., Midland. Barley—For malting, 51c. to 53c.; for feed, 43c. to 48c., outside. Flour—Ontario ninety-per-cent. winter-wheat flour, \$3.85 to \$3.90, seaboard; Manitoba flour—Prices at Toronto are: First patents, \$5.30; second patents, \$4.80; in cotton, 10c. more; strong bakers', \$4.60, in jute.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, \$12 to \$13 for No. 1, and \$10.50 to \$11 for No. 2.

Straw.—Baled, car lots, track, Toronto, \$9 to \$10.

Bran.—Manitoba, \$19 per ton; shorts, \$21.50; Ontario bran, \$19 to \$20, in bags; shorts, \$21.50, car lots, track, Toronto.

TORONTO SEED MARKET.

Seedsmen are quoting re-cleaned seeds, per cwt., to farmers, as follows: Alsike No. 1, \$28 to \$28.50; alsike No. 2, \$24.50 to \$26.50; red clover No. 2, \$26.50; alfalfa No. 1, \$19.50 to \$20.50; alfalfa No. 2, \$17.50; timothy No. 1, \$7.50 to \$8.50; timothy No. 2, \$6 to \$6.50.

COUNTRY PRODUCE.

Butter.—Market steady. Creamery pound rolls, 31c. to 33c.; creamery solids, 28c. to 29c.; separator dairy, 28c. to 30c.; store lots, 22c. to 24c.

Eggs.—Market unchanged, at 20c. to 21c. for case lots.

Cheese.—New, twins, 14c.; large, 13c.; old, twins, 15c.; large, 14c.

Honey.—None offering, but worth 13c. for extracted, and \$2.75 to \$3 per dozen for combs.

Potatoes.—Market easy, as supplies have been large. Ontarios, 55c. to 60c.; New Brunswick Delawares, 65c. to 70c., for car lots, track, Toronto.

Poultry.—Receipts light. Turkeys, 22c. to 28c.; last year's chickens, 25c. per lb.; hens, 18c. to 20c. per lb.; broilers, 50c. per lb., dressed.

HIDES AND SKINS.

No. 1 inspected steers and cows, 13c.; No. 2 inspected steers and cows, 12c.; No. 3 inspected steers, cows and bulls, 11c.; country hides, cured, 12½c.; country hides, green, 11½c.; calf skins, per lb., 16c.; deacons, \$1.10 to \$1.25; lamb skins, \$1.10 to \$1.50; horse hides, No. 1, \$3.50 each; horse hair, per lb., 37c.; tallow, No. 1, per lb., 5½c. to 6½c.

FRUITS AND VEGETABLES.

Apples.—No. 1 Spies, \$4.50 to \$5.50; No. 2 Spies, \$3.25 to \$3.75; other grades and kinds, \$2 to \$3 per barrel; onions, Spanish, \$2.75 per sack of 112 lbs.; beets, 35c. to 40c. per bag; carrots, 40c. to 45c. per bag; parsnips, 50c. to 60c. per bag; cabbage, \$3.25 to \$3.50 per case of three dozen; asparagus, 60c.

to 75c. per dozen bundles; American strawberries, 14c. to 18c. per quart, in case lots.

Montreal.

Live Stock.—The market for cattle showed little or no change last week, although the tone of prices was firm. Offerings were light, and demand good. Sales of choice steers took place at 7½c. per lb., fine being 7½c., and good 6½c. to 7c., while medium was 5½c. to 6½c. Common stock ranged all the way down to 4½c. per lb. The supply of calves was large, and prices were about steady. Common stock sold at \$2 and \$5 each, and best up to \$10. The market for sheep was firm, and sales were made at 8c. per lb. Supplies of spring lambs showed a considerable increase, and prices were higher, being \$5 to \$12 each. Hogs were about steady, and selects sold at 18½c. to 10½c. per lb., weighed off cars.

Horses.—Very few horses are being offered for sale at country points, and dealers here were able to dispose of everything they receive at the following prices: Heavy-draft horses, weighing from 1,500 to 1,700 lbs., \$300 to \$350; light horses, 1,000 to 1,100 lbs., \$125 to \$200; broken-down, old horses, \$75 to \$125, and choicest saddle or carriage horses, \$350 to \$500 each.

Poultry.—Almost no live stock was available, and prices for cold-storage stock were as follows: Turkeys, 23c. to 24c. per lb.; geese and fowl, 15c. to 17c.; ducks, 20c. to 22c. per lb., and chickens, 18c. to 19c. per lb.

Dressed Hogs.—Fresh-killed, abattoir-dressed stock, held firm in tone, and prices were steady, at 14c. to 14½c. per lb. for selects.

Potatoes.—The market for potatoes was easier. Supplies were more plentiful, and the stock not very choice. Green Mountain potatoes, in car lots, were quoted at 60c. to 62½c. per 90 lbs., on track. Quebec grades were 50c. to 55c. Smaller sales, 30c. advance on these prices.

Syrup and Honey.—Maple syrup was moderately active, and three-quarter tins were selling at 85c. to 95c. per tin. Syrup in wood was 7c. to 8c. per lb., while maple sugar sold at 11c. to 12c. per lb. The market for honey showed no change, prices being steady, at 16c. to 17c. per lb. for white-clover comb honey, dark being 14c. to 15c. White, strained honey, was 11½c. to 12c. per lb., and dark, 8c. to 9c.

Eggs.—There was practically no change in the egg market. Supplies came forward liberally, and the quality was fine. In the wholesale way, 21c. was quoted, while smaller lots ran as high as 23c. per dozen.

Butter.—Prices of creamery butter dropped in the country during the end of last week, and quotations were a couple of cents lower than the previous week. Dealers quoted 26c. to 26½c., wholesale, for finest fresh-made creamery. Second quality was about a cent less than these figures. Dairy butter was quoted at 21c. to 22c. per lb.

Cheese.—The make of fodder cheese was light. Prices were very little changed as compared with a week ago. Western fodder cheese was quoted at 11c. to 11½c. per lb., while Easterns were 10½c. to 11c. per lb.

Grain.—Several sales of round lots of No. 2 Canadian Western and extra No. 1 feed, have been made for export. No. 2 Canadian Western sold locally at 42½c. per bushel, while the extra No. 1 feed sold at 41c., and No. 1 feed at 41c. per bushel.

Flour.—There was nothing new in the market. Prices were \$5.40 per barrel for Manitoba first patents, in bags; \$4.90 for seconds, and \$4.70 for strong bakers'. Ontario winter-wheat patents were quoted at \$5.25 per barrel, and straight rollers at \$4.85 to \$4.90.

Millfeed.—Prices for bran are slightly lower, at \$19 per ton, in bags. Shorts were \$22 a ton, and middlings \$25. Pure grain mouille was \$32 to \$34, while mixed sold at \$28 to \$30 per ton. Hay.—The market was unchanged, and prices were \$13 to \$13.50 per ton for baled hay, in car lots, track, for No. 1, and \$12 to \$12.50 for No. 2 extra, while No. 2 ordinary was \$9 to \$10 per ton, and ordinary \$8 to \$9.

Seeds.—Shipments were very active, and prices firm. Prices held steady, at

\$4.50 to \$7.50 per 100 lbs. for timothy seed; \$18 to \$26 per 100 lbs. for red clover, and \$22 to \$28 for alsike.

Buffalo.

Prime steers, \$8.50 to \$8.65; shipping, \$7.75 to \$8.50; butchers', \$6.25 to \$8.40; cows, \$3.75 to \$7.50; bulls, \$5.75 to \$7.50; heifers, \$6 to \$8; stock heifers, \$5.50 to \$6; stockers and feeders, \$6 to \$7.60; fresh cows and springers, \$35 to \$85.

Veals.—\$6 to \$9.25. Hogs.—Heavy, \$8.75 to \$9.80; mixed, \$8.80 to \$8.85; Yorkers and pigs, \$8.85 to \$8.90; roughs, \$7.60 to \$7.75; stags, \$6.50 to \$7; dairies, \$8.60 to \$8.85.

Sheep and Lambs.—Lambs, \$5 to \$8.50; yearlings, \$7 to \$7.25; wethers, \$6 to \$6.35; ewes, \$3 to \$5.75; sheep, mixed, \$5.75 to \$6.

Cheese Market.

Campbellford, Ont., 10 15-16c.; Woodstock, Ont., 11½c.; Madoc, Ont., 11c.; Kingston, Ont., 10½c.; Cornwall, Ont., 13 5-16c. to 13½c.; Iroquois, Ont., 10 13-16c. to 11c.; Alexandria, Ont., 10½c.; Napanee, Ont., 10½c. to 10½c.; Picton, Ont., 10½c.; Cowansville, Que., butter, 26½c.; St. Hyacinthe, Que., butter, 25½c.; Belleville, Ont., 11 1-16c.; London, Ont., 10½c. to 10½c.; Watertown, N. Y., 12½c.

Chicago.

Beeves, \$7.10 to \$8.90; Texas steers, \$6.75 to \$7.75; stockers and feeders, \$5.85 to \$7.85; cows and heifers, \$3.90 to \$7.90; calves, \$6.50 to \$9.

Hogs.—Light, \$8.90 to \$8.55; mixed, \$8.25 to \$8.55; heavy, \$7.95 to \$8.50; rough, \$7.95 to \$8.15; pigs, \$6.50 to \$8.50.

Sheep and Lambs.—Sheep, native, \$5.75 to \$6.85; yearlings, \$6.35 to \$7.50; lambs, native, \$6.40 to \$8.45.

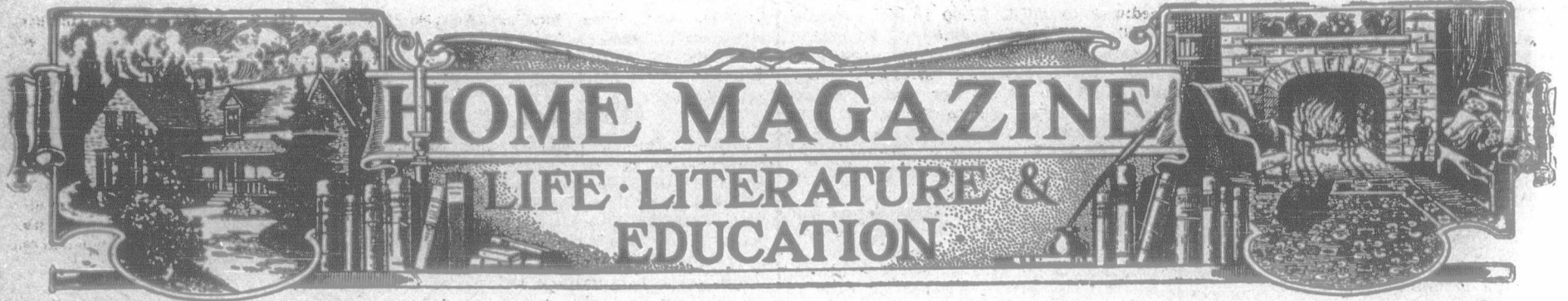
British Cattle Market.

John Rogers & Co. cable that Irish steers are making 15c. to 16c. per pound.

Gossip.

Elsewhere in this issue is illustrated the imported Clydesdale stallion, Cawdor Laird (14621) [11456], owned by Arthur F. O'Neil, Birr, Ont. This good son of Baron Hood, who was sired by Baron's Pride, and had for dam Lady Diana, by Prince Romeo, and tracing through Prince Robert to Prince of Wales, is bred in the purple. His dam, Lady Mabel, is by Prince of Kyle, and out of Lady Lawrence, by Prince Lawrence, tracing in a direct line to Prince of Wales, Darnley, and Lochfergus champion. The illustration shows him in his four-year-old form. As a three-year-old, he was third in a strong class at Guelph Winter Fair, and a colt by him won the yearling class at that show last year.

Attention is called to the advertisement elsewhere in this issue, of the great dispersion sale of Ayrshire cattle, to be held by John D. Duncan, Howick, Que., Wednesday, June 4th. The entire herd of imported cattle, including six head over four years of age; fourteen three-year-olds; twenty two-year-olds; eight yearlings; two young bulls, and a three-year-old stock bull, will be sold. These cattle were selected from the best herds in Scotland, and will be sold subject to the tuberculin test. Conveyances will meet trains. All the cows are young, and all are entered in the R. O. P. test, many making big records. Craigie Pansy, in ten months, gave nearly 12,000 lbs. of milk; Chapmanton Wylie, a four-year-old, calved in March, and gave 1,600 lbs. of milk in April; Picken's Fancy calved in March, and gave 1,500 lbs. of milk in April; Arydine Janet calves the end of November at thirty months of age, and in five months gave nearly 6,000 lbs. These are all show cows. All bred cows have been served by Lochfergus Young Marquis. This is a great offering, brought out in show condition. If interested, see the advertisement, and write Dr. J. Watson, Howick, Que., for catalogue.



The New Public Health.

The Farmer's Advocate Bureau of Public Health Information.

QUESTIONS, ANSWERS, AND COMMENTS.

Conducted by Institute of Public Health, London, Ont.

[Questions should be addressed: "New Public Health," care of "The Farmer's Advocate," London, Ont." Private questions, accompanied by a stamped, self-addressed envelope, will receive private answers. Medical treatment for individual cases cannot be prescribed.]

Flies in the Country More Dangerous than in the City.

Ques.—You say flies are much more dangerous in the country than in the city. Why?

Ans.—Because, in rural districts, the toilets are generally outdoors, and are not fly-proof: so every summer, as soon as flies appear, the regular diet has added to it the contents of outdoor closets. This fact is the chief explanation of the typhoid fever, dysentery and summer complaint found in rural districts in the summer. Most of these diseases can be avoided in the country, as a rule, by having fly-proof toilets, and this is the time of year to fly-proof them. See that the vault itself is built up with earth, or the house built down with boards, so that no opening at front, rear, or sides, is left by which flies can go directly to the deposits within. Then stop all knotholes, cracks, etc., with boards, or tin, or even tar paper—anything flies cannot get through—and tack fly-net or fly-screen over the window or vent or other needed opening. Then see that the door fits snugly when it is closed, and put a spring on, or a weight hung on a cord running in a pulley or hook or staple on the door-frame, to insure that the door is closed. These precautions will take all of fifteen minutes to carry out, and may cost as much as fifteen cents as well, but they will often save hours and days and weeks and months of nursing, many dollars for sickness, and often hundreds of dollars for funerals. Of course, once you have provided a fly-proof place for these discharges from the body, don't make your work useless by allowing people, help, etc., to leave their discharges in the stables or about the premises.

So much for preventing most of the diseases that flies carry. But, of course, flies are a nuisance, even when they are harmless, and no one wants to eat human or horse, cow or hen manure, with their food, even if typhoid fever does not result therefrom. Therefore, keep flies from the kitchen and dining-room as much as possible by screening the doors and windows, and by keeping the garbage indoors until you are ready to burn it or take it to a fly-proof place outside. Throwing slops on the ground outside the kitchen door keeps a damp spot dotted with bits of food, etc., attractive to flies, and then if the screen door is open for a moment, some of them dodge inside. Of course, some flies will get in, no matter what you do, but

(Continued on page 923.)

Letters from Abroad.

X.

ON MEDITERRANEAN SHORES.

Naples, April 19, 1913.

My dear Jean,—I candidly confess that I don't like Naples. In my mind, I have always pictured it as a sort of dream-city of incomparable loveliness, circling a sapphire bay, with Vesuvius rising in the background dark and high,

very badly, but we heard of many people who were. One unfortunate lady had her trunk forwarded to Naples, and when she opened it, all it contained was one stocking and a cake of soap. It was very thoughtful of the thief to leave the soap, for one requires so much of it in Naples. However, I think the story is slightly exaggerated, although its truth was vouched for by the person who told it.

The Neapolitans are a very emotional people, and are always making a noise

back streets where one can see this necessity of Neapolitan life in process of manufacture.

In France they call a tip "pourboire"; in Germany they call it "drinkgeld"; but in Naples they say "macaroni."

All tourists in Naples go to Bertolini's—ostensibly for afternoon tea—but really to see the other tourists, and the famous view of Vesuvius and the Bay of Naples. Bertolini's is an immense hotel, high up on the hill. To reach it, you go through a long tunnel bored into the hillside, then up in a high lift; when you emerge, Naples is at your feet. There is a long, broad terrace, where you may promenade or lounge, or sit at a table and drink and be merry with your friends, while you criticize your neighbors and admire the scenery.

The predominant tongue at Bertolini's is English. There are usually about twice as many Americans as English; a sprinkling of Germans and French, and a few Italians: The Italian waiters harvest the tourists' coins, and give in return poor tea and worse cake—and take a long time to do it.

But there is an excellent orchestra, some fine singers, and—the view. Even the most prosaic persons grow rhapsodical over the view. It is certainly magnificent, especially at sunset, when there is a glory over land and sea. You would be bored to death if I tried to describe the view, so I will kindly refrain. But I will say that as a feature in the landscape, Mount Vesuvius doesn't hold a candle to Mt. Etna, viewed from Taormina, and as for the far-famed beauty of the Bay of Naples—it is quite eclipsed by the scenic grandeur of the harbor of Vancouver, B. C.

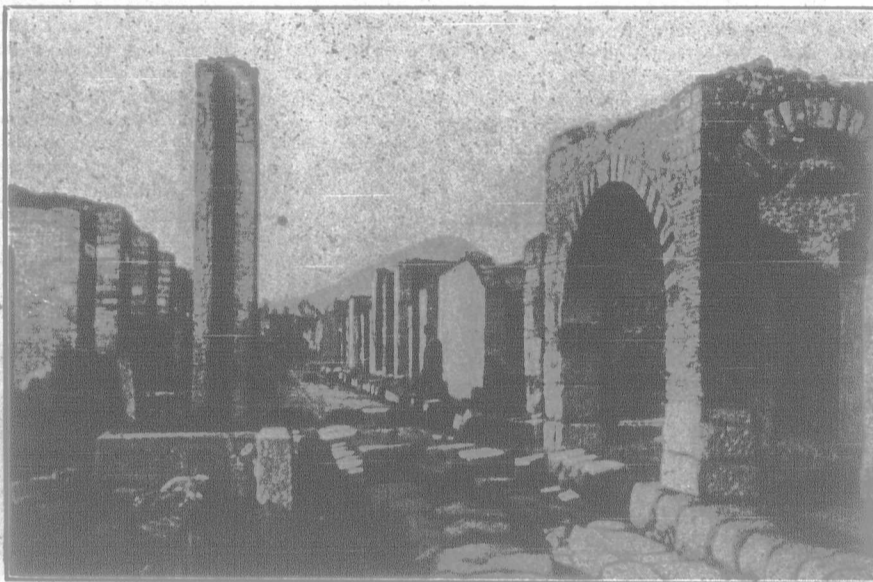
When we reached Naples, we found Mrs. Russell waiting for us there. She looked quite beaming, and seemed to have entirely recovered from the lame knee which prevented her from going to Tunis with us. But she seemed to be terribly absent-minded, and at the dinner table I discovered the reason. He sat next to her. He is quite good-looking, and something in the archeological line. We met him casually in Taormina, prowling among the ruins there. He seems to have been consoling Mrs. Russell during our absence, and she has become perfectly daffy about old rocks and antiques and all that sort of thing. I'm afraid Jack's chances are rather slim unless he hurries over here and cuts out the professor.

We have added a new member to our party,—a very charming, pretty, American lady, whom we have christened Harmony, because she is so amiable and optimistic, and has such a mellowing effect on us all. Four is really a better travelling number than three in some ways, but when it comes to ordering rooms ahead it has its disadvantages. The following letter was received by Miss Morris from an Italian hotel manager in answer to a request for four single rooms for a certain date:

Dear Madame,—Your exquisite letter received. I am sorry to you inform that to not suppose to have so many single room vagrant. With all respect.
J. PAJOLLI.

The nicest thing about Naples, to my mind, is the ease with which you can get away from it and visit charming and interesting places near by. We were terribly disappointed to have to give up the Amalfi drive, which is said to be the finest in Europe, but we did manage to get to Pompeii and Capri, and they quite repaid us for any discomfort we endured in the city.

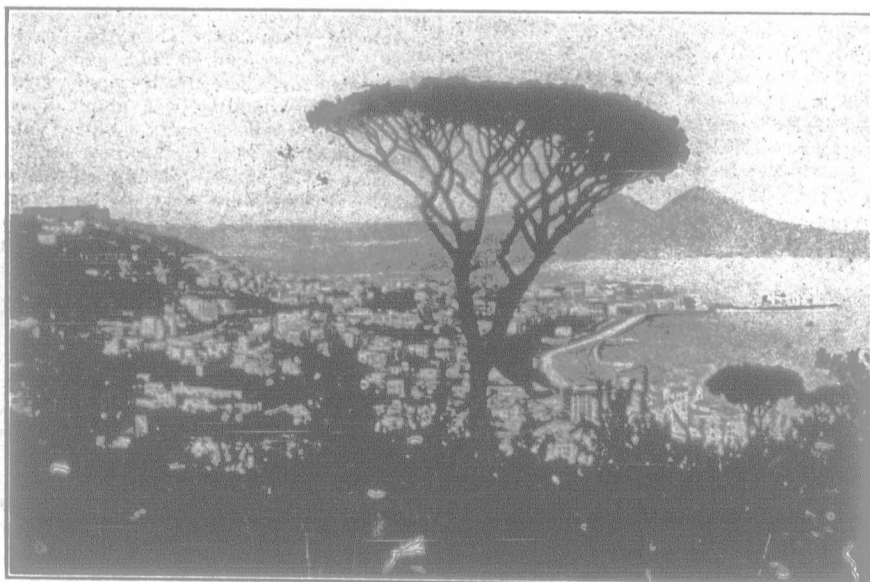
Capri looks deceptively near, but is really nineteen miles across the bay. We left early in the morning, and made one stop on the way, at Sorrento. The cliffs there are enormously high and im-



Excavated Street in Pompeii.

with great clouds of smoke hovering over its summit. I suppose the alluringly-bright ads. of the steamship companies are responsible for this mental picture. Anyway, actual experience has shattered my dream. I have been breathing dust ever since I landed. The streets are dirty and noisy, and everything seems to be in a state of muddiness and disorder. As for ragged urchins—the streets are fairly littered with them, and all the lanes and back alleys swarming. They

about something. Their ordinary talking voice is a scream. One would suppose the whole community was deaf. In addition to their vocal speech, they have a complicated language of signs, and can express a whole paragraph by a movement of the fingers. Two men conversing peaceably on the street, gesticulate so much with their arms and hands that they look as if they were having a violent quarrel, and might come to serious blows any minute.



View of Naples and Vesuvius.

play happily in the rubbish heaps, or gamble with cards on the pavement.

Gambling is a passion with the Neapolitan, and at any hour of the day one may see groups of men sitting in the street playing cards on a makeshift table, and surrounded by a crowd of idlers looking on. They are a lazy lot, and have the reputation of being the biggest cheats in Italy. They certainly "do up" the innocent tourist whenever they get a chance. We were not stung

I could forgive the Neapolitans a good deal if they would only be kinder to animals. Their brutality is revolting. One can never go on the street without witnessing scenes of cruelty that make one boil with indignation. Also, one can never wander in the byways without passing shops festooned with fringes of macaroni drying in the sun—and dust, with all sorts of rubbish in the near vicinity. One's appetite for macaroni is not so keen after a ramble in the

pressive. It was very amusing to watch the hotel boats coming out to meet the steamer, each boat placarded with signs, and full of gesticulating porters yelling out the names of the hotels they represented.

At Capri, the steamer anchored near the famous Blue Grotto, and was immediately surrounded by swarms of small boats into which the passengers were dumped and rowed to the grotto. Not more than three were allowed in any one boat, as the entrance into the grotto is small, and you have to lie on the floor of the boat as you glide under the arch. For this reason, it can only be entered when the sea is calm. At first everything seemed dark, but gradually it became brighter and bluer, until it was the most marvellous color, a sort of peacock-blue, full of a silvery sheen that was simply dazzling. It seemed as if the water and rocks had been touched by a magician's hand, and turned into blue fire.

When we emerged, we were surrounded by boatloads of peasant girls selling corals. It made a very pretty picture, and hundreds of kodaks have carried it away.

The trip to Capri is full of quick changes from steamer to small boats, and vice versa. After making one more, we were rowed ashore and taken up to the town in the funicular. On the piazza was a regiment of cab-horses, each decorated with a long, stiff feather, which stuck straight up between its ears. We had luncheon at the hotel, and afterwards took the magnificent cliff drive to Anacapri. There we walked around the quaint old village; had tea in a garden under fragrant lemon trees; met the King of Sweden coming from his villa, and drove back again at sunset. Oh, that drive! It was heavenly. Such wonderful cloud effects! Such marvellous colors! Naples, across the bay, looked like a golden mirage; the island of Ischia glowed like an amethyst; and Vesuvius—a glistening mountain of pink-seamed to rise right out of the sea.

The trip to Pompeii was a great contrast to this. Do you remember the graphic description of its destruction in Bulwer Lytton's "Last Days of Pompeii"? I sat up half the night reading it after I came home. It gives one a curious feeling to saunter through those silent, empty streets, and it seems impossible to believe that the city was buried for fifteen long centuries, under the ashes of Vesuvius. About half the town has been excavated. The streets are very narrow, and bordered with sidewalks raised above the level of the roadway. In the lava blocks of the pavement are deep ruts made by ancient chariot wheels. At the corners, and here and there along the street, are high stepping-stones for pedestrians. At many of the corners are public fountains. The houses are all very similar, having a blank wall on the street side, and a narrow entrance leading into an interior court around which the living-rooms are grouped. Some of the houses are very well preserved, the mosaic floors in good condition, and the wall-paintings as brilliant as if recently painted. We went into bakeries and wine-shops; visited the Forum and Amphitheater, and spent a good deal of time inspecting the public baths, which must have been a perfectly gorgeous place two thousand years ago, when the gilded youths of Pompeii spent half their days there.

When we were ready to drop from fatigue, we rested on the steps of the Temple of Jupiter, and ate our simple lunch. All the sight-seers seemed to get hungry at the same time, and the Forum looked like a sort of paper-bag cafe. We were not so vigorous in the afternoon, and about three o'clock our powers of locomotion and observation gave out completely, and we flopped on three stepping-stones in the middle of the street and wished there was nothing else to see. Harmony had a momentary spirit of ambition, and said in a languid voice that we really ought to go and see the street of Tombs, but her mournful suggestion met with no encouragement. As soon as we were able to move we hobbled to the train, dropped into the nearest seats, and remained dead to the world till we reached Naples.

