

PUBLISHED EVERY WEEK. \$1.50 PER YEAR.

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

PERSEVERE
SUCCEED
FOUNDED 1875

Library
Chief Office Publications
Branch Dept of Agr
Mar 15 1913

VOL. XLVII

ENTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875
LONDON, ONTARIO, AUGUST 8, 1912.

No. 1037

The Understudy of the Sun

McClary's Sunshine Furnace

WHEN Old Sol swings low and far away he appoints an understudy for the purpose of keeping Jack Frost where he belongs—outside.

Years ago McClary's "Sunshine" Furnace, by reason of its marvelous heating capacity and the balmy June air it suffused the house with, was specially appointed Understudy to the Sun. That appointment has been confirmed year after year, and—your "Sunshine" Furnace—Jack Frost's Master awaits your orders for the coming winter.

Remember the past winter—the Frost King was very active—He battered us with a three-months' siege of snow and ice—Almost conquered the thermometer by chasing the mercury out of sight. But he failed to penetrate thousands of homes, because the Understudy of the Sun—McClary's "Sunshine" Furnace—was on the job in the cellars of these homes.

It's easy to keep Jack Frost at a safe distance with the "Sunshine" Furnace. He may storm and rave outside, but there is no place for him within—because the Understudy of the Sun has demonstrated its mastery in the home.

The average furnace is a glutton for coal—it literally burns up money. The "Sunshine" Furnace saves money—earns its cost in a very few years, because it burns coal sparingly. Call on the McClary agent of your locality and ask him to prove that statement true. If he cannot convince you—show you that the "Sunshine" Furnace will cut your coal bills by a very pleasing margin we don't want your order. That's the fairest way we know of doing business—does it appeal to you?



There are a multitude of reasons why the "Sunshine" Furnace does save fuel—reduce coal bills—reasons that will be printed in the following advertisements. Here is one that should make you call on the McClary agent at once—the "Sunshine" Furnace has four radiating surfaces—surfaces that gather up the heat greedily and diffuse it liberally all over the house.

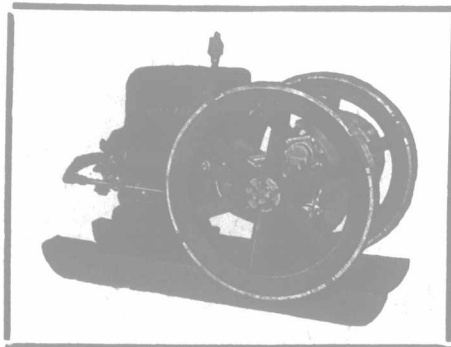
But—you just call on the McClary agent and ask to be shown. If you do not know him write us at our nearest address and we'll tell you.

You certainly owe it to yourself to find out why McClary's "Sunshine" Furnace is called the "Understudy of the Sun."

LONDON
TORONTO
VANCOUVER
ST. JOHN, N. B.

McClary's

MONTREAL
WINNIPEG
HAMILTON
CALGARY



Extra Serviceable

These 8, 12 or 16 h.-p. engines are extra strong and rugged, because intended for use under the hard conditions often met with on the farm.

The engine illustrated is one of the famous

"Bull Dog" Gasoline Engines

which are constructed especially for outdoor work. Drop a postal to our Canadian agents for our catalogue. It shows the different styles of "BULL DOG" Gasoline Engines, and explains their construction in detail.

Bates & Edmonds Motor Company
Lansing, Michigan

General agents for Canada:

A. R. Williams Machinery Company, Limited
Toronto, Ont. St. John, N. B.

Canada's Great Eastern Exhibition

AUG. 31 1912 SEPT. 7

SHERBROOKE, QUE.

Magnificent, Unsurpassed Farming Exhibits.

Grand, Unrivalled Attractions.

25c. General Admission 25c.

"Go North Young Man!"

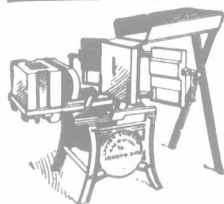
WHY?

Because there are millions of acres of agricultural land in Northern Ontario in some cases free, and in others at 50 cents per acre, excelling in richness any other part of Canada, blessing and waiting to bless the strong, willing settler, especially the man of some capital.

For information as to terms, homestead regulations, special railway rates, etc., write to

H. A. Macdonnell
Director of Colonization
TORONTO, ONTARIO

HON. JAS. S. DUFF,
Minister of Agriculture



Build Silos, Dwelling, or any class of building from **Concrete Block**. The London Adjustable Concrete Block Machine makes every kind and size of block. High grade. Moderate price. We manufacture a full line of Concrete Machinery. Tell us your requirements.

LONDON CONCRETE MACHINERY CO.
Dept. B., London, Ont.

Pump Water, Saw Wood, Grind Grain, Churn

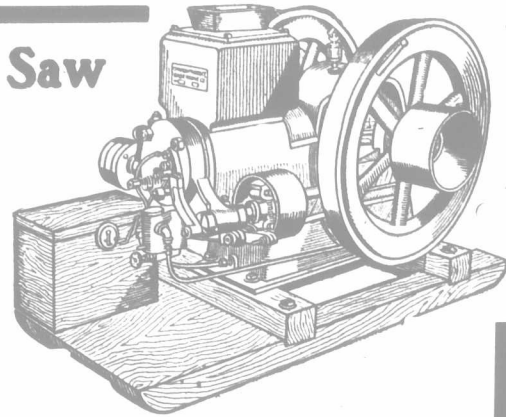
and do many other labor-saving tasks with the **Barrie Engine**. Will pay for itself quickly by saving valuable time for you. Strong, rugged construction. So simple a lad can run it. Sure in action. Economical in operation. Every farmer needs one.

Write for booklet.

AGENTS WANTED

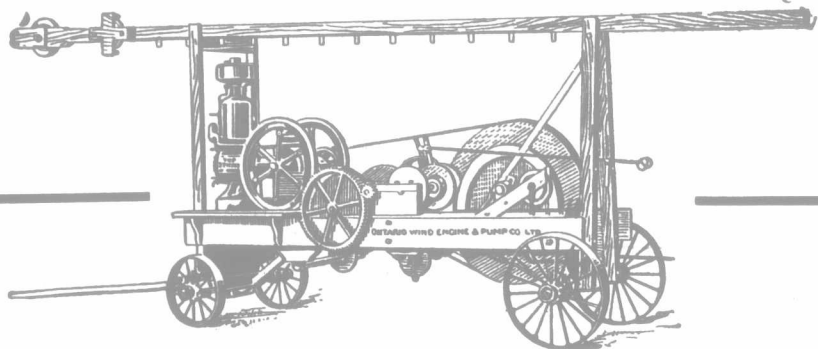
THE CANADA PRODUCER & GAS ENGINE CO., LTD.
Barrie, Ontario, Canada

Distributors: James Rae, Medicine Hat; Canada Machinery Agency, Montreal; McCusker Imp. Co., Regina; The Tudhope Anderson Co., Ltd., Winnipeg, Calgary, Edmonton, Lethbridge, Saskatoon and Regina



Barrie Engines

Stationary or Portable; 3 to 100 h.-p., for gasoline, distillate, natural gas and producer gas. Make and break or jump spark ignition.



One Man Can Operate This Well-Drilling Machine

Three right-hand levers complete every operation. Drills deep or shallow wells in any kind of soil or rock. The right man with a little cash can quickly pay for the machine and earn \$75 to \$100 a week drilling wells. Write our office nearest you to-day for full particulars.

ONTARIO WIND ENGINE AND PUMP COMPANY, LIMITED
Winnipeg TORONTO Calgary
We supply Well Casing and General Deep Well Supplies of all kinds. Write for prices

CANADIAN PACIFIC RAILWAY

UPPER LAKES NAVIGATION

Steamers leave Port McNicoll Mondays, Tuesdays, Wednesdays, Thursdays and Saturdays at 4 p.m. for SAULT STE. MARIE, PORT ARTHUR and FORT WILLIAM

The steamer Manitoba, sailing from Port McNicoll Wednesdays, will call at Owen Sound, leaving that point 10.30 p.m.

Steamship Express

leaves Toronto 12.45 p.m. on sailing days, making direct connection with steamers at Port McNicoll.

HOMESEEEKERS' EXCURSIONS

July 9 and 23, and every Second Tuesday until Sept. 17 inclusive.

WINNIPEG and RETURN \$34.00
EDMONTON and RETURN \$42.00

Proportionate rates to other points. Return limit 60 days.

Through Tourist Sleeping Cars

Ask nearest C.P.R. Agent for Home-seekers' Pamphlet.

Winnipeg Exhibition

JULY 10th to 20th, 1912

TICKETS AND FULL INFORMATION FROM ANY C. P. R. AGENT

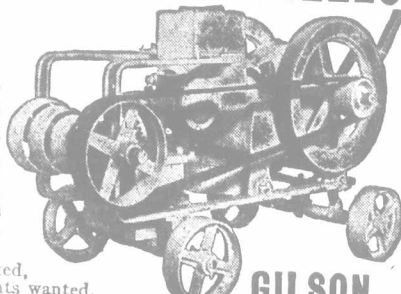
A FARMER'S POWER HOUSE ON WHEELS

Complete with Line Shaft, Truck, Pump Jack and interchangeable Pulleys capable of 60 changes of speed.

An engine that carries its own line shaft, pulleys, belt tightener and hangers. The Gilson 60 Speed Engine is a complete power plant in itself. You can haul engine anywhere, attach it and get just the speed desired—the only engine of its kind made. Gives 100 per cent service. Runs the whole farm. Goes like sixty—sells like sixty—has sixty speeds. 11 H. P., also 3 H. P. and 6 H. P. Engines up to 27 H. P.

WRITE TODAY. Write at once for illustrated, descriptive literature with full information. Agents wanted.

GILSON MFG. CO., Ltd., 61 York Street
Windsor, Ontario



GILSON "60 SPEED" ENGINE



Flies! Flies! Flies!

Get rid of them and help make your home and premises sanitary by the liberal use of **Tanglefoot Fly Paper**. There is fully one-third more compound per sheet on **Tanglefoot** than on any other fly paper; hence it lasts longest, catches the most flies and is the best and cheapest fly paper. If you ask for "fly paper" or "sticky fly paper" you may get a cheap imitation that will soon dry up or glaze over. Ask for **Tanglefoot**.

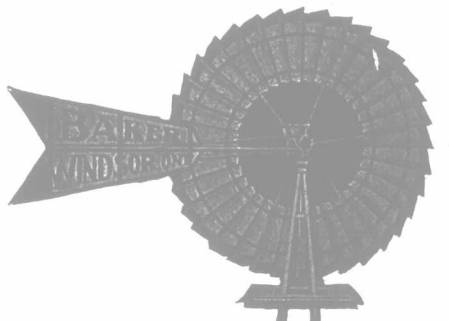
Sold by Grocers and Druggists.

TREE TANGLEFOOT, put up in 1, 3, 10 and 20 lb. cans.

Will protect your trees from all climbing insects.

"Baker" Wind Engines

Are built for hard, steady work, and keep at it year in and year out.



It is the reputation which "BAKER" Wind Engines have fairly won and steadily held ever since their first appearance on the market, 30 years ago, that should be considered. They are famous for their durability, simplicity of construction and easy running. "BAKER" Wind Engines are so designed that the gears cannot wear out of mesh. The wheel is built on a hub revolved on a long stationary steel spindle, requiring no babbitting. It has a large number of small sails which develop the full power of the wind and enable them to pump in the lightest breezes. Has ball-bearing turn-table and self-regulating device, and all the working parts are covered with a cast shield, protecting same from ice and sleet. The above is only a few of the many features that have placed "BAKER" Mills in the lead. Let the H.-A. Co. agent give you complete information, or write direct for booklet.

We make a full line of Steel Towers, Galvanized Steel Tanks, Pumps, Pneumatic Water Systems, Spray Pumps and Gas and Gasoline Engines.

THE HELLER-ALLER COMPANY
Windsor, Ontario



EARN \$25 TO \$100 A WEEK

Endorsed by BENJ. BRISCOE, Pres. United-States Motor Co., J. D. MAXWELL, Pres. Maxwell-Briscoe Motor Co., and J. I. HANDLEY, Pres. American Motors Co.

We teach in 12 simple lessons the whole subject. Course on Salesmanship Free. Best and most practical system. Small payment starts you. Free model to each student. Big demand for chauffeurs and salesmen. We assist you to get a position. Write for free book. It explains how to enter this new industry.

PRACTICAL AUTO SCHOOL, 66 Beaver Street, New York
Owners - We supply competent men.

INVENTIONS Thoroughly protected in all countries. EGERTON R. CASE, Registered Patent Attorney, DEPT. B, TEMPLE BUILDING, TORONTO. Booklet on Patents and Drawing Sheet on request.

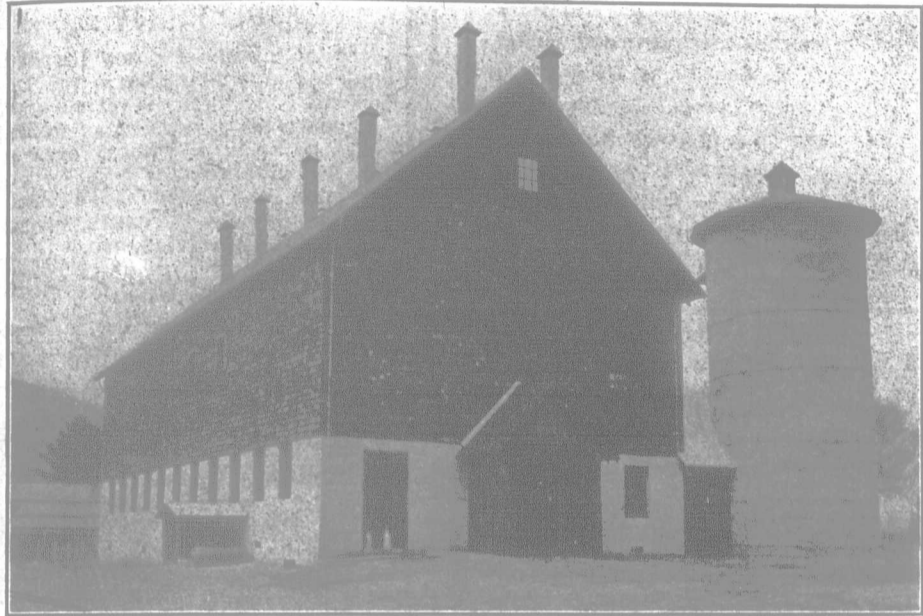
MENTION "FARMER'S ADVOCATE."

FIREPROOF COW STALLS

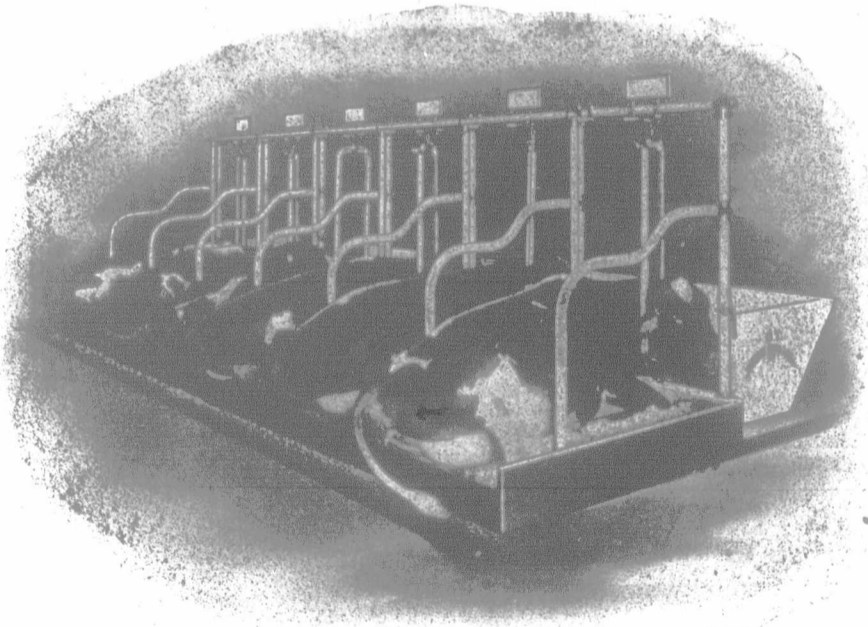
DO YOU SEE THESE CUTS? They show the barn on the Boys' Farm and Training School, Shawbridge, Quebec. It was built last year and equipped with 30 BT Steel Stalls. On April last fire broke out and devoured every vestige of material that would burn, leaving only the concrete walls, floors and BT Stalls. Mr. Mathews, Principal of the School, writes: "I am very glad I put in your Sanitary Steel Stalls. One dollar makes them as good as ever after the fire. Had we put in wood stalls they would have been a total loss, and in burning they would have destroyed the floors." But that is not all.

The Stanchions Saved the Cows

In a moment every cow could be released from the BT Stanchions. Thirty could be freed from the Stanchions while three would be if tied with chains. With cement floors and Steel Stalls the stable burnt slowly. Wooden stalls would be ablaze like a furnace before a single cow could be saved.



The Boys' Farm and Training School is located at Shawbridge, Quebec, near Montreal, and Mr. Mathews, the Superintendent, tells us that it now has some 60 city boys that it is training in Farm and Garden work. It is certainly doing splendid work in getting the boys back to the land. The first cut shows the new barn they built in 1911 and equipped with 30 BT Steel Stalls. The second cut shows the ruined barn after the fire. The third cut shows the BT Stalls. They went through the fire practically uninjured.



Arrange Your Barn Right

At a cost of over \$2 000 we have produced a book on stable construction. It tells how to build a dairy barn from start to finish. It shows how the upper structure should be built, and saves much money over the ordinary methods of framing. It gives the latest and best system of ventilation, which has been carefully prepared by J. H. Grisdale, Dominion Agriculturist. It gives barn plans approved by the best dairy authorities, tells how to lay cement floors properly. It gives proper measurements for manger, cattle-stand and gutters for any size or widths of barn.

This Book is Free. Write us for it. Fill out the coupon.

BEATTY BROS., - Fergus, Ontario

We make Litter Carriers, Hay Carriers, Slings, Forks, etc.

A Wise Investment

The BT Stalls stood the test. Made of Steel they neither burn nor rot. In fact they are indestructible. Surely when you consider this point alone, you will say they are a good investment. Remember, too, their cost is no greater, taking all things into consideration, than that of the wood stalls. Further, they will save you in many ways. Write and let us tell you about them. We cannot tell you much in the space we have here.

They Make Your Stable Bright and Clean

With Steel Stalls your stable is bright. The open construction of the stalls allows the sunlight to reach every corner. It permits a free movement of air throughout the stable. This abundance of fresh air and sunlight will do more than anything else to prevent disease among your cattle.

The benefit to the cow is indeed one of the great advantages of Steel Stalls. A cow tied in a BT Stall and Stanchion has the maximum freedom consistent with keeping her lined up in her stall. She can card herself on almost any part of her body. Tied centrally in her stall she is free to lie down on either side. She can freely get up or down, but at the same time she is prevented from moving backward and forward in her stall, so that she can be lined up on the cattle-stand and all droppings go into the gutter, not on the cattle-stand. That means clean and comfortable cows, and cow comfort means increased production.

Easily Set Up

You can do it yourself. In two hours you can set up 20 BT Steel Stalls, and as soon as the cement is dry your stable is ready for the cattle. Isn't that better than buying expensive lumber and posts getting it dressed, hiring expensive carpenters and boarding them for days while they put in your stable? You can remodel your stable yourself if you use BT Steel Stalls. From our book on stable construction you get

complete information as to how to lay cement floors—the best measurements for stalls and how to set them up quickly and properly.

Get Our Book on Stalls

Steel Stalls are not all alike. Last year the Dominion and several Provincial Governments built some 20 barns in different parts of Canada, and every one of them was equipped with BT Stalls and Carriers. Why? Our book will tell you. It shows how BT Stalls lessen abortion, do away with the principal causes of big knees, ruined udders and many other injuries which cows are liable to. You will see how our individual mangers save feed—prevent over feeding and underfeeding. You will also learn how the exclusive features on the BT Stalls mean dollars and cents to you, by giving greater comfort and protection to your cows.

Write us about Fireproof Cow Stalls. Use the Coupon.

BEATTY BROS., 1025 Fergus, Ont.

Gentlemen:—Send me (free) your book, "How to Build a Dairy Barn," and your catalogue on BT Stalls.

How many cows have you?

Are you going to remodel or build?

If so, when?

Will you need to buy a hay track or litter carrier?

.....

Name.....

Post Office.....

Province.....



QUALITY AND EFFICIENCY ARE MAIN ESSENTIALS IN A PIANO YOU GET THESE IN A BELL PIANO

We take the time and pains to build them right. There are many good features in the BELL never found in other makes. Information in our (free) catalogue No. 40. Send for it.

The **BELL PIANO & CO., Limited**
GUELPH, ONTARIO

"Good as Gold"

ARE THE POLICIES OF THE

LONDON LIFE Insurance Company

Head Office : LONDON, CANADA

Maturing 20-Year Endowments in the ordinary Branch show returns of \$140 per \$100 paid in premiums.

Full Insurance Protection in addition.

Ask for samples of Actual Results.



THE Stratford Extension Ladder

IT IS strong, serviceable, light, easily operated and durable, with wire-trussed reinforced sides.

If interested, write for booklet H, which tells all about this and other lines of ladders.

The Stratford Mfg. Co., Limited
STRATFORD, ONTARIO



O.K. CANADIAN POTATO DIGGER

"Money In Potatoes," is invaluable to farmers. Haven't you a copy of this book? Write at once — we'll send one free—also Catalogue

Canadian Potato Machinery Co. Limited., Galt, Ont.

YOU wouldn't think of getting your potato field ready for planting by using a spade and a hand rake. You use a plow and harrow—and let the horses do the hard work. Let the O.K. CANADIAN POTATO DIGGER and the horses dig your potatoes this year. All you do is sit on the machine and drive. The O. K. Canadian digs the potatoes — separates roots — cleans off the dirt—and deposits the potatoes in rows behind the machine. This machine is as great a time-saver and work-saver as the reaper and binder. O. K. Canadian is easily drawn by two horses. If you have a big crop of potatoes, write us at once about getting an O. K. Canadian — the digger that has won first prize wherever exhibited.

DOMINION EXHIBITION
Ottawa, Sept. 5th to 16th, 1912
JOINTLY WITH CENTRAL CANADA FAIR

Federal grant of \$50,000 used to improve Agricultural features

All cash prizes increased 50 per cent. Exhibition Association pays freight on exhibits coming over 100 miles. Reduced passenger rates and excursions on railways from five Provinces and two States.

