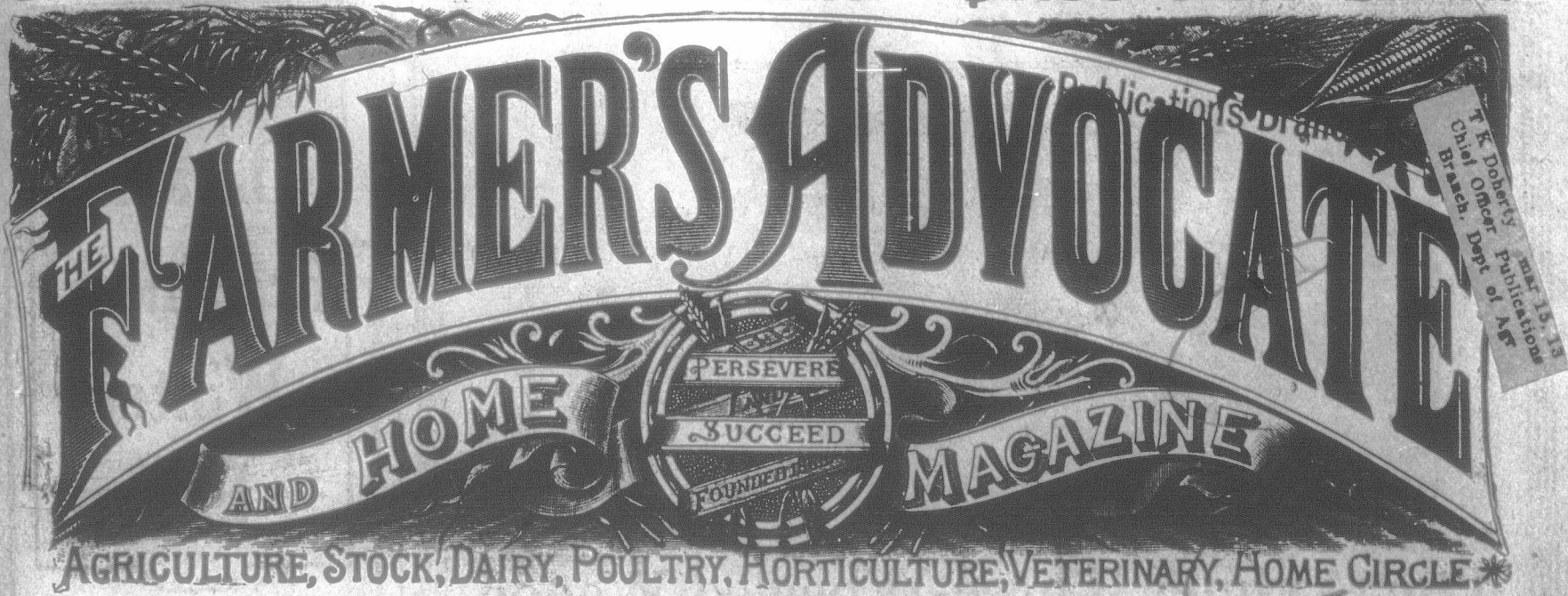


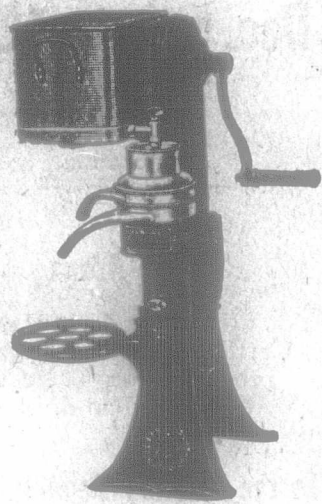
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Vol. XLVIII.

LONDON, ONTARIO, NOVEMBER 27, 1913.

No. 1078

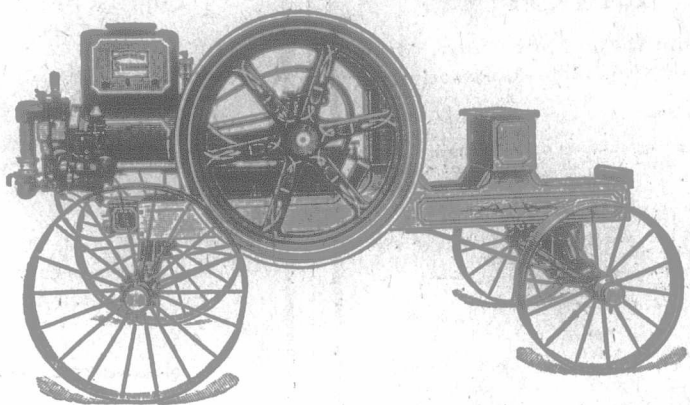


Renfrew Standard

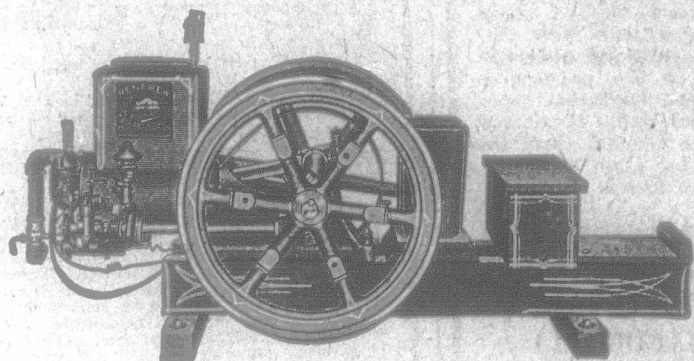
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YOU must have the close-skimming Standard Cream Separator if you are to get largest cream profits from your cows. The Standard skims, on the average, down to .01 per cent. The cream is of highest-class because skimmed in an absolutely sanitary bowl. All gears and bearings run in a

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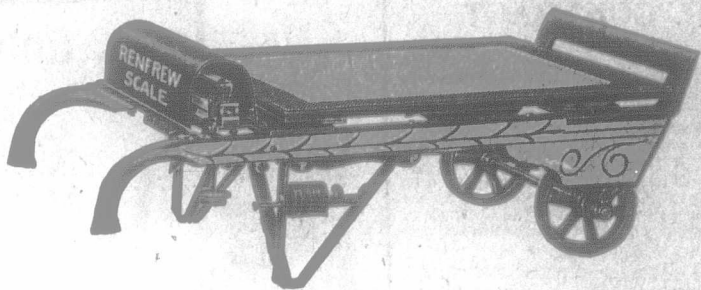


More and more is the Renfrew-Standard Gasoline Engine taking the place of the hired man. Some farmers tell us that they could scarcely get along now without their Renfrew-Standard. This is the engine that aroused so much admiration and enthusiasm at Toronto Exhibition and other



A greater necessity than almost anything else on the farm is a good scale. How can a farmer make sure of getting all that his cattle, hogs, sheep are worth unless he weighs them? The Renfrew Handy Two-Wheel Truck Scale has paid for itself on many farms in less than three months. A truck and a scale combined. Designed especially for farm use. Strong, compact, durable, yet light weight. Tested by government for accuracy. Write for scale booklet. It will open your eyes.

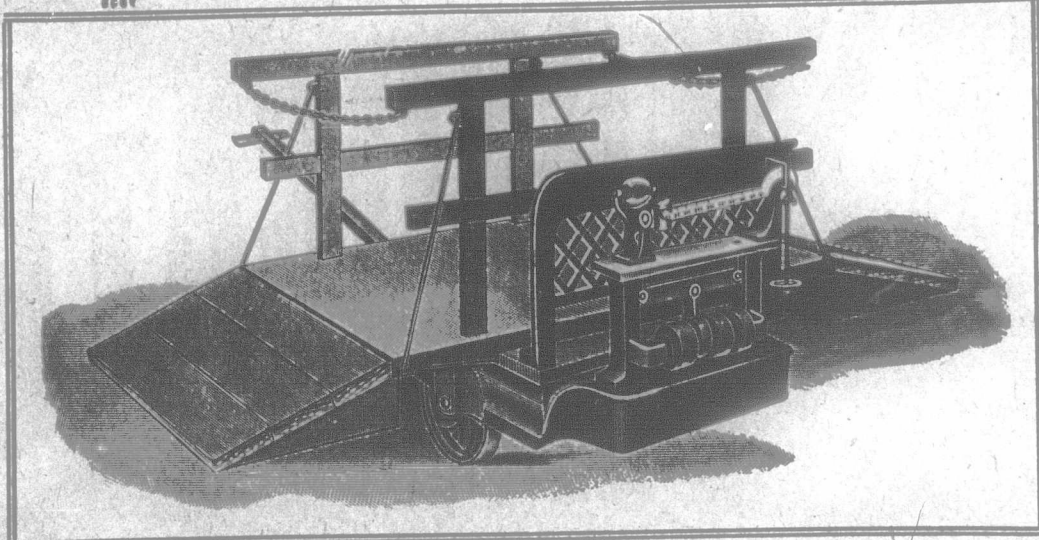
Fairs. It starts without cranking in all kinds of weather. Has governor of fly-ball steam engine type. So perfectly balanced it doesn't need to be anchored down. And many other improvements told about in our engine booklet. Write for a copy. All styles and sizes, from 2½ to 60 h.-p.



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The Aylmer Three-Wheeled Wagon and Stock Scale

Aylmer Scale is the only 3-point bearing scale on the market.

The only scale that will weigh correctly on an uneven surface.

The wheels are large and encased.

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Capacity of this scale, 2,000 lbs.

Size of platform without rack, 24"x36".

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Mail us \$26 to-day, and we will deliver this scale, with Government certificate attached, to your nearest railway station, if in Ontario, or \$35 with cattle rack.

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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

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Director of Colonization
Parliament Bldgs.
TORONTO ONTARIO



MAIL CONTRACT

SEALED TENDERS addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 28th day of December, 1913, for the conveyance of His Majesty's mails on a proposed contract for four years, six times per week over Strathroy (Napier) Rural Route No. 3, from the Postmaster General's Pleasure, next.

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 Strathroy, Napier and Cairngorm, and at the Office of the Post Office Inspector at London.

Post Office Department, } G. C. ANDERSON,
Mail Service Branch } Superintendent.
Ottawa, November 14th, 1913.

Milk Wanted

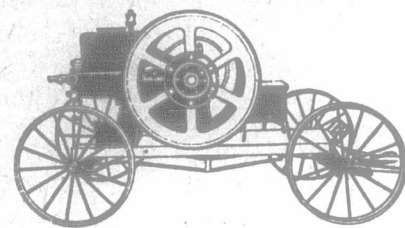
For milk route in Windsor

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More Value, More Power, More Service, More Satisfaction.

Does SERVICE, SAFETY and SATISFACTION mean anything to you? Does money saved in repairs and expense bills, time, equipment, etc., mean anything to you? Get Gilson Facts and find out how the Gilson 60-Speed and 100% Service Engines do the greatest variety of work—give the maximum satisfaction—are trouble proof and fool proof. Their scientific design makes them absolutely safe—they are approved by the National Board of Fire Underwriters; no insurance troubles.

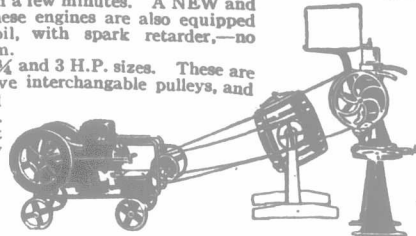
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The new Gilson 100% SERVICE ENGINES, 4 H.P. and upwards, are equipped with our new friction clutch pulley with five interchangeable rims, each of a different diameter. Change to the proper speed for every job in a few minutes. A NEW and EXCLUSIVE GILSON FEATURE. These engines are also equipped with a magneto, without batteries or coil, with spark retarder,—no cranking necessary. A child can start them.

We also make 60-SPEED engines in 1½ and 3 H.P. sizes. These are mounted on truck, with line shaft and five interchangeable pulleys, and we will send you full descriptive literature. We are making special prices to the first purchaser of one of these engines in every locality. Write NOW.

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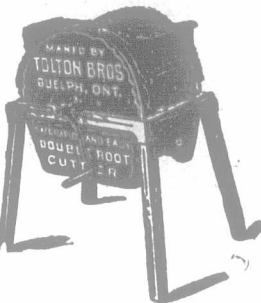
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"Tolton's No. 1" is the only Double Root Cutter manufactured, and the best of its kind made.

There are many advantages for the farmer using "Tolton's No. 1" Double Root Cutter. Fitted with Steel Shafting, Roller Bearings and the latest improvements, and made by skilled workmen.

Send a post card for prices and circular. Write to-day.

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Guelph
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You will see the best Horses, Cattle, Sheep and Swine produced on the best farms in Ontario.

In the Poultry Department

You will see the Greatest Poultry Show on Earth.

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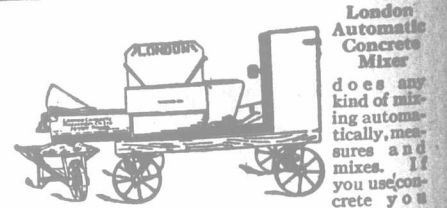
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does any kind of mixing automatically, measures and mixes. If you use concrete you

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—gives a bright, powerful light instantly,—just press the button. Compact, handy and safe. Four times as strong as any other and can be recharged for a trifle. Can't explode. The baby can handle it. Safe in a powder bag.
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Swift's Fertilizers

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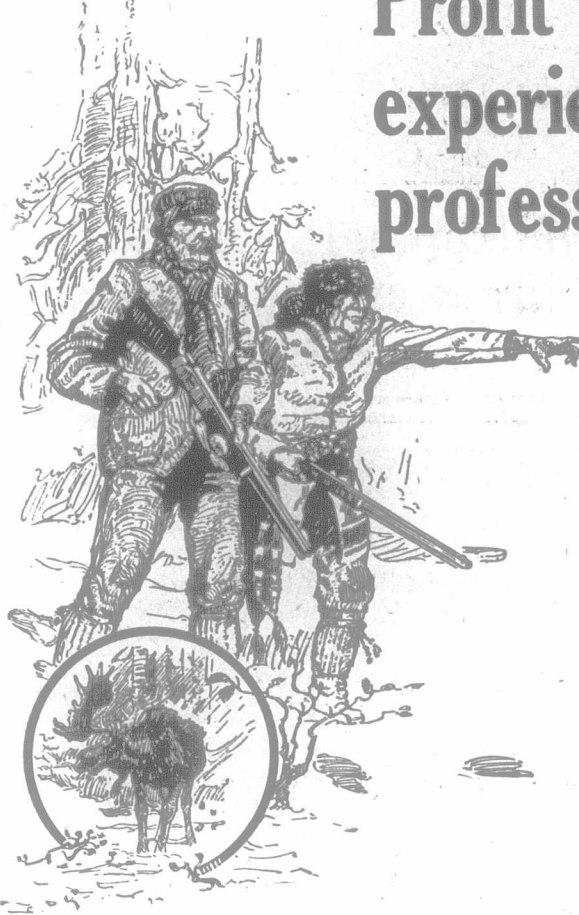
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No one knows better than they the importance of having ammunition that is accurate, powerful and dependable under all conditions. Big game hunting in Canada is different from that of other countries, and the ammunition used must be suited to the climate in which it is used.

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We secure "Help" for farmers from the country districts of the British Isles. Requisitions must be filled up. Copies sent on application. Average time to get you "Help," about six weeks. No fee charged. Only regular fare on ocean and rail to pay.

You need not be without "Help" this summer or fall if you send requirements early.

Write for further particulars.

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The More Intelligent Farmers

are sending their sons to the O.A.C. to learn the science of farming, and to the "Kennedy" to learn the business of farming. Requires only 3 months—\$30.

Write for catalogue.

THE KENNEDY SCHOOL,
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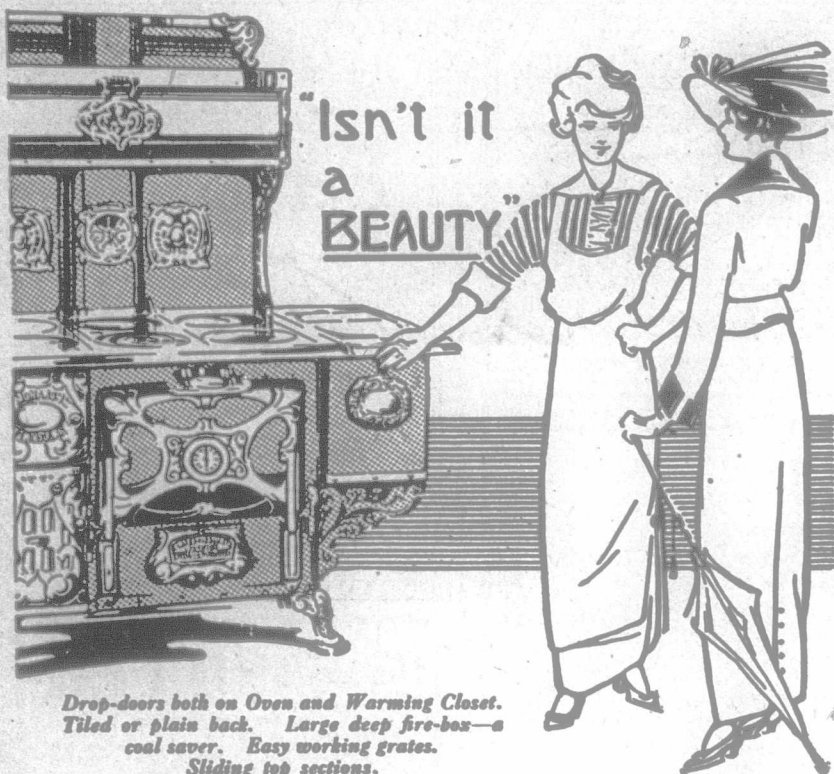
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Drop-doors both on Oven and Warming Closet.
Tiled or plain back. Large deep fire-box—a
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BEAUTIFULLY polished, easy-to-clean steel body. All nickel doors on the warming closet. Heavy plain nickel trimmings that can be taken off when the range is being cleaned.

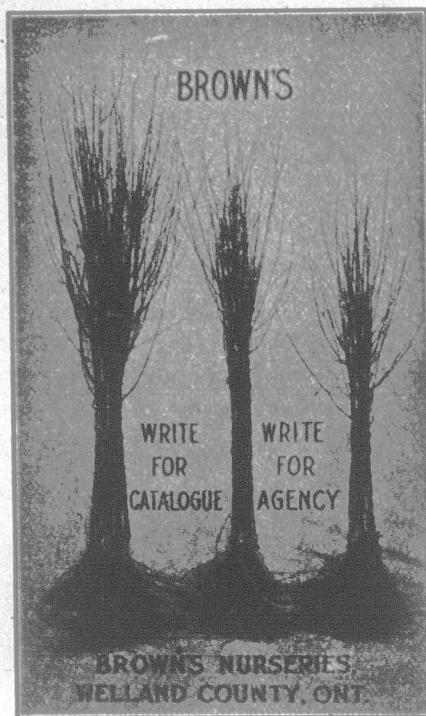
You cannot help but stand in admiration of the Monarch Range. It is handsome. But its *real* beauty is this: It saves coal—gives you the best service at a low cost.

There is something in our Book "The Cost of a Range" that every economical housewife should know. Let us send you a copy.

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**Roots
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The true value of a tree is based upon its root system and limb growth. Trees grown at

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Are famous because of these two points.

If you have land suitable for fruit or ornamental trees, send in your list for prices.

**Peach, Apple, Plum and Cherry
Trees are our largest
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Are you a trapper? Are you a dealer? For top quotations, square grading, prompt returns, ship to us. No commission. We pay express and mail charges.
WRITE FOR PRICE LIST AND SHIPPING TAGS. MENTION THIS PAPER
References: Greenwich Bank. East River National Bank, New York
BENJAMIN DORMAN, Inc.
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147 West Twenty-Fourth Street New York

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If there are any Trappers or Collectors of Raw Furs that do not know us by this time, it is time now to get acquainted with us. Let us send you our price list, or better yet, make us a trial shipment and let us show you what we can do. Write for Price List and Tags Free.
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Dept. R, Walkerton, Ont.
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Wooden troughs and utensils are unsanitary and likely to leak.

Our steel tanks and troughs, guaranteed for 10 years, are self-supporting and made of finest quality galvanized steel.

SQUARE STEEL WATER TROUGH (Fig. 1), will not rust or leak, and is strong, clean and sanitary. Freezing will not damage it. Thoroughly riveted, soldered and braced.

STEEL FEED COOKER (Fig. 2), sits right over the fire and is very easy on fuel. Made in same style as our Maple Evaporator. A necessity on every farm.

STABLE TROUGH (Fig. 3), insures running water for your winter stock. Simple construction. Nothing to get out of order. Sold in lengths easily bolted together.

STEEL HOG TROUGH (Fig. 4), soldered to prevent leakage. Heavy galvanized steel specially imported. Heavy and durable.

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Send for your copy. W-76

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"Tweed" Sanitary Closet
"Row" Sanitary Lavatory

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TWEED, ONT.

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MAKE FALL AND WINTER DAIRYING MORE PROFITABLE
There is surely no reason to delay the purchase of a separator or to continue the use of an inferior one. A De Laval Machine will save its cost by spring, and may be bought on such liberal terms if desired as to actually pay for itself meanwhile.

De Laval Dairy Supply Co., Ltd.
Montreal, Peterboro, Winnipeg

Davies Fertilizers ARE Money Seeds
"As you sow them—so shall you reap."
WRITE:
The William Davies Co., Ltd.
WEST TORONTO, ONT.

Please mention "The Advocate."



EDITORIAL

This is a good time to save the breeding heifers.

Read the convention and live-stock show reports in this issue.

Just two more weeks to wait for the annual Christmas Farmer's Advocate.

High prices for finished beef, pork and mutton should mean better feeding this winter.

"Any port in a storm" is manifestly a safer slogan than "this boat can weather any storm."

If you would have healthy, thrifty stock, keep them in clean, light, well-ventilated buildings.

Weigh a few of the steers from time to time, and note their comparative gains according to feed consumed.

Manufactured into good beef, pork or lamb, what would that load of grain offered at the elevator be worth?

Feed plenty of live stock to feed the farm and take just as good care of the barnyard manure as of the stock fodder.

The young orchard needs protection from mice. Now is the time to attend to this if it has not already been done.

A good beginning for the writer's thoughtful consideration of farm subjects is attendance at some of the winter exhibitions and conventions.

Cold-weather comfort in the stable does not mean high temperature, but it does mean fresh air in abundance.

Perhaps there is no essential in good stable construction so little understood and so badly neglected as proper ventilation.

Some have again been convinced that it is not the best practice to leave apple-picking, turnip-pulling and potato-digging too late in the fall. November weather is uncertain.

Attend the agricultural meetings. It may be possible that things will be said with which you do not agree. If so, get in the discussion. You will get more out of it, and so will the others present.

Chicago cattlemen complain that Canadian cattle have a starved appearance. Either they are not getting the best stock, or many of our cattle are being offered unfinished. We hope the latter is not the case.

There is no better means of gaining knowledge than getting out and seeing what the other fellow is doing. Take a holiday and exercise your powers of observation while away.

Get in touch with your member of parliament before the coming session opens, and make the needs of the rural population known. You have elected him as your representative, but your duty does not end with the marking of the ballot.

The Economy of Good Highways.

Road-making is one of the biggest questions in Canada to-day. Railroads, steamship lines and motor trucks can never solve the transportation problem till that five- or ten-mile stretch of highway between the depot or town and the producing acres of our country is put into such condition as will allow the grower to greatly increase his output and still be able to draw it to market. One individual in the Niagara district of Ontario increased his acreage contract for tomatoes from five acres to forty acres on account of improved shipping facilities. A neighbor contracted for seventy-five acres because he could dispose of his crop after he had grown it. Does not this picture plainly the relation of roads to production? With the increase in production will come a decrease in price. The grower must take less for his output and the consumer will buy his necessities for less money. The producer gains through his increased acreage, the consumer through a diminished price. This condition warrants a universal movement towards better roads. It is not a rural question alone, but the onus should be borne by urban centers as well as rural districts. The expense will be great, but the results will correspond. One man in the neighboring Republic said: "If we had all the money we have expended on our roads we could pave our streets with gold."

With a far-reaching result in the marketing of produce with communication established between town and country, with the producer and consumer brought closer together, the Provincial Parliaments and Federal Government can well afford to liberally assist with the construction and maintenance of roads.

The Cost of Living.

A public school principal of successful experience in a leading Canadian city for many years, and well acquainted with urban and rural conditions, respectively, has tersely expressed to "The Farmer's Advocate" his conclusions on the popular newspaper topic of the day—the so-called high cost of living. The question, he concludes, simply resolves itself down to two main causes. First, there is the abnormal flow of people to the towns, swelling the consuming population and lessening the ranks of those on the farms and retarding production. This has already in the case of some foods had the effect of enhancing values. The second, and a very immediate reason, lies in what may be termed high living, or to put it more mildly, the people have forsaken the ways of plain living. There is perpetual and increasingly costly craving for recreation day after day and night after night. Nowadays people insist on better and more modern homes in which to live. As a result of the massing of people in towns, property values have gone up and taxes and rents have increased. People demand more modern homes and a house which a few years ago could be secured by a workman or clerk for nine or ten dollars a month will now probably exact a monthly rental of eighteen dollars. No, it is idle and wrong to lay at the door of the farmer the high cost of living for which people themselves are largely responsible. As may be expected, a variety of nostrums and cure-alls will be prescribed by politicians and newspapers, most of them superficial and futile as far as affording any real help either to farmers or town consumers is concerned and

indeed some of them may be positively mischievous in their nature. There is no easy, short-cut method to a solution of the present situation in town living. If the people must all dwell on the front street and enjoy orchestral accompaniments with their meals, they will have to pay the price.

Sell the Heifers -- Spoil the Herd.

What is a big price for a big, healthy, thrifty yearling, two-year-old heifer? She need not necessarily be pure-bred, but a grade of the kind that every cattleman, who is a judge of what constitutes a likely valuable breeder, takes pride in owning. Hundreds upon hundreds of this class of heifers have been sold off Canadian farms this fall, to be fed for the butcher's block either in this country or in the United States. It is bad enough to see the steers going elsewhere to be finished, but it does seem almost criminal to further deplete the breeding herds of good young females by selling the promising heifers to be fattened. A correspondent in another column in this issue shows just how grave the situation is. From one small district in Middlesex County, Ontario, 113 yearling heifers, which averaged 634 pounds each, were shipped in one day early in this present month, and the drovers and dealers still have their lines and drag nets out to make the largest possible haul of cattle. They are ready to buy anything which is beef or looks like making good beef when finished, but they place a premium on size and quality.

There was a time when the drover or butcher did not care to buy heifers, or, at least, he beat the farmer down in price favoring steers. Not so now. Good heifers are in demand for feeders and beef, and the result is sure to be an increasing scarcity of beef cattle. Sell the heifers, and the herd of the future is gone: Only upon the best young females bred to the best-breeding bulls can a satisfactory future cattle business be founded. Remove the foundation and the building collapses; sell the good heifers and the cattle business totters and is destroyed. It is more serious than many seem to realize, and the suddenness of the upward trend in prices, which, in the cattleman's parlance was correctly known as a "jump", has been and even yet is being taken advantage of by buyers. Five or ten dollars per head more than he could have obtained for good heifers or young cows or good steers seems quite a consideration to the man who owns the stock, and yet on a thousand-pound or twelve-hundred pound animal it is very little per pound. We have heard of several "deals" being put through where the first owner got what he thought was a good price, being \$5 or \$10 more than he expected a little while previously, the second owner turned the same cattle over almost immediately at an advance of \$5 or \$10, and in a few cases a third transaction has been recorded at a still further advance. This is the way it goes, but it all leads to fewer heifers and spoils good opportunities for bolstering up the cattle-breeding business. There are two values to place on the heifer, viz., what she is worth for beef, and what she is worth as a breeder. Be sure the price is more than covers her worth for the latter purpose before selling.

Before feeding up nearly all the grain or disposing of it in any other manner, would it not be advisable to clean and put away in the best bin the seed required for next spring?

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The Advocate."

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.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries 12s.; in advance.
3. ADVERTISING RATES.—Single insertion, 25 cents per line, space. Contract rates furnished on application.
4. THE FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrears must be made as required by law.
5. THE LAW IS, that all subscribers to newspapers are held responsible until all arrears are paid, and their paper ordered to be discontinued.
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10. LETTERS intended for publication should be written on one side of the paper only.
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12. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
13. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (LIMITED),
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A CHRISTMAS BOX TO OUR SUBSCRIBERS

Renew your own subscription for 1914 at half price. From all whose subscriptions are paid up to the end of 1913, we will accept \$2.25 any time from now to December 31st to pay your own renewal and one new subscription to December 31st 1914. This offer is made on condition that the new subscriber pays you \$1.50 for his year's subscription. This is a Christmas Box to our present subscribers; we want you to get the benefit; take advantage of this special offer at once; tell your neighbor how valuable The Farmer's Advocate and Home Magazine is to you and your family every week in the year. You will have no difficulty in obtaining his subscription. Tell him it costs \$3.00 a year to produce the 52 copies he will receive for \$1.50; tell him The Farmer's Advocate and Home Magazine gives its readers more sound, practical reading matter than any other three agricultural papers combined.

Remember this offer is open to December 31st only, so speak to your neighbor before he subscribes to other papers. All new names, sent in before December 31st will receive the balance of this year complimentary, from date of receiving subscription, including our handsome 1913 Christmas Number, the price of which alone to non-subscribers is 25cts. Secure the new subscription to-day, for the sooner received, the larger number of copies he will receive for his money. The Christmas Number for 1913 will surpass all former holiday issues.

To take advantage of this offer, the old subscriber must positively send in a bona fide new name.

Nature's Diary.

By A. B. Klugh, M. A.

Over large areas of Canada the sedimentary rocks are extensively developed. The materials of which these rocks are composed, were in the first instance at least, derived from the breaking down of the Igneous rocks, and they have been laid down under water. Consequently wherever we now find these rocks was once the bed of an ancient sea or lake. Tennyson, who grasped the fundamental scientific conceptions far better than the great majority of poets, wrote:

"There rolls the deep where grew the tree.
O earth! what changes hast thou seen!
There where the long street roars, hath been
The stillness of the central sea.

"The hills are shadows, and they flow
From form to form and nothing stands;
They melt like mist, the solid lands,
Like the clouds they shape themselves and go."

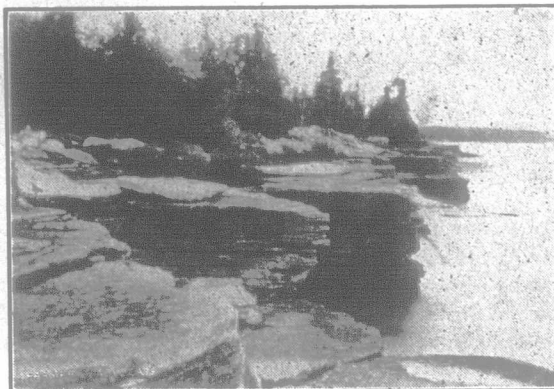


Fig. 1.—Shore of Fitzwilliam Island.

The sedimentary rocks may be divided into two main groups, organic deposits and mechanical deposits. The first group is composed of rocks whose materials were accumulated by living beings, on the death of which more or less of their substance was preserved, added to by successive generations, and finally compacted into rock. The main representative of the organic group which we meet with is limestone, and it is one of the most interesting rocks we have on account of the fossils which occur in immense quantities in it. These fossils are casts in the rocks of animals and plants which fell to the bottom while the deposit was accumulating, and whose bodies gradually became replaced by limestone. They give us an insight into the types of living forms which existed when these rocks were being laid down, and we are thus able to trace the ancestry of the forms which exist today, for as we come to more and more recent rocks, so we find the forms more nearly approaching our present-day types.

From the way in which they were laid down we can readily see that the sedimentary rocks would naturally be arranged in layers. Figure

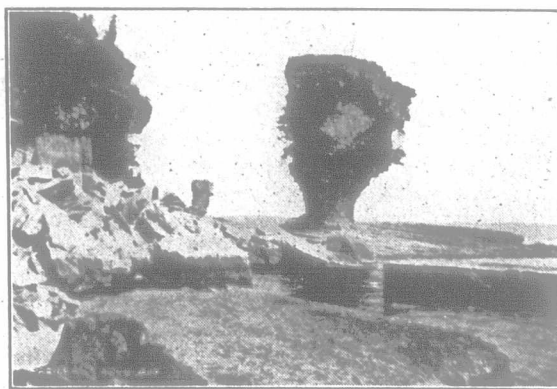


Fig. 2.—The Flower Pots.

one shows the shore of Fitzwilliam Island, south of Manitoulin, and the layers show very plainly, some of the superficial ones having been split off as huge slabs by ice-action. These slabs were simply filled with fossil corals and shells. In many places the limestones form high cliffs along shores such as along the Georgian Bay shore of the Bruce Peninsula.

On the shore of Flowerpot Island, ten miles off the head of the Bruce Peninsula, we have excellent examples of the way in which weather and waves can carve rocks. By the action of these agencies working along joint-planes columns of limestone have been cut off from the cliff, and subsequent wave-action has cut into the base of the columns until they are extremely slender. In fact there were once three of these "Flowerpots" but one was cut completely through and fell some years ago, and it will not be very long until its companions share its fate, though on account of the falling of the water in Lake Huron

the wave-action is not so severe as it was at one time. Figure two shows the one of the "Flowerpots" in the foreground, and the other in the distance.

Of the mechanical deposits the one we meet with most frequently is sandstone. When the sandstone has been formed with rounded stones and pebbles included in it, it is called conglomerate. A good example of this is the cliff of sandstone conglomerate on the shore of the Bay of Fundy at St. Andrews, N. B., where the stones included in the cliff may be seen and also the result of weather and waves in forming the beach of sand and small stones.

THE HORSE.

Avoid drafts in the stable at this season.

A little bran will aid in keeping the horses thriving. It tones up their systems.

Good ventilation is the carrying away of foul air and the bringing in of pure air from the outside without drafts.

Idle horses do not require as much feed as workers, but seldom is it good practice to allow them to go down in flesh.

Let the colt, in a measure, look after himself; do not pamper him, but on the other hand do not allow him to be neglected.

Vermont State Fair held an endurance test for horses. Nearly all those entered were Arabs and Morgans, and seven of them covered 154 miles over hilly roads in less than thirty-one hours. All the horses were ridden.

If intending to purchase a stallion for next season why not do so now? Purchasing at this season places one in a position to winter his horse and prepare for the breeding season according to his own ideas. Many a stallion has been ruined by injudicious winter care.

A Rapid Grower.

Editor "The Farmer's Advocate":

I noticed in a recent issue of "The Farmer's Advocate" a request asking any readers to write in if they ever heard of better gains than those made by L. M.'s colt, and I thought a description of a filly colt which I raised last year would interest your readers. This colt at birth weighed 203 lbs. and at six months weighed 965 lbs. She was not forced in any way. She only got milk from her dam while the dam did her share of the work on the farm. When I weaned her I fed three or four quarts of separator milk twice per day and a mixture of bran and oats which I kept increasing until she was getting a gallon three times a day and all the hay she would eat. I intended to weigh her when she was one year old, but owing to the pressure of other work I neglected to do so, but her estimated weight passed upon by several parties was 1,300 lbs. She was turned out to grass last spring, and she got no other feed whatever. As a result she came in rather thin this fall, having only a loose skin over her ribs, yet she weighs 1,550 lbs at 18½ months old and is 16 hands 3 inches high. Had I fed her some grain this summer and kept her in flesh, which she lost owing to her rapid growth and dry pasture the latter part of the summer, she would easily weigh 1,700 lbs now, and I am looking for her to beat a ton by the time she is thirty months old.

Bruce Co., Ont. SAMUEL HILDRED.

The Foal's First Winter.

Whether or not the colt has been weaned earlier in the season he is generally separated from the dam when stabling time comes. With winter at hand and nothing but dry feed to take the place of milk and grass the colt is at the most critical stage of his development. Upon his care from now until next June depends largely his value when mature. His growth may be forwarded or badly checked, and altogether the care of the colt should be the first consideration in the stable. The starved colt loses heart, his stamina wanes, he becomes susceptible to disease and vermin and is generally a sorry sight humped up in his stall or often in a corner of the barnyard. A colt poorly fed seldom makes the best class of horse.

What does the colt require? First, we may mention exercise. He has been accustomed to the free range of the open fields. He has exercised at will on the cool, moist ground so well suited to the best development of his feet. He

has nibbled at the tender grass and sought out the sweetest knolls in the pasture. Now he is confined, preferably in a box stall, where he has a measure of freedom of movement, but many are not even allowed this privilege and are tied in narrow stalls. All colts, whether in box stalls or in narrow stalls, should have several hours' run in a large, open yard or paddock every fine day during the winter. Many claim that five hours outside daily is not too much. At any rate, it is a fact that often, even where outside exercise is given regularly, sufficient is not allowed, the colts only being left out one-half to one hour each day. This is better than none, but more would be better still. This is a case where if a little does a little good more will do more good. Exercise develops every part of the colt's body and with the change of feed is necessary to maintain his health and vigor. His feet, legs, muscling and body all are benefitted as well as his digestive organs. Give more exercise.

Feeding may be the prime consideration and as before intimated should be done with a knowledge of requirements and keeping in mind always that the colt is a young, growing animal with a digestive system very sensitive to sudden changes of rations and injudicious feeding. A few quarts of sweet, skimmed cow's milk would do no harm to the colt recently weaned. With the butterfat removed there is little danger of this overfattening him, and it contains some constituents much like those of his dam's milk, of which he has recently been deprived. The sweet, skimmed milk is easily digested, but when feeding it it must be remembered that the colt has a comparatively small stomach and too large quantities are likely to produce an undue amount of "podding." Give the youngster the cleanest and sweetest hay, preferably that containing a large percentage of clover. This applies more particularly to the draft colt. If a light colt is being developed for speed it is generally advised to feed timothy or blue-grass hay. Always give hay of best quality and in small amounts, removing each time any that may have been mused over before putting fresh in the manger.

No colt should do without grain. A few rolled oats and bran twice daily will work wonders. Do not get the colt too fat, but where sufficient exercise is given there is little danger of this. For a well-grown, newly-weaned colt two quarts of oats and bran mixed (about one-quarter to one-third bran) at a feed twice daily should not be too much. Of course much depends upon the colt and upon the other feed given. Light colts require less than heavy foals, and it is often advisable to give colts which have for some reason come into the stable in low condition a little extra feed of grain. Many colts will stand more than the amount stated; some need more, others will do with less. There can be no set rule.

Besides hay and grain an occasional root will aid digestion. Good carrots or Swede turnips are most relished and the colt will gnaw away at them greedily. They are laxative and help to bridge the gulf between hay and grass.

For housing, a big, light, well-ventilated box stall is best. It need not be very warm. In fact, if it is free from drafts, a little on the cold side is preferable. Colts generally have a long, thick coat of shaggy hair, which is a great protection, and it is a mistake to pamper too much. They will stand well bitter cold when outside, provided it is not storming, and inside a high degree of warmth is not necessary. The main thing is to keep the stall clean, not allowing manure to accumulate and heat under the animal's feet, and always giving a liberal supply of clean, dry bedding.

If possible keep fresh water in the stall all the time, so that the colt may drink at will. Remember that fresh water is not water that has stood in the pail for days. Keep the pail, or whatever the receptacle may be, clean, and renew the water at least once daily.

It is well to "halter-break" the colt early. If this has not been done already tie him up for a day or two at first to let him know what it means. After this tie him for an hour or so each day that he become thoroughly accustomed to standing with his headstall on. After he has been tied a while, teach him to lead and lead him about occasionally. All these things are parts of his education. Be kind to him, exercise him, feed him and water him regularly and well, and give him a roomy stall and a comfortable bed and he will daily grow into money.

LIVE STOCK.

The calves do better to get a run in the yard for a while each day.

For quick and satisfactory returns what beats a prolific brood sow?

Any treatment adopted for cattle lice must be repeated once or twice at intervals of about one week to be effective.

Start the season by forming a chore system. Do the chores each day in the same rotation, followed because it is most economical of time and labor.

A little hellebore mixed with ordinary dry cement and dusted thoroughly into the hair of cattle has been known to be very effective in killing lice.

Many people will not be bothered with feeding lambs, and yet there is money in them. Maybe it is because these people will not "bother."

Put your brand on all good heifers or your own labels in their ears, and add them to the number of breeding matrons to go on and raise the standard of your live stock.

Let the ewes stay out in the yard on fine days all winter. Sheep do not do well housed too closely. All that is necessary is shelter from storms.

The open yard or paddock is a fine thing for the bull, winter as well as summer. A few hours a day outside quietens him and adds to his chances as a breeder.

At the rate promising heifers of milking stock are disappearing from the country the serious problem with the dairy farmer will soon be not how to obtain milkers but where to secure the cows.

A sow lacking exercise may farrow a large litter of pigs, but rarely are they strong, hardy youngsters. They are, as a general rule, male weaklings and often devoid of hair, and losses are usually heavy.

Feeding Out the Silage.

None of the types of silos recommended for building in this latitude are sufficient to keep out frost. A little freezing occurs in any of them in severe weather. Many silos, too, have no roof, and where this is the case, it is more difficult to prevent loss. It is well to have the silo roofed and is also advisable to keep the doors closed as much as possible. When feeding out from day to day plan to take the silage down even over the surface, always keeping it a little lower around the outside. Never dig down in the center, as this leaves a layer around the outside which is sure to freeze and cause losses. Some advocate keeping the surface covered with a layer of hay or straw and in some cases good results have been reported from the use of a big blanket for the purpose. Avoid digging deeply into the silage. A little care will aid materially in preserving the winter's feed.

Care for the Young Stock.

Too often it is thought the young stock are able to shift for themselves late on into the fall and sometimes well into winter. This is a mistake. Of all the stock on the farm the youngsters are perhaps least able to withstand the bitter cold and the biting winds. They hump up and shiver, do not feed well even if feed is plentiful, and receive a set-back in growth and condition from which it takes months of good care and feeding to fully recover them. Among the first stock to be cared for should be numbered the youngsters. They do not require exceedingly warm stables. We have seen them do well with a shed and stack for shelter from wind and storm when getting a liberal allowance of feed, but they must have shelter. A well-protected yard is a fine thing for the growing stock to run in on fine days, and stock so raised usually make rugged, hardy animals. It is not wise to stint the feed on the young animals. Regularity, liberal allowances, exercise and comfortable shelter are the prime requisites to success in raising young stock and these should be practiced before the animals begin to show the effects of bad management.

Selling Heifers is a Shortsighted Policy.

Editor "The Farmer's Advocate":

From a mixed-farming district within a few miles of London, in Middlesex County, Ontario, there have been shipped this fall fifty carloads of cattle, nearly all going to supply the feeding-cattle needs of our American cousins. Practically all were young cattle, from one to two years old, the age at which they would have consumed the roughage grown on the farms, viz., hay, straw, corn and roots, good crops of which were grown in the district this past season. But the high price offered loomed so big in the eyes of the farmer that it shut out the view of the possibility that finished cattle might be a big price next spring and that reasonably cheap grain and fodder might be converted into high-priced beef and would thus yield profitable returns for labor during the winter and a larger manure pile to enhance the fertility of the farm next spring.

But the worst is yet to come. On the second Monday in November 113 yearling heifers, averaging 634 pounds each, were shipped from this district. Most of these were of Shorthorn breeding, and fully 75 per cent. were worthy of being placed in any stable for breeding purposes. True the price exceeded anything that had been offered, but it looks like "killing the goose that lays the golden egg." With all this breeding stock going out of the country, where are we going to secure animals to fill our stables and graze pasture fields in the years to come, and



Cart Horses at an English Fair. Showing how the horses are kept in out-door stalls.

UNDED 1866

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without live stock our farms become depleted in fertility?

Too many of us are short sighted. There is a possibility of cattle being even higher than at the present. He is a wise man who thinks twice and looks carefully into the future before selling his young stock, even if prices are above the average.

I. B. W.

Middlesex Co., Ontario.

Live Stock Imports Prohibited.

Editor "The Farmer's Advocate":

I have the honor to inform you that, owing to a recent outbreak of foot-and-mouth disease in Great Britain, no permits to import cattle, sheep and other ruminants and swine from the United Kingdom will be issued until you are further notified.

F. TORRANCE, Veterinary Director General.

THE FARM.

Attractiveness in Marketing.

Editor "The Farmer's Advocate":

At nearly every plowing match and fall fair a prize is offered for the best farmer's turnout. This is as it should be, for the day has come when the farmer must pay attention to the appearance of himself and his product, or take second place in the procession. Grocers, hardwaremen, railroadmen and steamboatmen have been driven to this by sheer pressure of public opinion. The more alert farmers have already learned that it is good business, not only to produce goods of high quality but attractive in appearance as well. One farmer I know has provided a special wagon for marketing purposes, that he washes regularly and treats as often as need be to a good coat of paint well applied. He offers his potatoes for sale in clean bags, and sells his other vegetables in clean boxes. His harness is well oiled, and his personal appearance neat and cleanly. This farmer rarely goes to the market with his produce, but he goes directly to his private customers, whether they be private citizens or businessmen. All this season he has received from ten to fifteen cents per bushel more than his neighbors. On a load of potatoes this means an advance on his less careful neighbors of from four to six dollars, not a bad day's wages in itself, and, in a season, not an inconsiderable addition to his income.