All the most precious things found in Pompeii have been placed in the museum

In Naples. There I saw all sorts of household utensils; lovely bronze lamps, and vases; workmen's tools; surgical instruments; jewellery, etc. But what seemed to bring the tragedy nearer than anything else, was the sight of articles of food in perfect condition, but carbonized. Think of seeing a loaf of bread two thousand years old! In shape and size it was exactly the same as sold in the shops of Naples to-day. I saw nuts, apples, pears, and all sorts of grains, and also eggs, and many other eatables I can't remember.

The one thing that saddens me about leaving Naples, is the fact that I must part from the entertaining young Scotchman who is my table-mate. He is so refreshingly candid, has such bright eyes, and such a perfectly fascinating Scotch burr-r-r. He has given me a sea-horse as a parting gift. I always thought a sea-horse was about the size of a whale until I saw one disporting itself gayly in a small tank in the aquarium here. It really looks just like a fantastic bit of antique jewellery. Harmony says she'd like to wear one for a pendant, but she can't have mine. Perhaps I'll have it mounted, and wear it for a brooch myself.

To-morrow we leave for Rome.

LAURA.

The Green Things Growing

(By Dina Mulock.)

Oh, the green things growing, the green things growing,

The faint, sweet smell of the green things growing!

I should like to live, whether I smile or grieve,

Just to watch the happy life of my green things growing.

Oh, the fluttering and the pattering of those green things growing!

How they talk each to each, when none of us are knowing;

In the wonderful white of the weird moonlight,

Or the dim, dreamy dawn, when the cocks are crowing.

I love, I love them so, my green things growing,

And I think they love me without false showing;

For by many a tender touch they comfort me so much,

With the soft, mute comfort of the green things growing.

The Roundabout Club.

Results --Study IV.

At last the papers submitted in Study IV. have been examined, and we are pleased to say that this, the last competition of the season, has been the most successful, if success can be judged at all by the number of students who entered. The standard of the work submitted, too, has been of a high order, except—and this is rather surprising, is it not?—on the "farm end" of the test, where the falling off was noticeable. Upon the whole, however, as a general intelligence test, the competition may be regarded as most satisfactory.

Study IV., it will be remembered, was to be carried out "without investigation or inquiry," precisely as though the students were "in an examination hall." It was pleasant to find, enclosed with most of the answer papers, reassuring little notes stating that this rule had been adhered to.

For instance, one young man wrote: "You will please find enclosed a sorry attempt at the last competition. I wrote it, however, without 'investigation or inquiry,' but when you read it you will quite believe me. It will be almost unnecessary to say that I will now look up the correct answers."

Another says: "It is astonishing how little I was able to answer some of those questions, considering that I am a farmer's son. It has been a splendid examination, and I will await the result with great interest. It was certainly unhandy to have a conscience in working order part of the time, but that was the only way."

—Yes, "Taps," that was the only way. The people with consciences are the salt of the earth—the only worth-while people. Bravo, lad! There is no need to tell you to keep yours in working order.

Then, this from "Mack," Elgin Co.: "I have been an earnest reader of your Literary Society for some time, and, while not taking part in it before, have enjoyed it very much. And so, while I have tried to answer some of the questions this time, I know full well that there are many others of your students who will be able to answer them much better. I have entered the competition this time more for the self-realization of how prone we are to skip over our reading without thinking and impressing it on our minds, thus to be able to

make use of it at any time in the future when occasion should arise."

You have grasped perhaps the main reason for the setting of these questions, Mack,—that they might serve as a self-revelation.

These notes are pleasant to read, are they not? They ring true. They betoken the sort of straightforward, strike-from-the-shoulder honesty, that should form the backbone of Canadianism.

After all this, it is a little disconcerting to have to confess that, in two instances, the judges had reason to be suspicious that books had been consulted in this "thrown-on-your-honor-not-to" competition. In these two instances, certain similarities in the wording with that of some of the books in our very comprehensive library, certain details that would not likely come under the heading of general information, and that would not be likely to be remembered off-hand, were noted. However, since there was no way of proving that the objectionable thing had been done—and we sincerely hope it was not—the matter had to be passed over. If it were done, the conscience of the offenders must be the only punishment.

THE PRIZE AND HONOR LISTS.

Those who won the prizes in Study IV. were:

"Interested," Bruce Co., Ont.; W. J. Way, Kent Co., Ont.; "Nibs," Halton Co., Ont.; "Kanaska," Simcoe Co., Ont.

Honor Roll (marks given): Rosalind, Middlesex Co., Ont., 98; "Mack," Elgin Co., Ont., 98; "Rue," Welland Co., Ont., 92; Ex-Student, Peterboro Co., 92; "Taps," Wentworth Co., Ont., 91; Mrs. J. H. Taylor, Victoria Co., Ont., 89½; Marion Bell, Middlesex Co., Ont., 89½; "Antigonish," Nova Scotia, 87½; Agnes Hunt, Algoma, Ont., 87; "Mis(s) Information," Lambton Co., Ont., 87; Mrs. Parkins, Norfolk Co., Ont., 86½; R. H. C., York Co., Ont., 86; "Amateur," Perth Co., Ont., 82; "Twin," Wellington Co., Ont., 81; "Elginite," Elgin Co., Ont., 80½; "San Toy," Sussex, N. B., 78; "Jonatch Cree," Perth Co., Ont., 75½; "Dawn," Lambton Co., Ont., 75½; W. Lodge, 75; Sherard McLeay, Perth Co., Ont., 71; T. J. Rutherford, Grey Co., Ont., 67½; "Shy Ann," Waterloo Co., Ont., 66; Ross Tilden, Point Pelee, Ont., 66; "Enoch Arden," Grey Co., Ont., 57½; "Grit," Grey Co., Ont., 57½; "Norma," Huron Co., Ont., 56; "A. A. C.," Quebec, 46; "Bunnie," Pontiac Co., Que., 46.

Total number obtainable, 120. We have listed in Honor Roll all who took over pass-marks according to school marking.



From a painting by Corot, Perry Print.

Spring.

Answers to Questions

In giving the answers to questions, we are using, in the main, those taken from the best papers.

1. Name three of the political parties in the last United States election. Ans.—Democrat, Republican, and Republican-Progressive, or "Bull Moose" party.

2. Name the political parties of Canada.—Ans.—Conservative, Liberal, Independent, Nationalist, Labor, Socialist.

3. Those of Great Britain? Ans.—Liberal, Unionist (or re-organized Conservative), Irish Nationalist, Labor, Socialist.—As one student put it, "wheels within wheels."

4. Name the Presidents of Mexico, China, and France. Ans.—Huerta (succeeded Madero), Yuan Shi Kai, and M. Poincare.

5. Name the President of Toronto University. Ans.—Pres. Falconer.

6. Designate the chief allies in the war against Turkey. Ans.—The Balkan allies—Serbians, Bulgarians, Montenegrins, and Greeks.

7. Mention some event of recent or current interest associated with each of the following: Sun Yat Sen, Jane Addams, Nogi, Adrianople, Amundsen, Alexis Carrel, R. F. Scott. Ans.—Sun Yat Sen is the man who was chiefly instrumental in bringing about the establishment of a Republic in China. He was made Provisional President, but soon retired. He has recently been intrusted with the work of developing a railway system throughout the country.

Miss Jane Addams—a noted social reformer and settlement-worker in Chicago. For the better carrying out of her work, she established Hull House in the slum district. She is one of the leaders in the United States movement for Woman Suffrage, and last fall, at the Chicago Convention, seconded the nomination of Col. Roosevelt for the Presidency.

General Nogi.—A noted Japanese General, the hero of Port Arthur. After the death of the late Mikado, he and his wife committed suicide to show their loyalty.

Adrianople.—A city south-west of Constantinople. It has been the chief bone of contention in the war between the Balkan Allies and Turkey. (Since competition letters were received, it surrendered to the Bulgarians.—Ed.)

Amundsen.—A noted Polar explorer. He discovered the South Pole in December, 1911.

Dr. Alexis Carrel, of the Rockefeller Institute, New York, was presented at Stockholm last year with the Nobel prize, given for medical research during 1912. He has discovered a method of stimulating the growth of tissues by which a wound or broken limb can be made to heal in a marvellously short time.

Captain R. F. Scott (misprinted "N" instead of "F"), leader of the British expedition to the Antarctic regions during the winter of 1911-12. He perished, with four of his party, on the return journey from the Pole, which they reached a month after Amundsen.

8. What is an artery? What is a vein?
An artery is one of the ducts through which the blood is forced by the heart to the various parts of the body. A vein is one of the ducts which carry the blood back to the heart. The force is not so strong as in the artery. . . . Arteries carry pure, red blood through the body, and veins carry the impure blood back to the heart. There are, however, exceptions to the rule that arteries always carry pure blood, for it is an artery which carries the impure blood from the heart to the lungs to be purified, and veins which carry the pure blood back to the left side of the heart.

9. What are the emergency directions for a severed vein? For a severed artery?
For a severed vein, bathe the wound with water of extreme temperature, either hot or cold, and bandage on the side remote from the heart. For a severed artery, put firm pressure directly on the bleeding part, and apply pressure on the artery between the wound and the heart by means of a tourniquet, a stick run through the bandage and twisted. If the blood is dark in color and oozes gently, it may be judged that a vein has been cut; if it is bright red in color, and comes in spurts, it may be judged that an artery has met with

the accident. If the bleeding is serious, in either case, send at once for a doctor.

10. What is the normal temperature of the body? Ans.—98.3-5ths. Runs from 97.3 to 98.4.

11. What is a meridian? A parallel of latitude? Ans.—Meridians are imaginary lines running north and south about the earth's surface, intersecting at the poles and crossing the equator at right angles. They are useful in measuring distance in degrees east and west.

Parallels of latitude are imaginary lines running around the earth's surface, parallel with the equator. They are used to measure distance, in degrees, north and south.

12. Explain these abbreviations: R. F. D.; C. O. D.; F. O. B.; R. S. V. P. Ans.—Rural Free Delivery, Cash on Delivery, Free on Board; Respondez s'il vous plait, meaning "answer, if you please."

13. How many leaves to a stem or group has the poison ivy? The Virginia creeper? Ans.—Poison ivy has three; Virginia creeper five.

14. Give an example of a powerful alkali. Several were given including caustic potash, ammonia, Gillett's lye, etc.

15. Strong ammonia, when spilled on green cloth, usually creates a red spot. If you rub vinegar on this the color is restored. Why? Ans.—Vinegar is an acid while ammonia is an alkali. An acid will neutralize the effects of an alkali, and vice versa.

16. What State mines the most coal? Name a noted coal district in the Canadian Northwest. Ans.—Pennsylvania. Lethbridge district.

17. Name a peculiarity of the River St. John, N. B. Ans.—The "reversible" falls near the mouth.

18. What is meant by baritone voice? A male voice between tenor and deep bass.

19. What is the meaning of the word "Gospel"? Ans.—"Good tidings,"—the Christian revelation.

20. Who said, "Whither thou goest, I will go, and where thou lodgest I will lodge"? Ans.—Ruth to Naomi.

21. Who were Alexander the Great, Caesar, Hannibal?

Alexander the Great was a Macedonian King who ruled about 330 B. C. He conquered the greater part of the then known world, including Asia Minor, Persia, and part of India.

A number of Roman Emperors bore the name Caesar. The most illustrious was Julius Caesar, who conquered Gaul, Flanders, and part of Britain.

Hannibal was a Carthaginian general and statesman who fought against the Romans. He invaded Italy, and defeated the Romans in several battles, and nearly captured Rome itself, but was finally defeated at the battle of Zama, and died, having taken poison, in exile.

22. Who defended Thermopylae against the Persians? Ans.—The Spartans, under Leonidas.

23. Who were the following?—Michael Angelo.—A famous Italian sculptor and painter.

Galileo.—A famous Italian astronomer and philosopher, founder of modern ideas regarding astronomy through his telescopic discoveries.

Robert Bruce.—A Scotch king who won Scotland back from the English at the Battle of Bannockburn.

Jenner.—Famous English physician of 18th century. Discovered vaccination.

Beethoven.—German composer of music.

Watt.—Inventor (Scottish) of steam engine. There was also a hymn-writer of the same name.

Rembrandt.—A famous Dutch painter.

Bismarck.—German statesman of the nineteenth century.

Florence Nightingale.—"The Lady of the Lamp," noted for her services during the Crimean war. She took to the Crimea a staff of thirty-seven trained nurses. With the £50,000 granted her in recognition of her services, she established a training home for nurses. She also did much to improve army and army hospital sanitary conditions.

Tolstoi.—Russian writer and philosopher, of a somewhat Socialistic tendency.

Cervantes.—Spanish novelist and poet, author of Don Quixote.

Gutenberg.—German printer. Invented movable type.

Sir Isaac Newton.—Famous natural philosopher (Eng.) of seventeenth century. Discovered the spectrum, and

the application of the law of gravitation.

Schiller.—Famous German poet and philosopher.

Richelieu.—French cardinal and statesman, prominent in connection with early Canadian history. He founded "The Company of One Hundred Associates."

Darwin.—English scientist, who advanced theory of evolution. Author of "Descent of Man," and "Origin of Species."

Jenny Lind.—Famous Swedish singer.

Cecil Rhodes.—Englishman, noted as South African magnate and politician.

24. Who was the chief engineer of the Panama Canal? Ans.—Col. Goethals. The sanitary officer?—Col. Gorgas.

25. Who painted Mona Lisa? Name an interesting occurrence in connection with that picture. Ans.—Mona Lisa was painted by Leonardo da Vinci. The picture was stolen from the Louvre in 1911, and has not yet been found.

26. Name a work by each of these authors. (Several for each were given. We mention only the best known.) Milton.—Paradise Lost.

Scott.—Ivanhoe.

Goldsmith.—The Deserted Village.

Burns.—Cotter's Saturday Night.

Hawthorne.—The Scarlet Letter.

Dickens.—David Copperfield.

Tennyson.—In Memoriam.

Stevenson.—Treasure Island.

27. Who wrote (a) "All the world's a stage, and all the men and women merely players"? (b) "God's in His Heaven, All's right with the world"? Ans.—(a) Shakespeare; (b) Browning.

28. Quote a verse from the Sermon on the Mount. (Not here quoted.)

29. Name two of the leading high-yielding varieties of the following: Wheat, barley, oats, peas, corn, mangels, turnips, sugar beets, carrots, potatoes?

Ans.—The varieties given are, in each case, two of the leading varieties, but there may be a good deal of latitude allowed in this question. Where two good varieties of each class were named, full marks were allowed.

Wheat.—Dawson's Golden Chaff. Early Genesee Giant.

Spring Wheat.—Red Fife, Wild Goose.

Barley.—Mandscheuri, O. A. C. No. 21.

Oats.—American Banner, Siberian (or Daubeny), and O. A. C. No. 72.

Peas.—Early Britain, Potter.

Corn.—Dent: White Cap Yellow Dent, and Bailey or Leaming. Flint: Compton's Early, Longfellow.

Mangels.—Yellow Leviathan, Mammoth Long Red.

Turnips.—Fall: Red Top White Globe and Cow Horn. Swedes: Keepwell, and Carter's Invicta, or Elephant and Improved Purple Top.

Sugar Beets.—Jumbo, Giant White Feeding.

Carrots.—Improved Short White, Mammoth Intermediate Smooth White.

Potatoes.—Early: Early Eureka and Early Fortune. Late: Davies' Warrior, Empire State (or Rural New Yorker No. 2), and Carman No. 1.

Another case where some latitude was allowed.

30. From the list of apples grown in this country, what six would you select for domestic and commercial trade?

Ans.—Northern Spy, Baldwin, Greening, King, McIntosh, Fameuse, or, in some districts Duchess, Wealthy, or Golden Russet might be substituted for Greening or McIntosh.

31. What has "mixed farming" to commend it over "specialized farming," and vice versa.

Ans.—Advantages of mixed farming—(1) A wider diversity of crops and interests, placing the chance of complete failure at a minimum.

(2) A well-managed mixed farm loses little fertility, as all feed grown is consumed on the place.

(3) Labor is spread over the entire year, making it easier to keep hired help, and more economical.

(4) As high a state of efficiency is not required as in specialized farming.

(5) Returns are more uniform from year to year.

(6) Mixed farming is live-stock farming, and is probably more likely to interest young people in agriculture. Its greatest disadvantage, if it may be called such, is that owing to the fact that the farmer has so many "irons in the fire," he does not reach the highest possible point of production in any one line.

Specialized farming advantages.

(1) All effort is centered in one branch, permitting of its exploitation to the fullest extent.

(2) In some localities, close to a large market for certain products, it yields higher returns.

(3) It is a training-ground for turning out experts.

(4) There may be more time for recreation.

Its greatest disadvantage is, that to make it an outstanding success requires a specialist, and most farmers are not specialists. Untiring effort and concentration are necessary, or several years of failure will ensue, and when the special crop fails, there is none other upon which to depend. It is narrower in scope, and not so broadening in effect.

32. What is the average production of wheat per acre in Canada, and how does it compare with that of the United States and Great Britain.

Ans.—The average production of wheat, both winter and spring, in Canada, is, according to the Canadian Yearbook for 1911, 20.8 bushels per acre. Great Britain produces considerably more, and United States a smaller amount.

33. What size should stalls be for mature horses and cattle?

Ans.—Horse stalls should be nine feet long, including the manger, and, for big horses, six feet wide. For light horses, five feet in width is often enough. Cow stalls should be from 4½ to 5 feet 9 inches long, to suit the size of the cattle, and 3½ feet wide.

34. How many square feet of space per hen is necessary in housing hens of the meat or general-purpose breeds, and hens of the Mediterranean or non-sitting breeds.

Ans.—Hens of the meat breeds require four square feet of space, while those of the lighter, non-sitting breeds, do not need quite so much, although it is well to provide this amount. These figures are given for flocks of 75 to 100 birds. Where only a few birds are kept, 5 to 6 square feet of floor space is necessary.

35. Name three of the best-known breeds of heavy-draft horses, beef cattle, dairy cattle, short-wooled sheep, long-wooled sheep, and bacon hogs, in Canada, and give a short history of the origin of each breed.

Ans.—Draft Horses.—Clydesdales, Percherons, Shires.

Beef Cattle.—Shorthorns, Herefords, Aberdeen-Angus.

Dairy Cattle.—Holsteins, Ayrshires, Jerseys.

Short-wooled Sheep.—Shropshires, Southdowns, Oxford.

Long-wooled Sheep.—Cotswolds, Leicesters, Lincoln.

Bacon Hogs.—Yorkshires, Berkshires, Tamworths.

The early history of the Clydesdale is veiled in obscurity. It is believed that stallions were brought from Flanders to Scotland, about the middle of the seventeenth century, but, about 1715 or 1720, John Paterson, of Lochyoch, in South-east Scotland, near the river Clyde, brought in a Flemish stallion from England. A superior strain of horses resulted, and early in the 19th century some notable horses were being bred. Then came, late in the same century, the great Prince of Wales (673), and Darnley (222), real makers of Clydesdale history.

The Percheron breed had its original home in La Perche, France. Its origin is most obscure, draft horses being bred in the district for centuries. Foreign blood was used in the formation of the breed, and the Arab horses, Godolphin and Gallipoli, early in the nineteenth century, are believed to have been materially responsible for the formation of the breed crossed with the French draft mares.

The Shire traces back to the days of the Roman conquest of Britain. "The Great Horse" of the sixteenth century, used in war, was, no doubt, the real foundation of the breed. The counties of Lincoln, Cambridge, Huntingdon, Northampton, Leicester, Nottingham, Derby, and Norwich, form the special region of Shire breeding. Horses were imported from Holland, Flanders, and Germany, in the improvement of the breed.

York, Durham, and Northumberland, in England, was the original home of the Shorthorn. Cattle came to England with the early invaders, and even before the year 1600 it is said cattle of the

Shorthorn type were bred in these countries. The improvement of the breed really commenced about 1780. Charles and Robert Colling, Thomas Bates, Thos. Booth, and Amos Cruickshank, being the earlier improvers, establishing the breed largely through in-and-in breeding.

The Hereford breed, as its name implies, originated in Hereford, England. It is believed that they descended from aboriginal cattle of the island. White-faced cattle from Holland and Flanders are believed to have been imported in the making of the breed. Early breeders of repute operated throughout the eighteenth century.

The Aberdeen-Angus breed had its native home in Northeastern Scotland, in Aberdeen, Kincardine, and Forfar. Among the wild cattle of Britain were polled animals, and some writers believe this breed is a sport from a black breed with horns, but cattle without horns were known in the district in 1752. The breed was greatly improved during the latter part of the 18th and beginning of the 19th centuries.

The Holstein breed originated in North Holland, and it is said has been known there for a thousand years. Many believe it to have descended from the Great ox (Bos primigenus).

Southwestern Scotland, in the County of Ayr, is the native home of the Ayrshire. It is believed by some that the breed is a native of Ayr, while others claim the cattle from the Channel Islands were used in making the breed. Short-horn, Devon, Hereford, and Highland blood, are also said to have been used. The 18th century was the time of greatest improvement to the breed.

The Jersey comes from the island of that name in the English Channel. Most probably the breed originated from stock from France, Brittany and Normandy. The breed is kept pure on the island, no importing of cattle being allowed.

Shropshires originated in the Counties of Shropshire and Stafford, in England. Southdown, Leicester and Cotswold blood being used with native sheep.

Southdowns originated in Sussex, England, springing from the original Sussex sheep, through selection and good mating.

Oxfords come from Oxford County, in England, and the breed was founded about 1833, by using Cotswolds and Hampshires.

The County of Gloucester, in Central South-western England, is the home of the Cotswold. It is believed that the breed developed from a large type common in adjoining counties.—Leicesters were used in improving the breed.

Leicesters come from the County of Leicester, and have been there from time immemorial. In 1726, Robert Bakewell began the improvement of the breed through selection.

Lincolns came from Lincoln County, by the North Sea. The breed dates back many years. Leicester blood was used to improve it.

The Yorkshire pig is over a century old. About the middle of the 19th century, modernizing began by the use of White Leicester pigs. Yorkshire and Lancashire were the home of the breed.

The native home of the Berkshire is in the Counties of Berkshire and Wilts, in England. Chinese, Siamese, and Neopolitan blood, was used in the improvement of the breed, which was perfected in the latter part of the 18th century.

The Tamworth was first bred in Stafford, Leicester, Northampton, and Warwick, England. It is one of the oldest English breeds of swine. About 1880, great strides toward the improvement of the breed were made, the breed being accomplished by selection.

[Note.—These are only a few points in connection with each breed. Much more might be written, but this serves the purpose.]

A Few of the Howlers.

There is no examination without its "howlers." Indeed, were it not so, the work of examining hundreds of papers would be an arid task, so even "howlers," it seems, have their usefulness. We trust that those who find any of their answers among those given below, will understand that we are by no means "making fun" of those who tripped, but that they will accept the spirit of good nature in which the list is given. Variety, you know, is the spice of life. It

may be mentioned, by the way, that few papers escaped, at least, one howler.

Galileo was a source of worry to several. Here are a few of the observations regarding him: "Galileo was the Spanish Prime Minister who was assassinated last autumn." "Galileo was a sculptor." "Galileo—a skilled medico— or was it Galen?" "Galileo was a lawyer in the time of Christ." "Galileo was a learned Hebrew."

"Richelieu was a Governor-General of Canada."

"Nogi was a general in the Turkish army, also a poet." "Nogi is the Japanese Parliament."

"Jenny Lind became famous because of her throwing a stool at the head of the bishop who was announcing that the English church prayer-book must be used in Scotland."

Mona Lisa was a source of much confusion of mind, although most of the students connected the name with a picture. Behold!: "Mona Lisa was painted by Millet." "De Vinci painted Mona Lisa." "Rossetti painted Mona Lisa." Gaze of Mona Lisa prevented robbers from stealing the picture."!!! Finally, "I think Lorenzo de Medici painted Mona Lisa."!!!!

It is well that the diagnosing of disease does not depend on some of our students. One boldly affirmed, "The normal temperature of the body is 70 degrees Fahrenheit," while another quite as confidently declared it to be 100 degrees F. Yet another, struck the degrees more accurately, but spoiled it all by saying that the "abnormal" temperature of the body is about 98 2-5ths.

How are these for politics? "Three of the political parties in the last United States election were, President Taft, Colonel Roosevelt, and Woodrow Wilson." Not so slow, that, perhaps; but here is one more startling: "The political parties of Great Britain are Premier Asquith, Pelletier."!

Jane Addams probably would have been surprised to find herself figuring on two papers as "a famous New York actress," and Alexis Carrel would have achieved a remarkable bit of self-revelation had he found himself slated upon one paper as "a painter," and on another as "one of the Polar explorers."

Now Cervantes: "Cervantes was a Spanish Admiral." "Cervantes was one of the Generals of the Allies in the late Turkish war." "Cervantes was Premier of Spain."

"Xerxes defended Thermopylae against the Persians."

"Jenner was the discoverer of radium." "Jenner was Queen Victoria's physician."

"Darwin was an English poet." "Darwin,—a writer. Said people are descended from monkeys."

"Rembrandt was an artist—French." "Michael Angelo was a German artist."

"Michael Angelo was a seaman." "Gutenberg—Writer of the Passion Play, and the name of the place in which it is played every ten years."

"Watt—A Prime Minister of England who had views similar to Lloyd-George's."

"The President of China was Sun Yat Sen, who was shot and killed not long ago."

Alexander the Great figured successively as, "a king of Egypt," "a Roman emperor," and "a great ruler of England."

The abbreviations gave cause for some maneuvering. "R. S. V. P." appeared as "Rights Reserved, Verb Possessive," and as "Royal Society of Veterinary Practice"!!! while one facetious dandy defined "F. O. B." as "Forlorn Old Bachelors."

Quotations from Shakespeare and Browning fared little better, as may be judged. "Bryant wrote 'God's in His Heaven. All's well with the world.'" "Rev. Dr. Talmage" wrote it. "Carlyle" wrote it. Arthur Stringer wrote "All the world's a stage, and all the men and women merely players."!!!!