New \$90,000 Machinery Hall erected for farm implements.

Entries from field crop competitions from every Province. Educational features along agricultural lines added. Novel attractions and amusements.

SEND FOR REVISED PRIZE LIST
E. McMAHON, Mgr. and Sec'y, Sparks St., OTTAWA
Entries close August 20th



Canadian Airmotors

provide free power for pumping water on stock and dairy farms, for drainage, irrigation, domestic water supply for private residences or summer resorts, for fire protection, etc. The Canadian Airmotor is the

Strongest, Easiest-Running Windmill

No gale too strong, no breeze too light. "Runs when all others stand still." Self-regulating—needs no attention. To be thoroughly posted about windmills you should

Write Now for Valuable Information—FREE

Asking for our catalogue does not obligate you to buy. Write our office nearest you.

ONTARIO WIND ENGINE & PUMP CO., LTD., Toronto
Winnipeg, Calgary

WHY NOT LET US SOLVE YOUR HEATING TROUBLES

PLEASE HEATING SYSTEMS

Free of all cost to you, our expert Heating Engineer's Department is at your service. Many heating troubles are chiefly due to poor installation in the first place. This can be avoided or remedied by the advice of our Engineers.

If you live in Toronto, phone us, and we will gladly send a man up to see you—if you live out of Toronto, write us describing your trouble fully.

Our books "The Question of Heating," or "Boiler Information" sent free on request.

"ASK THE MAN WHO HAS ONE."

PEASE FOUNDRY COMPANY, LIMITED
TORONTO, ONT.

WARM AIR HOT WATER STEAM COMBINATION

SAVE FROM ONE-THIRD TO ONE-HALF THE COAL

To PLANTERS

Making arrangements for Fall and Spring (1913) Planting

ORDER NOW AND SECURE **FRUIT TREES**
The finest stock grown in Canada.

BY **E. D. SMITH**
Helderleigh Nurseries
WINONA, ONT.

Whose practical experience is at your service

SPECIALITY :

Suitable stock for any locality, any soil, any situation in the Dominion. About 150 varieties of **Apples**, over 50 varieties of **Pears**, over 80 sorts of **Plums**, over 40 sorts of **Cherries**, over 50 sorts of **Peaches**, and equally large collections of **Grapes, Currants, Gooseberries, Raspberries, etc.**

850 ACRES
of the best of everything for farm and garden, for profit and pleasure.

Ornamental Trees and Shrubs, Hedge Plants, Roses, Lawn Specimens, Vines for Climbing, Borders and Rockeries.

Spring, Summer and Autumn Flowering Plants

Expert advice on fruit culture and horticultural operations. All orders valued. Correspondence solicited. Visitors courteously received. Catalogue, descriptive and illustrated, mailed free. Testimonials (unsolicited), copies mailed, originals shown at offices.

GINSENG

Anyone can grow it and make money. For planting this fall we are selling New Seeds, Stratified Seeds and One-year-old Roots.

Write us for Price List.

I. E. York & Co., Waterford, Ont.

BULLETIN 33

Learn "How to get rid of hen lice with one application of Avenarius Carbolineum a year." How to paint silos, barns, fences, shingles, etc., to preserve against decay. "Country Gentleman" says: "Every reader should have it." Tested on Dominion Farms; highly recommended by Mr. Gilbert, poultry manager. Canadian orders filled from Montreal stock. Write to day.

CARBOLINEUM WOOD PRESERVING CO.
194 Franklin St. New York, N. Y.



Vol. XLVII.

LONDON, ONTARIO, AUGUST 8, 1912.

No. 1037

EDITORIAL.

Most districts have been experiencing the usual barley-harvest rains.

Has autumn or after-harvest cultivation begun on your farm yet? Frequent rains are giving an excellent opportunity to advance this work.

Every noxious weed seed that can be induced to germinate now is a help toward ridding the farm of these pests, and means a saving of labor and worry later on.

The crying need of more live stock should not be answered by the breeding of all the scrubs in the country. Better have a few animals of the right kind than a surplus of inferior grades to drag the market down to the lowest level.

"Dairy Produce and Hogs High." These are common comments upon the market situation in our large cities, and, properly carried on, no two branches of agriculture fit in with each other better than do these two. What an opportunity!

Present indications do not point to a very heavy corn crop this year in most localities. Do not cease cultivating until the size of the corn positively does not permit of further working. Cultivation is the only means by which growers can hope to make up for the injuries done by the unfavorable season.

Illustrative of the advantages which Eastern Canada offers, compared with Old Country farming conditions, a young man from Scotland, in his first year as a hired help on an Ontario farm, reports that he has been able to save more than he did in the five years previous on a farm in the Old Land. And besides, he has to the good the benefit of training in Canadian farm methods.

Two powerful agencies have been at work to deplete the rural population: One, the misdirected school system, which educates the youth off the farm, or does little or nothing to qualify them for its activities, and the other an economic policy that promotes the city and its industries, at the expense of the country, by tending steadily to withdraw population from the land.

Of all seasons of the year, none are to be more appreciated on the farm than harvest. Harvesting the season's crop cannot help giving the owner a sense of satisfaction. Who would not be pleased to see the heavy-headed golden grain falling back on the endless canvas which conveys it to the deck, from which it is discharged in regular bundles, tied and ready to stook? What more satisfying sight can be imagined than a heavy field of grain drying in the stook, under the clear summer sky? And best of all is the time when the crop is all housed and the barn bulges and creaks with its abundant load; when the threshing machine in a short time separates the grain from the chaff, and the stack, mow and granary are filled with the feed to be turned into meat or milk during the coming winter. How much of the crop will be disposed of? The more of it that is fed on the farms, the better for the country's agriculture.

The Tariff on Traction Ditching Machines.

In going over considerable areas of the Province of Ontario during the past month, members of "The Farmer's Advocate" staff have been struck with the deplorable condition of the crops in certain sections, compared with other portions. Sometimes the alarming contrast was apparent on adjacent farms, and even on different fields of the same farm. Correspondents in various parts of the country verify the existence of this state of affairs, which careful and extended inquiry attributes to the absence of drainage or insufficient drainage. In one extensive stretch of country, the sickly, stunted character of the field crops was most conspicuous, and it was found that there tile draining had been almost entirely neglected. Last spring there was an excess of moisture and cool weather, with the result that on undrained land seeding was delayed and the land improperly worked. Expert demonstration confirms the outcome of general farm practice that the late-sown crops are the poor crops, and nothing so hampers spring sowing as a wet, cold soil. Cases are cited from actual experience where the increased crop from a field the first season has paid the cost of the drainage, and, once the work is properly done, the improvement is permanent. In olden times, it was thought only the low places in the field needed tile draining, but now it is known that it pays handsomely to drain the higher ground, as well.

Careful and long-continued work done by the drainage authorities at the Ontario Agricultural College has demonstrated that, taking into consideration both wet and ordinary farm lands, drainage would give an average crop increase valued at a trifle over \$20 per acre. There are probably 4,000,000 acres of land in what is known as "Old Ontario" urgently needing underdraining, and probably 5,000,000 acres of slash, swamp or waste land, of which at least 3,000,000 acres might be reclaimed by drainage, the crops from which, added to the increase from lands already under cultivation, would make a grand-total increase of \$100,000,000 per year. Such an increase would go far to solve the high cost of living problem and materially benefit all classes of people. The drying up of wet or swamp lands would also prove of inestimable benefit from a sanitary standpoint, removing many causes of disease and mitigating others, such as those of a tubercular nature. What is true of Ontario is also to a greater or less extent true of the other Provinces of Canada, excepting such areas as those of Alberta.

When the needs of drainage are so evident and the benefits so immediate and lasting, how is it that the work is not more generally done? By the staff of the Physics Department at the Guelph College, and by the County Representatives of the Department of Agriculture, a great deal of drainage-survey work has been performed. By the urgent request of farmers who realize the need, proper systems of drains have been laid out, but, unfortunately, in too many cases it has been found impossible to carry on the undertaking to completion. In the year 1910 as many as 15,000 acres were surveyed on 400 farms in 37 different counties, and last year it was continued at about the same rate. Less than half the progress in drainage is being made that should be done, and Ontario is suffering a loss annually of probably

\$1,400,000 for that reason. Naturally, the Provincial Government does not see its way clear to undertake the work of draining individual farms, and farmers themselves confronted by the appalling scarcity of labor, are unable to grapple with the problem. So, over the country, valuable land is reverting to pasture, and but little is realized from some of the richest soils that are among the most favorably situated in the world.

The land cannot be properly worked and everywhere weeds are gaining ground for the same reason. Time was when in every locality there were men ready to handle drainage tools, but it was heavy labor, and now the ditcher is practically non-existent. Skilled and unskilled laborers have been drawn away to the cities, whose industries thrive at the expense of the soil. Tillage and harvesting machinery has enabled farmers to overcome some of their obstacles with less manual labor, but ditching has not been so relieved to any extent.

* * *

Lack of tile is not the real impediment. Clay from which tile can be made is to be found in nearly every township, or at least in every county, and tile-making machinery is not difficult to procure and operate. In Ontario alone there are probably over 200 tile yards, the number and capacity of which might be vastly increased, along with the related industry of tile-making outfits. But neither the one nor the other will be developed unless the trenches to receive the tile can be made. Labor for this work, as we have stated, is practically impossible to obtain.

* * *

What, then, is the solution of this great problem? In a word, the traction ditching machine, which, with a couple of attendants, neither of whom has to work very hard, can make as much trench in a day as a score of strong, experienced laborers toiling with spades and shovels. These machines have been perfected by United States firms, but their manufacture has not been undertaken in Canada, nor is it in prospect, we are given to understand, because the great outlay required would not be warranted by the Canadian demand. These machines cost anywhere from \$1,200 to \$2,900, according to style and capacity. Not being manufactured in Canada, there is no "infant" or full-grown industry to protect, but still, upon the machine a duty of 27½ per cent. is imposed, which, added to the heavy original cost, becomes practically prohibitive, in so far as farmers or other men of moderate means are concerned. Some few have been imported, and their efficiency fully demonstrated, but the \$600 or \$700 duty blocks the way. At the ordinary agricultural implement schedule of 17½ per cent., the burden would not be so bad, but, under all the circumstances, and when the advantages are considered, obviously the proper place for traction ditchers is upon the free list. The Canadian Manufacturers' Association, the tariff section of which looked into the matter, have not opposed this small concession in the interests of the country's greatest industry, agriculture, and it is hard to conjecture why remedial action should be so long delayed.

Cement-making has grown to be an important Canadian industry, but a short time ago, by order-in-council, the Government, in its wisdom, for the furtherance of building and other enterprises, cut the duty on imported cement squarely in two, and the large inflow of the greatly needed material was hailed with satisfaction. That the

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, agate. 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.
6. REMITTANCES should be made direct to us, either by Money Order or Registered Letter, which will be at our risk. When made otherwise we will not be responsible.
7. THE DATE ON YOUR LABEL shows to what time your subscription is paid.
8. ANONYMOUS communications will receive no attention. In every case the "Full Name and Post-office Address Must be Given."
9. WHEN A REPLY BY MAIL IS REQUIRED to Urgent Veterinary or Legal Enquiries, \$1.00 must be enclosed.
10. LETTERS intended for publication should be written on one side of the paper only.
11. CHANGE OF ADDRESS.—Subscribers when ordering a change of address should give the old as well as the new P.O. address.
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),
LONDON, CANADA.

progress of drainage should be longer retarded by the imposition of a duty exorbitant in itself, but in the aggregate yielding no great revenue to a flourishing country like Canada, will not commend itself to the good judgment of the country, when all the foregoing considerations are taken into account. Leading men in Canadian affairs, from the Maritime Provinces westward, who have looked into the subject, fully concede the imperative need for action and the wisdom of the step which this article urges.

What Shall Our Boys Do for a Living?

Parents or guardians have been watching with more or less animation the published lists of successful students at the midsummer educational examinations, and presently will be planning future courses or "careers" for those in whom the hopes of the family are centered. The title of this article was chosen as the subject of a book written a few years ago by Charles F. Wingate, about the time that large families were going out of fashion. Nowadays the youth settles the matter for himself at about thirteen years of age, tackling the first job that strikes his fancy. A reputable tradesman tells us that lads once entered his premises with some deference, desirous of learning the trade, and were eager to qualify themselves for usefulness. But now, when the "Boy Wanted" card appears in the window, he stalks through the door, with the demand, "How much is there in it for me?" Times, as well as manners, have changed.

The choice of an occupation and the necessary preparation therefor are about equally important. Neither can be done aright without careful consideration and ample time to qualify. A boy of average attainments may make his way fairly well in any one of a dozen different pursuits, but if he shows special gifts in any particular direction, or, as it is called, an unmistakable "bent," then, devoted to such an occupation, his life will be most

satisfactory and successful. Care need be exercised that a mere passing whim or fad is not mistaken for a real endowment.

Law, medicine and other professions and mercantile pursuits are overcrowded, and only the few rise to eminence or places of emolument. In industrialism or railroading, one only out of multitudes emerges to power and influence. The masses must toil or battle for little better than livelihood. Factories and foundries, warehouses, stores and street railways swallow up the multitudes of mediocrity. The veterinary profession, so long at a low ebb, is improving because of improved college courses and the demands of the time for elaborate and rigid systems of live-stock oversight and meat inspection. Hosts of town boys have been going into electrical fields, which seem likely to be too well filled, with heavy competition in the lower grades of work. It is encouraging to observe that in many sections of Canada the teaching profession is taking on a higher status, with more encouraging remuneration. The public school will yet assume its proper place in rural communities, and more properly relate itself to country life and its great occupation.

Sons of the farm, with a real liking for natural science, coupled with some administrative capacity, are finding a widening field for opportunity to serve the country well in places of experiment, research, demonstration, and in the multiplying schools and colleges where agriculture is taught, and in the forestry service.

In single issues of each of a couple of Toronto newspapers, lately, the advertisements for teachers for country public schools, chiefly, numbered about 225, and, as a rule, the salaries offered appeared to range from \$500 to \$600. This is more in keeping than former conditions with the higher standards now required and the importance of the work which they are called upon to do. To attract young men permanently to the teaching professions, a better scale of stipends must prevail.

However, the one great occupation that is undermanned is farming itself, and it is no exaggeration to say that no other presents so many substantial inducements, such independence, such a certainty of a fair competence, with so much that is wholesome and attractive. As an industry, it has had to make its way against obstacles, and has not been "fostered" or fattened on the public domain, as is the case with too many of the enterprises that center in the cities. It is fortunate, indeed, that farming is not a millionaire-creating business, and happily there are signs of a reversion against money-worship in the public mind. It has been slow in coming, but not the less sure. Making money is no great achievement, after all, and the gold kings will be forgotten about as soon as they get back to their six feet of land. Farming in a beautiful land like Canada, with its varied specialties, horticulture, dairying and live-stock husbandry, is an occupation of which to be proud, and rural life is in many ways incomparably the best. But the time is gone when any old way will do on the farms. It is the place for the student and the thinker. For growing up, there is no place like the farm. This is why the sons of the farm so generally forge to the front in competition with the city-developed youth. For any pursuit, there is no preparation equal to a few years on a well-conducted farm, where stamina and resourcefulness are daily developed in a hundred ways. It is a profession to be learned. Those who would rise in this walk of life need take time to prepare. It is a poor place for the dullard. Farming is a combination of science and practice and business, demanding knowledge and skill, as well as ability to do manual work. Once and for all, let there be no mistaking the fact that, to farm well means capacity and training, and those who lack these pre-requisites will probably do well to drift into some occupation that makes less exacting demands upon intelligence and resolution of character.

Commenting upon the farm-labor problem, a Toronto daily recently put forth the opinion that there is a great future ahead for the scientist who will invent a harvest hand that is able to work twenty-four hours daily three months in the year and hibernate like the bear the remainder of the season. This has been the trouble too long. Men have been engaged for short summer seasons only, and no work given during the winter months. The farms on which labor is employed by the year do not suffer at any season from lack of help to such a degree as farms on which hired men are kept only during the haying or harvest, or the summer season. The best method to secure satisfactory labor in country districts, and one which has been advocated through these columns time and again, is to so manage the farm as to have profitable work for the hired help winter and summer, and to supply them with houses to live in. This means an increase in the live stock kept in the country, more fertile farms, greater satisfaction for all concerned, and better returns from the land.

The Diversification of Crops.

In dealing with crops suitable for irrigation farms, the Yearbook of the United States Department of Agriculture for 1911 gives the following on diversification of crops which is applicable on any soil where general farming is carried on.

Diversification of crops is essential to a permanent and prosperous agriculture, and this diversification should exist on the individual farm, as well as in the community as a whole. The importance of diversification is recognized and practiced in every community that has been long established, even where the products of other sections are easily obtainable. Where a community is isolated, diversification is still more important because of the high cost of transportation. The greatest economies in agricultural production are secured not where specialization is practiced, but where diversification of crops permits the most uniform and continuous employment of labor, and where the larger proportion of needed food supplies is produced at home. It is a deplorable feature of many new agricultural regions that a large proportion of the food supply is imported, when it could be produced much more cheaply.

A high degree of specialization in farming is economically more feasible when a community is well established, and where facilities for an exchange of products and a shifting of labor are highly perfected. In a new and isolated community, on the other hand, the best and most rational development is secured when a sufficient diversity of industries is practiced to supply the majority of the home requirements to keep labor continuously and effectively employed, and to insure a revenue from some of the crops when others fail.

Unfortunately, much of the exploitation of agricultural land in new regions is done on the basis of a single crop. Not infrequently, investment is solicited under an arrangement whereby the land is to be planted to some perennial crop, and cared for by the seller until the crop comes into production. Such schemes of exploitation have little to recommend them, even when carried out faithfully. The rigors of pioneering are not to be lessened that way. The profits in agriculture are seldom large, and are assured only as a result of close personal attention, careful economy and persistent effort. Non-resident ownership and operation permit none of these, and are seldom, if ever, profitable.

Under ordinary conditions, farming should not be looked upon primarily as a money-making occupation, but rather as a means of a fairly certain livelihood and an opportunity for home-making. As a general thing, investment opportunities in agriculture are to be found in the increase in land values, and are therefore of a speculative nature. Under favorable conditions, farming may be expected to afford all of the necessities and some of the luxuries of life, and it favors the development of healthy, sane and self-reliant citizens. These are the principal features and advantages of farm life with irrigation, as elsewhere, in new communities or in old ones. One whose chief desire is to accumulate wealth through the investment of money can usually find more profitable openings in some other line than farming.

HORSES.

Begin to put the finishing touches on the colt intended for the fall shows.

It is surprising how few foals are seen in a day's travel through the country. No wonder the demand for horses keeps up. There are thousands of mares not being bred which, if placed in service, would yield a large profit to their owners.

The Chamber of Commerce stakes at the Detroit race meeting went for the second time in the history of the event to a Canadian horse. Joe Patchen II., the big son of Joe Patchen, won it in 2.03½, 2.04½, 2.05½.

Teach the colt what is expected of him, and he will do it freely and willingly. Get him on his good behaviour before taking him before the judge. Manners count greatly in the show-ring, and must be taught thoroughly previous to the show.

In reading the reports of the Western exhibitions, the large numbers of Clydesdales out and the comparatively few Percheron and other draft entries listed, leads one to believe that the Scotch breed still stands in greatest favor throughout Canada.

Weight on horses' necks has always given more or less trouble in the working of farm implements and machinery. It is not uncommon to see horses with large sores on top of the neck, due in part to this cause. If you have never tried one

before, get a tongue truck for that wide binder, and mark the difference in this particular.

The breeding season is now practically over. What is to become of the stallion? Is he to be placed in a stall, there to remain in darkness and seclusion until time to commence another year's service? Far better would it be to put him to work and make him earn his keep, at the same time keeping him in excellent condition for breeding sound, healthy foals. At least give him daily exercise in a paddock or on a line.

If the rush of work cultivating corn and hoed crops, harvesting the season's crop, and commencing the early autumn cultivation, necessitates that the mare with colt at side must work, it will be found profitable to give her a little extra feed, and at the same time provide the colt with a separate box from which he may get a liberal ration of oats and bran to make up for the loss he sustains in the falling off in milk supplied by his dam, due to the extra work.

Rope Horseshoes.

A writer in The Country Gentleman describes, from German reports, rope horseshoes, which have been in common use in Germany since the rapid increase of asphalt and wood-block pavements. They are made from both forged and cast iron, with a deep groove on the under side; into this a section of tarred rope is fitted, which, when once forced in, remains there without further fastening. The rope is about three-fourths of an inch thick, and sometimes has a steel wire running through the center. In Munich, about 90 per cent. of the hind feet and seventy per cent. of the fore feet of horses are shod with these shoes. Their average life is about six or eight weeks.

They are light and comfortable, prevent slipping, break the concussion, and deaden the sound of the hoof. On the other hand, the driving of the nails requires more care, a larger quantity of shoes of various sizes and shapes must be kept in stock, and in making them great care must be taken not to overheat the iron or hammer it when it is too cold; otherwise, it will crack on the anvil. The shoes are sold in bundles of 20 for \$9.16, a hundred kilos—220.46 pounds.

Draft Horse Judging.

A. S. Alexander says the judging of horses is an art to be acquired by careful observation, practice and experience. Not every man has the naturally keen observing powers and love of the subject peculiar to some men who become notable experts, yet all may acquire a practical, useful knowledge of the exterior of the horse by methodical and conscientious study. To become a proficient judge of horses is worth striving after. The attainment gives its possessor personal satisfaction, the necessary information for use in breeding, buying, selling and managing horses, and enables him to help his fellow men by counsel in horse matters or the selection of prizewinners in the show-ring. Masters of the art wield a mighty influence on the horse-breeding operations of the country.

The student should get into the habit of "sizing up" every horse he sees. By comparing one horse with another, he will gain experience and be able to estimate correctly the value of component parts, and to judge of beauty, symmetry, correlation of members, and adaptability for breeding purposes or work. After learning the names of the various parts of the horse's exterior, the student is equipped to analyze the value of each, and at length will be able to judge quickly and intelligently of the value of the entire combination of points constituting the individual horse.

A great number of horses must be examined. Then several must be considered together, and one compared with the other until each can be placed in its proper position as regards merit and utility. Horses of varying breed, age, type, quality, soundness and serviceability should be used as material for study. Where possible, the student of horses should visit horse-breeding establishments, sale stables and shows to continue his studies and round out his experience, as soon as a practical knowledge of the work of judging has been acquired.

HOW TO EXAMINE A HORSE.