The other day one of the meat dealers in Toronto remarked of one of the farmers from whom he was accustomed to purchase supplies wholesale, "I cannot buy from Brown any longer. He came in here the other day with a quarter of beef, with his boots dirty and his clothes even dirtier, and I was glad to get him out of the shop before any of my regular customers came in." That farmer wonders why he has lost a customer, but the dealer may scarcely tell him.

It is especially important to be careful of appearances just at this time of year. The holiday spirit is in the air. Other businessmen are putting in place their Christmas decorations, and the farmer who brightens up his produce will draw the trade to his wagon or sleigh. There are some who do not set any value upon appearances, but they are so scarce that they need not be considered. The lesson of merit in goods and of honesty in salesmanship has been well learned. Insanitary products need not be offered. The leaders have learned that to merit must be added attractiveness, and all will do well to study the art of making a fine appearance in marketing.

York Co., Ont.

O. C.

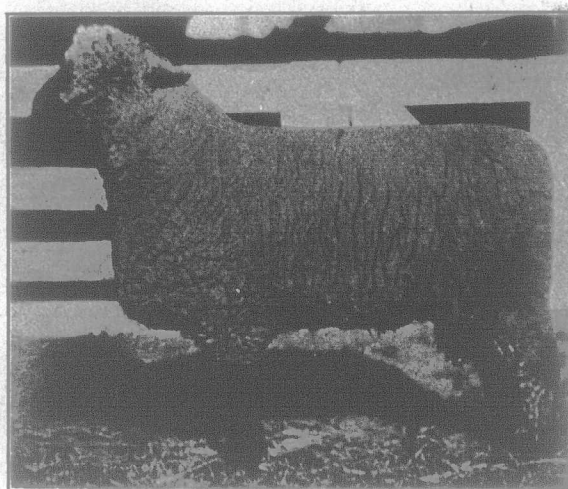
"Results" from Farmers' Clubs.

A farmers' club carrying on co-operative transactions to the extent of \$20,000 annually is the outcome of the club movement in Ontario. This flourishing club in the last five months has handled seed corn, oats, clover seed, salt, feeding stuffs, flour, sugar, binder twine and other farm necessities. Stock has been handled co-operatively, and in one transaction horses valued at \$3,600 were sold to one man. Each week the members load their stock in common cars for Toronto, and now they are shipping their own poultry. The strong point in connection with a farmers' club is the discussion regarding local subjects by local men. A man of experience is qualified to talk in his own community, but he must have a very extended experience to be able to speak in every or any district. An application of up-to-date practices and an unrestrained, unbiased report of the results by the one who put them into vogue, is one way of helping the neighborhood. This, with a co-operative spirit will force any locality to the front and make for better times.

Artificial Fertilizers; Their Nature and Use. -- I

By B. Leslie Emslie, C.D.A., P.A.S.I., F.C.S.

Under the above title a series of articles by the present writer appeared in the columns of "The Farmer's Advocate" during the early part of the year 1908, which it has now been deemed advisable to reproduce in revised and supplemented form to meet the growing desire for information on this subject. During the intervening period the advancement of agricultural science has kept pace with the remarkable development of our country and in our Federal and Provincial Legislative Assemblies many laudable measures for the benefit of agriculture have been enacted. As prominent examples of these, we note the Dominion Government's Conservation Commission, whose agricultural committee conceived the idea of the district demonstration



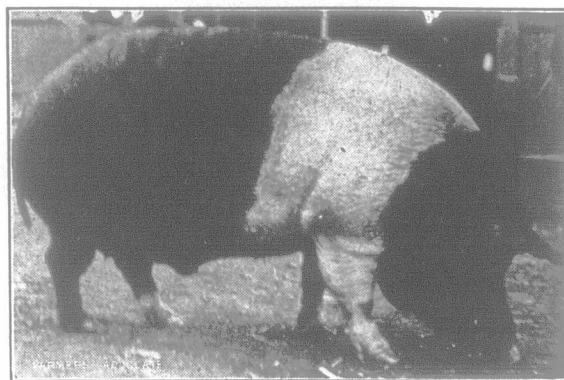
Yearling Oxford Ram.

Champion at Toronto and London, 1913. Bred and exhibited by Peter Arkell & Sons, Teeswater.

farms to serve as object lessons to the farmers of the communities in which they are placed, the selection and supervision of the farms being made under the able direction of John Fixter; also the popular "Burrell Bill," providing for an expenditure of ten million dollars, within a period of ten years, to aid agricultural education in the various Provinces. It seems peculiarly fitting that the Hon. Martin Burrell should have selected, as administrator of this grant, Dr. C. C. James, who instituted in Ontario the now well-known system of District Representatives of the Department of Agriculture, the success of which has led to its adoption in other Provinces.

FERTILIZERS A FACTOR.

In the improvement of our agricultural methods, the use of artificial fertilizers plays an important part. Many, who five years ago decried their use, are now amongst the most ardent advocates of the practice, while some otherwise apparently intelligent men persist in denouncing the same. The expression of such views is prompted either by ignorance or prejudice, since a denial of the merits of fertilizing



Hampshire Boar.

Champion at Toronto, 1913. Owned by Porter Bros., Appleby, Ont.

implies a deplorable lack of familiarity with agricultural history or indicates a mind biased from causes, which may be evident or problematical.

CAUSES OF PREJUDICE.

The apparent cause in many cases is unwillingness to admit a previous error in judgment. That there may be other causes suggests an incident, related in a well-known book in the writer's "mither tongue," dealing with rural life in the early part of the nineteenth century. Two farmers, going to the "kirk" one Sabbath morning took a "short cut" through a neighbor's

field, where they discovered some "manure in bags," which their neighbor (evidently a progressive farmer of his day) had procured for application to his turnip land. Never having seen "guano" before, they became deeply interested and closely inspected the wonderful stuff. One of them, familiarly known as Peter, not anticipating the consequences of his rash act, placed a handful of the guano in his pocket for future reference, and the two hurried off to church, where they took their places beside their respective spouses, who had arrived some time previously in a wheeled conveyance. Now, guano, unlike the more popular concentrated fertilizers of to-day, has a very strong and decided odor, which does not require a particularly refined sense of smell to detect. The sample in Peter's pocket, being true to kind, emitted a stench, which pervaded the whole building and seriously interrupted the attempts at devotion on the part of the congregation. Peter's better half, being ready at any time to lay blame on her husband for misfortunes, of which he was, of course, not always the cause, was not kept long in doubt as to the origin of the disturbance, and on reaching home her righteous indignation held full sway in the most awful curtain lecture which Peter ever endured. As Mrs. Peter held the purse-strings, it is extremely unlikely that her spouse ever summoned up sufficient courage to suggest the purchase of some guano for the farm, and to those, without "inside information," he would have been known as "prejudiced"; which all goes to show the futility of endeavoring to fathom "private opinion."

SOILS AND THEIR FORMATION.

"The moaning of the homeless sea,
The sound of streams that swift or slow
Draw down Aeonian hills and sow
The dust of continents to be."
—Tennyson.

The soil, whereon the farmer's home is founded and from which, by means of brain and brawn, he derives his livelihood, must necessarily be the beginning and ending of the present discourse. Soil formation may be said to take place in two ways, either by a process of disintegration or breaking-down, or by a process of construction or building-up. Both these processes of natural change are in constant operation, yet so slow and gradual in their progress that their effects are scarcely perceptible within the comparatively short span of a human life. The physical character and chemical composition of a soil will naturally depend on the manner and origin of its formation. Soils formed by a process of disintegration will partake of the nature of the rock from which they were derived, modified by conditions attendant on their formation. Others formed by a process of construction will likewise vary in character for similar reasons. In the latter class are included the alluvial deposits formed by the silt of rivers, etc., excellent illustrations of which may be found in the fertile deltas and the muck or peat soils, which have been gradually built up through organic agencies, by the successful growth and decay of various forms of plant life.

PHYSICAL CHARACTERS OF SOILS.

Muck soils, of which large areas occur in Canada, particularly in the Provinces of Ontario and Quebec, are essentially rich in humus (decaying vegetable matter) and poor in the mineral constituents. All productive agricultural soils contain from one to three or more per cent. of humus. The rest is made up of sand and powdery matter of varying degrees of fineness, together with a certain proportion of clay, which may vary from one to as much as fifty per cent. of the whole. Soils are defined as "light" or "heavy," according to the proportion of these ingredients. Generally speaking, light soils represent those in which sand or humus predominate, while heavy soils are those containing a large amount of clay. Loams are intermediate in character between sand and clay soils.

ELEMENTS OF FERTILITY.

Now, the farmer's object is to make his soil grow plants of various kinds and the substances entering into the composition of the plant will indicate approximately what substances must be present in a "fertile" soil. If we take any living plant and reduce it to its elements, we find only a small range of substances. Water forms the greatest portion of the plant; the remainder is almost wholly composed of compounds of carbon with hydrogen and oxygen.

Nitrogen constitutes, on an average, about two per cent. of the dry matter; the others, found in the ash when the plant is burnt, make up a further two per cent.

The ash constituents comprise potassium, sodium, calcium, magnesium, sulphur, silicon, chlorine and a little iron and manganese. Traces of other substances occasionally occur in the ash of plants, grown on soils happening to contain them, but they are not essential.

Carbon is the chief element in the plant's composition and is obtained from the carbonic acid gas in the atmosphere through the medium of specialized cells on the plant leaves.

With the exception of nitrogen, potash (or potassium), phosphoric acid (or phosphorous), the average soil contains sufficient amounts of plant-food substances for crop requirements.

The three essentials mentioned are those of which the soil becomes depleted in the ordinary process of cropping and they must be returned in some form if the fertility of that soil is to be maintained. The value of a fertilizer, therefore, must be assessed on the amounts of nitrogen, phosphoric acid and potash which it contains. Lime, while only to a limited extent a direct plant food, performs an important function in counteracting the harmful effect of an excess of vegetable acids in the soil and in rendering clay soils more friable in texture.

CHEMICAL ANALYSES OF SOILS.

No reliable method of estimating the availability of the elements of fertility in soils has yet been discovered, so that a chemical analysis is generally inadequate as an indication of the soil's fertilizer requirements. The methods adopted by the different chemists vary widely, some using strong, others weak hydrochloric, nitric or other acids, either hot or cold, for a longer or shorter time and the results are consequently very uneven. Only a very small proportion of the plant-food in the soil becomes available to plants in any one season and the most effective means of arriving at the fertilizer requirements is by the conducting of field experiments.

EXHAUSTION OF SOIL FERTILITY.

Every pound of butter, every gallon of milk, every bushel of grain, every barrel of apples, every hundredweight of beef, pork or mutton, and every ton of hay, sold off the farm, permanently removes so much fertility and unless the latter be restored in some form, the soil will ultimately become unproductive. The origin of a soil will to a certain extent determine its fertilizer requirements, but the nature of the crop to be grown, as well as that of preceding crops and previous treatments of the soil, must also be considered as factors. It must also be borne in mind that the larger the crop the more fertilizing materials will be removed from the soil. However fertile the latter may originally be, continuous cropping is bound to exhaust it, unless measures are taken to restore the fertility. Many farmers imagine that by occasional dressings of barnyard manure they are fully satisfying their debt of obligation to the soil for the substances yielded up to the crops grown thereon, when an intelligent view of the matter will show them that, while the barnyard manure restores a small proportion of the elements of fertility, the larger part has been removed by the sale of produce from the farm and in losses by evaporation and leaching from the manure itself. Other farmers acknowledge that barnyard manure alone is insufficient, but argue that the growth of clover crops adds fertility to the soil. While this is very true with respect to the atmospheric nitrogen, which the clover plant assimilates and fixes, clover adds nothing to the soil's supply of potash and phosphoric acid. The growth of clover or any other crop will render some small portion of the soil's stock of phosphoric acid and potash available to the succeeding crop, but at the expense of the total available supply in the soil. The fact remains that recourse must be had to artificial fertilizers if the requirements of the soil for all the elements of fertility are to be satisfied and the sooner a farmer becomes cognizant of this, the less trouble he will have in restoring a run-out soil.

(To be continued.)

THE DAIRY.

Cull the Cows.

Almost daily there comes to our notice new cases where weighing milk and testing cows has saved dollars to the dairyman. More particularly is this true of the man not specializing particularly in dairy cattle, but keeping a few cows for milk on a mixed farm. There are thousands upon thousands of men just so situated in Canada to-day, and thousands of them are keeping one or more "boarder" cows which are eating up the profits made by the fair or high-producing cows in the herd. Just weigh the milk from each cow for a while, and determine whether or not it is going to prove profitable to keep some of the "strippers" over winter. Their carcasses are worth a good price this fall, and it would be better to sell them and fill their places with milkers.

The Business Dairy.

The general farmer to-day is a business man, corresponding to his wholesale brother of the city, but the dairyman, also a business man, corresponds more to the retail merchant, because he usually deals directly with the consumer. He must, therefore, be prepared to give that consumer as much attention as the large retail merchant gives to his city customers.

To be a successful business man he must have a reasonably accurate system of costs, and know for how much he can handle the milk to the best advantage. He must understand shipping, and he must have a workable knowledge of sanitation as well as having a good business talent, and be able to recognize the value of advertising. The is, of course, the actual business part of the enterprise in addition to the practicable and scientific knowledge required.

To keep the cost the dairyman must, in all months; to calculate how to bring down the costs and retain the maximum efficiency of every

have his own driver to take the milk to his own exclusive customers. Naturally, this depends upon local conditions.

Costs are of the greatest importance, for upon the cost of the production of any article depends the retail price.

Shipping, another item of importance, may resolve itself into the fact that, in perishable freight, the best and quickest way is obviously the best. Nevertheless, this also is a matter of costs. Is the output of the dairy enough to warrant long distance shipping? If the dairy is close enough to town it usually pays better to drive the milk into the city. On some of the larger American farms, automobiles have been used for this purpose with great success. In shipping milk, should there be more than one railroad near the farm, it is a matter of treatment, convenience of trains and location of the city depot.

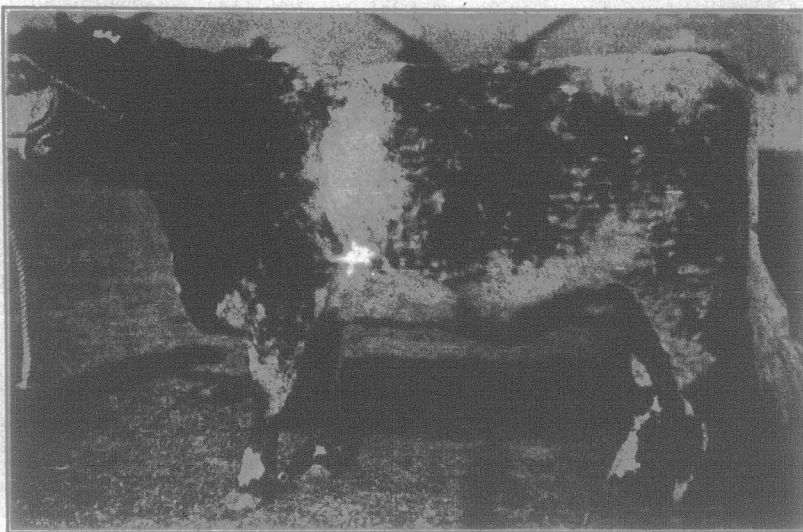
Often it would pay the farmers of a district to band themselves together and establish their own city receiving station from where it could be sent to the consumer by the farmers. This is co-operation. The absence of scientific agricultural co-operation is the strength of the middleman.

Sanitation, a misunderstood term, means to the dairy farmer, the proper establishment and care of stable drains, and the proper working of all drains near, or in, the wash-house. The disposal of manure and the general cleanliness of the barn. Stable drains should be constructed so as to have a fall of at least one inch to the foot. They should have a bell-trap at the end, through which all liquid manure would pass, and they should be flushed out each day. Considerable success has been had with concrete stable drains; if properly finished, they are very easy to keep clean.

Every farmer knows that the stables should be thoroughly cleaned every day and whitewashed at regular intervals. There is the question of cost in whitewash, small though it is, to be looked after. The idea is not so much to make the whitewash stick as to have the antiseptic qualities of the lime. A method used in some salt water places is to mix the whitewash with ordinary salt water in order to make the whitewash stick.

The wash-house. Did you ever, Mr. Modern Farmer, go into an old-time dairy where the cans were half washed in the kitchen and finished by the milk, where the water was thrown outside the kitchen door, where the washing was done with filthy cloths, where the kitchen was a veritable fly-belt? Such conditions are very rare to-day, as most farmers use a separate wash-room. All cannot afford separate wash-houses, but all can afford good drains. A wash-house drain need not have as sharp a fall as a stable drain, but it must end at a considerable distance from the house. It should be of large enough diameter so that it can be flushed out at intervals. A good plan is to have the wash-house drain end in three-inch weeping tile, under the ground. This tile is a very valuable filtering agent. If the practice is to feed the washings of the

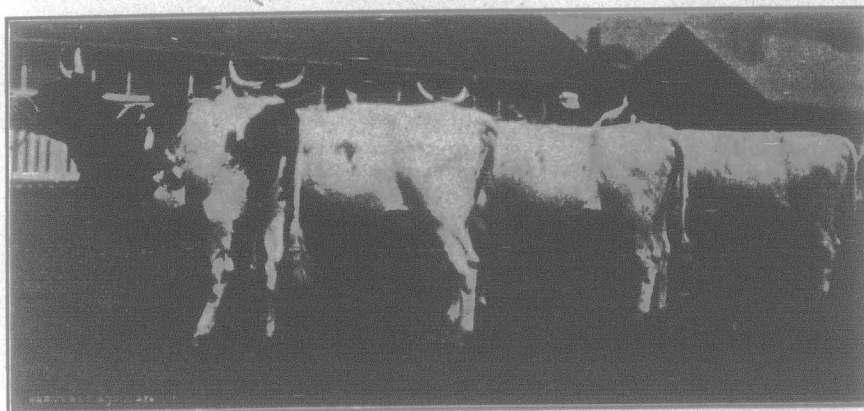
milk cans, they should be kept at some distance from the house. Washing cloths should be dried inside. Cloths dried outside collect dust. It is safe to hang them outside to air, but not to dry. Manure should be piled some distance away from the barn; it doesn't look attractive to visitors, for one thing. Money spent on sanitation is never wasted. Sanitation is the life of the herd; and often the life of the farmer and his family. Business talent. No man ever succeeded in business without it. No dairy can be run at a profit if the farmer hasn't the least liking for his business, or the least conception of value.



Sittytton Lady.
First-prize senior heifer calf at Toronto, 1913. Owned by H. L. Emmert, O ak Bluff, Man.

cow; to have the cost of the field and dairy labor in the same way; to know how much the stable upkeep costs; how cheap he can buy the best bottles and cans; if the cost of machinery is prohibitive or not; to know the difference in cost between a dairy route in the nearest town and a factory trade. The shipping costs and the cheapest and best way of handling the milk from the time it is taken from the cow to the time it is delivered to the consumer.

He must keep a careful record. If a cow is not bringing in as much profit as to repay for her cost, then she should be disposed of, for her stable room is valuable. If a certain kind of separator requires more attention than the cost of that machine would warrant, then it is cheaper to do without it. Cleaning time is worth something. Each and every cow is a charge against the dairy; each piece of machinery is a charge; each pound of food and each hour



Four Showing Ayrshires.
A cow class at the 1913 Canadian National.

of labor; each can; each veterinary bill; each new fitting for the stable, but each pint of milk placed before the consumer liquidates some of that charge. If it costs more for a feed which does not show a larger credit, than some other feed, then why use it? If a man spends much of his time walking from one part of the farm to another, overlapping on the work of other men, then why not systematize? You are not paying that man to walk. Should it be possible to improve the barn at a little cost, then why not do it? It is a good advertisement, if nothing else. Sometimes it pays the farmer to send his milk to town, even if he has to ship by rail, and

The world is half peopled with business failures. Good mechanics, but utterly unable to manage their own affairs. The dairy farmer must have more than technical knowledge, more than honesty; he must have business talent.

Advertising, the publicity of business. The dairy farmer cannot afford to undertake any large advertising campaign. He may think that he doesn't have to advertise. Let him look at any great business he likes and see what advertising has done for it. Let the modern farmer advertise his products; invite people to his farm; show the people that the milk can be just as pure from his farm as from any other. Give the farm a name, or use his own name, but keep it before the public. Impress on everyone the importance of his district of the country. Advertise. Advertise. Advertise. This is a principal of business; tell the people what you have for sale.

The writer knows of a farm in the State of Washington where two brothers have two farms, managed as one, where from a small herd of dairy cattle the stock has grown to five hundred head. One brother runs the farm, and the other is the business agent. The farm is on an electric railway, about thirty miles from Spokane. They have their own cooling plant; the cans are washed by machinery in a separate wash-house. They have advertising down to a science. They own great barns and silos; in short, a thoroughly modern business, dealing directly with the public. If a large American rancher can do this, why can't a Canadian?

There is hard work in the dairy business, Mr. Modern Farmer, but there is money in it as well if you know how to get it.

The modern dairy farmer must be a specialist in his business. As a business man he should be able to talk business with any other business man. He should know more about that business than any man he might meet, and above all things, he should recognize that business as a factor in the civilized world.

York Co., Ont. CHAS. L. PITTS.

HORTICULTURE.

If the field mice are thick, they probably made their appearance when the recent snows were up on the ground and secured some meals from the trunks of the young trees. Veneer, building paper or tar paper will ward them off.

When you select the site for your new orchard have it in a convenient place, but let that be a subordinate consideration. Discreet is he who looks to it that the slope is in the right direction and that there will be good air drainage. Also see that the soil is gravelly or loamy, with a deep or open subsoil.

All the many arguments to date have not yet disproved that the proper time to prune is "when the saw and knife are sharp." This must be overlooked in the case of smaller fruits and berries, but a sunshiny afternoon in winter or spring lends itself admirably for pruning in the trees. A little done each day will alleviate the rush of spring and allow the man in the orchard to shape the tree and conform it to his ideal more thoroughly than in the busy days of approaching summer.

A Season's Results.

Editor "The Farmer's Advocate":

From time to time I have noticed, in the columns of your Horticultural Department, articles dealing with the insect known as San Jose scale. I have had some experience this year, and thought that it might be interesting to know just what has been done with the scale by a reader of your paper.

The scale has come into our district, and we are quite surrounded by orchards and wild trees and shrubs that are, in many cases, literally covered. It is discouraging at the outset to attempt to keep an orchard clear with such unfavorable surroundings, but the experience of others has taught me that an orchard can be kept clean even under these conditions, and I set out this year with the determination that I would clean the scale from my orchard. From what I have seen I am assured that, in order to do effective work, almost every part of the tree must be covered with the spray material, which is commonly used as an agent against the scale. My trees were quite full of brush and dead wood, and before I could get the spray into the center of the tree at all I saw it was necessary to do some severe pruning. My attacks were directed towards the dead wood in the trees, which I cleared out altogether. Some of the trees were so high that unless I used a derrick on my wagon I would not be able to reach them with the spray, so I topped them down in many cases six, seven and eight feet, taking care to

cut them off just above a side limb or lateral. I also cleared the branches out of the trees in order that the underside as well as the upper-sides of the branches and small twigs might be totally covered with the spray material.

All this immense amount of timber and brush was carried to one side of the orchard and burned during the month of April. I had been told that young insects emerged from their little scales in the spring of the year when the days become warm and began to give birth, to young about the month of July, so I was very thorough in clearing up all the branches and limbs that might possibly have provided winter quarters for the scale. The orchard looked very bare, and, in fact, appeared as though some enemy had done the pruning, but when I came to spray I found that it was profitable, indeed, to clear them out thoroughly as I had done, and then again in the fall of the year the color and size of the apples justified, in every regard, the severe pruning which the orchard had received.

For spray material I used the preparation that has now been advised for a number of years, the commercial as well as the home-made concentrated lime sulphur solution. For a pump I purchased a double-action pump that would carry two lines of hose, and altogether three nozzles. On one bamboo I had two nozzles, on the other only one. I find that a double-action pump requires two men to operate it if it is to be done with any kind of ease and convenience at all. With two men on the handle pressure can be kept up from 115 to 125 constantly. This pump complete with hose, rods, nozzles and a rudely-constructed tank, which would hold about 100 gallons, cost me approximately \$65.00, and if at any time I wish to connect it up with a gasoline engine, all I need to do is to make the engine and pump firm on a small frame and operate it with a jock from the engine.

For a number of years it has been recommended that we use for winter strength about one gallon of commercial lime sulphur to nine or ten gallons of water, but during our winter spray we made the mixture, in some cases, so it would test as high as 1.040 specific gravity, that means about one to eight of commercial concentrated lime sulphur, or one to six of the home-made solution. In some of the orchards we made the strength the same as the ordinary winter applications, about one to ten, and during this season I failed to see any advantage from the stronger solution. Much of the mixture we made ourselves with fifty pounds of stone lime, one hundred pounds of sulphur and forty to forty-five gallons of water. The strength of our resulting mixture varied under different circumstances, but, as a general thing, tested 1.240 and my experience has been with good lime and proper care this strength should prevail, but sometimes when the quantity at the conclusion of the boiling does not measure up to forty gallons, the strength is sometimes very much higher. In the spraying we were very particular to cover trunk, branches, limbs and twigs so there would no part uncovered by the spray, but even under these conditions I believe there are some parts of the tree that remain untouched. This spraying was done in the spring before much sign of life appeared in the buds. It took considerable mixture to cover the orchard with this application. One barrel or forty gallons would only do about twelve or fourteen full-grown trees, and in many cases the 100-gallon tank would only cover about twenty-five trees.

There is still considerable scale on the apples this year, and some new scale has also developed on the limbs of the trees, yet there is a vast improvement in the orchard over that of one year and two years ago. Neighbors told me in the spring that the lime sulphur which I was putting on would be no better than water. They also informed me that to bore holes in the tree and fill them with sulphur would be the proper way to get rid of the scale. Others said to drive long rusty nails in the trunk of the tree, that it would so invigorate the tree that it would be able to throw off the attack of the scale. But I have noticed this fall that their apples are entirely unfit for use or sale and that many of the trees have died as well, showing any traditional treatments of this kind would be altogether ineffective. I believe that much of the scale appearing on my apples has blown or been carried by birds or insects from other orchards and shrubbery nearby, but I have also found some on the limbs which leads me to believe that I did not thoroughly eradicate it in the one spraying last spring. I am convinced, though, that after another season's spraying or perhaps two that the orchard will be practically free from the scale. I do not expect to be absolutely free from the depredations of this insect, but ravages can be so held in check as not to cause any material or significant waste in the production of the orchard. I have had in mind during the summer a little fall spraying. As the home-made lime sulphur has been cheaper for me in the past, I have concluded to use it again next spring, but my trouble for seasons past has been to procure good lime during the spraying season. This year I am going to make up a quantity of lime

sulphur in the fall and store it away in the barn if I can keep it from freezing. My intentions are to spray a part of the orchard this fall and again in the spring, and I believe with those two sprayings no parts of the trees will remain untouched by the spray, and any very vigorous insects will succumb to the two sprayings as they would not to one. One spraying of the orchard will not rid it of the scale, but, after one or two seasons' thorough work I am convinced that there will not be very much loss on account of scaly apples, and my trees will be kept tolerably healthy. The scale seems to be spreading the country over, and any thorough, practical fruit growers, I believe, will be able to ward off any material injurious attacks from the insect, and maintain his orchard in a healthy condition.

CONSTANT READER.

POULTRY.

Some Poultry Pointers.

Egg production depends on four things and if any of these four be absent, maximum egg production need not be expected, says a new bulletin from Purdue University Agricultural Experiment Station.

1. The hen must be bred to lay, that is she must have that invisible inheritance that gives her capacity and ability to lay. Some people call this "an inborn tendency to lay." This means that the breeding will have more influence than the breed. Breeding surely tells.

2. The hen must be physically strong enough to withstand the drain of heavy egg production, and the chances of disease. She must be able to withstand the abuse that man generally gives her by making her environments unnatural, be able to lay a large number of eggs when prices are high, and produce hatchable germs when the incubation season arrives. Constitutional vigor is of first importance, and though the hen be well-bred and every environment exactly right, if she has some physical weakness that is either hidden or apparent, the results will be unsatisfactory.

3. The hen must have suitable environmental conditions, such as housing, yarding, condition of range, etc. The house is the home of the hen, and as such should be comfortable. Dampness, draft and poor ventilation, all retard egg production. A small yard or bare range is not conducive to success.

4. The hen makes eggs out of the food given. She depends upon it and must have it in large enough quantities to induce rapid growth and large production. A hen cannot lay well on just any food that may be given. This has been demonstrated too many times on the farm and at experiment stations.

Egg production is one of the chief aims of the poultry raiser, and it is for this reason that these four things are mentioned. They are given in the order of their importance. The bird itself must be the first consideration.

From answers to questions sent out over the State of Indiana it was seen that the market side of the question is the most important phase of farm poultry. A few people find it profitable to sell stock and eggs for fancy purposes, but the commercial side is by far the most popular with the farmer. Poultry is a side issue on the farm and a part of diversified farming, but there seems to be a rapidly growing sentiment to make the hen have a more important position than she has had in the past. This is proven by the statement that 101 out of 704 keep poultry as an important means of livelihood.

* * * *

It is not generally advisable, except with Leghorns, to keep a bird for egg production over eighteen months from the day it is hatched. A chicken does its best laying in the twelve months after it lays its first egg. Mature yearling hens are best, however, as breeders, and should be held back from early-winter laying in their second year, and not expected to do much, until in February. Pullets are the best layers but not the best breeders. This makes hens expensive to keep just for market eggs, but for breeders they will pay well for their feed and trouble, in increased fertility and strength of germ. With Leghorns, it may pay to keep them until over two years of age just for market eggs, for they do not get over fat as easily as do heavier breeds. It will not pay to sell a Leghorn at one year of age. If bought for a breeder she will cost around \$1.00. As a hen, sold on the market, she may bring 40 cents. This 60 cents depreciation is too great on one year's investment, but if divided over two years it is not so great. A Plymouth Rock pullet costing \$1.00 may sell for 85 cents in July as a hen on the market. The loss would then be but little. A mature, tried and physically strong hen is a better breeder than an immature pullet. It is advisable to select a breeding pen each fall; give the birds free range away from the growing pul-

lets and let them rest until February. The pullets can then be forced for egg production. If it is necessary to confine any birds, the breeders should not be confined; they should always be allowed the freedom of range.

On the farm it is not always practical to leg band hens in order to keep record of their ages. It entails too much labor. An easy way has been suggested, of marking with round hog rings, putting one on the right leg of a bird when one year old and then adding another when two years old. Thus any person may easily tell the ages of the birds without catching them.

The greatest influence that breeding possesses is shown in the vitality or constitutional vigor. If an egg fails to hatch, the blame is too often placed on the incubator or setting hen, or maybe on the male heading the flock. The hen plays her part in causing poor hatches, for if she is weakened in constitution by poor housing, cured or present disease, or heavy laying, the chances are slight for her to transmit strength to the germ in the "hatching egg."

This likewise applies to the male. At Purdue Experiment Station, a pen of White Wyandottes one year did not produce a hatchable egg. Two Silver Laced Wyandottes were later placed in this pen and ninety per cent. of their eggs hatched. The White Wyandottes still failed to produce chicks. The same results were found in a pen of Black Orpingtons where Black Langshans were introduced. In both of these pens all hens were known to have been mated. To a student of poultry, the cause of such a condition ought to be discovered. No one seems to be able to find out why eggs will not hatch. One thing is sure, the cause in these cases did not all lay with the male bird.

Another instance is of interest. On a certain farm one season, the hatching was splendid; as good as could be desired. That fall, roup broke out on the farm and the following spring the hatching was miserable. The winter conditions had been first class and the only cause that could be attributed was the weakness in vitality due to the roup of the preceding fall.

At Purdue hens as a rule do better than purelets, in producing strong germs. The eggs of lighter breeds always hatch better, regardless of the means of hatching, than do the heavier ones. Some hens never produce fertile eggs, while others always have exceptionally high fertility. Birds confined, lose their health quicker than those running on range. They do not keep in good condition. Experiments show that vitality is the influencing factor in the above mentioned cases; it cannot be anything else. When that ofttimes hidden something called vigor, is well defined and understood, then can many of the troubles be prevented.

Vigor has its influence in preventing disease. Immature stock is more susceptible; mature stock seems many times to be immune, and some birds never show signs of disease under the worst of conditions. They are not susceptible; they are stronger in health and have greater vigor.

FARM BULLETIN.

Dominion Experimental Farms to Distribute Seed Grains and Potatoes.

By instructions of the Hon. Minister of Agriculture, a distribution of superior sorts of grains and potatoes will be made during the coming winter and spring to Canadian farmers. The samples for general distribution will consist of spring wheat (5 lbs.), white oats (4 lbs.), barley (5 lbs.), and field peas (5 lbs.). These will be sent out from Ottawa. A distribution of potatoes (in 3 lbs. samples) will be carried on from several of the experimental farms, the Central Farm, at Ottawa, supplying only the provinces of Ontario and Quebec. All samples will be sent free, by mail. Applicants must give particulars in regard to the soil on their farms, and some account of their experience with such kinds of grain (or potatoes) as they have grown, so that a promising sort for their conditions may be selected. Each application must be separate and must be signed by the applicant. Only one sample of grain and one of potatoes can be sent to each farm. Applications on any kind of printed form cannot be accepted. If two or more samples are asked for in the same letter only one will be sent. As the supply of seed is limited, farmers are advised to apply early; but the applications will not necessarily be filled in the exact order in which they are received. Preference will always be given to the most thoughtful and explicit requests. Applications received after the end of January will probably be too late. All applications for grain (and applications from the provinces of Ontario and Quebec for potatoes) should be addressed to the Dominion

Cerealists, Central Experiment Farm, Ottawa. Such applications require no postage. If otherwise addressed delay and disappointment may occur. Applications for potatoes from farmers in any other province should be addressed (postage prepaid) to the Superintendent of the nearest Branch Experimental Farm in that province.

J. H. GRISDALE,
Director Dominion Experimental Farms.

On the Sulky Plow.

By Peter McArthur.

If it were not for the driving mists and the little spitting showers of rain that gradually soak a man without being heavy enough to make him stop, doing fall plowing with a sulky plow would be ideal work. Besides feeling that I was getting things in good shape for the spring I had plenty of time to think about other matters. The lever did not need to be touched except at the ends of the furrows and beyond watching the driver so that she would not bump against the other horse and lighten her labor by throwing the plow out of the ground I had nothing to do. Of course the furrows might be straighter, but as the plowing is being done parallel with the road, the passing public is unable to see what kind of work I am doing and make disagreeable remarks. If the weather keeps open for a few days longer there will be no plowing to do on the place until next fall. That should enable me to get the corn planted in good time and to have the ground in proper condition for the next ten acres of young orchard that I propose to plant. I have decided that as a form of exercise planting young trees and caring for them is just as amusing and healthful as playing golf and besides I am convinced that it is about the most useful form of farm work that a man can do in this district. In doing this planting, I am not going it blind, for I have had the advice of some of the most experienced orchardists in the country. They have assured me that this is an ideal locality for producing the best quality of apples and this year's experience with the scab has not discouraged me a bit. It simply, got my dander up and we shall attend to that scab next year.

While thinking matters over on the sulky plow, I came to the conclusion that the first lesson our scientists should impress on students and everyone else is the good old proverbial one, "Never bite off more than you can chew." During the past few years I have had a lot of good intentions go wrong simply because I had too many of them. Now that I have found out how much farm work I want to do and can do I find that I can keep my work up to date and have it turn out right. I am afraid that a great many people who try scientific methods (I haven't started yet) get disgusted because they find themselves unable to do all the necessary work. If they would make their experiments on about half the scale they usually do they would succeed and get much greater returns for their labor. They try to put in as much land as they used to and follow instructions, but being unprepared for the extra work, they make a muddle of things and fail to get the promised returns. Then scientific farming is a failure, and the world is full of sawdust and "the belly-band of the universe has slipped" and agricultural education is no good. If our educators would begin by rubbing in the fact that it does not pay to "bite off more than you can chew" experiments would be made on a scale that could be handled and those who are anxious to learn better methods would get a greater return for their labor.

Another matter that furnished me with food for reflection was a question asked me by a farmer some time ago. In the course of our conversation he put this poser to me: "How much is a farm really worth?" The first impulse was to ask him what farm he had in mind and to try to suggest a price for it. But that was not what he had in mind. What he meant was: "What is a farm worth to the world?" You will grasp the significance of this when you recall the fact that the entire wealth of the world amounts to something less than one year's food for all the people. This view makes every farm from which food can be produced year after year and generation after generation of incalculable value. The man who buys a farm and works it is only getting the use of it while he lives, but that farm is of value to the world age after age. Looking at the matter in this way, we see that the pioneers, no matter how poor they may have been when they died, left to the world inestimable wealth. They took land that was valueless to mankind and made it productive. For themselves they got only the products of a few years, but the land they reclaimed will be useful to all future generations. The wealth they left us in this way exceeds all the wealth of all the millionaires of whom we hear so much in the daily papers. The wealth of the millionaires will be

dissipated, but the wealth of the pioneers will endure. And there is another difference. Few millionaires got their wealth by aiding production. They got it by taking profits from the producer. The pioneer, on the other hand, created new avenues by which true wealth can enter. The farms they cleared will yield wealth as long as men continue to work. It is impossible for any man to estimate what a farm is worth to the world or to set a value on the work of the pioneers in giving us our farms. It is our pioneers and not our millionaires we should be honoring, but we will never do it unless some millionaire starts the scheme and puts up the money to see it carried out.

A letter from a correspondent in Manitoba also raised a good point. Someone, in talking about the condition of the farmers out there, remarked that they are really in better shape than before. It is true they are carrying a greater burden of debt, but they are richer because their land has increased in value. My correspondent wants to know what good it does him to have more valuable land if he cannot make it produce a bigger income with which to pay his debts and his living expenses. If his sole return is from the products of his farm it does not matter to him whether his land is worth two hundred dollars an acre or nothing. He cannot get at the wealth he is credited with having without selling his land and that he has no intention of doing, for it would not yield enough to support him. If he is to live, he must have his farm to work, so the actual value of that farm means nothing to him except in increased taxation.

When you consider the value of productive land to the world at large you must admit that unproductive land is a serious loss. This brings up a point about which we are likely to hear something in the near future. Already people are beginning to say that Canada needs a Lloyd George to grapple with our problem of land-lordism. Most people think we have no land-lordism worth speaking of in this country. This is a mistake. Thousands of small landholders who are keeping ten, twenty or fifty acres lying waste and not producing are just as much a menace to the country as a few large landlords who are holding thousands of acres for parks and game preserves. There is much more idle land held by the farmers of Ontario than by all the landlords of England. And as this land is absolutely valueless to them unless they work it and make it produce, why should they be allowed to keep it idle when thousands of people are clamoring to get back to the land? It is a dog in the manger state of affairs that threatens the future of the country. We have enough land to give employment to millions of people and those who are now holding it idle would be richer if they were rid of it and putting their labor on what they can really work to advantage. I think I shall read up on the sulky plow before I put in another day on the sulky plow.

The Maple-Sugar Industry.

As announced in "The Farmer's Advocate" of last week, an admirable bulletin on the maple sugar industry of Canada has been issued by the Department of Agriculture at Ottawa. It covers 64 large pages, well printed and generously illustrated, dealing with every practical phase of the subject, and is in every way creditable to the author, Jas. B. Spencer, B. S. A., editor of the Publications Branch, being a class of work in which he particularly excels. The industry, though a large one with an output annually now of about 22,000,000 pounds in sugar and its equivalent in syrup, appears to have declined a couple of million pounds in recent years, partly due to the lack of organized effort to keep it growing and partly to the unsatisfactory conditions of sale due to the competition of cheaper imitation products masquerading under the name of "maple" in some form or other. More effective regulations rigidly enforced against such imitations are called for. The industry is capable of great expansion if given a fair show, because of the ease with which the area of maple groves can be preserved and extended. If the 50,000 odd farmers engaged in the industry make themselves felt in securing conditions that will preserve the industry its rapid extension is almost certain to follow. Copies of this useful bulletin should be secured by every reader of "The Farmer's Advocate" interested, for study during the winter, and they may be secured by applying to Hon. Martin Burrell, Minister of Agriculture, Ottawa.

The dates for the next annual exhibition and convention of the Ontario Corn Growers' Association have been fixed for Feb. 3, 4, 5 and 6, and the meeting place Chatham. For South-western Ontario it will be the agricultural event of the winter.

Ontario Vegetable Growers in Annual Convention.

Co-operation was the keynote of the addresses delivered by leading vegetable growers and specialists at the annual meeting of the Ontario Vegetable Growers' Association in the Railway Committee Rooms, Parliament Buildings, Toronto, November 19th. Nearly every speaker somewhere in his address advised "getting together" and "working together," which means real co-operation. C. W. Baker, of London, Ontario, president of the association, urged his hearers to co-operate. He also brought out the necessity of each and every grower familiarizing themselves with the up-to-date methods. He also had in mind the publishing by the association of a special vegetable journal. This scheme seemed to meet with the approval of some of the growers present, but it was finally pointed out that it costs a large sum of money to start a publication and keep it going. In this connection we might say that the columns of "The Farmer's Advocate" are always open to good practical articles on vegetables and vegetable growing and that more of the growers wishing to aid their fellow growers in their work would find this a first-class medium.

The report of the secretary, J. Lockie Wilson, was listened to with much interest. He urged that in the coming year efforts be put forth to add at least 1,000 more members by giving all those interested in gardening an opportunity of joining the association. The finances of the association were shown to be in good condition. Last year there was a balance on hand of \$72.74. This has been increased this year to \$105.75 and during the year \$1,455.33 had been paid out from receipts of \$1,561.08.

Experiments carried on by the association in New Ontario have proven that country to be particularly well suited to vegetable growing. Nearly 500 bags of seed potatoes were distributed among the members in the Northland the past year. Peas were also sent out and a large quantity of these two crops will be on hand for next spring's seeding.

Field-crop competitions have proved an incentive to the improved cultivation of better varieties, particularly in tomatoes, onions and celery. The Province was divided into four districts and the long list of prize winners showed that each class in each district was keenly contested. Great interest was shown at the exhibitions where the vegetables from these competitions were shown, viz., Toronto and Ottawa. Mr. Wilson pointed out that notwithstanding the fact that co-operation was steadily gaining ground, there is still a wide gap between the producer and consumer.

The synopsis of the reports from the various branches of the association showed increased membership on the whole and a thriving state of affairs. According to Mr. Wilson the scarcity of additional labor is still a burning question with us, and if market gardeners of Ontario are to keep pace with the demand for their produce, more strenuous efforts must be made to secure skilled gardeners.

The Bill for fixing standard weights for bag and bushel of vegetables has not yet become law. Growers trust that at the incoming session of the Federal Parliament this important legislation will not be overlooked.

"If arrangements can be made to secure lower freight rates from Northern Ontario to the cities of the older portions of the Province, the Northland will in the very near future be able to supply the cities with the finest quality of potatoes at reasonable prices. From 200 to 300 bushels per acre can easily be grown in the practically free grant lands available for settlement in Ontario's great Hinterland. With potatoes selling at \$1.20 per bag in Toronto at the present time and the probability of higher prices prevailing in the near future, the crop that unskilled labor can easily produce should be an incentive to the incoming immigrant to shake the dust of our cities off his feet and get into the gardener's game."

Reports submitted showed that the quality of seed supplied gardeners was somewhat better than upon former occasions. The chief requisite as pointed out is uniformity of type. Better grading and packing was advised. Vegetables must have an attractive appearance and must be well graded. War was declared on dirty, unsightly and large containers.

TRANSPORTATION PROBLEMS.

Robert Thompson, St. Catharines, Ontario, discussed transportation, which he called the greatest problem of fruit and vegetable growing. He was not afraid of over-production, but growers must put forth every effort to obtain and hold markets. He condemned the old system of splitting up shipments into small lots consigned to many dealers. He advised getting good men to consign to and sending out the shipments in large quantities. By doing this a fast freight service was possible, and where goods were so

shipped the grower looked after all loading of cars and there was much less damage to packages. Expressmen load hurriedly, handle the goods roughly and damage vegetables or fruit in shipment. He urged growers to make up at least three-to-five-ton lots, or better still, carloads, and ship to one man, or send to a railway center, where the shipment could be divided and sent out short distances to smaller towns in smaller lots. He had found this quicker service by freight than by express, less expensive and the goods being properly loaded damaged less in transit. He believed in leaving the express service for smaller places, and the large growers to get together and ship a uniform product by fast freight. He stated that fruit and vegetables should be handled as carefully as eggs. While he liked an attractive package, he stated that nine-tenths of the consumers were not prepared to pay any more for packages than they could help. Co-operation and location are prime factors in distribution. The growers in a given district should work along the same line, so as to be able to ship together in large lots. The valuable fruit or vegetable farm must be situated convenient to railroads, and the business must be carried on upon a large scale, either individually or collectively.

CO-OPERATION IN PURCHASING SUPPLIES.

Some time ago there appeared in "The Farmer's Advocate" an article by W. J. Kerr, setting forth the possibilities of purchasing seeds and supplies co-operatively. Mr. Kerr is purchasing agent of the association and gave an address which set the fifty or sixty growers present thinking. He pointed out that co-operation should begin in the home between all members of the family, contrasting the "boss" parent with the one who took his boys and girls into his confidence and his business. All classes, even tramps, were organized but the farmers. Lack of co-operation forced the gardener to pay double for his tools. He showed that by co-operation he had been able to sell carrot seed for which dealers charged \$1.75 per pound for 25 cents, and that \$1.75 per pound had been quoted by seedsmen for beet seed, which he offered in co-operation for 30 cents per pound. Cabbage seed quoted at \$2.80 per pound was offered co-operatively at 75 cents, and cauliflower showed comparative prices of \$2.35 per pound and 75 cents co-operatively. The seed handled co-operatively is the best that can be bought in Europe. The association is also in touch with large growers in the United States. The prices quoted are indicative of the saving possible in co-operation.