In the farming section, one hapless student got hopelessly entangled—with little wonder, perhaps—on the spelling of Mandscheuri barley, but retrieved the situation thus: "Menschuria—oh! oh! oh!—the beardless."

Hope's Quiet Hour.

Sent Into the World.

Ye are the salt of the earth.—S. Matt. v.: 13.

When our Lord knew that death was near, and that the disciples must learn to fight and climb without His visible presence in their midst, He turned to the Father, pleading for them. In that wonderful intercession, preserved for our reverent study in the seventeenth chapter of St. John's Gospel, He did not ask that the disciples might be kept safe from all temptation: "I pray not that Thou shouldst take them out of the world, but that Thou shouldst keep them from the evil. . . . As Thou hast sent Me into the world, even so have I also sent them into the world."

We find so much teaching against worldliness in the Bible that we might almost feel tempted to copy the hermits, and retire as far as possible from it. But our Master sent His Church into the world, as He was sent into the world. Why? Look at our text. "Ye are the salt of the earth."

If all the honest and honorable men should retire from the world of politics, the result would be that political corruption would grow worse and worse. One high-minded man can do a great deal for his country, not only directly, but indirectly. Goodness is at least as infectious as wickedness. Being an optimist—"Hope" by nature as well as name—I firmly believe that it is far more infectious. We all want to be better than we are, and when we see people who have climbed to a higher level on the mountain of holiness than we have yet reached, we are encouraged and inspired to climb more enthusiastically ourselves.

It is exactly the same in what we call the fashionable world. Some may have the call to leave it altogether, but others cannot do this without neglecting their plain duty. If all the spiritually-minded people deserted their rich and fashionable friends and relatives, it would mean that evil would spread, and soul-disease would fester, unchecked by the salt of the earth—the servants of Christ who have been "sent" by Him "into the world." Each must bear witness to his Master where he is told to stand on duty. We are not free to choose our post. The men and women who seem to care nothing for any world but that of wealth and fashion, are very dear to the heart of God. Probably they are not nearly as worldly as they seem. Riches do not always harden the heart. Abraham—the friend of God—was a very rich man, and Job was the greatest of all the men of the East. Someone has said that riches do not injure a heart unless they are worn next it. If God is always nearest the heart of a man, the riches can be torn away without destroying his happiness, or can remain without injury to his soul. Job still blessed God when all his possessions were suddenly swept away.

Rich men—when they are not worldly—often do a great deal of good in secret. Yesterday a poor blind woman told me that a rich man, for whom she had worked five years ago, had paid all her hospital expenses and doctor's bills. She has been in the hospital six months, and a doctor was attending her a year before she knew who had sent him. Another woman, in the next ward, who has been for seven months in the hospital, has all her expenses paid by a rich philanthropist.

Some years ago, when I was doing Settlement work, a young and cultured lady helped with some of the classes. She was splendid with the children, and I urged her to devote her life to social work. She was only eighteen, and yet she had thought out the situation and decided that her vocation was "social work," indeed; but work among the rich rather than the poor. "There are so many working among the poor," she said, and there is great need of people to encourage higher standards among the rich." She has since married, and I feel sure that her home is like a city set on a hill, a center of light and wholesomeness to the fashionable neighborhood.

It is a wonderful thing to remember that we are sent by our Master for a special purpose. Are we in any way fulfilling that purpose? Are we helping at all to purify and uplift the society in which we are placed?

This is not a question to be lightly answered. We are certainly not sent to be prigs, to constantly correct other people, or set ourselves up as examples. But, we are bound to let everybody who is acquainted with us know which side we are on. Of course, we live in a "Christian" country, but that does not prove that we are spending our lives in the service of Christ. It is possible to profess and call ourselves Christians, to go to church when it is reasonably convenient, and even to be communicants and liberal contributors to church funds, without having any real love for God at all.

But if we do love Him, and have determined to spend our lives in His service, let us never be ashamed to let people know it. I don't mean that we should be constantly "talking religion," or refuse to join in the innocent amusements which do so much to draw us into fellowship with each other. An earnest young Christian once told me that he would not go to a party because it would be out of place to read a chapter of the Bible aloud there. And yet our Lord often went to feasts, and His Presence added to the joy of the guests. A man in one of Scott's novels complained about a Cameronian cow-feeder because, when he wanted to talk about farming, the Cameronian "answered him out of the Bible."

It may be just as worldly to talk about sanctification, regeneration and conversion, as to talk about theaters and dances. If the world you desire to please be a religious world, and your talk about religion only means that you are seeking to be admired or respected, then your religious phrases are untrue, and not really representing yourself. They are only a veneer, intended to make your hearers think you are religious.

If I speak severely, it is because I know how easily we can deceive ourselves as well as others. We may sometimes, almost unconsciously, be like the scribes of old, who loved the chief seats in the synagogues, and "for a pretense" made long prayers. We may, like the hypocrites, seek the admiration of our neighbors by generous giving of alms and energetic church work, and yet have no love in our hearts.

We must be constantly on our guard against worldliness, for it is likely to creep in at any unguarded opening. Why is it that larger sums are given in charity when the list is publicly carried from house to house, than when the money is dropped secretly into an alms-box at the church door? Why is it that in a home where family prayer is the rule, it is often ignored entirely when visitors are staying in the house? One of our readers has reminded me that I do not often mention family prayer. The omission was certainly not intentional; for family prayer is, in my opinion, the greatest safeguard of family fellowship. In our home, we are accustomed to read the daily lesson from the Old and New Testaments, both morning and evening, and then kneel together before the throne of God. In some households there might not be time for that, but there can always be a short reading from the Bible, and the Lord's prayer—at least—can be said by the family in unison.

We are "sent into the world." Let us accept our high mission prayerfully and bravely. Let us refuse to be slaves of fashion, wasting time and money in trying to be always in the very latest style. It is humiliating to be a slave, is it not? But we certainly are not free when we are dragged helplessly behind the chariot of Fashion, when we are miserable if our clothes are a little behind the style, or a little shabby, when we even pay out to our tyrant—Fashion—the proportion of our income which belongs to God.

It is not the fashion now for men to swear in the company of ladies, but what about the "ladies"? The conversation of many girls to-day is anything but refined and womanly. When the girls are slangy and "fast," what can you expect of the young men? Men are greatly influenced by women, and great power—power used for good or for evil—

lies in the hands of young girls. They are moulding even now the lives of the young men of to-morrow, and shaping their ideals. The children's future—the future of the men and women of the next generation—lies in the hands of the young women of to-day. A great trust and a great responsibility! Are you facing it with unstained souls and high ideals?

I don't want you to be unfashionable or dowdy—far from it. I want you to be sweet and dainty in all your tastes, and as pretty as God intended you to be. I want you to be natural and unaffected, and to keep your eyes open to spiritual things.

It is nearly a hundred years ago since Charles Lamb started a discussion about "persons whom one would wish to have seen." Many famous people were named, and then one was spoken of reverently by Lamb in these often-quoted, never-to-be-forgotten words: "If Shakespeare were to come into this room, we should all rise to meet him, but if that Person were to come into it, we should fall down and try to kiss the hem of His garment."

The best help in our never-ending fight against worldliness is to remember that He Who sent us into the world is always beside us. There is a fairy story about a princess who was always joyous, although treated unkindly. Her days were filled with loving, helpful work, although no one thanked her and she was constantly blamed unjustly. All wondered at her, until she died, and the secret of her life was revealed. She carried in her heart a magic glass which reflected all her thoughts and acts to the one she loved best, and his approval was also reflected to her. With her eyes on his face, it mattered little to her whether others praised or blamed.

"JESUS calls us from the worship
Of the vain world's golden store,
From each idol that would keep us,
Saying, 'Christian, love Me more.'"
DORA FARNCOMB.

The Ingle Nook.

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

Dear Ingle Nook Friends,—Perhaps on this delightful May day I should be writing to you about springing grass and budding things, and, indeed, I feel sorely tempted to talk with you a while about the marvellous gradations of color that one may see just now anywhere where there are trees. For the leaves have not come fully out yet, and from a distance the treetops truly look as though they were, as Tennyson described it, "bursting into smoke." Nearer are all the tints of baby-green, and gray, and faint rose—beautiful indeed, with here and there a plum or cherry tree, all snowy, to lend the last touch of charm. Who would wish to be in Japan, these May days? Surely Canada is good enough.

But I am not going to dwell on these things, because, forsooth, I have been asked the question, "Junia, what do you think about Woman Suffrage?"—Awful come-down, is it not? and yet, notwithstanding poetic ravings about Nature, the human interest must always come first.

Now, I am not at all sure that my opinion will count for anything, one way or another, in this matter, but here it is, for what it is worth.

A year or two ago I wrote a scrap on the subject, and a very dear and clever friend of the Ingle Nook wrote, "I believe you are coming to it. I am a convert of two years standing." Well, I don't think I am a convert yet, as some women are. Of course, I do think that, as responsible humans, and on the principle of "No taxation without representation," women should have a vote. It is perfectly preposterous that they should not have had it long ago, but we are coming to it, surely, and, perhaps, not too slowly. I do not think for one moment that possessing the

right to cast a ballot could make any woman less womanly, or spoil her homelife in any way. It does not take much time to vote. A woman has to read, anyway, and most of the wide-awake ones nowadays are reading politics just as much as though they had the right of exercising an influence in them. Government is, unquestionably, the most important thing in the world to-day, and one of the most interesting. Women have to obey laws and to pay taxes; why, then, should they not, equally with men, who likewise have to obey laws and pay taxes, possess the right to take a part in the great important work of governing, through representatives?—oh, that eternal question of sex, sex, sex, makes me sick! I can see no reason whatever why it should enter, in a compulsory way, into questions of education and government. Why cannot we consider intellect and common sense as a thing apart, and humans as humans?

And don't you wonder, sometimes, why the "antis" so persistently bring up that old argument, "Women do not need the vote, because they may exercise so great an influence over sons, and husbands, and lovers"? What a low, slimy suggestion, savoring of cajolery and intrigue on the part of the women, and plumb stupidity or love-sick slavery on the part of the men! Don't be fooled,—not a solitary man who advances that argument, believes it. He only uses it as "expedient."—And not a solitary woman who advances that argument

thus gulled and persuaded; there would be a number who would, figuratively speaking, shout, "Hip, hip, hooray! The old party, and nothing but the old party!" voting blindly and prejudicially with the party they were "born to," just as numbers of men do; there would be a number of innocent, ignorant ones, voting just as they were told to by relatives or friends, irresponsibly, as many men do; and, last of all, there would be a number who would work might and main for personal advantage, for graft, for office for sons or husbands, just as there are thousands of men who do this thing. Now, dispassionately, isn't this so?

So the balance of things would not, after all, be so greatly changed, although, without doubt, a few good laws would be brought in, and that speedily, if women had the vote. Liquor interests would suffer; the white-slave traffic would be assailed with right good will; the sale of cigarettes to juniors would be prevented, and laws discriminating against women and children would be amended. All this would be well worth while, and, as all must agree, cannot come too soon.

Of course, we cannot shut our eyes to the fact that many good men are working, and working hard, to bring about just these things. If women could vote, they would hurry up matters a bit, that is all.

To sum the whole matter up, the more I think about it the more I realize that

women are so short-sighted that they cannot bide their time, that they cannot wait as Ireland has waited, and Wales has waited, till the chance could come. Cannot women practice the patience of hope?

"Not women of the Pankhurst type. If they do not get what they want immediately they will fight for it. They can't fight as men fight, but they will destroy property, burn houses, and now will not even draw the line at life. They are so enraged, so infuriated, that reason has left them. The sentence of Mrs. Pankhurst, which seems perfectly justified, to three years' imprisonment with hard labor, is resented with nothing less than impassioned fury. She will starve herself till released, and they will not hesitate to kill. It is a condition of horrible mob-madness, which we pray may not invade this country.

"Of course, Mrs. Pankhurst's demand of votes for women is just. So far she is right. We can imagine a condition in which we might even look with leniency on her method of warfare. It is a woman's method, not a man's, and women have as much right to fight as have men, in case of oppression; and the refusal of the right of representation is oppression. What we claim is that this recourse to force, to fire and bombs, is foolish, crazy, because it is untimely. These British women have not tried instruction and persuasion to the limit. Their method awakens attention to their cause, and so is, in part, helpful; but their way is not the way the end has been gained in Australia and Colorado. Our (the American) women's way is better.

"To illustrate our way, we take not the great successes in so many States, but the appeal to Congress. It is so fine as to be amusing. They asked permission, 681 of them, to present petitions personally to Senators and Representatives in the rotunda of the Capitol, and it was granted. So they came, each addressing the man of her district or State, Mrs. LaFollete pleading to her husband, the Senator, that she might be given the ballot; Mrs. Nelson to Representative Nelson, of Wisconsin; Mrs. Roberts to Representative Roberts, of Massachusetts; Mrs. Kahn to Representative Kahn; Mrs. Taylor to Representative Taylor, and Miss Morgan to her father, Senator Morgan, of Alabama. "It is to laugh," and a smile is quite as good a weapon as a bludgeon or a bomb."

Of course, you know that women's suffrage has been granted quietly in nine of the United States, and is under weigh in several others. Perhaps Uncle Sam is more chivalrous—or more progressive—in this matter than John Bull.

Now, "Enquirer," you know my opinion. But please do not ask it again in so weighty a matter. I do not like to write so many capital "I's."

In the same copy of The Independent, appears an article on floods. May I quote you a bit of it, just to hammer down the suggestion made in this column a few weeks ago?

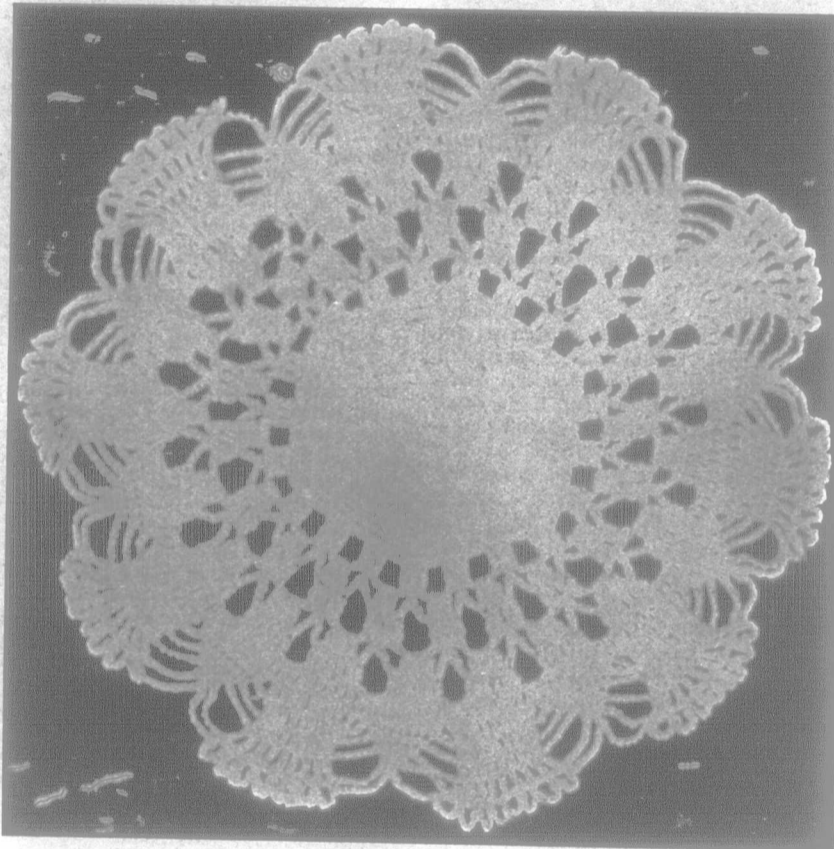
"The expansion of our country has itself been an agency of destruction. We cannot retrace our steps, and no true conservationist wishes to do so; but much can be done BY PLANTING TREES WHEREVER POSSIBLE, and by teaching scientific soil cultivation for the prevention of run-off. Here, then, the believer in the conservation of timber and soil has a common interest with the advocate of river regulation and flood prevention, and they should work hand in hand."

Plan for a few trees along your farm this year, won't you? They can be planted either in spring or fall. Of course, the work should be done carefully, so that the roots are not broken nor dried out before resetting.

[P. S.—By the way, do you know that the question of local option for Woman Suffrage has been mooted in Great Britain.]

Table Mats.

Some time ago someone asked for a design for table mats. We have had the accompanying one photographed, but please do not ask for detailed instruc-



Crocheted Table Mat.

understands what she is saying. Either she hasn't thought about it enough, or she is so puffed-up by flattery and self-conceit that she can't see straight.

On the other hand, I have no idea at all that giving women the vote will bring the millennium. I have been in women's meetings, and heard, occasionally, women speakers argue as though this must almost come to pass. They have harangued about women's purity and nobility, leaving the converse in regard to men to be inferred, until I was, well, just about nauseated, and so, I am sure, was every other woman in the audience who wished to be fair.

I have knocked about a great deal through the world, and have had much to do with men as well as with women, and upon my word, I can't see much difference between the two. If the wrongs that ordinary men commit—granting that no one is perfect—are sometimes more flagrant, I am not at all sure that the more petty ones indulged in by women are not just about as bad, all told. If women had the vote, there would be a number who would try to vote honestly, just as there are a number of men who try to do so; there would be a number who would be easily gulled and persuaded by unscrupulous party-workers, just as there are a number of men who are

Government is a tremendous thing; that it entails a tremendous responsibility, not only on the part of representatives in Parliament, but on the part of every single, solitary human, who possesses a vote. And the next step is clear—viz.: that our men, as well as our women, need more education along political lines, and common-sense lines, and altruistic lines, to make them fit for the privilege.—Yes, education, and more education, and yet more education!

As to the methods of the militant suffragettes in England, to me they seem utterly futile and ridiculous, as most undignified things are. An article in The Independent (New York), voices what I have thought on the matter so fully that I cannot do better than quote it:

TWO FEMINE CAMPAIGNS.

"It is a pity of all pities that when Great Britain has a Ministry and Parliament resolved, as never have Parliament and Ministry been resolved before, to right long wrongs and put justice in place of injustice, and when they are taking up one cause and case after another against the greatest opposition, each in its turn—for each must take its turn—and when Parliament and Ministry are willing and even eager to give its turn to votes for women, a class of

tions, as they are not available, and no one about the office has, at present, time to copy off a mat to obtain them. Those who are accustomed to crocheting, however, should be able to take the pattern quite easily. The thick, central part, is made exactly the same as the common stitch for slippers—single crochet, catching the hook through the outer stitch each time. It will be noted that this center is hexagonal, or six-sided; it is necessary, therefore, to increase at the corners to form the turn.

SUMMER CLOTHES—COCOA CAKE.

Dear Junia,—Like many others, I have been getting a great deal of help from you in your valuable corner.

What will be the leading shades in spring suits?

What will be the chief quality for summer dress, and what color?

I will close with a recipe.

Cocoa Cake.—Two eggs, 1½ cups sugar, white or brown, ¼ cup butter, ¼ cup sour milk, 1 teaspoon soda in sour milk, 3 teaspoons cocoa in half cup boiling water, 2 cups flour.

York Co., Ont. **BLUE BELL.**

All colors are shown for summer suits. Blue, tan and gray, all, are appearing on the streets. Almost everyone nowadays invests in a cotton suit of rep, cotton whipcord, duck, mercerized linenette, or ratine. The investment is a good one. Such a suit saves the cloth suit greatly, and is quite heavy enough for most of the cool days during the summer.

All sorts of material are shown for summer dresses. You will just have to go to the shops and "hunt" until you find what suits you. On the spur of the moment, one thinks of linens, gingham, chambrays, ratines, pongee silks, foulard silks, paillette silks, eoliennes, cotton crepes, muslins—an endless variety—and in all the beautiful shades of blue, pink, champagne, tan, green (reseda green is the favorite), and lavender.

QUESTIONS.

Dear Junia,—I have never written you before, and am coming with a list of questions. I enjoy this part of the paper very much.

How to make onion pickles with dressing in which is a little curry powder?

How to take drops of liquid from stovepipes out of linen?

What to do with dahlia plants which have luxuriant foliage and no blossoms?

How to whiten a ceiling that will not be streaky. Has mixing of whitening anything to do with it?

SUBSCRIBER'S WIFE.

Peterboro Co., Ont.

Can anyone send this recipe for onion pickles?

For the spots caused by dripping from a stovepipe, you might try the following, given by Scientific American: Cover with a thick layer of powdered French chalk previously well moistened with benzine. Then cover over to prevent evaporation of the benzine. After five or six hours, remove the chalk and benzine and apply a fresh layer, continuing until the spots have disappeared. If the benzine is not successful, add a little chloroform. As benzine and its fumes are very inflammable, do the work in a room in which there are no fires or lights.

Try the dahlias again, following out instructions recently given in this paper, for their cultivation. Possibly the dahlias did not bloom last year because of the excessive amount of rainfall.

Should advise washing and cleaning the ceiling very thoroughly, then applying, with a smooth, new brush, one of the kalsomines sold for the purpose.

RE VACUUM CLEANER.

Dear Junia,—Having read your enquiry re vacuum cleaners, I could not resist the temptation of writing you and having my little say on the subject. The opening up of the discussion will be the means of educating many women in the rural districts who never have used one, or know of the amount of labor it saves in taking up carpets, dusting, etc., and as to moths, our house was infested with them every season, and since using my cleaner I have hardly seen a sign of them, as the suction removes the eggs better than any carpet-beater could do.

While I own my cleaner myself, I do not see any reason, why a few could not club together and buy one, unless all would want to use it at the same time. Another plan which I am told works well, is for one to buy it, and rent it for, say, \$1 to \$1.25 per day. Personally, I think this would be the best way, as it would have to be returned after being used.

In this neighborhood the cleaner is looked upon as an implement for city people who do not like work. However, ever, with me it fills a long-felt want, and I could as easily get along without my wringer and washing machine, as the benefits of it are felt every day in the lack of sweeping and dusting. Of course, sweep we must, and dust, too, but the old custom of sweeping the house from cellar to garret on Friday every week in the year is fast vanishing from my memory.

Everyone knows that the majority of farm houses are heated with stoves, from which ashes are always flying, and, indeed, I find since using the furnace it is far from being dustless, either; but the occasional use of the cleaner keeps everything, curtains, draperies, carpets, etc., clean.

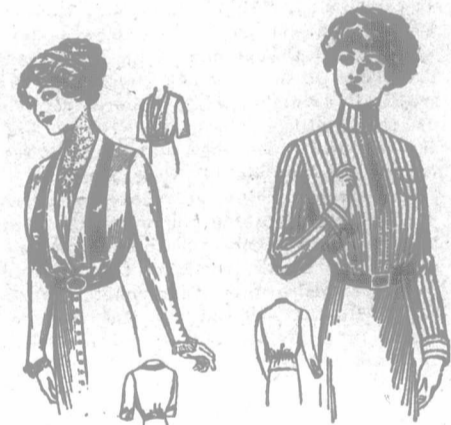
The machine we have must be on sale in the hardware stores of your city. It retailed at \$25, two years ago, and may possibly be cheaper now, but even this price to me is money well invested. The smaller machines have less suction, and, though cheaper, would not, I think, give as good satisfaction.

20TH CENTURY HOUSEKEEPER. Middlesex Co., Ont.

Furnishing the Home.

Has that pretty new home to be furnished this summer? Or has some of the old furniture given out, and it is necessary to replace it? If so, you may find it to your advantage to send to the F. C. Burroughes Furniture Co., Toronto, for a catalogue. See advertisement elsewhere in this issue.

The "Farmer's Advocate" Fashions.



755 Fancy Blouse, 34 to 42 bust.

779 Plain Blouse or Shirt Waist, 34 to 44 bust.



754 Middy Costume for Misses and Small Women, 14, 16 and 18 years.

772 Work Apron. Small 34 or 36, Medium 33 or 40, Large 42 or 44 bust.



DESIGN BY MAY MANTON. 769 Blouse with Robespierre Collar, 34 to 42 bust. 7477 Four-Piece Envelope Skirt, 22 to 30 waist.



774 Infant's Yoke Kimono, One Size.



756 Fancy Blouse, 34 to 40 bust.



DESIGN BY MAY MANTON. 779 Robespierre Coat, 34 to 40 bust.



773 Tucked Blouse or 7813 Blouse with Robespierre Collar, 34 to 44 bust.



736 Girl's Dress with Set-In Sleeves, 8 to 12 years.

Extra Gowns and Hats With Diamond Dyes

Why not have some extra gowns and hats this spring? The styles this year are so simple that you can easily make any of them at home.



Cream charmeuse dyed light green.

You, too, can solve dress problems with Diamond Dyes. You need not try them on a sample first nor practice before dyeing even your most costly garments.

This gown on the left.

Could anything be simpler to make? The charmeuse dress you wore last spring can be made up into a gown just as pretty as this. Dye the material one of the new spring shades. Cut down the brim of one of your summer hats—use some of the silk in the dress, and a bunch of flowers for the trimming. Your new gown and hat should not cost more than 10 cents—the price of one package of Diamond Dyes.

This gown on the right.

Take your last summer voile dress—dye it a delicate lavender shade and trim it with buttons covered with material like the gown. For a hat to wear with this gown, use a straw hat that you have, face it with black velvet, and get a yard of lavender satin ribbon for the trimming.

Diamond Dyes

Diamond Dyes are making this possible for every woman in the country. Learn their use and have the joy of knowing that your wardrobe is really complete.

Mrs. R. L. Lee, writes: "I often wonder why my friends don't have a greater number of gowns. Few dresses are really worn out after one season's wear, and they can always be made over and given new life and beauty with Diamond Dyes. With the aid of Diamond Dyes I have many extra gowns, waists, hats, collars, etc., and I know every woman would be happier if she would profit by my experience."

There are two classes of Diamond Dyes—one for Wool or Silk, the other for Cotton, Linen, or Mixed Goods. Diamond Dyes for Wool or Silk come in Blue envelopes. Diamond Dyes for Cotton, Linen, or Mixed Goods come in White envelopes.

Here's the Truth About Dyes for Home Use.

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

There are two classes of fabrics—animal fibre fabrics and vegetable fibre fabrics. Wool and Silk are animal fibre fabrics. Cotton, Linen, or Mixed Goods are vegetable fibre fabrics. "Union" or "Mixed" goods are 60% to 80% Cotton—so must be treated as vegetable fibre fabrics.