Have the animal led out "to halter," and stood at ease in an open, well-lighted place. View the horse from all directions. In this way, an impression of the conformation, style, character and "general appearance" of the animal and peculiarities or excellencies of the various members is obtained. The horse may be moved around first at a walk and then at a trot, to afford the judge a broadside view. This should be followed by a careful study of the animal as he walks from and to the observer, and is then led away and

back at a trot. The examination may then follow in detail. The student should learn to use his eyes, rather than his hands in judging. The eye is master of the situation. The hand should only be used as an assistant to the eye. It may be used when the eye cannot, unaided, determine a question of quality, size, condition or soundness. For example, the eye sees plumpness of flesh, but the hand must be used to decide its depth on the ribs or other parts; or the eye detects what appears to be a bone spavin, and the hand, by feeling, corroborates or disproves the

tween August 1st, 1910, and May 1st, 1912, has recently been completed. This covers most of the colts foaled in 1909 and 1910, some over-age animals, and a few 1911 colts.

While it does not represent two full years' registrations, it does give a very definite line on the distribution of Percheron mares, and the location and relative importance of various breeding districts. Volume 14, containing registrations from 62,000 to 74,000, inclusive, is in the hands of the printers, and Volume 15, containing registrations from 74,000 to 86,000, has just been closed. Illinois and Iowa contributed 50 per cent. of the Percherons recorded. Ohio, Kansas, Nebraska and Indiana are the States next in line, and together breed 22.8 per cent. of the animals recorded in the time mentioned. Minnesota and Wisconsin follow closely, and Missouri takes an unexpectedly high rank, standing 9th. This is due to the rapid development of draft-horse breeding in the north half of the State, where conditions are very similar to those prevailing in the big six, or the corn-belt States.

The judgment of the most experienced buyers of draft horses for market purposes is to the effect that more good draft horses can be purchased in Iowa and Illinois than anywhere else in the United States. This is undoubtedly due to the fact that these States are older in draft-horse breeding than any others, save Ohio. All experienced horsemen conceded that the distribution of a number of purebred mares of any draft breed in a locality results in hastening the introduction of better sires, for the owners of pure-bred mares insist upon a first-class sire of the breed they are using. In numerous instances where stallion owners have declined to purchase better horses, they have of their own accord gone out and purchased good stallions, thereby forcing the local stallioners into the purchase of better sires.

The three leading States are those oldest in draft-horse breeding. Ohio was earliest with Percheron importations in 1851, but Illinois breeders purchased the greatest of the early sires, Louis Napoleon, in 1856, and between that time and 1880 imported many times more Percherons than Ohio. Iowa breeders started with the breed almost as soon as their co-laborers in Illinois, and, like Illinois, established a greater number of breeding centers than Ohio, prior to 1880. From these three States, pioneers in draft-horse breeding, the spread has been gradual into adjoining States. It is a matter of surprise that Indiana, lying midway between Illinois and Ohio, should have made less progress in recent years than Kansas and Nebraska.

Within the leading States, the breeding is centered chiefly in 10 or 12 counties. Illinois is breeding Percherons in 80 out of a total of 102 counties; Iowa, in 96 out of 99; Ohio, in 70 out of 87; Kansas in 72 out of 105; Nebraska, in 53 out of 92; Indiana, in 67 out of 92.

Illinois and Iowa, the leading States, stand in marked contrast in one particular. Most of the Percherons in Illinois are bunched in relatively few counties, while in Iowa they are distributed over practically the entire State. No country contributed over 7.2 per cent. of those bred in Iowa, while in Illinois, the leading county, McLean, furnished 15.8 per cent. of all those bred in the State in the time considered. The first six counties in Illinois furnished 45 per cent. of all bred in the State; the first six counties in Iowa but 35 per cent.



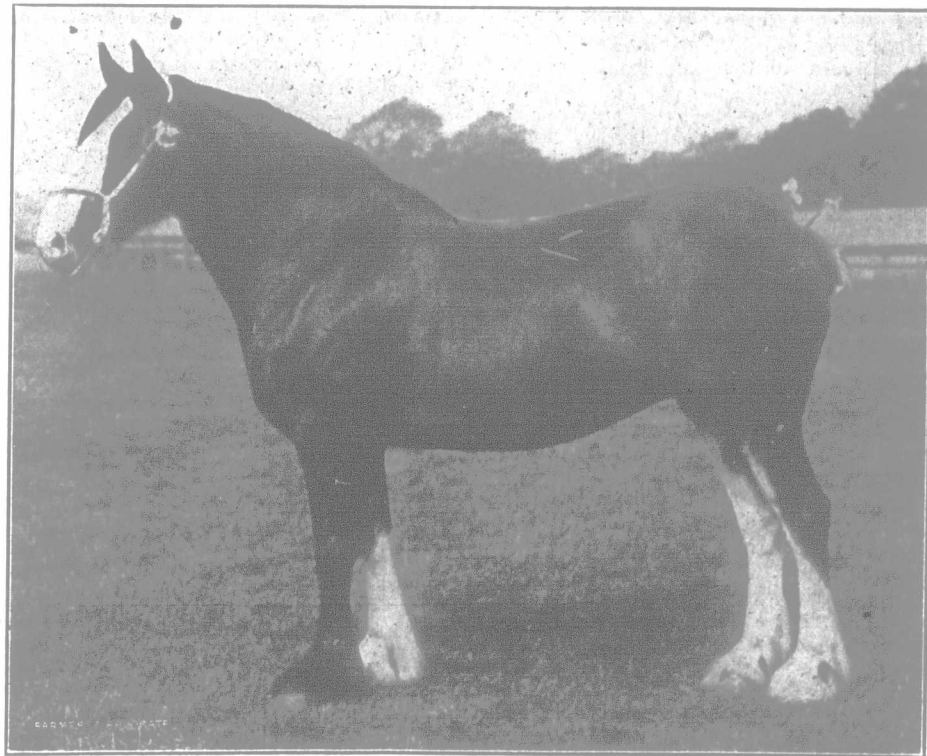
Lady Gartsherri and Lynndhurst Belle.

Clydesdales; mother and daughter, owned by Geo. Potts & Son, Norfolk County, Ont.

suspicion. As a general rule, much handling is to be avoided by the student. Excessive handling suggests lack of confidence, experience and mature judgment. It betokens the amateur.

Percheron Breeding in the United States.

Slowly but surely the Percheron breeders in the United States are following the trail laid out by American cattle-breeders. Comparatively little progress was made in cattle-breeding until the number bred in this country made selection possible; and the most rapid progress came after the breeds were well distributed and pure-bred animals had become fairly easy to locate in the



Harviestoun Baroness.

First and champion Clydesdale mare, Highland Show, 1912.

chief breeding districts. In the past, writes Wayne Dinsmore, secretary of the Percheron Society of America, the breeding of Percherons of the best possible type has been retarded, because of the limited number of breeding animals from which selection could be made. The fact that the available animals were widely scattered over a vast area of territory still further handicapped the work of constructive breeders. Selection and assembling of the best females was impossible. These conditions still prevail in some degree, but much less than formerly. An analysis of the registrations of American-bred animals, made be-

The wide distribution of Percheron mares, already shown, means a more general demand for the best Percheron sires. The number of men who own and are breeding Percherons, now in excess of 6,000 active breeders, will inevitably hasten the production of better Percherons than have heretofore been bred in America. American farmers are excelled by none in the world in intelligence and skill in their live-stock-breeding operations, and the work of so many keen minds cannot fail to bring a wonderful improvement in the breed within the next few years. Careful selection of the best is now possible, although difficulty will still be encountered on account of the area which must be covered in making selections.

Success in breeding live stock is hard to win. This is particularly true in horse-breeding. The development of Percheron breeding in the United States has been hampered by competitors of the breed, by division in the ranks of its supporters, and by much hostile criticism from would-be authorities on breeding problems. These are incidents, history teaches us, in the development of every great breed of live stock. Percherons outnumber all the other pure-bred draft horses in the United States. There has never been a time when the horse-breeding industry was on a firmer foundation, nor a better time for creative breeders to devote their best efforts to the development of better Percherons than the world has yet produced.

Rations for Farm Horses.

The feeding of farm stock is always one of the most interesting and important problems of the farm. It must be done economically, and the animals must be kept in thriving condition. Horse-feeding seems to be largely limited to hay and oats, as far as rations are concerned, but there are other times when other substances may be very profitably used. Some rations for horses, as they are being fed in Great Britain, are given by Charles Crowther, M. A., Ph. D., of Leeds University, in the July issue of the Journal of the Board of Agriculture, and they, together with the explanations given, contain much useful information which may be of value to horse-owners in America.

In feeding horses, says Dr. Crowther, it is essential to remember that, compared with cattle, the horse has only a very small stomach, which acts most efficiently when about two-thirds full. The horse is thus not well adapted for dealing with bulky food, and should receive its food at regular short intervals, if possible, not more than five hours being allowed to elapse between meals during the daytime.

The ration of the working horse must hence contain a large proportion of concentrated food, the most suitable being oats, barley, maize, beans and peas. A ration composed exclusively of concentrated foods will not prove satisfactory, but must be blended with a certain amount of bulky food. This latter must consist of hay or good straw.

It is economical to chaff hay for horses, as they frequently waste it by littering when supplied long in the rack, though possibly a horse given to bolting food would chew it better in the long state. In general, however, if the greater part of the hay is chaffed and mixed with the grain food, a thorough mastication of the latter will be insured, the mastication will be effected more rapidly, and waste of hay will be reduced to a minimum. Long hay may be placed in the racks for consumption during the night.

The proportion of hay and straw in a horse's ration should be regulated by the demands made upon it for work. During busy times, when horses are working long hours at heavy work, the diet should be of a concentrated character, as horses do not derive the same amount of nourishment from bulky foods that cattle do. In the neighborhood of London (England), where farm horses are frequently engaged almost continuously in carting hay and straw to market, it is not unusual to allow as much as 25 pounds per head per day of oats, with only a small quantity of hay chaff.

Of the grain foods, none is superior to oats, and for the more valuable horses they are commonly regarded as indispensable. Barley and maize may be used with safety if blended with oats, beans or peas. They are more suited, however, for horses working at a slow pace than for those in rapid motion.

Beans are favored for horses that are called upon for sudden exertion or prolonged heavy work. All corn should be crushed or bruised. Sugar also seems to be an energy-producing food of the first rank, and may be conveniently supplied in the form of treacle.

All the hay and grain used must be thoroughly mature and "sweated." In feeding horses, it is a safe rule to remember the saying, "old oats, old hay, and old beans long crushed."

The following data as to food requirements may serve for guidance in constructing rations for horses under various conditions. The "medium

work" may be taken as similar to that done by a horse plowing medium loam soil for a day of eight hours.

The data given are the requirements per 1,000 pounds live weight per day. Ordinary heavy cart horses will weigh more than this, say 1,250 to 1,500 pounds, and the rations must be increased for them correspondingly by about .2-3 lb. digestible albuminoids and 2-3½ lb. starch equivalent.

RATIONS PER 1,000 POUNDS LIVE WEIGHT PER DAY.

	Total dry matter.	True albuminoids.	Starch equivalent.	Crude albuminoids.	Oil.	Carbohydrates and fibre.
	lb.	lb.	lb.	lb.	lb.	lb.
At rest.....	17-22	0.6	7.0	0.8	0.2	9.0
Light work..	18-23	1.0	9.2	1.2	0.4	9.8
Medium "	21-26	1.4	11.6	1.6	0.6	11.3
Heavy "	23-28	2.0	15.0	2.2	0.8	13.7

The maintenance requirements given for a horse at rest correspond to a supply (per 1,000 pounds live weight) of about 8 pounds of digestible matter, with an albuminoid ratio of about 1 to 8. These requirements can be met by good hay alone. Such a diet, however, fails to keep up that "hard" condition which is necessary if the horse is to be fit for work when called upon. A suitable ration for an idle horse is 8 pounds oat straw, 6 pounds hay, 5 pounds maize, or maize and barley, and 2 pounds beans, or 8 pounds oats substituted for the other grains.

Carrots, Swedes and mangolds are much relished by horses; they are very suitable for idle horses, but to those in work they should not be given in greater quantities than about 8 or 10 pounds a day. A sick horse will often be tempted to eat a few carrots when it will touch no other food.

From the above table it would appear that a heavy farm horse at ordinary work will require a ration supplying about 25 to 30 pounds total dry matter, with a starch equivalent of about 14 or 15 pounds, including about 1½ pounds digestible albuminoids.

The following is probably the simplest example of a daily ration for a farm horse: 20 pounds hay, and 12 pounds oats.

As a rule, however, a simple diet like this is not the most serviceable. Occasional changes of food are advantageous. With a more complex diet, the animals will be found to thrive better, and in many cases, also, the expense is reduced.

A mixture of maize and beans, in the proportion of 2½ of the former to 1 of the latter, gives about the same albuminoid ratio as oats, and it will be found that 15 pounds of the maize-beans mixture affords the equivalent amount of nourishment to 19 pounds of oats.

The following are examples of suitable daily rations for farm horses at average work:

- 1.—18 pounds hay, 8 pounds maize or partly barley, 2 pounds bran, 1½ pounds beans.
- 2.—12 pounds hay, 5 pounds oat straw, 6 pounds oats, 5 pounds maize, 2 pounds beans.
- 3.—18 pounds hay, 12 pounds oats, 1½ pounds beans.

A full ration for a heavy horse at the busiest time of the year would be 9 pounds oat straw, 6 pounds hay, 12 pounds oats, 3 pounds beans or peas, 1½ pounds linseed.

Farm horses fed on oat straw and oats alone—the plan followed in many northern and western districts—require a very variable quantity of oats, depending upon the character of the straw, which in some localities has a high nutritive value, whilst in others its quality is very low. In any case, the oat straw is given ad libitum, and the quantity of oats required to supplement it will vary from 14 to 24 pounds, according to the quality of the straw, the quality of the oats, the size of the horse, and the character of the work to be done.

Mares suckling foals find all the nourishment they require in an early-summer pasture. Should an indoor ration be required for a mare with foal, the following is a very suitable one: 21 pounds hay, 4 pounds maize meal, 5 pounds oats, 3 pounds bran, 3 pounds beans. Half the hay might be given long, and the other half should be chaffed and mixed with the maize meal and bran damped, and the oats and the crushed beans given dry.

The foal will graze with the mare, and soon share with her any indoor food she may be getting, and thus prepare itself for weaning. When weaned (about five months old), it should get a little trough food, consisting of ½ pound oats and ¼ pound linseed cake, a day.

During severe weather it should be fed twice or three times daily, and, in any case, when brought in at night it should be supplied with a rack of hay and one of the following trough mixtures:

(1) 1 pound of oats and ½ pound linseed cake, or (2) ½ pound oats, ½ pound bran, and ½ pound crushed beans. The oats should be crushed or bruised.

Bruised oats, bran, cut hay and pulped turnips, moistened with treacle and water, make an excellent mixture. A hot mash of bran, beans and hay is also productive of good results.

Except in very bad weather, foals are much better running out during the day than kept in confinement, not so much for the sake of the food they find as for the exercise, which is so essential for the normal development of the body and limbs.

During the winter of its second year, the colt may be gradually introduced to light work, say about three half-days a week, and during the following autumn it may be fully broken in to the heavier work of the farm. On no account, however, must the young horse be overworked, or irreparable damage may be done to the slowly-hardening framework of its body.

LIVE STOCK.

Our Scottish Letter.

We are still troubled in Great Britain with outbreak of foot-and-mouth disease, traced directly to Irish sources. So far, in Scotland, we have happily escaped. No single case has occurred north of Tweed or Solway, but Northumberland and Cumberland have both been badly hit. Since I wrote, a fortnight ago, fresh outbreaks have taken place in Ireland, and also in Leicestershire, where it was not before reported. The outbreak in Leicestershire has been marked at Mr. Stokes's place at Market Harborough. Mr. Stokes is one of the most extensive dealers in hunting horses in England. As such, he must be in constant communication with Ireland, where the best Hunters are bred. In this way the disease may be carried through the boots or clothing of men passing hither and thither between the two countries in search of horses, and of necessity, going over fields which may be infected. This suggests an unsuspected line of contact between two points—the point of origin, and the point where the disease manifests itself. It is to be hoped the clue thus furnished may be followed up, and mastery of the disease be secured.

The situation in Northumberland is rather serious. It would seem as if the infected cattle from Ireland had gone there in somewhat extended numbers. Their presence has given to that county a most unenviable notoriety in connection with this recrudescence of foot-and-mouth disease. The annual show was held at Tyne-mouth this week, but, as neither cattle, sheep nor swine were permitted to be shown, it was rather a depressing event. Next week the Durham County show is to be held, under like conditions. The great center in Northumberland is, of course, Newcastle-upon-Tyne. This is a very hilly city, and horses for its streets must be weighty, active animals. The cabs that ply for hire in Newcastle have each a pair of horses—a fact which tells its own tale. The towns in Durham are also steep and hilly, with sharp gradients, and in both counties Clydesdales of an exceptionally heavy type are in demand. Small, fancy horses are of no use where heavy loads and steep gradients have to be faced; and the Clydesdale, with his unusual combination of weight and activity, fills the bill better than any of his rivals. The Seaham Harbour stud did much to popularize the heavier Clydesdale in these northern counties of England, and generally, the horses winning this week were of this big order. Mr. Brydon still carries on the Seaham Harbour stud, and stock of his old horse, Silver Cup 11184, with foals by his younger horse, Bonnie Buchlyvie, were much in evidence. Hunting horses of an unusually good type are bred in Northumberland, and the show of such in saddle was worth going far to see. For the rest, the show at Tyne-mouth had to depend on such minor attractions as dairying and cognate items.

THE HIGHLAND SHOW.

This year the Highland and Agricultural Society made an invasion of the County of Fife, and held its annual show at the small county town of Cupar. The zeal of Lord Ninian Crichton Stuart, the president, and the local committee was contagious, and for the first three days of the show the old place seemed to become all alive. The fourth day, however, was a failure, the attendance falling away greatly, and the Cupar show of 1912 closed its gates with drawings some £1,400 less than had been secured eight years earlier at the Perth show, with which it must compare in the circuit. Still, in spite of these things, the Cupar show was an unqualified success, save for the absence of all English exhibits and from all exhibits from Scots owners which had been in England at the unfortunate Royal Show, held at Doncaster. But it turns out that even that event was not so disastrous as had been anticipated.

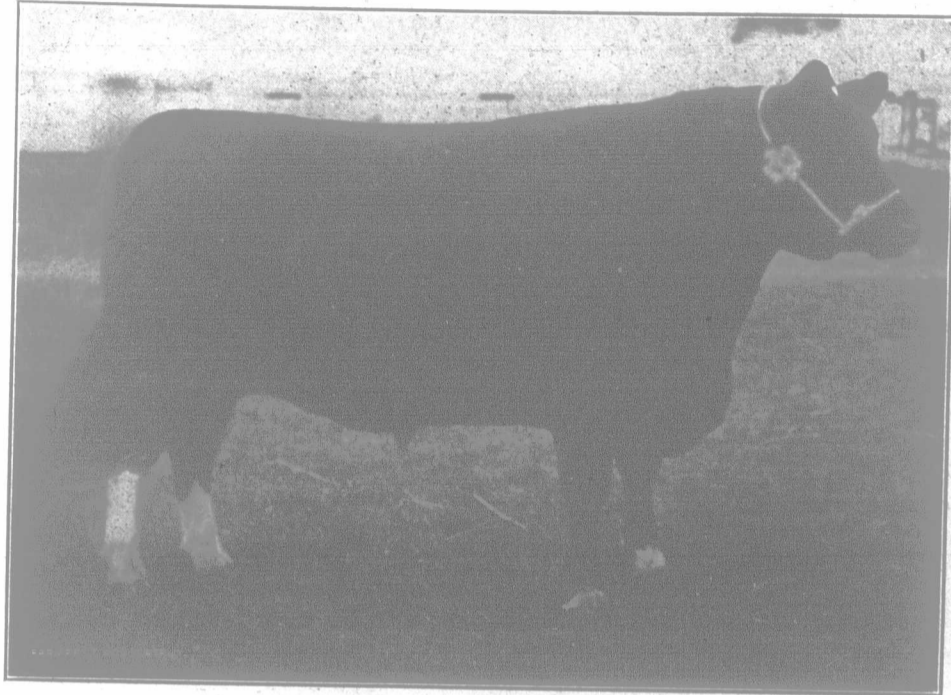
and the likelihood is that both the national shows of 1912 may prove remunerative in a financial sense. So far as stock is concerned, the show at Cupar will long be remembered for its splendid exhibition of Clydesdale horses. We have had nothing like it for many years. The great class was that for two-year-old colts. So large and high-class a collection of these has probably never before been seen in a Scots show-yard. It may safely be averred that the best colts outside the prize or ticketed list were as good as many of the prizewinners of the past. The champion male Clydesdale of the show was Wm. Dunlop's fine two-year-old colt, The Dunure 16839. This colt has been unbeaten this season, and last year, when a yearling, although he had varying success in the earlier part of the season, he finished supreme champion of the Highland at Inverness. He is a marvellously well-balanced son of the sensational Baron of Buchlyvie 11263. Many colts of his age have better-laid shoulders, with higher withers, but where he excels is in the uniformity of all his points. The second colt in the class, Messrs. Montgomery's Baron's Crown 16457, greatly excels where The Dunure is weak. He is an upstanding colt, with a most imposing outlook, and grandly set up at the withers. He is a notably well-bred colt, being got by Baron's Pride, out of that great horse's own grand-daughter, Sarcelle, which in her yearling and two-year-old days was a great prizewinner. The sire of Sarcelle was the unbeaten Everlasting 11331, one of the most successful breeding horses among the Baron's Pride family. The first aged stallion was the big, gay horse, Fyvie Baron 14681, which as a yearling and two-year-old was almost unbeaten. He has not been shown since. Another horse from the Montgomery stud, Signet 16816, a handsome bay, got by Allandale 12418, was first in the three-year-old class. He was second at the Kilmarnock show in spring, and has this season been travelling the Kirkcudbright district. In the yearling colt class, the Montgomery stud again led the way, their representative this time being the Baron's Pride colt, bred by Mr. T. R. Sleigh, in the same parish as Fyvie Baron. He was first at the earlier spring shows, and has done well. The first-prize colt at the Royal, the full brother of the champion mare, Nerissa, which has gone to British Columbia, was second. The championship in the female section, which was the Cawdor Cup, went to Wm. Ritchie's Harviestoun Baroness 27086, a lovely big black daughter of Baron's Pride. She was sold to R. A. Fairbairn, Westfield, N. J. This week she was again champion at the Royal Northern show at Aberdeen. Her full sister, Anice, was third in the broodmare class at the Highland, and on Tuesday of this week was champion at the Stranraer show. A full brother, a yearling colt, was first at the Royal Northern show on Thursday, and yet another full brother is the favorite premium horse, Baron Dollar. Canadians will be interested to know that the dam of this remarkable succession of good animals is a black mare in the Harviestoun stud, named Ambrosine, and her sire was the noted Northwest champion horse, Woodend Gartly, which died far too soon. Harviestoun Baroness defeated a very strong field for champion honors. It included the champion mare, Bokuhan Lady Peggie, the unbeaten three-year-old mare, Dunure Myrene, the unbeaten two-year-old Nannie, and her unbeaten full sister, Esmer, the first named being got by Hiawatha, the second by Baron of Buchlyvie, and the two younger mares by Apukwa 14567, which bids fair to be by far the best breeding horse ever got by Hiawatha.