Mr. Kerr also urged co-operation in selling. From figures prepared from Ottawa market he estimated that it takes 900 hours, or three and one-half months, to market \$3,000 worth of produce. He advised the establishing of a large depot in each city where gardeners could bring the goods and receive a credit check stating the quality and quantity of goods received and retail business could be done under a skilful business manager. This would prevent market glutting.

EXPERIMENTS AND DISEASES IN VEGETABLES.

A. H. MacLennan, of the O.A.C., took up the subject of diseases, experiments and field-crop competitions. He first discussed late blight of celery (*Septoria Petroselin*), which appears first as rusty brown spots on the outer leaves. These gradually spread under favorable conditions until the leaf dies. The spots will also be found on the stems. A season of warm, moist weather is most suitable for its spread, and it will also appear in the storage house. It can be prevented by the use of Bordeaux mixture if applied at the right season. If we wish to grow celery at a profit, we must spray often and thoroughly.

Cabbage, onion and radish maggots are the larvae stage of two-winged flies almost identical in appearance. The adult appears generally about the 15th of May till the 15th of June. The eggs are laid close to the host plant and are hatched in three to ten days' time. The worm which hatches being without wings or legs is helpless unless against its host plant. For the cabbage maggot the tarred felt-paper disc is a sure cure. For the onion and radish maggot no sure cure has been found. Carbolic acid wash and kerosene and sand have been used. As a vegetable growers' association we should try to have these tried out commercially. In each branch where the crops are grown a demonstration could be carried on to show the results obtained from such treatment.

In many sections of Ontario it is becoming quite a problem to obtain the necessary quantity of barnyard manure used in intensive gardening. As the industry grows, this will become more acute, as it has in many parts of the United States. On this account it is necessary to make use of commercial fertilizers.

For the past three years tests with commercial fertilizers in different combinations have been carried on at Guelph. While this work has been

very successful, it brings one to the conclusion that to obtain results that will be of value to commercial growers tests must be carried on in each district.

Commission men in Ontario speak of the increasing demand for head rather than leaf lettuce. Experiments have been conducted at the O. A. C. for two or three years to find out what conditions are necessary for its growth here in Ontario. In our clay soil sub-irrigation is absolutely essential, but in the sandy soil which many have in their greenhouses, the method used in Boston of soaking the soil two or three days ahead of planting, would answer the purpose. Transplanting into two-inch pots before they are placed in the bed helps greatly to obtain a perfect stand.

For some years Mr. MacLennan has been trying to breed a cucumber of the American type with the fruiting habits of the English varieties which will set freely without being pollinated. In dull weather most of our American varieties refuse to set unless bees are kept in the house. He has several strains which appear of exceptional value and whose appearance has suited almost everyone who has seen them.

For indoor work he has also been trying to breed the good qualities of the Industry tomato, especially its disease resistance, on to the pink tomato, which was obtained in Grand Rapids, Mich., four years ago, and which has exceptional thickness of flesh with thin skin but good carrying qualities. For a number of years seed of various vegetables, as radish, lettuce, beets, cabbage, tomatoes, onions, melons, etc., have been grown at Guelph with excellent results.

He advised adding cabbage and cauliflower to the three crops already in the field competition.

SUITABLE GREENHOUSES.

Greenhouses were discussed by S. C. Johnston, B. S. A., of the Department of Agriculture. He gave an excellent address, from which we can only take a few points now, but shall enlarge upon it in future issues. The location, he pointed out, should be close to a railroad, where a siding can be installed to facilitate the handling of fuel. Coal is one of the largest items of expense and money must be saved in its handling. Avoid cold, wet spots in building and be sure of good drainage. Windbreaks should be provided on the side from which the prevailing winds blow, but at considerable distance to prevent damage from falling limbs. Solid concrete is the common foundation, about eight to twelve inches thick and set from eight inches to two feet in the ground. Concrete blocks are growing in favor. Connected houses cost less to build, but more for upkeep, while detached give good chances for side ventilation. He favored the separate houses connected by an alley at the end. The land between separate houses may be utilized for tomatoes, corn, cucumbers, squash, or for hot beds and cold frames. The wide house is the house for progressive growers. The 17 x 20 foot house is being replaced by the 35 x 40 foot house. Some houses up to 125 feet in width are being erected and horses are used for cultivation.

The advantages of wide houses he named as: 1. Atmospheric conditions can be better controlled. 2. Less heat is needed. 3. More light is received. 4. Plants grow to marketable size without danger of check.

The most up-to-date houses are built with iron frames, of which the initial cost is high, but the upkeep is lower; the house will last a lifetime and many supports are done away with.

Soil sterilization is being practiced by the most progressive growers. Some successful growers select only one or two crops and cater to the highest class of trade and seek to improve varieties by seed selection. Many growers hold their manure in concrete manure pits, floored and with walls about two feet high and built so that a team and wagon may be driven in to dump the manure. They hold this from four to five months. The coarse manure soaks up the liquid and full benefit is gained.

Staking early varieties of tomatoes gives fruit a week earlier and of better quality and costs 5c. to 10c. per plant.

J. J. Davis, of London, Ontario, advised a wider use of irrigation amongst the growers of vegetables, stating that it was nearly always valuable and often indispensable.

Hon. J. S. Duff, Minister of Agriculture for the Province, encouraged the growers to produce the very best possible in their different lines, and altogether it was one of the most successful meetings of the association yet held.

Innumerable and Valuable.

Enclosed please find one dollar and a half (\$1.50) in payment of the renewal of my subscription to "The Farmer's Advocate." I have gained innumerable valuable suggestions from this paper during the past year and think you are holding your own splendidly against all modern competitors.

Russell Co., Ont.

DOWLER FREEMAN.

Ontario Fruit Growers in Annual Convention

The Horticultural Show has thrown in its lot with the New National at Toronto, and fruit-growers put forth every effort to make their end of the affair a success. In conjunction with the exhibition the Ontario Fruit Growers' Association always holds its annual meeting. A fairly good attendance was present in the Dairy Building on the exhibition grounds at Toronto for most of the sessions of the convention, but it was difficult to coax the fruitmen away from the fruit exhibits to sessions, which were held while the fruit was being judged. However, after the first morning session more interest was manifested. President W. H. Dempsey, of Trenton, is none too optimistic, judging from his address. He seems to be a little afraid of over-production. He stated that the crop in storage sold last spring at prices far under the cost of production in many cases. This low price was the result of over-production, and while not a full crop by any means, it was heavy enough to give a slump in prices, which we hope may not soon be repeated. This year, with a crop almost a failure, apples have kept within reason; hence we begin to feel that the apple business may soon be over done, and caution seems necessary on the part of our fellow investors, and on ourselves, who already know the business. The peach growers last year had good crops and good prices. This year they have had better crops and only part of the planting bearing, but prices have fallen often below that of apples, so that here we feel it time to sound the note of warning to those about to plunge deeper into the game. In the smaller fruits, cherries have not been any higher priced than usual. Berries have been higher because of the unusually dry weather which dried up part of the crop.

Owing to the fungus and insect pests being very prevalent this season, the inspectors have had a busy time. The main work of the Fruit Growers' Association, he designated as self-protection—by encouraging the use of fruit, by educating fellow growers to the greatest efficiency in production, by raising standards of package and quality of contents, and by protecting fellow investors against over-production. A few years ago Toronto bought apples in barrels only from Ontario. Then a few boxes came in from the Western States; then boxed Ontario apples at the Horticultural Show, and this year Toronto will eat 100,000 boxes of Ontario apples. The government, the O. A. C., and District Representatives are helping all they can to advertise good fruit. Mr. Dempsey closed his address by a note of warning against over-production. With the last two crops of apples, one not a full crop and the last generally called a failure, which did not put prices out of sight, he concluded that there is immediate danger of over-production of apples, and he also thought that it was a time to go carefully with peaches.

At the conclusion of this address the President submitted the following recommendations:

1. That an effort be made to have all navigation companies handling freight, and operating upon Canadian waterways, placed under the jurisdiction of the Railway Commission.
2. That power be given the Railway Commission to adjudicate claims against railway or express companies not settled in sixty days.
3. That the Railway Commission be given jurisdiction in the matter of fixing a penalty for rough handling, and pilfering of freight and express shipments.
4. That fruit inspectors be also cargo inspectors.
5. That the express minimum be reduced from 20,000 lbs. to 15,000 lbs.
6. That if necessary, the Railway Commission be asked to compel the railway companies to allow free transportation both ways for man sent in charge of heated cars.
7. That the railway companies be asked to provide a special fruit train service from central points in Ontario to Winnipeg, during the shipping seasons.

VARIETIES OF APPLES FOR COMMERCIAL PLANTING.

Prof. J. W. Crow, of the Ontario Agricultural College, discussed at some length the choice of varieties for planting on a commercial scale. He did not favor the Baldwin, holding it has been over-planted. In the past more Baldwins have been planted than any other one variety of apple. He did not believe that the Baldwin should at the present time be placed in the first-class list when selecting trees to be planted. Furthermore the Baldwin is the main crop in the apple-growing sections of Eastern United States, and now that their market is open to our fruit he believed that it would pay us better to plant the highest quality varieties, namely, Northern Spies, McIntosh Reds, and Snows. In some sections along the north shore of Lake Ontario, Ben Davis has been extensively planted. Prof. Crow does not believe that this is a wise move, neither did he favor the planting of Stark. Neither of these varieties will command the best prices, and he

would not include them in his list if selecting for a large plantation. We must keep in mind, however, the extent of the demand for first-class fruit. This is hard to gauge, but in the present season No. 1 Snows and McIntosh are selling in the larger Ontario centres for from \$5.00 to \$7.00 per barrel, and he believes that our markets would be large enough to take all the McIntosh, Snows and Spies that we could produce.

He also pointed out that in planting an orchard, the grower to make the largest profit, must endeavor to plant those varieties which distribute the labor best throughout the season. The cost of production is one of the present factors to be reckoned with, and man labor is the biggest consideration in connection with this. Prof. Crow believes that the apple boom is past, and in the markets of the future there will be the keenest of competition. No man need expect to make a success of the business unless he does it right, and he should plant with the future market in view, planning to sell in car-load lots of each variety. This necessitates going into the business on a moderately large scale. He believed that a grower could handle forty acres of orchard to better advantage than twenty acres with horse labor, machinery and man labor. The small orchard of the future will be subject to very strenuous competition. In choosing varieties it must be remembered that while the winter sorts should be most extensively planted, the choice of variety should not be confined to these. Here is his selection: Duchess, Alexander, Wealthy, Snow, McIntosh, Greening, Spies and a few Baldwins, although he did not favor planting Baldwins, only in special conditions. The Wealthy where planted must be thinned to make best returns.

Basing his remarks on the results of investigation in Europe he stated that proper fertilization was responsible for the largest percentage of increased crop production where good methods were followed. He stated that those who are getting the large crops of fruit annually are the men who use the largest amount of fertilizer judiciously. He cited the case of Geo. A. Robertson, of St. Catharines, who applies every year 600 pounds

	Comparative yields.				
	1908	1909	1910	1911	1912
Yield in barrels	300	250	78	331	333
Receipts from sale of apples.....	\$300.00	\$200.00	\$100.00	\$740.55	\$449.80
Per cent. No. 1's	30-60	30-60	30-60	87.6	80.5
Net profit				\$537.95	\$271.58
Net profit per acre				215.18	108.63

of bone meal, 200 pounds of muriate of potash and seven and one-half tons of barnyard manure per acre on his cherry orchard at a cost of \$25.00, and from his three acres this year marketed 2,500 baskets of cherries. Mr. Robertson gets a crop every year. Many of our growers do their spraying and pruning almost perfectly, but few fertilize properly. The individual in these days of high production and market competition must get a crop when the other fellow has a failure. By using fertilizers and thinning properly, he thought it advisable to regulate the crop as the best growers of peaches have done.

He did not think that there was any fear of over-production in Spies, Snows, and McIntosh, and with reference to the cost of marketing, he hoped to see the time when the consumers would take the matter up to bring down the cost of marketing on their side of the question, citing as an example the work as then taken up by the women in some of the cities of the United States.

In discussion on the address Dan Johnson, of Forest, was asked by a member the cost of box packing, which he placed at 40 cents per box. This covers crating, packing, nailing of the boxes, hauling to and loading on the car, and putting a false floor in the bottom of every car, and also nailing every box in place on its side. H. A. McIntosh, grandson of the originator of the McIntosh apple, told of selling his apples on the Montreal market this season, where he received not less than \$7.25 per barrel for apples of the McIntosh variety. Other growers did not believe that the Baldwin should be turned down.

CITY HELP FOR FRUIT PICKING.

Mrs. L. A. Hamilton, of Lorne Park, told the convention how she was solving the labor problem in fruit growing. The past season she rented cottages and put in 28 beds. Girls from the city came out to these for a country holiday and some girls from the Old Land also. She hired a housekeeper for the girls, charged them \$3.00 per week for board, and paid them according to the work they accomplished. The girls liked the work; it helped them with their vacation, and from them Mrs. Hamilton learned much in connection with the marketing of her fruit, taking advantage of every hint dropped by them regarding the kind of fruit and packages which they liked best to buy when in the city. She thought

womens' institutes might do something to encourage this practise.

PROFIT FROM OLD ORCHARDS.

R. S. Duncan, District Representative of the Department of Agriculture, Port Hope, Ont., opened the eyes of those present to the possibilities of old orchard renovation. He gave facts and figures concerning four old orchards which have been under his care for three years. These orchards had never been sprayed, were totally neglected and covered with bark louse, blister mite, canker, etc. The bark was scraped off, the trees were sprayed three times yearly, commercial fertilizers were used, and cultivation with cover crops took the place of the old sod.

The following table shows the success of the treatment in one of the orchards which consisted of 117 trees (2½ acres) 32 years old, on light sandy loam:

Expenses.	After cared for		
	1911	1912	1913
Scraping	\$11.25		
Pruning	34.00	\$22.00	\$39.00
Painting wounds	10.28	7.05	15.60
Gathering brush	6.75	4.00	4.50
Spraying:			
First	25.90	21.90	20.55
Second	15.75	15.70	13.13
Third	23.17	23.35	15.60
Cementing holes in trees.	1.25		
Bracing trees with wire.	1.37		
Removing deadwood and thinning suckers90	1.80
Fertilizer:			
Manure	25.00	30.00	30.00
Muriate of potash, 500 lbs.	13.00	11.70	12.60
Acid phosphate 1,000 lbs.	11.00	11.00	16.00
Applying	1.00	1.00	1.00
Freight			2.75
Cultivation	7.50	18.00	5.70
Total expenses	\$202.60	\$178.22	\$174.68
Expense per acre	\$ 81.04	\$ 71.29	\$ 69.85

	Comparative yields.				
	1908	1909	1910	1911	1912
Yield in barrels	300	250	78	331	333
Receipts from sale of apples.....	\$300.00	\$200.00	\$100.00	\$740.55	\$449.80
Per cent. No. 1's	30-60	30-60	30-60	87.6	80.5
Net profit				\$537.95	\$271.58
Net profit per acre				215.18	108.63

Other tables given showed the net profit per acre per year to run in one orchard, \$215.18; \$108.63 and \$127.58; in the second orchard \$57.83, \$48.56 and \$72.42; in No. 3, \$195.12; \$94.11 and \$24.02. A fourth was only obtainable for one year, and the profit was \$12.16. A fifth orchard lost \$18.40 per acre one year, and made a profit of \$182.57 the next. Very satisfactory results.

Some notable figures were obtained on the cost of spraying. These large trees were sprayed three times, and the total cost per tree for the three sprayings annually run from 55.8 cents down to 32.5 cents. The amount applied per tree at each spraying run from four and two-thirds gallons up to 11 gallons, which seemed a heavy application to most of those present, but indicates thoroughness as the percentage of No. 1's in the table proves. A further report of the cost of spraying will be published later.

SOME REAL TRANSPORTATION PROBLEMS.

Transportation and marketing are believed by G. E. McIntosh of Forest, Ont., the Transportation Agent of the Association to be two of the greatest constituents in the success of fruit growing. Fruit and vegetables were carried by the railways last year, to the extent of over a million tons and are the third highest on the list of agricultural products, contributing to railway receipts. Agriculturists are the second best customers of Canada's railroads and are therefore entitled to advantages. The problem of rates is not the essential and most important. It is briefly speaking lack of railway equipment; inefficient terminal facilities; a service in transit that assures no certainty of reaching a market in proper time; delays in supplying cars; rough handling; lack of shelters, pilfering, neglect in icing cars or attending heaters according to season and certain privileges that are accorded shippers of other commodities, but not for fruit.

During the past year the Railway Commission was asked to compel railways to allow part carloads of fruit charged at carload rates and weight from original point of shipment to final destination to be stopped in transit for completion of load at an additional charge of \$3.00 per car for each stop. This was refused on the ground that the transit practice is a privilege, not a right.

The railways up to March 28, 1911, carried

the conclusion be of value to be carried on in

peak of the in than leaf let- conducted at the find out what growth here in abso- soil which many method used in or three days for the purpose. before they are to obtain a per-

has been trying rican type with varieties which nated. In dull rieties refuse to ouse. He has exceptional value almost everyone

been trying to ndustry tomato, on to the pink Grand Rapids, has exceptional out good carry- years' seed of uce, beets, cab- etc., have been results. d cauliflower to d competition.

USES.

S. C. John- of Agriculture, in which we can t shall enlarge ation, he point- ilroad, where a tate the hand- largest items of ed in its hand- building and be aks should be n the prevailing distance to pre- Solid concrete ought to twelve ches to two feet are growing in ss to build, but ed give good He favored the alley at the end. may be utilized squash, or for wide house is s. The 17 x 20 the 35 x 40 foot et in width ar- set for cultiva-

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apples to concentration points for storage, inspection and completion of carloads and re-shipment at a reduction of one-third the local tariff rates. On March 29, 1911, the concession of completion of carloads was withdrawn, restricting the storage and inspection privilege to carloads. The Commission was asked to re-establish this, which they did and the railways referred the matter to the Supreme Court, but it is in effect now. Shippers' requests that slatted floors put in cars by them be paid for was granted up to \$8.00.

Reciprocal demurrage was discussed last year whereby the railroads would be responsible for delays in loading and unloading as well as the shippers. Congestion at terminals was shown to be the cause for many delays. Out of 40 shippers requiring 1186 refrigerator cars last year, 26 experienced delays of from 4 to 38 days in getting them, and in some instances were compelled to use box cars. One man ordered 8 refrigerator cars for Oct. 24. He got (2) on Nov. 23, one Nov. 30, one Dec. 1st and no more until Dec. 11th.

Shipments to Winnipeg travelled as slow as two and three-quarter miles per hour, Brandon four and three-quarter to ten miles per hour, Regina four and three-quarter, five and one-half and six miles per hour. Some shipments of nursery stock required: Seventeen days to go 23 miles, 15 days to go 29 miles, 22 days to go 37 miles, 26 days to go 72 miles, etc. Mr. McIntosh thought shipments of fruit should get at least 10 miles per hour. Cases were cited where United States fruit trains run 16, 17 and even 20 miles per hour. The Railway Board has been asked to pass upon this. Heated refrigerator cars must be supplied for the carriage of fruit, but must carry at least 12,000 pounds. The railways are now being asked to carry a man with heated cars free to the destination of the fruit and back where shipments go west of Port Arthur.

Rough handling was also discussed. Mr. McIntosh cited cases where the bottom tiers of barrels were removed in unloading cars and the remainder allowed to come tumbling down. Barrels are often broken and fruit badly damaged. Baskets of fruit are sometimes thrown around like sticks of wood.

The uniformity of railroad rates on fruit from the United States to the Canadian West was shown, there being in most cases no difference between that consigned to Calgary, Winnipeg or Medicine Hat, while from Oshawa, Ont., to Winnipeg it is 53c. and to Medicine Hat 96c., to Calgary and Edmonton \$1.04. The Okanagan shipper pays on a through rate 60c. to Calgary and 7 c. to Winnipeg, the Washington, Idaho or Oregon shipper 75c. to both, while the Ontario shipper pays 58c. to Winnipeg and \$1.04 to Calgary. Eight cents per hundred is charged by a railway for the haul of 657 miles between Medicine Hat and Winnipeg to the British Columbia shipper and for the same haul charges the Ontario shipper 18c. per 100 pounds. Ontario shipped 238,000 barrels of the 455,000 barrels marketed in the West in 1912; United States sent in 164,000; British Columbia 75,000 and Nova Scotia 18,000. Many other problems were brought out in this excellent report.

OUR MARKETS.

Robert Thompson, manager of the St. Catharines Cold Storage and Forwarding Co., took up the subject of Canadian markets. He covered much the same ground as in his address at the Ontario Vegetable Growers' Association, claiming that the large growers should use rapid freight service in place of express, and ship in large quantities in every possible case. In the course of his address he stated that he believed that most of the jobbers in the West are controlled by an American syndicate which is not in sympathy with Canadian growers and which wished to corner the market for fruit shipped in from the United States. He said that we are to a great extent at the mercy of this syndicate who, he alleged, buy Canadian fruit, re-label it and sell it as American in order to build up a trade for the United States product. He believed also, as the box-packed fruit on exhibition proved, that Ontario growers were putting up a much better pack than they formerly did and he urged that publicity be given to the fact that Ontario fruit was second to none in the world. A number of growers should arrange to plant varieties that will carry well, handle them carefully, produce them in good supply, load them properly, cool them before shipping and then ship in large, uniform lots which the railway can handle to best advantage in the shortest possible time.

PLUMS TO PLANT.

F. M. Clement, of the staff of Macdonald College, discussed the present status of the plum industry in Ontario. From census figures he showed that plums in Ontario have decreased in number of trees during the last ten years more than twice the percentage of all other fruit combined. For this decrease he gave four direct reasons: Popularity and cheapness of other

fruits; rot, insects and disease; overplanting of poor varieties, and the low prices. Plums are not as largely used for dessert as other fruits. It is difficult to keep rot out of the orchard and when the rot once makes its appearance it is very hard to control. Many poor varieties have been introduced by nurserymen, but we must work back to the old European varieties to make a success of plum growing. Prices have ruled low; in 1908 as low as 11.9c. per basket, and the average for ten years, 1903 to 1912, ran from 28c. up to 44c. in 1907, being the year of highest returns. Many prominent fruit growers, among them some from New York State, have made the remark that they would not take a plum orchard as a gift. The man who prunes well, fertilizes well and sprays three times or more is the successful plum grower. We must discard the variety the consumer does not want and plant to please the purchaser. The average yield in New York State is approximately four-fifths of a bushel per tree, or about three baskets. The yield for good districts in Ontario is about the same. The best grower averages from four to four and one-half baskets. This, on a basis of 100 trees per acre, at the price of Bradshaws, 36.6c., would be \$146.40 per acre. Native varieties, such as the De Soto Stoddard, Wolf, Hawkeye and Cherry do well. The tendency is to drop the Japanese varieties. Put the plums on the cheapest land on the farm, give them good care, plant on a large scale, plant now, and for commercial plantations use Burbanks in limited numbers, Bradshaws, Reine Claudes, Monarchs, Grand Dukes, German Prunes, Damson, and for local planting outside the commercial districts, Glass Seedling, Moore's Arctic, Red French, Mount Royal, Lombard and Perdrigon.

CURRENT AND GOOSEBERRY CULTURE.

The production of currants and gooseberries according to L. B. Henry, of Winona, B. S. A., is increasing in importance year after year. Prices have advanced until as high as 10½ cents wholesale for black, and six for red are quite common. However, labor has increased in cost, and the net profits are not so much greater as one might suppose. The large number of jam factories erected are responsible for the increase in production. A northern slope was advocated for acreages planted in the northern sections of the country. Black currants will grow in almost any soil, but a rich clay loam is best. Red currants require a somewhat lighter soil. Both classes are propagated from cuttings which may be made in the fall as soon as the wood is ripe. They should be covered with straw or straw manure until spring. Cuttings may be also made in winter and stored in sawdust until spring. Select only the plants showing a large fibrous root system and looking thrifty. A good two-year is superior to a one-year-old plant. If conditions are favorable the fall is the best season for planting, then they become established before winter and are ready for business in the spring. Plants should be planted fairly deep to grow in bush form to sucker freely. A few branches should be covered with earth at the junction of the main stem. Some recommend planting 4 x 5 and 6 x 8 feet. Mr. Henry advised putting the bushes five feet apart in the row, and the rows seven and nine feet apart. Start on one side of the field and plant three rows seven feet apart, and then leave a space of nine feet and then three rows seven feet apart, etc. This provides space for the power sprayer. Plough up to the bush in the fall, and thoroughly furrow out the patch to run off surplus water. With the spring-tooth cultivator cultivate often. Thorough cultivation is necessary. Manure should be applied in the fall, twenty tons every three years. This may be supplemented by commercial fertilizer.

A system of renewal is necessary in pruning. Red currants bear the best fruit on two-year-old wood. Cane should not be allowed to remain much longer than five years. Pruning may be done any time after the leaves fall. Remove canes which have passed the best period of productiveness. Head back the young branches to encourage fruit spurs along their length. Do not prune young plants much for three years. In black currants, he recommended Naples, Champion and Victoria. Of red currants he favored Cherry, Fay, Prince Albert, Chataqua, Perfection and Raby Castle.

Gooseberries have been extensively planted of late. Up to about five years ago the preference was for American varieties, on account of their resistance to mildew. Grown in an orchard under trees there is much less danger of sunscald. Two bushels can be planted between the trees in the row; spraying is easily done, and the picking is more comfortably accomplished in the shade of the trees. Gooseberries do best on a sandy loam soil. American varieties are propagated by mound laying, dirt being thrown up over young shoots in June. Cuttings taken in August or September and stored as currant cuttings are successful with American varieties, but the layering methods produce stronger plants. Most of the English varieties are imported as young

plants. Mr. Henry prefers planting gooseberries in the fall and quite deeply that they sucker freely. The same plan is followed as for currants and the same cultivation. Gooseberries bear on two-year-old wood. The canes should not be allowed to remain after they are five years old. Young bushes require little pruning for three years, except to cut back the new growth each year. Among the best English varieties he gave Industry, Lancashire Red, Crown Bob, Keepsake, Whitesmith. Of the American varieties the Pearl, The Downing and Smith's Improved are those advised to plant.

Among the insects attacking currants the San Jose scale was mentioned, which may be controlled by cutting out badly affected stalks and spraying with lime sulphur. Several borers, insects and diseases were mentioned, most of which may be controlled by spraying as outlined by Mr. Henry, and which will be published in a future issue.

THE NEW DIRECTORATE.

The following directors were elected: R. B. Whyte, Ottawa; C. W. Beaven, Prescott; P. S. Wallbridge, Trenton; E. Lick, Oshawa; W. J. Bragg, Bowmanville; H. G. Foster, Burlington; R. H. Dewar, Winona; Geo. Schuyler, Simcoe; Dr. Grant, Forest; G. Mallough, Porter's Hill; C. W. Gurney, Burford; W. B. Saunders, East Linton, and Prof. J. W. Crow, Guelph.

Apple scab was thoroughly gone into by L. Caesar of the O. A. C., whose excellent article in "The Farmer's Advocate" of November 6th last covered the ground thoroughly. He also discussed peach insects and diseases which will be mentioned in a future issue.

W. F. Kydd gave some hints on how to get color on fruit. Discussions were readily and spiritedly entered into, and it was one of the most successful conventions yet held.

P. E. Island Notes.

Editor "The Farmer's Advocate":

At this date (Nov. 17th) we still have open weather. Plowing has gone on all the month, with the exception of two days when frost hindered. The crop is all gathered in, but much of the late grain is useless for seed and not much good for feed. This has been the worst season for saving grain farmers have ever known here, and the crop loss is heavy indeed. In some sections of the Island cattle are being disposed of on account of scarcity of feed. This will be the most serious loss, as herds cannot be replaced in a hurry. Most of our better farmers get the larger part of their income from stock, either from beef or from the dairy, and a shortage of fodder for one year means a serious setback. Potatoes were a good crop on most of the Island, but the wet, warm weather of October caused rot to develop to such an extent that the loss already is serious and leaves a poor prospect for wintering them in the cellars. I have never seen so much dry rot showing up at this time of year. Shippers tell me they are afraid to handle them, especially for distant markets. The turnip crop is also seriously affected with rot. Many farmers will feed potatoes to their cattle rather than risk them in the cellars till spring, and, as is usual, great quantities will be cooked for hog feed, this being the customary way to feed hogs here. Beef cattle are in strong demand for local consumption, as well as for export. A trade has already been opened up with Boston, and a trial shipment of ninety head went forward to that market a few days ago. The lamb crop has been mostly marketed. The price for the best lambs, weighing seventy pounds and over, was about \$5.00 per cwt. This looks small beside the prices in Montreal and Toronto, but our lambs are weighed right off the grass, with no allowance for shrinkage.

Our local Department of Agriculture is very actively engaged in the interests of farmers. A number of lecturers are engaged, who are specialists along our different lines of production. Just now the greatest interest seems to center in the poultry industry. T. A. Benson, our poultry specialist, is kept inculcating a better system of marketing eggs, and has already organized a number of egg circles, through which farmers will co-operate to get better prices. Our egg trade has been badly handled in the past, and much of our exports have not reached the markets until unfit for food. The egg circles propose to get this produce marketed while they can still be classed as fresh eggs, and in so doing receive a much better price. Heretofore much of our egg trade has been handled by the country stores and some gathered by pedlars who visit the farmers every two weeks to gather them, good and bad. Then all are shipped to Charlottetown or Summerside to be forwarded by exporters. Under this system many of the eggs are rotten in warm weather before the exporter gets them, and the result is a low average price. Co-operative shipping through egg circles will remedy this and give the person who puts up only good, sound, fresh eggs the value for them he is entitled to.

W. S.

The New National Exhibition at Toronto.

It is not an easy matter to inaugurate a new exhibition. The people must at first be educated, must understand what the purpose of the show is, why it is held and whether or not it is worth going to see. In some things the public moves slowly, and fair-going is one of them. Once enthused nothing will stop the crowds. Conceived only a few months ago the new National Live Stock Horticultural and Dairy Show had scarcely time to find its bearings before November 17th, the day of its opening, had arrived. It is not all smooth sailing to start any exhibition, but this particular show had more than its share of difficulties. First one faction and then another would rise up in temporary opposition. The dairymen, the stockmen, the horticulturalists, the poultrymen and the dog fanciers all had their troubles. A home was to be found for the show, and after hamperings of various kinds the gates finally swung open Monday, 17th instant under none too favorable weather conditions, but with the finest poultry and horticultural display ever seen at a Canadian exhibition, and an abundance of the flower of the live stock of the continent. The management are deserving of credit in so successfully, in the face of difficulties galore, launching a great national show. To add to the drawbacks the second and third days of the exhibition were veritable downpours of rain and consequently crowds were not large. But on the following days, which were warm, (unseasonably so) large crowds thronged the buildings, and the management were quite enthusiastic over the success of the initial event.

It was impossible to have everything perfect in so short a space of time. The Transportation Building was used for the horticultural exhibit, and made an admirable place with plenty of light and sufficient space for exhibits, so that one did not detract from another. The building used for horticultural products at the C. N. E. was filled with poultry—the largest show of its kind ever held in America, and, according to a well-known lover of the feathered tribe held in the best building for the purpose on this continent, not excluding Madison Square garden in New York. The dogs were in the Dog Building, and much interest was shown.

The new live-stock arcade was the center of the stockmen's interest. The sheep and pigs were in the new barns flanking the arcade, rather cramped but quite comfortable. The horses and beef cattle were judged in the arcade, which is altogether too narrow, the people not being able to see the judging to advantage. However, this could not be avoided this year, and by the opening of the second of these exhibitions the management hopes to have the finest judging arena in the country fully equipped and ready for the greatest show Canada has ever seen.

The stock was all exceedingly well brought out, which reflected credit upon the fitters. Our cousins to the south entered the competition and carried off some of the good things, which added to the excitement and interest. If the buildings were not quite so scattered, particularly those in which the stock was housed and a good arena were in place, there is no better place in America to hold such an exhibition. The cramped live-stock facilities will be improved immediately, and the show will then be completely equipped.

There seems to be a growing interest in fat-stock exhibitions. Agitation has been a good thing. The Guelph Exhibition has more entries this year than ever before, and in reality the Toronto show seems to be aiding it. A breeder has to fit for one show, he might just as well take advantage of two or three. In the face of all the difficulties which confronted it, Canada's new exhibition registered a success, especially as far as exhibits were concerned. Crowds will be larger now that the people know what to expect.

Horses.

What was true of all the other lines of stock was doubly true of the equine entries at the first National Show. Breeders brought their very best individuals to the fair, and left the mediocre individuals at home. This condition of affairs throughout, tended to project the exhibition into a class by itself, and made each entrance into the ring one of interest and worthy of close inspection. Nothing too good can be said regarding the horses at this live-stock show. When such horses as Fyvie Baron, Marden Raider, Lampyre, Lord Hermione and others came out and a great retinue of other horses in the same breeds that did not look belittled in the presence of these champions, one can assure himself that nothing but the best was there. Horses are always a drawing feature at any fair, but the excellence of the individuals kept the ring completely encircled, several deep, with gazing people.

CLYDESDALES.—The Clydesdale appears to be the national breed of draft horses in Canada, and, amongst its patrons, interest is not waning. They stand out in Canada as the universal popular breed, and with the conformation and quality which they continue to bring into the ring, they

are not unworthy of this favor. Not only were the classes well filled, but many renowned animals, known on two continents, came again before the admiring public.

In the class for aged stallions Serjeant Major Le Blanc, the ring manager, lined up for the judge, Wm. Smith, eight horses that made an aggregation hard to beat. Amongst them was, Fyvie Baron, many times a champion, with large feet and bone but quality throughout, and with a head, neck and body that are near the ideal. Then came Bright Smile, sired by Rycroft, another good horse, but second to Fyvie Baron. Fairlawn came third, High Honor, fourth, and Anchor's Pride fifth. Such good horses as Baron Fairfax, Baron Smith and Everest Again, walked out of the ring without ribbons.

The class for stallions foaled in 1910 brought out other noted horses. Six appeared, and Lord Ullin led the way. It is not his first victory, for, at the Canadian National, he stood at the right end of the line of eleven high-class horses. He is a high-standing, dark bay, fearless and straight in his movement, and has quality and substance combined. Rycroft Model, a horse with good action and weight, thick and firm, was second, with Gold Nugget third.

In the class for Clydesdale mares foaled previous to January 1st, 1910, there were eleven entries, but Castle Belle, a sweet mare, sired by Glengolan, out of Fanny of Sandyknowe, was first and later grand champion female. Ten Canadian-bred mares foaled in 1910 came forward, and Dolly Murray, sired by Cairndale, and out of Daisy Murray, was at last chosen for first place. Boreland Queen, sired by Boreland Chief, took the blue ribbon, and Belle of Argyle the white. Only five imported mares foaled in 1910 were out. Polly of Plinglas, sired by Diana's Prince, got the red ribbon. A good mare she is, but she does not show the spring of rib and thickness of breast and chest that is carried by Nellie McKay. The Plinglas mare was not well fitted, and could be improved in these points, while Nellie McKay was in exceptionally good show-ring shape. The first-prize mare was the mover of the lot, and has exceedingly good limbs and quality.

Exhibitors.—T. D. Elliott, Bolton; H. M. Robinson, Erindale; M. Slingerland, Niagara-on-the-Lake; Graham Bros., Claremont; Robert Canning, Milliken; Robert Beith, Bowmanville; J. M. Gardhouse, Weston; Dr. Adam Watson, Cobourg; E. B. Barnhardt, Orangeville; R. B. Pinkerton, Essex; Joseph Fewster, Brampton; Isaac Williamson, Toronto; Alex. Doherty, Wexford; L. J. C. Bull, Brampton; Fred G. Wilson, Riverbank; Humphrey Dymont, Dundas; Mount Elgin Industrial Farm, Muncey; Norman Dryden, Galt; Sunnybrook Farm, Eglinton; H. A. Mason, Scarborough; Thomas McMichael & Son, Seaforth; R. C. Rogerson, Fergus; J. F. Staples & Son, Ida, Ont.; Wm. Elliott, Galt; T. A. Bowes, Concord; Hugh McDougall, Tiverton; John Laurie, Malvern; John Johnson, Woodbridge; Chas. Grigg, Elmvale; David Cordingly, Lisgar; Chas. Groat, Oshawa; Norman J. White, Ashburn; City Dairy Farm, New Lowell; W. F. Batty, Brooklin; C. Thompson, Malvern; Alex. McKee, Sandhill; F. J. Fisher, Malvern; S. J. Prouse, Ingersoll; James Leonard, Schomberg; J. S. Johnson, Sutton West; A. Watson & Sons, St. Thomas; John Brown & Sons, Galt; H. I. Barnhardt, Oro Station; Wm. Robinson, Newton Brook; Robt. Duff & Son, Myrtle; Thomas Ball & Son, Uxbridge; H. C. Hamill, Box Grove; Thomas McMillan, Seaforth; P. W. Boynton & Son, Dollar; A. Jamieson, Streetsville, and Hiram Dymont, Dundas.

Awards.—Stallion foaled previous to January 1st, 1910: 1, Graham Bros., on Fyvie Baron, by Baron's Pride; 2, Graham Bros., on Bright Smile, by Rycroft; 3, Slingerland, on Fairlawn, by Baron Chief; 4, Elliott, on High Honor, by Hiawatha; 5, Elliott, on Anchor's Pride, by Baron Ruby. Stallion foaled in 1910: 1, Graham Bros., on Lord Ullin, by Sir Hugo; 2, J. M. Gardhouse, on Rycroft Model, by Rycroft; 3, Graham Bros., on Golden Nugget, by Scotland Crest; 4, Elliott, on Kirkland, by Everlasting; 5, Dr. Watson, on Dunure-Captain, by Baron of Buchlyvie. Stallion foaled 1911: 1, Graham Bros., on Alert, by Baron's Pride; 2, Graham Bros., on Rising Hope, by Craigisla; 3, Elliott, on Whittington, by Ormiston; 4, Elliott, on Baron Everard, by Robin McDowall; 5, Dr. Watson, on Royal Dragon, by Kinleith Pride. Stallion foaled in 1912: 1, Graham Bros., on Lord Malcolm, by Mendel; 2, Pinkerton, on Kier Democrat 2nd, by Kier Democrat; 3, Elliott, on Gateside Favorite, by Flora's Favorite; 4, Barnhardt, on Rick Hill Baron, by Baron Columbus. Canadian-bred stallion foaled previous to January 1911: 1, Staples & Son, on Baron Elator, by Elator; 2, Rogerson, on Dandy Prince, by Prince Orla; 3, McMichael & Son, on Lord Ronald, by Baron's Luck; 4, Elliott, on Day Dream, by Baron Acme; 5, Dymont, on Royal Prince, by Prince Ascott. Canadian-bred stallion foaled in

1911: 1, Graham Bros., on Maconbie, by Macqueen; 2, Pinkerton, on Kier Jimmie, by Kier Democrat; 3, Elliott, on Guinea Gold, by Baron Acme; 4, MacDougall, on King Darrel, by King Thomas; 5, Slingerland, on Blaken of Up-to-Time, by Fairlawn. Canadian-bred stallion foaled in 1912: 1, Laurie, on Prince Fashion, by Cairndale; 2, Johnson, on Lockwood Chief, by Craignair; 3, White, on Ivory Macqueen, by Black Ivory; 4, Barnhardt, on Rich Hill Baron, by Baron Columbus; 5, Groat, on Newday Member, by Fiscal Member. Canadian-bred stallion foaled in 1913: 1, Batty, on Prince Carruchan, by Gallant Carruchan; 2, Pinkerton, on Kier Quality, by Kier Democrat; 3, City Dairy Farm, on Sylvander's Favorite, by Sylvander; 4, Wilson, on Gay Ronald, by Montgrave Ronald. Stallion foaled previous to January 1st, 1910, owned by exhibitor since April 1st, 1913: 1, Staples & Son, on Baron Elator; 2, Slingerland, on Fairlawn; 3, Rogerson, on Dandy Prince; 4, Slingerland, on Pride of Glencairn. Stallion foaled on or after January 1st, 1910, owned by exhibitor from April 1st, 1913: 1, J. M. Gardhouse, on Rycroft Model; 2, Elliott, on Day Dream; 3, Rogerson, on Orla's Boy. Mare foaled in 1910: 1, Sunnybrook Farm, on Polly of Plinglas, by Diana's Prince; 2, Doherty, on Nellie McKay, by Armadale; 3, Mount Elgin Industrial Farm, on Ella Fleming, by Sam Black; 4, Graham Bros., on Maid of Buittle, by Prince Sturdy; 5, Dryden, on Dora Duff, by Ransom. Mare foaled in 1911: 1, Graham Bros., on Bessie Foulder, by Chester Prince; 2, Mason, on Snow Drop, by King Tom; 3, Elliott, on Pride of Aucheneleith, by Picador; 4, Graham Bros., on Jessie of Pettie, by Farmer's Counsel; 5, Doherty, on Kate of Wester Loyal, by Dunure Burns. Mare foaled on or after January 1st, 1912: 1, F. Pinkerton, on Queen of Kiers, by Kier Democrat; 2, Fewster, on Spruce Beauty, by Manaton; 3, Fewster, on Spruce Rose, by Manaton. Canadian-bred mare foaled previous to January 1st, 1911: 1, Staples & Son, on Derwent Queen, by Derwent Crook; 2, Mount Elgin Industrial Farm, on Royal Rose, by The Rejected. Canadian-bred mare, foaled in 1910: 1, Fisher, on Dolly Murray, by Cairndale; 2, Leonard, on Boreland Queen, by Boreland Chief; 3, Watson & Sons, on Belle of Argyle, by Baron Galtly; 4, Watson & Sons, on Trim of Ore, by Baron Galtly; 5, City Dairy Farm, on Darling Bess, by Baronet Quality. Canadian-bred mare foaled in 1911: 1, Gardhouse, on Bonnie, by Lord Scott; 2, Barnhardt, on Hillsdale Bessie, by McKinley 2nd; 3, Johnson, on Jessie Marcellus, by Gallant Marcellus; 4, Duff & Son, on Princess of Atha; 5, White, on Queen Jess, by Holestane Chief. Canadian-bred mare foaled in 1912: 1, Batty, on Maple Avenue Bell, by Golden Favorite; 2, Jamieson, on Miss Rhona, by Craignair; 3, McMillan, on Maggie Hill, by Guinea Gold; 4, Staples & Son, on Golden Ruby, by Golden Gleam; 5, Barnhardt, on Hillside Beauty, by Ardnahor. Canadian-bred mare foaled in 1913: 1, Batty, on Princess Carruchan 2nd, by Gallant Carruchan; 2, Wilson, on Ruby Lane, by Montgrave Donald; 3, Doherty, on May Queen, by Baron Lionel; 4, Staples & Son, on Golden Crest, by Golden Gleam. Mare foaled previous to January 1st, 1910, owned by exhibitor since April 1st, 1913: 1, Beith, on Belle of Blackhill; 2, Mason, on Jean McPherson; 3, Bull, on Brampton Lady Peggy; 4, Staples & Son, on Burn Brae Bell; 5, Pinkerton, on Darling of Biglands. Mare foaled on or after January 1st, 1910, owned by exhibitor since April 1st, 1913: 1, Fisher, on Dolly Murray; 2, Leonard, on Boreland Queen; 3, Watson & Sons, on Trim of Ore; 4, Hatson & Sons, on Belle of Argyle; 5, Wilson, on Lady Orla. Champion Clydesdale stallion, Graham Bros., on Fyvie Baron, by Baron's Pride; champion Canadian-bred stallion, Staples & Son, on Baron Elator, by Elator; champion Clydesdale mare, Graham Bros., on Castle Belle, by Glengolan; champion Canadian-bred Clydesdale mare, Fisher, on Dolly Murray. Best Clydesdale stallion and mare, Walker House Challenge Trophy, Graham Bros., on Fyvie Baron and Castle Belle.

PERCHERONS.—In former years Canadians have criticised the Percheron as lacking quality of limb and slope of pastern and shoulder. The present-day representatives of the breed vindicate the Percheron name, and show that a few poor specimens have been responsible for bringing disfavor upon a breed possessed of good limbs, quality, substance, good conformation and stamina. Importers have only to bring the good ones into this country, and the growing popularity will soon obliterate any lingering antagonism to this type of the draft horse. The females were numerically weak, only sixteen being on exhibition, but the stallions were numerous and exceedingly good.

In the aged stallion class, R. Burgess, a famous Percheron advocate in the neighboring republic, viewed six good individuals, and at last gave Jef, a horse by Frudiant, the honored place. He is a big dark grey, and a fearless mover, pos-

essed of quality and avoirdupois. Jabloir was second, showing substance and abundance of masculinity, but no better style of action than some horses who took a lower place. Lord Dunmore was third, a horse with quality, but he could handle more size and weight. Fourth place went to Irade, a huge princely grey, but lacking smoothness in conformation and finish in action. Enghien stood fifth.