Vegetable fibres require one class of dye, and animal fibres another and radically different class of dye. As proof—we call attention to the fact that manufacturers of woolen goods use one class of dye, while manufacturers of cotton goods use an entirely different class of dye.

Do Not Be Deceived

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

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

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

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

THE WELLS & RICHARDSON CO. LIMITED, 200 Mountain Street, Montreal, Canada



DESIGN BY MAY MANTON.

7707 Blouse with Front Closing, 34 to 42 bust.
7708 Four-Piece Skirt, 22 to 32 waist.



7540 Girl's One-Piece Dress, 6 to 12 years.



7783 Child's Tucker Empire Dress, 6 mos., 1, 2 and 4 years

7803 Tucked Blouse for Misses and Small Women, 14, 16 and 18 years.

HOW TO ORDER PATTERNS.

Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state issue in which design appeared. Price ten cents PER NUMBER. If two numbers appear for the one suit, one for coat, the other for skirt, twenty cents must be sent. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

The Beaver Circle

OUR SENIOR BEAVERS

[For all pupils from Senior Third to Continuation Classes, inclusive.]

A Cat's Long Journey.

A fine black cat of superior breed was received not long ago by express in the town of Thorold, Ontario. It had come from Trail, British Columbia, 2,500 miles away. When its owner, a young lady, was about to travel and could no longer take care of her pet, she did not abandon it as so many have been known to do, but provided for its safe passage to friends at another home.

It was comfortably housed in a roomy box, on which was a placard with this inscription: "My name is Rastus. Please feed me good milk once a day, and beyond that I can nibble the crusts provided until I reach home." The way-bill accompanying it bore records of the feedings along the route, and showed that puss had not wanted for friends or food on his long journey.

The strange shipment created a great deal of interest along the way. Children by the score expressed their sympathy with the traveler, realizing that he had journeyed more miles than most of them had. Rastus arrived in the best of health, and climbed out of his box home as fresh as when he entered it.

—Our Dumb Animals.

Senior Beavers' Letter Box

Dear Puck and Beavers,—I am going to give you a short letter on what I can remember in my life.

I have two sisters and a brother. They are all older than I am. When I was about four years old it was very lonesome for me sometimes as my sisters and brother were away at school and I had no one to play with, I used to go out to the field and when papa was plowing I would follow him around the field, and if I got tired I would sit on the plow on papa's knee or sit down in the furrow and make mud cakes. Of course, when I went into the house I would have to be washed, combed and cleaned up, if I did not get out with papa I would go and call him at meal time, and he would lift me on the horse's back and let me have a horse-back ride down to the barn, or else he would let me drive the horses, although they were only colts and very wild. I can remember when we had an old horse. Papa used to put me on her back, and I would take hold of the bridle and would ride up and down our back lane. Her name was Mable. Poor Mable got so old she had no teeth and could not eat, so papa had to shoot her. I was very sorry when he did so, as she was my favorite horse.

DO YOU KNOW

THAT WORN-OUT LANDS MAY BE MADE PRODUCTIVE AND PROFITABLE BY THE JUDICIOUS USE OF THE RIGHT KIND OF FERTILIZER?

NOW IF YOU HAVE A PIECE OF LAND THAT WON'T GROW ANYTHING BUT WEEDS, TALK WITH US ABOUT IT AND LET US SUGGEST THE RIGHT FERTILIZER

WE FEEL VERY SURE THAT WE CAN SHOW YOU HOW TO USE FERTILIZERS WITHOUT GREAT EXPENSE SO YOUR LAND WILL PAY

CONSULT US FREELY IT IS OUR BUSINESS TO KNOW ENQUIRIES FREELY ANSWERED AGENTS WANTED FOR TERRITORY NOT TAKEN UP

THE W.A. FREEMAN CO. LIMITED
HAMILTON ONTARIO



MAIL CONTRACT

SEALED TENDERS ADDRESSED TO the Postmaster-General, will be received at Ottawa until noon, on Friday, the 20th June, 1913, for the conveyance of His Majesty's Mails on a proposed Contract for four years, six times per week, over Rural Mail Route No. A, from Crediton (West), Ontario, to commence at the pleasure of the Postmaster-General.

Printed notices containing further information as to conditions of proposed Contract may be seen, and blank forms of Tender may be obtained, at the Post Office of Crediton, and at the Office of the Post-office Inspector at London.

G. C. ANDERSON, Superintendent.

Post Office Department, Mail Service Branch, Ottawa, 2nd May, 1913.



MAIL CONTRACT

SEALED TENDERS ADDRESSED TO the Postmaster-General, will be received at Ottawa until noon, on Friday, the 20th June, 1913, for the conveyance of His Majesty's Mails on a proposed Contract for four years, six times per week, over Rural Mail Route "D," from Dashwood (Shipka, Corbett), Huron, S. R., Ont., from the Postmaster-General's Pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen, and blank forms of Tender may be obtained, at the Post Office of Dashwood, Shipka, Corbett, and at the Office of the Post-office Inspector at London.

G. C. ANDERSON, Superintendent.

Post Office Department, Mail Service Branch, Ottawa, 2nd May, 1913.

WE WANT

WOOL

Send particulars when ready to sell.

E. T. CARTER & CO., 84 Front St., E., TORONTO

When writing mention Advocate

We always had a great large Christmas tree. One year Santa brought me a nice rocking chair and a lovely large doll sitting in it; I thought my doll was great, and even yet I make dresses for my dolls and I also have my chair.

We have two farms, and one day we moved to the other farm I thought it was great. I went over on a large load of chairs and stuff. I had never seen this place before, and there was a great deal of fun running through the house and seeing what kind of a place it was, and trying to see where all the doors led to. Shortly after this I started to school and have gone ever since. I have gone to four teachers and liked them all. I have noticed that Alberta Allison is also the same age as I am and in the same class, I have never heard of a girl named Alberta before but myself. As I was named after my uncle Albert with the (a) put on. Wishing every success to Alberta and the Beaver Circle.

ALBERTA THACKER.
(Age 12, Sr. III.)

R. R. No. 1. Ariss.

Dear Puck and Beavers,—I have been a silent reader of the circle, but have written an essay on "Sir Walter Raleigh." We have taken "The Farmer's Advocate" for a number of years. I am going to describe a trip out West which I had four years ago.

My father, mother and I started for North Dakota on the fourteenth of August. It was a beautiful morning as we drove along the road to the station, the sun was just rising in the eastern sky. The train was to leave Walkerton at a quarter after seven, but did not do so till after eight because it was an excursion. At last we started with a nice long train full, but nearly at every station there were more people getting in. It was very nice to look over the country when the sun was shining so brightly on everything, and the time went very quickly. We stopped at Muskoka for about ten minutes. It was quite rocky and so many little lakes would show up here and there. At last we came to Lake Superior and the North Shore. Isn't that lovely to go round? Lake Superior has such lovely scenery. We would stop many times through the woods to get water, to let a train pass, etc., and a number of the people would go out and pick blueberries and raspberries, chase a rabbit or play a game. We stopped for quite a while at Fort William and Port Arthur, and saw the large grain elevators. We then came to Winnipeg and we stayed at my cousin's for a few days, then we started for North Dakota. We arrived at "Minot" at a little after ten so we stayed at a friend's till the afternoon, and then started for Voltaire where my sister lives. My sister lives six miles from Voltaire. We then went out to her place. I certainly enjoyed myself out there. We stayed there for ten weeks, then came to Winnipeg and on to Brandon. We stayed there for a few days and then went out to the country and stayed there for a few days, then came back to Winnipeg and stayed there for a few days, and then started for home. When we were near Hawke a train had run into another one, and we were delayed for nine hours. A large car with high planks came and took the cars to one side to let us pass. Nearly every person in our train went out and watched them take the cars away. It happened to be a few minutes before we came along or we would have been wrecked. I took a piece of one of the damaged cars, but I lost it on the train. We were supposed to be in Toronto at three, but did not get there till after eight so we were too late for the Walkerton train, so had to stay in Toronto over night. We came home the next day after having three months of pleasure.

Would some of the Beavers please write to me?

VIOLA W. CUNNINGHAM.
(Age 13, Sr. IV. Class.)

Greenock, Ont.

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for as long as I can remember. This is the second time I have written, but my first

one was not in print, so I thought I would try my luck again.

My grandfather has a sawmill, but it did not run much more than two weeks after it started, on account of the overflowing of the creek which runs between the house and mill. It ran in the fireplace and they had to stop. Then there was a strong wind and they stopped to sharpen a saw, and when they were about ready papa filled up the fireplace and had a big fire on, and just as they were putting the saw on the wind blew the smokestack over and they had to stop, the wind blew the door off the mill. It took the roof off two churches, and the roof off quite a few barns and blew down fences, but we live in the hollow so we are shaded and most of the wind goes over.

I wonder how many birds the leaves have seen this spring. I have seen some robins, blackbirds, and some crows and some blue-jays, which you can see anytime in winter too.

Say Puck, if I were going to write a story could I read one and then write it in my own words or would I have to make one up?

MAURICE READHEAD.
(Age 10, Book Jr. IV.)

Lowville, Ont.

It would be better for you to make the story up, Maurice, or, at least, to write one about something that happened in your locality.

Dear Puck and Beavers,—I hope this poem I made will do to put in your "Senior Beaver Circle," it is called:

NIGHTFALL.

The summer sky was tinted gold and red,
All the trees were of their coolest green,
The sun, last rays of brightest beauty shed,
Slipped behind its fleecy, clouded screen.
Down the slope the cows came one by one,
The horses homeward quietly were led,
The birdies weary of their long day's fun,
In cool and shady treetops went to bed.
The friendly stars came twinkling in the sky,
Upon the earth the moon shed silv'ry beams,
The fleecy cloudlets gently glided by,
And all beneath was wrapt in happy dreams.

MARJORIE L. RILEY.
(Age 11, Jr. IV.)

Millford Bay, Ont.

Dear Puck and Beavers,—A whole year and a half has slipt by since I last wrote you a story on "The frog and its surroundings." Since that time I am older and have met with some great experiences. For instance, one day a friend and I were out rolling the land with the roller with an old but rather frisky pair of horses. They took a notion to run and, as some people express it, "they were really running some." It smashed the top of the roller and I went down between a scantling and the roller, and luckily got off with a pretty badly scraped head. My partner, who was some years my senior, grabbed the horses by the bits and hung on till they stopped. I knew nothing more, nor do I now even remember what happened next. All I knew last was I was picked up and carried to the house. My head pained me for a while, but afterwards I went to sleep. Day by day I gradually got better, till at last I was able to get into the fresh, pure air of the country of Ontario.

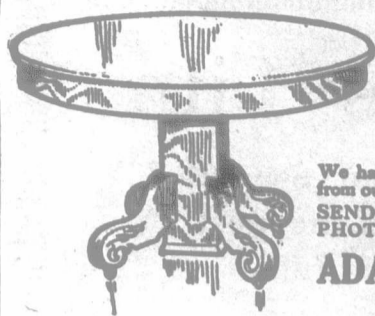
I love our country as every Canadian should and live in the Province of Ontario. I notice that everyone praises his own province, and why should he not? Turn to "My Native Land" in fourth reader and you will find it appropriate.

I am a poor writer and hope this will escape the waste-paper basket. I should like one of your little badges. Wishing your society all the success that could be desired, yours truly,

HAMILTON CLUTTON.
(Age 12, Jr. IV.)

Dunlop, Ont.

We have not decided to have Beaver Circle badges yet, Hamilton.



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We have cut out all unnecessary expense by shipping direct from our various factories to your home.
SEND FOR OUR LARGE PHOTO ILLUSTRATED Catalogue No 7
ADAMS FURNITURE CO., Limited
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GOOD FOR 30 DAYS ONLY

We are cutting the price in half, and selling our KING EDWARD HAND-POWER VACUUM CLEANER for

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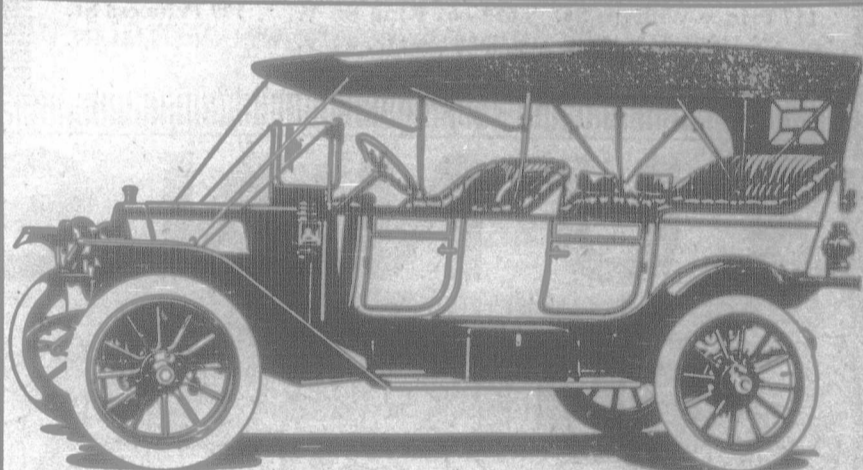
in order to introduce our celebrated Cleaner among the farm homes of Canada. Thousands of satisfied users in the cities testify to the merit of the KING EDWARD.

This is one of the best offers ever made to the readers of "The Farmer's Advocate." We want you to benefit by it, as the regular price of this machine is \$16.00.

Satisfaction Guaranteed, or Money Refunded.

Cash must accompany order. Don't Delay. Order to-day.

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Motor Cars for the Farm

MANY uses can be made of a fine motor car on the farm. You can enjoy the pleasures of long-distance touring. You can also use it to advantage in your business, to carry produce and in the general routine of the farm.

These rebuilt cars are genuine sacrifice sales. We took them in exchange for new Russells.

1. A 30 h.-p. Russell four-cylinder with seven-passenger body. This car has good tires and is in splendid running shape. Price \$500. Cost four times that when new.
2. A six-cylinder Napier car with seven-passenger body. An imported car, in fine running order. Very cheap. Price \$1,200.
3. Thomas Flyer, 7-passenger. An excellent car for a real estate concern. It was too large for the owner, who wanted a runabout. Price \$500.00.

If you desire you can make a truck body and put it on any of the above cars and make a first-class delivery car. It will more than repay your investment the first year.

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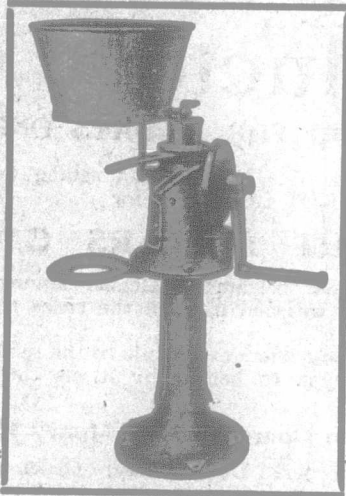
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Now is the Time

to purchase the Cream Separator
which will secure you the most
profit from your milk
this season.

THE "PREMIER"

will do this
and will give
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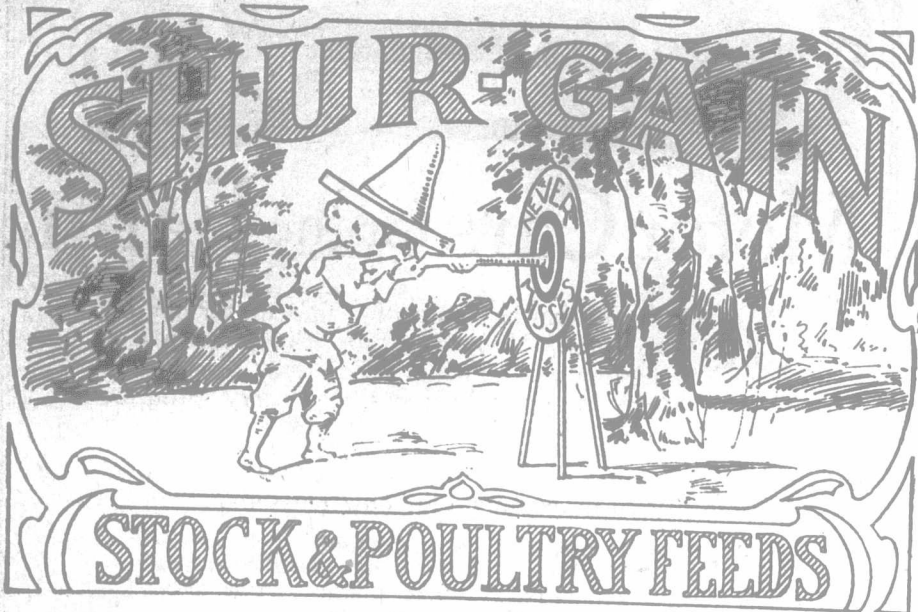
Give it a trial.
It will cost
you nothing,
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Write us direct for further particulars.

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Or any other line of Stock or Poultry Food. Write:

GUNNS LIMITED, West Toronto
Electric Steel Wheels with Wide-grooved Tires



Are the ideal wheel for farm and road. Built to fit any axle or skein, of any height, any width of tire and capacity.

WRITE FOR CATALOGUE AND PRICES.

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Honor Roll:—Carrie Martin, Russel Freid, Madeleine Draper, Isa Glendinning (Newfoundland), Ruby Brocklebank, Bruce McLeod, Rosabell Park, Holden Appleby, Emma Runge, Nelson Thomas, Mabel Rhindress, Lillian Collier, Elma Dodds.

RIDDLES.

Why is a postage stamp a most unfortunate thing?—Though it sticks to its duty it get its head punched, and its face disfigured and a good licking.—Sent by Gertrude Everett.

How does a hairdresser end his days?—Curls up and dies (dyes).

What is the most curious thing in the world? Ans.—A Chinaman. Why?—Because his tail comes out of his head.—Sent by Gladys Elsley.

By the way, very soon all the Chinamen will have discarded their "pigtails," Gladys.

The five little brothers grew quite gloomy,

And the wee one began to pout,
Till the biggest one whispered: "What do you say?
Let's leave the carriage and run away!"

So out they scampered, the five together,

And off and away they sped.
When somebody found the carriage of leather,

Oh, how she shook her head!
'Twas her little boy's shoe, as every one knows,
And the five little brothers were five little toes.

—Elma Wheeler Wilcox.

Junior Beavers' Letter Box

Dear Puck and Little Beavers,—I thought I would write a letter to the Circle again. As I wrote once before



A May Quilting Bee.

Why is a watchdog bigger in the morning than at night?—Because he is let out in the morning and taken in at night.

What goes up when the rain comes down? An umbrella.—Elizabeth Hughes.

Beaver Circle Notes.

We should like if Isa Glendinning would write us, telling us something about Newfoundland where he lives.

The following would like some of the Beavers to write to them: Rosabell Park (age 11), Donlands Farm, Donlands, Ont.; A. Hughey Couland (14), Harriston, Ont.

Elma Dodds, Lloydtown, Ont., says she is making a garden. Will she kindly let us know if she intends entering the Garden Competition?

and didn't see it in print. I live on a farm, and we have taken "The Farmer's Advocate" as long as I can remember, and like it fine. I enjoy reading the Beavers' letters. And also that story "Rebecca of Sunnybrook Farm." Say! little Beavers (I'll say Beavers' for I do hope it will escape the w. p. b.) have you read many books? I am very fond of reading and have read "The Half Sisters," "Old Rose and Silver" and "Idle Thoughts of an Idle Fellow," and several others.

I like our teacher fine, her name is Miss Clegg. I have four sisters. My youngest sister and I go to school every day we can. I am in the third class at school; I tried for the senior third last summer and passed the examination.

Lloydtown, P. O. ELMA DODDS.
(Age 11, Class III.)

OUR JUNIOR BEAVERS.

[For all pupils from the First Book to Junior Third, inclusive.]

Five Little Brothers.

Five little brothers set out together
To journey the livelong day.
In a curious carriage all made of leather,

They hurried away, away!
One big brother and three quite small,
And one wee fellow, no size at all.

The carriage was dark, and none too roomy.
And they could not move about;

Dear Puck and Beavers,—This is my first letter to the Beaver Circle, and I enjoy reading the letters very much. My father has taken "The Farmer's Advocate" for as long as I can remember, and he likes it very much. For pets I have a pony named Freddie, a kitten named Rags, and a calf called Baby. As this is the first time, I will close, wishing the Beaver Circle success, I am Leith, Ont. INA ISOBEL SCOTT.
(Book II., age 8.)

Dear Puck and Beavers,—I live on a farm of 150 acres, I go to school every day. Our teacher's name is Miss Pratt, I like her fine. We are one-half a mile from school. I am going to tell you about my pets, I have a cat, her name is Bluebell. She is eight years

old; and a dog Collie, he is black and white; and a white rabbit, it has bright red eyes. My father has taken "The Farmer's Advocate" for a number of years, and we all like it fine. I like reading the Beaver Circle. As this is my first letter, I will close, wishing the Beavers success.

MARGUERITE MIDDLETON.
(Age 10, Book III.)

South Buxton, Ont.

Dear Puck and Beavers,—This is my first letter to your circle. We have four cows and two calves. I go to school and I'm in the part second, and I'm going to try for the second in June. I have a dog, his name is Sheppy. I have three brothers and one sister. I am going to close now.

Appin, Ont. JAMES MCARTHUR.
(Age 7, Class, Part Second.)

Dear Puck and Beavers,—I do not go to school. We have two calves. My letter is getting too long. I am five.

Appin, Ont. IAN MCARTHUR.

You are our very youngest Beaver, Ian. So you are five—and you wrote your letter all yourself, too!

Dear Little Beavers,—Here comes another Beaver. I always read the letters and enjoy reading them. I go to school every day and like it fine. I am in the junior third book. For pets I have a cat I call Tootsie and a dog called Sport. He will play hide-and-seek with me and tag, also other games. Puck! I think I would like to enter the garden competition this summer. I think it would be fine, don't you Beavers? As my letter is getting rather long, I will close for my first time. Hoping my letter will escape the w. p. b., with my best wishes for all the Beavers.

Science Hill. MABEL GUNNING.
(Class, Junior III.)

Dear Puck and Beavers,—This is the first time I have written to the Beaver Circle. But I did not have as good a time as I would like to have in Easter holidays, on account of muddy weather. I go to school every day. I like my teacher fine; her name is Miss Edgar. I guess I will close as my letter is getting very long.

Lakefield, Ont. ORA DUNFORD.
R. R. No. 4. (Age 8, Class Part II.)

Dear Puck and Beavers,—I live on a farm near Pond Mills. I have two little brothers; their names are Johnnie and Arthur. We all go to school together. I am eight years old and in the senior second class. I like my teacher very much; her name is Miss Sellery. I like to read the Beaver letters in "The Farmer's Advocate" very much. I hope this letter will escape the w. p. b. As this is my first letter I guess I will close.

MARGARET I. GRIEVE.

RIDDLES.

Why do chickens three weeks old cross the road? Ans.—To get to the other side.

Gossip.

Artemas O'Neill, of Birr, Ont., informs us that he has sold the four-year-old Percheron stallion, Rexall [2842], which he advertised in "The Farmer's Advocate," to C. E. Sobey, of Albany, P. E. I. Mr. Sobey selected this good colt after looking at a large number of stallions in Ontario.

The death is reported of King George's Shire stallion, Calwick Blend, which dropped dead in his stall. He was 16 years old, being foaled in 1897, sired by the renowned Harold, dam Princess May, by Premier, thus exemplifying the highly-popular cross of Harold and Premier strains. Calwick Blend was bred by William Sargeant, and was bought by the late King Edward from A. C. Duncombe. A fine type of Shire stallion, embodying weight and quality, he was a winner, and bred winners, which included the well-known breeding stallion, Babingley Nulli Secundus, now in the Tring stud, and himself the sire of winning foals.—Farmer and Stock Breeder.

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Special Yearling bull. Sire:—Earl Dam:—Morton Mains Greenside (Imp) 30756, by Morton Mains Butterscotch (7026), R. O. P. No. 296. Qualified as a two-year-old with 302.05 lbs. fat in 296 days.

A SNAP FOR SOMEONE.

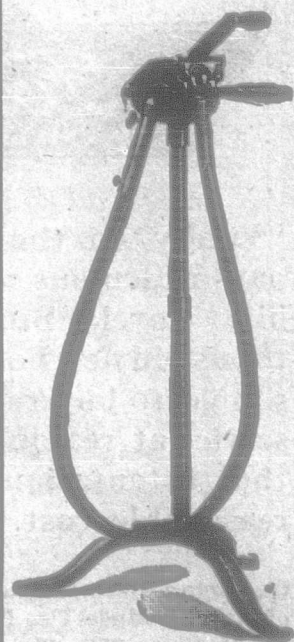
WORN-OUT SOILS

can be made to yield bumper crops if the right fertilizer is used. There are 14 different Harab Fertilizers—each for a different purpose. For full particulars write

THE HARRIS ABATTOIR CO., LTD.
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The National Pipe & Foundry Co., Ltd., whose advertisement of silo material appears in another column of this issue, inform us as we go to press, that they have moved into new offices, and their new address is 211 McGill street, Montreal. Readers who are interested should write the new address.

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No matter how thick or scraggly the hair, the "BURMAN" HORSE CLIPPER will clip it in thirty minutes. Always ready for use, easy to manipulate, always dependable and clips cleanly, evenly and as close as you wish. If you have one horse or twenty this clipper will save your time and money—there is a low first cost and no repair expense.

Comes packed ready for use—clipping plates and shaft hook for holding clipping head supplied. Ask your dealer or write direct.

B. & S. H. Thompson & Co. Ltd.
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June 25th.—T. E. & H. C. Robson, Elderton, Ont.; Shorthorns.

**BISHOPRIC
WALL BOARD AND SHEATHING**

Made with tough, fire-resisting, everlasting Asphalt-Mastic will give you a drier, warmer house, at lower cost, in a month less time, than if you used lath and plaster.

Bishopric Wall Board is made by imbedding kiln-dried dressed lath, under 500-lbs. pressure, in sheets of hot Asphalt-Mastic, the other side of which is surfaced with sized fibre-board.

Saves Time—Bishopric Wall Board comes in sheets 4x4 feet ready to go on. It goes on quick—far quicker than lath and plaster. It goes on dry—you don't have to wait for setting or drying as you do with plaster. You can get into the new house at least a month sooner if you use Bishopric Wall Board.