The Clydesdale market is very active, and a large number of horses have been hired for 1913, while many purchasers are on the ground from all parts of the world, but chiefly from the United States and Canada. Several are here from British Columbia. The Clydesdale man is in for another good year, although I do not think the export trade is to be quite as brisk as it was in 1911.

MILK RECORDS.

In dairying matters, we are having quite a boom in Milk Record Ayrshires, and alongside of this we are experiencing a renewed and extended interest in Holstein cattle. Several herds of the latter are now to be found in Scotland, and there are quite a number in England. A recent decision of our Scots Supreme Court will do a good deal to enhance the popularity of the Holstein. Hitherto there can be no doubt that dairy farmers have been afraid to go too far in the use of these cattle, because of the comparatively low yield of butter-fat found in their milk under normal conditions. The presumptive standard with us is 3 per cent. butter-fat, 8.5 per cent. solids not fat. This is not an absolute standard. When milk is found to fall beneath this standard, it is presumed, until the contrary is proved, that the milk has been tampered with, either by the addition of water, or by the abstraction of fat. The authorities have, however, in prosecutions, generally proceeded on the assumption that the standard is absolute, and, unfortunately, a num-

ber of the County Court judges have supported them. In an Airdrie (Lanarkshire) milkman, however, the authorities met their match. He was accused of having sold milk containing 2.57 per cent. butter-fat. He did not deny the charge, but pled that he sold the milk as the cows gave it to him. Moreover, he declared, on oath, that he bought and fed his cows to produce quantity and not quality, and that in so doing he had in nowise broken the law. The County Court judge sustained his pleas and dismissed the complaint. The authorities appealed to the Supreme Court. Seven judges—that is, a full bench—heard the arguments and considered the evidence led in the Court below. They unanimously found the milkman



Pat of Aberlour. Aberdeen-Angus steer; first and champion for fat cattle at Highland Show, 1912.

innocent. He had discharged the onus placed upon him, and satisfied the Court, and, as it appeared, also the prosecution, that he had not tampered with the milk in any way after it had left the cows. He sold the milk to the public as the cows yielded it, and in so doing had complied with the regulations. Those who have fought shy of the Holstein because she undoubtedly often yields milk below the 3-per-cent. standard, will now feel safe. So long as they deal honestly with the product of the cow, they cannot be prosecuted in Scotland, even although the 3-per-cent. standard is not reached. It is, of course, possible that the law may be altered, and an ab-

While the same comparison cannot be made of beef cattle, hogs or sheep in the same degree, success will lie with the well-bred individual, and failure with the scrub.

Every herd or flock contains its percentage of best animals and poorest animals, and the calibre and percentage of the best will determine whether or not that herd or flock is a financial success. The calibre and the percentage of the best in the herd depends first upon the quality of the sire used, and then upon the extent to which culling is carried on among the breeding females. Culling is the factor that counts for the greatest increase in the quality of the herd. Farmers using



Princess 20th. Shorthorn heifer; first in two-year-old class, female champion, and grand champion, Highland Society's Show, Cupar, 1912. Exhibited by Geo. Campbell, Harthill, Aberdeenshire.

solite standard be set up. Should this be done, there can be little doubt that the standard will be raised, and those who own cows yielding a low average of butter-fat may have to effect a clearance and reconstitute their herds. An average herd of Ayrshires, well selected for milk production, healthy and rationally fed, will not readily yield milk falling below the 3-per-cent. limit. When Holsteins are kept, a few Jerseys, judiciously intermingled may effect a sufficient rise in the butter-fat content as will relieve the farmer of all anxiety. "SCOTLAND YET." 19th July, 1912.

Cull the Breeding Stock.

The Farmer's Advocate and Home Journal, of Winnipeg, Man., commenting upon the fact that Western Agriculture has been advised to increase its live stock, reminds breeders that culling is necessary. Recommending an increase in live stock is good in part, but advice that has received, to say the least, meagre attention. From time to time the live-stock population has been swelled suddenly by pressing into breeding service every available female, with the result that in a couple or more years there has been a lapse of interest in live stock, and the statements that it does not pay, markets are not favorable to the

farmer, and there is more money in wheat, are definitely made by agriculturists who had been giving live stock a try-out.

To breed, grow and finish live stock or produce milk and make money requires more than a casual interest at times when the markets quote high prices for live stock or live-stock products. The fact that high prices mean an increase in breeding stock means, also, that an inferior class of stock will be produced, and an inferior class of live stock means a non-paying proposition. Success and failure lie between the dairy cow that produces 9,000 lbs. of milk per year and the cow that produces 3,000 lbs. or less per year.

pure-bred bulls of merit, after years of breeding are disheartened to see such slight improvement in their herds. Yet they carry, year after year, breeding females of very inferior quality, yes and even bring in females from time to time that are below the level of the average herd. In this respect the pure-bred breeders of merit have a lesson that can be taken home by the average farmer, that of culling or weeding out the inferior young females as they grow up and sending them to the butcher. In beginning to increase the stock on your farm, start first by culling. The stockbreeders' maxim should be breed, feed, weed.

The Shepherd's Journal predicts that inside of six months after the election in the United States, prices for wool and mutton will be higher than they have been in years, an unusually large number of pure-bred flocks will be established, and importations will be larger than they ever have been before. The reduction of sheep in Australia through drouth, the loss and curtailment of sheep in the West, and the reckless marketing of live stock, is bound to have its effect.

Still Raises Some Hogs.

In a section where sale of milk to condensary and powder factory had well-nigh extinguished not only the cheese but the hog business, it was somewhat of a relief, the other day, to run across a farmer, W. B. Roberts, of Elgin County, Ont., who still keeps about one hundred head of swine. Mr. Roberts, in partnership with his brother, farms 600 acres of land. He breeds his sows for two litters a year, arranging, as far as possible, to have them come in March and August, respectively. The fifty August pigs are wintered on mangels and corn, receiving also rape and alfalfa, and having the run of the corn stubble in autumn. They are sent off in May and June, being thus kept long enough to have a little green feed before finishing. The spring litters are finished on corn, of which ten acres of Longfellow and Compton's Early are grown, to be harvested by the hogs. This system throws a lot of hogs on the December market, which is not usually a good one, but Mr. Roberts follows it because it suits his system of farming. He does not attempt, without milk, to finish his hogs at six months of age, but rather counts on eight or nine months. As to breed, he finds nothing better than the Tamworth-Berkshire cross, preferring the Berkshire sow as being easy to keep, and quiet. Mr. Roberts is quite an enthusiastic advocate of alfalfa, and recommends adding three to five pounds alfalfa seed per acre to the regular seed mixture, in order to improve the pasturage, his only proviso being that he would not include the alfalfa when sowing a field from which he hoped to thresh a crop of clover seed.

The appointment of Dr. F. Torrance, V. S., D.V. S., the newly-designated Veterinary Director-General of Canada, dates from August 1st. It is expected that he will attend the meetings of the American Veterinary Medical Association, and of the International Commission of Bovine Tuberculosis, about the end of the month.

THE FARM.

Device for Stacking Hay.

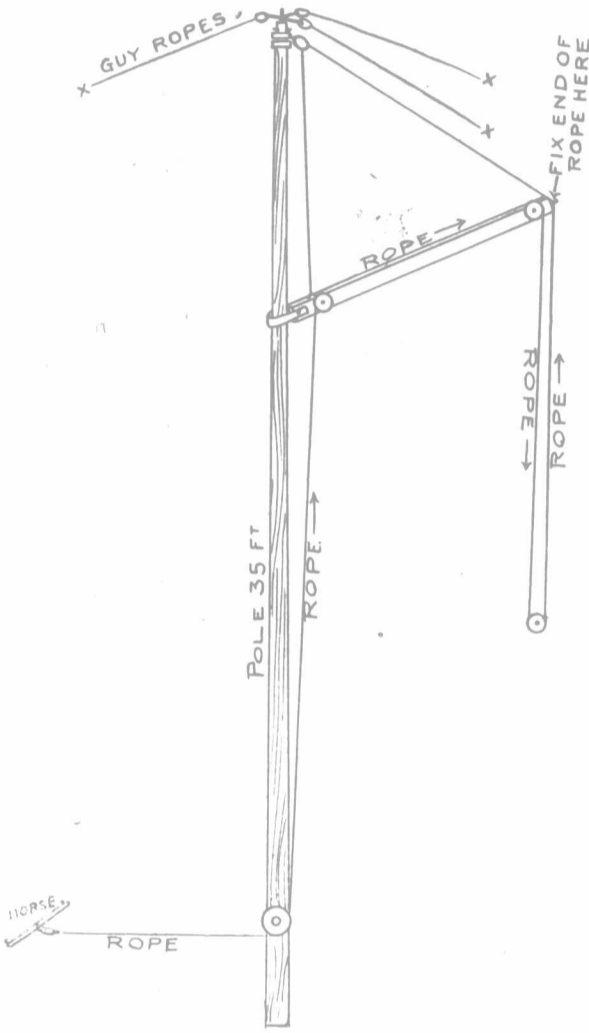
Editor "The Farmer's Advocate":

I notice in your issue of July 11th a request for a description of a horse fork for the purpose of stacking hay. If you can follow my instructions, I will try to help your inquirer. I have been the means of getting two outfits erected in this vicinity, and I can assure you that, for anyone who has a lot of outside stacking to do, it saves a lot of heavy labor.

In the first place, you require a straight tree (an oak, or one similar in fibre). If the person inquiring has a bush on his place, he will probably find one suitable; get one about 9 or 10 inches thick at the bottom, tapering to 6 inches at top, with a length of 35 feet, or a little less will do, but the higher the better, if your tree is strong enough. Trim your tree, or pole, as you will now call it, so as to remove any knots or roughness. Three feet six inches from bottom mortice a hole right through pole for the purpose of inserting pulley wheel, which must be a shade wider than the pole, so as to clear the rope from rubbing on side of pole. On top of pole you require to trim about 9 inches perfectly round, and fix an iron virole or shoe around the end of the pole that you have made perfectly round, and be sure that it is about 9 inches deep, leaving extreme end open on top. Put a flange on lower end of virole about an inch wide. On top of this flange fix a flat ring about 2 inches wide, which must be loose, for the purpose of swinging round, and in this ring punch a hole and insert a big link, or two, if you like. Be sure to make the links big enough so as to admit a good-sized rope. Now, on top of this flat ring there should be a hole drilled right through the pole, and a bolt or round piece of iron put right through the hole and fixed there, so as to keep flat ring as level as possible when the weight is on it, but be sure to give the flat ring enough room to permit it to travel round easily. On the very top you require three rings for the purpose of attaching guy ropes. This is quite easily done by drilling a hole in extreme end on top, and driving a round piece of iron into hole. Now take a flat piece of iron about 8 inches long and fix a ring or link on each end; put a hole in center and slip on to the round piece that is driven in end. Take another piece half the length and put a hole in one end and a ring in the other, and slip on the end, too; and now you have three rings to tie your guy ropes to.

Now you require a jib for swinging hay on to stack. The jib must be 9 or 10 feet long, and must be a piece of good strong wood, at least 6 inches square on inside and a little less on outside end. On inside end fix a clamp so as to fix or slip against the pole. Six inches from inside end mortise a hole for pulley wheel, and fix a clevice on along with axle pin of pulley; on outside end,

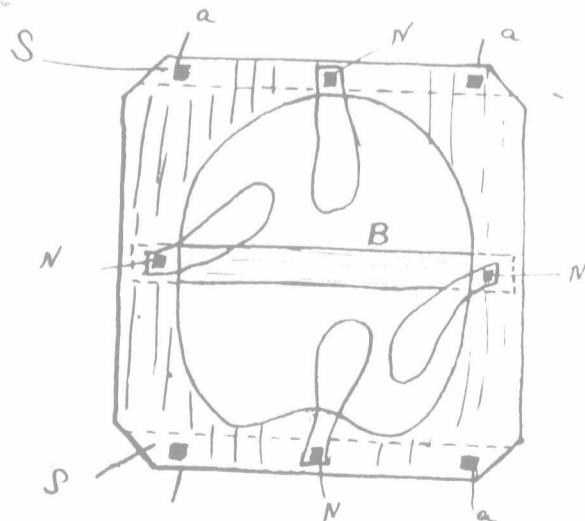
practically same as above, only keep as near end as you think will be reasonably safe with your pulley and clevice. Now you can attach your jib to flat ring on top. With a piece of strong rope, tie from outside end of jib to flat ring on top, then from inside end to same ring on top. Now, this jib can be fixed there stationary, or, if preferred, may be slung on blocks, so as to be movable from the ground at will, whichever is preferred. All that is required now is a long rope for the purpose of working the fork. Pass that through the pulley at bottom of pole, then up and over the pulley at inside end of jib, along the jib and over the pulley at outside end of jib, and down to the ground to your fork. Your fork will



Hay-stacking Device.

likely be one of the usual kind, with a pulley wheel on top of it. If it is, don't fix your rope to fork, but pass round pulley wheel on fork and take it up and fix the end of rope on outside extremity of jib. This little device, being a great saving on horse-power, should not be omitted.

Your rope should not be any less in thickness than one-half inch. The best rope is three-quarter inch, and be sure your pulleys are a little wider of groove than the rope, as thereby your rope will not cut up, and will run more easily. One word as to your guy ropes, be sure your three stakes for tying them to are far enough out not to interfere with the swinging of the jib. In erecting fork, cut round hole about six inches deep where you want it to stand; it is pretty difficult to get up on end. The best way to erect it is to load a wagon of hay, lift up the top end of pole on back end, and back up the horse until you have got it up. Be sure to have a man at each guy rope so as to steady it. Give your



Bog Shoe.

Size, about 1 x 10 x 12 ins.; B, iron bar 1 x 1/4 in.; N, nuts holding straps in place; A, small bolts; S, small strip on under side of board.

pole a list or incline of about six inches, or a little more, so as to enable the jib to swing easily onto stack. Be sure to keep outside end of jib a good bit higher than inside end.

JOHN WRIGHT.

Bog Shoes.

Editor "The Farmer's Advocate":

In a recent issue of "The Farmer's Advocate" R. C. was inquiring for a bog shoe for horses. I am enclosing in this a rough sketch of one that we have used for a number of years on our horses in working on a beaver meadow. The shoes are easily made out of a good tough board about 1 x 10 x 12 inches, but the size depends somewhat on the size of the horse. The hole for the foot should be just large enough to allow the bog shoe to slip on over the ordinary shoe. A narrow strip of wood is bolted to the board at either end to strengthen the wood, and a bar of iron about half way between these to bear the weight of the horse. At the four points marked (n) in the sketch looped straps are bolted to the wood on the upper side, and these are long enough so as to allow them to reach above the coronet, and then a strap is run through them and buckled snugly around the pastern of the horse. For an ordinary-sized horse, they need not be more than six inches when they are doubled. The nuts should all be on the upper side of the shoe, and the strips of wood and the bar are all on the lower side.

In using shoes, it is never necessary to use more than two, which are put on the hind feet, and in most cases one on the left foot is sufficient, and with both feet thus shod the horse will walk on places where a load cannot be taken off.

NORMAN C. MCKAY.

Bruce Co., Ont.

Another Bog Shoe Described.

Editor "The Farmer's Advocate":

I noticed a query re bog shoes in last week's issue. I never used any, but have seen them. They are simply pieces of plank, wide enough to project about two and a half inches each side of the foot, and of approximately the same length, the thickness of the plank depending upon its toughness, some material being less likely to split than other.

On the upper side of the bog shoe, holes are bored corresponding to the caulks of the iron shoe, which must fit snugly into same to keep the bog shoe from slipping out of place when fastened on. The method of fastening on consists of a light iron band going over the horse's hoof, and fitted with nuts on each end, the band being fitted snugly to the hoof, and both ends going down through the bog shoe close to the sides of the hoof. This, in connection with the caulk holes on the upper surface of the bog shoe, seems to hold it firmly in place, and users have told me that the two or two and a half inch projection on the inside of the foot does not seem to cause interfering, as one would suppose, especially after the horse has worn them for a few minutes. So, you see, the bog shoes are no elaborate affair, being only a square piece of plank, which will prevent the horse's sinking into the soft ground, and fastened to the foot in a very simple manner, which may be accomplished by most any handy man.

B. ARMSTRONG.

Northumberland Co., Ont.

"Ifs" and "Buts" of After-Harvest Cultivation.

Editor "The Farmer's Advocate":

In discussing the after-harvest cultivation of our grain fields, we will find the topic quite productive of "ifs" and "buts."

"If" you do as we have done for many years, you will have all your grain fields seeded down with clover and timothy, and then there is no after-cultivation, and there generally ought not to be any pasturing, or, at the worst, as little as possible, if the good of the next crop is considered. "But," we are told, "The best-laid plans of mice and men gang aft a'glee," and on most farms there are seasons and times when our plans are so abortive, and our hopes so shattered, that, like a bad stomach-ache, it becomes a case for the doctor. And the doctors of agriculture are not quite plentiful enough that we may be able to call one for consultation and prescriptions for every peculiar and particular case. And every case is a problem peculiar unto itself. Herein lies the necessity that the successful farmer be a man of intelligence, judgment and decision, with great executive ability.

So far as after-harvest tillage is concerned on our farms, on grain fields, it is nil. Our grain is all following sod or hoe crop, and is followed by sod. Our soil is all light to loamy, with open bottom. We are anxious to have as much organic matter, therefore aim to have as much growing on it as we can. We only break up long enough before seeding to get a well-settled seed-bed.

"If" intended for wheat, the sod will need

turning as soon after haying as possible. "If" intended for spring grain or hoe crop, later or fall-plowing will do. "If" the sod contains twitch or blue grass, break up as early as possible, just deep enough to get barley under the rootstocks. Disk and drag until the sod is fairly mellow, then use spring-tooth cultivators and rake every vestige of life into sunlight.

"If" the sod is clean timothy, later plowing will do; "if" clover, it may be plowed at any time before seeding or planting, just so there is time enough to thoroughly settle with disk and drag.

Our fighting of weeds is principally done on the hoe crop, of which we have from forty-five to fifty acres as the regular proportion, being one-fifth of the crops on two farms, and one-sixth on other two. We endeavor to keep hoes and cultivators going regularly enough that those fields will need no after-cultivation, but we cannot always succeed as we would wish, or there would be no weeds on the farm.

Whatever the nature of our soil or crops, we are not likely to get too much organic matter into the soil, or too many weeds out of it, or too much tillage for the crop. ANSON GROH. Waterloo Co., Ont.

Threshing in Grey County.

Editor "The Farmer's Advocate":

Mow threshing is the only method that would be satisfactory in this part, as farmers have ample barn room for both grain and straw. We aim to keep all straw inside, if possible, as it keeps better and is convenient at all times when required.

The blower is a great labor-saving device. The duster is certainly one of the best attachments ever put on a threshing machine.

Threshing being done in the barn, the grain is always carried in boxes. As a rule, nine or ten hands are required, besides the threshers.

The majority of farmers are not particular enough about the preparation of their granary and bins, and no special care or thought is given the seed grain, all being thrown in together at threshing time, and in spring cleaned out of what is left. J. R. P. Grey Co., Ont.

Plowing Grain and Corn Stubble.

Editor "The Farmer's Advocate":

In reply to your request for experience in the cultivation of the soil after the crops are taken off, I might say that I fear anything I can say will be of little value to your readers, which are spread over so vast a territory as the Province of Ontario, which is comprising so many different soils and conditions; and when I remember that I was born and have always lived on one of the farms I now own, I realize that my experience will be very limited. The soil in this part of Lambton County is what is termed a clay loam. The rotation of crops we try to follow is a three-year rotation which causes us to seed down nearly all of our grain fields. Some years ago, when in beef production, we usually plowed a field each year after the crop was off and sowed it to rape, with very good results; but as dairying is now our principal line of farming, we have discontinued that plan.

For any fields we do not wish to seed down, we think the following cultivation the best. Gang plow as soon as possible after the grain is taken off, as early in August as can be done, about three inches deep, then harrow down with a smoothing harrow, and let it lie in that condition until, say, the 10th of September, when all weeds and grain will be growing, then double disk it, so that the disks will not ridge it up, and follow with the smoothing harrow and roll. Let it lie in that condition until plowing time, which should not be later than October 15th. I believe more weeds, such as Canadian thistle, ragweed, prickly lettuce and others, can be killed with less work at this season of the year than can be done in any other way. A field cultivated in this way will grow almost any kind of crop you wish. Now, just a word about the after-cultivation of the corn field. Much is being said by Institute speakers and also by the agricultural press, in favor of not plowing the corn field, which I believe is having a very injurious effect on many of the farms of this locality. The result is that the Canadian thistle and many other bad weeds are increasing very rapidly on our farms. I believe that at least three conditions must be adhered to if we wish to be able to discontinue plowing. The first is thorough drainage, for, if the water is lying on the field all winter, it will be almost impossible to make a seed-bed in the spring. The second is thorough cultivation of the corn. I do not think that this can be done sufficiently by machinery, but hoeing and weeding by hand must also be practiced. Third, the weather conditions must be such that you can either disk or cultivate it up to the depth of at least three inches immediately after the corn is taken off. If all these conditions can be carried out, you may be successful

without plowing, but if you fail in any one of these, I believe it will pay well to plow, and as early as possible. If you have a ten-acre field, and cannot plow it with an ordinary walking plow, it will be money well invested to buy a single-furrow riding plow, with a three-horse evener, and a new shear every day to plow your corn field, as ten bushels extra grain per acre will pay the cost, and I believe that is not too much to expect on this clay soil. R. J. W. Lambton Co., Ont.

THE DAIRY.

Believes in Testing Cows.