The good three year olds shown at Canadian National did not appear in this class, but their places were filled by others of superior qualities. Kerlogaden was first, a big, dark grey, with Kirsch second and Kahiz third. The two-year-old class had the champion in Lampyre, a big, light grey, sired by Hourd. He was an easy winner, and later grand champion Percheron stallion.

Exhibitors.—J. B. Hogate, Weston; T. D. Elliott, Bolton; Chas. Virgin, Dunmore; C. W. Gurney & Son, Paris; Steen and Cheyne, Derry West; J. Haines, Toronto; G. Edw. Boulter, Picton; Wm. Henry & Son, Queensville.

Awards.—Stallion foaled previous to January 1st, 1910: 1, Steen and Cheyne, on Jet, by Etudiant; 2, J. B. Hogate, on Jabloir, by Dollar; 3, Virgin, on Lord Dunmore, by Roderic; 4, Elliott, on Irade, by Sahara; 5, Gurney & Sons, on Enghien, by Ulysse. Stallion foaled in 1910: 1, Hogate, on Kerlogaden, by Grevy; 2, Hogate, on Kirsch, by Goute d'Or; 3, Hogate, on Kahiz, by Galop. Stallion foaled in 1911: 1, Elliott, on Lampyre, by Hourd; 2, Elliott, on Lassie, by Hieron; 3, Elliott, on Leicester, by Hamster; 4, Hogate, on Lodi, by Douget-ex-Sapeur; 5, Haines, on Loustic. Stallion foaled in 1912: 1, Boulter, on Herculaid, by Domino. Mare foaled previous to January 1st, 1911: 1, Hogate on Kolonaide, by Galopeur. Mare foaled on or after January 1st, 1911: 1, Elliott, on Limac, by Henri; 2, Hogate, on Lisa, by Houllier; 3, Hogate, on Laise, by Gogel; 4, Elliott, on Malaisie, by Moulinet; 5, Hogate, on Longueur. Mare foaled previous to January 1st, 1911: 1, Henry & Son, on Jactation, by Villers; 2, Henry & Son, on Jeannette, by Boileau. Champion Percheron stallion, Elliott, on Lampyre; champion mare, Henry & Son, on Jactation.

SHIRES.—England's heavy draft and cart horse is far outnumbered at Canadian shows by other kinds of horses, and strange it seems that breeds to which the Shire has contributed its blood for their establishment and maintenance should, in return, wrest from the name of the parent stock the glory of a modern patronage.

Although the numbers were few, the name of the breed was well upheld by quality and substance. In the two-year-old stallion class, Marden Raider was out and in good ring condition, winning over Champion Junior, a bright bay of the right kind. The winner is a large bay with few faults, and good enough for T. J. Berry, of Hensall, who made the awards, to give him premier place over Tuttlebrook Esquire, the big four-year-old in the aged stallion class, thus making him champion of the breed.

Exhibitors.—Jas. Bovaird, Brampton; John Gardhouse & Sons, Highfield; Amos Agor, Nashville; Geo. Allen, Burford; John H. Kellam, Nashville; J. M. Gardhouse, Weston.

Awards.—Stallion foaled previous to January 1st, 1911: 1, John Gardhouse & Sons, on Tuttlebrook Esquire, by Deighton Bar; 2, Agar, on Ouse Bridge Champion, by Knowle Orion; 3, Allen, on Norwell Chieftain, by Sowerby Chieftain; 4, Bovaird, on Roxwell Saxon Harold, by Roxwell Saxon Oak. Stallion foaled in 1911: 1, J. M. Gardhouse, on Marden Raider, by Marden Major; 2, Kellam, on Champion Junior, by Ouse Bridge Champion. Shire mare foaled previous to January 1st, 1911: 1, J. M. Gardhouse, on Rokeby Halo, by Madresfield Thumper; 2, J. M. Gardhouse, on Rampton Jessie, by Royal President 2nd. Shire mare foaled in 1911: 1, J. M. Gardhouse, on Belle Newnham, by Newnham Duke; 2, John Gardhouse & Sons, on Grey Fuschia, by Proportion; 3, Kellam, on Nashville Belle, by Ouse Bridge Champion. Shire mare foaled on or after January 1st, 1912: 1, J. M. Gardhouse, on Heather Belle, by Waveney Rex; 2, John Gardhouse & Sons, on Nicaeus Queen, by Tuttlebrook King. Champion Shire stallion, J. M. Gardhouse, on Marden Raider; champion Shire mare, J. M. Gardhouse, on Rokeby Halo.

HEAVY DRAFT.—Horse excellence, caparisoned in glossy black, brass and nickel-mounted harness, makes a spectacular scene in any showing, but to those who love the heavy horse and who are acquainted with the type and quality that satisfy the expert eye, the sight of the heavy draft teams was a feast indeed. The horses were heavy, indicating power and ability to work; flat of bone with glossy, fine feather, indicative of quality and no time or labor had been spared to make them look their best and show to advantage the superior quality which they possessed.

The heavy-draft teams in harness were a pleasing and a stirring sight. The Dominion Transfer Co., of Toronto, won first and second place, and Philip McDonald, of Rayside, third.

The prize winners were a pair of dark bays, mare and gelding, large, smooth and trappy. The second pair, also owned by the Dominion Transport Company, were very light bays, but one of them Gus by name, was a gelding of superb conformation, short in the back, with a broad, deep, powerful loin. In fact, the first three teams were close, but the dark bays were so closely mated and so filled the eye that they were awarded first.

Awards.—Heavy draft gelding or mare shown in single harness: 1, 2 and 3, Dominion Transport Co.; 4, Philip McDonald, Rayside. Heavy-draft team in harness, gelding or mare: 1 and 2, Dominion Transport Co.; 3, Philip McDonald, Rayside; 4, Geo. S. Cochrane, Columbus. Heavy draft, foaled previous to Jan. 1st, 1911, shown on line: 1, Philip McDonald; 2, Geo. S. Cochrane; 3, Snell Bros., Seaforth; 4, Geo. S. Cochrane; 5, Eastwood Bros., Long Branch. Heavy draft, foaled after Jan. 1st, 1911, shown on line: 1, Norman J. White, Ashburn; 2, Amos. Agar, Nashville.

HACKNEYS.—Although not a profitable horse to the rural districts in his pure form, the Hackney is nevertheless a favorite with all horsemen. Strong in build, princely in his carriage, noble in action and spectacular in performance, he lights the spirits of the lookers on who forget their long weary stand by the ringside and burst forth into shouting and applause, and, as the winner races nobly up and down the ring, all other sounds are drowned by the mingled cheers of approbation.

Colorito was out again in the aged class, but Spartan and Guelph Performer were there to make him earn his laurels, and nobly did they strive for premier place. Spartan showed a little better flexion and higher action, but he did not move so true and firm as Colorito. In the two-year-old class Hermione was best with Adamston Nugget almost on a par. Another struggle was for the honors in the aged mare class, where Londesborough Madge and Lockryan Princess closely competed. The former mare did not show quite the excellence of action, but she was a little firmer quartered and stronger limbed. For this and other reasons Walter H. Smith, the judge, gave her the red ribbon.

Exhibitors.—Graham Bros., Claremont; Tilt and Cheyne, Derry West; A. Watson & Sons, St. Thomas; Bennett Bros., Carlisle; Crow and Murray, Toronto; Robert Beith, Bowmanville; M. Slingerland, Niagara-on-the-Lake; J. G. Hammer, Burford; J. F. Staples & Son, Ida; F. C. Greense, V. S., Guelph; Thomas Rodda, West Hill.

Awards.—Stallion foaled previous to January 1st, 1911, 15 hands 2 inches and over: 1, Graham Bros., on Colorito, by Rosador; 2, Tilt and Cheyne, on Spartan, by Polonius; 3, Guelph Performer, by Square Shot. Stallion foaled previous to January 1st, 1911, under 15 hands 2 inches: 1, Crow & Murray, on Lord Hermione, by Mathias; 2, Bennet Bros., on Adamston Nugget, by Goldfinder 6th; 3, Wenona Jubilee, by Jubilee Chief. Stallion foaled on or after January 1st, 1911: 1, Beith, on Mainspring, by Terrington Cetewayo. Mare foaled previous to January 1st, 1901: 1, Crow & Murray, on Londesborough Madge, by His Majesty; 2, Green-side, on Lockryan Princess, by His Majesty; 3, Staples, on Frivolus, by Glenrosa. Mare foaled on or after January 1st, 1911: 1, Rodda, on Lady Evelyn Crayke, by Crayke Mikado; 2, Watson, on Dainty's Maid, by Guelph Performer; 3, Watson, on Daisy Performer, by Guelph Performer. Champion stallion, Crow & Murray, on Lord Hermione; champion mare, Crow & Murray, on Londesborough Madge.

STANDARD-BRED.—The new National Show was not strong in the light-horse breeds, having on an average three or four in each class.

Exhibitors.—Ira A. Mabee, Aylmer; T. Castor, North Claremont; Fred Garbutt, Lambton Mills; S. A. Devitt, Burketon; Ashley Stock Farm, Foxboro; Wm. Hammall, Toronto; J. M. Gardhouse, Weston, and Norman J. White, Ashburn.

Awards.—Stallion foaled previous to January 1st, 1911: 1, Devitt, on Antevolo Rysdyk; 2, Mabee, on General Worth; 3, Garbutt, on Imperial, Jr.; 4, Castor, on Prince Arundel; 5, Ashley Stock Farms, on McMartin. Stallion foaled in 1911: 1, Ashley Stock Farm, on Noble Peter; 2, Wm. Hammall, on Victor Peters. Stallion foaled in 1912: 1, Ashley Stock Farm, on Alick; 2, Gardhouse, on Royal Melrose; 3, Ashley Stock Farm, on George Reyner. Mare and foal: 1, Hammall, on Todd Girl; 2, Ashley Stock Farm, on Noble Lottie; 3, Ashley Stock Farm, on Lottie Fraser. Mare foaled in 1910: 1, Hammall, on Todd Girl; 2, Ashley Stock Farm, on Nietal. Mare foaled in 1911: 1, Gardhouse, on Queen Melrose; 2, White, on Charmar; 3, Ashley Stock Farm, on Emma Fraser. Mare foaled in 1912: 1 and 2, Ashley Stock Farm, on Phillywinkle, and Merrywinkle. Champion stallion, Devitt, on Antevolo Rysdyk; champion mare, J. M. Gardhouse, on Queen Melrose.

THOROUGHBREDS.—Exhibitors.—Jas. Bovaird, Brampton; Roland Thayer, Aylmer; G.

Edw. Boulter, Picton; A. Murray, Woodstock; Dale and Dalziel, Willowdale; D. McCrae, Guelph; J. Coventry, Woodstock; J. W. Arthurs, Brampton.

Awards.—Stallion foaled previous to January 1st, 1911: 1, Dale & Dalziel, on Kelston; 2, Bovaird, on Selwick; 3, Thayer, on Nasbaden; 4, Boulter, on Warhoop; 5, Bovaird, on Prince Hohenlohe. Stallion foaled on or after January 1st, 1911: 1, Arthurs; 2, Coventry, on Hermit Coventry; 3, Arthurs; 4, McCrae, on Percy. Mare foaled on or after January 1st, 1910: 1, Coventry, on Lady Roseberry Coventry; 2, Dale & Dalziel, on Golden Dream; 3, Coventry, on Redmart. Champion stallion, Dale & Dalziel, on Kelston.

PONIES.—Pony stallion any age: 1, J. M. Gardhouse, Weston, on Talke Fire Alarm; 2, Broadview Pony Stud, on Folly's Danegelt. Hackney pony, mare any age: 1, J. M. Gardhouse, on Lady Horace; 2, Jas. Wilkin Balsam, on Greenbrae Fairy; 3, J. M. Gardhouse, on Berkeley Snell. Mrs. W. R. Hunter had the Shetland pony stallion any age, and T. A. Russell, Toronto, had the Shetland pony mare in-lazy. Daylight, for John Lloyd Jones, was best pony stallion any other pure breed, and Vera, best pony mare for R. Christopherson, Toronto. Champion pony stallion, Talke Fire Alarm, for J. M. Gardhouse.

Dairy Cattle.

HOLSTEINS.—Without a doubt the Dairy Department of the National Live-Stock Show constituted an exhibit of dairy cattle that was never equalled in Canada before. Over three hundred head of the milk and butter kinds were there with large udders or conformations that suggested milking qualities. The Holsteins far outnumbered any other breed, and almost equalled the Ayrshires and Jerseys together. Homestead Colantha Prince Canary won his class from Major Posch Mercena, and later became senior and grand champion bull, winning the highest honors from Sir Belle Fayne, Haley's yearling bull. In length of quarter and openness of rib the young bull may have been superior, but the senior bull is strong on top and won out on general strength and maturity.

In the dry cow class, three years old and over, Dymont won first on Cora Countess Echo over Olive Abbecker Posch 3rd. Cora Countess Echo is a cow with enormous capacity and strong constitution, with an udder indicative of great milking ability. Her outstanding feature is her quality of hide and hair, being a rare handler.

Exhibitors.—City Dairy Farm, New Lowell, Elias Snyder, Burgessville; Wm. Manning & Sons, Woodville; Wm. Watson, Pine Grove; Leuszler & Bollert, Bright; M. H. Haley, Springfield; A. E. Hulet, Norwich; Sunnybrook Farm, Eglinton; Hiram Dymont, Dundas; Clarence Kettle, Wilsonville; Sir H. M. Pellatt, Toronto; H. Bollert, Tavistock; R. H. Walker, Utica; J. E. Brethour & Nephews, Burford; C. C. Kettle, Wilsonville; W. J. Biggar & Sons, Erie; Edgar Dennis, Newmarket; W. F. Walker, Manchester.

Awards.—Holstein bull three years and over: 1, City Dairy Farm, on Lord Cornelius Tension, by Cornelius Posch; 2, Snyder, on Pontiac Hengerveld Calamity Paul, by Pledge Spooford Calamity Paul; 3, City Dairy Farm, on Dutchland Colantha Sir Abbecker, by Colantha Phama Lad; 4, Manning & Sons, on Summerhill Sir Maida, by Oakland Maida. Bull, two years old: 1, Watson, on Homestead Colantha Prince Canary, by Dutchland Colantha Sir Abbecker; 2, Hulet, on Major Posch Mercena, by Abbecker Mercena; 3, Leuszler & Bollert, on King Lyons Hengerveld, by King Picton; 4, Haley, on Sir Homewood Fayne, by Grace Fayne 2nd Sir Colantha. Yearling bull: 1, Haley, on Sir Belle Fayne, by Grace Fayne 2nd Sir Colantha; 2, Pellatt, on Sedis De Kol, by Sir Lyons Sears; 3, Hulet, on Reuben Abbecker Mercena, by Prince Abbecker Mercena; 4, Dymont, on Ormsby Deho Echo, by Sir Admiral Ormsby. Senior bull calf: 1, Hulet, on Prince Colantha's Abbecker, by Prince Abbecker Mercena; 2, Hulet, on Sir Paul Abbecker Mercena, by Prince Abbecker Mercena; 3, City Dairy Farm, on Potter's Tunson De Kol, by Lord Cornelius Tunson. Junior bull calf: 1, City Dairy Farm, on Potter's Prince Ykema, by Lord Cornelius Tension; 2, Sunnybrook Farm, on Sunnybrook Mercedes Natoge; 3, Brethour & Nephews. Cow, four years old and over, in milk: 1, Hulet, on Pauline Colantha Posch, by Sir Belle De Kol Posch; 2, City Dairy Farm, on Lady Nell De Kol, by Sir Mutual Butter Boy; 3, Hulet, on Ladoga Idaline Verman, by King Verman De Kol; 4, Biggar & Sons, on Netherland Shurling, by Sir Shurling Posch. Cow, three years old, in milk: 1, Haley, on Nettie Abbecker, by Prince Abbecker Mercena; 2, Pellatt, on Zennie June Posch, by Cornelia Posch; 3, Hulet, on Lemina Bonhier, by Sir Oliza Scheiling 2nd. Cow, three years and upward in calf, not milking: 1, Dymont, on Cora Countess Echo, by Count Echo De Kol; 2, Snyder, on Olive Abbecker Posch, by Cornelia's Posch; 3 and 4, Dennis, on Queen De Kol Peer 2nd, by

ray, Woodstock; McCrae, Guelph; Arthurs, Bramp-

ious to January on Kelston; 2, on Nasbaden; vraid, on Prince or after January ntry, on Hermit Crae, on Percy. y 1st, 1910: 1, 3, Coventry, on ale & Dalziel, on

age: 1, J. M. Fire Alarm; 2, olly's Danegelt. 1, J. M. Gard- Wilkin Balsam, Gardhouse, on Hunter had the age, and T. A. nd pony mare in yd Jones, was pure breed, and ristoperson, Tor- alke Fire Alarm,

ot the Dairy De- stock Show con- e that was never or three hundred inds were there ns that suggest- eists far outnum- ed equalled the er. Homestead his class from er became senior ning the highest Haley's yearling openess of rib- n superior, but and won out on

years old and Countess Echo Cora Countess ns capacity and er indicative of standing feature being a rare

m, New Lowell, m. Manning & Pine Grove; Haley, Spring- nnybrook Farm, ndas; Clarence Pellatt, Toronto; alker, Utica; J. C. C. Kettle, ns, Erie; Edgar er, Manchester. years and over: rnelius Tension, er, on Pontiac Pledge Spofford arm, on Dutch- Colantha Phama Summerhill Sir , two years old: Colantha Prince Sir Abbekerk; 2, na, by Abbekerk on King Lyons Haley, on Sir ne 2nd Sir Col- y, on Sir Belle r Colantha; 2, r Lyons Sears; rkerk Mercena, ; 4, Dymment, Sir Admiral Hulet, on Prince e Abbekerk Mer- bbekerk Mercena, 3, City Dairy Kol, by Lord calf: 1, City Ykema, by Lord rook Farm, on 3, Brethour & d and over, in antha Posch, by Dairy Farm, on al Butter Boy; rman, by King Sons, on Nether- e Posch. Cow,aley, on Nettie Mercena; 2, Pel- rnelia Posch; by Sir Oliza s and upward in n Cora Countess ; 2, Snyder, on elia's Posch; 3 Kol Peer 2nd, by

Prince Victor Pledge De Kol, and Queen De Kol Peer, by Prince Victor Pledge De Kol. Two-year-old heifer: 1 and 4, Hulet, on Madam Pauline Canary, by Shadelawn Prince Canary, and Bessie Posch of Tyrell, by Sir Syhria Posch; 2 and 3, Haley, on Corea Fairmount Hawtie, by Hawtie Baron, and Aggie Fortilla, by Prince De Kol Posch. Senior yearling heifer: 1 and 2, Haley, on Colantha De Boer, by Grace Fayne 2nd Sir Colantha, and Grace Fayne of Oxford, by Grace Fayne 2nd Sir Colantha; 3, City Dairy Farm, on Vashila Hazel Tension, by Lord Cornelius Tension; 4, Dymment, on Lady Veeman, by Count Echo De Kol Keyes. Junior yearling heifer: 1 and 2, Haley, on Princess Fayne Colantha, by Grace Fayne 2nd Sir Colantha, and Homewood Fayne Cornelia, by Grace Fayne 2nd Sir Colantha; 3, Leuszler & Bollert, on Canadian Aggie Beauty, by Pietertje Hengerveld of Maple-side; 4, Manning & Sons, on Sunnybrook Victoria, by Lewis Lilly Rohelle Hartog. Senior heifer calf: 1, 2 and 3, Hulet, on Lady Pauline Colantha, by Prince Abbekerk Mercena, Perfection's Mercena, by Prince Abbekerk Mercena, and Madam Pauline Canary, by Prince Abbekerk Mercena. Junior heifer calf: 1, Haley, on Rose Fayne, by Grace Fayne Sir Colantha; 2 and 4, Snyder, on Rosalind Pontiac Abbekerk, by Pontiac Hengerveld Calamity Paul, and Mercena Pontiac Abbekerk, by Pontiac Hengerveld; 3, Hulet, on Jean Mercena Canary, by Shadelawn Count Canary. Senior and grand champion bull, Watson, on Homestead Colantha Prince Canary; junior champion bull, Sir Belle Fayne; senior and grand champion female, Dymment, on Cora Countess Echo; junior champion female, Haley, on Colantha De Boer; graded herd: 1, Hulet; 2, Haley; 3, City Dairy Farm; 4, Snyder. Breeder's herd: 1, Haley; 2, Hulet; 3, Snyder; 4, Dymment. Four animals get of one sire: 1, Haley; 2, Hulet; 3, Haley; 4, Snyder.

AYRSHIRES.—Many new exhibitors came forward and won considerable money and encouragement, while the veterans succeeded in winning a goodly share. Exhibitors.—Alex. Hume, Menie; A. S. Turner & Son, Ryckman's Corners; W. C. Stewart & Sons, Menie; H. C. Hamill, Box Grove; Frank H. Harris, Mt. Elgin; Sas. Begg & Son, St. Thomas; Jas. B. Ross, Streetsville; E. Dymment, Dundas; City Dairy Farm, New Lowell; J. L. Stansell, Straffordville; Wm. Thorn, Lynedock. Awards.—Bull, three years and over: 1, Turner & Son, on Lessnessock Forest King, by Lessnessock Sprightly's Heir; 2, Stewart & Sons, Springhill Cashier, by Lessnessock Dumary Lily; 3, Hume, on Auchenbrain Hercules. Two-year-old bull: 1, Hamill, on Helen's Monarch, by Lessnessock Royal Monarch; 2, Hume, White Duke of Springbank, by Pearl Stone of Glenora; 3, Turner & Son, Netherton King's Theodore, by Netherton King Arthur. One-year-old bull: 1, Stewart & Sons, on Crow Bay Boy of Menie, by Springhill Cashier; 2, Harris, on Duke of Wardene, by White Prince; 3, Ross, on Streetsville Boy of Menie, by Springhill Cashier; 4, Dymment, on White Prince Fernbrook, by Garclaugh Prince Fortune 2nd. Senior bull calf: 1, Hume, on Humeshaugh King, by Auchenbrain Hercules; 2, and 3, Turner & Son, on Captain of Springbank, by Lessnessock Forest King, and Royal Victor of Springbank, by Lessnessock Forest King. Junior bull calf: 1, Turner & Son, on Silver King of Springbank, by Lessnessock Forest King; 2, Stewart & Sons, on White Bob of Menie, by Springhill Cashier; 3, Hume, on Humeshaugh White Prince, by Auchenbrain Hercules. Cow, four years and over, in milk: 1, Hume, on Clerkland Kate 2nd, by Clerkland Rummy; 2, Tur-

ner, on Jessie, by Royal Scot; 3, Stewart, on Dewdrop Mine, by Rob Roy; 4, Thorn, on Dalpiddor Aggie, by Garclough Bob of the Bent. Cow, three years, in milk: 1, Stansell, on White Lass, by Carrick Lad of Donlands; 2 and 4, Dymment, Dairymaid Hickory Hill, by Haysmuir Milk Record, and Duchess Hickory Hill, by Haysmuir Milk Record; 3, H. C. Hamill, on Craigilla Jean, by Woodroppe Comrade. Cow, three years and upward, in calf, not milking: 1, Hume, on Bellsland Nan 4th, by Bellsland May King; 2, Dymment, on Lassie of Hillview 2nd, by Prince of Hillview; 3 and 4, Hamill, on Tulip of Craigville, by Woodroppe Comrade, and Annie Hume of Ingleside, by Lessnessock Royal Star. Two-year-old heifer: 1, Hume, on Spicy Lass, by Spicy Sam; 2, Harris, on Hazel, by Silver King; 3, Turner & Son, on Whitehill White Rose 3rd, by Whitehill Scott Again. Senior yearling: 1, Turner & Son, on Queen Flower of Springbank; 2, Hume, on Humeshaugh Kate, by Lessnessock Royal Monarch; 3, Harris, on Ivanhoe's Grace, by Ivanhoe of Tanglewyld; 4, Stewart & Sons, on Ayrshire Beauty of Menie, by Springhill Cashier. Junior yearling: 1, Harris, on Duchess of Hillcrest, by Advance; 2, Stewart & Sons, on White Heather 3rd, by Springhill Cashier; 3, Hume, on Humeshaugh Snowdrop, by Auchenbrain Hercules; 4, Hamill, on White Lady of Craigielea, by Woodroffe Comrade. Senior heifer calf: 1, Turner & Son, on Lady Floss of Springbank, by Lessnessock Forest King; 2 and 3, Turner & Son, on Doreen of Springbank, by Lessnessock Forest King, and Dons of Springbank, by Lessnessock Forest King; 4, Stewart & Son, on Blue Bell of Menie 2nd, by Springhill Cashier. Junior heifer calf: 1, Harris, on Springburn Valentine, by Ivanhoe of Tanglewyld; 2 and 3, Hume, on Humeshaugh Rose 2nd, by Sprightly's Spicy Sam, and Humeshaugh Belle 2nd, by Auchenbrain Hercules. Senior and grand champion bull: Turner & Son, on Lessnessock Forest King. Junior champion bull: Stewart & Sons, on Crow Bay Boy of Menie. Senior and grand champion female: Hume, on Clerkland Kate 2nd. Junior champion female: Turner, on Whitehill White Rose. Graded herd: 1, Hume; 2, Turner & Son; 3, Hume; 4, Harris. Breeder's herd: 1, Turner & Son; 2, Stewart & Sons; 3, Hume; 4, Harris. Four animals: 1, Dymment; 2, Turner & Son; 3, Stewart & Sons; 4, Harris.

JERSEYS.—Some very high quality Jerseys filled up the stalls in the dairy barns. Sultan's Raleigh was easily first in the aged bull class, and as easily won the championship of his breed. He is a noble bull, but could be a little stronger on the back. Brampton Cowslip Blue Bell, a two-year-old heifer, was senior and grand champion female. She is one of the sweetest heifers that ever went into the ring, and could win in any American company. A senior heifer calf, Brampton Stockwell Rose was junior champion.

Exhibitors.—David Duncan, Don; B. H. Bull & Son, Brampton; Josh Lawrence, Woodstock; J. B. Cowieson & Son, Queensville; W. N. McEachern & Son, Westhill; Thos. Russell, Downsview.

Awards.—Bull, three years and over: 1, Bull & Son, on Sultan's Raleigh, by Eminence Raleigh; 2, Duncan, on Eminent's Royal Fern, by Sensational Fern. Bull, two years old: 1, Cowieson, on King Fox of Queensville; 2, Bull, on Raleigh Duke, by Brampton Raleigh; 3, Lawrence, on Erdenheim's Majesty, by Royal Majesty; 4, Bull, on Brampton Raleigh Beam, by Brampton Blue Beam. Yearling bull: 1, Mc-

Eachern, on Brampton Stockwell A., by Brampton Stockwell; 2, Bull & Son, on Brampton Nap Plaisir, by Nap; 3, Bull, on Brampton Premier Oxford, by Combination Premier. Junior bull calf: 1 and 2, Bull & Son, on Brampton Karnak Chief, by Karnak's Chief, and Brampton Chief Manor, by Karnak's Chief; 3, Bull, on Brampton Stockwell John, by Brampton Stockwell. Cow, four years and over, in milk: 1, 2 and 3, Bull & Son, on Brampton Raleigh, Noblesse, by Noble of Tapon; Brampton Patricia, by Morny Cannon, and Brampton Astoria, by Astor; 4, Lawrence, on Fontaine's Belle of Dentonia by Blue Bell's Blue Fox. Cow, three years old, in milk: 1, 2 and 3, Bull & Son, on Brampton Lady Alice, by Foundation Stock; Brampton Wonder Beauty, by Harriett's Boy, and Brampton Czarina, by Cossock; 4, McEachern & Son, on Brampton Helen, by Fauxpas. Cow, three years and upward, in calf, not milking: 1 and 2, Bull & Son, on Brampton Cowslip Blue Bell, by Cowslip Golden Noble, and Brampton You'll Do Queen, by Oxford You'll Do. Two-year-old heifer: 1, 2, 3 and 4, Bull & Son, on Brampton Cowslip Blue Bell, by Cowslip Golden Noble; Brampton Bright Kathleen, by Viola's Bright Prince; Brampton You'll Do Queen, by Oxford You'll Do, and Brampton Bright Lass, by Viola's Bright Prince. Senior yearling heifer: 1, 2 and 3, Bull & Son, on Brampton Golden Fern's Blue, by Golden Fern's Noble, Brampton Dulcie, by Western King, Brampton Fern Beauty, by Golden Fern's Noble, and Queensville's Brunette, by Black Fox of Kirkfield. Junior yearling heifer: 1, 2 and 3, Bull & Son, on Brampton Sultana Faw, by Judy's Sultan, Brampton Pretty Gamba, by Combination Premier, and Brampton Florence, by Florence Boy; 4, Cowieson & Son, on Lady Fox, by Black Fox of Kirkfield. Senior heifer: 1, 3 and 4, Bull & Son, on Brampton Stockwell Rose, by Brampton Stockwell; Brampton Prim Plaisir, by Brampton Stockwell, and Brampton Stock Beam, by Brampton Stockwell. Junior heifer: 1 and 3, Bull & Son, on Brampton Princess Cute, by Viola's Bright Prince, and Brampton Princess Patricia, by Viola's Bright Prince; 2, Russell, on York Lodge Flossie, by Bright Prince. Senior champion female, Bull & Son, on Brampton Cowslip Blue Bell; junior champion female, Bull & Son, on Brampton Stockwell Rose; senior and grand champion bull, Bull & Sons, on Sultan's Raleigh; junior champion, Brampton's Golden Noble, also for bull. Graded herd: 1, 2 and 4, Bull & Son; 3, Cowieson. Breeder's herd: 1, Bull & Son; 2, Cowieson. Four animals the get of one sire: 1 and 2, Bull & Son; 3, Cowieson.

DAIRY TESTS.

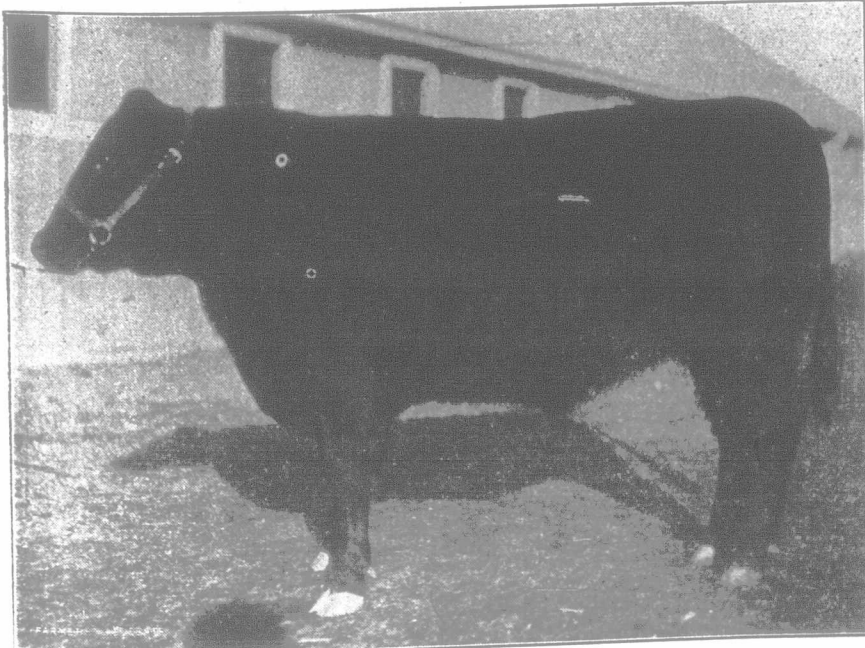
W. F. Walker, of Manchester, had the highest scorer in Madam B. 3rd Alma 2nd, an excellent four-year-old Holstein cow, sired by Sir Intia Scott.

Highest producing Ayrshire, A. S. Turner & Son, Ryckman's Corners first on Briery 2nd of Springbank.

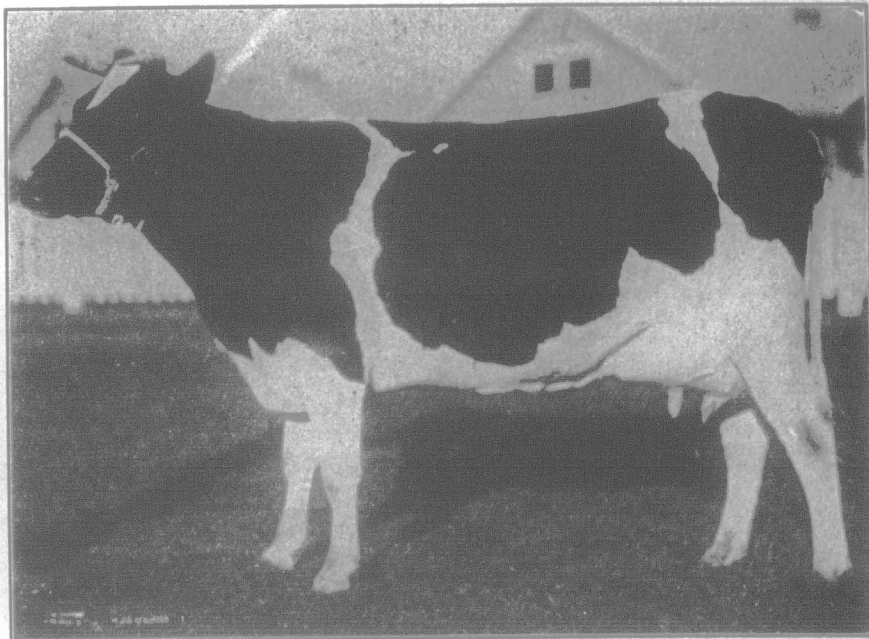
Jersey cow 48 months and over: 1, J. B. Cowieson, Queensville, on Lida, by Earl Denton, D. P. F. Cow 36 months and under 48: 1 and 2, Bull & Sons, on Brampton Wonder Beauty, by Harriett's Boy, and Brampton Czarina, by Cossock.

Fat Cattle.

At a show of this kind one likes to see the product of each breed come out finished, and finished well. The high prices are paid for breeding stock that they may produce good fat steers and heifers or males and females that will stock the country with exporters or good butcher cat-



Grand Champion Steer. Black Monarch. Owned by John Lowe, Elora, Ont.



Champion of the Milk Test. Madam B. 3rd Alma 2nd. Owned by W. F. Walker, Manchester.

the. Not only the breed is shown in these classes but the exhibitor's ability to feed and finish stands out as prominently as breed type or conformation. In every way the exhibits were gratifying to the management and interesting to the spectators.

SHORTHORNS.—The Shorthorns were naturally strongest in the straight breed classes of fat cattle and many good representatives came out. Exhibitors.—John Brown & Sons, Galt, Ont.; Wm. Marquis & Son, Uxbridge, Ont.; Thos. Russell, Downsview, Ont.; Jas. Stone, Saintfield; Geo. Ferguson, Salem; Francis W. Oke, Alvinston, Ont. Awards.—Steer, two years and under three: 1, John Brown & Sons, on Archer. Steer, one year and under two: 1, John Brown & Sons, on Mike; 2, Jas. Stone, on Mike; 3, Thos. Russell, on Roan Duke; 4, Wm. Marquis & Son, on Calista's Lady. Steer, under one year: 1, Geo. Ferguson, on Futteret; 2, Jas. Stone, on Ike; 3, Francis W. Oke, on Dainty.

HEREFORDS.—Only three animals came forward in this breed and they were steers under one year. First went to L. O. Clifford, Oshawa, on Prince; Henry Reed, Mimosa, took second on Teddy Jones, and Jas. Page, Tyrconnell, Ont., on Tyrconnell Boy.

ABERDEEN-ANGUS.—Only one animal showed in this class of fat cattle and that was Sir Guelph, a steer under one year of age, owned by Jas. Bowman, Guelph, Ont.

GALLOWAYS.—Galloway steer, two years and under three: 1, D. McCrae, Guelph, Ont.

GRADES, (ROSSES AND EXPORT STEERS.—For a beginning show, or, in fact, for any show, this line of stock was a creditable department. They show the results of crossing a pure-bred beef bull on a common or grade female, the get of which voices the adaptability and general popularity of that particular breed better than scores of pure-bred individuals of the breed could do. It is the character, stamped upon the general run of cattle throughout the country by male representatives of a breed, that gains for that kind of beef animal a reputation or relegates it to a subordinate place. Shorthorn blood predominated throughout these classes, but many of the winners gave strong evidence of Angus blood. An Angus bull crossed with a Shorthorn cow gave some of the very best individuals to show in the export steers and butchers classes. It is still slightly early to show highly finished stuff, but the classes came out strong and in good bloom. Exhibitors in export steers and butchers' steers.—Thos. Russell, Downsview, Ont.; Pritchard Bros., Fergus, Ont.; Hall & Robson, Washington; John Brown & Sons, Galt, Ont.; Jas. Leask & Sons, Greenbank, Ont.; Francis W. Oke, Alvinston; Wm. Marquis & Son, Uxbridge, Ont.; Joseph Stone, Saintfield; Kyle Bros., Drumbo, Ont.; John Barr, Blyth; Wm. E. Steen, Streetsville; Leo Chard, Lambton, Mills; E. Brien & Sons, Ridgeway; L. O. Clifford, Oshawa; Henry Reed, Mimosa; Jas. Bowman, Guelph. Awards.—Grades and crosses of any breed, steer, two years and under three: 1, Leask, on Roan Champion; 2, Brown & Sons, on King; 3, Hall & Robson; 4, Pritchard Bros., on Benny. Steer, one year and under two: 1, Lowe, on Black Monarch; 2, Russell, on Richard; 3, Leask, on White King; 4, Brown, on Favorite. Steer, under one year: 1, Lowe, on Hector; 2, Leask; 3, Kyle Bros., on Spring Valley Pride; 4, Stone, on Captain. Heifer, two years and under three: 1, Stone, on Lovely; 2, Leask, on Lily White; 3, Brown, on Daisy; 4, Steen, on Grey Beauty. Heifer, one year and under two: 1, Ferguson, on Daisy; 2, Stone, on Maggie; 3, Leask, on Kate; 4, Kyle Bros. Heifer, under one year: 1, Chard, on Flossie; 2, Leask, on Watson; 3, Stone, on Gem; 4, Leask, on Tib. Three export steers: 1, Brown; 2, Brown; 3, Russell; 4, Russell.

BUTCHERS' CATTLE.—Awards.—Steer or heifer, weighing 900 pounds and less than 1,000: 1, Lowe, on Hector. Steer or heifer, weighing 1,000 pounds and less than 1,100 pounds: 1, Ferguson. Steer or heifer, weighing 1,100 pounds and less than 1,300 pounds: 1, L. O. Clifford. Champion butchers' steer: Hector. Grand champion steer: Black Monarch. Black Monarch and Hector are both Shorthorn and Angus crosses with a Shorthorn for the dam. Black Monarch is a deep, low-set steer, and good where a finished steer should be. He carries a good depth of fleshing evenly laid on except along the back where there is a little unevenness. For a 22-months-old steer Black Monarch carries considerable weight and substance. He is a credit to the breed as well as to Mr. Lowe who reared him to such a high state of perfection.

Poultry.

The building known to visitors at the September Canadian National as the Horticultural Building covered a vastly different exhibit from that at the fall show. Over 5,500 of the feathered tribe were conveniently exhibited in the light, well-ventilated and spacious building—undoubtedly the greatest show of its kind ever held in America and in the best quarters ever al-

located to the plumed beauties. The quality of the exhibit was good throughout, but owing to the earliness of the season some of the birds had not altogether recovered from the moult. Another two or three weeks will make a big difference with these. White Leghorns, as is often the case at our leading shows, were most numerous. All the utility classes were exceptionally strong, and all the American breeds made a great showing. The Asiatics were said by fanciers to be the strongest classes of the breeds ever seen in a Canadian show. Barred Rocks were an extra choice lot, and White, Silver, Buff and Black Wyandottes were numerous and of high quality. United States fanciers exhibited in large numbers and it was a "great show."

The Dominion Department of Agriculture had an extensive educative exhibit. In coins which looked like gold they represented the value of Canada's egg crop as compared with some other staple products. Here are the figures representing annual production. Eggs, \$22,475,000; corn, \$14,510,800; barley, \$14,606,000; fruit, \$11,600,000. Truly a great industry is egg production and yet it is often sadly neglected. Besides showing how to candle and grade eggs and explaining the different grades two sets of miniature buildings and highway and rural routes were shown depicting the right and wrong way to handle and market eggs. In the distance was, in the right way, a good poultry house from which the eggs were gathered regularly, handled carefully, and marketed quickly to the country store, where they were candled, bought on the quality basis, sent to a country depot, kept under cover, handled quickly and carefully and shipped to the city depot, again kept covered, quickly despatched to the wholesaler and to the retailer and delivered in cartons promptly to the consumer. The other route showed a poor house, neglected poultry and surroundings, rough handling, slow transportation, no candling, eggs sold case count, handled in a blazing sun with slow and tardy delivery. The result in the first case a good egg, in the latter a bad egg.

A coop around which large crowds gathered contained the group of White Leghorns which won the first International egg-laying contest in British Columbia which lasted twelve months. These birds are now valued at \$1,000.

Space does not permit a detailed account of the prize winners. There were so many exhibitors that it would take columns to publish the results.

Fruit, Flower and Honey Show.

The exhibit of fruit, flowers and honey was held, this year, in the Transportation Building. This building has been the scene of many fine exhibits on prior occasions, but no event has ever produced such a picture as was displayed in this arrangement of flowers, fruit and honey. The Horticultural Exhibition since its inception has been domiciled in several buildings, but no building until this year has given opportunity for such an arrangement of the exhibits that visitors could see all the exhibits without having them concealed by others larger and more conspicuous. At the time the Horticultural Exhibition was inaugurated barrels and plates as well as some individuals were the chief form of exhibit, but now the box has almost entirely replaced the barrel at the exhibition, as it gives promise of doing in Canadian markets. This year upwards of 2,300 boxes were on exhibition, while only 63 barrels of apples could be found in the whole building. The center of the building was taken up chiefly with individual and plate exhibits; no less than 600 plates of apples were arranged on the tables down the center, interspersed here and there with beautiful bouquets of chrysanthemums and other cut flowers. Grapes and pears had been preserved in such a way that they looked quite fresh during the fore part of the exhibition. Although the number of boxes and quantity of fruit did not quite come up to that of previous years, yet there was a color and appearance to the whole exhibition that made it look to be the most finished and high-class exhibition that was ever held. To the casual observer the quality looked to be superb, but upon closer inspection one could see that it was difficult to procure that faultless apple or box of apples that some growers are striving for. As it is with live stock, so it ever will be with fruit. Perfection may never be attained, but the general run will be improved and this in fact the Horticultural Exhibition with its associated interests can look back upon as having accomplished with no small degree of success. It is well to have an ideal or model by which to guide, but let the prime and ultimate purpose be to improve Canada's pack throughout, as the poet said, "Make no more giants, Lord, but elevate the race at once."

Growers do not come out and advertise as they should the apple which they are growing as

a product of the farm and which must be sold. Owing to a peculiar condition throughout America, largely on account of the pack and quality of apples offered for sale, citrus fruits and bananas have replaced the apple on the table, where it naturally should hold sway, and it seems necessary to place before the consuming public the advantages and the superiority of the apple as a dessert fruit. It therefore behooves the apple growers of Ontario and Canada to do all they can to advertise the apple and place it foremost amongst the necessities for home consumption.

The exhibit around which the most intense interest is centered by apple growers and fruitmen is the 300-box exhibit; quality, pack and variety of apples all figure in the judgment of these exhibits. Northumberland and Durham Apple Growers' Association won from Oakville Fruit Growers' Association in this important event, although for quality of fruit, especially color, the Oakville exhibit was slightly superior, but the pack could be criticized as being a little slack. In contra-distinction to this the Northumberland and Durham apples were so sorted and graded that the same pack of 3-2, diagonal, was used in every box and in every layer so that exactly twenty apples were in each layer with five layers in each box, making 100 apples in each box as packed.

Anyone acquainted with the operation of box-packing will understand the endless work and diligence required to procure apples of the same size that they may be packed in this way, and considering the work and attention given to them Northumberland and Durham was worthy of the prize. In the 100-box exhibit Northumberland and Durham Apple Growers' Association won on Baldwins from the St. Lawrence Valley Apple Growers' Association, who had a large exhibit of McIntosh Reds complete. Grey County was third in the 100-box exhibit. In the 50-box class Oakville Fruit Growers took first on Spies, with Brant County Fruit Growers a close second. In 50-box Kings, Oakville first; 50 boxes of Baldwins, Oakville first; 20 boxes Spy, first, Northumberland and Durham; second, W. L. Hamilton, Collingwood; 20 boxes of Greenings, W. L. Hamilton; 20 boxes of Baldwins, Northumberland and Durham. Halton County and Northumberland and Durham were the largest contributors to the fruit show. Oakville Fruit Growers of Halton County had over 700 boxes on exhibition and received a large number of prizes. Their five boxes of Baldwins were so uniform in size, so brilliant in color and superb in quality that one can safely say they are the best five boxes of Baldwins ever shown on exhibition in Canada. The ten boxes of Kings were also worthy of mention, not the large, rough, over-grown King that is commonly boxed as the No. 1 or fancy, but the medium size, smooth, bright colored, red apple filled up the ten boxes and made a very attractive exhibit.

Northumberland and Durham took \$485.00 in prize money, being first in the 300-box, the 100-box, 20-box Spy, 20 boxes of Baldwins, 10-box Snow and single box Cranberry, Greening, Spy, Talman and McIntosh, as well as having the sweepstake single box. The apple growers of these united counties, with the assistance of R. S. Duncan, are doing much to raise the standard of the apple and in a small booklet containing 160 receipts place its uses before the consuming populace. This, with the products of their demonstration orchards, together show how good fruit may be produced and economically consumed.