Saves Money—The first cost of Bishopric Wall Board is considerably less than that of lath and plaster. There is no expense for repairs, for neither dampness, vibration, settling of foundations, nor anything else will ever make it loosen or drop off the wall. Moreover, there is a substantial saving in coal bills, as a wall of Bishopric Wall Board is

Warmer than lath and plaster. The Asphalt-Mastic in which the laths are imbedded is absolutely air tight, blocking all drafts, and a non-conductor, keeping the heat in in winter and out in summer.

Dryer—This Asphalt-Mastic is also moisture-proof. If your house is lined with Bishopric Wall Board you will never be troubled with that uncomfortable, unhealthy, dampness so common in plastered houses.

A Flat and Rigid Wall—Bishopric Wall Board is the only board made with laths. Laths are positively necessary to back up wall board to make it rigid and substantial—and to keep a perfectly flat surface. Without lath, wall board swells, warps, cracks and pulls away from the joints.

Easily Decorated—Bishopric Wall Board is surfaced with heavy sized cardboard, which takes Oil or Water Colors perfectly, and which forms an ideal surface for Wall Paper or Burlap. Artistic panelling adds to its attractiveness.

Fire-resisting—The Asphalt-Mastic in which the laths are imbedded is toughened by a patented process, and will not burn. Buildings have been saved because of this Wall Board.

Rat and Vermin Proof—The pests find it impossible to gnaw or bore through the tough, gummy Asphalt-Mastic.

Bishopric Sheathing is made of precisely the same materials as Bishopric Wall Board, but the

finished surface is not so smooth. It costs only one quarter as much to apply as lumber and building paper, and makes a better wall. Applied with the laths out, it binds cement or stucco as nothing else can. When weather boards are applied over it, the dead air space between the laths affords splendid insulation.

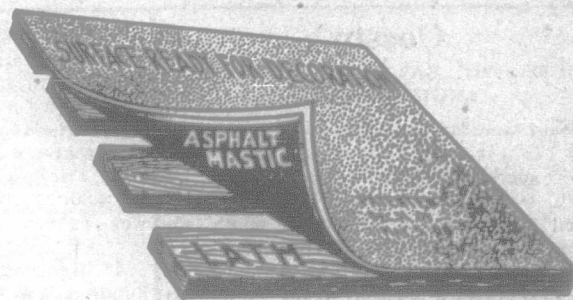
Write for Illustrated Booklet which explains fully the advantages of Bishopric Wall Board and Sheathing, and shows by photographs how to apply it and how it looks when put on the wall and ceilings.

Working plan for Bishopric Model Home—Send 6 cents to cover cost of mailing and we will send you Architectural plan for building a Model House. We will also send sample of Bishopric Wall Board and Bishopric Booklet. Write to-day.

Dealers—Our proposition for representatives in unoccupied territory is decidedly interesting. Write us.

Bishopric Wall Board Co. Limited
Sparks Street, Ottawa, Ont.

(Coupon)
BISHOPRIC WALL BOARD CO. LIMITED
OTTAWA, ONT.



Please send me your Wall Board and Sheathing Book, and this big sample of Bishopric Wall Board.

Name.....
Post Office.....
L 8



"Vanity on the highway" still pays ridiculous toll for automobile travel. But two hundred thousand new Fords will this season go to buyers who prefer real service at reasonable cost rather than ostentatious display at unreasonable cost.

Our factories have produced more than a quarter of a million Model T's. Prices: Runabout, \$675, Touring car \$750, Town Car, \$1,000—f. o. b. Walkerville, Ont., with all equipment. For particulars get "Ford Times"—an interesting automobile magazine. It's free—from Walkerville factory, Ford Motor Company of Canada, Limited.

20 to 30% Less Coal

ON account of its distinctive construction the Kelsey Warm Air Generator saves 20 to 30% of coal bills.

A Kelsey has 61 square feet of radiating surface to 1 square foot of grate.

This large radiating surface is provided for in a battery of heavy, cast iron, Zig-Zag tubes that surround the fire grate.

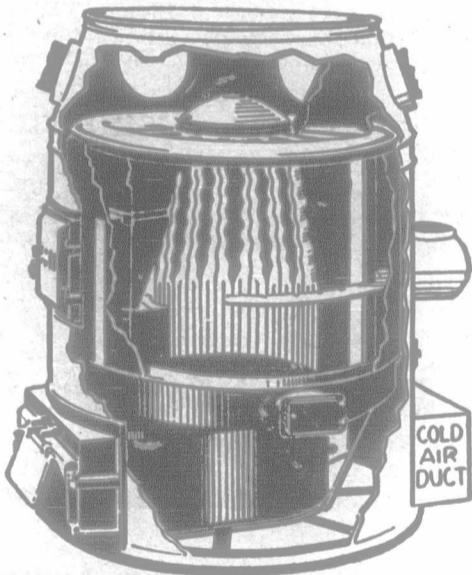
These heavy tubes store up heat and radiate it evenly.

All the heat from the coal is concentrated in these Zig-Zag tubes which are right up against the fire. And because of their immense weight they retain the heat for hours after the fire gets low, making constant "firing up" unnecessary.

That is why the Kelsey is the

most economical of all heating systems. It saves from 20 to 30% of coal bills.

Our booklet "Achievements in Modern Heating and Ventilation," tells all about this economical heating system. Send for it.



THE
**JAS. SMART
MFG. CO.**

LIMITED
Brockville, Winnipeg,
1 Ont. Man.

Gossip.

SUCCESSFUL SALES OF ABERDEEN-ANGUS BULLS.

Recent auction sales of Aberdeen-Angus bulls in the United States have been quite successful. On April 29th, at South Omaha, Nebraska, 62 head consigned by various breeders, made an average of \$181. The top price was \$350, for the two-year-old Esmond Eric, and 17 others brought from \$200 to \$315 each. At Chicago, May 1st, 67 Angus bulls, consigned by various breeders, the top price attained was \$400, paid for the three-year-old Earl of Botna. The first thirty sold, made an average of \$200, and the entire lot an average of \$131.

Fifty-nine head of Shorthorns of Standard American sorts, the property of W. H. Bryson, at Lake Fork, Illinois, April 29th, were sold for an average of \$153. The highest price was \$350, for the roan four-year-old bull, Golden Edgewood. A roan two-year-old son of this bull sold for \$300. The highest price for a female was \$250.

At Geneva, Ohio, May 1 and 2, one hundred and ninety-three Holstein-Friesians, property of T. H. Russell, sold at auction, made an average price of \$202 per head. The top price was \$605, for the three-year-old heifer, Countess Pearl of Lake Lawn. Thirty-seven others sold for prices ranging from \$400 to \$600 each.

News of the Week.

CANADIAN.

Dr. Friedmann treated patients for the second time in Ottawa, Toronto, and London. Physicians in Canada and the United States continue to express themselves as rather sceptical of the "cure." Dr. Friedmann's arrangements with the Eisner firm of New York, are, however, more generous than at first reported. They provide for the proper preparing of vaccine in several institutions, and that all duly licensed physicians shall be, without cost to themselves, entitled to receive at the institutes proper instructions in the methods of application. It is also stipulated that patients who are unable to pay shall be treated free of charge.

The Canadian Northern Railway is tunnelling the mountain at Montreal to secure better terminal facilities, and open a new tract of land for the building of suburban houses.

BRITISH AND FOREIGN.

The Underwood tariff bill was passed at Washington on May 8th, the vote standing 281 to 139.

A French airman, Marcel Brindejono des Moulinais, flew across the English Channel in twenty minutes on May 11th.

The British Government has announced that no more opium will be sent from India to China this year. It is probable that this marks the end of the regrettable traffic.

Sir Cecil Spring-Rice has arrived at Washington as Ambassador from Britain to the United States, in succession to Rt. Hon. James Bryce.

An international conference to arrange for the celebration of the centenary of the signing of the treaty of Ghent, and the one-hundredth anniversary of peace among English-speaking nations, was held in New York last week. Delegates from Ghent, Great Britain, Canada, Australia, and Newfoundland, were present.

The Women Suffrage Bill was again rejected last week in the British House of Commons. Among its supporters were Sir Edward Grey and Lord Robert Cecil.

Militant suffragette manoeuvres of the week include the mutilation of taxicabs, the burning of a church at Chatham, the attempt to blow up the chancel of St. Paul's Cathedral by a bomb, and the placing of a bomb outside of the Grand Hotel in London. Blenheim palace has been closed to the public, owing to the fact that the Duke of Marlborough received an anonymous letter warning him of the existence of a "militant" plot to destroy it.

The United States has formally recognized the Chinese Republic.

Ten thousand women marched, on May 10th, through Fifth avenue, New York, in well-organized procession, to demonstrate their desire for the ballot.

The pictures collected by the late Pierpont Morgan have just been insured for \$23,000,000.

Dr. Liebknecht, who made public the Krupp scandal, now declares that the Vickers-Armstrong war-supply firm in England was the originator of the Boer war; that certain French armament interests have carried on criminal politics in the Balkans, and that German cannon and arms industries sell weapons to everyone so that German soldiers may be murdered with them.

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at 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 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 advertisements inserted for less than 50 cents.

A BARGAIN—Mammoth Imperial Pekin duck eggs, \$1.50 per 11. Trio for sale, Silver Campine, Black, White, Silver Spangled Hamburgs and Barred Rock eggs; the best at reasonable prices. L. J. Gibbons, Iroquois, Ont.

A DOLLAR per sitting, Barred Rock eggs, O.A.C. laying strain. Mrs. W. H. Berry, Guelph, Ont.

BARRED Rock eggs; selected stock. Dollar per fifteen, dollar fifty, per thirty. Frank Baird, Glanworth, Ont.

BEAUTIFUL Buff Leghorns—All-year layers, choice birds, eggs \$1.25 per fifteen. Unfertile eggs replaced free. Chas. Watson, Londesboro, Ont.

BUFF ORPINGTONS—Large, vigorous stock; good colour and type guaranteed; laying strain. Eggs \$1.00 for twelve. Rev. A. E. Jones, Belmont, Ont.

BLACK Minorcas, White, Silver Wyandottes, Dorkings, Reds, Barred, White Rocks, Bantams, Leghorns, Pekin, Aylesbury Ducks setting \$1. R. Laurie, Drumbo.

BUFF Leghorns, Buff Orpington eggs; circular free. J. E. Griffin, Dunnville, Ont.

BUFF ORPINGTONS—Pure-bred cockerel, \$3. pullets, \$2; large, stout, healthy birds, Satisfaction guaranteed. Hugh A. Scott, Caledonia, Ont.

BARRED ROCK eggs from well-bred, heavy laying, prize-winning stock; \$1. per 15, \$2. for 30, \$4. per 100. Chas. Hillier, Norwich, Ont.

EXCLUSIVE breeder of Barred Rocks, Eggs for hatching, \$1. per 15. Pringle and Hall strains. Mating list free. Jas. E. Metcalfe, Hanover, Ont.

EGGS from Barred Rocks, S. C. White Leghorns (both O. A. C. laying strains), Rhode Island Reds, Brown Leghorns, \$1.50 per setting. Pekin lucks \$1 per 11. Mammoth Bronze turkeys 25 cents each. Norfolk Specialty Farms Co., Ltd., St. Williams, Ont.

EGGS from bred-to-lay Partridge Rocks, Barred Rocks, Single-Comb Reds and Rose-Comb Brown Leghorns; beautiful matings, \$1 per 15. Reuben Batho, Kenilworth, Ont.

INDIAN Runner eggs, ten cents each. White Wyandottes, dollar for fifteen. W. D. Monkman, Newmarket, Ont.

INDIAN Runner Ducks—Fawn and white, prolific layers of large, white eggs. \$1 for 10 eggs. Select pens of Rose Comb Rhode Island Reds and Barred Plymouth Rocks. Eggs \$1 for 15. R. F. Sanderson, Oakville, Ont.

LIGHT Brahmas \$2.00 setting; Silver Spangled Hamburgs \$1.50 setting; Golden Polish \$2.50 setting; every bird a prize winner. Harry Wilson, Box 798, Collingwood, Ont.

SUPERIOR Barred Rocks—Laid 4,928 eggs this winter in sixty days. Pullets laid at four and a half months. Pens headed by Ringlet males. Eggs \$1.25 per fifteen. Unfertile eggs replaced free. Charles Watson, Londesboro, Ont.

THE R. Roy Farm breeds for egg production and utility. B. Rocks, W. Leghorns, eggs \$1.50 per 15, \$5 per 100. Utility and exhibition R. I. Reds, eggs \$2 per 15. Ruppel Bros., Elmira, Ont., Box 98.

WHITE Wyandottes exclusively. Eggs \$1.00 per 15. Good hatch guaranteed. Thos. F. Pirie, R. 3, Ingersoll, Ont.

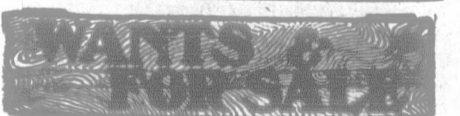
WHITE Wyandotte eggs from bred-to-lay stock, \$1 per 15; cockerels, \$2. John Orchard, Shedden, Ont.

WHITE ROCKS, Guelph winners. Booklet free. John Pettit, Fruitland, Ont.

WESTSIDE FARM offers choice S. C. Brown Leghorn eggs at one fifty per fifteen. David A. Ashworth, Maple Grove, Ont.

WHITE Wyandottes bred for utility and show. Blocky snow white birds. Excellent layers. Eggs dollar per fifteen. Allan McPhail, R.R. No 4, Galt, Ont.

Pleasant Valley Farms—Eggs for hatching. White Wyandottes and S. C. White Leghorns, \$4 per hundred. Special matings, both varieties, \$2 per 15, excellent varieties. GEO. AMOS & SON, Moffat, Ont.



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

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

ALL kinds of farms. Fruit farms a specialty. W. B. Calder, Grimsby, Ont.

AIM FOR VANCOUVER ISLAND—Canada's most favoured climate; suits middle-aged and elderly people well; good profits for ambitious men with small or large capital in business professions, fruit growing, poultry, mixed farming, manufacturing, mining, fisheries, timber, railroads, new towns, endless opportunities. Write to-day for authentic information. Vancouver Island Development League, Broughton Street, Victoria, B. C.

HELPFUL literature for Bible students free on application. Secy. International Bible Students' Association, 59 Alloway Ave., Winnipeg.

100 Acre farm for sale 2 1/4 miles north west of Thamesford. Good brick house and barn. School near. Apply to Mrs. Roderick McDonald, London, Ont.



Note the Color of your flour—
And the Bread it makes for you.
 Delicately *creamy* is **FIVE ROSES** flour.
 Because it is *not bleached*, don't you see.
Clear—Immaculate—Desirable.
 A *pure* Manitoba wheat flour—**FIVE ROSES.**
 And the healthy sun-ripened spring wheat berries are *naturally* of a *golden glow*.
 And the meaty *heart* of the polished kernels is *creamy*.
 Milled from *this cream*, **FIVE ROSES** is delicately "creamy."
 The only *natural* flour from Manitoba's prime wheat. Which gets whiter and whiter as you *knead* it.
 And your bread is most appetizing, *unusually* attractive in appearance.
 Looks good.
 And is good.
 Bake this purest *unbleached* flour.

Five Roses Flour

Not Bleached



Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED, MONTREAL

The New Public Health Continued.

sticky fly paper or fly traps will help to keep the number down.

The favorite breeding place of flies is horse manure. A house close to a stable in use is practically never free from flies, unless the greatest care is taken to remove the manure once a week, or keep it in bins, screened to keep out flies. If they cannot get horse manure to breed in, cow manure will do: garbage, and damp, smelly spots of any kind are third and fourth choice places. Under the flooring of horse stalls is a favorite place, if it is accessible at all.

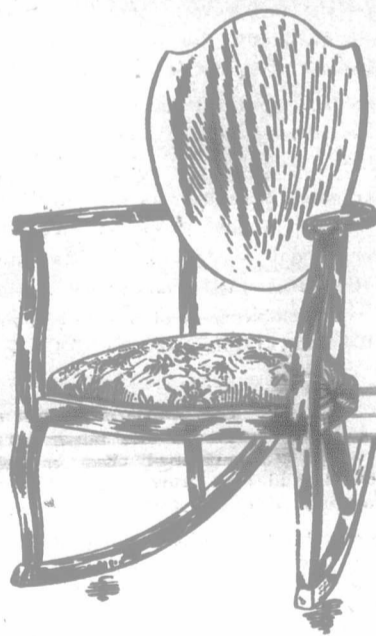
Flies take over a week to develop from egg to adult; and therefore if any breeding place is cleaned up once a week in such a manner that eggs and maggots are destroyed or placed where they can do no harm by further development, flies cannot increase in numbers.

But, of course, this programme is very hard to carry out in all the thousand places about a farmhouse where flies may breed. Nevertheless, attention to the main breeding grounds may reduce their numbers quite appreciably.

One great advantage that a farmer has over the dweller in a village in screening his out-door toilet is this: In a village you may screen your own toilet, but your neighbor may not, so that while your flies are "clean" (to that extent), your neighbor's flies hop over the fence to you, bringing your neighbor's bowel discharges with them to your milk and bread and fruit. But the farmer has no near neighbors, as a rule, and his own toilet furnishes the chief source of trouble. Screening it takes care of most of the danger in his locality all at one operation.

But flies, even house flies, sometimes

EXTRAORDINARY FURNITURE VALUE



The Rocker illustrated is a dainty little Parlor Rocker, made of select birch, mahogany-veneered back and beautifully hand polished. The frame is strong and well built, particular attention being given to the swing and comfort of the Rocker. The seat is covered in choice silk-finished Tapestry, in red, green, brown, or what is more preferable, a dainty Nile green Moire silk.

Price \$6.95

Freight paid to any station in Ontario.

Buy from **BURROUGHS** and you are buying from Canada's Largest Home Furnishers. You will save from 20 to 35 per cent. on the regular cost of furniture if you buy from us through our catalogue. You will find the catalogue most interesting. It contains hundreds of illustrations. It's free.

Drop a card or letter to-day.

Ask for Catalogue F.

The F. C. Burroughes Furniture Co.
 TORONTO, ONT. LIMITED

Baby Chick Feed



CANUCK

makes strong, healthy birds. A sure PROFIT MAKER
 Free Samples From
Chisholm Milling Co. Ltd. Toronto



THE POULTRY BOOK

A thoroughly practical guide for Amateur, Fancier, Professional Breeder or General Farmer. It is the book you need, 355 illustrations and over 1300 pages. A handsome volume bound in cloth, large 8vo. Price until recently, \$5.00, now offered for the first time at \$2.50 postpaid. Write for catalogue of books every farmer should have.

Meier Stamp & Pub. Co.
 84 TYNDALL AVE., TORONTO, CANADA

200 ACRES

First-class grain and stock farm adjoining Bradford village. Everything in good repair.

DRAWER 276

travel long distances, not by direct flight, but chiefly by journeying along with horses in teams, or even with cows, or humans. I have seen typhoid fever carried thus by teams driving from a farm where typhoid existed to farms one or two miles away. It is important, therefore, to urge your farmer neighbor to screen his toilet also, even if it is less important in the country than in the village. Of course, it is true that flies cannot carry typhoid even from un-screened toilets, UNLESS THE TYPHOID GERMS ARE THERE FOR THEM TO CARRY. The typhoid germs must be put into the toilet somehow before the flies can get them out again.

Typhoid germs (like all other germs) do not develop from dirt of every or any kind but only from previous germs of the same kind. So, unless someone uses your toilet who had typhoid germs in his bladder or bowel, there will be no typhoid germs there at all. The same is true of dysentery germs, etc. But, of course, every farm has visitors and callers from time to time, neighbors, salesmen, book agents, machinery agents, etc., etc.; and every farm has extra help engaged from time to time. These are likely to use the toilet more or less during their stay; this does no harm, UNLESS ONE (OR MORE) OF THEM HAS THE GERMS OF TYPHOID FEVER (OR OF DYSENTERY, ETC.), IN HIS BLADDER OR BOWEL. Then, the next flies from that toilet which fall into the milk or run over the sugar, leave the typhoid or dysentery germs, or both, as the case may be, as well as their usual contributions.

RURAL TYPHOID FEVER is usually due either to MEMBERS OF THE FAMILY VISITING PLACES WHERE TYPHOID GERMS ARE ABOUT (such as cities with sewage in their water supplies) or TO VISITORS BRINGING THE GERMS TO THE FARM in their inter-

The Canadian Industrial Exhibition

Winnipeg, Man.

July 8th to 16th, 1913

The greatest year of Western
Canada's Greatest Educational Exhibition

See the amazing

FRONTIER DAY'S EXPOSITION

Bucking Bronchos, Real Cowboys and Rough Riders.
World's Supreme Wild West Show.

GRAIN CLEANING COMPETITION

Interesting, Instructive, Unique. Only contest of its
kind ever devised in America.

HUGE FARM MOTOR CONTEST

Displaying the greatest developments of mechanical
genius in farm tractors.

THE ORIGINAL BOYS' FARM CLUB

First camp ever planned for farm boys. A solid week
of education and enjoyment.

PIONEER DAYS IN FIREWORKS

Come to the West's Greatest Annual Exhibition.

SIR WILLIAM WHYTE, President. F. J. C. COX, Vice-President.
W. H. EVANSON, Treasurer. A. W. BELL, Secretary.

Over 50 Head **Dispersion Sale** Over 50 Head

AYRSHIRES

To be held Wednesday, June 4th, 1913

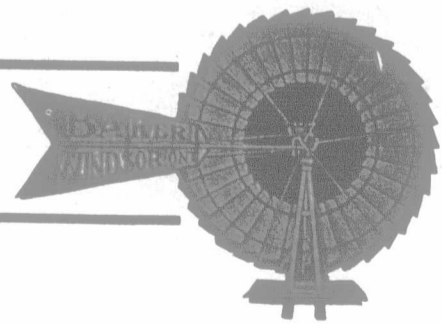
At 12 noon at Terrace Bank Farm,
Howick, P. Que., 2 miles east of Howick Station, G. T. R.

I will offer my entire herd of imported Ayrshires for sale, comprising: Six over four years old; fourteen three years old; twenty two-year-olds; eight yearlings; two young bulls, and three-year-old stock bull. This is a lot of the best Ayrshires ever imported into this country, being selected from all the best herds in Scotland. They are all entered in the test for the Record of Performance, and the amount of milk given so far will appear in the catalogue. They will all be sold subject to the tuberculin test, and all those desiring catalogues, please address DR. J. WATSON, Howick, P. Que.

Conveyances will meet both trains to carry visitors to the farm. Every one interested in Ayrshires should attend this sale, for they are all in the pink of condition, and will be sold without reserve or limit.

JOHN D. DUNCAN, Howick, P. Que.

Windmill Power is Growing in Popularity



For Pumping, and it is not
equalled by any power.

Thousands of farmers who have done their
first power pumping by gasoline engine
have become tired of it, and are buying
windmills.

You can save the cost of a
BAKER in one year.

The cost of gasoline, oil, batteries and
repairs in pumping for 150 head of stock and
the average farm home with a gasoline
engine will buy a BAKER Back-gear
Ball-bearing Pumping Mill every year.

You can't afford to waste both money and
your time. Look into this proposition. Send
for Booklet No. 20 and list of satisfied users.

The HELLER-ALLER COMPANY, Windsor, Ont.

Please Mention The Advocate

tines. Of course, flies are not by any means the only ways by which typhoid germs in people's intestines get into the family food. A careless milker, visiting the toilet before he milks, and forgetting to wash his hands afterwards, may very easily, and often does, carry a speck or two of his discharges on his hands to the milk. A speck so small as to be quite unnoticeable, may have a million typhoid germs in it. If he does not leave this speck in the milk, he may put it on the roller towel, or rub it off on the bread. But flies do carry a great deal of typhoid fever, especially in the country: and the reason is that the outdoor toilet in the country (or anywhere else where it exists for that matter) is usually not fly-proof.

In order of value, then, first and foremost, easiest and most efficient:

FLY-PROOF THE OUT-DOOR TOILET.

Next, and far less important, but still well worth while for comfort as well as safety:

KEEP KITCHEN AND DINING-ROOM FREE OF FLIES.

Next, and almost hopeless, but worth trying:

REDUCE FLIES ABOUT THE FARM by destroying their breeding places or cleaning them up once a week.

But whatever desperate efforts you are willing to make, in any or all directions to get rid of flies, don't neglect to FLY-PROOF THE TOILET FIRST.

Stable flies, in fact any fly that goes from toilet to food, may carry typhoid. Horse flies bite; house flies do not. It has been proved that stable flies, biting an individual sick with some kinds of infectious disease, and biting another person soon afterwards, may carry that disease from one to the other. This is perhaps one way that poliomyelitis (infantile paralysis) is carried.

Maggots are flies in the larval or "worm" stage; whenever you kill a maggot, you are "swatting" a fly.

H. W. HILL.

Rebecca of Sunnybrook Farm.

By Kate Douglas Wiggin.

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

CHAPTER XXX.

GOOD-BY, SUNNYBROOK.

Will Melville drove up to the window and, tossing a letter into Rebecca's lap, went on to the barn on an errand. "Sister's no worse, then," sighed Aurelia gratefully, "or Jane would have telegraphed. See what she says."

Rebecca opened the envelope and read in one flash of an eye the whole brief page:—

Your aunt Miranda passed away an hour ago. Come at once, if your mother is out of danger. I shall not have the funeral till you are here. She died very suddenly and without pain. Oh, Rebecca! I long for you so!

Aunt Jane.

The force of habit was too strong, and even in the hour of death Jane had remembered that a telegram was twenty-five cents, and that Aurelia would have to pay half a dollar for its delivery.

Rebecca burst into a passion of tears as she cried, "Poor, poor aunt Miranda! She is gone without taking a bit of comfort in life, and I couldn't say good-by to her! Poor lonely aunt Jane! What can I do, mother? I feel torn in two, between you and the brick house."

"You must go this very instant," said Aurelia, starting from her pillows. "If I was to die while you were away, I would say the very same thing. Your aunts have done everything in the world for you,—more than I've ever been able to do,—and it is your turn to pay back some of their kindness and show your gratitude. The doctor says I've turned the corner and I feel I have. Jenny can make out somehow, if Hannah'll come over once a day."