A. H. Menzies & Son, "Farmer's Advocate" subscribers at Pender Island, British Columbia, who are breeders and admirers of Jersey cattle, are also firm believers in the system of keeping individual records of the performance of cows, and of using as sires only sons of dams having satisfactory records. In a recent letter they write: "When we started in dairying, with grades, we soon found, by weighing and testing the milk of

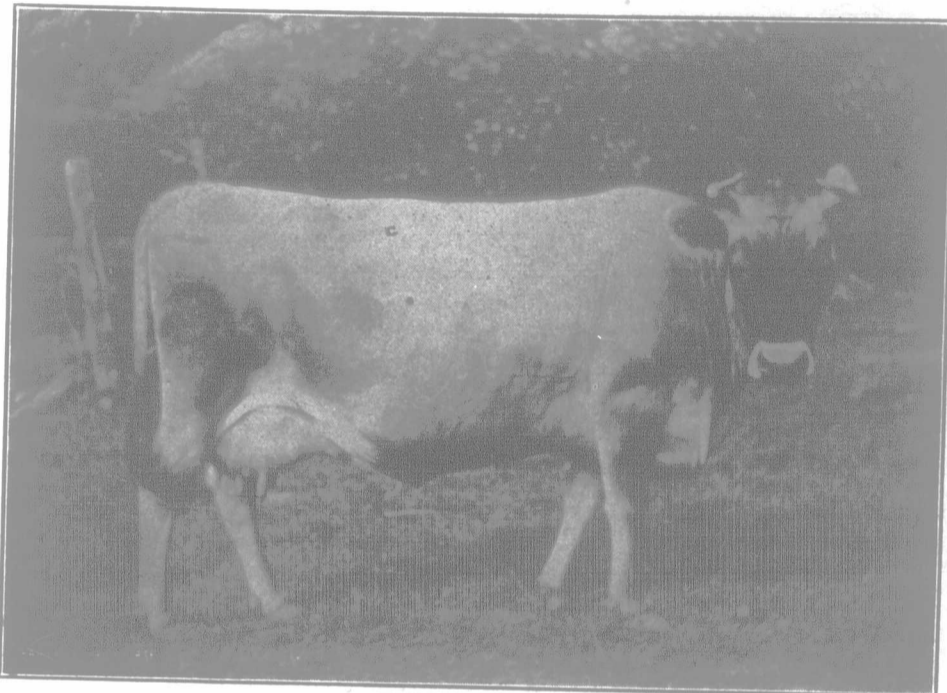
ing their records. One of our cows, Golden Milkmaid (whose portrait is given herewith) began her test at 4 years 243 days, and made a record of 8,442.5 pounds milk, testing 409.411 pounds fat. Lady Buttercup of Pender began her test at 4 years 26 days, and made 9,305.5 pounds milk, testing 466 pounds fat. She has increased that record this year. She gave 9,959½ pounds of milk for the third consecutive year. Buff's Lassie, 2 years and 46 days at beginning of test, has just been milking a little over nine months, and has made over 8,500 pounds milk to date, July 17th, 1912, testing 5 per cent. fat. We think she is making a splendid record for a two-year-old with her first calf, and she is due to calve again inside of the year." Messrs. Menzies wind up with saying, "If one is going into dairying, why not keep pure-breds; and if pure-breds, why not Jerseys?"

The Formation of Milk.

When the constituents of milk are considered, it is seen that amongst them are some—as, for instance, casein and milk sugar—which are not found in any other of the tissues or fluids of the body. This fact proves that the milk is not already

formed in the juices that flow to the udder, but that it must be separated in the milk glands, and pass from them to the cavities of the udder. Milk, therefore, is not a simple excretory product like urine, which is simply filtered from the blood in the kidneys, but it is a substance formed from the fluids of the body by chemical changes in the milk glands. The material which is brought to the utilized first of all mammary gland is to build up certain cells which on completion are wholly or partly destroyed. These products of decomposition are milk, which in this way may be regarded as a fluid organ. It follows that milk is not directly formed from the blood, because of the richness of the ash in potash and its poorness in soda, for the ash of blood, on the contrary, contains much soda and only a little potash.

In the cow, the mammary gland, which is covered with fatty tissue and folds of skin, consists of two portions, which are separated from one another by a wall of muscular tissue which runs parallel to the long axis of the body. Each of these halves possesses a grape-like shape, and is composed of a great number of smaller or larger flaps, which are traversed by small, branching ducts. These small ducts unite to form wider ones, which finally open into a broad passage which empties into the milk cistern—a large, hollow space lying above the teats. If the small ducts above mentioned are followed into their finest capillaries, they are found to end in tiny sacs or alveoli, which compose the small flaps. The alveoli are furnished with a delicate homogeneous membrane, on which a single layer of so-called epithelial cells lies. A dense network of the finest blood and lymph vessels surrounds the outer walls and supplies the epithelial cells, from or in which the milk arises, with the necessary material. Numerous nerve fibres imbedded alongside the blood capillaries regulate the activity of



Golden Milkmaid.

Jersey cow, belonging to A. H. Menzies, & Son, Pender Island, B. C. Began Record of Performance test at 4 years 243 days, and made a record of 8,442½ lbs. milk, testing 409 lbs. fat.



Ayr Review.

Ayrshire bull; first in aged class, male champion, and grand champion of the breed, Highland Show, Cupar, 1912.

each cow, that some were more loss to us than profit, while others that we thought were the poorest were the best payers, so we bought two pure-bred Jersey cows that were the foundation of our present herd. They were nothing special, but, by weighing and testing their milk and feeding liberally, we found that one kept increasing her yield of milk and butter-fat until she passed the requirement of the Record of Performance, and we have now eleven cows milking which have either passed or are expected to pass this year, and more heifers coming in soon, all these, with the exception of one, having come from the two cows we bought. We find it pays to keep increas-

ones, which finally open into a broad passage which empties into the milk cistern—a large, hollow space lying above the teats. If the small ducts above mentioned are followed into their finest capillaries, they are found to end in tiny sacs or alveoli, which compose the small flaps. The alveoli are furnished with a delicate homogeneous membrane, on which a single layer of so-called epithelial cells lies. A dense network of the finest blood and lymph vessels surrounds the outer walls and supplies the epithelial cells, from or in which the milk arises, with the necessary material. Numerous nerve fibres imbedded alongside the blood capillaries regulate the activity of

the alveoli. The alveoli, therefore, are that portion of the mammary gland in which the materials forming the milk undergo conversion. Whether the alveoli are partly or entirely destroyed, and then grow again, or whether they remain intact, has not been proved.

Milk is therefore a product of the mammary gland, and it is upon the development and productivity of this organ that the extent to which the quantity and composition of the milk can be influenced by other factors—particularly the food—depends.—[Kellner.

The Dairy Heifers.

Few, indeed, are the farms which can afford to do without the good dairy heifers, and few are those which can afford to keep the poor ones. It is, or at least it should be, a process of the survival of the fittest, and the fittest can only be determined by the practice of a systematic milk-record account. The heifers should be culled, but all the good individuals should not be disposed of, leaving a herd vacancy to be filled from other herds very often of an unknown quantity. The safest way to replenish the milk supply is to keep records in the herd, and breed the cows to the best bulls, and select the best heifers for your own use.

Only heifers from heavy-producing cows are eligible for a place in the best herds. This permits of a thinning out during the early life of the calves, those from low producers going to the butcher for veal. Now only the calves from the good cows are left, and as time goes on a few of these will be noticed to be making poor headway towards becoming a dairy cow. As soon as convinced that there is no milking future for such an animal, she may as well be disposed of, but do not discard the heifer because she shows a little tendency to run to beef. This is often not a bad sign in even a dairy heifer. Such a heifer usually has a good constitution, and this means a lot to a dairy cow. If she is bred right, give her an opportunity to demonstrate her ability at the pail before condemning her.

It is not wise to keep the heifers thin. While they must not be loaded with fat, it is essential that an abundance of feed be given, in order that maturity be reached at as early a date as possible, or at least as mature a stage as it is possible to obtain before the first lactation period. As a rule, the best all-round dairy cows result from a service which brings the first milking at about twenty-eight to thirty months of age. This is comparatively young, not for dairy cows, but for cattle generally. Milking drains heavily on the heifer's vitality. She must be prepared for it, and the time to do it is while she is young, from the calf stage on to past breeding age. A little fat put on then may be useful afterward. Growth is imperative. These conditions make liberal feeding a necessity, and, with good feeding go all the other practices of care and management intended to formulate and complete a machine for the production of milk from the raw-food material on the farm.

Frank Hems, Secretary-Treasurer of the Dairymen's Association of Western Ontario, informs us that the Dairy Herd Competition, which has been conducted each year for several years by this Association, will be conducted this year along practically the same lines as previously. Some time in September, prize lists will be issued and sent to the cheese and butter makers of Western Ontario, and they will distribute these prize lists among the patrons who wish to enter the competition.

GARDEN & ORCHARD.

Prizes for Preserved Fruit.

The prize list of the preserved-fruit section of the Ontario Horticultural Exhibition, to be held in Toronto, November 12th, 13th, 14th, 15th and 16th next, has just been issued by G. A. Putnam, Superintendent of Farmers' Institutes. The display of exhibits by branch Women's Institutes was one of the attractive features of the exhibition last year, and it is expected that the increase in prizes offered this year will induce a larger number and better quality of exhibits. For a quart sealer of canned fruit of blackberries, cherries (black or red), cherries (white or yellow), gooseberries, grapes (black or red), peaches, pears, plums (blue or red), plums (green or white), raspberries red, raspberries black, and strawberries, the prizes are \$2.50, \$2.00 and \$1.50, first, second and third prizes in each class. A special for members of any Ontario Women's Institute taking highest aggregate in prize-money in these classes, consisting of first, \$6.00; second, \$5.00; third, \$4.00; fourth, \$3.00; fifth, \$2.00, is also offered.

For a pint jar of jam of currant (black), goose-

berry, grape, peach, pear, plum, raspberry or strawberry, the prizes offered are \$2.00, \$1.50 and \$1.00 in each class. And for a half-pint jar of jelly of apple, crab-apple, currant (red), grape, quince, raspberry (red), \$1.50, \$1.00 and 75 cents are offered in each class.

For one quart of unfermented grape juice, \$3.00, \$2.00 and \$1.00 are offered, and a special for best aggregate in jam and jelly by members of any Ontario Women's Institute, \$6.00, \$5.00, \$4.00, \$3.00, \$2.00.

For best display by any branch Women's Institute, to consist of Ontario-grown fruits and vegetables, preserved, canned, dried, pickled, or put up in any other way, intended to prolong keeping qualities for food, not more than two jars of any one kind, \$15, \$12, \$10, \$8, \$5.

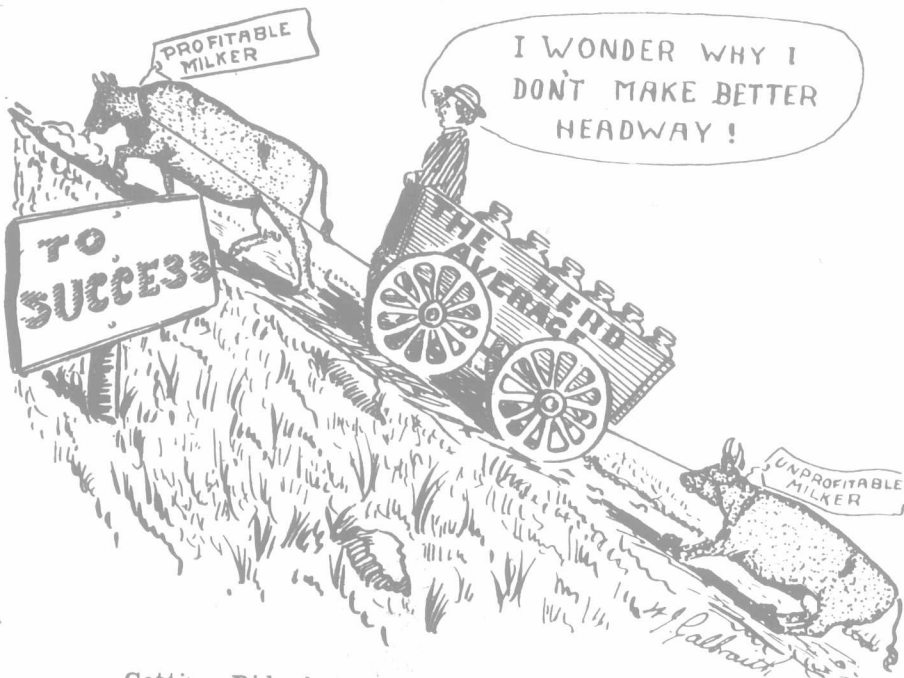
Fresh fruits and vegetables may be used for decoration.

Produce More Early Potatoes.

On July 22nd an item appeared in the Toronto daily papers stating that during the previous six weeks the people of Toronto and vicinity had paid \$202,500 for potatoes brought from Virginia.

The writer of the item quotes, as authority for above statement, J. D. Jacob, secretary of a co-operative association of 2,500 farms in a county in Virginia. In six weeks, Mr. Jacobs is reported as saying, he had sold 150 carloads of potatoes in this city and neighborhood. The value of the potatoes was \$150,000, and, in addition, the consignees had to pay 55 cents a barrel in freight, and 50 cents a barrel duty. The freight amounted to about \$27,000, and the duty to \$25,000.

Now, it does not appear from the figures given that the consignees were making anything out of the transaction. But that is not the point to



Getting Rid of the Critter Behind Would Help.

which I wish particularly to draw your attention. The question is, why cannot the farmers of the surrounding country produce these potatoes, instead of compelling the city to import them? No doubt there will always be a certain amount of early potatoes shipped to Canadian cities, but a large percentage of what is now brought from across the border would be unnecessary, if the farmers of Canada, more especially old Ontario, realized that there was money in the early potato. Early potatoes require no better land, possibly a little more fertilizer, than later varieties. Their only drawback is the late frosts; and if the market-gardener is able to meet this emergency, why not the farmer?

We all know what a wet, backward spring the last has been. The writer has a truck garden that lies very low, and, being heavy clay, underdrained, it would not be considered favorable to potato-growing this season. It so happened that we could not get early potatoes to plant, so we planted some from our store of winter potatoes—Delawares, we understood them to be. On July 5th we pulled up a hill (we had planted three sets in each), and found twenty usable potatoes, some as large as a hen's egg, and that from a late variety in a piece of ground in which some of the sets rotted from extreme moisture.

Another advantage of the early potato is that it brings in a little money at a time of the year when there is little money coming in from other things on the farm. The farmers of York County, Ontario, who grow such splendid crops of the late varieties, ought especially to profit by growing a reasonable amount of the earlier kinds. York Co., Ont.

J. J. D.

Insects Preying upon Potato Beetles.

Editor "The Farmer's Advocate":

I should like to draw the attention of your readers to a beneficial predaceous insect which is now commonly appearing on some of the potato fields. Unfortunately, through lack of knowledge concerning its habits, it has in some cases been unknowingly destroyed, hence a plain description of the insect, which will aid in its ready identification, together with a knowledge of its usefulness, will, it is hoped, foster its protection. There are probably two species; at least, the color markings of the adults would seem to indicate this; both forms agree, however in being predaceous in all stages on the potato beetle.

Description.—The adults are about one-half inch or more in length, about two-thirds as wide as long; shape similar to that of the common stink bug; the head is black, and the first segment back of the head is red or yellow marked, with two transverse black lines; the back is black, with yellow or black bands along the sides, and in the center is a U or V shaped red or yellow band. The posterior portion of the under side of the body is yellowish or red, marked with numerous black dots or punctures. The color markings of the adults may be bright or dull, depending on the sex. The eggs are deposited on the upper surface of the leaf, varying in number from four to twenty-six, due to the fact that eggs may be laid on several plants. Oviposition extends over a period of five days. The eggs are about one-twentieth of an inch long, deposited either in rows or in more or less circular masses; black and shiny, with an inverted cup-like top, which is slightly lighter in color. From the bottom of the inverted cup numerous small, shiny processes

radiate. The eggs hatch in twelve days into small, reddish insects, but in a few hours the head and central portion of the body become steel blue in color, while the posterior portion becomes redder in color and is marked with four transverse black lines. The first food of the young insects is the egg-masses of the potato beetle, but in a few days they start to feed on the young bugs, by inserting their beak into the bodies of their victims, and feeding on the body juices. These bugs have also been reported to feed on the larval form of the Tussock moth. Their work has been

so effective in some cases in the destruction of the potato beetle that spraying has been rendered unnecessary, so it would be well for the agriculturist to become conversant with this most useful insect.

H. H. HUDSON.

POULTRY.

A Colony House Used in Iowa.

The following plans are for a colony house which has been used with good success by the poultry section of the Iowa Agricultural Experiment Station for several years, and which is illustrated and described in Bulletin 132 of the Iowa Station. It is 8 feet wide and 12 feet long. Larger houses have been built upon the same general lines, but they have not withstood moving well. A general view of the house is shown in accompanying illustration. The plans are for a house with a shed roof, although a combination roof may be used successfully. The house has two curtained openings and one large window in front, which provides a large measure of sunlight and ventilation. The illustration shows the window near the door, but it may be placed at the opposite end. In the latter case, more value is placed upon the sunlight entering through the curtain opening while the curtains are open.

The openings for the curtains are covered with screen, and the curtains are hinged at the top and arranged to be swung up to the rafters. The front wall, directly below the window and one of

the curtains, is made to open and admit sunlight directly on the floor near the front wall. This trap-door is hinged at the top and provided with a hook to hold it up. This opening is also covered with wire cloth or poultry netting. A small door is provided in the front or at the end for the fowls.

The roosts and dropping-board are placed along the back wall, about two feet from the floor. The nests are placed on a continuation of the dropping board, and with the roost fill the back side.

The skids are made of any good quality of dimension lumber. White or yellow pine is usually selected for this purpose, although other kinds of lumber might resist decay to better advantage. The floor, of 1 x 6-inch flooring, is laid on 2 x 4-inch sills, which are slightly notched onto the skids. The framing is of 2 x 4-inch material, white or yellow pine being satisfactory, and arranged with girts or headers which permit the siding to be nailed on vertically.

The siding is 1x6-inch matched flooring, which has been found to be warmer and drier than dropping or clapboards. The rafters are 2x4-inch material, spaced 2 feet apart. The roof is made of 1-inch tongued and grooved sheathing, covered with a good grade of prepared roofing. The sheathing, which is usually flooring, should be dressed on both sides.

BILL OF MATERIALS.

- Skids.—Two pieces 4 in. x 6 in. x 14 ft., yellow pine dimension.
- Sills.—Seven pieces 2 in. x 4 in. x 8 ft. No. 2 yellow or white pine.
- Studs.—Nine pieces 2 in. x 4 in. x 8 ft. No. 2 yellow or white pine; two pieces 2 in. x 4 in. x 7 ft. No. 2 yellow or white pine; seven or nine pieces 2 in. x 4 in. x 6 ft. No. 2 yellow or white pine.
- Girts and Plates.—Five pieces 2 in. x 4 in. x 12 ft. No. 2 yellow or white pine; two pieces 2 in. x 4 in. x 8 ft. No. 2 yellow or white pine.
- Rafters.—Seven pieces 2 in. x 4 in. x 9 ft. No. 2 yellow or white pine.
- Floor.—Seventeen pieces 1 in. x 6 in. x 12 ft. No. 2 white pine flooring.
- Siding.—Eighteen pieces 1 in. x 6 in. x 10 ft. No. 2 white pine flooring; 17 pieces 1 in. x 6 in. x 14 ft. No. 2 white pine flooring.
- Sheathing.—Twenty-one pieces 1 in. x 6 in. x 12 ft. No. 2 white pine flooring.
- Roofing.—1½ rolls best 3-ply roofing.
- Door.—One 4-panel 2 ft. 8 in. x 6 ft. 8 in. x 1½ in. No. 3 Standard Door.
- Window.—One 12-light 9 in. x 12½ in. window. Finish for curtain frames.—One piece of 1½ in. x 6 in. x 12 ft. C finish white pine.
- Roosts and Nests.—Two pieces 2 in. x 4 in. x 6 ft.; 6 pieces 2 in. x 4 in. x 3 ft.; 2 pieces 1 in. x 4 in. x 12 ft.; 8 pieces 1 in. x 12 in. x 6 ft.; 2 pieces ½ in. x 12 in. x 6 ft.
- Miscellaneous.—Twenty pieces of ½ in. rd. 12 ft.; 2 pieces ½ in. rd. 10 ft.
- Hardware.—1½ pairs 3-inch wrought steel butts for main door; 4½ pairs 4-inch Tee hinges for chick door, curtain frames and nests; 1½ pairs 6-inch Tee hinges for trap door; 3 sash locks; 1 rim lock; ½ dozen screw hooks and eyes; 1 special long hook for trap door; 25 pounds 8d. nails; 8 pounds 10d. nails; 20 pounds 20d. nails; 20 feet of wire cloth or poultry netting 36 inches wide.

THE FARM BULLETIN.

South Kent Notes.

Editor "The Farmer's Advocate":

One has only to look over this part of our fair Dominion to realize what a truly grand and wonderful country is ours. Everything looks like peace and plenty for the farmer this year, as far as crops are concerned. Hay was a fair, average crop. Wheat, where it was not winter-killed, is medium. Oats and barley are both good, and corn, of which there is a large amount planted, is good. One sees a lot of broken fields, though, owing to poor seed. Farmers will have to practice more care in the selection of their seed. There is nothing that will pay better. Beans are also good, and there is a large acreage planted here this year. Tobacco is the poorest it has been for a number of years. Various causes are given for its backward condition, late, cold weather for starting the plants in the spring, cutworm taking so much of it, and a dry spell just at replanting time. We had one of the worst electric wind and rainstorms July 28th, that has visited this section in years. Fruits are all very high here: Strawberries, \$1.60 to \$2.40 per crate; red raspberries, \$3.00 to \$4.30 per crate; black-caps, \$3.50 to \$4.50 per crate. Apples are scarce, and of peaches there are practically none. New orchards look first class, and there were a goodly number of new orchards planted this year. Fruit land is going up in price every year.

A. L. J.

Progress at Nova Scotia's Agricultural College.

Seven years have elapsed since the Nova Scotia Agricultural College formally opened, and a second seven years has begun. A week of years has seen great progress, and, impelled by this, the College authorities are now preparing for another week of still more prosperous years. Seven years ago the attendance at the regular and short course of the College totalled 85. This year 450 were in attendance, and buildings which were formerly thought ample were this year crowded to the limit. So the authorities have answered to the call of the country, and, as a result, the sound of carpenters and masons is to be heard on the College grounds at Truro.

The following additional buildings are now under way: An L is being added to the main building that will double its capacity. The main

the past year the farm has been increased to the extent of forty acres.

It is most encouraging to observe these evidences of progress in this Eastern institution, and we look for the next seven years to show even greater results than the seven years that have just passed by.

M. CUMMING.

A Canadian's Impressions of the Highland.