Most unique and attractive from a display viewpoint was the fac-simile of Peel County, executed in products of the orchard, soil and field. The whole county and its various resources were graphically displayed, while the good roads, tram roads, electric power and industrial resources were set forth in miniature as by an artist.

The Dominion Fruit Branch gave demonstrations morning and afternoon, and with their exhibit, in charge of P. J. Carey, showed in all about twenty different packs and the technique of the operation of putting up an attractive, saleable article.

A large exhibit of honey, including about 1,000 jars erected by the Ontario Beekeepers' Association, gave tone and color to the whole scene, and it was interesting indeed to those who do not carry their prejudices for the honey bee into the pleasant moments of a repast. In addition to the brilliant display of bottled honey, there were over 750 jars of preserved and canned fruits. This profusion of colors helped to blend fruit and vegetables with the flowers in such a way as to form a most attractive display.

The success of this show of fruit has been hammered out by the secretary, P. W. Hodgetts, who has watched it from its infancy and raised it to the high state of perfection which it has at last obtained.

The remainder of this report, including beef cattle, sheep and swine, will appear next week.

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.

Receipts at the Union Stock-yards, West Toronto, on Monday, Nov. 24, were 180 cars, comprising 2,718 cattle, 1,373 hogs, 900 sheep and lambs, 239 calves, and 25 horses. Trade was active and prices strong in every department. Best butchers', \$7.50 to \$7.75; good, \$7 to \$7.25; medium, \$6.25 to \$6.60; common, \$5 to \$5; stockers, \$5 to \$6.25; feeders, \$6.25 to \$6.75; milkers, \$6.5 to \$1.25; calves, \$5 to \$10.50. Sheep, \$5 to \$5.75; lambs, \$8 to \$8.75. Hogs were cheaper, at \$8.50 fed and watered, and \$8.25 f. o. b. cars.

REVIEW OF LAST WEEK'S MARKETS

The total receipts of live stock at the City and Union Stock-yards for the past week were :

	City.	Union.	Total.
Cars	23	551	574
Cattle	627	9,594	10,221
Hogs	82	7,484	7,566
Sheep	257	5,996	6,253
Calves	14	989	953
Horses	—	2	2

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

	City.	Union.	Total.
Cars	69	402	471
Cattle	690	5,176	5,866
Hogs	1,060	8,349	9,409
Sheep	1,564	7,122	8,686
Calves	66	433	499
Horses	—	36	36

The combined receipts of live stock at the two yards for the past week, show an increase of 103 cars, 4,355 cattle, and 454 calves; but a decrease of 1,843 hogs, 2,433 sheep and lambs, and 34 horses, in comparison with the corresponding week of 1912.

Receipts for the past week were moderately large. The quality of the bulk of the fat cattle was common to medium, the number of good to choice being very small in comparison with the lower grade, and not enough to supply the demand. While prices were very firm, they were not materially changed from those of the previous week. Prices for sheep and calves were steady, but very firm, but lambs were higher, having again passed the \$8 mark, some having sold at \$8.20, but the bulk ranged from \$7.75 to \$8. Hogs, at the beginning of the week, sold at \$8.90 to \$9 fed and watered, but at the close of the week prices had receded, and \$8.75 was the current price. There were many buyers for cattle from the United States, there being representative men from New York, Baltimore, Buffalo, Detroit, and Chicago, who took a large percentage of the stockers and feeders.

Exporters.—There were few cattle of export weights and quality offered, not more than four or five loads during the week, and these were reported as being sold at \$7.75 to \$8; and a small bunch of five steers, 1,425 lbs. each, of very choice quality, were reported sold at \$8.25. All of these were taken by the local abattoirs.

Butchers.—Choice butchers' steers sold at \$7.50 to \$7.75; choice heifers, \$7.25

to \$7.50; good, \$6.60 to \$6.85; medium, \$6 to \$6.50; common steers and heifers, \$5 to \$5.75; choice cows, \$6 to \$6.50; good cows, \$5.25 to \$5.50; common cows, \$4 to \$4.25; butcher bulls, \$5 to \$5.50; export bulls, \$6 to \$7; bologna bulls, \$4.25 to \$5.

Feeders and Stockers.—The demand for stockers and feeders was undiminished, and prices were very firm all round, for all classes of stockers and feeders. Choice feeders, 1,000 to 1,100 lbs., sold at \$6.40 to \$7, the latter price being paid three times during the week for extra quality cattle; steers 900 to 1,000 lbs., sold at \$5.70 to \$6; steers 700 to 800 lbs., \$5 to \$5.80, and some choice yearling steers of good quality and colors, brought \$6 to \$6.25, which hitherto have been unheard of prices; Eastern, rough, stock heifers, \$4.50 to \$4.75.

Milkers and Springers.—Demand continued to center on good to choice milkers and close-up springers. Such sell at firm to strong prices, being very scarce. Many of these sold at \$70 to \$80, with choice to extra, big producers of milk, at \$90 to \$110 each, and in one or two instances during the week \$115 and \$135 was paid.

Veal Calves.—The demand for veal calves has been greater than the supply during the week, and prices have been very firm. Choice veals sold at \$9 to \$10.50; good, \$8 to \$9; medium, \$7 to \$8; common, \$6 to \$7; rough, Eastern calves, \$4.60 to \$5.50.

Sheep and Lambs.—The market for sheep and lambs was stronger, especially for lambs. Sheep, ewes sold at \$4.50 to \$5.50; culls and rams, \$2.50 to \$4; lambs sold from \$7.60 to \$8.20, the bulk going at \$7.75 to \$8.

Hogs.—Receipts at no time during the week have equalled the demand, and prices have had a wide range on different days of the week, according to the supply. On Tuesday, an outside buyer who wanted five decks of hogs caused prices to advance 25c. per cwt., hogs selling at \$9 fed and watered. On Wednesday, there being no outside demand, prices declined, and \$8.75 was the price paid for hogs fed and watered.

BREADSTUFFS.

Wheat.—Ontario, No. 2 red, white or mixed, new, 80c. to 82c., outside; 85c., track, Toronto. Manitoba, No. 1 northern, 90c.; No. 2 northern, 89c.

Oats.—Ontario, new, white, 33c. to 34c., outside; 35c. to 36c., track, Toronto. Manitoba oats, No. 2, 39c.; No. 3, 38c., lake ports.

Rye.—No. 2, 61c. to 62c., outside.
 Peas.—No. 2, 83c. to 85c., outside.
 Buckwheat.—No. 2, 52c. to 53c., outside.

Corn.—American, No. 3 yellow, 77c., Midland; 82c., track, Toronto.

Barley.—For malting, 56c. to 58c.; for feed, 48c. to 46c., outside.
 Flour.—Ontario, ninety-per-cent. winter-wheat patents, new, \$3.60 to \$3.70, bulk, seaboard. Manitoba flour.—Prices at Toronto are: First patents, \$5.50; second patents, \$5; in cotton, 10c. more; strong bakers', \$4.80 in jute.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, No. 1, \$14 to \$15; No. 2, \$13 to \$14.
 Straw.—Baled, car lots, track, Toronto, \$8 to \$9.

Bran.—Manitoba bran, \$22 to \$23, in bags, track, Toronto; shorts, \$24 to \$25; Ontario bran, \$22, in bags; shorts, \$24; middlings, \$24.

HIDES AND SKINS.

No. 1 inspected steers and cows, 18c.; No. 2 inspected steers and cows, 12c.; No. 3 inspected steers, cows and bulls, 11c.; city hides, flat 14c.; country hides, cured, 13c.; calf skins, per lb., 16c.; lamb skins and pelts, 60c. to 90c. each; horse hair, 35c. to 38c. per lb.; horse hides, No. 1, \$3.50 to \$4; tallow No. 1, per lb., 5 1/2c. to 7c.

TORONTO SEED MARKET.

Alsike, No. 1, per bushel, \$8.50 to \$9.25; alsike, No. 2, per bushel, \$7 to \$8; alsike, No. 3, per bushel, \$5 to \$5.50; timothy, No. 1, per bushel, \$2.75 to \$3.25; timothy, No. 2, per bushel, \$2 to \$2.50; red clover, per bushel, \$6.00 to \$7.00.

COUNTRY PRODUCE.

Butter.—Market steady, but firm. Creamery pound rolls, 28c. to 31c.; creamery solids, 27c. to 29c.; separator dairy, 27c.; store lots, 20c. to 25c.

Eggs.—New-laid, 40c.; cold-storage sections, 34c.; cold storage, 30c. to 31c.

Cheese.—Old, large, 15c.; twins, 15 1/2c.; new, large, 14c.; twins, 14 1/2c.

Honey.—Extracted, 10c. to 11c.; combs, per dozen sections, \$2.50 to \$3.

Potatoes.—Ontario potatoes, car lots, track, Toronto, 80c. per bag; New Brunswick Delawares, car lots, track, Toronto, 90c. per bag.

Poultry.—Receipts continue liberal, but the quality, as a rule, is much improved. Prices rule about steady. Turkeys, alive, 17c. to 18c.; geese, 10c. to 11c.; ducks, 12c. to 14c.; chickens, 13c. to 14c.; hens, alive, 10c.

Beans.—Imported, hand-picked, \$2.25 per bushel; Canadians, hand-picked, \$2.10 to \$2.25; primes, \$1.65.

FRUITS AND VEGETABLES.

There was a plentiful supply of all kinds of seasonable fruits and vegetables. Apples in box, Spies, \$2; Baldwins, \$2; Kings, \$2; Greenings, \$1.75; Canadian onions, 75-lb. bag, \$2; cabbages, per case, \$1.25; turnips, 60c. per bag; beets, 75c. to 85c. per bag; carrots, 75c. to 85c. per bag; parsnips, 85c. to \$1 per bag; Canadian celery, 40c. per dozen; grapes, 35c. to 50c. per basket.

Montreal.

Live Stock.—The local cattle market continued very firm in tone, and an active trade was going on in lower grades. Bulls were selling from 3 1/2c. to 4 1/2c. per lb., while culling cows ranged from 3 1/2c. to 3 3/4c. Export was still going on to the United States. Choice stock was very scarce, and sales were made at 7 1/2c. to 7 3/4c. per lb., while fine stock sold at 7c.; good at 6 1/2c. to 7c.; medium at 5 1/2c. to 6 1/2c., and common down to about 4 1/2c. per lb. The supply of sheep and lambs was fairly liberal. Western lambs sold at 7 1/2c. to 7 3/4c. per lb., and Eastern at 7c. to 7 1/2c. per lb. Sheep sold at 4 1/2c. to 5c. per lb. The demand for calves was somewhat lighter, and receipts showed a falling off. Grass-fed stock was taken by the United States at 3 1/2c. to 4 1/2c. per lb., while local butchers were taking milk-fed stock at 5 1/2c. to 7 1/2c. per lb. Selected hogs sold at 9 1/2c. to 9 3/4c. per lb., while straight lots sold at 9c. to 9 1/2c., weighed off cars.

Horses.—Both demand for, and offerings of horses, were fairly liberal, and prices held steady. Heavy draft horses, weighing from 1,500 to 1,700 lbs., sold at \$300 to \$350; light draft, 1,400 to 1,500 lbs., \$225 to \$300; broken-down, old animals, \$75 to \$125, and choicest saddle and carriage animals, \$350 to \$500 each.

Dressed Hogs.—There was little change in the market for dressed hogs. Prices held about the same as the previous week, being, however, a small fraction less.

Potatoes.—The market held quite steady. Supplies were fairly liberal, and the weather was favorable to shipments. Quite a quantity of stock was received here lately. Green Mountains were 85c. to 90c. per bag, ex track, and Quebecs 75c. Jobbing prices were 10c. to 15c. higher, ex store. Bags weigh 90 lbs.

Honey and Syrup.—White-clover comb was 15c. to 16c. per lb.; extracted, 10 1/2c. to 11 1/2c.; dark comb, 18c. to 14c., and strained, 7 1/2c. to 8 1/2c. per lb. Tins of maple syrup sold at 9c. to 10c. per lb., while syrup in wood was 7c. to 8c., and maple sugar was 9c. to 10c. per lb.

Eggs.—The market for eggs was exceptionally high for the time of year, and the tendency of prices will continue upwards. Quotations last week were higher than the previous week, being 48c. to 50c. for strictly fresh eggs; 35c. to 36c. for selected eggs; 31c. to 32c. for No. 1 candled, and 25c. to 26c. for No. 2.

Butter.—The price of creamery butter was steady, and no change was made in quotations. Choice makes were 28c. to 28 1/2c. per lb., wholesale; fine butter was 27 1/2c. to 27 3/4c., while second grades were 27c. to 27 1/2c. Dairy butter was firm at 23c. to 24c. per lb.

Cheese.—Prices of cheese were steady and firm. Western, September, colored, was 13 1/2c. to 13c. per lb., and white, 13 1/2c. to 13c. October, Western cheese, sold at 13 1/2c. to 13c. for colored, and 13 1/2c. to 13c. for white.

Grain.—The prices of oats held steady. No. 2 Canadian Western oats were 40 1/2c. per bushel, ex store; No. 3 were 39c. to 39 1/2c., while No. 2 feed sold at 38 1/2c.

Argentine corn was 79 1/2c. to 79 3/4c. per bushel, ex store.

Flour.—The market was steady. Manitoba first-patent flour was quoted at \$5.40 per barrel, in bags, seconds being \$4.90, and strong bakers' \$4.70. Ontario winter-wheat flour was unchanged, at \$4.75 to \$5 for patents, and \$4.50 to \$4.60 per barrel, in wood, for straight rollers.

Milfeed.—Bran sold at \$21 per ton, and shorts at \$23 in bags, while middlings were \$26, including bags. Mouille was \$29 to \$30 per ton for pure, and \$27 to \$28 for mixed.

Hay.—The market for hay was very firm. No. 1 pressed hay, car lots, Montreal, on track, was \$16 to \$17 per ton; No. 2 extra was \$15 to \$15.50, and No. 2 was \$14 to \$14.50 per ton, ex track.

Hides.—The price of hides was quite firm, and there was no change. Beef hides were 12c., 13c. and 14c. for Nos. 3, 2 and 1, respectively; calf skins were 15c. and 17c. per lb. for Nos. 2 and 1, and lamb skins, 65c. each, with horse hides ranging from \$1.75 for No. 2, and \$2.50 each for No. 1. Tallow sold at 1 1/2c. to 3c. per lb. for rough, and 5c. to 6 1/2c. for rendered.

Buffalo.

Cattle.—Choice to prime native steers, \$8.50 to \$9.75; Canadian steers, \$8.50; best shipping steers, Canadians, \$8 to \$8.25; fair to good weight steers, \$7.85 to \$7.60; fair to good shipping steers, \$7.25 to \$7.50; best handy-weight butcher steers, \$7.75 to \$8; choice to prime fat cows, \$5.75 to \$6.50; good butcher cows, \$6.25 to \$6.50; canners and cutters, \$3.50 to \$4.25; best heifers, \$6.75 to \$7; medium to good heifers, \$6 to \$6.25; common to fair, \$5.25 to \$5.85; selected feeders, dehorned, \$7 to \$7.25; fair to good, \$6.25 to \$6.50; yearling stockers, \$6.40 to \$6.75; good to best stockers, \$5.75 to \$6.25; fair to good, \$5 to \$5.50; common stockers, \$4 to \$4.50; heavy bulls, \$6.75 to \$7; best butcher bulls, \$6.50 to \$6.75; bologna bulls, \$5.75 to \$6.25; stock bulls, \$5 to \$5.75; milkers and springers, \$4 to \$10.

Hogs.—Heavy, \$7.80 to \$7.90; mixed, \$7.75 to \$7.80; Yorkers, \$7 to \$7.80; pigs, \$6.75 to \$7; roughs, \$7 to \$7.25; stags, \$6.50 to \$7; dairies, \$7.50 to \$7.75.

Top lambs, \$7.25 to \$7.40; yearlings, \$5.50 to \$7.25; wethers, \$5 to \$5.15; ewes, \$4.25 to \$4.50.

Chicago.

Cattle.—Beeves, \$6.65 to \$9.60; Texas steers, \$6.50 to \$7.65; stockers and feeders, \$4.80 to \$7.50; cows and heifers, \$3.25 to \$8.20; calves, \$6.50 to \$10.
 Hogs.—Light, \$7.20 to \$7.75; mixed, \$7.35 to \$7.85; heavy, \$7.80 to \$7.85; rough, \$7.80 to \$7.45; pigs, \$5 to \$6.90.
 Sheep and Lambs.—Native, \$3.90 to \$5.05; yearlings, \$5.15 to \$6.25; lambs, native, \$5.85 to \$7.40.

Cheese Markets.

Campbellford, Ont., 12 1/2c.; Kingston, Ont., 12 1/2c.; Brockville, Ont., 12 1/2c.; Nap- anee, Ont., 12 1/2c.

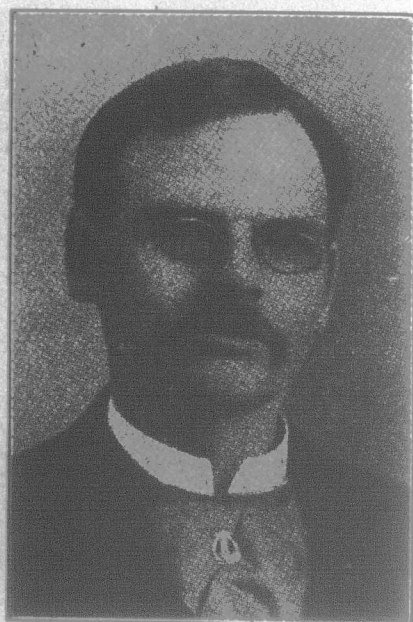
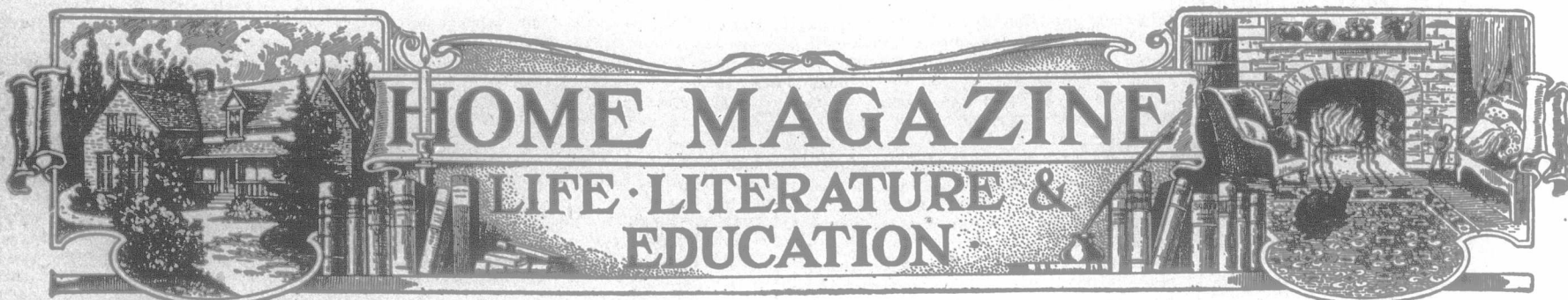
Trade Topic.

RAILWAY RATES TO THE WINTER FAIR, GUELPH.

From stations in Ontario, Kingston, Sharbot Lake, Renfrew and West, but not west of Azilda, the general public may purchase round-trip tickets for single fare (with minimum charge for ticket, 25 cents), from December 9th to 11th, 1913, inclusive; good to return up to, and including, December 13th, 1913.

From all stations in Canada, east of and including Port Arthur, Sault Ste. Marie, St. Clair and Detroit Rivers, on surrender of standard form of judges' and exhibitors' certificates, signed by E. W. Wade, Secretary, exhibitors and judges may purchase round-trip tickets for single fare (with minimum charge for ticket, 25 cents), from December 5th to 12th, inclusive. Return limit December 16th, 1913.

A. Farewell, Oshawa, Ont., is advertising in this issue young bulls, sons of the great King Segis Walker. Look up his advertisement and write him for photo- and description.



Dr. Wilfred Campbell.

Canadian Poets.

(By Clayton Duff.)
THE OTTAWA SCHOOL.
(Continued.)

The other members of what is sometimes known as "The Ottawa School" are Wilfred Campbell and Duncan Campbell Scott. The former holds an important position in the Department of Indian Affairs, while Mr. Campbell, no doubt, finds his post in the Dominion Archives a congenial one, as part of his literary activities have been of an historical nature, notably the "History of the Scotaman in Canada," written in collaboration with Prof. Bryce.

Wilfred Campbell has a distinguished reputation, but it must be said that there is a dryness in much of his work, not altogether due to a somewhat gloomy cast of thought. A melancholy mood need not detract from a poet's charm, as may be seen in the case of Phillips Stewart; but Campbell sometimes lacks that "magical diction" with which another Canadian poet has been credited, and a number of mannerisms, such as the use of unusual compound words, often give an air of artificiality to his lines.

Campbell was educated for the ministry of the Church of England, and while he did not continue in that calling, its influence may perhaps be traced in the somewhat didactic tendency of his poetry. The reader is apt to resent the tone of reproach that he often adopts; but while he is inclined to be peevish and the joy of living is not conspicuous in his writings, he is not a pessimist in reality, because he has hopes of better things toward which he urges mankind.

Campbell is a versatile poet, and has experimented in many forms of verse from the brief lyric to the metrical drama, drawing his materials from sources that indicate wide sympathies and interests. His narrative poems are mostly on sombre themes, and of these, the most powerful and dramatic is "Ahmet," extraordinary in its atmosphere of desolation. "The Mother" has been called the most remarkable of Canadian poems, but Isabella Valancy Crawford has treated a similar theme in "The Mother's Soul," and made it, if not so passionate, equally touching, and superior in poetic charm. One of Campbell's strongest conceptions is "The Blind Caravan," which symbolizes the progress of humanity through time, led on by the great souls of the ages. To the sightless hosts behind, from these

brave beings in the van is whispered back the hope and cheer that keep them struggling on.—

"A strange, glad joy that fills the night
Like some far marriage horn,
Till every heart is filled with light
Of some belated morn."

Characterized by the same grandeur of thought is the "Ode to Halley's Comet," but in contrast to the sombre feeling that marks "The Blind Caravan" the Ode is inspiring in its recognition of the worth of man's spirit in comparison with the most tameless and infinite forces of nature.

His patriotic poetry, of which "England" and "Mafeking" are two stirring examples, is more martial in spirit than that of Roberts. His nature poetry is inclined to be abstruse, and perhaps Campbell comes closest to us in those spontaneous lyrics in which he forgets his moral and intellectual responsibilities and becomes one of "Nature's Children"—in the woods or the spring fields or by his beloved lakes or among the meadow's weeds, of which he tells us in, "An August Reverte":

"I may not know each plant as some
men know them
As children gather beasts and birds to
tame,
But I went 'mid them as the winds
that blow them
From childhood's hour and loved with-
out a name.
There is more beauty in a field of weeds
Than in all blooms the hot-house garden
breeds.

"For they are Nature's children; in
their faces
I see that sweet obedience to the sky
That marks these dwellers of the willing
places
Who with the season's being live and
die;
Knowing no love but the wind and sun
Who still are Nature's when their life is
done.

"They are a part of all the haze-filled
hours
The happy, happy world all drenched
with light
The far-off climbing click-clack of the
mowers,
And yon blue hills whose mists elude
my sight,
And they to me will ever bring in
dreams
Far mist-clad heights and brimming
rain-fed streams."

Little Trips Among the
Eminent.Canadian History Series.
THE ABORIGINES.

In our last journeys we paused to look on at the scene that wrung the heart of Quebec upon that sad Christmastide of so long ago, when, amidst the snow, the body of Champlain, best friend of New France, was laid away in the little grave beneath the rock by the St. Lawrence.

Let us now turn to look for a time upon the new world, as it was in his day, that new world which had been for so many weary years the object of his great hopes, as it had been the scene of his many disappointments.

As from a point far above, let us look down upon it, and what do we see? . . . Stretching from ocean to ocean, upheld by mighty mountain-ribs on the one side and the other, a great continent, "shaggy" it is true, yet filled with promise greater far to these old explorers, could they but see it, than the

longed-for waterway to China of which they have dreamed. . . . See to the westward vast prairies over which countless herds of buffalo browse in peace, or run with thunderous tread. See the mighty Mississippi, with its tributaries, interlacing like silver threads the prairies to the west, the forests to the east. See the great St. Lawrence, the vast lakes, vaster than any others that are. See the endless forests covering the eastern portion of the continent with a sea of tree-tops.—Forests everywhere: in the far South where the tropical vegetation grows thick and dank, and slimy serpents glide beneath the flowers that glow like flames; in the great central belt where grow stately elm and maple and beech and birch; on through the far North, where the dark growth of pine and spruce dwindles off into the mosses and snows of the Arctic.

Yes, forest everywhere, for the few Indian clearings and river-meadows are scarcely distinguishable in the vast sea of leafage; while scarcely more so, and then but by reason of their strange incongruity in this continent of Nature's own, are the scattered settlements where the white men, one day to dominate this vast area, have placed their feet, apparently so feebly, but really with such portent to the new world;—the few Spanish ports to the South; the little settlements of English and Dutch in Virginia and on the Hudson; the lone posts along the coast of Acadia, and at the great rock of Quebec, and far inland at Montreal.

And the native population of this great land?—Red men everywhere, divided into a myriad of tribes; building their rude houses; fishing and hunting in their primitive way; fighting their battles; looking upon the white men, for the most part, with suspicion; g'iding silently beneath the trees; watching, wondering, sometimes wreaking vengeance swift and cruel.

Upon but a few of these tribes, however, in the study of Canada, is it necessary to touch especially,—the Algonquin tribes scattered over all the country, from Cape Fear to the Arctic; the Hurons, whose home lands were the districts lying toward the great lake known by their name; and the Iroquois, occupying chiefly the country skirting Lake Erie and the St. Lawrence to the southward.

In the complete story of America, wherever we shall find it, we may read of many nations: the Abenaki's of the Penobscot, the tribes of the great West, the Micmacs of Nova Scotia, the Montagnais of the Saguenay district, the Nipissing and Petite Nation of the Ottawa, the Tobacco nation of the Blue Mountains of Ontario, and many others,—but most of these are connected with the three great divisions to which reference has been made. Of these the Algonquins were by far the most numerous, and were usually allied with the Hurons; the Iroquois, on the other hand, were, owing to their superior organization, the most terrible in war.

The true name of the Hurons appears to have been Ouendat, corrupted to Wyandot, the name "Huron" having been derived, so it is said, from the exclamation of some Frenchmen on first seeing them—"Quelles hures!" (What heads of hair!) an exclamation provoked by the grotesque way in which the Hurons of that day dressed their dusky locks.

This tribe, as has been seen when following the career of Champlain, had achieved a comparatively high state of civilization. In 1639 they had made clearings for agricultural purposes, and had thirty-two villages made up of seven hundred dwellings, chiefly in the country east of the Georgian Bay. Some of their dwellings were fifty yards long, and

all were built after the same pattern, with a pole frame-work and back covering. Upon each side were built wide platforms, four feet from the floor, which served as beds, and along the eastern floor, midway between the beds, the fire were built, the smoke escaping through a long aperture in the roof,—that is, when it was not swirling into the eyes of the long-suffering inhabitants.

The way in which the land was cleared was unique; branches were hacked off, piled about the trunks of the trees, and set afire, the process being repeated until the tree fell. When enough had been burned away, the squaws sowed corn, pumpkins, beans, sunflowers, tobacco, and hemp.

In the Iroquois country an even higher point of advancement had been reached, for besides cultivating tracts of land and living in "long houses" in palisaded towns, they had also a sort of organized government. Each tribe, it is true, lived in a separate village, and each had its own council, but at times of crisis there was a general council to which the sachems and chiefs of all the villages adjourned. This great council was usually held in the valley of the Onondagas, the tribe which had custody of the wampum, or "mnemonic record of their structure of government." The wampum, by the way, was both currency and decoration. It was made of shells, skilfully cut and woven into strings and belts, those used as records for the tribes being in the keeping of skilled men, who alone could decipher and explain.

The Iroquois were made up of Five Nations (later six) in all: The Seneca or Great Hill People; the Cayuga, or People of the Marsh; the Onondaga, or People of the Hills; and the Mohawk, or Possessors of the Flint. Like most other Indians of that time, they were charitable and hospitable among themselves, as a rule, but ferocious to enemies, and given to practices of torture (chiefly on prisoners taken in war) unsurpassed for cruelty. Like most other red men of the time, too, they were brave, though treacherous, in battle, eloquent in council, and stoical in distress, even under torture. Their general councils, however, gave them a concentration unknown among other tribes of the North, and so, as we are told, "The fear of the Iroquois was everywhere."

In summer, among all the tribes, very little clothing was worn. In winter, garments made of skin, often elaborately embroidered with quills of the porcupine, were donned, with robes of beaver or otter for occasions of ceremony. When in full war-dress, and especially when equipped for battle, the braves were accustomed to painting themselves with ochre, soot, and the juice of berries.

Their division of labor was as the laws of the Medes and Persians, the men hunting, building the houses, and making the weapons, pipes, and canoes, while the women carried the loads on the march, cultivated the land, and did the work of ordinary service.

Most of the Indians were inveterate gamblers, and Brebeuf, among the incidents noted in his journal, has recorded that upon one occasion, in midwinter, with the snow nearly three feet deep, the men of his village, near the Georgian Bay, returned from a gambling visit, "bereft of their leggins and barefoot, yet in excellent humor."

They were greatly given to feasts, and almost anything served as an excuse for one. It has been told that often, among the Hurons, an over-zealous host would spend all he had on a single supper. If the feast chanced to be religious, then it was necessary to eat every morsel of the portion given one, and sometimes the blessing to come was supposed to depend upon the speed with which the



vians disappeared. As a result, death sometimes ensued. Cannibalism was sometimes resorted to when prisoners were taken in war.

As with all other primitive peoples, there was some idea of an after-world, but when the missionaries first went among the tribes, they found no belief in any one great spirit, but in many spirits, "In the stirring of the leaves, in the glint of the sunbeam amid the foliage, in the shadow on his path, in the flash of the lightning, in the crash of the thunder, in the roar of the cataract, in the colors of the rainbow, in the very beat of the pulse, in the leap of the fish, in the flight of the birds, the Indian saw some supernatural power to be worked." (Bourinot).

Manitous or genii were everywhere, to be appeased or pleased, and so, you will remember, Champlain's Indians threw tobacco into the falls of the Chaudiere on that memorable journey up the Ottawa. They looked upon dreams as omens, or revelations from the spirit world, and Champlain has told in his journal of how they used to question him about his dreams, and of how the Indians near Quebec used to come howling to the fort for protection, in case one of them had a "nightmare."

Great respect was paid to the dead, and in the Huron country it was customary to collect the bones of the buried every few years and put them together in pits, with weird ceremonies, each family carrying the bones of its own departed.

All illness was looked upon as the work of evil spirits, and, as a matter of course, the medicinemen, who could exorcise these spirits, were of great importance. Certainly, their methods were strenuous enough to frighten away any demon, were he present. "The Indian doctor," Parkman tells us, "beat, shook and punched his patient, whooped, rattled a tortoise-shell at his ear to expel the evil spirit, bit him until blood flowed, and then displayed in triumph a small piece of wood, bone, or iron, which he had hidden in his mouth, and which, he affirmed, was the source of the disease now happily removed." . . . Sometimes, by prescription, half the village would throng into the house, where the patient lay, led by old women, disguised with the heads and skins of bears, and beating with sticks on sheets of dry bark. Here the assembly danced and whooped for hours together.

These, then, are the people, of whose education and salvation Champlain had dreamed, and for which, venturing far into the forest, sometimes alone, always to meet hardship and suffering, and often torture and martyrdom, came the first teachers, the Recollet monks, the Ursuline sisters, and those who suffered most of all, the Jesuit fathers.

(To be continued.)

A Suggestion for Winter Evenings.

The other day I heard of a way of employing some of the winter hours that is full of valuable suggestions to a good many rural communities. The young people of the neighborhood decided to give a regular study to "A Short History of Our Own Times," by Justin McCarthy. Leaders for the consideration of the various chapters were duly chosen and a committee with the faculty of getting things done, was selected to secure individuals whose duty it was to discuss, somewhat in detail, the various sub-topics in the chapters. The duty of those to whom the topics were assigned, was to secure all information available, and to present this information at the regular meeting of the Circle in as clear and concise a manner as possible. The meetings were held at the houses of the members of the Circle, it being distinctly understood that no refreshments were to be served.

This action of this little band has much in it to commend. For one thing, it encourages the reading of a fine book. It opens the way for a good deal of research, and it brings to light a deal of information upon the history of our own day. How great the problems of our Empire are, but comparatively few are really aware. How instructive a study of these problems is, only those know who have earnestly considered them. The late Matthew Arnold said that if he lived to be eighty, he expected to be the

only living man who read anything outside of newspapers and magazines. The young people who have formed this Circle have no such reproach resting upon them.

Not a few of our young people's gatherings dwindle to nothing because they do not study a book or follow up a work or study that is distinctly worth while. Many of us would live longer and more happily and usefully, were we to think about something that would really tax the gray matter in our brains. Our mental muscles are sadly in need of toning up by hard, but judicious, exercise.

A helpful supplement to the programme of the young people already referred to would be a lecture by some capable man of repute, a journalist, a teacher, or a statesman, or a clergyman. In addition to this, a first-class singer might profitably be engaged, the object being, not the making of money, but the opportunity of hearing a high-class artist. Should this course of study be continued for a few winters, the improvement in the taste of the community, the gain in knowledge, the added facility of expression, and the improved capacity for serious thinking or rational criticism, would be almost incredible.

York Co., Ont. LISTENER.

Hope's Quiet Hour.

The Secret of Prosperity.

In every work that he began in the service of the house of God, and in the law, and in the Commandments, to seek his God, he did it with all his heart, and prospered.—2 Chron. xxxi. 21.

Those words were written about Hezekiah, the good king of Judah who "wrought that which was good and right and truth before the LORD his God." He prospered because he worked for God with all his heart. That is the secret of real prosperity, of real power and happiness. Usually it is the foundation for outward prosperity, too, though many of earth's greatest men have—like their Master—accepted poverty uncomplainingly, and endured terrible sufferings with great courage.

Each life is made up of moments—spent as they are given. We can, and must, lay up what we buy with these precious moments; but we can never store away the hours for future use. We must spend to-day's wealth of time to-day. Like the manna in the wilderness, it will not keep. As the Master, in one of his parables, delivered to each of his servants a pound, to trade with until his return, so our Master has delivered to each of us a life. The servants in the parable, who made good use of their Master's money, were rewarded according to their works. The reward of the man who had increased his trust-money tenfold was twice as great as that of the man who had changed his one pound into five. The man who did not use his capital at all lost it.

We find ourselves in this world, placed here by no choice of our own, forced to play our part on the world's stage whether we desire it or no. We have to act a part, but the choice lies with ourselves whether it is played well or ill. I am an optimist, you know—or I should have no right to the name "Hope." I believe that this world belongs to God, and that He is always Emmanuel—God with us. Anyone who works for this just Master with all his heart, need not fear that his life will be thrown away. "Nature never forgives," the scientists tell us. Those who break nature's laws—which are the laws of a righteous God—must endure the consequences. The laws may be broken in secret, the transgressor may foolishly imagine that his sin is safely covered from sight, but sin exacts usury at compound interest. The longer it is indulged, with apparent immunity from punishment, the heavier will be the debt when, at last, payment is demanded.

I have lately read two books which show this very forcibly. One was written nearly a century ago—De Quincey's "Confessions of an Opium Eater"—the other is very recent—Jack London's "John Barleycorn." De Quincey shows how he was able for seventeen years to enjoy the dangerous pleasure of drinking laudanum, until he was able to take the terrific dose of 8,000 drops a day. Then

the slave that had provided daily delights for him exacted terrible payment. The horrors of the time when De Quincey was untwisting the chain which bound him are vividly depicted. They should surely warn anyone who is recklessly sliding into the opium habit to beware, lest he not only suffer the agony of De Quincey, but lest he fail—like millions of other opium-slaves—to free himself. This one short life is given to each of us to use for God and man; how can we use it to the full if we are bound hand and foot by any evil and degrading habit?

The other book I have mentioned shows that a man who has great physical and mental power, and who can drink large quantities of alcoholic liquor without getting really "drunk"—in the usual meaning of that word—may presume on his supposed safety for many years, only to find at last that he also is a miserable slave. For years he drank heavily, but felt no desire for liquor when on long ocean-voyages. He thought that he could form a habit of drinking to excess and stop any time he chose. It is strange how many men delude themselves with this idea, when they see so many lives wrecked in that very way. We all need to remember the Apostle's warning: "Let him that thinketh he standeth take heed lest he fall." Those who recklessly injure their powers of mind and body must bear their punishment, and one of the heaviest parts of that punishment is loss—the loss of time, health, influence, hope, self-respect, and many other valuable things. Who can give us back the years we have thrown away? Let us make the most of those that are left, working like Hezekiah with all our hearts, that which is good and right before our God. Then we can go to meet him in humble trustfulness, when our day's work here is done, knowing that no time and faithful service can possibly be overlooked by Him.

It is hopeless to expect to hide poor and unfaithful work. Like murder, it "will out." Emerson says: "In the gingham-mill, a broken thread, or a shred, spoils the web through a piece of a hundred yards, and is traced back to the girl that wove it, and lessens her wages. The stockholder, on being shown this, rubs his hands with delight. Are you so cunning, Mr. Profitless, and do you expect to swindle your master and employer, in the web you weave? A day is a more magnificent cloth than any muslin, the mechanism that makes it is infinitely cunning, and you shall not conceal the steezy, fraudulent, rotten hours you have slipped into the piece, nor fear that any honest thread, or straighter steel, or more inflexible shaft, will not testify in the web."

Though we have no power to store up minutes, we have the certain knowledge that the good or evil produced by us during each minute, will be stored up. About a hundred years ago De Quincey met an acquaintance on the street and told him that he had been suffering from facial neuralgia. The friend suggested opium as a remedy, and that suggestion, so easily adopted, was the first link in the awful chain which the opium-eater wound around himself year after year, and which he nearly killed himself in breaking. How little the speaker knew that his easy advice would so nearly wreck a bright young life, and would be remembered for more than a hundred years. Words lightly spoken seldom live so long, but they often are of vital importance in turning an undecided soul to the right hand or the left. And it is not only words that affect others for good or ill. It was said of a Roman, long ago, that by his countenance the good were inspired and the wicked checked. Browning, in "Pippa Passes," shows how a glad-hearted, high-souled factory girl had power by her presence to check evil and arouse good in others without her own knowledge.

We want to be prosperous in this life, but what kind of prosperity is worth winning? Will it satisfy our ambition to become very rich or famous? When death summons us to drop all earthly gains, how desperately beggared we shall feel if we have nothing at all belonging to ourselves to carry into the new life. In the parable, the man who had not used the trust-money committed to him was forced to give it up, but those who had made faithful use of their Master's property were given both capital and interest. So those who devote their lives to God's service, who hunger and thirst

after righteousness and refuse to waste their lives in self-seeking, who seek "first" the kingdom of God and His righteousness, find that their choice is the best one even in this world. The Lord sent a message to Eli, warning him that if he did not put a stop to the wicked behaviour of his sons, beggary would follow, and all the increase of his house should die in the flower of their age. "Them that honor me I will honor, and they that despise Me shall be lightly esteemed," was His promise and warning then. Read the history of the past and the history of to-day, and you will see that the men and women who are really honored by God and man are those worthy of honor. The road to prosperity is not that of vice, crime, laziness, or selfishness, but of industry, honesty, and righteousness. Godliness, as the Bible tells us, is profitable for this life as well as for the next; although, of course, it is not real godliness—but only a sham—if it is adopted for the sake of visible reward. The greatest reward of faithful service is noble character, and character cannot be made in an hour, nor in a year. Each hour in a lifetime leaves its mark on character,—not one of little consequence. Our lives are not our own, they belong to our Master, "and what doth the LORD require of thee, but to do justly, and to love mercy, and to walk humbly with thy God."

DORA FARNCOMB

In the Garden with Him.

By DORA FARNCOMB, Author of "The Vision of His Face." (A new book by the author of Hope's Quiet Hour.)

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III.—Watered and Kept.
IV.—Seeking the Master.
V.—In His Garden of Lilies.
VI.—Springtime in the Garden.
VII.—Growing in Sunshine.
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On the New Road.

When you have started forth towards your vision.
When you have counted up the gain and cost.
When you have faced the old, old world's decision,
Its scoffing of all endeavors lost;
When all is said, leave it the sane, wise clinging
To proven ways you never can recall;
It has not heard your golden trumpet ringing.
O, Pioneer, the end is worth it all.
When by your cause you stand, its one defender,
And hear the jeers and anger grow more loud,
When greater men than you, grave-eyed and tender,
Look on your lone defiance from the crowd,
Then, then the joy of battle surges in you,
The splendor of the quite unequal strife.
And all the strength of soul and brain and sinew
Proclaims that you will win, and this is Life!
Madness and pride? Nay, never heed the shouting,
The future's yours—can you not wait O, youth?
In your divine conceit you know, undoubting,
That you have found a fragment of God's truth.
How shall you fail, how shall our faith diminish?
—Faith less in self than in your splendor,
Did dream?
You heard God speak to you, and at the finish
Far in the East you saw your vision gleam.
—Mildred Hurley, in London Spectator.

The Ingle Nook.

[Rules for correspondence 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.]

Guessed He Could Get Along.

Dear Ingle Nook Friends,—Here is a bit clipped from a magazine that amused me so that I just want to pass it along:

"The neatness of the New England housekeeper is a matter of common remark, and husbands in that part of the country are supposed to appreciate their advantages.

"A bit of a dialogue reported as follows shows that there may be another side to the matter:

"Martha, have you wiped the sink dry yet?" as the farmer, as he made final preparations for the night.

"Yes, Josiah," she replied. "Why do you ask?"

"Well, I did want a drink, but I guess I can get along until morning."

Just imagine poor old Josiah toddling off to bed thirsty because—the sink had been wiped dry! Well, I suppose the story is a bit exaggerated, but it accents a danger that lies in wait for many an ultra-neat woman, doesn't it?

In the old days this danger was practically unknown. Then the houses were of necessity small, with fewer blessed contrivances for stowing things away. Then the housewife never thought of having a "maid." She had to do all the work herself, and not only the routine work of housekeeping—she had also to spin the wool and weave the yarn, as well as make the cloth up into garments, and she had to weave the straw into braid and sew the braid into hats, a very different matter from merely putting on a bit of trimming as the house milliner does to-day.

With so much to do, naturally she had to learn to overlook a bit of "upset" in the house occasionally, and to feel that the earth would still turn if the "sink were wet."

But to-day, with all the modern contrivances to help in making housework easier, it is possible for most people to have a beautifully clean house. And that is, of course, as it should be. The danger comes in the tendency to overstep the mark. It is one thing to be clean; it is quite another to carry neatness to such a fussy extremity that there is neither freedom nor homelikeness within the home. It does not really matter very much—does it?—if little Willie whittles a few splinters on the floor, but it may matter greatly if his little heart is broken, or he is made stubborn by a sharp and cruel reprimand. A bit of John's cigar ashes spilled on a table or a mark left by his boot on the kitchen floor, does not really constitute "dirt," but it may be that a calamity much worse than a bit of such muss may come into the home if John is hectoring about every such slip until he feels that any place else is more cheerful and homelike than home. Of course, if John is just the nicest kind of John, he will try hard to clean his boots before coming in, and he will try to remember that if he spills cigar ashes (or leaves his newspapers about, if he doesn't smoke), wife or someone else has the bother of clearing away the muss, and that that is not fair.—But if he should chance to forget once in a blue moon—well, it's a balance between a newspaper on the floor and a human hair, isn't it? After all, what does it matter if once in a while "the sink is wet?"

INK STAIN, ETC.

The outside is peeling off my tan boots. Is there anything I can do?

I have accidentally split ink on the cover of a new book. Could you suggest anything to take it off? F. W.

The quality of the leather in your tan boots is evidently at fault. I know of nothing you can do.

Whether you can remove the ink stain successfully from the cover of the book

will depend somewhat upon the quality of the cover; it is hard to do anything with cheap covers. The only method given is to try oxalic-acid solution, followed by a solution of chloride of lime after the stain disappears. Wash well with cold water.

KAIL—DATE CAKE.

Dear Junia,—I have received so much help from your corner that I am coming to help a little, if I can, and to get some more help. I wonder if you could tell me how to cook kail? We have a fine lot, but do not know how to use it. It is something like a cabbage, and very curly.

Someone asked some time ago for a date cake. Here is a good one: One cup sugar, one teaspoon butter; cream together. Sift two cups flour, one teaspoon of powdered cloves and cinnamon together three times. Add sugar and butter with one cup sour milk, then add

give the very right way for cooking this pretty vegetable. Thank you for the recipes.

BREAD—DOUGHNUTS.

Dear Ingle Nook Friends,—Can anyone tell me if tuberous begonias can be made to bloom in winter, instead of summer? I would also like to know what will keep bread moist. I use potatoes in it.

And could someone tell me why I can't make cake with baking powder? I have tried all the best kinds, and the cake is always solid and heavy. I will enclose a recipe for doughnuts.