"But, mother, I can't go! Who'll



Light Your Farm With "Home-made" Electricity

You can now make your own electric light. We have perfected a system for generating and storing current on the safe, low voltage system. Costs very little to install and about 20c. per week to operate. So simple your boy can run it. Also pumps water under sufficient pressure to give running water throughout house and barn. Send for full description, special terms and recommendations from satisfied users. The lowest price system of its kind and class.

Send your name to

The Home Electric Light & Water Systems
Welland, Ontario



THE PLAYTIME WASHER

Means a saving of money to the farmer and his wife. The time and energy spent over the wash tub could be employed more profitably in some other way. It might mean more and better butter, poultry, fruit and eggs. The "Playtime" is adapted to either hand or power operation. In either case it eliminates the HARD work of washing and saves wear and tear on the clothes.

Ask your dealer to show you the "Playtime" or send to us for full information.
Cramer-Barnwell Ltd.,
Hamilton, Ont.

BEAUTIFIER



If you have a face void of good looks, spotted, blotched, discolored and poor generally and want a healthy, clear skin, use

Princess Complexion Beautifier

An external remedy that is simple and easy to use, and that produces results. It clears away tan, freckles and other discolorations quickly.

Price \$1.50 delivered
Superfluous Hair, Moles, Warts, etc., permanently removed. Booklet "F" explains. Send for it and free sample of toilet cream.
HISCOTT INSTITUTE Estab. 1892
61 College Street Toronto, Ontario

COLUMBIA DOUBLE DISC RECORDS

DOUBLE VALUE FOR YOUR MONEY

Cream Wanted

We guarantee highest Toronto prices, full weights and prompt returns. Our 15 years experience ensures satisfaction. We furnish cream cans and pay express charges. Write:

Toronto Creamery Co., Limited
Toronto, Ontario.



WE PAY THE FREIGHT.

At the Factory Price

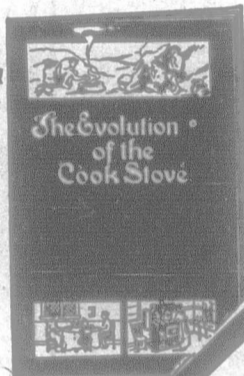
Buying at the factory will land this range at your station freight prepaid for \$20.00 less than the next best stove on the market. You pocket the dealer's profit—about 30 per cent.—get a beautiful steel and malleable iron range built to last a lifetime. And what's more you save money every month on your fuel bill.

Every Range is unconditionally guaranteed.

Dominion Pride Range

Sold on easy terms if desired

It's as good as seeing the range to read the complete and clear description in our book. The book also contains a history of cooking worth reading. Let us send you a copy.



53

Canada Malleable & Steel Range Mfg. Co., Limited, Oshawa, Ont.

Canada Malleable & Steel Range Mfg. Co., Limited, Oshawa

Please Send Book.

Name.....
Address.....

INTERNATIONAL POULTRY FOOD Will Just Double Your Profits

There is more than increased egg production for you in International Poultry Food. This wonderful tonic—made from roots, herbs and seeds—is purely medicinal. It keeps the roosters and hens vigorous and healthy, cures and prevents disease and sickness, promotes good health, supplies material for bone, muscle and fibre. It is very beneficial during the hatching season. Eggs from hens fed International Poultry Food produce fine, vigorous chicks.

International Poultry Food

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Please Mention The Advocate

turn you in bed?" exclaimed Rebecca, walking the floor and wringing her hands distractedly.

"It don't make any difference if I don't get turned," replied Aurelia stoically. "If a woman of my age and the mother of a family hasn't got sense enough not to slip off haymows, she'd ought to suffer. Go put on your black dress and pack your bag. I'd give a good deal if I was able to go to my sister's funeral and prove that I've forgotten and forgiven all she said when I was married. Her acts were softer'n her words. Mirandy's were, and she's made up to you for all she ever sinned against me 'n' your father! And oh, Rebecca," she continued with quivering voice. "I remember so well when we were little girls together and she took such pride in curling my hair; and another time, when we were grown up, she lent me her best blue muslin: it was when your father had asked me to lead the grand march with him at the Christmas dance, and I found out afterwards she thought he'd intended to ask her!

Here Aurelia broke down and wept bitterly; for the recollection of the past had softened her heart and brought the comforting tears even more effectually than the news of her sister's death.

There was only an hour for preparation. Will would drive Rebecca to Temperance and send Jenny back from school. He volunteered also to engage a woman to sleep at the farm in case Mrs. Randall should be worse at any time in the night.

Rebecca flew down over the hill to get a last pail of spring water, and as she lifted the bucket from the crystal depths and looked out over the blowing beauty of the autumn landscape, she saw a company of surveyors with their instruments making calculations and laying lines that apparently crossed Sunnybrook at the favorite spot where Mirror Pool lay clear and placid, the yellow leaves on its surface no yellower than its sparkling sands.

She caught her breath. "The time has come!" she thought. "I am saying good-by to Sunnybrook, and the golden gates that almost swung together that last day in Wareham will close forever now. Good-by, dear brook and hills and meadows; you are going to see life too, so we must be hopeful and say to one another—

"Grow old along with me,
The best is yet to be."

Will Melville had seen the surveyors too, and had heard in the Temperance post-office that morning the probable sum that Mrs. Randall would receive from the railway company. He was in good spirits at his own improved prospects, for his farm was so placed that its value could be only increased by the new road; he was also relieved in mind that his wife's family would no longer be in dire poverty directly at his doorstep, so to speak. John could now be hurried forward and forced into the position of head of the family several years sooner than had been anticipated, so Hannah's husband was obliged to exercise great self-control or he would have whistled while he was driving Rebecca to the Temperance station. He could not understand her sad face or the tears that rolled silently down her cheeks from time to time: for Hannah had always represented her aunt Miranda as an irascible, parsimonious old woman, who would be no loss to the world whenever she should elect to disappear from it.

"Cheer up, Becky!" he said, as he left her at the depot. "You'll find your mother sitting up when you come back, and the next thing you know the whole family'll be moving to some nice little house wherever your work is. Things will never be so bad again as they have been this last year; that's what Hannah and I think:" and he drove away to tell his wife the news.

Adam Ladd was in the station and came up to Rebecca instantly, as she entered the door looking very unlike her bright self.

"The Princess is sad this morning," he said, taking her hand. "Aladdin must rub the magic lamp; then the slave will appear, and these tears be dried in a trice."



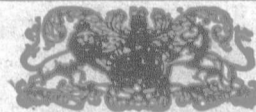
MAIL CONTRACT

SEALED TENDERS ADDRESSED TO the Postmaster-General, will be received at Ottawa until noon, on Friday, the 20th June, 1913, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week, over Rural Mail Route "H," from Bayfield (South) Huron S. R., Ont., from the Postmaster-General's Pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen, and blank forms of Tender may be obtained, at the Post Office of Bayfield, and at the Office of the Post-office Inspector at London.

G. C. ANDERSON,
Superintendent.

Post-Office Department,
Mail Service Branch,
Ottawa, 3rd May, 1913.



MAIL CONTRACT

SEALED TENDERS ADDRESSED TO the Postmaster-General, will be received at Ottawa until noon, on Friday, the 20th June, 1913, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week, over Rural Mail Route "B," from Seaforth (West) (Huron S. R.), Ont., from the Postmaster-General's Pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen, and blank forms of Tender may be obtained, at the Post Offices of Seaforth, Egmondville, and at the Office of the Post-office Inspector at London.

G. C. ANDERSON,
Superintendent.

Post-Office Department,
Mail Service Branch,
Ottawa, 3rd May, 1913.



MAIL CONTRACT

SEALED TENDERS ADDRESSED TO the Postmaster-General, will be received at Ottawa until noon, on Friday, the 20th June, 1913, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week, over Rural Mail Route (South-east) from Seaforth, Ontario, to commence at the pleasure of the Postmaster-General.

Printed notices containing further information as to conditions of proposed Contract may be seen, and blank forms of Tender may be obtained, at the Post Offices of Egmondville, Seaforth, and at the Office of the Post-office Inspector at London.

G. C. ANDERSON,
Superintendent.

Post-Office Department,
Mail Service Branch,
Ottawa, 3rd May, 1913.

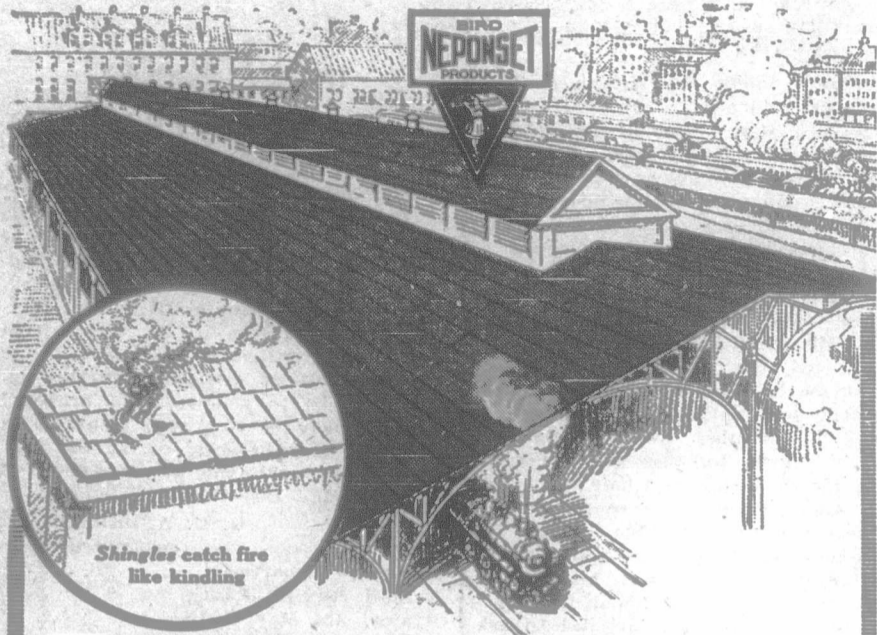
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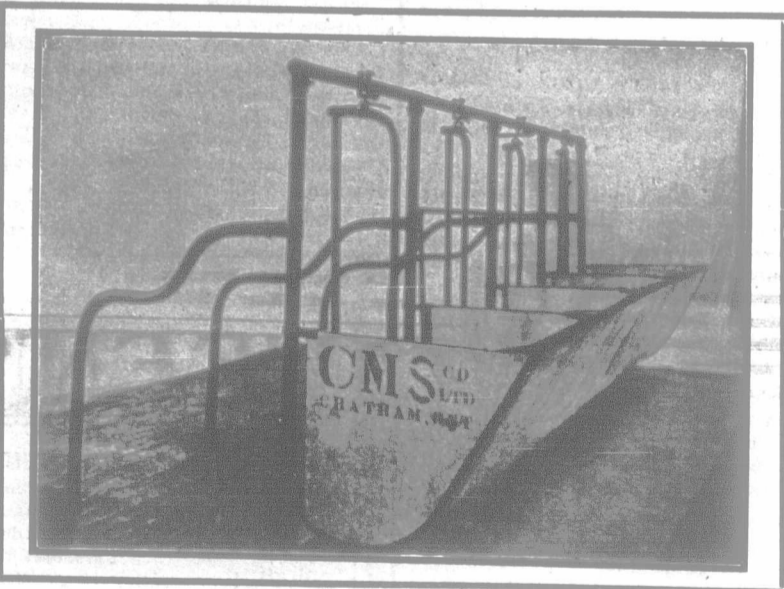
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He spoke lightly, for he thought her trouble was something connected with affairs at Sunnybrook, and that he could soon bring the smiles by telling her that the farm was sold and that her mother was to receive a handsome price in return. He meant to remind her, too, that though she must leave the home of her youth, it was too remote a place to be a proper dwelling either for herself or for her lonely mother and the three younger children. He could hear her say as plainly as if it were yesterday, "I don't think one ever forgets the spot where one lived as a child." He could see the quaint little figure sitting on the piazza at North Riverboro and watch it disappear in the lilac bushes when he gave the memorable order for three hundred cakes of Rose-Red and Snow-White soap.

A word or two soon told him that the grief was of another sort, and her mood was so absent, so sensitive and tearful, that he could only assure her of his sympathy and beg that he might come soon to the brick house to see with his own eyes how she was faring.

Adam thought, when he had put her on the train and taken his leave, that Rebecca was, in her sad dignity and gravity, more beautiful than he had ever seen her,—all-beautiful and all-womanly. But in that moment's speech with her he had looked into her eyes and they were still those of a child; there was no knowledge of the world in their shining depths, no experience of men or women, no passion, nor comprehension of it. He turned from the little country station to walk in the woods by the wayside until his own train should be leaving, and from time to time he threw himself under a tree to think and dream and look at the glory of the foliage. He had brought a new copy of The Arabian Nights for Rebecca, wishing to replace the well-worn old one that had been the delight of her girlhood; but meeting her at such an inauspicious time, he had absently carried it away with him. He turned the pages idly until he came to the story of Aladdin and the Wonderful Lamp, and presently, in spite of his thirty-four years, the old tale held him spellbound as it did in the days when he first read it as a boy. But there were certain paragraphs that especially caught his eye and arrested his attention,—paragraphs that he read and re-read, finding in them he knew not what secret delight and significance. These were the quaintly turned phrases describing the effect on the once poor Aladdin of his wonderful riches, and those descanting upon the beauty and charm of the Sultan's daughter, the Princess Badroulboudour:—

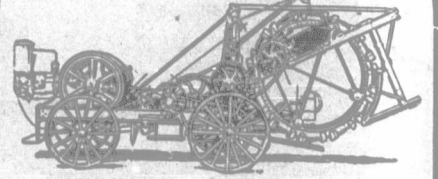
Not only those who knew Aladdin when he played in the streets like a vagabond did not know him again; those who had seen but a little while before hardly knew him, so much were his features altered; such were the effects of the lamp, as to procure by degrees to those who possessed it, perfections agreeable to the rank the right use of it advanced them to.

The Princess was the most beautiful brunette in the world; her eyes were large, lively, and sparkling; her looks sweet and modest; her nose was of a just proportion and without a fault; her mouth small, her lips of vermilion red, and charmingly agreeable symmetry; in a word, all the features of her face were perfectly regular. It is not therefore surprising that Aladdin, who had never seen, and was a stranger to, so many charms, was dazzled. With all these perfections the Princess had so delicate a shape, so majestic an air, that the sight of her was sufficient to inspire respect.

"Adorable Princess," said Aladdin to her, accosting her, and saluting her respectfully, "if I have the misfortune to have displeased you by my boldness in aspiring to the possession of so lovely a creature, I must tell you that you ought to blame your bright eyes and charms, not me."

"Prince," answered the Princess, "it is enough for me to have seen you to tell you that I obey without reluctance."

(To be continued.)



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It may have passed you up before or perhaps you overlooked it—but anyway it's headed towards you now with a money making proposition.

It wants to start you in the ditching business—doing contract ditching with the

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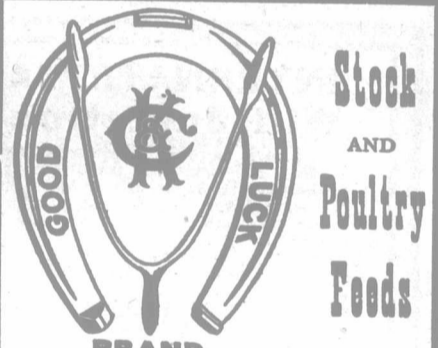
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Gossip.

CLYDESDALES AT KILMARNOCK.

At the annual Spring Show at Kilmarnock, Scotland, April 23rd, Clydesdales made an excellent showing. Mares were judged by John M. Hannah. The only weak class in numbers was that for yield mares, but the two exhibited were notable, having made history. Both are owned by Wm. Dunlop, Dunure Mains, Ayr. First prize was awarded to the beautiful, but not big, Dunure Ideal, by Auchenflower, and second to Sarcelle, by Everlasting. Brood mares were a very fine class, and were led by J. & W. Meiklem's Dunure Myrene. Stephen Mitchell was second with his Hiawatha mare, Sweet Melody, and Robert Young third with Rhoda, by Baron Ruby. Three-year-old fillies were a very fine class, and the contest for first place was between J. Ernest Kerr's Harviestoun Phyllis and Stephen Mitchell's Nannie, the latter being placed first, and Phyllis second, third place being taken by John Young's Hiawatha mare. The two-year-old fillies were a strong class, in which Baron of Buchlyvie's daughters made nearly a clean sweep. His owner, Mr. Dunlop, was himself first and fourth; second went to Mr. Kean's Baron of Buchlyvie filly, and third to Geo. B. Shields' Esmer, by Apukwa.

In a very fine class of yearling fillies, Mr. Dunlop was first with Dunure Glad Eye, by Dunure Footprint, dam by Marcellus; Andrew Brooks was second with Lady Betty, by Apukwa, and Wm. Veitch was third with Minora, by Hiawatha. The fourth was by Dunure Footprint, and the fifth by Apukwa.

Stallions were in three classes. In the class for three-year-olds, Wm. Dunlop was first with The Dunure, and second with Dunure Peer, both by Baron of Buchlyvie. There was a great show of two-year-olds, and first went to A. & W. Montgomery's unbeaten yearling of 1912, Baron's Seal. Next stood Wm. Dunlop's Dunure Stephen, by Baron of Buchlyvie. Third was Robert Parke's Ivanhoe, by Diana's Prince. In yearlings, first was Wm. McKeam's Chapelton Diamond, by Baron of Buchlyvie, and second was John Leckie's bay colt, by Dunure Footprint. In the Derby, the order was: 1, Chapelton Diamond; 2, Lord Bute; 3, Sir Dighton's Brother. The male championship was awarded to Messrs. Montgomery's Baron's Seal, with The Dunure reserve. The family-group prize for the best five yearlings, was won easily by Apukwa.

The Clydesdale Horse Society's medal for the best yearling or two-year-old of either sex, was won by Baron's Seal, with Dunure Glad Eye reserve.

AYRSHIRES AT KILMARNOCK.

At the 120th annual show of the Kilmarnock Farmers' Society the last week in April, Ayrshire cattle made, as usual, a splendid display. In a large class of aged cows in milk, the first prize was awarded T. C. Lindsay's big, deep-bodied, home-bred cow, by St. Barchan, dam by White Prince; Alex. Hunter was placed second with his well-known Strawberry, and third was James Seton's attractive five-year-old cow, which was champion at Dundonald and Irvine Shows this year. The aged cow-in-calf class was topped by last year's winner in the milking class. This was Clockston Yellow Bess, shown by Martin Meikle, Tarbolton. T. C. Lindsay was awarded second prize for a cow of the same breeding as his winner in the milking class. She is a very true specimen of the breed, and one doing her duty faithfully in the dairy. Robert Wilson stood third with his noted black cow, Lady Ann, by Barcheskie. Nineteen three-year-olds competed for the Derby, compared with eighteen last year. After lengthy deliberation by Judge Wm. Reid, the prize of honor went to Robert McBride, for Ballie IV., by Overton Fortune's Heir. The second prize fell to Mrs. McAllister, Rothesay, for the brown and white, Meikle Kilmory Perfection, by King Edward. Wm. T. Dunlop was third with Heather Belle III., by King of Sanquhar. For three-year-olds in milk, Mr. McBride again led with his Derby winner, and John McAllister was second with a home-bred daughter of King Edward. James Neil had a popular win in the class for three-year-olds

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will go anywhere and has the power behind it—it pulls up to 6 bottoms in stubble—harrows, discs, hauls, bales and makes roads.

It's handy, easy to run and of light weight. It does the work of a dozen horses, and goes almost anywhere a team can go and brings money back with it.

It will pay you to see this tractor—it will be of service every day in the year.

Ask for Gas Pull Data-Book No. 352 and the name of our nearest dealer.



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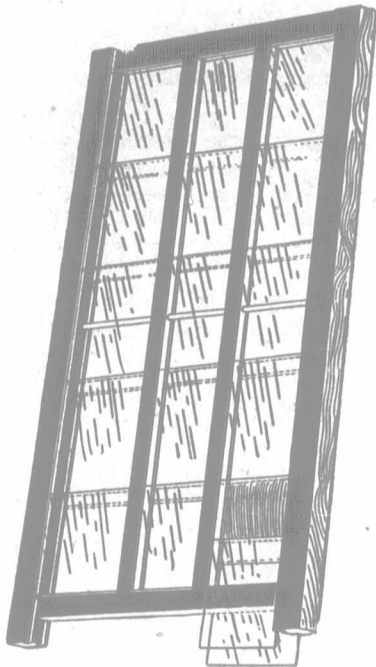
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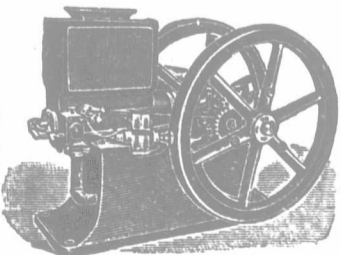


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in calf with Lily White, by Chapelton Snowstorm. The fourth winner in the Derby, belonging to T. C. Lindsay, was second in this class, and Wm. Howie came third. Bulls were judged by Robert Hunter, Kirkbean, Dumfries. In the aged class, Thos. Barr led with Commander, a big, massive bull, of good character, bred by Mr. Lindsay; second was John Slater's three-year-old, Success, by Prince Imperial. In a good class of two-year-olds, James Howie was first with his winning Stirk of last year, sired by Budget. He is now a big, level, well-balanced bull, with plenty of quality and style, sired by Ardgowan Budget, out of a cow by the famous Hillhouse bull, Erin-go-Bragh. James Kennedy, Auchenleck, was second with President, his Mortain Mains-bred bull, which won at Cumnock, by Auchenbrain Pluto. In a fair class of yearlings, Thos. Barr led with Perfect Peace, a well-grown, home-bred bull, by Hobsland Masterpiece, which was champion at Toronto last year, shown by R. R. Ness, Howick, Que. Wm. Middlemass came second with Benboch Denis, a brown and white home-bred bull, and Mr. Barr had third with a son of Lord Darnley. The awards went in the same order in the Derby class for yearling bulls. The male championship was awarded James Howie's winning two-year-old, with the Hobsland yearling as reserve. The female championship went to James Howie's two-year-old heifer, the Derby winner being reserve.

Questions and Answers.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In Veterinary questions the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

Crippled Pigs.

Sow has a litter five weeks old still nursing. Some of them, a few minutes after eating, go away and drop as though weak in their backs.

J. C. J.

Ans.—This is due to high feeding and want of exercise. Give each 2 table-spoonfuls of raw linseed oil, and turn them out on a grass plot every fine day.

ALWAYS THE WAY.

William was lying on his bed, face downward, sobbing desolately. His mother took him in her arms, the whole eight years of him. In a few minutes she learned all. It was a girl, and she had sent him a note.

"Dere Willyum—

"I luv yu the best But Henery givs me the most candy.—ISABEL."

An Irish horse dealer is said to have sold a mare as sound in wind and limb and without a fault. It afterward appeared that the poor beast could not see at all out of one eye, and was almost blind in the other.

The purchaser, finding this, made heavy complaints to the dealer, and reminded him that he engaged the mare to be without fault.

"To be sure," replied the other, "to be sure I did, but then, my dear, the poor creature's blindness is not her fault, but her misfortune."

Ernest H. Coulter, author of "The Children in the Shadow," tells of a lecture he delivered in Toronto not long ago. Throughout his talk he referred to mankind as "man." After he had finished, a woman, who looked as though she might have been a militant advocate of woman's suffrage, accosted him.

"You have been speaking about man, man, man, all the evening. Now where does woman come in?"

"Madam," replied Mr. Coulter in a conciliating tone, "man embraces wo-

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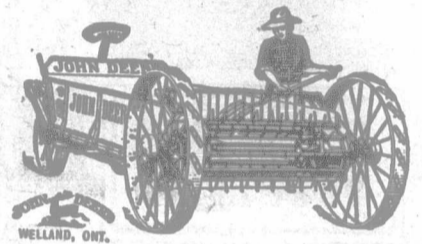
A daily cup of BOVRIL is very valuable during spring. It supplies energy and power to digest and assimilate food.

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John Deere Spreader

The Spreader with the Beater on the Axle



WELLS, ONT.

Take any manure spreader you have ever seen, remove all the clutches and chains, all the countershafts and stub axles, do away with all adjustments and mount the beater on the rear axle.

Rebuild the spreader so that the top of the box is only as high as your hips. Make it stronger. Remove some two hundred trouble-giving parts and throw them away. You will have some sort of an idea of what the John Deere Spreader, the Spreader with the Beater on the Axle, is like.

The Beater on the Axle

The beater and all its driving parts are mounted on the rear axle. This construction is patented. You cannot get it on any other spreader made.

Power to drive the beater is taken from the rear axle through a planetary transmission (like that on automobiles). It is positive, runs in oil, and does not get out of order.

Few Working Parts

The John Deere Spreader is so simple that there are no adjustments. It has some two hundred less parts than the simplest spreader heretofore made.

There are no clutches to throw it into gear.

The lever at the driver's right is moved back until the

finger, or dog, engages a large stop at the rear of the machine. All the chains and adjustments have been done away with.

Only "Hip-High"

Because the beater is mounted on the rear axle, it is only "hip-high" to the top of the box. Each forkful of manure is put just where it is needed. You can always see into the spreader.

Roller bearings, few working parts, the center of the load comparatively near the horses, and the weight distributed over four wheels, make the John Deere Spreader light draft.

Spreader Data Free—Tells about manure, when and how to use it, how to store it, and a description of the John Deere Spreader. Ask for this data as Package No. Y 119

John Deere Plow Company, Limited
Toronto, Ontario

SHARPLES MECHANICAL MILKER

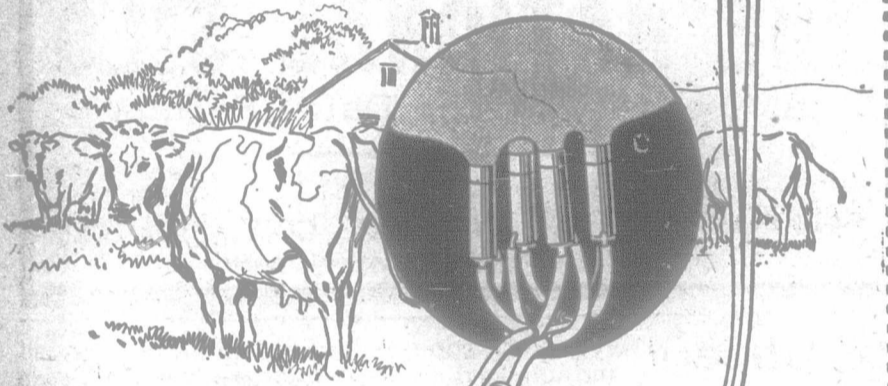
THIS equipment is revolutionizing modern dairy operation. During the four years since its perfection it has been installed with unqualified success in hundreds of the leading dairies throughout America and abroad.