Editor "The Farmer's Advocate":

Of course, I had to take in the Highland Society's Show at Cupar, Fife. The town was rather small to accommodate such a large influx of visitors, but quite a number took the evening trains and spent the night in neighboring towns. When we entered the show-yard, we were confronted by a wonderful display of the Forestry Department. A great variety of different kinds of lumber, nicely dressed, giving the ages of the trees from which it was taken. There were also very fine field gates, made of larch and oak, unpainted, so that the quality of the lumber could be seen. There were also some logs.

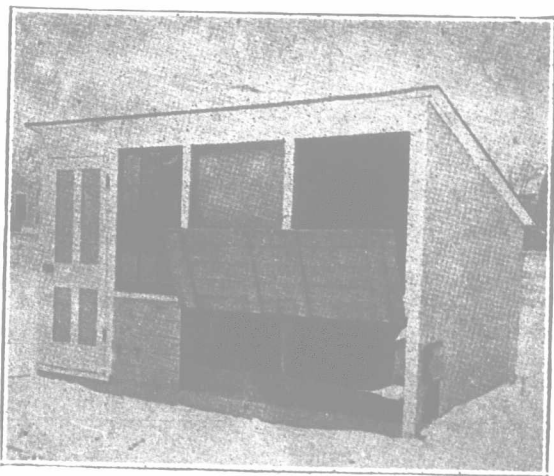
I was very much astonished to see such a very great display of agricultural implements and machinery, such as traction engines, threshing machines, binders, potato-planters, diggers and sorting machines, in great variety; also, a great variety of lawn mowers, the larger size being run by an oil engine which formed part of the machine. There was also a wonderful variety of oil engines of all sorts and sizes; fanning mills, very different from our Canadian ones. The threshing machines were also very different from ours, ranging from a very small one to be operated by the foot, costing £6 10s, and rated to thresh from 8 to 10 bushels per hour, to the largest size, requiring 15 horse-power, and costing over £90. The larger sizes were almost all of the rubbing cylinder type, and some of them tied the straw into large bundles, with two strings to each bundle. As the straw is not broken or cut up, our wind-stacker or blower would not work on their machines. I noticed an entirely new style of hay tedder, which I believe would work well, called a swath-turner. There were also three or four styles of milking machines, but I am afraid that none of them are yet within the reach of the ordinary 100-acre Canadian farmer. Those representing the makers of these machines told me it would not pay to instal one for a dairy of less than 40 cows, and there should be 80 cows to make any reasonable return for the investment. One of the makes of milking machines had to be strapped under the cow, and then in all cases the makers recommended stripping the cows after the machines. There was also what was apparently a very good refrigerating machine, guaranteed to cool the newly-drawn milk down to 42 degrees, but, again, the cost of the machine (£150) was prohibitory, except in very large herds of cows.

There were several beautiful summer houses of peeled rustic work, oiled and varnished, and thatched with heather. It seemed to me that it would have been wiser to have put on a more permanent roof on such otherwise perfect structures.

There was not the variety of breeds of horses, cattle, sheep and pigs that we have at the Toronto and London (Ont.) shows. There were no Percheron, Coach or Suffolk Punch horses, neither were there any Holstein, Guernsey or Devon cattle, and very few Jerseys, and they were poor representatives of the breed. The few pigs were mostly all Yorkshires. There were seven breeds of sheep represented, but there were no Dorset-Horned or Southdowns, such as we always see at Toronto and London. The Clydesdale horses were very good, Scotland being the home of that noble breed. They are good sellers. One of them was sold for

£1,000, so I was told. The Hackneys were a fine display, and there was a good show of large Highland ponies—some fine animals; they would not be popular in Canada. But I think the Shetland Ponies were the center of attraction. There were fifteen stallions on parade, so small and yet such perfect horses, and so docile and tractable, some of them led out by young boys, and two of them by little girls; and when the mares and tiny foals came out there was a great deal of admiration and laughter. The little foals were so small and so cute. A man could pick up one under each arm and walk off with them.

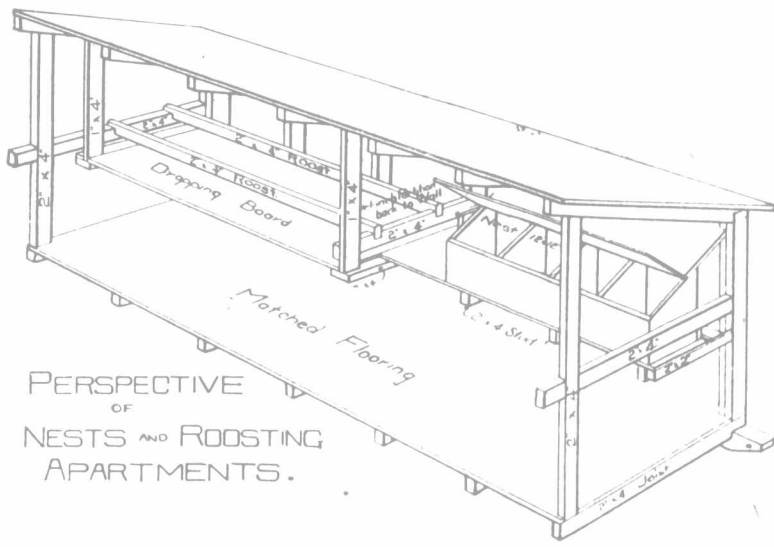
Owing to the foot-and-mouth disease having broken out in England and Ireland, no cattle or pigs were allowed to come from those countries, and some Scotch breeders were also deterred from exhibiting, so that there was not nearly the show of cattle there would otherwise have been. There



Front View of House.

feature of this will be an assembly hall 88 x 60 feet, affording one-half more seating capacity than the former hall, which had become too small to seat even a short-course class, let alone the visitors who from time to time attended the sessions. Over this hall will be erected two classrooms, larger than any in the College at the present time. The basement will afford accommodation for the rapidly-growing pure-seed department, under the control of the Experimentalist at the College. Provision is also being made in this basement for ample cloak rooms and shower-baths for the students.

Horticulture, too, will receive its proper attention in the contemplated additions, for work has already begun on a new Horticultural Building, with greenhouses attached, which will be an ornament to the College premises, and will afford a much better opportunity to give this department the prominence which it deserves in the Province of Nova Scotia. In connection with the Horti-



Showing Interior of House.

cultural Building, provision will be made for an Entomological Department, with a glass house attached, where insects can be bred and studied at all times of the year. In this connection, the College authorities are just now negotiating for a professor of Zoology, who shall also be a Provincial Entomologist, and who will, in addition to lecturing at the College, take charge of the work connected with the control of insect pests in the Province.

Nor is the stock end, for which the College has been so famous, being neglected, for their is now well under construction a horse barn, built on the most modern principles, in which will be housed the magnificent stallions and brood mares, as well as the farm horses which visitors to the College farm have so often admired.

To keep pace with all this, the College authorities have had to purchase extra land, and during

were a few very fine Shorthorns, some splendid specimens of Aberdeen-Angus, a few Galloways, and a number of Ayrshires. The Highland cattle were very good, although the ordinary Canadian farmer does not approve of growing so much horn. A few Jerseys and a few Shetland cattle made up the show of bovines. There was quite a show of poultry, thirteen breeds being represented, besides a few ducks and geese, but there were no rabbits, hares or Guinea pigs or other pets, so dear to the small boy at Toronto and London shows.

The dairy exhibit was very poor. I have seen a better exhibit at a county show in Ontario. The Canadian Government had an exhibit of grains, fruits, etc., and a liberal supply of literature for all who wished it. The Australian and Rhodesian Governments also had tents, and were anxious to get immigrants. Several enterprising seedsmen had fine exhibits of grains and seeds. I believe some of them are doing good work in originating new varieties of grains and roots.

D. L.

The Question of Hired Help.

By Peter McArthur.

Sir Jingo McBore has a goose
That lays golden eggs for his use;
If I told you her name,
You might shrivel with shame,
But some folks would give me abuse.

* * *

At the present writing, about ten days before this article will be published—the prospects are that I shall get in the last of the hay this afternoon. I make this explanation so that people who will probably be busy at their oats when they read this will not think that I am still fussing with the hay. I know I am behind with my work, but, unfortunately, I am not alone. There is still a lot of hay in the fields, some of it still uncut. The fact that mine is in the cocks gives me something of an advantage over some other people, for it is in shape to stand a little rain. The last that was hauled in was as good as if it had not been rained on—real farmers told me so—and I am hopeful that what is left will be all right, also. Between the "catchy weather" and the scarcity of labor, one is lucky to get in the hay in any kind of shape. The trouble has been the same with all of us who are behind—wet weather and lack of help. While thinking over the help problem, a solution of the whole difficulty flashed on me, and it looks so easy that I wonder it has not been attended to long ago. I do not know why it is that things like that seem so wonderfully clear to us sometimes. There is nothing new about my solution. I have been mumbling about it at various times for the last couple of years. But it was when I was actually struggling with the work that the cause of the trouble occurred to me. Labor is scarce in the country simply because farmers cannot afford to pay wages that will compete with the wages paid in the cities. An impression prevails in the towns and cities that the farmers are too mean to pay decent wages. This is not true. I know now from personal experience that if a man were to pay wages that would stop the trend of labor to the cities, and have all his work done by hired labor, he would have to be a very skillful business man to come out even, leave alone making a profit for himself and his investment in farm property. Why should this be so? Farming is the most important industry in the country—the one that supplies the absolutely necessary food and the raw materials of other industries. If any occupation is to have an economic advantage, it should be the one. But it seems in some way to be handicapped. The well-organized manufacturers and capitalists are able to pay wages that lure labor from the farms where it is needed most. There is need of an adjustment by which farmers can go into the labor market on terms of equality with all others. Then, and not till then, can they produce more, and the cost of living may be reduced if the rapacious corporations can be curbed. I do not care to enter into a discussion of whether this handicap on farming can best be removed by Reciprocity, or by Protection, or by some other means, but it must be removed somehow. When the manufacturers and capitalists find themselves working at a disadvantage, they organize and make the political parties understand their needs. It is possible that they go too far in this way, and use the power of their organization to get unfair advantages, but they are teaching us a lesson that is worth heeding. Farmers must get together and make their needs clear, and make it understood that their purpose is not to strengthen some political party, but to have their great industry placed on a fair footing with all others. If they do that, a way will soon be found to give them fair play. But farming cannot make progress until farmers can afford to pay as good wages as anyone else, and they cannot do that until they get a larger share of the legitimate

profits on their products. The business world seems to be so organized that there are altogether too many people making profits on farm produce before it reaches the ultimate consumer. If this is because the business world has undue privileges, the privileges must be wiped out, even though some business men may be forced back to the land. If it is because the farmer does not get the advantages to which he is entitled, the advantages must be given to him. Let those who make it their business to solve such problems give this one their attention. We will soon know if they get the answer right by the fact that the farmers will be able to pay just as good wages as anyone else, and in that way get their fair share of the labor of the country.

* * *

As a banker, Sir Jingo McBore
Is bound to have money galore.
Should his bank go to smash,
The depositors' cash
Will float him while swimming ashore.

* * *

One of the finest things about farming is its independence. Every farm is a little kingdom in itself, with "few men within it." Sometimes it is a happy democracy in which everyone from the baby up has a voice, and sometimes an absolute monarchy, ruled over by a surly tyrant who ought to be brought to his senses with a carefully-applied fence stake. But this matter of home rule and dealing with all problems on the farm as if they were personal and peculiar is sometimes carried too far. Perhaps men would find that many of the troubles in their little kingdoms are felt in all the other little kingdoms. Even such a matter as the sons and daughters and the hired help all going to the city, and leaving behind only the disheartened owner of the farm, is not peculiar to any family or place. I suspect that if we got together and investigated, we would find that the fault was not entirely that of the sons and daughters and the hired help, or even of ourselves. It might be found that the trouble is due to economic conditions that are disturbing all our little kingdoms alike. Personal grievances and troubles each farmer must deal with by himself, but when it is found that all have a certain line of trouble in common, the time has come for concerted action, in order to remove it. These are things that properly belong in the domain of politics, and if farmers would make it clear to the politicians, who always have remedies for everything, that they know that they are being discriminated against, something would be done, and that quickly, to remove the cause of the trouble. But if the farmers will simply sit at home and grumble because their children are deserting to the cities, and they cannot hire help to take their place, conditions will never be improved. It is useless to keep on complaining about the scarcity of help on the farms, and wondering about it. Just get busy and see to it that matters are so adjusted that you can pay as good wages as city employers, and the drift cityward will dwindle down to those who feel that they are really not living unless they can take trolley rides and go to the moving-picture shows. And even these frivolous people may in time find that they are paying too great a price for their enjoyments and be glad to get back to the stolid comfort of the country. There is no use lecturing them about it. The only way is to make money talk to them, but, in order to do that, the farmers must have a chance to get the necessary money.

* * *

Sir Jingo McBore, it is true,
Is a pirate, a cheat and a screw;
He fights through the week
With claw and with beak,
But on Sunday he sleeps in a pew.

* * *

The work of getting the railways to obey the law which orders them to blow the whistles when within eighty rods of level crossings, and to ring the bell continuously until the crossing is reached, is becoming very interesting. As I mentioned some weeks ago, the Board of Railway Commissioners issued a circular letter to the railways calling attention to the law and warning them that it must be obeyed. The signals were given with some regularity for a few days, and then matters lapsed to the old state. Having satisfied myself that the law was not being obeyed, I complained to the Board, and gave specific instances of breaches of the law. I was notified that the inspectors of the operating department were assigned to the task of seeing if the railways were heeding the warning, and once more there is an improvement, though several trains passed to-day without giving the signals. Although I am profoundly interested in having the law enforced because it would mean so great a saving of life—eighty per cent. of the fatal accidents occur on the country crossings—I have found a new and absorbing interest in watching to see whether a corporation can be made to obey the law when only

the rights of the people are at stake. It is useless to blame the engineers. They obey all orders issued by their general managers—they would be called "on the carpet," and jolted from the cradle to the grave if they did not—and they would obey this one if the men higher up wanted it obeyed. Where the rights of the shipper are concerned, if he gets a decision against a railway, it is enforced, because he has a lawyer to represent him. But apparently the people have no one to represent them, unless the Board undertakes the enforcement of the law. If the railway law is enforced in regard to giving signals, it will be an encouragement to go on and force other corporations that are forgetting the rights of the people to do their duty. If it is not enforced, it is time we knew about it and learned the reason why. If laws intended to govern the conduct of corporations cannot be enforced, a state of affairs exists that cannot be remedied too soon. (While I was writing this paragraph, the International Limited passed the level crossing near-by, without giving the signals.)

Thus spoke bold Sir Jingo McBore:
"Men say I break laws by the score!
As there's nothing to fear,
I reply with a sneer,
I do, and I'm going to break more!"

Brandon Exhibition a Record Breaker.

Brandon's beautiful fair-grounds this year accommodated more live stock, increased exhibits and greater crowds than in any former year. The live-stock sections put up one of the choicest exhibits ever seen in Western Canada, cattle making a great display, with hogs and sheep stronger than on former occasions, while horses showed a little falling off.

HORSES.

Clydesdales.—Competition was keen in nearly every class. The exhibitors were: W. H. Bryce, Arcola; Wm. Grant, Regina; W. I. Elder, Colquhoun & Beattie, Trotter & Trotter, J. D. McGregor, Jas. Sutherland, G. C. Porterfield, A. C. McPhail, and F. E. Thompson, of Brandon; D. Hastings, Oak River; W. J. McCallum & Bros., Brampton, Ont.; Thos. Jasper, Harding; W. J. Young, Griswold; John Nicol, Beresford; P. S. Dawley, Carroll; W. A. Walker & Sons, Carnegie; A. P. Webster, Welwyn; A. C. Stewart, Rapid City; Wm. Turner, Forrest, and A. J. White, Hamiota.

The awards in the aged-stallion class were: 1, W. H. Bryce, on Revelanta's Heir, by Revelanta; 2, O. J. White, on General Notice, by Revelanta; 3, John Graham, on Queen's Royal; 4, Wm. Grant, on Warlaby; 5, W. J. Elder, on Proud Edward. In the three-year-old class, Colquhoun & Beattie got first on Critic, the Winnipeg grand champion; 2, A. C. McPhail, on Sir Francis Drake; 3, Trotter & Trotter, on Craigie Gibson; 4, W. J. Elder, on Kirktown Squire. Two-year-olds presented a good line-up of high-quality colts. 1, D. Hastings, on Radien, by Son of Hiawatha; 2, McCallum Bros., on Royal Ideal; 3, F. E. Thompson, on Crosby Gallant, by Sir Everest; 4, T. Jasper, on Baron Ivory. Yearling stallions—1, Bryce on Doune Lodge Revelanta, by Revelanta's Heir; 2, W. J. Young. The male championship class brought out three grand animals. Revelanta's Heir won for Bryce over the Winnipeg champion, Critic, and was afterwards made champion over all breeds.

The female classes were even stronger than the stallion classes. Yeld mares—1, John Graham, on Border Rosie, by Hiawatha; 2, A. C. Stewart, on May Urquhart; 3, Trotter & Trotter, on Bella Stewart. Three-year-olds—1, McCallum Bros., on Privation, by Revelanta; 2, W. A. Walker & Sons, on Lady Melvin, by Allendale; 3, W. J. Young, on May Brandon. Two-year-olds—1, W. H. Bryce, on Craigie Belle, by Bonnie Buchlyvie; 2 and 3, Grant, on Lady Hopetoun, by Baron Hopetoun, and Nellie Lansdowne, by Lansdowne; 4, Bryce, on Doune Lodge Lady Garnet; 5, McCallum Bros. Yearlings—1 and 2, Bryce, on Countess of Moray, by Bonnie Buchlyvie, and Doune Lodge Floradora; 3, Grant, on Kismet, by Cawdor Laird; 4, McGregor, on Glencarnock Maid. The brood-mare class was won by J. Nicol, on Lizzie Barclay, second going to G. C. Porterfield on Flashend Princess; W. A. Walker, third on Lady Stirling. Nicol and Sutherland were first and second, respectively, on colt. Craigie Belle won the championship for Bryce, and Lady Hopetoun was made reserve. Craigie Belle was also awarded the prize for the best pure-bred draft mare at the show.

The Canadian-bred classes displayed all the desired qualities found among the imported animals. A. McPhail got first in three-year-old stallions on Sir Francis Drake, by Dundrennan. Jasper's Baron Ivory, by Black Ivory, won the two-year-old class; while Bryce's Doune Lodge Revelanta was first in yearlings. Maggie Priam was first for Webster in brood mares. J. Young won on

It is use-
all orders
would be
from the
—and they
up wanted
hipper are
a railway,
to repre-
ave no one
undertakes
ilway law
it will be
other cor-
s of the
enforced, it
the reason
conduct of
of affairs
(While I
ernational
y, without

May Brandon in the three-year-old class, and two-year-olds were headed by Grant's Lily Lansdowne, while Bryce got first on his yearling, Doune Lodge Floradora. Lily Lansdowne was made champion female, and Sir Francis Drake champion stallion. Percherons.—In this breed, exhibited by Colquhoun & Beattie; W. A. Davidson, of Moore Park; W. C. Henderson; R. Reid, Forrest; A. M. McPherson and J. B. Hogate, of Brandon, there was little competition save in aged and three-year-old stallions. Colquhoun & Beattie won the aged class with Gasdon, Henderson and Hogate standing second and third, respectively. In three-year-olds, Colquhoun & Beattie took first and second on Jaume and Joseph; Davidson got third, and Henderson fourth. Jaume was champion of the breed, and reserve champion over all breeds. A. M. McPherson had the champion female in Frances. W. C. Henderson had the only exhibit of Belgians.

The grade, draft and agricultural classes were unusually well filled, every section showing a long string of good individuals.

CATTLE.

Cattle at Brandon were strong throughout, and the interest at the show-ring was merited by the exhibits. The awards in Shorthorns and Herefords were made by Leslie Smith, Minn.; in Aberdeen-Angus, by C. G. Gray, of Chicago, secretary of the Aberdeen-Angus Association; and in the dairy breeds by J. C. Smith, of Regina.

Shorthorns.—This breed, as is usual at the Western fairs, made the strongest showing. The exhibitors this year were W. H. English; R. W. Caswell, Saskatoon; H. L. Emmert; J. H. Melick, Edmonton; J. A. Watt, Salem, Ontario; G. J. Sayer, from the United States. The classes were made up of about the same animals as were present at the Winnipeg Exhibition. Competition was very keen. The senior bull championship went to Watt, on Gainford Marquis, placed over Caswell's Keir Emblem. For junior championship, Emmert had three bulls eligible: Missie's Prince, the senior yearling; Choice Goods, junior yearling, and Sittyton Selection, senior calf. The award went to the youngest animal, a fine quality type, that should develop well. Gainford Marquis was given the grand championship.

For senior champion female, Watts' cow, Dale's Gift 2nd, and Sayer's heifer, Mary Ann of Oakland 2nd, were out. The award was given to the cow, the smoother, finer animal, over the heifer, which showed stronger, but with an uneven finish. For junior champion, Emmert's senior yearling, Thelma 2nd, and Melick's junior heifer, Clover Leaf Mildred, and senior calf, Clover Leaf Dorothy, and Emmert's junior calf, Sittyton Rosebud, qualified. Melick won on Clover Leaf Dorothy.

The herd prizes were fairly well divided, senior being won by Melick, with Sayer, Watt, Emmert and Caswell in order named. Emmert was first in junior herds, with Melick second. Calves stood: Emmert first, Watt second, Caswell third. Three animals, get of one sire—1, Melick, on three by Avondale; 2, Sayer, on get of Glenbrook Sultan; 3, Emmert, on get of Oakland Star.

Aberdeen-Angus.—J. D. McGregor, of Brandon; Jas. Bowman, of Guelph, and O. V. Battles had out practically the same animals as were present at Winnipeg, the placing being reversed in some cases. In the male classes, the senior championship went to McGregor's Le Roy 3rd of Meadowbrook, over the two-year-old Expert of Dalmeny 2nd, also from the Glencarnock herd. The junior championship went to Bowman's home-bred Beauty's Prince, a senior yearling, with Battles' junior yearling, Eileen's Lad of Rosemere, close up. Reserve championship in the female classes was won by McGregor's Violet 3rd of Congash, and Bowman took the junior championship with Elm Park Pride 12th.

Herefords.—J. A. Chapman, Hayfield; L. O. Clifford, Oshawa, Ont., and John Nichol, Beresford, furnished the competition in Herefords. Clifford's Refiner was senior and grand champion bull, and Chapman's Beau Albion junior champion. Clifford took the senior and junior championships in females with Miss Brae 26th and Miss Brae 28th. Chapman and Clifford divided the herd prizes.