Doughnuts.—One cup sugar, one cup of buttermilk, one egg, one teaspoon of soda, one-half teaspoon of cream of tartar, one teaspoon of butter, one cup of potatoes (put through ricer). Sour cream can be used instead of buttermilk and butter.

A half teaspoonful of ginger put in the lard when it is hot will save it when fry-

cloth, and leaving it in the oven until the cloth has dried, or by dipping the loaf in water, then heating it in a covered basting-pan.

The trouble with your cake is likely with the oven, but the mixing also has something to do with the quality. Try the following method: Beat the sugar and butter together to a cream, then beat in the beaten egg, then the milk, then (very rapidly) the flour, which has been sifted with the baking powder. The oven should be fairly hot when the cake is put in, and the heat may gradually increase. If it is too hot at first, a crust will form over the top of the cake, the cell-walls of the flour will burst and run together in holes, and the batter will likely burst through the crust at the top, making a cake that is dry, and of bad shape. If, on the other hand, the oven is not hot enough, too much gas will escape from the cake, and it will be heavy and "soggy."

Your doughnut recipe is opportune now that Christmas is approaching, Briar Rose. What a delightful pen-name you have chosen! Perhaps your baking troubles suggested the "briar" to you, but I only think of the sweetness of the petals, and the dear, wild places, where the briar roses grow.

Ironing Starched Clothes.

During winter there is always a certain respite from ironing starched clothes; yet there are always collars and cuffs to be done, and occasionally—although colored linen and chambray shirts have greatly supplanted them,—white shirts. In some warm houses, too, cotton shirtwaists are worn all winter long.

Most people know that even when clothes are to be treated with cold starch they are the better of being stiffened with boiled starch first. The thickness of the boiled starch for all clothes to be stiffened that way must depend on whether one likes one's cotton clothing very stiff or not. Of late years, very little starch, or none at all, has been used for cotton dresses or undershirts, but most people prefer a perceptible crispness in shirtwaists and underwaists. The quality of the boiled starch, then, is important. It should be smooth and clear, and to have it so care must be taken to have the starch very thoroughly blended with a little cold water, and to have the water that is poured on it really boiling. Afterwards the starch should be stirred over the fire until it is really cooked, and looks of the right consistency. This will help to keep the irons from sticking. A little laundry wax, butter, or kerosene, added to the hot starch, will also be of value in this way.

When ironing-day comes, it is necessary to see that all conditions for the work are right. For instance, the irons should be thoroughly clean; indeed, they should be often washed with soap and water, and dried well, to keep them so. The worker should also don a clean apron, and see that the ironing sheet is clean and pinned tightly about the ironing-board; if it is put over two or three thicknesses of flannel the results of the work will be better. Clean newspapers should also be spread on the floor in case of any article touching it or falling on it. Also a paper for trying the iron on should be placed on the board, and a beeswax laundry-ball and a bit of salt placed by for rubbing the iron on as the work progresses.

About an hour before the cold-starched things are to be ironed, they should be given their bath in the cold starch. The latter may be made by either of the following methods. The second, it will be seen, gives somewhat "stiffer" results than the first:

Cold Starch, No. 1.—One-half table-spoon fine starch, 1 cup water, $\frac{1}{2}$ teaspoon borax dissolved in a little boiling water, a few drops turpentine.

No. 2.—One table-spoon starch, 1 cup cold water, 4 drops spirits of turpentine, borax to lie on a dime, dissolved in a little boiling water.

If cuffs are to be ironed, and they are joined to the sleeves, wet the cloth adjoining with the fingers dipped in cold water, but do not let the water on to the cuffs. This will prevent spots of starch from running up the sleeves. Now gather the sleeves tightly in the hand and dip the cuffs in the starch until saturated with it, wring them out, then



An Old-time Method.

(Photo by Sallows.)

twenty walnuts and a half-pound of dates chopped fine. Beat all together for a minute. Bake in slow oven for forty minutes. If kept for three days it is very good.

One-egg Cake.—One egg, one cup sugar, one cup milk, one-half cup flour, two teaspoons baking powder, two table-spoons melted butter, and flavoring. This is very good.

Thanking you for past help. Ontario Co., Ont. MILLIE.

I regret to say that so far I have been quite unable to find anyone who is accustomed to cooking kail. We grew it one year, and found best results to come from cooking it without salt in water softened by adding a very little bit of soda, butter, pepper and salt being added just before serving, but even then the leaves were a little hard, and we did not like the dish as well as cabbage or Brussels sprouts. Perhaps some reader from Scotland will be good enough to

ing doughnuts. After frying, place the kettle of hot grease out of doors and pour in a little cold water, enough to make the grease bubble. This will take out the burnt taste, and the grease may be used again. BRIAR ROSE.

The best florist in this city informs us that tuberous begonias cannot be made to flower in winter.

It may be that the flour you have been using for your bread is at fault. It may be harsh and dry. Off-hand tests for good bread flour are as follows: It should be white with a faint yellow tinge, should fall loosely apart after being pressed in the hand, and should be sweet and nutty in flavor. Overworking the dough, until it has lost its tenacity will also produce a dry bread, or perhaps you keep it exposed, so that its moisture evaporates too quickly. Try keeping it in a bread-box with a lid. Dry, old bread, may be "freshened" somewhat by wrapping it in a clean, wet

the oven until by dipping the top in a cov-

cake is likely mixing also has quality. Try Beat the sugar a cream, then then the milk flour, which has ng powder. The when the cake may gradually hot at first, a top of the cake, will burst and the batter will rust at the top, try, and of bad hand, the oven much gas will and it will be

opportune now roaching, Briar pen-name you your baking "briar" to you, sweetness of the d places, where

and Clothes.

always a certain shed clothes; yet and cuffs to be although colored shirts have greatly shirts. In some shirtwaists are

that even when with cold starch ng stiffened with thickness of the es to be stiff- pending on whether othing very stiff ery little starch used for cotton ut most people pness in shirt- The quality of s important. It ar, and to have en to have the blended with a ve the water really boiling: ould be stirred ally cooked, and ency. This will om sticking. A er, or kerosene, will also be of

, it is necessary s for the work the irons should ed, they should ap and water, them so. The a clean apron, g sheet is clean t the ironing- two or three e results of the lean newspapers n the floor in ing it or falling y trying the iron he board, and a d a bit of salt e iron on as the

the cold-starched they should be old starch. The ither of the fol- econd, it will be stiffer" results

One-half table- up water, 1 tea- a little boiling entine.

n starch, 1 cup its of turpentine, dissolved in a ed, and they are et the cloth ad- dipped in cold e water on to revent spots of e sleeves. Now tly in the hand e starch until r them out, then

rub each well to work the starch in. Finally fold the starched parts together and roll up. Of course, it is understood that the whole garment has been previously sprinkled.

When ironing shirtwaists, it will be found best to iron the neckband first, then under the arms and all parts that will stand a little wrinkling as the work goes on, then the sleeves, then, last of all, the fronts and back. When ironing cuffs, collars, etc., first rub each well with a cloth to rub off all superfluous starch, then iron lightly on the wrong side, then lightly on the right side, then heavily on the wrong side, then, to finish, heavily on the right side. Be sure to iron until the articles are completely dry.

Shirt-fronts are done the same way, but the work is expedited by having a shirt-front board for polishing. After polishing is begun, the iron should never be taken off the article until it is dry, the rubbing being downwards and sideways. To give an extra gloss, rub the front lightly over with the following mixture: One ounce raw starch, 1/2 ounce gum arabic, 1 pint water. Heat water and dissolve gum; cool, then stir in the starch and add the white of an egg, beating all well. As, however, high gloss is not approved of these days, this last coat may usually be dispensed with.

Embroidered articles, also bands with buttons on, should always be ironed right side down on a thick padding of sheet or Turkish towelling.

Some people prefer to start ironing all stiffly-starched articles through a muslin cloth. When half-dry the cloth is taken off and the work is finished.

If irons are greased occasionally with a little warm mutton tallow or sweet-oil, they will not rust. Of course, they must be thoroughly wiped before they are used again.

Some Vegetable Recipes.

Vegetable Soup.—Three quarts water; add a little shredded cabbage, 1 pint sliced potatoes, a little minced carrot, turnip, and onions, seasoning of butter, pepper, salt, minced celery, and tomato catsup. Stew gently for two or three hours with the cover partially off the stewpan. Put the vegetables through a ricer before serving if you choose.

Potato Soup.—Pare 8 potatoes and put in a stewpan with 1 cup chopped celery and 4 tablespoons chopped onion. Cover with boiling water, and cook half an hour. In another vessel put 3 1/2 cups milk. When it is boiling, blend 1 tablespoon flour in 1/2 cup of milk, and stir in. When the vegetables have cooked thirty minutes, put them through a ricer into the water in which they were boiled, and return to the fire. Add salt and pepper to taste, and beat with an egg-beater for three minutes. Last of all, beat in the boiling milk, add a tablespoonful of butter and a teaspoon of minced parsley, if you have it, and serve at once.

Bean Soup.—Wash 1 pint beans and soak over night in cold water. In the morning, drain, and put them in a saucepan with three quarts cold water. Let them come to a boil, then pour off the water and add 4 quarts of fresh, boiling water, to the beans. Let simmer for 4 hours, but after 3 hours add 1 tablespoon of minced celery. Meanwhile cook 1 large onion chopped fine with 4 tablespoons sweet drippings, or butter, in a separate pan for half an hour. Drain the water from the beans and save it, then add the beans to the onion and drippings. Add 3 tablespoons flour blended with a little water and cook half an hour, stirring often. Next, mash all fine and add the water drained from the beans. Re-heat, season to taste, and serve very hot. Less of the water may be added, and hot milk substituted, if preferred.

Split-pea Soup.—Wash 1 pint split peas and soak over night. In the morning, drain, and put the peas in a pot with 4 quarts water and 1/2 lbs. salt pork. Simmer gently for seven hours, but after 6 hours add 1 large onion, chopped fine, 2 tablespoons minced celery. When done, put through a sieve and re-heat. Thicken with 1 tablespoon flour mixed with 1 tablespoon butter, season, and serve very hot.

These soups are nice for supper on cold winter evenings, served with hot biscuits and butter, or "croutons,"—squares of bread buttered and toasted in the oven.

How to Get a Pretty China Tea Set.

What woman does not love pretty china! On the premium page you will see mention of the 21-piece Austrian China Tea Sets which "The Farmer's Advocate and Home Magazine" has secured to offer as premiums to all who are willing to make a little effort. These Tea Sets are really very pretty, in a dainty design of pink flowers and green leaves, and all that is necessary for you to do in order that one of them may be yours, is to send us two absolutely new subscriptions, at \$1.50 each, for one year. Do not put off the opportunity. The sooner the better.

Hints for the Debating Season.

Commenting on a recently published book, "University and Historical Addresses" (The Macmillan Co.), by Mr. James Bryce, former British Ambassador at Washington, T. P.'s Weekly says:

being led along a path towards a definite goal by a man who knows his way.

In controversial speaking, think always of what your opponent will say, and so frame your speech as to anticipate his answers and give little opening for his criticism.

Always reflect beforehand upon the kind of audience you are likely to have. Never despise those whom you address, whatever you may think of their intellectual attainments. You need not talk over their heads. But you will find it politic as well as polite to respect them.

Indeed a first-rate writer or speaker has his best opportunity with a public that is neither stupid nor over-cultured. If he is in earnest and has something original to say such a public will respond more easily than one that already is so dreadfully clever that it requires a mere echo of its own thoughts.

WHAT TO READ.

One is led to traverse the author's "Hints on Reading" where he says:— It is possible for a man who husbands his time and spends little of it on news-

poetry also. A man or woman who does not read poetry fairly often (both old and new) is in danger of a stiff mind. Avoid by all means the merely fantastic verse; nor is it well to read only the standard poets, although Chaucer, Keats, Shelley, Wordsworth, Tennyson, Browning and Whitman should precede the living writers. Otherwise a reader new to regular poetic reading will fall a victim to easy fluency or mere mannerism. In short what he reads will not be poetry at all.

READ YOUR FELLOWS.

And Mr. Bryce points out another kind of reading without which even our beloved books are so much paper, straw, and cloth:—

Whatever be anyone's occupation, he spends most of his working hours in the company of his fellow men. They may not delight him, as they did not delight Hamlet, or they may delight him, as they surely must have delighted Shakespeare. But whether they delight him or not, they are an inexhaustible field of study; and the study becomes more interesting when we compare the persons whom we meet and observe with the figures that stand out in the works of those masters of fiction who have known how to make human nature as true in tale or drama as it is in fact.

Putting Away Summer Clothes.

Since of late years our climate has become so variable, a great many people do not pack away summer things until about the end of November. Then a time comes when there is a little leisure. Fruit and vegetables are all in place, fall housecleaning is done, and there is a time to "fuss" over the packing as long as one chooses.

And, right here, it pays to take time over this work. It is necessary to have things come out looking well next spring, and how can they, if tumbled into boxes anyhow and jammed away anywhere during four or five months of winter?

Of course cedar chests are the ideal for packing things in, especially for summer, when moths run riot. But in winter it does not so much matter. Plenty of boxes and trunks, and a cold attic or other room for storage, will supply all necessities. If each person in the family can have a box of his or her own, why all the better; just so much confusion can be saved when this or that garment is needed in the spring. It will be still better if each person can have two boxes, one for fine articles, the other for the coarser articles, shoes, slippers, etc. And really boxes do not cost very much. Good stout ones with lids can usually be bought from storekeepers for a trifle.

So now to the packing itself: In the first place it is absolutely advisable to have everything that is put away clean; and be sure not to lay away anything that has been starched. Wash all the starch out and dry thoroughly; otherwise the garment will turn yellow.

It is also advisable to mend any rips and patch any holes that may have appeared. There is time to do that now, and if there is one thing that is exasperating it is to take out garments in spring, needed at once for wearing, and find them quite unfit to put on,—a button off here, a hole there, a hem frayed, and so on.

If there are any shirtwaists that are too much worn to do duty as shirtwaists next summer, keep them out and make them into corset-covers. If they are just a little worn about the neck, from wearing stiff collars, cut off the neck-band, mark scallops on the edge, buttonhole with floss, and work any little dot or pattern you choose in the scallops. Make the sleeves to match—and presto!—a new shirtwaist!

If there are any children's dresses that will be sure to need lengthening in spring, do this also, before packing the dresses away. You can make a very good guess at the length, and so save time in April and May when housecleaning and gardening are both on with a rush.

Fold all garments—never roll them—and place them flat in the boxes. It is surprising to see how much even a rather small box will hold.

Summer suits and coats should not



Braiding the Hats.
(Photo by Sallows.)

Mr Bryce is a fine speaker, not perhaps one of those whose very manner becomes a memory. But his oratory, like his literary style, is clear and has the ring of sincerity and of culture. Here are some of his hints, most of which apply also to the written word: Always have something to say. The man who is known never to speak unless he has, is sure to be listened to, especially in a deliberative assembly or wherever there is business to be done. Try to have an idea, or if you cannot find one—ideas are none too common—have two or three relevant facts. Always know what you mean to say. If your own mind is muddled, much more muddled will your hearers be. Always arrange your remarks in some sort of order. Nothing pleases an audience more than the sense that they are

papers and magazines to find leisure for the really striking books.

Now the best way to husband time and money is to take a good daily paper and to read it systematically, so that each day one realizes all that has happened of an important nature. Then the weekly literary journal should be read, including all reviews, book notes, and advertisements. Do not choose only your own subject. Learn what you can of all. If a review tells you all you want to know, let it go at that. But if the subject arrests you, buy the book and find time to read it. A wet Saturday or a quiet Sunday afternoon will become memorable if it has formed the starting point of a new study or interest. One agrees with Mr. Bryce that there are some indispensable books. The reprints give us these. But there is

be packed away; they should be hung up in an out-of-the-way place (how can people do without an attic!) on coat and skirt-hangers. The coat-hangers should be padded to prevent wrinkling of the coat. Brush out every bit of dust from the suit and remove the spots, slip the coat on the hanger, stuff the sleeves with tissue paper, and put a packing of paper in the front of the coat, buttoning the latter in place. If the place in which the suit is to be hung is at all dusty, slip a large bag made of five-cent factory cotton over the whole.

Fancy summer dresses should also be hung up in bags of the same kind.

If it is absolutely necessary to pack either suits or fancy dresses use plenty of tissue paper, for sleeves, and soft rolls of it in the folds of the skirt, etc. This will prevent sharp creases. Lay the coat with the fronts on top, and button it up over the padding of paper. Never pack white or light-colored materials with white tissue paper, as owing to some chemical used in bleaching it, it is likely to turn them yellow. Use blue tissue paper if possible.

Shoes should never be put away just as they are. If one has not shoe-trees for them, one can at least stuff them with paper packed in so tightly that there is no possibility of creases and getting out of shape.

Hats, too, may be kept much more presentable if placed in their boxes on a pad of some sort that will keep the crown from sagging in; an inverted strawberry box padded with paper is good.

Perhaps these little precautions do not seem important, but it is only necessary to try them once to be convinced of their advisability.

New Hydro - Aeroplane Ready for Real Test.

The Batson hydro-aeroplane, built to carry both passengers and freight, which has been under construction on Dutch Island, near Thunderbolt, in the neighborhood of Savannah, Georgia, is now ready for a tryout.

To the layman, the craft looks a little top-heavy, the flying part of the structure being the height of a man's head above the boat body. There are twelve wings. Eight are arranged about the upper work, four on each side, while the other four are immediately above the decks of the boat body. The craft, the inventor expects, will skim along the surface of the water at sixty miles an hour, lift itself into the air at forty-five miles an hour, and in the air be able to maintain a hundred miles an hour. Three powerful engines have been installed. The crew will consist of six men, besides the pilot. The vessel is equipped with wireless telegraphy. The great propellers are arranged in the central part of the machine fore and aft.

Captain Batson will give the craft a thorough tryout in local waters before attempting any long flights. Captain Matthew Arlington Batson, U. S. N., retired, is the inventor of the machine. He organized the first Philippine scouts.

September in the Lawrence Hills.

By Wilfred Campbell.

Already winter in his sombre round,
Before his time, hath touched these hills austere
With lonely flame. Last night, without a sound,

The ghostly frost walked out by wood and mere.
And now the sumach curls his frond of fire,
The aspen-tree reluctant drops his gold,

And down the gullies the north's wild vibrant lyre
Rouses life bitter armies of the cold.
O'er this short afternoon the night draws down,
With ominous chill, across these regions bleak:
Wind-beaten gold, the sunset fades around
The purple loneliness of crag and peak,
Leaving the world an iron house wherein
Nor love nor life nor hope hath ever been.

The Windrow.

The greatest radium deposits known to science have been found recently in the Paradox Valley, Colorado.

The Zuyder Zee of Holland, covering about 2,000,000 square miles, is to be drained, and the area formed into a new province. Since the 16th century Holland has reclaimed over 1,000,000 acres from sea, lake and river.

A hospital for animals, to be called the "Angell Memorial Animals' Hospital," in memory of George Angell, the friend of animals, is being built on Longwood Ave., Boston.

The Eiffel Tower, as a "wireless" tower, is now regarded as one of the treasures of Paris. It had been planned to tear it down as useless, when the invention of wireless telegraphy unexpectedly provided this new use for it.

A statue of Mark Twain is to be erected in the park at Hannibal, Mo., the city in which the great American humorist spent his boyhood, and the scene of many of the incidents described in Tom Sawyer and Huckleberry Finn.

The Krupp Company has constructed a novel searchlight projectile, which, when shot over an army at night, will illum-

inate a very large area of the earth's surface without in the least indicating the point from which it was shot.

The Beaver Circle

Our Senior Beavers.

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

Two Little Rooms.

In Japan, as you may have heard, the rooms of houses have very little furniture. To us they look very empty, but our rooms to the Japanese look very stuffy and over-crowded.

Two little maids I've heard of, each with a pretty taste,

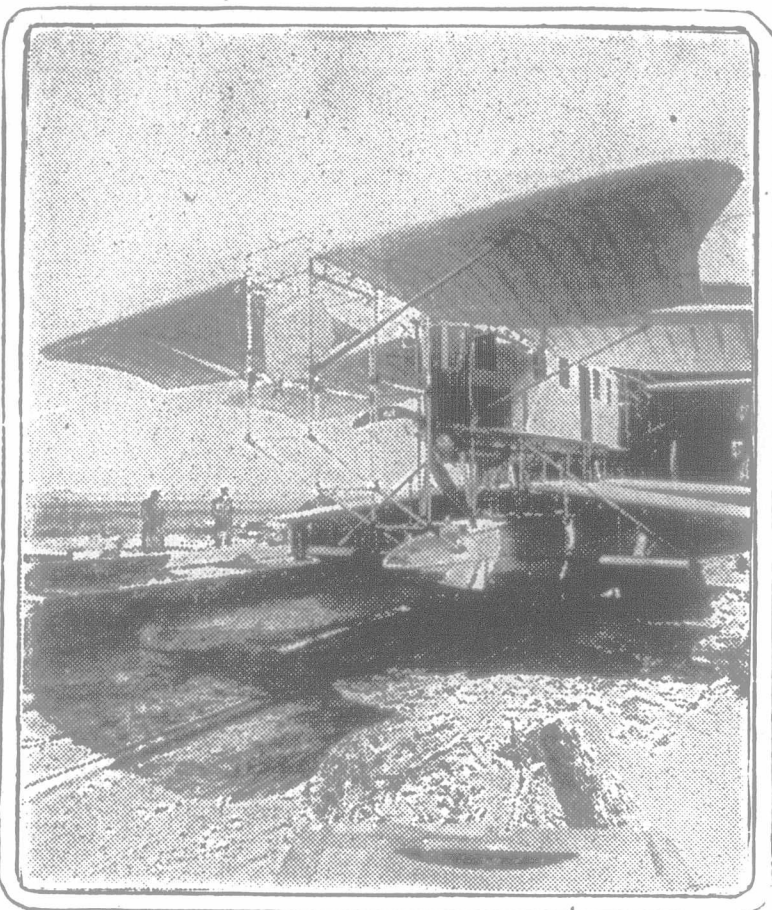
Who had two little rooms to fix and not an hour to waste.

Eight thousand miles apart they lived, yet on the selfsame day

The one in Nikko's narrow streets, the other on Broadway,

They started out, each happy maid her heart's desire to find,

And her own dear room to furnish just according to her mind.



New Hydro-Aeroplane Ready for Real Test.

CHAPTER I.

When Alice went a-shopping, she bought a bed of brass,

A bureau and some chairs and things, and such a lovely glass

To reflect her little figure—with two candle-brackets near,—

And a little dressing-table that she said was simply dear!

A book shelf low to hold her books, a little china rack,

And then, of course, a bureau set and lots of bric-a-brac;

A dainty little escritoire, with fixings all her own,

And just for her convenience, too, a little telephone.

Some Oriental rugs she got, and curtains of Madras,

With "cunning" ones of lace inside, to go against the glass;

And then a couch, a lovely one, with cushions soft to crush,

And forty pillows, more or less, of linen, silk, and plush;

Of all the ornaments besides I couldn't tell the half,

But wherever there was nothing else, she stuck a photograph.

And then, when all was finished, she sighed a little sigh,

And looked about with just a shade of sadness in her eye;

"For it needs a statuette or so—a fern—a silver stork—

Oh, something, just to fill it up!" said Alice of New York.

(My rhyme is getting longish, but I'm really nearly done,

For Chapter Two is shorter, you will see, than Chapter One.)

CHAPTER II.

When little Oumi of Japan went shopping, pitapat,

She bought a fan of paper and a little sleeping-mat;

She set beside the window a lily in a vase,

And looked about with more than doubt upon her pretty face;

"For, really,—don't you think so?—with the lily and the fan,

It's a little overcrowded!" said Oumi of Japan.

—Margaret Johnson.

Funnies.

Teacher—"How many zones has the earth, Johnny?"

Johnny—"Five."

Teacher—"Correct. Name them."

Johnny—"Temperate, intemperate, canal, horrid, and ozone."—Washington Star.

• • •

"How's your brother, Tommy?"

"Ill in bed, miss. He's hurt himself."

"How did he do that?"

"We were playing at who could leap farthest out of the window, and he won."

• • •

A schoolboy who gave "a nanny-goat" as the definition of buttress, was asked by his teacher how he arrived at such a conclusion.

"If a billy-goat is a butter," explained the pupil, "it seems to me that a nanny-goat ought to be a buttress."

Senior Beavers' Letter Box.

Dear Puck and Beavers,—I was very pleased the other day to see my long-looked-for letter in print in "The Farmer's Advocate," and pleased also that it was a little interesting. About two years ago last July a man caught us a little deer in the bush when it was about two weeks old. We had it till last spring, and it used to go out where my brothers were working in the bush. Someone in mistake shot it. When we got it first it was very wild, and after we had it for a while it got so tame it would follow any of us all around and come in the house. We grew to fairly love it. They are the dearest little pets anyone could get, I think.

We also had a nice lot of rabbits, wild, which we would catch, but something always used to happen. They would either die or go away. We would give them new milk and clover to eat and drink. My father also caught us a nice little hawk some years ago. We cut one of its wings so it could not fly, and after a while it grew quite tame. We had it for about three months, and one morning my eldest sister stepped on it and killed it. She, and all the rest of us, were very sorry. We called it Dick.

My oldest brother caught a mudturtle on the road one day and brought it home in his hat, and he kept it for about three weeks. We used to feed it frogs, and one day we got sorry for it, and put it in the river and it swam away. Now, we have had a lot more, but I will not take the time to mention them. There is always a certain amount of lumbering going on here every winter, making logs, pulp-wood, and cord-wood. There is also railroad contract work going on, and mining and sawmills, and always paying good wages to men and horses. Now, I think I will draw to a close for this time so that my letter won't be too long, for I know everyone is anxiously waiting to see their letters

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"Just a few more weeks till Santa Claus comes."

"Give in the spirit of true friendship so that it may abound."

GIFTS GALORE ARE OFFERED

In Your EATON Catalogue

JUST THINK!—Christmas is almost with us. A few more weeks and then the joyous season begins. With it comes, of course, the usual tokens of goodwill—the giving and receiving of gifts. "What shall it be?" is the premier thought in most minds, and to many it becomes a great problem indeed. Those of you who have a copy of our Fall and Winter Catalogue need have no such experience. We say this advisedly, because we believe that if you will but take the trouble to look through your catalogue you will find it a veritable storehouse of worthy merchandise. Further than that, there are many pages which list just such articles that are of popular choice and pleasurable interest.

THE TIME TO BUY IS NOW—AND THE REASON WHY

So many conditions may later arise that it is well for us to buy gifts early. To put off your purchase too long often brings disappointment. Sit down now and give this matter your earnest consideration and make your choice while stocks are large and varied. Do not forget, also, that ours is not primarily a Christmas catalogue but a comprehensive showing of articles of daily use in the home or the personal requirement.

If you have mislaid your catalogue, or have not now one from any reason, we will be glad to mail a copy free if you will send us your name and address.

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- SMOKING SETS
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True Style is only Cut and Color

Mrs. H. T. De Wolfe writes:



"Dark colors are most becoming to me, and are far more serviceable. I send you a photograph of a Bedford Cloth Suit which I dyed in a most becoming shade with DIAMOND DYES. The suit was given to me by a friend who went in mourning. It was too light for me so I changed it to a beautiful plum color with DIAMOND DYES. I think it looks very well, don't you? The cut was always good and now the color is fine too."

Bedford Cloth suit dyed Plum color.

Diamond Dyes

"A child can use them"
Simply dissolve the dye in water and boil material in the solution

Miss Josephine Campbell writes:

"The enclosed photograph will serve to show you a gown of pink silk poplin which I dyed a dark grey with DIAMOND DYES. I used the DIAMOND DYES for Wool and Silk, and the result was beautiful. DIAMOND DYE certainly are little wonder workers and surely have been Fashion's Helpers for me. When I recolored the gown I took some waterproof muline and dyed it the same color. I used it to trim a hat to match the gown. All my friends think the combination is stunning. I am so happy about it that I thought I would write you and send you a photograph. You may use it for advertising if you wish."



Pink silk Poplin dyed dark grey.

Truth About Dyes for Home Use

There are two classes of fabrics—animal fibre fabrics and vegetable fibre fabrics.

Wool and Silk are animal fibre fabrics. Cotton and Linen are vegetable fibre fabrics. "Union" or "Mixed" goods are usually 60% to 80% Cotton—so must be treated as vegetable fibre fabrics.

It is a chemical impossibility to get perfect color results on all classes of fabrics with any dye that claims to color animal fibre fabrics and vegetable fibre fabrics, equally well in one bath.

We manufacture two classes of Diamond Dyes, namely Diamond Dyes for Wool or Silk to color Animal Fibre Fabrics, and Diamond Dyes for Cotton, Linen, or Mixed Goods to color Vegetable Fibre Fabrics, so that you may obtain the Very Best results on EVERY Fabric.

Diamond Dyes Sell at 10 cents per Package. Valuable Book and Samples Free

Send us your dealer's name and address—tell us whether or not he sells Diamond Dyes. We will then send you that famous book of helps, the Diamond Dye Annual and Direction Book, also 36 samples of Dyed Cloth—Free.

THE WELLS & RICHARDSON CO., LIMITED
200 Mountain St., MONTREAL, CANADA.

in print, as well as myself, and I don't want to be selfish.

Will some of the Beavers please write to me? MARGARETTA WILLIAMS.
Larchwood, Ont.

Dear Puck and Beavers,—As I have been interested in your Circle, I thought I would write a short letter. I have just finished reading the letters, and like them very well. My favorite books are, "Beautiful Joe," "Little Sunshine," "James Garfield," "What Katy Did," "The Brownie," "Chautauqua Girls at Home," and many others. I am very fond of music, and have just finished my third quarter. I am a lover of dumb animals also. For pets I have a dog named Sport, and a cat named Barney. I had a rabbit, but it died last spring. I go for the cows every evening in autumn, and tie them in. Well, as my letter is getting rather long, I will close.

MYRL RUTTLE (age 11, Jr. IV.)
Ripley, Ont.

Dear Puck and Beavers, I thought I would write a letter to you. As this is my first letter I will try and not make it too long. We have two cats, Nigger and Bluey. One day Nigger came from the woods with a big red squirrel, and he ate it. Nigger is the "barn" cat, and Bluey is the "house" cat. We have three horses, Net, Molly, and Barnie; we call the colt Junia. We have five cows, and I milk one every night. I will close with some riddles:

Why doesn't a bicycle stand up alone?
Ans.—Because it is (two)-tired.
What is black and white and red (read) all over?
Ans.—A newspaper.
GORDON MACDONALD (age 10, Jr. IV.)
Strathroy, Ont.

Dear Puck and Beavers,—This is my second letter to your Circle, but as I did not see the other one in print, thought I would write again.

My father built a barn last summer. It made a lot of work for both men and women, but will be much more comfortable than the old stable.

There were about 250 at our place for supper the night of the raising. We had swings in the barn that night, and had lots of fun.

I have not been to school since last Thanksgiving. I passed Entrance when I was twelve years old, then I went to public school for nearly a year and a half. This year I learned to swim and ride a bicycle.

The river runs right near our place, and some weeks we would be in the water every day.

There were a lot of fires around our place this summer, but no one had their buildings burned.

Well, I think my letter is getting rather long, so I will close, hoping this will escape the w.-p. b.

MYRTLE THOMPSON.
Dartmoor, Ont.

Dear Puck and Beavers,—This is my first letter to you. We live in a beautiful valley. The river runs right in front of our place, and we have four big elms in front of the house, which makes the place very pretty. We have the only brick house in the valley. I go to school, and am in Grade Nine. Our teacher's name is Miss Fulmore, from Five Islands. Perhaps some of the Beavers know her, if any write from Five Islands. I think that some of the Beavers write very interesting letters. Do any of the girls like to work on the farm, and keep house? I do. I love to work in the hay field, and also keep house when mother is away. I am fifteen years old, and very tall.

FRANCES FOSTER.
Upper Stewiacke, N. S.

Honor Roll.

Mae Morgatroyd.
Iva Lobb.
Russel Day.
Mildred Bowins.
Grace Mosey.
Neita Oke.

Beaver Circle Notes.

Agnes McLellan, Kippen, Ont., drew a very good picture of "The Old Apple

Woman," and sent it for us to see. Many of our Beavers could find much pleasure in drawing such pictures during the long winter evenings if they tried. We must have a Drawing Competition soon.

The results of the Garden Competition will appear soon.

Frances Jensen (age 13), Foley Brook, Victoria Co., N. B., wishes some of the Beavers to write to her.

How to Get a Christmas Present for Your Mother.

Boys and girls, do you know that, if you will do a little work for us, you will be able to give your mother a beautiful Christmas present, one of the nicest she ever got? Get two new subscribers for us, and send us their names and \$3.00, to cover two subscriptions for one year, and we will send you a beautiful 21-piece china tea-set, white, with pink flowers and green leaves. Do you think you could give your mother anything else that she would like as well?

Our Junior Beavers.

[For all pupils from the First Book to Junior Third, inclusive.]

What Mother Said

By H. R. Hudson.

I know a little girl of nine.
(I wonder if you've met her!)
I think, if you should see her once,
You never would forget her.
She's such a fussy little girl,
There is so much to fret her;
It is so very hard to learn
The tasks her teachers set her;
She wants to do so many things
Her mother doesn't let her.
But then, when she is ten years old,
Perhaps she may do better,
I'm sure she will not like to think,
When she's a little older,
How very, very many times
Her mother had to scold her.
If she would think about it now
Perhaps it might withhold her
From yielding to the fretfulness
That has so long controlled her.

Dear Puck and Beavers,—This is my first letter to your Circle. My father has taken "The Farmer's Advocate" for about three years, and we like reading the letters very much. For pets I have a chicken and a hen. The chicken's name is Buffer, and the hen's name is Marble. I have a colt and a calf; the colt's name is Junia, and the calf's name is Silver. There was a pet squirrel about our place, and it was as white as snow. Every morning when we would feed the hens corn it would eat with them, but so many people wanted it that I think it was shot—or caught. My teacher's name is Miss R. Wilson, and I like her very much. I go to school every day, and we have two miles to walk. My teacher took us all to Rock Glenn in a big 'bus on the 24th of May. We all took our lunches with us and had nice boat rides, and altogether it was a lovely time, and it was a nice day.

RETA MACDONALD (age 9, Jr. III.)
Strathroy, R. R. No. 5.

Dear Puck and Beavers,—Have enjoyed reading "The Farmer's Advocate," which my father takes. I pick out dresses from the Fashion Department that I like for myself. I had two little cousins of mine from Detroit to visit me this summer. They were very fond of playing cowboy and Indians in the stalks of barley. Mother gave a picnic for us down by the water, and we had a nice little lunch. I have no live pets, but have a doll, swing, hammock, and croquet set. Well, as this is my first letter, I will close.

EVANGELINE O'HARA.
(Age 8, Book II.)
Mt. Carmel, Ont.

Dear Puck and Beavers,—
I am going to tell you about my cats. Two years ago I was down at my aunt's visiting. One night my cousin and I were going down to a neighbor's, and just as we were turning out the gate we heard a cat. We looked around and saw

Why Pay More

\$18.90 direct from factory to you is all you need to pay for the famous New Butterfly Cream Separator.

Stays a quiet and steady separator—patented and workmanship guaranteed a life-time. Why pay more? Also made in four larger sizes up to No. 5 let shown here. Makes a clear profit of \$16 more per year from each cow. Pays for itself in six months. Saves work, and drudgery.

NEW BUTTERFLY Cream Separator runs light and easy, have ball bearings bathed in oil. The one-piece aluminum skimming device cleans quickly without scrubbing. No discs to rust and get out of place. Only one part inside the bowl. We give 30 days FREE trial on your farm and pay freight both ways if you are not pleased. Write for Catalog, Prices, and low factory-to-farm prices.

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From stations Kingston, Renfrew, and west in Ontario

Good Going Nov. 30th; Dec. 1st and 2nd.

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RETURN LIMIT—All tickets valid to return to reach original starting point not later than midnight of December 8th, 1913.

Frequent and Fast Train Service

ONLY DOUBLE TRACK ROUTE

Full particulars, berth reservations, etc., at Grand Trunk Ticket Offices

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AND ALL ABOUT GAS ENGINES

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Write to-day for illustrated Booklets and full particulars.

EDUCATIONAL DEPARTMENT
Y.M.C.A. BROADVIEW BRANCH
TORONTO

MAIL CONTRACT

SEALED TENDERS addressed to the Postmaster General, will be received at Ottawa until noon on Friday, the 2nd day of January, 1914, for the conveyance of His Majesty's mails on a proposed contract for four years, six times per week over Park Hill (Fort Rose way) Rural Route, from the Postmaster General's pleasure next.

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 Park Hill, and at the Office of the Post Office Inspector at London.

Post Office Department } G. C. ANDERSON,
Mail Service Branch } Superintendent.
Ottawa, 21st, November, 1913.

FARM FOR SALE

Half section situated 3½ miles north-east of Westaskiwin, Alta.

There are about 175 acres cleared, the remainder being covered with small timber. There is a running stream through the farm and a fence right around the farm on the outside, as well as some cross fences. It has stabling for about 25 head of stock and pits for about 11,000 bushels of potatoes. This farm is noted as being one of the best potato farms in Alberta. It also has splendid grain producing soil, which is black loam.

Price \$10,000.00. Payments can be arranged to suit purchaser. Apply:

THE SHERLOCK-MANNING PIANO AND ORGAN COMPANY
London, Ontario

THE GALLANT LABORER.

"O, thank you," exclaimed an elderly lady to a laborer, who surrendered his seat on a crowded tramcar—"thank you very much!"

"That's all right, mum," was the rejoinder. As the lady sat down the chivalrous laborer added:

"Wot I see is a man never ort to let a woman stand. Some men never gets up unless she's pretty, but you see, mum, it don't make no difference to me!"—London Telegraph.

a little gray kitten, and the dog walking beside it. We picked it up and took it to the neighbor's with us, and gave it to his little boy; but before we got there we heard another cat, and after a while a little yellow kitten came up out of the long grass on the side of the road.

When I came home I brought it with me; my little brother thought it was very pretty. He named it Fuzz. It is now a big cat.

MARGUERETE MAGUIRE.
(Age 9, Jr. III Class.)
Mooresville, Ont.

Dear Puck and Beavers,—I am going to tell you something about my first visit to Toronto. We first went to Riverdale Park, and up through the Zoo, where we saw all the wild animals, the reindeer with his large horns, then the big elephants, two white polar bears, black and brown bears, lions, tigers, sea lions, wild cats, sacred cattle from Palestine, leopards, a giraffe, with his long neck; monkeys, which almost work like people. We had a trip on the big boat to the Island, and had supper there. Next we went to Scarborough Beach, and were in a row boat, Ferris swing, merry-go-round, shoot-the-shoot, and many other things that I cannot remember. A little Beaver.

RUTH ARMSTRONG (age 9).
Bowmanville, Ont., R. R. No. 3.

Honor Roll.

Ruby Kennedy.
Rae Coultis.
Mary Comfort.
Hilda Foster.

Riddles.

When does a man sneeze three times?
Ans.—When he can't help it.—Sent by Mary Comfort.

A man went up the hill and yet was at the bottom. Ans.—His dog's name was Wet.—Sent by Myrtle Hamilton.

What goes up and down and never touches earth nor sky? Ans.—A pump-handle.—Sent by Edna Noble.

Fashion Dept.

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 PATTERN. 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.

When ordering, please use this form:—

Send the following pattern to:

Name

Post Office

County

Province

Number of pattern.....

Age (if child or misses' pattern).....

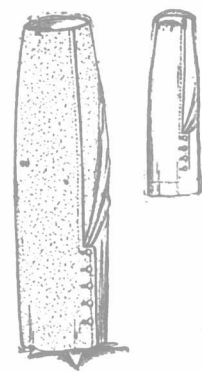
Measurement—Waist, Bust,

Date of issue in which pattern appeared.....

Address: Pattern Dept., "The Farmer's Advocate and Home Magazine," London Ontario.



7555 Hourie Jacket with Peplum, 34 to 42 bust.



8058 Two-Piece Skirt with Drapery, 22 to 32 waist.



DESIGN BY MAY MANTON
7681 Child's Tucked Dress,
1, 2 and 4 years.



DESIGN BY MAY MANTON.
8059 Doll's Coat Set,
18, 22 and 26 inches high.



DESIGN BY MAY MANTON.
8038 Two-Piece Skirt,
22 to 30 waist.

The Music Master Says:

The really great pianos are identical—inside. There are only a few made. The Sherlock-Manning is one of them. For brilliancy of tone this instrument is unrivalled. Before buying a piano you should know all there is to know about the

**Sherlock-Manning
20th Century
Piano**



Louis XV.—Style 89.

Study out the things that make a piano a splendid musical instrument. Find out the reasons why this piano is a permanent, joy-giving investment. Write to the Sherlock-Manning people and ask them to show you wherein their instrument is worthy of the title

**"CANADA'S BIGGEST
PIANO VALUE"**

Their reply will delight you, and—save you \$100—if you want to buy a really great piano: Get the facts. That places you under no obligation.

THE SHERLOCK-MANNING PIANO CO.,
LONDON (No street address necessary) CANADA

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MADE BY THE COTTAGERS OF BUCKINGHAMSHIRE.

This is the old-fashioned lace made on the cushion, and was first introduced into England by the Flemish Refugees. It is still made by the village women in their quaint old way.

Our Laces were awarded the Gold-Medal at the Festival of Empire and Imperial Exhibition, Crystal Palace, London, England, for general excellence of workmanship.

BUY some of this hand-made Pillow Lace, it lasts MANY times longer than machine-made variety, and imparts an air of distinction to the possessor, at the same time supporting the village lace-makers, bringing them little comforts otherwise unobtainable on an agricultural man's wage. Write for descriptive little treatise, entitled "The Pride of North Bucks," containing 200 striking examples of the lace makers' art, and is sent post free to any part of the world. Lace for every purpose can be obtained, and within reach of the most modest purse.



COLLAR—Pure Linen \$1.00.



DAINTY HANDKIE—70c.
No. 910.—Lace 1 1/4 in. deep.

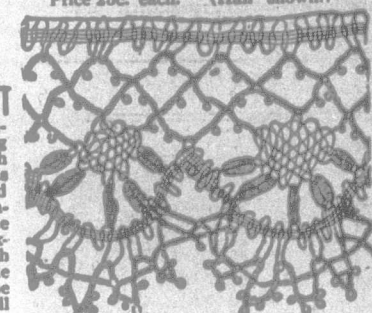
Collars, Fronts, Pla-
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kerchiefs, Stocks,
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Sets, Tea Cloths, Table
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Sets, etc., from 25c.
60c., \$1.00, \$1.50,
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Over 300 designs in
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from 10c., 15c., 25c., 45c.
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over 100 Irish
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hand-made
laces may be
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makers, both the workers and the customers derive great advantage.

Every sale, however small, is a support to the industry

(1 1/4 in. deep.) STOCK—Wheel Design.
Price 25c. each. (Half shown.)



No. 122.—30c. per yard.

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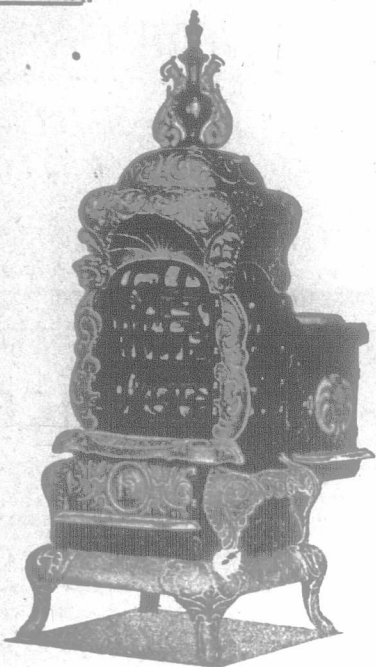
"Educationalists are giving more and more attention to the conditions under which the young are trained." This is especially true regarding the education of young ladies. For very many a residential school is best. Such schools are growing in popularity. Many of the best homes patronize them.

Alma (Ladies) College

is a Christian Home School that affords practical and artistic education under wholesome and attractive conditions. Collegiate buildings. Large campus. Strong staff. Physical culture excels. Health lectures. Send for prospectus and full particulars.