The distinctive features of the SHARPLES MILKER, to which its complete success is due, are the Teat Cups with the Upward Squeeze and the Patent Pulsator operating them. This device reproduces nature's own method, of milk extrusion, which the most skillful hand-milking cannot do.

The cows are more contented. The teats and udder become far better conditioned. The milk product is absolutely uncontaminated—pure and more valuable. Labor cut to one third.

Sharples Mechanical Milking means the end of all drudgery of milking.

Practically every dairyman can visit installations of SHARPLES MILKERS within easy distance, where the actual operation of this equipment can be observed under conditions approximating his own. We shall be pleased to hear from dairymen with a view to their making such inspections.



OUR comprehensive Mechanical Milker Catalogue is the most important document to the dairyman now current. Forwarded on request.

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West Chester, Pa.

Branch Offices:
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Manufacturers of SHARPLES TUBULAR CREAM SEPARATORS—the 100% efficient Separator with the 3-part easily washed bowl. Write for the Sharples Separator Catalogue.

Agencies Everywhere

The Patent Pulsator operating the Teat Cups with the Upward Squeeze.

Questions and Answers. Veterinary.

Chronic Catarrh.

The cats here seem to have a disease. They cough and sneeze, and discharge from nostrils. Is it contagious to human beings? D. R. McL.

Ans.—This is a chronic nasal catarrh, and treatment is seldom effective. We do not consider it contagious. Take 2 drams tincture of iron and 1 dram quinine, and add sufficient water to make 4 ounces, and give the cat a teaspoonful twice daily. The administration of medicines to cats is difficult. V.

Eye Wash for Horses.

Sugar of lead, 2 drams; white vitriol, 1 dram; laudanum, 1 dram. Add to this 1 quart of soft water. Let it stand six or eight hours and it is ready for use. Wash the eyes out every morning, after first washing the eyes with cold water. Don't be discouraged if you have to follow this up for three or four weeks. The horse should be kept on low diet, and not overheated or worked too hard; scalded bran and oats are good. Have this injected with a glass syringe. G. E. S.

This system of treating ophthalmia will probably give fair results in many cases, but in cases where there is any abrasion of the surface of the eye, the lead that the preparation contains will be very liable to form an insoluble albuminate. Hence, a veterinarian never recommends the use of sugar of lead in an eye lotion. Neither is opium, in the form of laudanum or otherwise, considered suitable. No doubt our correspondent has had a case or two of recovery under his treatment, and attributes it all to the specific. V.

Miscellaneous.

Horse Queries—Working Land.

1. What is the best season to have mare foal for a fall colt?
2. Is it best to let the mare rest every other year?
3. What is the proper length of time to let a colt run before weaning, when the mare is again with foal?
4. If land lies rather low, would it not be better to avoid working crossways, and keep the land as high as possible? J. S. K.

Ans.—1. There can be no set rule, but the last two weeks in October, or the first two in December, is as good a time as any.

2. No. Keep her breeding if she is in good condition and healthy.
3. Five months is a good time.
4. This would likely aid drainage, but it is sometimes necessary where land does not work well, or where grass is present, to work crosswise.

Trade Topic.

UPPER LAKES NAVIGATION VIA CANADIAN PACIFIC STEAMSHIPS.

The Canadian Pacific, commencing May 10th, northbound, and May 11th southbound, will operate Great Lakes Steamship Express trains between Toronto and Port McNicoll on the following schedule, with first-class coach and parlor car running through without local stops.

Northbound—Leave Toronto 12.45 p.m.; arrive Port McNicoll 4 p.m., each Monday, Tuesday, Wednesday, Thursday and Saturday, connecting with the Palatial C. P. R. Upper Lakes Steamships leaving Port McNicoll on above days for Sault Ste. Marie, Port Arthur and Fort William.

Southbound—Leave Port McNicoll each Sunday and Thursday at 8.45 a.m., arriving Toronto 12.00 noon, and leaving Port McNicoll Mondays, Tuesdays and Saturdays at 11.45 a.m., arriving Toronto 8.15 p.m. Until Steamship Express goes into commission, connection is made with Upper Lakes Steamships by leaving Toronto at 9.45 a.m.

Full particulars from any C. P. R. Agent, or write M. G. Murphy, District Passenger Agent, Toronto.

HORSE OWNERS! USE GOMBAULT'S CAUSTIC BALSAM.



A safe, speedy and positive cure. The safest, best BALDYER ever used. Removes all bunches from horses. Impossible to produce scar or blemish. Send for circulars. Special advice free.

THE LAWRENCE-WILLIAMS CO., Toronto, Canada

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A little Zenoleum makes very good company for a flock of sheep. To soak a man is not usually productive of good results, but to soak sheep in Zenoleum means happiness for the sheep. It not only makes an excellent dip for curing scab, but it will kill ticks, lice, and maggots, and screw worms. It is a good thing for the nodular disease, good in castration where gangrene has set in, for healing shear cuts and wounds. It is a sure cure for stomach worms, and is recommended for this purpose by some of the most prominent sheep authorities in America. With all this, it is an excellent disinfectant, valuable always in maintaining healthy quarters for the animals. An excellent quality of Zenoleum is that, whether taken inwardly or applied outwardly, it is non-poisonous. A quart can cost only half a dollar, and most dealers sell Zenoleum. You can get a large tin for \$1.50, and if you are going to dip sheep, the contents of this tin of Zenoleum will make enough dip for 100 sheep. Be sure and send for that valuable sixty-four page booklet, "Veterinary Adviser," which can be had free by any reader of this paper, if they will only mention the fact, and write to the Zenner Disinfectant Company, 312 Sandwich St., Windsor, Ont.

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Each Tuesday, until October 23

WINNIPEG and return \$35.00

EDMONTON and return \$43.00

Other Points in proportion.

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Steamers Leave Port McNicoll, Mondays, Tuesdays, Wednesdays, Thursdays, and Saturdays, for SAULT STE. MARIE, PORT ARTHUR and PORT WILLIAM. Connecting train leaves Toronto 9.45 a.m. The Steamer "Manitoba," sailing from Port McNicoll on Wednesdays, will call at Owen Sound, leaving that point 10.30 p.m.

COMMENCING MAY 10

Steamship Express

leaves Toronto 12.45 p.m. on sailing days, making direct connection with Steamers at Port McNicoll.

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via "Empress of Asia"

Leaving Liverpool June 14, calling at Madeira, Cape Town, Durban, Colombo, Singapore, and Hong Kong, arriving Vancouver August 30th. Vessel remains 14 days at Hong Kong. "Rate for entire cruise, \$639.10." Exclusive of maintenance between arrival time in England and departure of "Empress of Asia," and stop over at Hong Kong.

Particulars from Canadian Pacific Agents or write M. G. MURPHY, D.P.A., C.P. Ry. Toronto.

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Proportionate low rates to other points. Return limit two months.

Through Pullman Tourist Sleeping cars are operated to Winnipeg without change via Chicago and St. Paul, leaving Toronto 11.00 p.m. on above dates.

Tickets are also on sale via Sarnia and Northern Navigation Company.

Full particulars and reservations from Grand Trunk Agents, or write C. E. Horning, D.P.A., Union Station, Toronto, Ont.

FOR SALE Choice White Pea Beans for seed "home grown" \$2.50 per bushel F.O.B.; bags 25c. T. D. McDonald, Oshawa. Phone 105 Leamington.

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the Breeding Season as the horse might die while being on the road. Do not take any chances by insuring with others, insure with us;

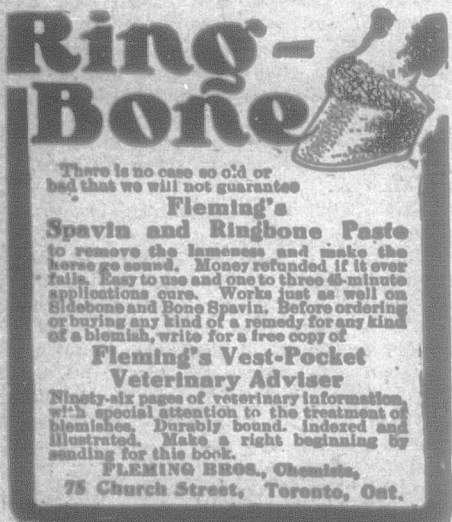
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Better have and not need than need and not have.

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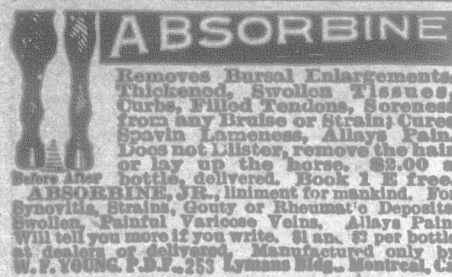
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Fleming's Spavin and Ringbone Paste to remove the lump and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 4-minute applications cure. Works just as well on Splints and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of

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DR. BELL'S Veterinary Medical Wonder. 10,000 \$1.00 bottles FREE to horsemen who will give The Wonder a fair trial. Guaranteed to cure Inflammation, Colic, Coughs, Colds, Distemper, Fevers, etc. Agents wanted. DR. BELL, V.S., Kingston, Ont.

Clydesdales, Standard-breds, and Short-horns. Our herd numbers about 40 head. Headed by the great stock bull, Trout Creek Wonder. Ten bulls for sale, from 6 to 14 months old; all good colors and good individuals.

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Bulls sold, up to May bull calves. Have two good ones of that age for sale. Also heifers got by, and cows in calf to, one of the good bulls of the breed. Inspection solicited.

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Questions and Answers. Miscellaneous.

Zinc for Fluës.

What effect would burning zinc in stove have on flue to prevent it burning out? F. M.

Ans.—A constant reader of "The Farmer's Advocate" informed us some time ago that by burning a piece of old zinc, about half a pound, in the stove occasionally, it will bring the soot to a powder, which will be carried out by the force of the draft.

Lump-Jaw Affecting Bone.

1. Have a cow with lump jaw. It is on the bone. Would you advise the iodide-of-potassium treatment?

2. Would it be advisable to let calves suck the cow? A. B.

Ans.—1. Yes.
2. It will be safe enough so long as the lump is not discharging pus that might be smeared over feed or litter consumed by the calves, or contaminating the teats they suck.

Building Cement Stable -- Veterinary Book.

1. Can you give me a plan for cementing a horse stable? That is, stalls, mangers, oat-boxes, partitions between them, and the thickness. I do not want them to go to the floor above. What support would I need in the cement partitions?

2. Would you please advise me one of the best general veterinary books? J. B.

Ans.—1. We have never seen a stable built entirely of cement, partitions and all. They could be supported by using reinforcement, and perhaps a post at the back of the stall, and a bar of metal along the top, placed in the cement. Any of our readers having built such a stable are invited to outline their method.

2. "The Farmers' Veterinarian," by Burkett. Price, \$1.50; postpaid.

Prescription for Worms.

In your issue dated April 24th, and on page 794, you prescribe a remedy for worms in horses. I got the drugs, intending to give it to a horse as directed, but thinking the dose rather strong, I phoned the veterinarian. He informed me that such a dose might prove fatal. Was he correct? If so, what would be the proper amount to give? W. O.

Ans.—The dose as given was correct, and your veterinarian's fears unfounded. The prescription has been repeatedly advised through these columns and used in thousands of cases, never, so far as we are aware, with fatal or disastrous results. Such doses have to be strong to be reasonably effectual. Of course, for a very small horse, say, one of eight or nine hundred pounds weight, it might be somewhat excessive. In such respects, ordinary judgment is supposed to be called for in administration.

THAT'S THE REASON.

Tommy came crying out of a room where his father was tacking down carpet. "Why, Tommy, what's the matter?" asked his mother.

"P-pop hit his finger with the hammer."

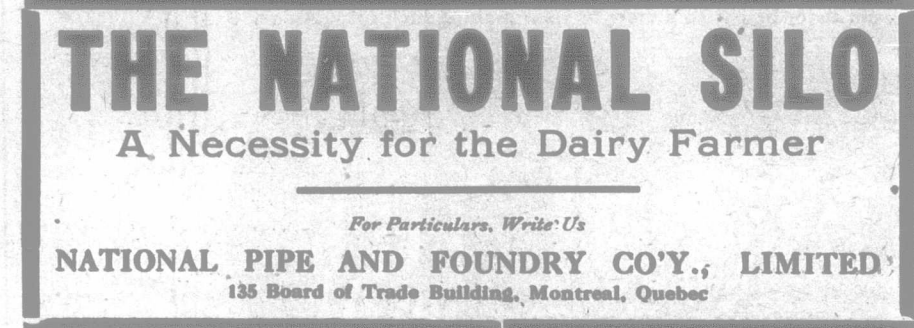
"Well, you needn't cry at a thing like that. Why didn't you laugh?"

"I d-did."

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Hickmore's Farm Account Book will be sent free to any farmer who will tell us who and where he is. This book is arranged to keep all accounts in simple form—more simple and certainly more practical than trying to remember them; shows what to charge against crop production; has a laborers' time record; and section for personal accounts. 64 pages, for ink or pencil. Not a cheap affair. Its quality is in keeping with BICKMORE'S Gall Cure, a soothing, healing salve, the old-time reliable horse remedy. Horses are now too valuable and too high priced to take chances of losing their services. Bickmore's Gall Cure heals and cures Harness and Saddle Galls, Rope Burns, Cuts, Scratches, Grease Heel, etc. You don't have to lay the horse of. Bickmore's cures while the horse works. Great thing for sore teats in cows. The work-horse trade mark on every box. None genuine without it. Be sure to ask for Bickmore's Gall Cure when you go to buy and do not take a substitute. Farm Account Book is ready. Send today.

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New importation arrived March 12. 1 to 6 years old. Percheron mares, 1 to 9 years old. Blacks and grays, many prize-winners and champions in each sex; most of the mares safe in foal. Will sell for less money than any of my competitors. Terms to suit. Come and see and be convinced. C.P.R., Ottawa to Montreal line. J. E. ARNOLD, Grenville, Que.

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They have arrived—my third importation for 1912, stallions and fillies. I have now the biggest selection in Canada, and a few toppers in stallions. High-class breeding and high-class quality—and low prices.

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We have lately landed a shipment of Clyde stallions and fillies, several Scotch winners among them. Their breeding is unsurpassed. Comparison with any others in the country will make you a buyer from us. Our prices are as low as the lowest.

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Stables Pay
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A dilapidated shed is expensive stabling for cattle. No horse or cow can render good service under such conditions.

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We have spent thousands of dollars to prepare a book for the up-to-date farmer. It tells how you can build your own concrete barns, chicken-houses, silos, etc., etc., giving exact ingredients and instructions. We gladly send the book to any farmer on receipt of 50 cents—a mere fraction of its real value. Write for "Portland Cement on the Farm."

**ALFRED ROGERS
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28 KING WEST TORONTO**

A Railway Steer-Feeding Experiment.

The Steer-feeding Competition inaugurated by the Animal Branch of the Department of Natural Resources of the Canadian Pacific Railway, for farmers' sons in the Irrigation Belt, has now been completed.

Of the two hundred and seventy-two steers which, in lots of eight, were last fall entrusted to thirty-four competitors, two hundred and seventy have been returned to the company, and sold at the highest prices obtainable on the Calgary market.

The steers used in this competition were high-class three-year-old feeders, in good beef condition, off grass, and in November last cost the Department 6½c. per pound.

Under the terms of the competition, the steers were delivered to the competitors at that figure, on the understanding that when turned in at the time of the Calgary Spring Show, the feeder would receive the difference between the cost as above stated, and the actual market value of the animals when sold to the best possible advantage.

The different results achieved by these lads, under conditions practically identical, are somewhat remarkable. While some of the lots showed uniform improvement that it was possible to class all the animals composing them as choice beef, it was found, in many cases, necessary to grade the animals into three classes, according to quality.

Where, as frequently happened, steers of different qualities were found in the same lot, those of each class were weighed separately, with the view of giving the competitor the highest price obtainable for each.

One hundred and twenty-seven steers in all were graded first-class, and topped the market, being sold at \$7.60 per hundredweight.

In the second-class, ninety-four brought \$7.35, while of the remainder, many of which were in worse condition than when sent out, twenty head brought \$6.60 per hundredweight, the balance selling at \$6.40.

The steers were weighed off cars at Calgary when delivered to the competitors, and when turned in, were carefully weighed by the Superintendent of the Alberta Stock-yards, in the presence of two witnesses, after being allowed thirty-six hours, with feed and water.

The Department paid the freight on the cattle, both going and returning, and also supplied feed and attention in the yards here.

The first prize of \$100 was won by Harold C. Bellamy, of Keoma, aged sixteen, all of whose steers graded first-class. Young Bellamy added 1,005 pounds to the weight of his cattle, which, with the increase in price, gave him a net return, apart from the prize money, of \$189.50.

The second prize of \$75 was won by John Cassels, of Langdon, aged 12 years, whose steers were also in the first grade. He added 775 pounds to the weight of his steers, making a net profit, apart from the prize money, of \$175.

The third prize of \$50 was won by William Cassels, Jr., aged 12 years, one of whose steers dropped into the second class, the added weight of the eight animals being 635 pounds, and the net profit, apart from the prize money, of \$152.69.

The fourth prize of \$25 was won by Russell Culp, of Keoma, aged 17. Six of his steers graded first-class and two second-class, the added weight being 560 pounds, and the net profit, apart from the prize money, of \$150.98.

In the case of the next twelve competitors, the cash returns ranged from \$146 to \$111.

Although a number of the others failed to add to the weight of their steers, which, in not a few cases, weighed less than when sent out, the advance in price prevented a cash deficit in all except three cases, where the loss in weight was so great as to more than offset the increased value.

From among the best of the steers turned in, two lots of fifteen each were carefully selected and shown in competition for the special prizes offered for fat stock at the Calgary Spring Show, under

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METALLIC
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Shorthorns!

Bulls of useful age all sold. Would appreciate your enquiry for females. Catalogue and list of young animals.

N. Cargill & Son, Cargill, Ont.

1854—1913
MAPLE LODGE STOCK FARM

An offering a very fine lot of young Shorthorn bulls just now. Excellent breeding, and most from splendid milking dams. The kind that is needed.

House is one mile from Lucan Crossing, G. T. R.

A. W. SMITH, Maple Lodge P.O., Ont.

Oakland—50 Shorthorns

Present offering. Red Baron—81845—. He is a fine massive bull, of a capital milking strain, 5-year-old, our own breeding and all right. Also one good red two-year-old and one sixteen months. All of the Dual-purpose strain and can be bought worth the price. Write, or better still, come and see them. John Elder & Son, Hensall, Ont.

SHORTHORN Bulls and Heifers—choice lot, and heifers in calf. Former sires Joy of Morning (Imp.)—33070— and Benachie (Imp.)—69954—. Present stock bull, Royal Bruce (Imp.)—55028— (89909).
GEO. D. FLETCHER, R. R. No. 2, Erin, Ont.

Woodholme Shorthorns

I have for sale a number of choice young bulls, from 3 to 14 months old (pure Scotch); also a number of heifers, 1 to 2 years old, of this level type, and richest breeding. **G. M. FORSYTH, North Claremont, Ont.**

Spring Valley Shorthorns

A few of the best young bull prospects we ever had. They will please you. Will sell females too. Visit the herd; we think we can suit you. Particulars on application.
KYLE BROS. AYR, ONT.

I STILL HAVE FOUR YOUNG BULLS FOR SALE AND MORE COMING ON

Several heifers that are bred right and that will make great cows; some of them in calf now to my great breeding sire, Superb Sultana—75413—perhaps the greatest son of the great Whitehall Sultan—55049—that was imported by me and used so long in Mr. Harding's herd. I sell nothing but high-class cattle, but the price is within the reach of all. A few Clydesdales, Shropshires and Cotswolds always on offer. Local and Long Distance Telephone.

ROBERT MILLER STOUFFVILLE, ONT.

10 SHORTHORN BULLS 10

If in need of a bull those that we are offering should interest you. They range from 8 to 14 months old, and are nearly all bred direct from imported stock. We also have females of all ages. Bell Phone Burlington Junction, G. T. R.

**W. G. PETTIT & SONS,
Freeman, Ontario.**

Springhurst Shorthorns

Four of the first-prize Shorthorns at the late Guelph show, including the champion and grand champion fat heifer, were all sired by bulls of my breeding. I have now for sale ten young herd headers of this champion-producing breeding. HARRY SMITH, HAY P. O. ONT. Exeter Station. Long-distance Telephone.

SHORTHORNS

Records show that cattle bought from the Salem herd won numerous ribbons the past season. We have others. Several young bulls are priced reasonably.

ELORA, G.T.R. and C.P.R. J. A. WATT, SALEM, ONT.

SCOTCH SHORTHORNS

One High-class Imp. ported yearling bull 10 bull calves, from 7 to 16 months old. 40 heifers and young cows, all by imported sires. Also some Imp. yearling heifers. Farn ¼-mile from Burlington Junction.

MITCHELL BROS., BURLINGTON, ONT.

5 YOUNG BULLS

My present offering consists of 5 fit for service, 10 females, cows in calf and heifers, 1 show yearling Clyde filly and 1 filly foal good enough to show any place. Prices very moderate. Claremont Station, C. P. R. Pickering Station, G. T. R.

JOHN MILLER, Brougham, Ont.


5 Shorthorn Bulls 5

We have for sale at moderate prices 5 Scotch Shorthorn bulls, including one of our herd bulls. Also a number of high-class heifers and heifer calves.

A. J. HOWDEN & CO., COLUMBUS, ONT.
Long-distance phone Myrtle G. T. R. & C. P. R.

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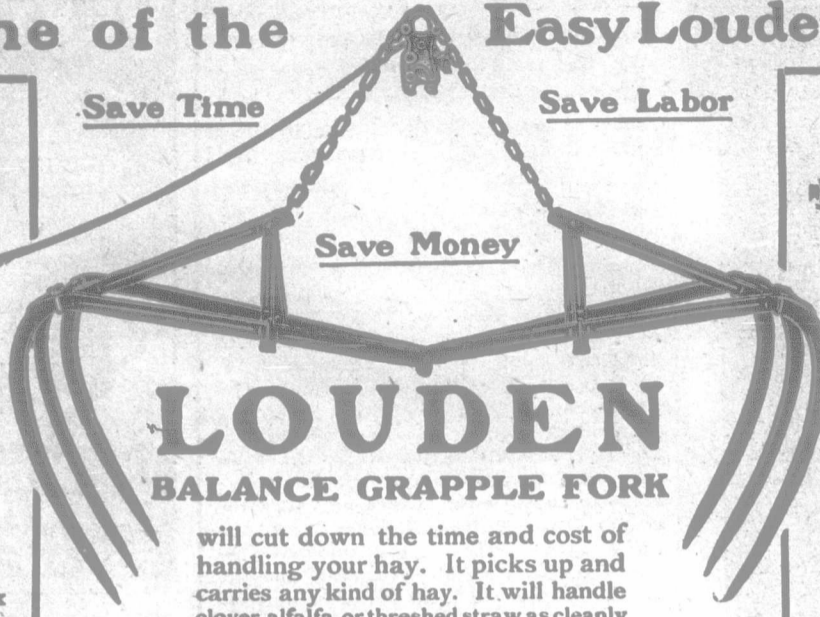
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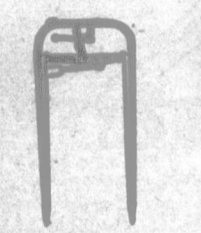
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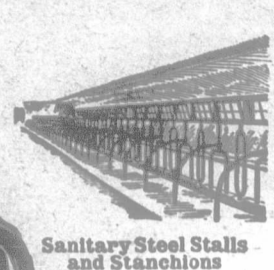
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Double Harpoon Fork



Sanitary Steel Stalls and Stanchions

LOUDEN

BALANCE GRAPPLE FORK

will cut down the time and cost of handling your hay. It picks up and carries any kind of hay. It will handle clover, alfalfa, or threshed straw as cleanly and quickly as it handles long timothy.

The LOUDEN LINE consists of Steel Stalls, Stanchions, Carriers, Hay Forks and Slings, as well as a line of Farmers' Hardware Specialties. Our latest Hanger, which is a Bird Proof Barn Door Hanger, runs in an enclosed Bird Proof and Weather Proof Track, and is positively the most perfect Hanger on the market.

Send now for our New Catalogue to

Free Advice and Plans

Our Expert Barn Architects will give you advice and plans for the building of your barn FREE for the asking. Tell us what you are going to build. We make a special study of means to save time, save labour, and save money for the farmer.

The LOUDEN MACHINERY CO. - Dept. 31 GUELPH, Ont.

Ending Your Gate Troubles



THIS GATE

Is made of tubular steel of large diameter, far superior to gas pipe or tee or angle iron; and of heavy wire mesh fabric. Will last a life-time. Can be raised, as shown, by simple adjustment. Clay Gates are wonderfully light and strong and always swing true.

ISN'T the kind of Gate all good farmers want as follows:—A Gate, [1] that won't sag, break, bend, burn, blow down or rot; [2] that can be raised (as shown) to let small stock through, yet keep back large stock; [3] that will raise to lift over snow in winter; [4] that will positively keep back breachy cattle; [5] that will last a life-time; [6] that is guaranteed.

CLAY STEEL FARM GATES

Meet all the above requirements. This is why the leading stockmen, with scarcely any exception, have Clay Gates on their farms. This is why farmers who once try them, keep them, being delighted with them. The O. A. C. has them; so have the Experimental Farm at Ottawa and the Macdonald College Farm. 30,000 Clay Gates were sold in 1912. They cost a little more than other gates; they are worth much more.

60 DAYS' FREE TRIAL.

One or a dozen Clay Gates will be sent, freight paid to any farmer willing to try them. Keep them 60 days without expense or obligation. Send size of opening when writing. Send to-day for illustrated price list.