Three dairy breeds were present. Holsteins were represented by the herds of W. J. Cummings, Glenlea; A. B. Potter, Langbank; Jas. Herriot, Souris, and Hamilton Bros., Brandon. A good showing was made in most classes, although some were not as strong as they should have been. The male championship went to Cummings on Riverview Hengerveld, with Potter reserve on Poladine Affie. Cummings took the lion's share of the prizes in all the classes, including herd awards.

Ayrshires were represented by a large herd from the stables of P. D. McArthur, North Georgetown, Que., and smaller lots by Wm. Braid, Oak River; W. H. Mortson, Fairlight, and E. J. Nealton, Brandon. The championship went to McArthur's Whitehall Freetrader in the male classes. In the female classes, McArthur got every-

thing except third in two-year-old heifers, this award going to Nealton. Amaryllis of the Wil-lows, McArthur's noted aged cow, got the female championship. All the herd and group prizes were taken by McArthur.

The exhibit of Jerseys came entirely from the stables of B. H. Bull & Sons, Brampton. They had a long string headed by Brampton Sir Robin, first in class, and junior champion at Toronto last year.

SHEEP.

The sheep exhibit was even stronger than at Winnipeg, and, as at the latter show, the keenest competition centered in Leicesters. Geo. Allison, of Burbank, and F. W. Crawford, of Chater, made the awards, which were much the same as at Winnipeg.

SWINE.

The swine department was taxed to the utmost. Every pen available was occupied with hogs of a high degree of excellence. Exhibitors were: Yorkshires—A. D. McDonald & Sons, of Napinka; W. H. English, A. B. Potter, Langbank; W. H. Mortson and John Campbell. Tamworths—W. H. Mortson. Berkshires—T. A. Cox, McGregor and Bowman, Forrest; W. H. Mortson and A. J. McKay. Poland-Chinas—F. H. Wien-cke, M. J. Standbridge, Stonewall, and Oscar Miller, Cheadle, Alta. Duroc-Jerseys—O. Miller and John Maurer, Clive, Alta. W. J. Cummings had a herd of O. I. Chester Whites. This list is practically the same as the Winnipeg list, and the prize-money was divided much the same.

To Help Live Stock in the West.

The beginning of last week a series of meetings were held in the C. P. R. offices, Winnipeg, Manitoba, for the purpose of "boosting" the live-stock industry of Western Canada. Among those present were J. S. Dennis, Assistant to the Superintendent, and head of the C. P. R. Natural Resources Department, at Calgary, Alta.; A. F. Mantle, Deputy Minister of Agriculture in Saskatchewan; Hon. Duncan Marshall, Minister of Agriculture in Alberta; Prof. W. J. Elliott, Agricultural Superintendent of the C. P. R.; T. Acheson, General Grain Agent of the C. P. R.; J. Manson, assistant to the Vice-President of the C. P. R.; Hon. Geo. Lawrence, Minister of Agriculture in Manitoba; Prof. Bedford, Deputy Minister of Agriculture in Manitoba; Dr. J. G. Rutherford; Prof. H. S. Arkell, acting Dominion Live-stock Commissioner; Mr. Ferguson, of Swift & Company; C. E. Dewey, General Freight Agent of the G. T. P., and W. Manders, Assistant General Freight Agent of the C. N. R.

The three larger Western railways and the packing concerns of the West have agreed to cooperate and spend both time and money in trying to develop the live-stock industry of Western Canada.

The indiscriminate slaughter of female cattle came up for considerable discussion. The case of certain states in South America was noted, where it became necessary to make a law forbidding the slaughter of female cattle for a certain number of years. It is expected, according to reports of the meeting, that something on similar lines will be adopted in Western Canada. Western farmers are only too willing to raise stock, if the right kind could be purchased at a reasonable price. Some important resolutions were drafted at the meetings which will be sent to the various live-stock interests for consideration. The meetings were called and held under the auspices of the C. P. R.

F. W. L. Sladen, F. E. S., has been appointed as assistant in Apiculture to the Dominion Entomologist. He has had extensive experience in bees, and is known as the originator of the "British Golden" species. He was born at Shooter's Hill, Blackheath, England, in 1876, and commenced beekeeping at the age of thirteen. In 1892 he published a small book on "The Humble Bee." He visited India in 1896-97 to further study bees. He has been for several years a well-known contributor to bee journals, and is the author of "Queen-rearing in England."

Some idea of Canada's scarcity of cattle may be gathered from the report which recently appeared in the daily press, that the first extensive shipments of genuine steers ever brought into Alberta are now being made from Mexico. The shipment comprises ten trains, containing in all 10,000 head of long-horned steers.

E. A. Howse, B. S. A., for several years principal of the Consolidated School, Guelph, Ont., a graduate of the Ontario Agricultural College in 1911, and since connected with the Seed Branch, Ottawa, has been appointed Professor of Agronomy in the Agricultural College, Reno, Nevada.

After-Harvest Cultivation a Necessity.

Regarding the after-harvest cultivation, J. H. Gridale, Director of Experimental Farms, in a letter to "The Farmer's Advocate," says: "Our practice here is probably not quite such as would be necessary all over Ontario, for the reason that we practically never sow grain without at the same time sowing clover to serve either as a fertilizer or, as is usually the case, to be grown for hay the next year. Where, however, we grow grain following grain, as happens on some of our Branch Farms in the West, we have found that special treatment is necessary.

"Under conditions as they exist here, where clover is always sown with the grain, it is not usually necessary to do anything to the field once the grain crop is harvested; but in cases where the grass catch is poor, or when the season is very dry, we have found it advisable to roll the stubble land shortly after harvest. This breaks the crust, forms a mulch, and gives the clover fresh life. If the stand is very thin, it is sometimes profitable to give a light scattering of seed before rolling. If the stand is very strong, but rather dirty—that is, if there are more weeds than seems normal—it might be beneficial to run over it with a disk harrow set at a very light angle, so as not to tear up the small plants to any great extent.

"Where no clover has been sown with the grain, there is certainly much to be said in favor of handling the field immediately after harvesting. In fact, in the West, on most of our Farms we follow the binder with the disk harrow. This practice has proven exceedingly advantageous in conserving moisture and destroying weeds. If the soil is heavy, going over the field twice with the disk harrow has been found beneficial. In cases where a heavy growth of weeds exists, it has been found profitable to plow with a shallow furrow as soon after the grain is cut as at all practicable. Immediately after plowing, the land should be rolled, and then disk harrowed, or, if a combination surface and subsoil packer is available, the going over the field with this implement once will obviate the necessity of covering the area twice, as would have to be done to roll and then harrow.

In Ontario, I have no hesitation in saying that every grain field whereon clover was not sown in the early spring, or where the catch has been so poor as to indicate the necessity of grain cropping another year, should be well disked or lightly plowed, and packed or rolled and harrowed as soon after harvest as at all practicable. In fact, doing this work in and out among the stocks will give the best results. This statement I am making not from experience in the East, but rather from the results secured in the West. There seems every reason to believe that this treatment would prove satisfactory in the East, especially in dry years, or every year, in most parts of Ontario, where the rainfall not infrequently goes dangerously near to the dry-farming or half-dry-farming limit, namely, about 20 inches per annum."

Not Alluring.

The usual clamor is being made this season for help to harvest the Northwest wheat crop, and naturally will be taken full advantage of by land speculators, immigration promoters and railways. It will be a fortunate thing for the country generally when a less hazardous and more rational system of farming is adopted in the West, so that the output of the farms can be handled without such risk and waste. Late reports from Winnipeg are not so favorable for an early harvest, and some of the painful experiences of last year may be repeated.

Another month has passed in the International egg-laying contest being conducted by the British Columbia Poultry Association, Vancouver Exhibition Board, and the Provincial Government. July 20th ended the ninth month of the contest. The first ten pens in Class I., composed of non-sitting breeds, are White Leghorns, having laid 734, 661, 559, 556, 551, 520, 512, 496, 487 and 483 eggs, respectively. Then follows a pen of Buff Leghorns, with 482 eggs to its credit, and next in line come four more pens of White Leghorns. In Class II., composed of the general-purpose breeds, a pen of White Wyandottes is leading, with 606 to its credit. Two pens of Rhode Island Reds follow, with 602 and 545, respectively. Then comes a pen of Barred Rocks, with 509, and a pen of Buff Orpingtons with the same score, closely followed by another pen of White Wyandottes, with 507. The highest yield in Class I. is 734 eggs, and the lowest 305, twenty-two pens competing. The highest yield in Class II. is 606, and the lowest 295, sixteen pens competing. Pens consist of six birds, and during the month the leading pen of Leghorns produced 119 eggs. The best performance for the month in the general-purpose class was 102 eggs, by a pen of Barred Rocks. Several hens are moulting.

MARKETS.

Toronto.

REVIEW OF LAST WEEK'S MARKETS

At West Toronto, on Monday, August 5th, receipts of live stock numbered 120 cars, comprising 2,381 cattle, 404 hogs, 721 sheep, 119 calves, and 45 horses; quality of cattle generally good; prices about 10c. lower. Exporters, \$7.25 to \$7.60; prime, heavy butchers', \$7 to \$7.85; good, \$6.75 to \$7; medium, \$6 to \$6.50; common, \$5.25 to \$6; cows, \$3 to \$3.65; milkers, \$45 to \$75; calves, \$4 to \$8.50. Sheep, \$3 to \$5; lambs, \$6 to \$7.25. Hogs, \$8.50 fed and watered, \$8.15 f. o. b. cars.

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

Table with 3 columns: City, Union, Total. Rows include Cars, Cattle, Hogs, Sheep, Calves, Horses.

The total receipts of live stock at the two markets for the corresponding week of 1911 were as follows:

Table with 3 columns: City, Union, Total. Rows include Cars, Cattle, Hogs, Sheep, Calves, Horses.

The combined receipts of live stock at the two markets for the past week show a decrease of 168 cars, 2,114 cattle, 2,780 hogs, 2,225 sheep and lambs, 24 calves, and 36 horses, compared with the corresponding week of last year.

As will be seen by the above table, the receipts of all classes of live stock were liberal, in fact, the cattle supply was greater than the demand, especially in the common and medium classes. The result has been that all classes of fat cattle were lower in price. In the beginning of the week there was a drop of 10c. to 15c. per cwt.; but at the close, common cattle had declined fully 40c. per cwt.

Exporters.—Steers, 1,241 lbs. each, sold at an average of \$7.45, or a range of \$7.25 to \$7.60; bulls, \$6 to \$6.40; but it must be remembered that these prices, which were paid on Monday, could not be realized at the close of the week, as they were fully 20c. to 40c. per cwt. lower, on Thursday.

Butchers'.—Choice cattle at the close of the week were selling around \$7 to \$7.25, but \$7.50 was paid on Monday; good, \$6.50 to \$6.75; medium, \$6 to \$6.25; common, light cattle, \$4.75 to \$5.60; cows, \$2.75 to \$5.50; bulls, \$4.75 to \$5.75.

Stockers and Feeders.—Steers, 1,000 lbs., for short-keep purposes, sold at \$5.50 to \$5.75; steers, 800 to 900 lbs., \$5 to \$5.25; stockers, 500 to 700 lbs., sold at \$4 to \$4.75.

Milkers and Springers.—Milkers and springers sold from \$40 to \$65 each, with a few extra quality cows at \$70 to \$75 each.

Veal Calves.—Prices ranged from \$4 to \$8 per cwt. for the bulk, with a few new-milk-fed veals at \$8.25 to \$8.75.

Sheep and Lambs.—Receipts were liberal, and prices easier. Ewes, light, sold at \$4.50 to \$5; heavy ewes and rams, \$3 to \$3.50; lambs, \$6.50 to \$7.50, a drop of 50c. to 75c. per cwt. since the beginning of the week.

Hogs.—Prices for hogs were 20c. to 25c. per cwt. easier. Selects, fed and watered, sold on Thursday at \$8.60, and \$8.15 f. o. b. cars, which on Wednesday sold at \$8.70, and \$8.35.

Horses.—There has been a fairly steady trade reported at the various markets, and about the usual number changed hands, at the following prices: Drafters, \$225 to \$275; general-purpose, \$175 to \$225; expressers, \$200 to \$250; drivers, \$100 to \$200; serviceably sound, \$30 to \$90 each.

BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, 98c. to \$1. outside points; Manitoba No. 1 northern, \$1.12½; No. 2 northern, \$1.09½; No. 3 northern, \$1.06½, track,

lake ports. Oats—Canadian Western extra No. 1 feed, 44c.; No. 1 feed, 43c.; track, lake ports; Ontario No. 2, 43c.; No. 3, 42c., outside points; No. 2, 45c. to 46c., track, Toronto. Rye—No. 2, 90c. per bushel, outside. Peas—No. 2, 90c. to \$1, outside. Buckwheat—70c. per bushel, outside. Barley—For malting, 87c. to 88c. (47-lb. test); for feed, 60c. to 65c. Corn—No. 3 American yellow, 75c., track, bay ports. Flour—Ontario ninety-per-cent. winter-wheat flour, \$4.20, seaboard; Manitoba flour—Prices at Toronto are: First patents, \$5.70; second patents, \$5.20; strong bakers', \$5 in jute; in cotton, \$5.10.

HAY AND MILLFEED.

Hay.—Baled, in car lots, track, Toronto, No. 1, \$12 per ton. Straw.—Baled, in car lots, track, Toronto, \$10 per ton. Bran.—Manitoba bran, \$23 per ton; shorts, \$26; Ontario bran, \$24 in bags; shorts, \$27 in car lots, track, Toronto.

COUNTRY PRODUCE.

Butter.—Market firm. Creamery pound rolls, 28c. to 29c.; creamery solids, 28c.; separator dairy, 26c. to 27c.; store lots, 22c. to 23c.

Eggs.—Market firm. New-laid, in case lots, 26c.

Cheese.—Large, 14c.; twins, 15c. Poultry.—Receipts moderate; dressed turkeys, 24c.; spring chickens dressed, 28c. to 28c.; spring chickens alive, 20c. per lb.; old fowl, 13c.

Potatoes.—New Ontario potatoes, \$1.50 per bushel; new American potatoes, per barrel, \$3.50.

HIDES AND SKINS.

No. 1 inspected steers and cows, 13c.; No. 2 inspected steers and cows, 12c.; No. 3 inspected steers, cows and bulls, 11c.; country hides, cured, 11c. to 12c.; country hides, green, 10c. to 11c.; calf skins, per lb., 13c. to 16c.; lamb skins and pelts, 35c. to 40c.; horse hides, No. 1, \$3.25; horse hair, per lb., 35c.; tallow, No. 1, per lb., 5c. to 6c.

WOOL.

Unwashed, coarse, 12c.; unwashed, fine, 14c.; washed, coarse, 18c.; washed, fine, 21c.; rejects, 16c.

FRUITS AND VEGETABLES.

Receipts of fruit and vegetables are daily becoming larger as the season advances. Prices ruled as follows: Raspberries, 12c. to 14c. per box; gooseberries, \$1.25 to \$1.35 per basket; black currants, \$1.50 to \$1.75 per basket; Canadian peaches, \$1.25 per basket; Canadian plums, 75c. to \$1 per basket; pears, American, \$2.75 per crate; cucumbers, 25c. per basket; tomatoes, Canadian, \$1.25 to \$1.50 per basket; beans, 40c. to 50c. per basket; carrots, 40c. per basket; marrows, 35c. per basket; eggplants, \$1.50 per basket; blueberries, \$1 to \$1.25 per basket.

Montreal.

Live Stock.—Exports of cattle from the port of Montreal for the week ending July 27th amounted to 705 head, being small for this time of year. Offers of cattle on the local market were fairly large last week, and as a result the tone of the market was rather easier, and a decline of about 1c. per lb. took place. Canners have begun operating once more, and there was a very fair trade in the class of stock required by them. The highest price paid for choice stock last week was 7c. per lb., the great bulk of the trade being in the vicinity of 7c. per lb., this being for fine stock. Good butchers' cattle ranged from 6c. to 7c. per lb., while medium sold at 5c. to 6c., and common at 4c. to 5c., with canners ranging down to 3c. The tone of the market for sheep was a little firmer. Prices were: Ewes, 4c. to 4c. per lb.; bucks and culls, 3c. to 3c.; lambs, 7c. to 8c. per lb., while calves sold at about the previous range, from \$3 to \$8 per head. The tone in the hog market was rather firmer, and prices were a small fraction higher, selling at 9c., and mixed lots at 8c. to 9c., according to quality, weighed off cars.

Horses.—The market has now entered upon one of the quietest periods of the

year, both from the standpoint of buyers and sellers. Lumbermen will probably begin buying about the end of next month. As sellers were not offering many horses, prices were accordingly firm, at the following quotations: Heavy draft horses, weighing from 1,500 to 1,700 lbs., \$300 to \$375 each; light draft horses, 1,400 to 1,500 lbs., \$225 to \$300 each; light horses, 1,000 to 1,100 lbs. each, \$125 to \$200 each; and inferior, old, or broken-down stock, \$75 to \$100 each. Choice driving and saddle horses, \$350 to \$500 each.

Dressed Hogs.—The market for dressed hogs was fairly active, and prices firm, in sympathy with the condition of the live-stock market. Sales were made at 12c. to 13c. per lb. for choice, abattoir-dressed, fresh-killed stock.

Honey and Syrup.—The market showed very little change, and the demand was not very active. White clover comb honey was 10c. to 11c. per lb.; extracted, 8c. to 8c.; dark comb, 7c. to 8c., and extracted, 7c. to 8c.

Eggs.—The quality of the stock was none too good, and selects were consequently firmly held, the price being 25c. to 26c., according to quantity. Straight receipts showed very little change in price, at 22c. to 22c., while second grades were still around 15c. and 16c.

Butter.—The price of butter continued to advance, and provided the make keeps up, farmers undoubtedly will have every reason to regard this as the best season they ever experienced. Prices have advanced, and buyers were compelled to pay 26c., which was 1c. more than a week ago. This stock cannot be sold here at less than 26c., and quotations were around that figure to 27c. for jobbing lots. It is claimed that the prices paid in the country were unnecessarily high, and that they are not being fully sustained by dealers in the local market. Fine creamery could be obtained at 26c., while seconds were 25c. to 26c. Dairy butter was quoted at 22c. to 23c. There were no exports.

Cheese.—Exports of cheese during the week were 84,000 packages, as against 69,000 the corresponding week of last year. The total shipments to date are 700,000 boxes, or 60,000 less than a year ago. Prices held fairly steady here, at 13c. for finest Western colored, and fully 1c. less for white. Townships were quoted at 12c. and Quebecs at 12c., while seconds were 12c.

Grain.—No. 2 Canadian Western oats, car lots, ex store, 45c. per bushel; No. 1 extra feed around the same figure; No. 3 Canadian Western, 45c.

Flour.—Since the last report, Ontario winter-wheat flour has shown a decline, and patents were quoted at \$5.25 per barrel in wood, while straight rollers were \$4.85 to \$4.90. Bags, 30c. less. Manitoba spring patents steady, at \$6.10 for firsts; \$5.60 for seconds, and \$5.40 for strong bakers'.

Millfeed.—Bran was slightly firmer, at \$22 per ton in bags; shorts, \$26; middlings, \$27 to \$28; pure grain mouille, \$32 to \$34, and mixed mouille, \$30 to \$31.

Hay.—Hay continued on the easy side. No. 1 pressed hay, carloads, Montreal, \$18 to \$18.50 per ton; No. 2 extra, \$16 to \$17; No. 2 good, \$15 to \$15.50; No. 3 hay, \$13 to \$13.50, and clover mixed, \$12 to \$12.50.

Hides.—The market for lamb skins advanced to 30c. each. Calf skins were still selling at 17c. and 19c. per lb. for Nos. 2 and 1, respectively. Beef hides, 11c., 12c. and 13c. per lb. for Nos. 3, 2 and 1, respectively. Horse hides continued to sell at \$1.75 and \$2.50 each. Tallow, 1c. to 3c. per lb. for rough, and 6c. to 6c. for rendered.

Cheese Markets.

Stirling, Ont., 12c. to 12 15-16c.; Madoc, Ont., 12c.; Peterboro, Ont., 13c. to 13 1-16c.; Brockville, Ont., 13c., 13 1-16c., 13c.; Kingston, Ont., 13c.; Alexandria, Ont., 12 15-16c.; Campbellford, Ont., 12 11-16c.; Vankleek Hill, Ont., 12c. to 12 15-16c.; Frontenac, Que., 12 13-16c.; Cornwall, Ont., 13c.; Ottawa, Ont., 13 3-16c.; Iroquois, Ont., 13c.; Kemptville, Ont., 13 1-16c. to 13c.; Picton, Ont., 13c. to 13c.; Napanee, Ont., 13 1-16c.

Chicago.

Cattle.—Beeves, \$5.75 to \$9.85; Texas steers, \$5 to \$7.10; Western steers, \$5.85 to \$7.90; stockers and feeders, \$4 to \$6.90; cows and heifers, \$2.75 to \$8.10; calves, \$6.75 to \$10.25.

Hogs.—Light, \$7.80 to \$8.40; mixed, \$7.30 to \$8.35; heavy, \$7.15 to \$8.15; rough, \$7.15 to \$7.85; pigs, \$6.70 to \$8; bulk of sales, \$7.55 to \$8.15.

Sheep and Lambs.—Native, \$3.30 to \$4.75; Western, \$3.50 to \$4.65; yearlings, \$4.50 to \$5.65. Lambs, native, \$4.50 to \$7.70; Western, \$4.50 to \$7.85.

Buffalo.

Cattle.—Prime steers, \$8.50 to \$9.25; butcher grades, \$4 to \$8.

Calves.—Cull to choice, \$6 to \$11.25.

Sheep and Lambs.—Choice lambs, \$7.50 to \$7.75; cull to fair, \$5 to \$7; yearlings, \$3 to \$6.50; sheep, \$2 to \$5.50.

Hogs.—Yorkers, \$8.70 to \$8.80; pigs, \$8.50 to \$8.60; mixed, \$8.75 to \$8.80; heavy, \$8.70 to \$8.75; roughs, \$7 to \$7.50; stags, \$6 to \$6.50.

GOSSIP.

Attention is called to the advertisement of Large English Berkshires, the property of C. J. Lang, Hampton, Ont., which appears elsewhere in this issue. Sows bred, and of breeding age, yearling boars, and choice young stock of both sexes are offered. See the advertisement and make inquiry.