R. I. WARNER, M.A., D.D. ST. THOMAS, ONTARIO

The Practical, Fuel-Saving Range



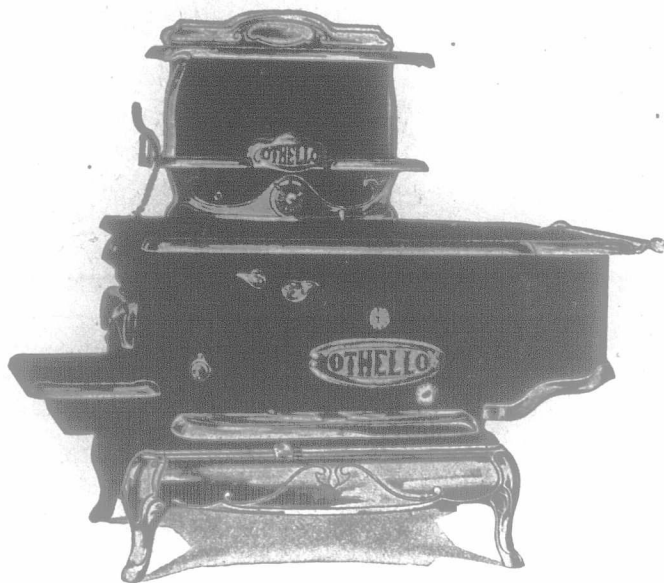
Art Treasure Baseburner with Oven

If you want comfort in your home this winter, and a satisfied wife, buy the

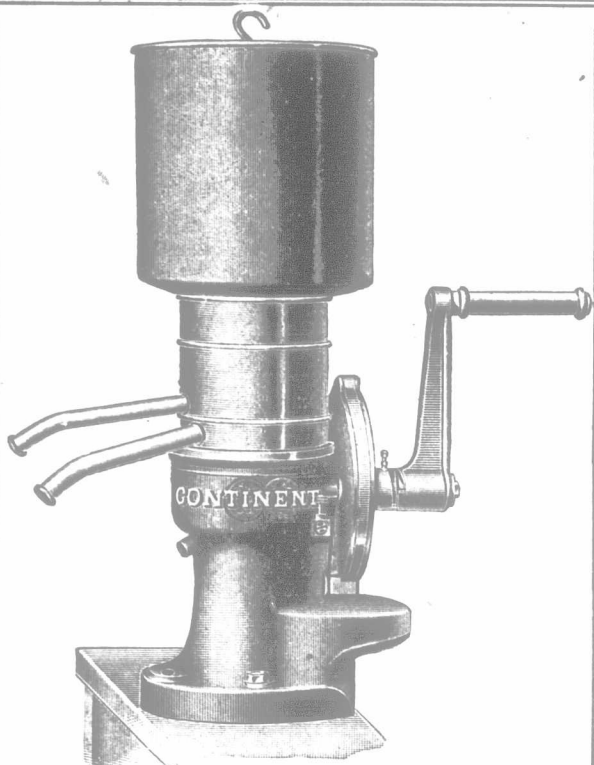
"OTHELLO" TREASURE

It is the most perfect working, fuel-saving, heat-giving range that has ever been produced.

Its baking powers are wonderful, for example: One firepot of coal will bake five clothes baskets full of biscuits. Can you imagine your old range doing this? Will keep fire for days with one firepot of coal. You have it under perfect control every minute of the day. The Thermometer gives you the exact temperature of the oven. The Glass Door allows you to see the articles while baking, without opening oven door. Beautiful semi-plain design. Lift-off nickle. Polished top smooth as glass. Ask your dealer to show you sample, or write us for particulars.



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Descriptive matter of this wonderful Time-Saver and Money-Maker sent on request.

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WE WANT ENERGETIC AGENTS

The People of the Whirlpool.

[Serial rights secured from The Macmillan Publishing Co., Toronto and New York]

Chapter VII.
SYLVIA LATHAM.

Sylvia came that afternoon well before dark, a trim footman following from the brougham with her suitcase and an enormous box of forced early spring flowers, hyacinths, narcissi, tulips, English primroses, lilies-of-the-valley, white lilacs, and some yellow wands of Forsythia, "with Mrs. Latham's compliments to Miss Dorman."

"What luxury!" exclaimed Miss Lavinia, turning out the flowers upon the table in the tea-room where she kept her window garden. "and how pale and spindling my poor posies look in comparison. Are these from the Bluffs?" "Oh no, from Newport," replied Sylvia. "There is to be no glass at the Bluffs, only an outdoor garden, mamma says, that will not be too much trouble to keep up. Mrs. Jenks-Smith was dining at the house last night, and told me what a lovely garden you have, Mrs. Evan, and I thought perhaps, if we do not go to California to meet father, but go to Oaklands early in April, you might be good enough to come up and talk my garden over with me. The landscape architect has, I believe, made a plan for the beds and walks about the house, but I am to have an acre or two of ground on the opposite side of the highway quits to myself.

"Oh, please don't squeeze those tulips into the tight vases, Aunt Lavinia," she said, going behind that lady and giving her a hug with one arm, while she rescued the tulips with the other hand; for Miss Lavinia, feeling hurried and embarrassed by the quantity of flowers, was jumbling them at random into very unsuitable receptacles.

"May I arrange the dinner table," Sylvia begged, "like a Dutch garden, with a path all around, beds in the corners, and those dear little silver jugs and the candlesticks for a bower in the middle?"

"A month ago," she continued, as she surveyed the table at a glance and began to work with charming enthusiasm. "mamma was giving a very particular dinner. She had told the gardener to send on all the flowers that could possibly be cut, so that there were four great hampers full; but owing to some mistake Darley, the florist, who always comes to decorate the rooms, did not appear. We telephoned, and the men flew about, but he could not be found, and mamma was fairly pale with anxiety, as Mrs. Center, who gives the swell dinner dances, was to dine with her for the first time, and it was important to make an impression, so that I might be invited to one or possibly more of these affairs, and so receive a sort of social hall mark, without which, it seems, no young New York woman is complete. I didn't know the whole of the reason then, to be sure, or very possibly I should not have worked so hard. Still, poor mamma is so in earnest about all these little intricacies, and thinks them so important to my happiness and fate, or something else she has in view, that I am trying not to deceive her until the winter is over."

Sylvia spoke with careless gayety, which was to my mind somehow belied by the expression of her eyes.

"I asked Perkins to get out the Dutch silver, toys and all, that mamma has been collecting ever since I can remember, and bring down a long narrow mirror in a plain silver frame that backs my mantel shelf. Then I begged mother to go for her beauty sleep and let me wrestle with the flowers, also to be sure to wear her new Van Dyke gown to dinner."

"This was not according to her plan, but she went perforce. I knew that she felt extremely dubious, and, trembling at my rashness, I set at work to make a Dutch flower garden, with the mirror for a canal down the centre. Perkins and his understudies, Potts and Parker, stood watching me with grim faces, exchanging glances that seemed to question my sanity when I told Parker to go out to the corner where I had seen workmen that afternoon dump a load of

of the pool.

From The Mac- Toronto and New VII.

THAM.

noon well before following from the suitcase and an ced early spring cissi, tulips, Eng- the-valley, white wands of For- athain's compl- d Miss La- flowers upon the where she kept ed how pale and ies look in com- on the Bluffs?" eport," replied he no glass at outdoor garden, not be too much Mrs. Jenks-Smith e last night, and garden you have, ht perhaps, if we a to meet father, rly in April, you to come up and with me. The I believe, made e walks about the e an acre or two site side of the

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little white pebbles, such as are used in repairing the paving, and bring me in a large basketful. But when the garden was finished, with the addition of the little Delft windmills I brought home, and the family of Dutch peasant dolls that we bought at the Antwerp fair, Perkins was absolutely moved to express his approval.

"What effect did the garden have upon the dance invitations?" asked Miss Lavinia, highly amused, and also more eager to hear the doings of society than she would care to confess.

"Excellent! Mrs. Center asked mother who her decorator was, and said she would certainly employ him; which, it seems, was a compliment so rare that it was equivalent to the falling of the whole social sky at my feet, Mr. Bell said, who let the secret out. I was invited to the last two of the series,—for they come to a conspicuous stop and turn into theatre parties when Lent begins,—and I really enjoyed myself, the only drawback being that so few of the really tall and steady men care for dancing. Most of my partners were very short, and loitered so, that I felt top-heavy, and it reminded me of play-days, when I used to practice waltzing with the library fire tongs.

"I dislike long elaborate dinners, though mamma delights in them, and says one may observe so much that is useful, but I do like to dance with a partner who moves, and not simply progresses in languid ripples, for dancing is one of the few indoor things that one is allowed to do for oneself.

"Now, Aunt Lavinia, you see the garden is all growing and blowing, and there are only enough tulips left for the Rookwood jars in the library," Sylvia said, stepping back to look at the table, "and a few for us to wear. Lilies-of-the-valley for you, pink tulips for you, Mrs. Evan,—they will soon close, and look like pointed rosebuds,—yellow daffies to match my gown, and you must choose for the two men I do not know. I'll take a tuft of these primroses for Mr. Bradford, and play they grew wild. We always joked him about those flowers at college until 'The Primrose' came to be his nickname among ourselves. Why?"

"One day he was lecturing us on Wordsworth, and reading examples of different styles and metres, he finished a rather sentimental phrase with:

'A primrose by a river's brim
A yellow primrose was to him
And it was nothing more.'

Suddenly, the disparity between the big-ness of the reader and the slimmness of the verse overcame me, and catching his eye, I laughed aloud. Of course, the entire class followed in a chorus, which he, catching the point, joined heartily. It sounds silly now, but it seemed very funny at the time; and it is such little points that make events at school, and even at college."

"Mr. Bradford told me some news this morning," said Miss Lavinia, walking admiringly about the table as she spoke. "He is Professor Bradford, of the University, not merely the women's college now, or rather will be at the beginning of the next term."

"That is pleasant news. I wonder how old Professor Jameson happened to step out, and why none of the Rock-cliff girls have written me about it."

"He did not tell me any details; said that they would keep until to-night. We met him in the street this morning, immediately after we left you," and Miss Lavinia gave a brief account of our shopping.

"That sounds quite like him. All his air castles seemed to be built about his mother and the old farm at Pine Ridge. He has often told me how easy it would be to get back the house to the colonial style, with wide fireplaces, that it was originally, and he always had longings to be in a position to coax his mother to come to Northbridge for the winter, and keep a little apartment for him. Perhaps he will be able to do both now."

Sylvia spoke with keen but quite im- personal interest, and looking at her I began to wonder if here might not, after all, be the comrade type of woman in whose existence I never before believed,—feminine, sympathetic, buoyant, yet capable of absolutely rational and un- emotional friendship with a man within

ten years of her own age. But after all it is common enough to find the first half of such a friendship, it is the unit that is difficult; and I had then had no opportunity of seeing the two together.

We went upstairs together, and lingered by the fire in Miss Lavinia's sitting room before going to make ready for dinner. The thaw of the morning was again locked by ice, and it was quite a nippy night for the season. I revelled mentally in the fact that my dinner waist was crimson in color, and abbreviated only in the way of elbow sleeves, and the pretty low corn-colored crepe bodice that I saw Lucy unpacking from Sylvia's suitcase quite made me shiver.

The only light in Miss Lavinia's den, other than the fire, was a low lamp, with a soft-hued amber shade, so that the room seemed to draw close about one like protecting arms, country fashion, instead of seeking to turn one out, which is the feeling that so many of the stately apartments in the great city houses give me.

While I am indoors I want space to move and breathe in, of course, but I like to feel entrenched; and only when I open the door and step outside, do I wish to give myself up to space, for Nature is the only one who really knows how to handle vastness without over- doing it.

As we sat there in silence I watched the play of firelight on Sylvia's face, and the same thought seemed to cross it as she closed her eyes and nestled back in Miss Lavinia's funny little fat sewing chair, that was like a squab done in upholstery. Then, as the clock struck six, she started, rubbed her eyes, and crossed the hall to her room half in a dream.

"She is like her Grandmother Latham when I first saw her, as a girl of twenty-one can be like a woman of fifty," said Miss Lavinia, from the lounge close at my elbow. "Not in coloring or feature, but in poise and gesture. The Lathams were of Massa- chusetts stock, and have, I imagine, a good deal of the Plymouth Rock mixture in their backbones. Her father has the reputation, in fact, of being all rock, if not quite of the Plymouth variety. Well, I think she will need it, poor child; that is, if any of the rumors that are beginning to float in the air settle to the ground."

"Meaning what?" I asked, half unconsciously, and paying little heed, for I then realized that the daily letter from father had not arrived; and Lucy at that moment came in, lit the lamps, and began to rattle the hair brushes in Miss Lavinia's bed-room, which I took as a signal for me to leave.

The door-bell rang. It was Evan, but before I met him halfway on the stairs, he called up: "I telephoned home an hour ago, and they are all well. The storm held over the last night there. Father says it was the most showy snow they have had for years, and he was delayed in getting his letter to the post."

"Is that all?" I asked, as I got down far enough to rest my hands on his shoulders.

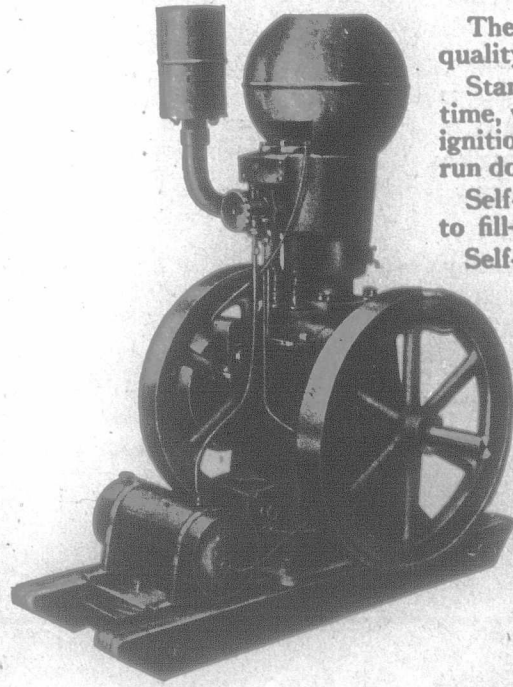
"Yes; the wires buzzed badly and did not encourage gossip. Ah!" (this with an effort to appear as if it was an afterthought). "I told him I thought that you would not wait for me to-morrow, but probably go home on the 9.30. Not that I really committed you to it if you have other plans!"

Martin Cortright appeared some five minutes before Horace Bradford. As it chanced, when the latter came in the door Sylvia was on the stairs, so that her greeting and hearty handshake were given looking down at him, and she waited in the hall, in a perfectly un- embarrassed way, as a matter of course, while he freed himself from his heavy coat. His glance at the tall girl, who came down from the darkness above, in her shimmering gown, with golden daffies in her hair and on her breast, like a beam of wholesome sunshine, was full of honest, personal admiration. If it had been otherwise I should have been dis- appointed in the man's completeness. Then, looking at them from out of the library shadows, I wondered what he would have thought if his entry had been at the Latham home instead of at Miss Lavinia's, how he would have passed the ordeal of Perkins, Potts and

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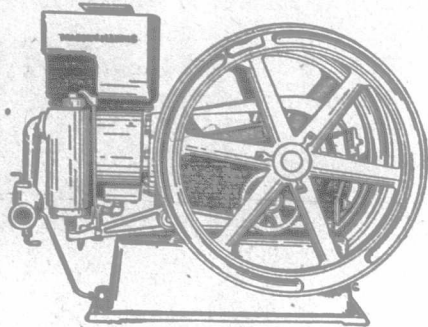
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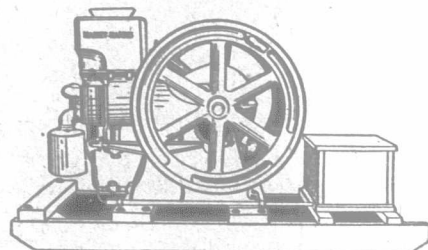
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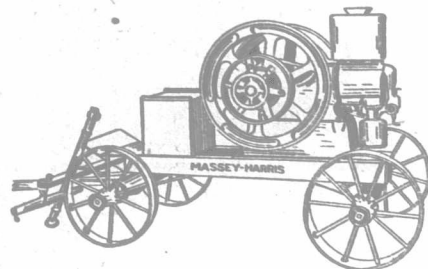
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Parker, and if his spontaneity would have been marred by the formality.

Perhaps he would have been oblivious. Some men have the happy gift of not being annoyed by things that are thorns in the flesh to otherwise quite independent women. Father, however, is always amused by flunkies, and treats them as an expected part of the show; even as the jovial Autocrat did when, at a grand London house, "it took full six men in red satin knee-breeches" to admit him and his companion.

Bradford did not wear an evening suit; neither did he deem apology necessary. If he thought of the matter at all, which I doubt, he evidently considered that he was among friends, who would make whatever excuses were necessary from the circumstances of his hurried trip.

Then we went into the dining-room, Miss Lavinia leading with Martin Cortright, as the most recent acquaintance, and therefore formal guest, the rest of us following in a group. Miss Lavinia, of course, took the head of the table, Evan opposite, and the two men, Cortright on her right and Bradford on her left, making Sylvia and me vis-a-vis.

The men appropriated their buttonhole flowers naturally. Martin smiled at my choice for him, which was a small, but chubby, red and yellow, uncompromising Dutch tulip, far too stout to be able to follow its family habit of night closing, except to contract itself slightly. Evan caressed his lilies-of-the-valley lightly with his finger-tips as he fastened them in place, but Bradford broke into a boyish laugh, and then blushed to the eyes, when he saw the tiny bunch of primroses, saying: "You have a long memory, Miss Sylvia, yet mine is longer. May I have a sprig of that, too?" and he reached over a big-boned hand to where the greenhouse-bred wands of yellow Forsythia were laid in a formal pattern bordering the paths. "That is the first flower that I remember. A great bush of it used to grow in a protected spot almost against the kitchen window at home; and when I see a bit of it in a strange place, for a minute I collapse into the little chap in outrageous gathered trousers, who used to reach out the window for the top twigs, that blossomed earliest, so as to be the first to carry 'yellow bells' to school for a teacher that I used to think was Venus and Minerva rolled in one. I saw her in Boston the other day, and the Venus hallucination is shattered, but the yellow bells look just the same, proving—"

"That every prospect pleases
And man (or woman) alone is vile,"

interpolated Evan.

Grape fruit, with a dash of sherry, or the more wholesome sloe-gin, is Miss Lavinia's compromise with the before-dinner cocktail of society; that is really very awakening to both brain and digestion; and before the quaint silver soup tureen had disappeared, even Martin Cortright had not only come wholly out of his shell, but might have been said to have fairly perched on top of it, before starting on a reminiscent career with his hostess, beginning at one of the Historical Society; for though Martin's past belonged more to the "Second Avenue" faction of the old east side, and Miss Lavinia to the west, among the environs of what had once been Greenwich and Chelsea villages, they had trodden the same paths, though not at the same time. While Sylvia and the "Professor," as she at once began to call him, picked up the web of the college loom that takes in threads of silk, wool, and cotton, and mixing or separating them at random, turns out garments of complete fashion and pattern, or misfits full of false starts or dropped stitches that not only hamper the wearers, but sometimes their families, for life. All that Evan and I had to do was to maintain a sympathetic silence, kept by occasional ejaculations and murmurs from growing so profound as to cause a draught at our corner of the table.

"Yes, we used to go there regularly," I heard Miss Lavinia say; "when we were girls Eleanor (Barbara's mother) and I attended the same school—Miss Black's,—Eleanor being a boarding and

I a day pupil and a clergyman's daughter also, which, in those days, was considered a sort of patent of respectability. Miss Black used to allow her to spend the shorter holidays with me and to go to those historical lectures as a matter of course. We never publicly mentioned the fact that Eleanor also liked to come to my house to get thoroughly warmed and take a bath, as one of Miss Black's principles of education was that feminine propriety and cold rooms were synonymous, and the long room with a glass roof, sacred to bathing, was known as the 'refrigerator'; but those atrocities that were committed in the name of education have fortunately been stopped by education itself. I don't think that either of us paid much attention to the lectures; the main thing was to get out and go somewhere; yet I don't think any other later good time were as breathlessly fascinating.

"Mother seldom went, the hermetically sealed, air-proof architecture of the place not agreeing with her; so father, Eleanor, and I used to walk over, crossing at the head of Washington Square, until, as we passed St. Mark's Church and reached the steps of the building, we often headed a procession as sedate and serious as if going to Sunday meeting, for there were fewer places to go in those days. Once within, we usually crept well up front, for my father was one of the executive committee who sat in the row of chairs immediately facing the platform, and to be near him added several inches to my stature and importance, at least in my own estimation. Then, too, there was always the awesome and fascinating possibility that one of these honorable personages might fall audibly asleep, or slip from his chair in a moment of relaxation. Such events had been known to occur. In fact, my father's habit of settling down until his neck rested upon the low chair back, made the slipping accident a perpetual possibility in his case.

"Then, when the meeting was called to order, the minutes read with many a-hems and clearings of the throat, and the various motions put to vote with the mumbled 'All-in-favor-of-the-motion-will-please-signify-by-saying-Ay!' Contrary-minded-no-the-motion-is-accepted!' that some one would say 'No' was our perpetual wish, and we even once meditated doing it ourselves, but could not decide which should take the risk.

"Another one of our amusements was to give odd names to the dignitaries who presided. One with lurching gait, called 'The Owl'; while another, a handsome old man of the 'Signer' type, erectile whiskers, and blinking eyes, we pink-cheeked, deep-eyed, with a fine-aquiline nose, we named 'The Eagle.'"

"Oh I know whom you mean, exactly!" cried Martin, throwing back his head and laughing as heartily as Bradford might; "and 'The Owl' was supposed to have intentions of perpetuating his name by leaving the society money enough for a new building, but he didn't. But then, he doubtless inherited his thrift from the worthy ancestors of the ilk of those men who utilized trousers for a land measure. Do you also remember the discussions that followed the reading of paper or lecture? Sometimes quite heated ones too, if the remarks had ventured to even graze the historical buntions that afflicted the feet of many old families."

"No, I think we were too anxious to have the meeting declared adjourned to heed such things. How we stretched ourselves; the physical oppression that had been settling for an hour or two lifting suddenly as we got on our feet and felt that we might speak in our natural voices.

"Then father would say, 'You may go upstairs and examine the curiosities before joining us in the basement,' and we would go up timidly and inspect the Egyptian mummy. I wonder how he felt last year when there was a reception in the hall and a hand broke the long stillness with 'The Gay Tomtit.' Was ever such chocolate or such sandwiches served in equally sepulchral surroundings as in the long room below stairs. I remember wondering if the early Christmas ever lunched in the catacombs, and how they felt; and I should not have been surprised if Lazarus himself appeared in one of the

Gift Furniture

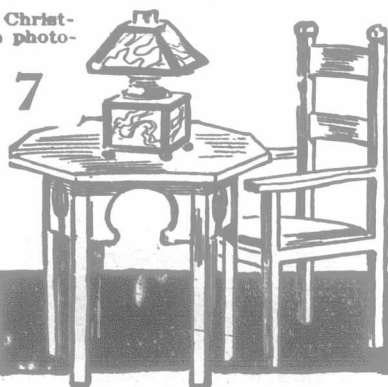
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"It seems really very odd that you were one of those polite young men who used sometimes to pass the plates of sandwiches to us where we stayed hidden in a corner so that the parental eye need not see how any we consumed."

Thus did Martin Cortright and Miss Lavinia meet on common ground and drift into easy friendship which it would have taken years of conventional intercourse to accomplish, while opposite, the talk between Sylvia and Bradford dwelt upon the new professorship and Sylvia's roommate of two years, who, instead of being able to remain and finish the course which was to fit her for gaining nominal independence through teaching, had been obliged to go home and take charge, owing to her mother's illness.

"Yes, Professor Jameson's decision to give all his time to outside literary work was very sudden," I heard Bradford say. "I thought that it might happen two or three years hence; but to find myself now not only in possession of a salary of four thousand dollars a year (hardly a fortune in New York, I suppose), but also freed this season from being tied at Northbridge to teach in the summer school, and able to be at home in peace and quiet and get together my little book of the 'Country of the English Poets,' seems to me almost unbelievable."

"I have been wondering how the book was coming on, for you never wrote of it," answered Sylvia. "I have been trying all winter, without success, to arrange my photographs in scrap-books with merely names and dates. But though, as I look back over the four months, everything has been done for me, even the buttoning of my gloves, while I've seemingly done nothing for any one, I've barely had a moment that I could call my own."



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"I do not think that it is strange, after having been away practically for six years, that family life and your friends should absorb you. Doubtless you will have time now that Lent has come," said Bradford smiling. "Of course we country Congregationalists do not treat the season as you Anglican Catholics do, and I've often thought it rather a pity. It must be good to have a stated time and season for stopping and sitting down to look at oneself. I picked up one of your New York church papers in the library the other day, and was fairly surprised at the number of services and the scope of the movement and the work of the church in general."

Sylvia looked at him for a moment with an odd expression in her eyes, as if questioning the sincerity of his remarks, and then answered, I thought a little sadly: "I'm afraid it is very much like other things we read of in the papers, half truth, half fiction; the churches and the services are there, and the good earnest people, too—but as for stopping! Ah, Mr. Bradford, I can hardly expect to make you understand how it is, for I cannot myself. It was all so different before I went to boarding school, and we lived down in the Waverley Place where I was born. The people of mamma's world do not stop; we simply whirl to a slightly different tune. It's like waltzing one way around a ballroom until you are quite dizzy, and then reversing,—there is no sitting down to rest, that is, unless it is to play cards."

"Yet whist is a restful game in itself," said Bradford cheerfully; "an evening of whist, with even fairly intelligent partners, I've always found a great smoother-out of nerves and wrinkles."

"They do not play it that way here," answered Sylvia, laughing, in spite of herself, at his quiet assumption. "It's

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'bridge' for money or expensive prizes; and compared to the excitement it causes, the tarantella is a sitting-down dance. I'm too stupid with cards to take the risk of playing; even mamma does not advise it yet, though she wishes to have me coached. So I shall have some time to myself after all, for my defect. puts me out of three Lenten card clubs to which mamma belongs, two of which meet at our house. That leaves only two sewing classes, three Lenten theatre clubs (one for lunch and matinee and two for dinner and the evening), and Mr. Bell's cake-walk club, that practises with a teacher at our house on Monday evenings. The club is to have a semi-public performance at the Waldorf for charity, in Easter week, and as the tickets are to be ten dollars each, they expect to make a great deal of money. So you see there is very little time allowed us to sit down and look at ourselves."

"I cannot excuse cake-walking off the stage, among civilized people," interpolated Miss Lavinia, catching the word but not the connection, and realizing that, as hostess, she had inconsiderately lost the thread of the conversation. "It appeals to me as the expression of physical exuberance of a lower race, and for people of our grade of intelligence to imitate it is certainly lowering! The more successfully it is carried out the worse it is!"

Miss Lavinia spoke so fiercely that everybody laughed, but Sylvia, who colored painfully, and Horace Bradford deftly changed the subject in the lull that followed.

The men did not care to be left alone with their cigars and coffee, so we lingered in the dining-room. Suddenly a shrieking whistle sounded in the street, and the rapid clatter of hoofs made us listen, while Evan rushed to the door, seizing his hat, on the way.

"Only the fire engines," said Miss Lavinia; "you would soon be used to them if you lived here; the engine house is almost around the corner."

"Don't you ever go after them?" I asked, without thinking, because to Evan and me going to fires is one of the standard attractions of our New York.

"Barbara, child, don't be absurd. What should I do traipsing after an engine?"

"Yet a good fire is a very exciting spectacle. I once had the habit of going," said Martin Cortright, emerging from a cloud of cigar smoke. "I remember when Barnum's Museum was burned my father and I ran to the fire together and stayed out, practically, all night."

More whistling and a fresh galloping of hoofs indicated that there was a second call, and the engines from up town were answering. I began to tap my feet restlessly, and Miss Lavinia noticed it.

"Don't hesitate to go if you wish to," she said. At the same moment Evan dashed back, calling: "It's a fire on the river front, a lumber yard; plenty of work ahead, with little danger and a wonderful spectacle. Why can we not all go to see it, for it's only half a dozen blocks away? Bundle up, though, it's bitterly cold."

Horace Bradford sprang to his feet and Sylvia was halfway upstairs and fairly out of her evening gown when Miss Lavinia made up her mind to go also, Evan's words having the infection of a stampede.

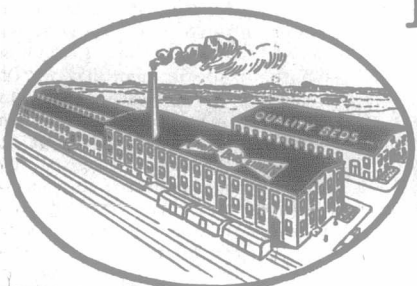
"Don't forget the apples," I called to Evan as I followed my hostess.

"The shops and stands are closed. I'm afraid," he called back from the stoop where he was waiting; "perhaps Miss Lavinia has some in the house."

"Apples, yes, plenty; but for mercy's sake what for? You surely aren't thinking of pelting the fire out with them!" she gasped, hurrying downstairs and struggling to disentangle her eyeglasses from her bonnet strings; a complication that was always happening at critical moments, such as picking out change in an elevated railway station; and thereby blocking the crowd.

"No, apples to feed the fire horses; Barbara always does," Evan answered, dashing down the basement stairs to the kitchen, and returning quickly with a medley of apples and soup vegetables in a dish-towel bundle, leaving the solemn cook speechlessly astonished.

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Then we started off, Evan leading the way, and the procession straggling after in Indian file; for the back streets were not well shovelled, and to go two abreast meant that one foot of each was on a side hill. Evan fairly dragged me along. Sylvia and Bradford, being fleet of foot, had no difficulty in following, but Martin and Miss Lavinia had rather a bumpy time of it. Still, as pretty much all the uncrippled inhabitants of the district were going the same way, our flight was not conspicuous.

It was, as Evan had promised, a glorious fire! Long before we reached the Hudson the sky rayed and flamed with all the smokeless change of the Northern Lights. Once there, Evan piloted us through the densely packed crowd to the side string-piece of a pier, Miss Lavinia giving little shrieks the while, and begging not be pushed into the water.

From this point the great stacks of lumber that made the giant bonfire could be seen at the two points, from land and water side, where the fire-boats were shooting streams from their well-aimed nozzles.

As usual, after running the steam-pumping engines as close as desirable to the flames, the horses were detached, blanketed, and tied up safe from harm, and we found a group of three great intelligent iron-gray beauties close behind us, who accepted the contents of the dish-towel with almost human appreciation, while a queer, wise, brown dog, an engine mascot, who was perched on the back of the middle horse, shared the petting with a politely matter-of-fact air.

"It is wonderful! I only wish I could see a little better," murmured Miss Lavinia, who was short, and buried in the crowd.

"Why not stand on this barrel?" suggested Bradford, holding out his hand.

"It's full of garbage and ashes," she objected.

"Never mind that, they are frozen hard," replied Bradford, poking the mass practically.

Three pairs of hands tugged and boosted, and lo! Miss Lavinia was safely perched; and as there were more barrels Sylvia and I quickly followed suit, and we soon all became spellbound at the dramatic contrasts, for every now and again a fresh pile of Georgia pine would be devoured by the flames, the sudden flare coming like a noiseless explosion, making the air fragrantly resinous, the doomed lumber yard was being draped with a fantastic ice fabric from the water that froze as it fell.

As to the firemen! don't talk to me of the bygone bravery of the crusaders and the lords of feudal times, who spent their lives in the sport of encamping outside of fortresses, at whose walls they occasionally butted with rams, lances and strong language, leaving their wives and children in badly drained and draughty castles. If any one wishes to see brave men and true, simply come to a fire with Evan and me in our New York.

We might have stood there on our garbage pedestals half the night if Horace Bradford had not remembered that he must catch the midnight express, glanced at his watch, found that it was already nearly half-past ten, and realized that he had left his grip at Miss Lavinia's. Consequently we dismounted and pushed our way home.

As we were half groping our way up ill-lighted West Tenth Street Martin Cortright paused suddenly and, after looking about, remarked: "This is certainly a most interesting locality. That building opposite, which has long been a brewery was once, in part at least, the first city or State's Prison. How often criminals must have traversed this very route we are following, on their way to be hanged. For you know that place, of later years esteemed so select, was once not only the site of Potter's Field, but of the city gallows as well!"

No one, however, joined more heartily than he in the merriment that his inappropos reminiscence caused, and we reached home in a good humor that effectually kept off the cold.

"Did you succeed in buying the gown?" Horace Bradford asked Miss Lavinia, as he stood in the hall making his farewells.

"Oh, yes, I had almost forgotten."

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Here is the package only waiting for your approval to be tied," and she led the way to the library.

Bradford touched the articles with his big fingers, as lovingly as if he were smoothing his mother's hair, or her hand.

"They are exactly right," he said heartily, turning and grasping Miss Lavinia's hand, as he looked straight into her eyes with an expression of mingled gratitude and satisfaction. "She will thank you herself, when we all meet next summer," and with a happy look at Sylvia, who had come to the library to see the gifts, and was leaning on the table, he grasped bag and parcel shook hands all around, and hurried away.

"What do you think?" I asked Evan, as we closed our bedroom door.

"Of what?" he answered, with the occasional obtuseness that will overtake the best of men.

"Of Sylvia and Bradford, of course. Are they in love, do you think?"

"I rather think that he is," Evan answered, slowly, as if bringing his mind from afar, "but that he doesn't know it, and I hope he may stay in ignorance, for it will do him no good, for I am sure that she is not, at least with Bradford. She is drifting about in the Whirlpool now. She has not found herself in any way, as yet. She seems a charming girl, but I warn you, Barbara, don't think you scent romance, and try to put a finger in this pie! Your knowledge of complex human nature isn't nearly as big as your heart, and the Latham set are wholly beyond your ken and comprehension." Then Evan, declining to argue the matter, went promptly to sleep.

Not so Sylvia. When Miss Lavinia went to her room to see if the girl was comfortable and have a little go-to-bed chat by the fire, she found her stretched upon the bed, her head hidden between the pillows, in a vain effort to stifle her passionate sobbing.

"What is it my child?" she asked, truly distressed. "Are you tired, or have you taken cold, or what?"

"No, nothing like that," she whispered, keeping her face hidden and jerking out disjointed sentences, "but I can't do anything for anybody. No one really depends on me for anything. Helen Baker must leave college, because they need her at home—just think, need her! Isn't that happiness? And Mr. Bradford is so joyful over his new salary, thinks it is a fortune, and with being able to buy these things for his mother,—father has sent me more money during the four months I've been back, so I may feel independent, he says, than the Professor will earn in a year. Independent? deserted is a better word! I hardly know my own parents, I find, and they expect nothing from me, even my companionship.

"Before I went away to school, if mamma was ill, I used to carry up her breakfast, and brush her hair; now she treats me almost like a stranger,—dislikes my going to her room at odd times. I hardly ever see her, she is always so busy, and if I beg to be with her, as I did once, she says I do not understand her duty to society.

"People should not have children and then send them away to school until they feel like strangers, and their homes drift so far away that they do not know them when they come back,—and there's poor Carthy out west all alone, after the plans we made to be together. It is all so different from what I expected. Why does not father come home, or mother seem to mind that he stays away? What is the matter, Aunt Lavinia? Is mamma hiding something, or is the fault all mine?"

Miss Lavinia closed the door, and soothed the excited girl, talking to her for an hour, and in fact slept on the lounge, and did not return to her own room until morning. She was surprised at the storm in a clear sky, but not at the cause. Miss Lavinia was keenly observant, and from two years' daily intercourse, she knew Sylvia's nature thoroughly. For some reasons, she wished with all her heart that Sylvia was in love with Horace Bradford, and at the same time feared for it; but before the poor girl fell asleep, she was convinced that such was not the case, and that the trouble already rising well up from her horizon was something far more complicated.

(To be continued.)

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So I told him I wanted to try the horse for a month. He said "All right," but pay me first, and I'll give you back your money if the horse isn't all right."

Well, I didn't like that. I was afraid the horse was not "all right" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now, this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what our "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in Six Minutes. I know no other machine ever invented can do that, without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges, nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, I will do with my "1900 Gravity" Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time.

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight too. Surely that is fair enough, isn't it?

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

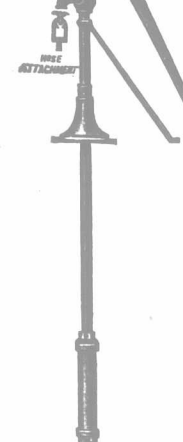
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Veterinary.

Growth in Nostril.

Heifer has a growth in her nostril and it causes a constant snoring and difficult breathing. Would her flesh be fit to eat?

E. S.

Ans.—If the growth can be seen, a veterinarian would be able to remove it by an operation. Unless it be a malignant growth, the flesh would be healthful. V.

Miscellaneous.

An Assault Case.

A is an unmarried woman of good character, about thirty-five or forty years of age, and goes to work for B, a neighbor, in the absence of his wife. B is a very disagreeable person, and there were numerous jangles between them. One morning he provoked her until she called him a name (not very complimentary); and he seized her and shoved her against a door, crushing in her chest with his elbow. He might have hurt her worse, or killed her, had not the hired man taken him off. As it was, she could hardly walk or get her breath, but managed to get to the nearest village, where she was examined by a doctor, who saw the marks on her arms and chest, and that her chest was crushed so that it will be some time before she will be in her former health again. The doctor offered to give evidence to this effect if he was wanted at the trial. She then gave the case into a magistrate's hands. This was on Saturday that all this happened, and the trial was held on Monday. B hired a lawyer to defend him, and also brought his hired man to the trial with him. The lawyer, with his loud voice, held full sway, and allowed the magistrate (who is an old man and in delicate health) to say scarcely anything. He dwelt mostly on different things which led up to the jangles, and said insulting things to this poor, meek woman, with no one to defend her, and not another woman in the room, there being quite a number of men present, asking her such questions as this: "Didn't you get a new pair of corsets not long ago?" Ans.—"Yes." "Didn't they hurt you?" She explained that her corsets could not possibly come away up to her chest where it was hurt. He continued to ask such questions as this, and as to the manner in which he grabbed hold of her, until the poor woman was glad to come to any settlement to get away from the eyes of those looking at her. The magistrate tried several times to talk, but was allowed to say very little, as his voice was soon drowned by the loud, thundering voice of this lawyer. And this man B (whose record is bad) was allowed to go scot free, without any punishment, except to pay the doctor, and a paltry sum besides.

1. Was this case tried right?

2. Was this not a criminal case, and should not a K. C. have had charge, and a judge present? If so, could this case be tried over again, even if A did agree to the settlement?

3. Could any other charge be brought up against B at the same time?

Ontario. CONSTANT READER.

Ans.—The magistrate ought not to have permitted domineering tactics on the part of the solicitor for the defendant. It would seem, too, that in view of the severity of the injuries inflicted on the complainant, he might well have notified the County Crown Attorney, who would then, probably, have taken charge of the case. But as the complainant eventually agreed to settle, and the case was actually settled between the parties and, apparently, with the concurrence and sanction of the magistrate, we do not see that there would be anything gained by an attempt on the complainant's part to re-open the matter.

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Fatality in Calf.

Early in October a five-months-old calf became sick, refused food, and bloated. We gave it a dose of ginger and soda, followed by a mixture of soft soap and salt, and later we gave it a patent preparation. The bowels moved in the evening, and it passed a worm four feet long, with a mouth like a sucker's. The calf died soon after this. Was this a tape-worm? When cattle have tapeworms, how can a person detect them? W. V.

Ans.—The calf suffered from impaction of the rumen with tympanitis (bloating). Treatment should have consisted in administering about one ounce of oil of turpentine in eight ounces raw linseed oil, to be repeated, if necessary, in about an hour. The treatment you gave was well calculated to increase the irritation, and we are not surprised that it caused expulsion of the worm. A tape worm is flat and thin, and marked off in small sections by transverse markings, and the head is somewhat hard to distinguish, hence we do not think that this was one. Animals that have tape worm are usually unthrifty, and void the worms in sections, hence the presence of sections of the worm in the excrement is the direct means of diagnosis. In some cases a post-mortem is necessary. V.

Miscellaneous.

Agistment of Cattle.

A rents pasture for two heifers from B. C owns a place adjoining B, and C rents his pasture land to D. A's heifers are then running in a field adjoining that on which D's cattle are grazing. D turns a bull with his cattle, and he breaks in with A's heifers and gets them both with calf. Before C rented his pasture to D, B told C that A's two heifers were on his place to pasture to be away from all danger of being accidentally bred, and C told D when the latter turned his bull with the cattle, that if any damages resulted he (D) would be responsible. Now the heifers are both with calf, and A says that the damage is at least \$15 for each. Who must A look to, to recover these damages, B, C, or D? Ontario.

Ans.—We should say that, as between B, C and D, B is the one to whom A should look for compensation.



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Bank Failure—An Endorser.

1. A and B have a dispute. A says a chartered bank is in danger of breaking down, while B says there is no danger.

2. A has a note with B as backer for one year. The note runs on for two years. Is B still responsible if not notified by A?

Ontario. SUBSCRIBER.

Ans.—1. A is right. It is possible for even a chartered bank to fail in its business; but most adequate protection is afforded the public in respect of its notes.

2. No; unless he waived notice of dishonor, or has, since the note matured, renewed his obligation in respect of it.

Boundary of Farms.

A and B own adjoining farms. Some thirty years ago gravel was taken out of a pit right under the line, and to accommodate this work the line fence was moved over for a short distance on to A's farm. The gravel-pit has ceased to be used, but the fence has never been replaced, though all these years. A has paid the taxes on the whole farm, including this strip. Has B any legal claim on this strip, or can A put back the line fence where it originally was? Ontario.

Ans.—It would seem that B has acquired title to the strip of land in question by length of possession, and, accordingly, that A cannot legally put the fence back upon the original boundary line unless B is agreeable.

Silage for the Horse and Bull.

1. What is considered the right amount of silage for a horse?

2. What is your experience of feeding silage to a bull?

3. Has silage any effect as to the sureness of a bull? L. L. M.

Ans.—1. Horses to be wintered on hay and silage should receive about 5 lbs. of silage at the beginning for every 1,000 lbs. live weight. The grain and hay can gradually be decreased and silage increased, until the ration consists of about 10 lbs. of hay and 20 lbs. silage for each 1,000 lbs. live weight.

2. From our experiences at Weldwood, and from other cases that come under our observation, we would say that silage, judiciously fed, is good fodder for a bull.

3. Corn silage has no detrimental effects, and under some circumstances will improve the potency of the bull by making him constitutionally strong and healthy.

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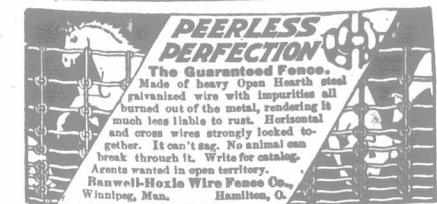
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Advertise in the Advocate

Questions and Answers. Miscellaneous.

Notice of Quitting.

I hold a lease of a farm which expires December 1st, 1914. It is a three-year lease. What notice do I require to give? If any, must it be in writing?

Ontario. TENANT.

Ans.—Notice is unnecessary.

New Ontario.

I was reading in a recent issue of your paper, some enquiries re Northern Ontario, and intend going out there next spring. Could you give me any idea of what sort of country it is in the Timiskaming District? Is this in the clay belt? Would the same varieties of seeds, cereals, and vegetables, roots, etc., that are used in this part of Ontario, grow equally as well in the Timiskaming District? Would it be a good district for mixed farming?

A. W. S.

Ans.—The Timiskaming District embraces the clay belt, and each year manifests itself as adapted to mixed farming. Clover and grain do exceedingly well, but the growing season is slightly shorter than in your section of Ontario, so it would be advisable to procure seed, if possible, in that district, where it has become acclimated. It is wise to plant berries, etc., that are hardy, and have proved themselves in that district. The same rule applies to vegetables and other crops. The drainage problem has not been completely solved in that country, but as development proceeds, it will likely give way to modern methods of leading off surplus water.

Peat as Fertilizer.

1. I have rented an orchard of two hundred and fifty trees, all sizes, some just starting to bear and some very old ones. The soil is light and gravelly. The orchard has been neglected and is in bad shape. There is a peat bog adjoining, and the peat could be easily applied. Would it be of any value as a fertilizer?

A. L. M.

Ans.—1. As yet, in this country, peat has not been used to any appreciable extent as a fertilizer, owing to the fact that a large quantity would have to be handled in order to obtain a small quantity of fertilizing ingredients. Whether the peat near your orchard could be profitably applied as fertilizer or not, depends largely upon the character of the peat. The one outstanding ingredient of peat would be the nitrogen content. If this is high enough to warrant your applying it, then you could profitably do so, because the organic matter in the peat would enhance the mechanical conditions of the soil. Send a sample to the Chemical Department, Agricultural College, Guelph, and have it analyzed for its fertilizing ingredients. Recently a method of treating peat and moss has been discovered in England by which one ton of the treated peat equals over eighty tons of barnyard manure. If this method could be established in Canada, your peat bog might be very useful.

2. The three fertilizer ingredients that should be applied to any orchard, are: Potash, phosphoric acid, and nitrogen. The nitrogen is the expensive part of this mixture. If by sowing vetch or clover and plowing it down each spring you can supply the nitrogen, as many do, you would only then need apply potash and phosphoric acid. The potash is customarily purchased as muriate of potash or sulphate of potash, but good, unleached ashes also contain this ingredient. The phosphoric acid can be applied in the form of basic slag, bone-meal, or acid phosphate, all of which can be purchased from any fertilizer company. Mixed fertilizers can be purchased also that are especially prepared for the orchard. If the orchard requires fertilizing, it will repay the use of about 500 lbs. per acre yearly. Thorough cultivation takes the place of considerable fertilizer if the soil is not entirely depleted: 150 to 200 lbs. of potash and 250 to 300 lbs. of acid phosphate or basic slag, will be sufficient to bring good results. Barnyard manure, if obtainable, would be excellent for the younger trees.

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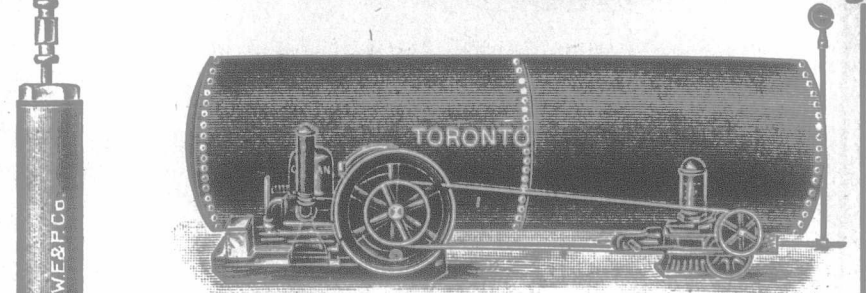
Questions and Answers.