GUARANTEE

I guarantee every Clay Gate to be free from any defects whatsoever in material or workmanship. I will replace free, any parts or the entire Gate giving out for this reason.

H. RALPH STEELE, MGR.

The Canadian Gate Co. Ltd., 34 Morris St., Guelph, Ont.

CATTLE AND SHEEP LABELS

Size	Price doz.	Fifty tags
Cattle.....	75c.	\$2.00
Light Cattle..	60c.	1.50
Sheep or hog..	40c.	1.00

No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample mailed free. F. G. JAMES, Bowmanville, Ont.

For Sale—Jersey cows and heifers and bulls for exportation. All pedigree and Herd-book stock. For further particulars apply to A. T. SPRINGATE, Breeder and Exporter, Gorey, Jersey, Europe.

JERSEY COWS FOR SALE
Two granddaughters of Arthur's Golden Fox Imp., 4 and 5 years old, in calf to grandson Golden Fern's Lad, due to calve 25th and 27th May. I guarantee all right in every way. Apply: **BOX 988, WOODSTOCK, ONT.**

Ayrshires Last chance. No females for sale, but still have a few bulls, sired by Woodroffe Comrade whose first heifer in milk gave 11,392 lbs. milk, 480 lbs. butterfat in year; prices right. H. C. HAMILL, Box Grove, Ont. Locust Hill, C.P.R. Markham, G.T.R. and L.D. Phone.

If you want a **YEARLING AYRSHIRE BULL** out of a large teated R. O. P. dam, closely related to one of the heaviest milking strains in Canada. **WRITE: COLLIER BROS.** Beachville, Ontario

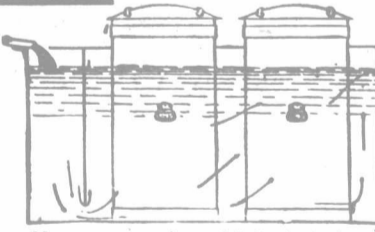
MENTION "FARMER'S ADVOCATE."

Milk-cooling Tanks

This tank of our making is perfect as a milk-cooler. It enables you to deliver milk to factory in the very best condition; is strong and light. Never gets water-soaked. Is **Clean, Sanitary, Durable**

Can be moved from place to place, or stored away, or used for other purposes. Makes a good storage tank for soap. We make a specialty Cooling Tank for keeping cream in good condition for shipping.

STEEL TROUGH & MACHINE CO., Ltd., 5 James St., Tweed, Ont.



Note construction. Made in 4 sizes. Send for price list of this and other "Tweed" Steel Equipments.

BRAMPTON JERSEYS

The spring trade is on; we are doing the largest business we ever did, chiefly with our old customers; young bulls and heifers from sires with tested daughters.

Several imported cows and bulls for sale. Canada's Greatest Jersey Herd.

B. H. Bull & Son, Brampton, Ont.

Stonehouse Ayrshires

Of choicest imported stock and with imp. sires and dams. I am offering young cows, 3, 4 and 5 years of age; a grand bunch of imp. yearling heifers, and a particularly good pair of young bulls.

L.-D. Phone. **HECTOR GORDON, Howick, Que.**

STOCKWOOD AYRSHIRES

This herd is now headed by White Hill Free Trader (imp.) No. 33273, champion bull at Sherbrooke; also headed the 1st-prize aged herd. All ages for sale. Satisfaction guaranteed. D. M. WATT, St. Louis Sta., Que. Telephone in house.

GLENHURST AYRSHIRES

ESTABLISHED OVER 50 YEARS high standard. We can supply females of all ages and young bulls, the result of a lifetime's intelligent breeding; 45 head to select from. Let me know your wants.

JAMES BENNING, WILLIAMSTOWN P. O. Summerstown Sta., Glengarry

the auspices of this Branch, it being the intention to divide any prize-money which might be won among the competitors, in proportion to the number of steers owned by each.

These steers were individually very good, but coming, as they did, from many different feeders, were lacking in uniformity and finish, and while much admired, were not placed among the prizewinners.

The wide divergence in the results achieved by the boys is very interesting, presenting, as it does, a fair illustration of the great differences which exist among our incoming settlers, not only in character, but in the degree of practical knowledge which they possess.

It is the intention later on to publish fuller details relative to the manner in which the various different lots were fed and handled, in the hope that the information thus afforded will be of real benefit to others, who, while realizing that coarse grains and roughage may be profitably used in the fattening of stock, are anxious to learn how these may be utilized to the best advantage.

The general interest which this experiment has attracted, not only in the Irrigation Belt, but elsewhere, affords good ground for the belief that the benefits resulting from it will more than justify the effort and expenditure which it has cost.

J. G. RUTHERFORD.

Questions and Answers.

Miscellaneous.

Spraying Plum Trees.
Will you kindly give me some information regarding the spraying of plum trees, stating when it should be done, and what ingredients to use?
W. R. D.
Ans.—See our issue of March 27, page 578, which contains a full account of the spraying of all kinds of fruit.

To Test Lime Sulphur.
Would you inform me where I could get an instrument to test lime-sulphur mixture, used for spraying?
F. G.
Ans.—This little instrument is called a hydrometer, and may be purchased from several of the spray companies advertising in these columns, or from wholesale druggists.

Damages for Sow.
I take sow to a neighbor's to be bred, and find her dead when I go after her. I take the second one there, and she is crippled after I get her home, caused by lying out in a cold rain while there. Can I collect damages?
A SUBSCRIBER.
Ans.—We scarcely think so, unless you can prove absolutely that wilful neglect caused the trouble. Why not have the sow bred and take her right back home with you?

Cow Misrepresented--Lump-Jaw.
A bought a cow from B at an auction sale, B saying it was eleven years old, remarking at the same time she would be good for four or five years yet. After A brought her home, he heard she was seventeen years old. If A can prove its age:

1. Can he make B take it back and refund the money?
2. If not, can he claim damages from B?
3. Is it lawful for A to sell B a beast with lump jaw?
X. Y. Z. Ontario.

Ans.—1 and 2. The statement of case is not sufficiently full to enable us to give definite answers to these questions. You do not say whether B's statements were made before or after A made his purchase; or, if before, whether A relied upon same, or whether they in any way induced him to buy. And there are other circumstances of the transaction as to which we would require information in order to deal with the points raised. Moreover, as the purchaser is required to act very promptly after discovery of misrepresentation, we would advise A to see a solicitor personally, and at once.

3. Not if A is aware that the animal has such disease and fails to inform B of it.



NOTHING in cheese making is more important than salting the curd.

The flavor—even color—smoothness—keeping quality and market price—all depend on the way the curd is salted, and on the salt used.

WINDSOR CHEESE SALT

Makes Prize Cheese

It gives a smooth, rich flavor to the cheese—dissolves slowly—stays in the curd—and makes the cheese keep as good cheese should.

Windsor Cheese Salt is cheapest in the end because it goes further.

73C



Long Rock Salt, \$10.00 for ton lots. f.o.b. Toronto
Toronto Salt Works, 128 Adelaide Street E.
G. J. CLIFF, MANAGER, Toronto Ont.



PURE-BRED REGISTERED Holstein Cattle

The most profitable dairy breed, greatest in size, milk, butter-fat and in vitality. Send for FREE illustrated descriptive booklets.

HOLSTEIN-FRIESIAN ASSOCIATION, F. L. Houghton, Sec., Box 127, Battleboro, Vt.

Herd Bull for Sale—Count of Lakeview (9076); calved March 28, 1910. Bred by Lakeview Stock Farm, Bronte, Ont. A splendid stock-getter. Over 80 per cent. of his get are females. Must sell him, as I have a number of heifers from him of breeding age. He is quiet and sure. Also two young bulls now ready for service, bred by Count of Lakeview, whose dams are granddaughters of Johanna Rhue 4th Lad. Straight and nicely marked. Will sell a few cows due to freshen this month. Bell 'phone, Fenwick Stn. C. V. ROBBINS, River Bend, Ont.

The Maples HOLSTEIN Herd

Bred by Prince Aaggie Mechthilde. For sale a present: Choice bull calves, from Record of Merit dams with records up to 20 lbs. butter in 7 days. All sired by our own herd bull. Prices reasonable.

WALBURN RIVERS, FOLDENS, ONT.

Evergreen Stock Farm 4 bulls, 12 mos. old, from officially backed ancestors, running from 18 1/2 lbs. at 3 yrs. to 22 1-3 lbs. as matured cows, and on sire's side from 24 6-10 to 29 lbs. of butter in 7 days. Write, 'phone, or come to F. E. Pettit, Burgessville, Ont.

HOLSTEINS and YORKSHIRES Minster Farm offers a grandson of Snowflake. She gave 2,054 1/2 lbs. milk in 30 days, and of Count Hengerveld Fayne De Kol; his dam and sire's dam average 24.075. A sister made 35.55 lbs. butter in 7 days. For extended pedigree and price, write: R. Honey & Sons, Brickley, Ont.

Holsteins and Tamworths

I am over-stocked, and will sell a lot of young cows and heifers, winners and bred from winners; officially backed and right good ones. Also Tamworths of all ages. R. O. MORROW & SON, Hilton P. O., Ont. Brighton Station. 'Phone.

Maple Hill Holstein - Friesians - Special offering: My junior herd bull, Choicest Canary, son of Nannet Topsy Clothilde, 30.23 lbs.; also choice bull calves.

G. W. CLEMONS, R.R. No. 2, St. George, Ont.

Questions and Answers. Miscellaneous.

Plant Potatoes Right after Cutting.

How long should potatoes be cut before they are planted? We had some cut for weeks last year, and all dried up and didn't grow. T. R.

Ans.—Potatoes should be planted as promptly as possible after being cut.

Chimney Smokes.

We have just moved to a new farm. The house has been up about twelve years. The chimney is on the north outside wall. It has two flues, each about eight inches square, and is up to a good height. It goes right down to the cellar. This chimney has always smoked. Would like if you could tell me of anything that would stop it smoking? W. S.

Ans.—It will likely be difficult with an old, defective chimney such as this, to prevent its smoking. The flues are the right shape, and should be large enough. Is the chimney high enough? For good draft, a chimney must be at least one foot higher than the highest point of the roof. It might be that better results would be obtained by building it higher, or by using a tile in the top.

Orchard Agreement -- Selling Apples.

1. I read an editorial in your issue of April 24, re Western and Northern Apple Markets. We have a young orchard of about one hundred trees of winter fruit, which is just beginning to bear well. It has been rented for a seven-year term two years ago to a company. Is there any way of withdrawing from this company without much trouble and law?

2. Would a farmer who sprays his orchard the full three times, be allowed to send a car of apples to New Ontario towns, and sell from car, providing he guarantees them as picked from the tree, and not classed as Nos. 1 and 2? Some people sell car lots of potatoes this way; why not apples? READER.

Ans.—1. This is a matter wholly between yourself and the company. The agreement must stand if either party to the deal decides that it should, and both are living up to the terms set forth therein. The only way for you to withdraw would be to meet the company and purchase your release from them.

2. We are not just clear as to the exact method you wish to follow, but would suggest that you write J. L. Englehart, Chairman of the Temiskaming & Northern Ontario Railroad Commission, Toronto, Ont.

Pasture Mixture -- Feeding Bull.

1. What mixture of grass seed would make a good pasture, to sow a fallow with, that would last till the hard-wood stumps had rotted, say, five or six years? Is orchard grass hard to break up?

2. What would make a good winter ration for a seventeen-months-old Shorthorn bull, barring silage and alfalfa? What grain ration would he need for summer when kept stabled, and fed grass, peas, and oats, green?

3. What service fees are generally charged by owners of pedigree Shorthorn bulls?

4. When is the proper time of the year to prune a cedar hedge, and to plant out hard-mapsle trees? R. D. R.

Ans.—1. A good mixture would be composed of orchard grass, 4 lbs.; meadow fescue, 4 lbs.; tall oat grass, 3 lbs.; meadow foxtail, 2 lbs.; timothy, 2 lbs.; alsike clover, 2 lbs.; white Dutch clover, 2 lbs., and possibly alfalfa, 5 lbs., although this latter is not absolutely necessary, and perhaps could as well be left out on new-land pasture. Sow this amount per acre. The orchard grass could be broken up all right.

2. Feed him all the red-clover hay of good quality that he will eat, also what roots he will consume without scouring. If no silage be fed, he will probably take 50 or 60 lbs. of turnips or mangels daily without injury. Of course, this depends somewhat on the grain fed. Do not get the bull too fat. Feed on mixed chop, from 5 to 8 pounds per day, according to size and demands of service.

3. From one to five dollars, according to the breeding and quality of the bull and females bred.

4. Early in the spring, as soon as growth begins.

Wood or Concrete Silos which are best?

Over in the U. S. many experiments made by the various agricultural experiment stations have conclusively shown that silage does not keep as well in cement, stone or brick silos as in silos constructed of wood.

Furthermore, the advantage of the wood silo over cement, stone or brick is greatest in a cold climate.

The vital question is, "Which silo will keep the silage in the best condition?"

If you are interested in reading the unbiased opinion of scientific investigators who have given this question careful investigation we shall be glad to send you, upon request, reprints of some of the experiment station bulletins giving in detail the reasons why wood silos make the best silage and keep it in the best condition.

We shall also be pleased to send you our silo catalog and give you any other silo information desired.

We are exclusive distributors in Canada of the World's Standard De Laval Cream Separators, and also carry a complete line of creamery and dairy machinery and supplies. If interested write for separate Catalogs.

De Laval Dairy Supply Co., Ltd.
LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA.
Montreal Peterboro Winnipeg Vancouver



We give a FREE TRIAL of the

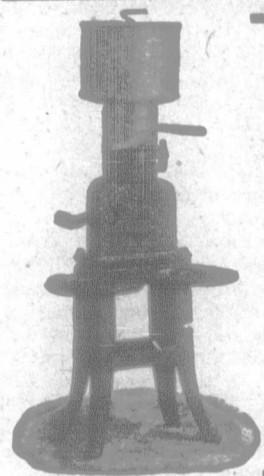
Domo Cream Separator

Think of it! We send this high-grade, easy-turning machine on approval, freight prepaid, to test at our expense. We take all the risk. Prices from \$15 and upwards, about half what you pay for others, and you can be the judge of its merit. Write to-day for circular "A," which gives full particulars of our trial offer, with prices and easy terms of payment. It's FREE.

DOMO SEPARATOR CO.

Brighton, Ont.

St. Hyacinthe, Que.



AVONDALE STOCK FARM

Herd bulls: Prince Hengerveld Pietje 5390 (50582). Sire, Pietje 22nd Woodcrest Lad, out of Pietje 22nd, 31.00 lbs. butter 7 days; greatest imported cow, and one of the greatest young sires of the herd, having already sired a 35-lb. 4-year-old daughter. Dam, Princess Hengerveld De Kol, 23.62 lbs. butter 7 days, highest record daughter of Hengerveld De Kol, with 115 tested daughters. King Pontiac Artie Canada 10042 (72294). Sire, King of the Pontiacs, greatest living sire of the herd, and sired by the greatest sire of the breed Pontiac Korndyke. Dam, Pontiac Artie, daughter of Hengerveld De Kol. Record, 31.8 lbs. butter 7 days, 128 lbs. 30 days, 1,076 lbs. 365 days. Young bulls from these two great sires for sale, from cows with records up to 20 lbs. Write us, or better come and see them. Visitors always welcome. Address all correspondence to: A. C. HARDY, Owner. H. LORNE LOGAN, Mgr., Brockville, Ont.



Lakeview Holsteins

Have only two bulls of the serviceable age left and are offering them at very reasonable prices. We are now in a position to offer a few young cows and heifers that are well worth the money asked to anyone looking for the best in breeding. E. F. OSLER, BRONTE, ONTARIO.

SERVICE BULLS AND BULL CALVES FROM A. R. O. DAMS.


Sons of Johanna Concordia Champion, No. 60575, one of the richest bred and best individual bulls of the breed. His granddams, Colantha 4th's Johanna 35.22 lbs. butter in 7 days; fat 4.32 per cent., and Johanna Colantha 2nd 32.90 lbs. butter in 7 days; fat 5.02 per cent. Average butter in 7 days 30.06 lbs.; average fat 4.67 per cent. If you want to increase the butter-fat in your herd, let me sell you one of these bulls. I can spare a few good cows and heifers bred to the "Champion." Write me your wants and I will try and please you. MAPLE AVENUE STOCK FARM, L. E. CONNELL, Prop., FAYETTE, FULTON CO., OHIO, U.S.A.



Holsteins

One six year old cow due this month also fine 2 and 3-years heifers, bred; also a few Yorkshire pigs ready to wean. A. WATSON & SONS, St Thomas, Ontario. L. D. 'Phone Fingal via St. Thomas.


Lump Jaw



The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser. Most complete veterinary book ever printed to be given away. Durably bound, indexed and illustrated. Write us for a free copy.

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75 Church Street, Toronto, Ont.

Cooper Dip



ONE DIPPING KILLS ALL TICKS and keeps SHEEP free from fresh attacks. Used on 250 million sheep annually. Increases quantity and quality of wool. Improves appearance and condition of flock. If dealer can't supply you send \$1.75 for 53 packet. Specially illustrated booklet on "Ticks" sent free for asking, a post card brings it. Address Dept. 77

Wm. COOPER & NEPHEWS,
Toronto, Ont., 122 Wellington St. W.

ALLOWAY LODGE STOCK FARM
SOUTH DOWNS
ANGUS
COLLIES

The best in their respective breeds. Write for information to:
ROBT. McEWEN, Byron, Ont.
R.R. Sta. and Tel. Office, London.

Duroc Jersey Swine AND JERSEY CATTLE
Grand stock, either sex, constantly for sale. Price reasonable. **MAC CAMPBELL & SONS,** Northwood, Ontario.

Cloverdale Berkshires—Present offering: Sows bred and others ready to breed; also younger stock of both sexes. Prices reasonable.
C. J. LANG, Hampton, Ont. Durham Co.

Tamworths—A few bred sows; also some very choice spring litters ready to wean.
HERBERT GERMAN, St. George, Ont.
Bell Telephone

Morrison Tamworths and Shorthorns—Bred from the prizewinning herds of England; have a choice lot of young pigs, both sexes, pairs not akin; and also the dual-purpose Shorthorns. Satisfaction guaranteed.
C. CURRIE, Morrison, Ont.

A man went into a butcher's shop and asked how much sausages were a pound.
"Ah," said the butcher, "der brice vas gone ups. I shall half to charge you twenty-five cents."
"Nonsense!" exclaimed the customer, "that is outrageous. I can get them at Schmidt's for twenty cents."
"Vell, vy don't you?"
"Because he was out of them."
"O, vell," replied the butcher, "if I vas out of 'em I'd sell 'em for twenty cents, too."



AFTER WORK USE SNAP

It will clean your hands thoroughly and quickly no matter how soiled they are and leave them smooth and soft. Ink, paint, oil or grease stains, off they come with Snap. Get a Can To-day. 15c. at Your Dealers. Save the Coupons.

Snap Company Limited, Montreal

Questions and Answers.
Miscellaneous.

Distribution of Estate.

1. If a wife dies, leaving a husband and no children, who claims her bank account?
 2. If a wife dies, leaving a husband and children, how is her property divided?
 3. Can a wife's brothers claim a share of her cash if she has a husband living?
- N. E. L.
Ontario.
- Ans.—1. Assuming that she dies intestate, her husband would be entitled to one-half of the entire net estate, including the money in the bank, and the other half would go to her next of kin.
2. If no will, one-third to the husband, and the rest to the children.
3. If no will to the contrary, yes.

Growing Tomatoes—Crop for Green Feed.

1. I intend planting tomatoes for early market, on rather poor, gravelly loam. Would you advise hen manure and ashes, also well-rotted stable manure? If so, in what proportions, and what artificial fertilizer would you advise with them?
 2. What kind of green crop would you advise on such soil for milch cows, to be cut for green feed?
- E. V.
Ans.—1. Results with fertilizers on tomatoes have been so variable that it is difficult to recommend. Too much nitrogen should not be supplied, as it tends to cause the vines to grow rapidly, and fruit is not produced, while potash causes a smaller vine and more fruit. Try and find out by experiment what the soil needs. It is likely it needs a complete fertilizer. Apply from 8 to 12 tons of rotted barnyard manure to the acre, and with this a little hen manure might be mixed. A complete fertilizer of a 2:8:10 mixture is good.
2. Oats and peas would likely give as good satisfaction as anything which could now be sown for this year's cutting. Some corn might also be put in for later feed.

Mare and Colt Queries.

1. Would it retard the growth of a foal to wean at three months old?
 2. Or, how could it be fed to keep it growing?
 3. Have a chance to purchase a yearling colt, quite thrifty-looking now, the mother of which weighs 1,100, and the sire 1,600 pounds. How heavy should the colt make when full-grown, with good care? Said colt is two-thirds Clydesdale.
 4. Which is supposed to be the stronger, a mare or a gelding, both same breed and weight?
 5. Is a stallion considered stronger than either mare or gelding?
 6. Have a large mare which is in oestrus very often during spring and summer, and is very troublesome, being cross, biting and kicking. Do not wish to breed her. Is there any drug I can give to prevent her getting in heat, or could a veterinary surgeon perform an operation on her so she would never show oestrus again?
 7. If so, would such an operation be attended with danger, or otherwise affect the usefulness or disposition of the mare?
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Ans.—1. Quite probably, to some extent. Such a foal would need careful attention. Better let him nurse until five months of age.
2. Teach him to eat oats and clover hay or grass, and feed a little cow's milk. In commencing to feed cow's milk, be careful and do not give very much. Increase the quantity as the colt becomes accustomed to it, but never feed in large quantity.
3. An answer to such a question could be nothing more than a guess. The mature size of the colt will depend upon his care and feeding to some extent, and no one can conjecture what a colt of such cross-breeding will come to, possibly 1,400 lbs., and possibly more, or less.
4. Similarly built, muscled, fed, and cared for, one should be as strong as the other.
5. Possibly so, due to his masculinity.
6. A veterinarian could perform an operation (spaying).
7. A properly qualified veterinarian should be able to perform the operation so that the mare would not be injured, and her disposition would likely be much better afterwards.



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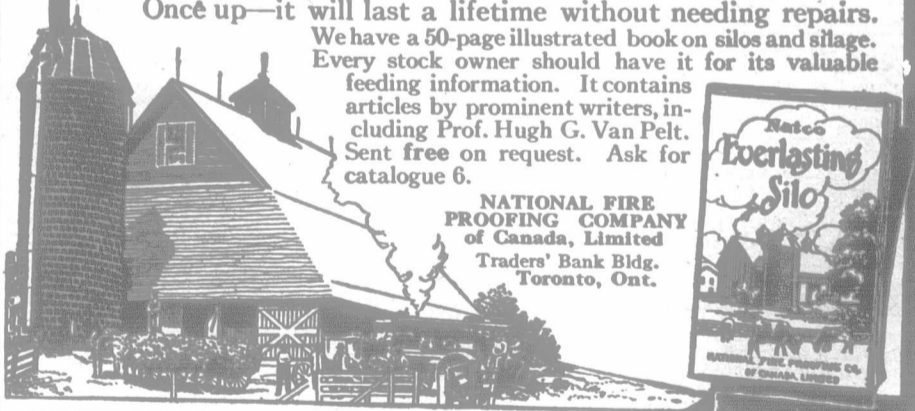
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SEALED TENDERS addressed to the Postmaster-General, will be received at Ottawa until noon, on Friday, the 6th June, 1913, for the conveyance of His Majesty's Mails on a proposed Contract for four years, six times per week, over Rural Mail Route No. 1, from Cromarty, Ont., from the Postmaster-General's Pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen, and blank forms of Tender may be obtained, at the Post Offices of Cromarty, Chiselhurst, and at the Office of the Post-office Inspector at London.

G. O. ANDERSON,
Superintendent.

Post-office Department,
Mail Service Branch,
Ottawa, 19th April, 1913.



MAIL CONTRACT

SEALED TENDERS addressed to the Postmaster-General, will be received at Ottawa until noon, on Friday, the 4th June, 1913, for the conveyance of His Majesty's Mails on a proposed Contract for four years, six times per week, over Rural Mail Route from Ailsa Craig (Ailsa Craig and Nairn), Ont., from the Postmaster-General's Pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen, and blank forms of Tender may be obtained, at the Post Offices of Ailsa Craig and Nairn, and at the Office of the Post-office Inspector at London.

G. C. ANDERSON,
Superintendent.

Post-office Department,
Mail Service Branch,
Ottawa, 19th April, 1913.

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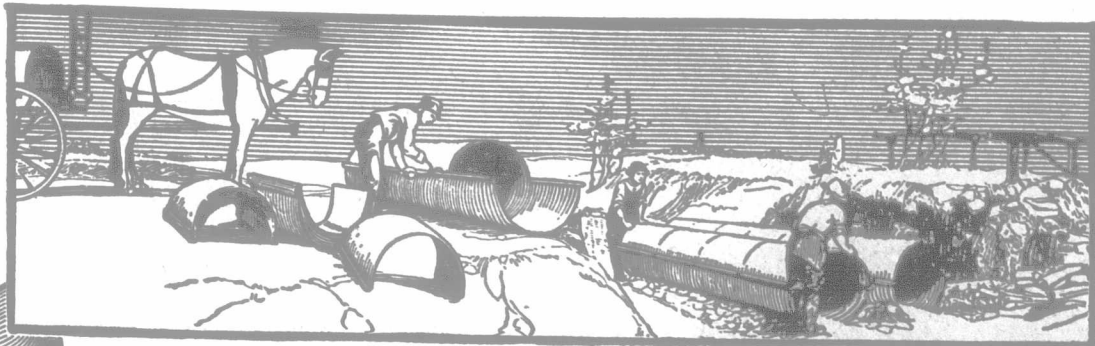
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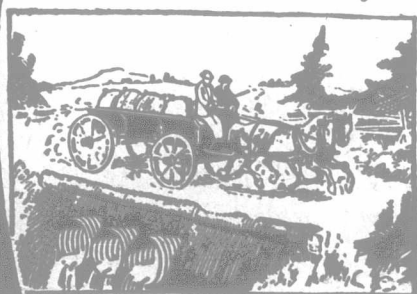
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