Miscellaneous.
Book on Feeding.
1. Can I obtain, through your office,
the book "Feeds and Feeding," by
Henry?
2. Do you know of a better book on
this subject?
3. Are there bulletins published on
silos and silage; also on dairying?
Where can I obtain these? J. H. W.
Ans.—1. Yes, at \$2.25, postpaid.
2. No.
3. From the Ontario and Dominion
Departments of Agriculture.

Stave Silos.
1. I have bought enough 2 x 4-in., 12-
and 16-foot tamarack scantling for a
silo. I am thinking of making it 10
feet in diameter, and about 28 feet high.
Is 12 feet and 16 feet right for breaking
joints? I intend to dress it on the in-
side, and size it all down to 4 inches.
Is that right?
2. Where could I get a number of cast
or malleable tugs to run the round-iron
hoops through so as to tighten up
hoops? Some say to put up a 4 x 4
scantling to run hoops through, but the
scantling would keep the hoops away
from the staves on each side of scant-
ling. Would you put in a 6 x 6 stave
on each side of door for jam, or would
2 x 4 staves do all around with door cut
out every three or four feet? We gen-
erally milk about ten cows the year
round. Would you advise putting in
splines at joints or ends of staves?
Would the hoops need to be in two pieces
for a ten-foot silo and have lugs?

3. On each side of silo, to use a 4 x 4
scantling for lugs, and to carry the
round-iron hoops and have hole about
one inch from inside of scantling to run
hoops through, would that do, and keep
up between hoops and staves on each
side of scantling, and about how many
2 x 4's will I require for 10 feet inside,
or would you advise making it 13 feet
in diameter and not so high? It would
be easier for me to fill it. Could I take
off enough each day for 10 cows to keep
it good to feed about six months, with
a little other feed? J. W. F.
Ans.—1. Do not make your silo any
larger than 10 feet diameter for 10 milch
cows. The 12-foot and 16-foot scant-
ling, with joints broken, will be all
right, as is your idea of dressing and
sizing the lumber.
2. If you desire malleable lugs, you
can probably get them at your hardware
merchant's. Many of them handle them.
You will find it preferable, I believe, to
use two 4 x 4-inch staves and run hoops
through them. Sink an iron shaft in the
foundation when building, and let it
project about one foot or eighteen inches
above, just outside of the outer side of
your 4 x 4 stave. Bolt the two large
staves firmly to this as a protection
against wind-storms. An iron brace to
a girl in the barn will also add strength.
You can cut your doors from the ordi-
nary staves, and insert a jam, but you
will find the 6 x 6 staves more firm.
They are in general use, with a con-
tinuous door or a number of doors
spaced and sized to suit the distance of
the bands on the silo. The hoops should
be in two pieces, and can be curved
nicely in a wagon-tire bender. It is not
necessary to spline the ends of the staves
where they join, but stave silos are now
constructed with dowls, which hold them
up, even if slack. These dowls or small
pins are easily inserted into the staves
when being erected, provided the holes
are bored previously. Two in each stave
is sufficient.
3. The 4 x 4 will act as lugs, and it
is wise to use wire staples over the
hoops similar to the way wire is held to
a fence-post, especially in the staves near
the 4 x 4-inch scantling. The complete
silo would require 94 staves the whole
length. That would mean 94 sixteen-
foot staves, and 94 twelve-foot staves.
The doors, however, will be twenty
inches wide. That is the general width,
which would cut that number by five of
each length, leaving, approximately, 90
of each length required. Removing two
inches of silage per day, in a ten-foot
silo, would feed twelve cows 40 lbs. per
day. That is the least to remove at
one time, so ten feet is large enough.

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Shipping Str., Wanstead, G. T. R.

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Gossip.

IMPORTED CLYDESDALE MARES.

The Canadian farmers that stay by the breeding of draft horses are the ones that will make the money if they breed the big, good kind, by using the big, quality, brood mares. L. J. C. Bull, of Brampton, Ont., is offering for sale an exceptionally choice lot of mares and fillies three and four years of age. This lot were imported over a year ago, and are in fine condition, and thoroughly acclimatized. Their average weight will be up to 1,750 pounds. They are an exceptionally good lot, with ideal draft character and choice underpinning. All of them are safe in foal to leading imported sires. Two brown four-year-olds are sired by the popular sire, May King, and dams by King's Cross and Triumph. They are well matched and should go together. Another bay four-year-old is by Gallant Faunteroy, dam by Lord Lothian. Another, same age, is a black, by Royal Aldie, dam by Sir Morell MacKenzie. Still another four-year-old is a chestnut, by Lord Derwent, dam by Superb. Another, same age, is a bay, by Look Out, dam by Mount Carrick. The other four-year-old is a brown, by Toredoal, dam by Sir Ronald. The three-year-olds are both bays, by Scotland's Laird and Pride of Blacon, dam by Duke of Rothesay and Carbineer. This is all big, fashionable breeding, and there are no better mares for sale in Canada. Get in touch with Mr. Bull.

FREIGHT RATES AND JUDGES FOR THE GUELPH WINTER FAIR.

The railway companies have granted the most favorable rates on exhibits to the Winter Fair this year. From all points east of Fort William in Ontario, and in all points in Quebec and New Brunswick, bona fide exhibits will be charged full tariff going to the Fair. On the return journey, when the exhibits are accompanied by the original paid expense bill or freight receipt, and a certificate in duplicate from R. W. Wade, Secretary of the Fair, to the effect that the property has not changed ownership, the exhibits will be returned free to the original shipping station any time within ten days after the close of the Fair.

R. S. Starr, Port Williams, N. S.; Wm. McKirdy, Napinka, Man., and Geo. Gormley, Unionville, Ont., will judge Clydesdales and Heavy Drafts; Shires and Percherons will be judged by Robert Graham, Toronto, and Hackneys, Standard-breds, Thoroughbreds, and Ponies, by Dr. F. C. Grenside, Guelph; and Dr. G. A. Routledge, Lambeth; Captain T. E. Robson, London, is to judge the beef cattle. Sheep Judges—Cotswolds, Chas. Shore, Glanworth. Leicesters—James Douglas, Caledonia. Lincolns—Harry Gibson, Denfield. Oxford—J. E. Cousins, Harriston. Shropshires—H. Noel Gibson, Pottersville, N. J. Southdowns, Dorsets, Hampshire, and Suffolks—H. Noel Gibson, W. H. Beattie, Pond Mills (reserve). Swine Judges.—Berkshires—W. W. Brownridge, Ashgrove; H. B. Jeffs (reserve), Bond Head. Yorkshires, Tamworths and Bacon Hogs—Prof. G. E. Day, O. A. C.; D. C. Flatt, Hamilton (reserve). Chester Whites—John Flatt, Hamilton; Geo. Bennett, Charing Cross (reserve). Any other pure breed—S. Dolson, Norval Station. Prof. C. A. Zavitz will judge seeds, and Prof. H. H. Dean will have charge of the dairy test.

Trade Topic.

One of the common complaints of stockmen is winter ailments of the live stock after being housed in the fall. The change from the natural, green, laxative food, to barn fodder, disturbs the animal system, and necessitates particular care and knowledge of conditions to avoid losses. Dr. Hess, a qualified veterinary scientist, has compounded a stock tonic to be used while animals are on dry fodder. This preparation has been on the market for twenty-one years, and Dr. Hess states positively that his remedy will keep stock healthy, expel worms, and keep your animals fit and well. Furthermore, Dr. Hess has instructed your dealer to supply you with Dr. Hess' Stock Tonic for all your stock, and, if it does not do all he promises, to refund your money. Look up what Dr. Hess says regarding this stock tonic in our advertising columns.

The "New Way" Air Cooled Engine

Can be depended upon at all times
No danger of cracked cylinders or bursted pipes. The only engine for zero weather.

No chance for any trouble with water.

It is absolutely guaranteed.

No Freeze ups.



It is a heavy duty engine built for continuous service. Long runs do not affect it.

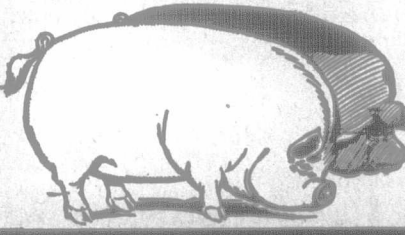
I have used one of your "New Way" engines for five years. It is a good engine and cannot be beat. We have never spent a cent for repairs, that was the fault of the engine. There never was a time when we could not start it. We can back you up in anything you say about the "New Way" engine because you have the goods. W. B. & T. H. Roberts.
Sparta, Ont. 8-7-13.
Get our complete catalog DC 12 at once.

THE "NEW WAY" MOTOR COMPANY
OF CANADA, LIMITED, WELAND, ONT.

INTERNATIONAL STOCK FOOD

Makes The Big Money For Hog Breeders

"I shipped a car of Hogs to South Omaha about 10 days ago. There were 7,500 hogs on the market that day. I had given mine International Stock Food. For my 64 heads, I received 25c. per hundred pounds more than any of the other sellers. Hogs all around my pen sold at 25c. per 100 lbs. less, so I topped the market for the day and week. Say, I sure felt proud. I lay it all to using International Stock Food".
JOHN WELLS, HARVARD, NEBRASKA.



International Stock Food keeps the brood sows well and strong—they give more milk—and raise more and stronger pigs. It's just what the "fall" pigs need to keep them fat and vigorous all winter and have them ready to market when prices go up.

Send by dollars everywhere. If you will write and tell us how many head of stock you own, we will forward to you free, our \$3,000 Stock Book.
INTERNATIONAL STOCK FOOD CO. LIMITED, TORONTO.

SHIP YOUR
RAW FURS
TO THE LARGEST, MOST RELIABLE AND OLDEST HOUSE IN CANADA
We Pay Express and Postage Charges. Prompt Returns.

E. T. Carter & Co., 84 Front St., E., Toronto

Willow Bank Stock Farm Shorthorns and Leicester Sheep. Herd established 1855; stock 1848. The imported Cruickshank Butterfly bull Roan Chief = 60865 = heads the herd. Young stock of both sexes to offer. Also an extra good lot of Leicester sheep of either sex; some from imp. sires and dams.
James Douglas, Caledonia, Ontario

ABERDEEN ANGUS AND SUFFOLK SHEEP
In the "Black Doodles" I can supply young bulls of serviceable age and females of any age, as choice as the breed produces, big, thick mellow cattle. In Suffolk Sheep I have anything you want in rams or ewes; they are the best all round breed in the world.
James Bowman - Guelph, Ont.

Canada's Champion Herefords When selecting a herd head or foundation stock come to the fountain head; for years my herd have proven their title as the champion herd of Canada. I have always both sexes for sale.
L. O. CLIFFORD - Oshawa, Ontario

Shorthorns and Clydesdales Shorthorn offering for October and November include 7 good young bulls from 9 to 15 month sold. A catalogue of our Clydesdales will be mailed on application. W.G.Pettit & Sons, Freeman, Ont. Bell 'phone Burlington Jct. Sta., G.T.R.

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 quality. HARRY SMITH, HAY P. O. ONT. Exeter Station. Long-distance Telephone.

SHORTHORNS Our present offering consists of Nonpareil Lord = 87184 = Dam Imp Dalmeny Nonpareil 6th. 7 young bulls from 6 to 12 months old. 15 cows and heifers of choicest quality and breeding.
A. J. HOWDEN & CO., COLUMBUS, ONTARIO.
Myrtle, C. P. R. and G. T. R. Long-distance 'phone

and Fillies
on of Clyde Stallions
a lot that measured
action and bred in
s.
Columbus, P. O.
D. 'phone.
ONS Imp.
Why? because I had
and my prices and
oose from and their
others, Clydesdales,
cust Hill, C.P.R.
Shires
bles. If you want the
e and see my offering;
ions. I have all ages
LE, QUEBEC
Dwing to desirous
at most
's Clyde
hran.
STALLIONS &
FILLIES
bles; there never was a
highest and my prices
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When in want
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stallions or fillies;
CAULAY Proprietor
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ter value in stallions
quality, royally bred.
, Hensall, Ont.
FILLIES
of them safe in foal,
choicely bred, a high
MPTON, ONT.
ies Imp.
ation is home, and we
ize, more style, more
both stallions and fillies
etric Cars every hour.

What is Your Best Horse Worth to You?

Yet your best horse is just as liable to develop a Spavin, Ringbone, Splint, Curb or lameness as your poorest!

KENDALL'S SPAVIN CURE

has saved many thousands of dollars in horse flesh by entirely curing these ailments.

Cornet, Ont., Feb. 25th, 1913.
"I have used Kendall's Spavin Cure to kill several jacks, and removed a bunch of long standing, caused by a kick." S. D. GRAHAM.
Don't take chances with your horse. Keep a bottle of Kendall's handy, \$1-6 for \$5. Our book "Treatise on the Horse" free at druggists or Dr. B. J. KENDALL CO., Rosbury Falls, N. Y.

Boo Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the bunch came.
Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid bluishish—Boo Spavin, Thoroughbred Splint, Curb, Capped Hock, etc. It is neither a salve nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be limited. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser

describes and illustrates all kinds of ailments, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.
FLEMING BROS., Chemists,
75 Church Street, Toronto, Ont.

GRAND TRUNK RAILWAY SYSTEM

"Only Double Track Railway between Toronto and Montreal, and Toronto and other principal cities in Canada. Also Double Track and Solid Trains between Montreal and Chicago; also between Ontario points, New York and Philadelphia, via Niagara Falls."

SMOOTH ROADBED
FINEST EQUIPMENT
ELECTRIC LIGHTED
PULLMAN SLEEPERS

Full particulars, berth reservations, etc., from Grand Trunk Agents, or write C. E. HORNING, District Passenger Agent, Toronto, Ont.

Shorthorns

Fourteen good young bulls, from 6 to 12 months old, and a number of females. Would appreciate your enquiry for same

H. CARGILL & SON, Cargill, Ontario

OAKLAND 45 SHORTHORNS
25 breeding females of milking strain headed by Scotch Grey 72892, a first prize and sweepstake roan bull; and Red Baron 81845, a fine large dark red bull of excellent dairy strain. Both for sale. Also a pair of grand young bulls 10 and 14 months, of excellent milking strain, youngest if properly placed will head a herd.
JNO. ELDER & SONS, HENS ALL, ONT.

1854 MAPLE LODGE STOCK FARM 1913
Shorthorns and Leicester

I have a most excellent lot of young rams for sale—mostly sired by imported Connaught Royal—Something very choice in young bulls. House one mile from Lucan Crossing, G. T. Ry.

A. W. SMITH, MAPLE LODGE, ONTARIO

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., R. R. No. 1, Drumbo, Ont.

WOODHOLME SHORTHORNS

I have for sale a most attractive offering in young bulls and young females, pure Scotch, breeding unsurpassed, the low thick kind. Write me your wants.
G. M. FORSYTH
North Claremont, Ont.

Gossip.

A typographical error occurred in our number of Nov. 13th, where a Jersey bull for sale by D. E. Mains, of St. Thomas, Ont., was listed as 3 months old, and should have read 13 months of age. This makes a material difference in the value of the bull.

SIZE AND QUALITY IN DRAFTERS.

T. J. Berry, of Hensall, Ont., expects to sail in the near future for a new importation of Clydesdales, and to make room is offering at unheard-of prices some exceptionally choice stallions. Mr. Berry is one of Canada's oldest importers of Clydesdales, he has no superior as a judge of what a draft horse should be, and his annual selections are among the best that cross the seas. Those mentioned below are thoroughly acclimatized, and proven right and true, and are sure money-makers. True Movement 18977 is a dark bay six-year-old, by the big, popular prize horse, Lothian Again, dam by the renowned breeding horse, Cawdor, grandam by the famous old Simon Pure. This is draft breeding all through, and True Movement shows it from the ground up. Weighing nearly a ton, he has size, style, character, quality, and faultless action. He is one of the good horses of this country. Royal Ronald 12086 is a brown six-year-old, weighing up to 1,900 lbs. He has the flashiest quality of underpinning, smooth, stylish, and a high-class show horse, sired by the great Sir Ronald, dam by the Glasgow champion, Brooklyn. Cumberland Gem 18978 is a brown three-year-old, immensely smooth and thick, and full of quality, a colt of great weight and style, sired by Sir Everist, a son of Sir Everard, dam by Lord Graham, grandam by London-derry. These are representative of the Clydesdales on hand. In Percherons, there is only one left, but he is a "cracker," remarkably thick and smooth, on a faultless set of underpinning—one of the kind popular in this country. He is a gray, very dark, four years old, sired by the great Salvator. These horses should go quick at the prices asked.

THE BIG HOLSTEIN SALE AT WOODSTOCK.

As an indication of the kind of breeding the public will be offered at the big sale of Holsteins at Woodstock, on Wednesday, December 17th, we wish to remind them that many of the young things to be sold will be got by, and many of the females in calf to, the cooperative stock bull, King Lyons Hengerfeld, whose six nearest dams have records averaging 31½ lbs., and whose breeding for generations is most intensive. He is said to be one of the richest-bred bulls alive, and is being shipped back to New York State for a six-weeks' service. Others will be in calf to his assistant in service, King Lyons Colantha, whose seven nearest dams have records averaging 28½ lbs. Several of the cows are daughters of the richly-bred Count Abbekerk Mercena, who this fall, at Toronto and Ottawa, was decked with championship honors. A number of the others are granddaughters of the great Pontiac Korndyke. Among the lot of 78 females to be sold are many of high-class show-ring standard. All those in milk are in the official records, R. O. M. and R. O. P., and some in both. Among them are such high-class individuals as Lucy Dewitt, seven-day record, 23 lbs.; R. O. P. record, milk 17,874 lbs., butter 807 lbs. Tirania Netherland 3rd, seven-day record, milk 549 lbs.; butter 27.38 lbs.; thirty days, milk 2,260 lbs.; butter 112 lbs. These are only indicative of the quality of the offering; 15½ lbs. for two-year-olds; 16.41 lbs. for three-year-olds, and from 21½ to 27.38 for mature cows, is a fair indication of their producing ability. Among the dozen bulls to be sold is the two-year-old, Houwtje Pledge Korndyke, whose dam at two years and two months made a record of 19.8 lbs. She was a granddaughter of De Kol 2nd's Butter Boy 3rd, and his sire is a grandson of Pontiac Korndyke. Another is a son of the elder stock bull, and out of a daughter of Prince Abbekerk Mercena, which at one year and ten months made a record of 15 lbs. All the young bulls are out of official-record dams.

GUNNS



STOCK & POULTRY FEEDS

Beef Scrap Charcoal Chick Scrap Poultry Bone
Beef Meal Bone Meal Oyster Shell Calf Meal
Crystal Grit Dairy Meal Hog Meal

Or any other line of stock and poultry food. Write:

GUNNS LIMITED,
West Toronto, Ontario

OIL CAKE

Nothing better for milk cows. They give more milk and better milk when fed

Livingston Brand Oil Cake Meal

It is equally good for fattening steers and putting them in the market in prime condition.

Fine ground, or course ground for cattle. Pea size for sheep. We also sell Linseed Meal and Flax Seed.

If your dealer cannot supply you, write us.

The Dominion Linseed Oil Company Limited
BADEN, ONTARIO MONTREAL, QUEBEC

100 SHORTHORNS 100 IN OUR HERD

For sale—Imported yearling show bull; 14 bull calves 8 to 14 months old; cows and heifers and show material all ages. Herd headed by three high class imported bulls, all three were prize-winners at Toronto this year.

MITCHELL BROS., BURLINGTON, ONTARIO
Farm ½ mile from Burlington Junction.

Shorthorns—I have ten young Shorthorn bulls, some fit for service now. Past of them are bred, and made so that they are fit to head the best herds in any country, some of them are of the thick, straight, good feeding kind, that will produce money-making cattle; some of them are bred from the best-milking Shorthorns, and the prices of all are moderate. I have Shropshire and Cotswold rams and ewes of all valuable ages. Write for what you want, I can suit you in quality and in price
ROBERT MILLER, Stouffville, Ontario.

Irvine Side Shorthorns

We are offering just now some very choice Scotch-bred heifers, high-class in type and quality, bred in the purple; also one right nice yearling roan bull.
L.-D. phone. JOHN WATT & SON, Salem, Ont.

SHORTHORN BULLS FOR SALE

8 head from 10 to 18 months, bred from cows which are from imported dams and sired by choicely bred bulls, prices are not high as I need the space for stabling cattle.
BLAIRGOWRIE FARM JOHN MILLER, Jr. ASHBURN, ONT.

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.

WINDSOR

Windsor Dairy Salt dissolves evenly and gives a delicious flavor to the butter.

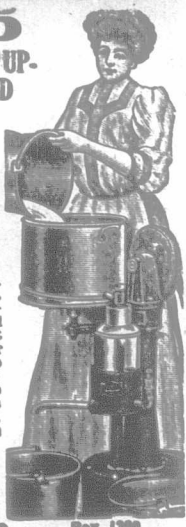
DAIRY

Practically every big prize at the big fairs was won by Butter made with Windsor Table Salt. 119

SALT

15 AND UPWARD AMERICAN SEPARATOR

THIS OFFER IS NO CATCH. It is a solid proposition to send, on trial, fully guaranteed, a new, well made, easy running separator for \$15.95. Skims hot or cold milk; making heavy or light cream. Designed especially for small dairies, hotels and private families. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Patents made promptly from WINNIPEG, MAN., TORONTO, ONT., and ST. JOHN, N. B. Whether your dairy is large or small, write us and obtain our handsome free catalog. Address: AMERICAN SEPARATOR CO. Box 1299, BAINBRIDGE, N. W.



MOLASSES FEEDS For Dairy Stock and Horses

Write for FREE samples to GRISHOLM MILLING COMPANY TORONTO

Royalton Stock Farm Holsteins
Herd headed by Royalton Korndyke Major, (Imp.) whose dam gave 111.1 lbs milk in one day, 3 months after freshening. We are offering a few young cows (2 years and up) bred to the above bull and due to freshen from now on. One young bull calf 5 months old from above bull. Also four young bulls fit for service, sired by Sir Abbekerk Paul De Kol (my former herd bull) and from R. O. P. Cows. E. C. GILBERT, R. R. No. 7 St. Thomas, Ontario

The Maples Holstein Herd
Headed by Prince Aaggie Mechthilde. Present offering: Bull calves and bulls fit for service, from Record of Merit dams, with records up to 20 lbs. butter in 7 days. Prices reasonable. WALBURN RIVERS R. R. No. 5 Ingersoll, Ont.

HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA
Applications for registry, transfer and membership, as well as requests for blank forms and all information regarding the farmer's most profitable cow should be sent to the secretary of the Association. W. A. CLEMONS, St. George, Ont.

HOLSTEINS & YORKSHIRES
Minster Farm offers Bull fit for service from a sister of a 1-year-old Heifer with R.O.P. record of 14,753-lbs and 540-lbs. butter, and Lakeview Burke Payne whose dam and sire's dam average 23.14-lbs. of butter 7 days. For extended pedigree write: Richard Honey-& Sons, Brickley, Ont.

Questions and Answers. Miscellaneous.

Cement Tank.

We have constructed at our cheese factory a tank to receive and hold rain water for our steam boiler. This tank is ten feet square and ten feet deep, with walls ten inches thick. It is made of concrete, composed of one part cement to three parts of coarse, sharp sand, and not reinforced. Is all underground except two feet.

1. Is it best to leave it full of water for winter, or partly full, and covered over to keep out frost?

2. Would it be better and safer to leave it empty?

3. In case it was left empty, would there be danger of frost from outside forcing the wall in and breaking it?

P. E. I. W. S.

Ans.—1, 2 and 3. It is probable that no damage would result if the tank were left full of water, but to be safe you might leave it about half-full and covered over, or it might be left empty. Ten-inch cement walls should stand all right if the tank were empty. Anyway the frost would not likely go down more than three feet into the ground, which would only be one-half the depth of the tank.

Balance Wheel.

Have a six-horse power gasoline engine running a 28-inch wood-saw. Engine has 16-in. pulley running 350 revolutions per minute. The saw has a 6-in. pulley. What would be the proper weight of balance wheel to give the best satisfaction, or does it make any difference?

J. C. B.

Ans.—Your query is ambiguous. It doesn't state whether the balance wheel referred to is the balance wheel of the engine or one to be placed on the shaft. It seems the more reasonable to assume that it is the engine balance wheel you refer to, and, consequently, the answer will be based on that assumption. Moreover, it is necessary to know the bore and stroke of the engine to calculate the size of the balance wheel. You did not give these, but with a speed of 350 revolutions per minute, I judge it would require about 6 1/2-inch bore x 7 1/2-inch stroke. The weight of the balance wheel varies with its diameter. The largest wheel it would be safe to use on an engine with that speed would be 4 feet 6 inches. As balance wheels are usually made somewhat less than the limit, let us deal with a diameter of 4 feet. With this diameter, the rim of the balance wheel should weigh 162 lbs., or if two wheels are used, the rim of each should weigh 81 lbs. To this would have to be added the weight of the spokes and hubs, which would probably bring each wheel up to in the neighborhood of 125 lbs., or a single wheel up to 250 lb.

If the wheel is 3 feet in diameter, the two rims together should weigh 288 lbs., or 144 lbs. apiece. The hubs and spokes would probably bring each wheel up to a weight of from 190 to 200 lbs. If the wheel is 2 feet in diameter, then the weight of the rim should be 648 lbs., or if two wheels are used, each rim should be 324. To this would again have to be added the weight of the hubs and spokes.

The medium wheel, of course, would be the one to use. The one 4 feet in diameter would be too flimsy, and the one 2 feet in diameter would require other parts of the machinery to be made heavy to carry such a big load.

W. H. D.

Among clerical anecdotes is that of the vicar and curate who had quarreled, and the curate was requested to find some other congregation to minister to. He, therefore, preached his farewell sermon, and the parishioners came in crowds to hear him. "My text," he said, "is taken from the moving story of Abraham. 'Tarry ye here with the ass while I . . . go yonder!'"

She—"Sometimes you appear really manly, and sometimes you are effeminate."

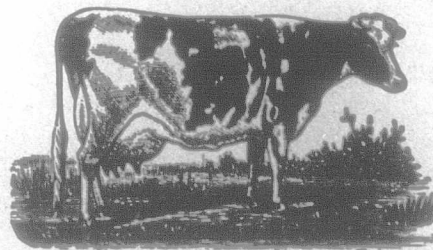
He—"I suppose it is hereditary. Half of my ancestors were men, and the other half women!"

Big Dispersion Sale of 90 Holsteins 90

An event, in which the choicest lot of Holstein Cattle ever sold by Auction in Canada, will be held in the covered rink in the City of Woodstock, Ontario, on

Wednesday, December 17th, 1913,

when a total dispersion of the big high-record herds of Mr. Elias Ruby and Messrs. Jacob Leuzler & C. Ballert will be sold to the highest bidder. 90 head; 78 females, 12 bulls.



Practically all the females in milk are in the R. O. M. and R. O. P. many of them in both records.

R. O. M. four-year-olds and upwards, from 21 1/2 to 27 1/2 lbs. Three-year-olds 16.41 lbs. Two-year-olds 15 1/2 lbs. R. O. P. up to 807 lbs. butter in the year.

Much of the richest producing blood of the breed is represented in the herd, many are high-class show animals, many of the young things are the get of King Lyons Hengerveld, one of the richest bred bulls alive, those not bred to will be bred to, King Lyons Colantha, whose 7 nearest dams have records averaging 28 3/4 lbs., these are the kind of Cattle we are going to sell.

Terms: Cash or 5 months with 7%.

For Catalogue, Write

JACOB LEUZLER, R. R. No. 1 BRIGHT

Sales Manager

E. M. Hastings, Laconia, N. Y., Col. B. V. Kelley, Syracuse, N. Y., and Col. R. E. Hagar, Algonquin, Ill.

Auctioneers

Sale at 10 a.m.

Ship your LIVE STOCK to the old firm of
DUNNING & STEVENS, Inc.
Commission Merchants EAST BUFFALO, N. Y.
Room 1, Live Stock Exchange Building
Established 1876 Write for market paper
Paid-in Capital, \$100,000 or pass books

FAIRVIEW FARMS HERD

Offers For Sale

A son of PONTIAC KORNDYKE, out of a cow with a record of over 31 pounds in 7 days. Calf is nearly ready for service. Have only a few sons of this great sire left, and remember these are the last. LOOK UP THE RECORD OF SONS OF PONTIAC KORNDYKE, AND SEE WHAT THEY ARE PRODUCING.

E. H. DOLLAR :: :: HEUVELTON, NEW YORK

LAKEVIEW HOLSTEINS

Herd headed by Count Hengerveld Payne De Kol, by Pietartje Hengerveld's Count De Kol out of Grace Payne Sad. He has 13 daughters already in the Record of Merit and many more to follow. Junior sire—Dutchland Colantha Sr. Moss, by Colantha Yehanna. Last out of Moss Pauline de Kol (27.18 butter) the dam of one daughter over 30-lbs. and one over 27-lbs; also the dam of the World's champion junior three-year-old for milk production. A few bull calves for sale. E. F. OSLER, Bronte, Ont.

HOLSTEIN CATTLE

The Buyer's Opportunity

We have more Cattle than we can stable. Some of the finest young bulls and heifers we ever offered; their breeding and quality is the very choicest, they will be sold worth the money. Don't wait to write, but come and see them.

D. C. FLATT & SON, R.R. No. 2, Hamilton, Ont. Long Distance Phone 2471

Evergreen Stock Farm High Class Registered Holsteins

Winners of 80% all first prize at the Canadian National Exhibition 1913. For Sale—a few choice females all ages and are booking orders for what bull calves will be dropped during Nov. and Dec. I will also buy on commission anything in pure-bred or grade Holsteins, singly or car lots. Bell phone A. E. HULET, NORWICH, ONT. R. R. 2

STOCKWOOD AYRSHIRES

Stock of all ages for sale, one 12 months old bull (Imp.) in dam will make a winner for some one; also bull calves from a week to two months old all from show cows and sired by White Hill King of Hearts, a son of the great bull Emy McC, and a half-brother of Brae Rising Star highest priced bull in Scotland prices and terms easy. D. M. WATT, ST. LOUIS STA., QUEBEC.

GLENHURST AYRSHIRES ESTABLISHED OVER 50 YEARS
AGO, and ever since kept up to a 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

When Writing Please Mention Advocate

Lump Jaw

The first remedy to cure Lump Jaw was

Fleming's Lump Jaw Cure

and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser. Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy.

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ONT WIND ENGINE & PUMP CO. LTD.
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Raw Furs

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The Oldest Established Flock in America

We are making a special offering for 30 days of 30 fine yearling Oxford Down ewes. Being now bred to our imported Royal winning ram. Also 20 first-class Oxford Down ram lambs.

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A few young puppies now for sale both from imported and home bred stock. Place your order early for a good young Angus bull this year if you wish to secure first choice.

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Oxford Downs choice ram and ewe lambs from prize-winning stock \$10, \$12 each, also yearling rams and ewes at close prices. Satisfaction guaranteed.

W.A. BRYANT, R.R. No. 3 Strathroy, Ont.

Questions and Answers.
Miscellaneous.

Cement for Silo.

How much gravel, and how many barrels of cement would it take for a silo 14 x 30 feet, and which is the better, one big silo or two small ones? J. B.

Ans.—It would require between 28 and 30 barrels of cement, and between 7 and 8 cords of gravel. For a small herd, where summer feeding is to be carried on, two small ones would be preferable, but where the herd is large enough to warrant, one large silo would be most economical.

Pumpkins as Feed.

1. Should the seeds be removed from pumpkins before feeding to milch cows?
2. Is there any difference in the feeding value between squash and pumpkins?
3. In what quantities should they be fed to get the best results? W. H.

Ans.—1. A tradition among farmers is responsible for the belief that pumpkin seed increase the kidney excretions, but investigation does not substantiate these reports. They contain much nourishment, and need not be removed.

2. As a result of several trials, 2½ tons of pumpkins are considered equal to 1 ton of corn silage for dairy cows. Cattle usually relish pumpkins more than squash, and on that account may do better on them. We have no record where they have ever been compared, so we cannot record their exact relative value. We have in mind one instance where hogs were fattened exclusively on raw squashes, with good results.

3. They should be fed in quantities varying from 25 to 30 lbs. per animal, decreasing according to size and nature as a feeder.

Pumping Queries.

1. We are building a new house, with a bath-room and tank in the attic. The cistern is just outside the house. We have a windmill attached to a drilled well about sixty feet from the house. Could we get a pump that would pump from the drilled well, and also force the water up into the tank in the attic from the cistern?

2. Would you advise putting in a plant to generate our own electricity for lighting purposes? If so, would the windmill do to furnish power, or would we require a gasoline engine?

OLD SUBSCRIBER.

Ans.—1. Under certain conditions you could arrange to have the same pump lift water from the well, or force water from the cistern to the attic. It would be particularly easy, provided the water in your drilled well is within about 25 feet of the surface. If such were the case, then the sucker of the pump would be above the surface of the ground, and the two pipes could join below the sucker. It would be necessary to have two valves, one between the sucker and the well, the other between the sucker and the cistern. When pumping from the cistern, this valve would be opened and the other closed. When pumping from the well, vice versa. If the water in the well is lower than the 25 feet, the sucker of the pump must be some distance down in the well, and it will not be practicable to use the one pump for the two purposes. There would be two obstacles in the way:

1st. The manipulation of the valve down in the well below the sucker.
2nd.—The pipe from the cistern would have to connect below the sucker, and this might possibly be lower down than the level of the water in the cistern, and if, after pumping from the cistern, the valves in the well were opened, and the one to the cistern also accidentally left open, then the pipe from the cistern would act as a siphon and empty the cistern into the well.

2. For ordinary farms, the electric-light installation is too expensive to be practicable. The windmill is not satisfactory for providing the power, hence, it would be necessary to install a gasoline engine and an electric generator. Besides this, you would have to do the wiring and provide the fixtures. The outfit would cost from \$400 to \$600.

W. H. D.

GALT ART METAL CO. LIMITED

Your Roofing Needs

A GOOD ROOF should be Durable, Fire-proof, Water-tight, Sanitary, Handsome and not too expensive.

All of these requirements are ably met by **GALT STEEL SHINGLES**. A "GALT" roof will last from twice to three times as long as a roof of sawn and kiln dried shingles. It affords protection from flying sparks and lightning. It will not warp, split, curl or loosen. It offers no lodging place for decaying vegetable matter. The bold, Gothic design of the **GALT STEEL SHINGLES** is handsome and architecturally correct.

Write for literature and valuable information which will settle the roofing question for you. Simply write the word "Roofing" on a postcard, together with your name and address.

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Brampton Jerseys 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.**

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SPRING-VALLEY SHROPSHIRE are bred from the best procurable imp. stock for generations back.

Can supply Shearling Rams and Ewes, Ram and Ewe Lambs, all got by Imp. sires, highest types of the breed. **Thos. Hall, R.R. No. 2, Bradford.**

Shropshires and Cotswolds In my 1913 importation of 80 head just arrived both breeds. I also have 50 home-bred yearling rams and ewes, and a fine lot of ram and ewe lambs. Will be pleased to hear from you if interested in sheep as "No business no harm" is my motto.

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Hampshire Swine I have a choice lot of Hampshire belted hogs for sale. Will be pleased to hear from you, and give you description and prices.

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J. Lawrence, Woodstock, Ont. R.R. 8

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Morrison Tamworths and Shorthorns bred from the prize-winning herds of England. Have two choice young bulls for sale 10 months old, out of large deep-milking cows and also some choice cows. Tamworths both sexes.

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Gramandyne Yorkshires & Tamworths Co., 656 Parkdale Ave., Ottawa, Ontario, can supply Yorkshires and Tamworths, either sex, any age, bred from prize-winners, none better. Long-Distance Phone. 3874 Ottawa.

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In Yorkshires we can supply either sex from a few weeks old up to breeding age sired by the 1200-lb boar, Eldon Duke 32228, of Summerhill breeding and out of 700-lb Oak Lodge bred sows. Also some choice ram Lambs of Campbell's famous blood.

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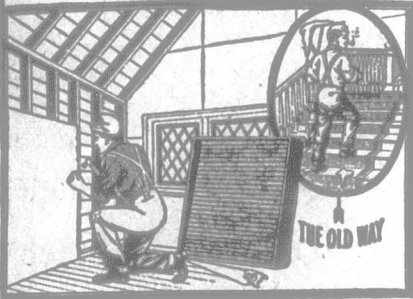
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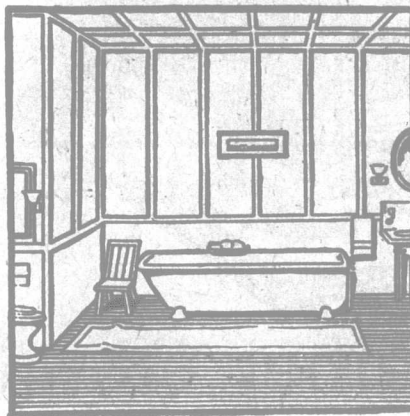
makes remodelling your home easy, quick and inexpensive



Are the Walls and Ceiling of your Bathroom in bad shape?

Is the plaster discolored, cracked or falling? Replace it, or cover it up, with the material that never cracks or falls, Bishopric Wall Board.

This Board is made, as you can see from the illustration below, of kiln-dried dressed lath imbedded under heavy pressure in a layer of Asphalt-Mastic, which is coated on the other side with heavy sized cardboard. This Asphalt-Mastic is absolutely damp-proof, making clean, sanitary walls and ceiling that will not warp, crack or pull away from the studding.

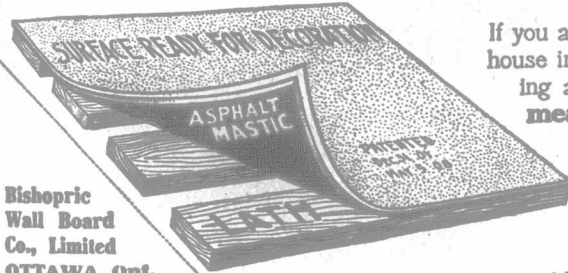


Do you need an extra room or two?

Then finish off the Attic with Bishopric Wall Board. It comes in sheets 4 feet square, packed 16 sheets in a crate, ready to be carried up to the attic and nailed right on to the studding.

You can put it on yourself if you like—and there won't be any of the muss and disorder through the house that you can't avoid if you use lath and plaster.

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Cross off if not desired
 I enclose 6c. to cover cost of mailing me Working Plan for Bishopric Model Home.

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Mail to us in Ottawa this coupon, asking for fully descriptive Booklet and Sample of Bishopric Wall Board, which we will send you promptly free.

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You and Your Friends are Invited to the

TORONTO FAT STOCK SHOW

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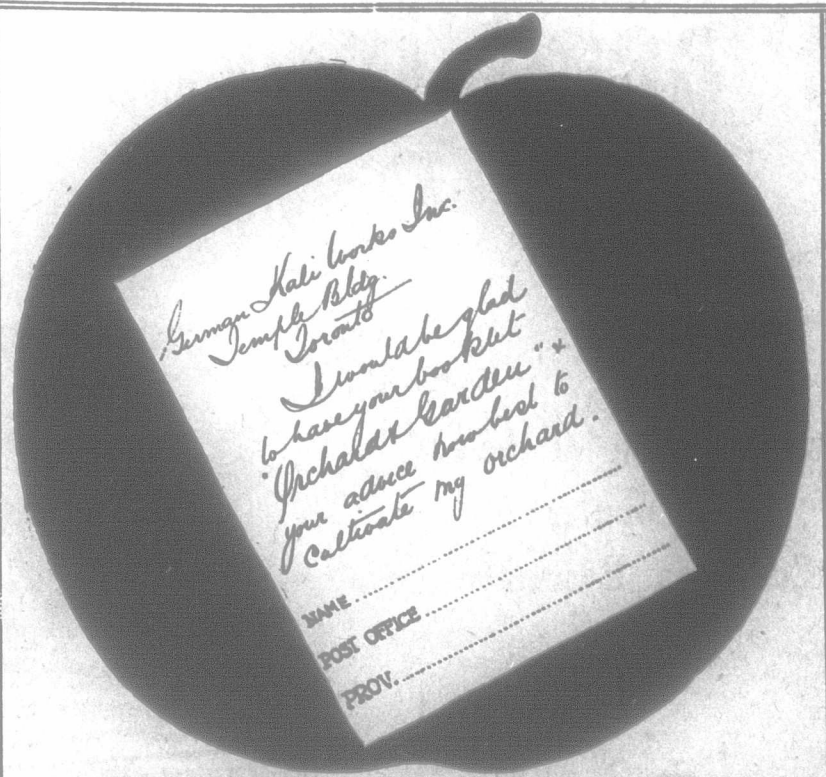
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Reduced Passenger Fares



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NOW—after harvest—is the best time to apply fertilizers, viz.: POTASH and Phosphoric Acid. This because the plant-food in these materials by the action of winter cold and spring thaws, will make the plant-foods completely available by the time the sap flows in the spring. You need have no fear of loss by leaching.

In the world-famed Annapolis Valley, the customary practice is to apply 600 lbs. Bone Meal (furnishing the Phosphoric Acid and Nitrogen), and 300 lbs. Muriate of POTASH per acre in the fall. If you can't get Bone Meal, apply 400 to 600 lbs. per acre of Acid Phosphate or Basic Slag. The Nitrogen is supplied by plowing under clover or leguminous plants, or by applying Nitrate of Soda in the spring.

If you prefer a factory-mixed fertilizer, be sure and get one containing at least 10% of POTASH.

The present high price for apples should impress you with the importance of improving the quality and increasing your crop. It is the best quality of fruit that demands the best prices.

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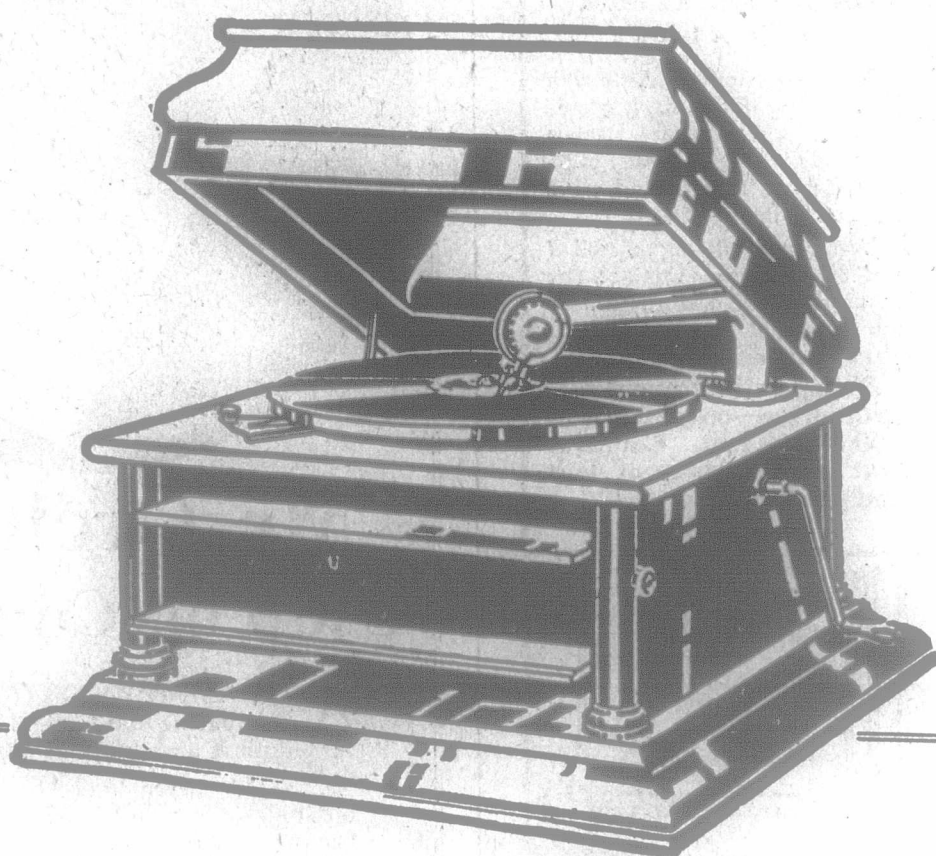
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Complete cabinet
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Only a Limited Number Obtainable So Be Quick to Order Yours

Hundreds of music-hungry readers of the Farmer's Advocate have been wanting a **high-grade Grafonola**—"if only they could afford it."

NOW—on payment of only \$10—you can get this superb fully-enclosed-cabinet Columbia Grafonola, together with the 10 most popular record selections—and if you act quickly the instrument and records will be delivered in your home before Christmas. The balance you can pay in convenient payments of only \$5.00 a month for nine months.

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Plays all flat disc records—both Columbia and Victor. Guaranteed satisfactory in every particular—or we will return your money.

No Wonder Nearly Everybody's Buying Grafonolas

Think what a pleasure it would be to spend your evenings at home listening to the best music the best artists in the world can provide—to entertain the children with songs, recitations, bands—when friends call to give them a whole evening of solid fun and enjoyment.

Until you have had a Grafonola in your own home you cannot fully appreciate the inexhaustible pleasure and happiness it provides. In no other way could you invest a few dollars that would mean so many hours of incomparable entertainment for yourself and friends. Money spent for entertainment in the theatre, opera house, concert hall, buys only temporary entertainment. With the Grafonola in the home you draw on the world's entertainment centers for what you enjoy most—and you enjoy it over and over again at no additional cost.

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