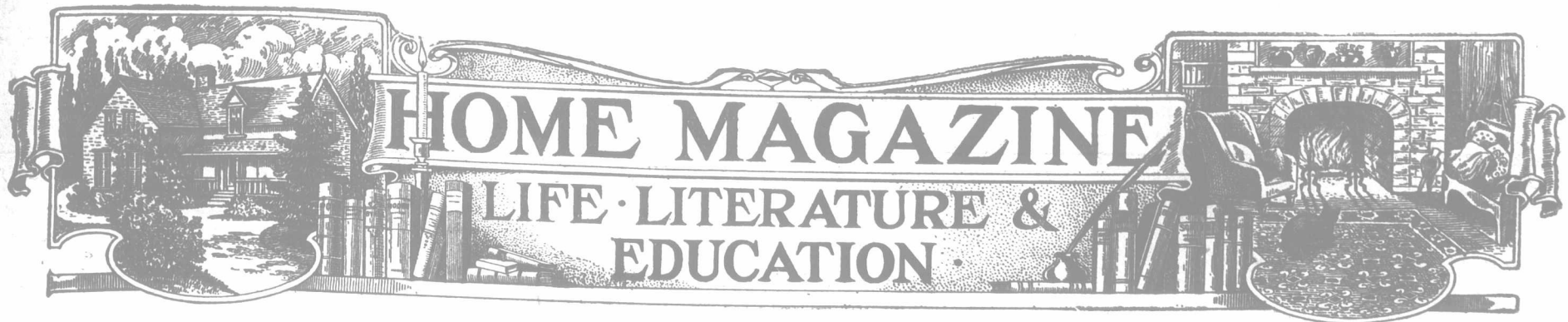
At a recent meeting of the Board of Directors of the American Shorthorn-breeders' Association, Abram Renick, of Kentucky, resigned as president, and F. W. Harding, of Wisconsin, was elected in his stead. Roy G. Groves, who has long been an assistant secretary, was elected secretary, succeeding his father, the late John W. Groves. Mr. Renick was elected general manager, and will remove from his Kentucky home to Chicago.

Attention is called to the advertisement of Cooper's sheep sale, which appears in another column of this issue. The Wm. Cooper & Nephews Pedigree Stock Co. purpose holding an auction sale on August 20th, at Sugar Grove, Ill., when a large number of show and breeding stock of four different breeds, viz., Shropshires, Oxfords, Hampshires and Cotswolds, will be offered. Breeders should plan to attend this sale. Good breeding stock is none too plentiful. Look up the advertisement and write the owners for full particulars.

The Menie District Ayrshire-breeders' Club will hold their second annual judging course on Ayrshires at the farm of Alex. Hume, Menie, Wednesday, August 21st. Lectures on subjects of special interest to Ayrshire-breeders and dairymen by experts from both Dominion and Provincial Departments of Agriculture will be given from 10 a. m. to 12.30 p. m. Judging course from 1.30 p. m. The show herds of Messrs. Stewart and Hume will be used in competition. Tent furnished by the Department of Agriculture, Stirling. All trains met at Hoard's, G. T. R. A splendid opportunity to purchase Ayrshires from the breeders of Menie District. The local branch of the Women's Institute will furnish meals. All will be entertained and made welcome. Everybody come; ladies and all!

TRADE TOPIC.

Three handsome, profusely illustrated, instructive pamphlets, have recently been issued by the Vancouver Island Development League Co., setting forth the possibilities of the island country. A fifty-page booklet is devoted to Victoria City, the Liverpool of the Pacific. The opportunity for sport forms the topic of a second volume, and fruit-growing, dairying, poultry-raising, horses, cattle, sheep, and hogs, and the openings for advanced agriculture constitute a third. See the advertisement in another column, and write the company for these pamphlets.



Little Trips Among The Eminent.

BENJAMIN WEST. (1738 - 1820.)

In art, as in other things, it sometimes happens that a man who really possesses comparatively little genius, is received in his own day with great acclamation, showered with riches and honors, and proclaimed among the great for all time.

Among those so mistakenly honored was Benjamin West, whose work is now considered somewhat tame and uninspired, although hailed during the lifetime of its creator as equal to that of the great masters.

Although born in America, West was of English descent, his grandparents having turned Quaker and emigrated to the New World in 1667.

His aptitude for drawing soon showed itself. When six years of age he was set, one day, to keep the flies off his sister's baby.

Young West's immediate prospects, however, were somewhat handicapped, since at this time there were neither great painters, paintings, nor even schools of art in America.

No doubt, hearing of this, a cousin sent the lad a box of paints and pencils, brushes, canvas, and six engravings—the rarest gift ever!

kissed and made to beg pardon from the schoolmaster, and so the storm passed.

When West was nine years of age, a relative took him to Philadelphia and introduced him to a painter of some local repute, Williams by name.

"What books do you read?" asked Williams, adding, "You should read the lives of great men."

These books—on art—decided the lad to become a painter.

The first pictures that he sold were done on three poplar boards that a carpenter had given him, and he received a dollar apiece for them from a neighbor.



Port Daniel. On the Bay Chaleur Portage.

and henceforth, for the most important work of his life he chose to paint almost exclusively historical and religious subjects—"subjects of rectitude and purity."

After the death of his mother, which occurred during his eighteenth year, he established himself in Philadelphia, where he received so many commissions that he was enabled to save up some money for future travel and study.

In July, 1760, he arrived in Rome. In those days, an American artist was a great novelty on the Continent, and everywhere the greatest interest was evinced in West, even noblemen outdoing one another in showing him kindness.

nal Albani, who held out both hands to greet him, asking, "Is he black or white?" "He is very fair," replied Lord Grantham.

When the youth went to see for the first time the great Italian works of art, thirty of the most magnificent equipages in Rome, filled with noblemen and others anxious to see the effect upon him, accompanied him.

To prove his right to be received on an equal footing with other artists, West now painted a portrait of Lord Grantham, which was placed in the gallery of Crespigny, and much admired.

In June, 1763, the young artist arrived in London, and here again a warm welcome awaited him. He was introduced to Reynolds and Wilson, and soon set up a studio for himself in Covent Garden.

this picture will occasion a revolution in art."

Subsequently, West painted many historical pictures, most of which were on very large canvases, for the King (George III.); also a series on the progress of revealed religion, which, after a solemn convocation of church dignitaries, found place in His Majesty's chapel.

On the death of Reynolds, in 1792, he was chosen as President of the Royal Academy, a position which he held for 28 years.

Again he gave himself up to painting for the public, and, at the age of 65, completed an immense canvas, "Christ Healing the Sick," primarily intended for a Quaker Hospital in Philadelphia.

After this, the artist took to painting other huge canvases, but they did not sell. After his wife's death, in 1817, his own health broke down, and he sank rapidly, although he was calm and cheerful to the last.

The pictures now considered his best are, "Death on the Pale Horse," "The Death of Wolfe," "The Battle of La Hogue."

The Bay Chaleur Portage

By Margaret Grant MacWhirter.

Half a century ago, the District of Gaspé—as it was then called—was a very out-of-the-way corner of British North America.

With the advent of the I. C. R., a brighter day dawned for Bonaventure County; at last there was a market, and good wages.

The distance was long, a number travelling as much as one hundred and forty miles. The cold and difficulties endured on this long, exposed road, along the bleak northern shore of Bay de Chaleur, would make interesting reading.

one of the earliest portagers to the I. C. R. works at Matapedia. This man can tell the exact location of every milepost between the county-line east and Matapedia, this knowledge often proving useful on dark nights.

When interviewed, said he, "I remember once travelling in company with an ex-sea-captain. While on the ice we were overtaken by a heavy snowstorm. The horses had all they could do to draw their loads, while we trudged behind up to our knees in snow. The captain remarked: 'We must keep the wind on our quarter, or we'll never reach the town.' Following his advice we reached our destination in safety,—being more fortunate than another man, who was lost on the ice till daybreak. Again, travelling alone with two horses, the road became impassible, and I was compelled to leave them and go a quarter of a mile for help. On my return, only their heads were visible above the drift. We dug out the horses, and, seeking shelter, I remained three days till the storm abated. In those days the drifts were deeper and harder, and the roads more impassible than nowadays. This January storm reminds me of old times. You will be inclined to be incredulous when I tell you that I have seen the snow so deep that our horses drove over the telegraph wire in the neighborhood of Carleton, and it was necessary to add pieces to the top of the poles and raise the wire.

I will remember a crowd of us once overtook a man insensible in his sleigh, a considerable distance from the shore. All we could do was clap his hands, trying to restore circulation, till we reached a hotel, where we were refused admittance by the proprietor, who declared that the man was drunk. Going to a near-by store, a doctor was summoned, and after considerable difficulty the man recovered.

On another occasion, in company with another man and four horses loaded with beef, I had an opportunity to test the faithfulness of a bull-terrier who had accompanied me for years. He lay upon one of my sleighs to guard the load. We had called at a house to get lunch and feed our horses; looking from a window in the clear moonlight, we saw a dog leave my sleigh and help himself to a beefsteak from the other man's load. Another trip a stranger joined our party and inquired if my dog would watch the loads. I replied that he would watch mine. Next morning the man found that the favors of the bull-terrier did not extend to his sleigh.

Often in spring when the roads were soft with as much as five or six feet of snow, it was no easy task to get along, and frequently tested the mettle of our best Canadian horses.

Occasionally the monotony of the journey was lightened by amusing incidents. It was in the spring, and the roads were in very bad condition. There were six horses in the party. We all called at a house to get supper and rest our horses. Among the party was a commercial traveller. While we were attending to our horses, the traveller thought a hot drink would be a comfort to us after our strenuous toil. As a beginning, he treated the women of the household, of whom there were five. When we came in we found the traveller convulsed with laughter, while an empty bottle testified to the relish with which the women despatched the liquor. The long, monotonous road was broken by pleasant calling-places, where we were served kindly and generously. Many a portager made a life-bargain with the handsome, capable daughter of the proprietor of a "calling-place."

Yes, there was much cold and suffering attendant upon this work. I am not likely to forget when a young man the siege of sickness which attacked me on one of these expeditions. I had arrived at my destination some ten miles above Matapedia, in January, and found all the bunks in the railway shacks full, so had to sleep upon the floor, in which there were wide seams. In the morning my throat was so sore that I could not swallow. Sick as I was, I immediately set off for Dalhousie, forty miles away, where I arrived before night. I found the old French doctress, Mrs. Arsenault, at Bellevue, near Dalhousie. She was a short, medium-slight, old French

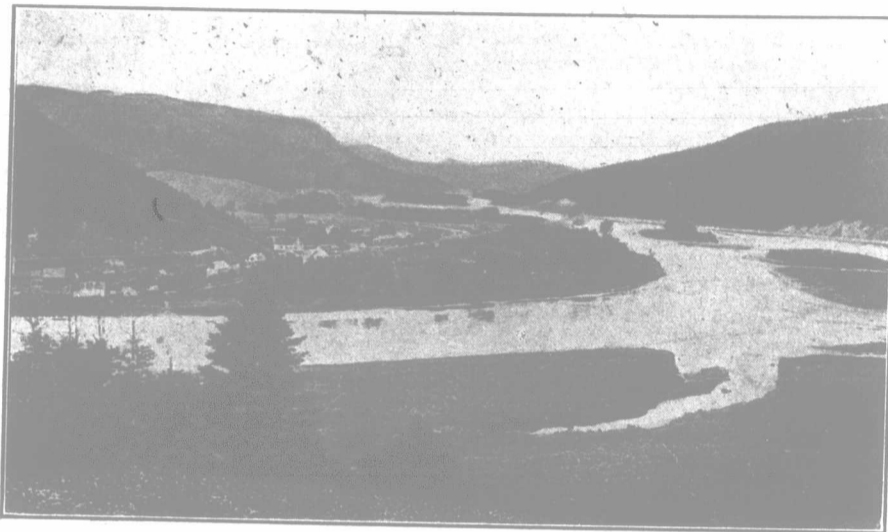
woman, gifted with a wonderful knowledge of healing, for which all summer long she gathered herbs and roots from the fields, and from which she concocted her winter's supply of medicine. She made no charge—payment being left to the generosity of the patient. The first thing she did for me was to prepare a drink of clove tea, which I promptly declared I could not swallow.

"Oh, yes," she said, "you try." Putting a finger behind my jaw-bone, on each side, she made a firm pressure. Down went the clove tea. Warmly covered up on the sofa, I slept an hour, while the old lady applied a poultice to my throat. When I got up I was able to eat a meal of bread and butter and tea. This was the beginning of a month's treatment, for I had a bad throat, which gathered and broke in

fectly happy and contented, sat Charley Woods, the full-blooded negro from above New Carlisle, facing that gale of iceladen wind.

"Hello, Charley, friend! Are you cold?" cried the ex-captain. "Hello, my two brudders! Where you going? Not cold to-day." "Where did you come from, Charley, and did you meet many people on the road to-day?"

"From Port Daniel, and you two are the first I met to-day. Not bad day; don't see why nobody on road to-day. Well, so-long, my brudders!" Off he started his horse in the face of that biting west wind. Both the captain and I were dark men, and as we pushed on with the wind in our backs,—the captain reflected a while ere he voiced his thought—finally he observed, with a laugh:



Metapedia Village, Que.

three places, discharging an enormous quantity of pus. At last I was able to go home,—but weak and useless, and unable to work till spring; but I believe my chances would have been poor had I fallen into other hands than the famous old woman-doctor of Dalhousie.

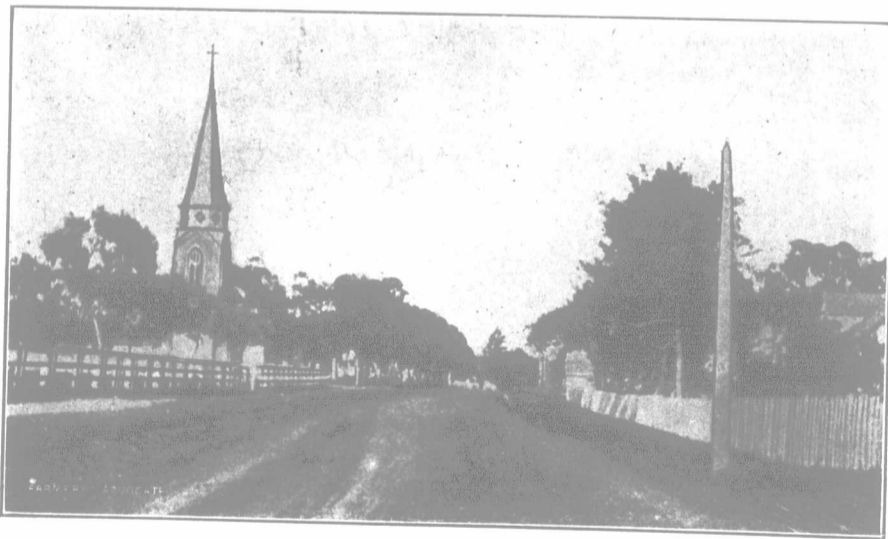
One incident more. Why I thought I had talked long enough. Let me see. About twenty-five years ago, my old friend, the ex-sea-captain and I, left for Gascons, to bring up loads of fresh cod and herring, which were still being caught, although it was Christmas week. The day was very cold, although the roads were in pretty good condition, as there was only about a foot of snow, but a heavy west wind was blowing, and the severe cold and drifting snow made it very uncomfortable travelling. We only reached Bonaventure the first day, where we were glad to spend the night.

"The only difference between a negro and two dark men is that he can face the storm, while we have to run before it."

My informant paused, then in a reminiscent tone, remarked:

"That ex-sea-captain was a wonderful man in many ways. He had most remarkable powers of endurance in his hands. Frequently have I seen him throw his mitts upon the snow, while with bare hands and the mercury twenty degrees below zero, he laced an iron tug with a rope. When I remonstrated with him for subjecting his hands to such exposure, he calmly replied:

"It's cold, but not so cold as I have seen on the banks of Newfoundland. I wish I had your feet and my hands; then I would not be afraid to challenge Charley Woods.' Poor fellow! He has passed away."



Street in New Carlisle, Que.

Next morning, we pushed on, although there was no improvement in the weather. Reaching St. Godfrey, we were shivering, although well wrapped up in our warm sleigh-ropes.

Suddenly my sea-captain exclaimed: "There's something comin'!"

"Is it a ship captain?" I inquired.

"We'll hail him, anyway," was the reply.

There on an open sleigh, seated upon a barrel of frozen fish—the sleigh entirely bare of rug or wrapper of any kind, upon the driver's head rested one of those old "Scotch bonnets," which were common many years ago, apparently per-

In those days we never dreamed of a railway through Bonaventure County. When in later days it was spoken about, knowing ones nodded their heads and talked of an "election-dodge." However, the unexpected happened, and the long portage along Bay de Chaleur is a thing of the past; passengers and freight are carried by rail, and to me belongs the honor of shipping by train the first load of beef which was sent out of New Richmond. I had endured my share of exposure, and was only too thankful that an easier and speedier mode of transportation had reached the northern shore of Bay de Chaleur.

Bright Prospects for Ireland.

Ireland, says a writer in the London Statist, a leading organ of finance and economics, is facing a bright future. The "wholesale and heartless evictions from their homes of her starving peasantry" have come to an end by the gradual division of the land among the peasantry. There is now no "land war." The Established Church, long "a bone of bitter contention," has been abolished. The population is growing rapidly and, we are reminded, a numerous population is the basis of all national greatness. It is quite "an ungrounded argument that the population of Ireland never can grow as rapidly as that of Great Britain." If Ireland has not iron and coal like England, she has other great natural resources. To quote:

"Ireland being a constituent part of the United Kingdom will continue to enjoy the advantages of the strong Government of the kingdom. Ireland also being an island, like Great Britain, has the same geographical advantage the latter has. Furthermore, she has numerous most convenient harbors. Finally, though Ireland is not so well endowed with coal and iron as is Great Britain, yet she has a counterbalancing advantage in an exceptional supply of water-power. Her water-power is sufficient to enable her to create a very great and diversified manufacturing industry, and it certainly is capable of supplying her with what probably will prove to be the greatest power of the future—electricity. So far, then, as the material accessories to national prosperity are concerned, Ireland is exceedingly well dowered by nature. If we were to stop here every impartial person, we think, would agree that we have sufficiently disposed of the objection that Ireland cannot support a much larger population that she has at present."

Next is considered "the allegation that the Irish people do not possess those qualities which enable a community to rise to great economic prosperity, and consequently to increase and multiply." This writer states that the causes of Ireland's poverty have been "the innumerable series of confiscations, not of the chiefs and nobles only, but of the whole body of the people." These acts of spoliation began with Henry II, and continued to William III. In more recent times English "dread of Irish competition" "led to the stamping out of nearly all the incipient industries of Ireland." Lastly, a cause of Ireland's poverty was to be found in "the forcible introduction and maintenance until the present time of a land system against which the Catholic population has been in revolt from the very outset." Since that time "these causes of demoralization, ignorance, and incompetence have been removed, and the Irish people are being given the right to manage their own local affairs in their own way. All experience teaches us to expect a rapid and steady increase of prosperity."

Other changes and reforms have led to the disappearance of the Ireland of Charles Lever, the distracted land of the Coercion Act and the "Invincibles." To quote further his sentences on the "quickening influence of responsibility":

"The disestablishment of the Irish Church removed what was a bone of contention between the two great religious bodies who have kept the country in strife for so long. Finally, the progress made with buying out the landlords has already put an end to the land war. . . . If all creeds and all parties, that is to say, agree to differ, and turn their best attention to making the most of their opportunities, there seems no reason why Ireland should not become an exceedingly prosperous country. Everybody who pays attention to such matters is aware that a marvelous change has come over the spirit of the Irish people during the past twenty years; that the old Ireland is disappearing and a new Ireland is taking its place; that there is a passionate desire for education; that faction is losing its attractiveness; and that the people are becoming more industrious, more eager to take advantage of opportunities, less ready to engage in feud—which simply means that as the old evil state of things has passed away the people have turned away from agitation and recognized that now it will be their own fault if they do not make themselves comfortable."—From Literary Digest.

Hope's Quiet Hour.

Make to Yourselves Friends.

I have been asked to write on the subject of "Sociability and Neighborliness." Of course, I can't be expected to be a good judge of my own writings, but it seems to me that I have written only about two things during the last dozen years—one is the real Presence of the Living God in our midst, and the other is the brotherhood of mankind. I have only two points of view; one is the reaching of heart and hands up to God, and the other is the reaching of heart and hands out to my fellows. But, evidently, one of my readers thinks the latter subject is not yet exhausted, so I am only too glad to talk some more about a favorite topic.

Our Lord gives us some unexpected advice as to the best way of using money. He says: "Make to yourselves friends by means of the mammon of unrighteousness; that, when it shall fail, they may receive you into the eternal tabernacles."—S. Luke xvi. 9 (R. V.). Then, in S. Luke xiv., directions are given for planning the invitations to a party. We are not to invite rich neighbors, nor even friends or relations, in the expectation that they will pay us back by returning our hospitality. But we are to pay special attention to the poor and the disabled, deliberately choosing those who can't make any return. When I said this was "unexpected advice," I was referring particularly to the reward promised by our Lord. In the one case He says that the friends you make by the judicious use of money will, after this life, throw open their eternal mansions to you; in the other case He says that hospitality shown to those who cannot make any return on earth will be paid back in full after this life is over. The critics who declare that Christians are inspired by selfish motives, unwilling to do anything without being paid for it—although willing to wait for their pay—may get what satisfaction they can find out of these two passages. The pay is certain, and it is accumulating compound interest in God's safe treasury, therefore it is good policy to invest as much as possible in that fashion. That sounds like cold, calculating selfishness, doesn't it?

But the Master of men knows the human heart. As a matter of fact, the hospitality shown generously to those who can make no earthly return, poured out freely even to those who are ungrateful and unloveable, never makes the hospitable person more selfish. The "true riches," promised to those who have been faithful in their use of the "unrighteous mammon" placed in their hands as a trust, unlike the false riches which this world offers, uplift and beautify the soul. The rewards held out for our encouragement are spiritual rewards—holiness, love, joy, peace, and the Master's delighted "Well done!" We don't give away a dollar here in the expectation of receiving a hundred dollars there; but, in the very giving, we learn, little by little, the inspiring truth that spiritual gains are, even in this world, infinitely more precious than gold or diamonds.

You spend a dollar or two in giving a little help to a neighbor. Are you that much out of pocket, even for the moment? Certainly not! You are richer in character—the transaction has been clear gain to you even now.

When our Lord was asked a direct question about the duty of being neighborly, He described how a certain man chose to put aside his own business, and even put his life in danger, in order to do all in his power to help a stranger and an enemy whom he found lying by the roadside. He did not wait for gratitude, but left money to be spent on this stranger after he had placed him in safe hands. Was he poorer or richer for the time and money spent? He was a nobler man than before—and which of us would not think money well exchanged for goodness—and his example has been an inspiration to millions. Outside of any reward in heaven, don't you think his neighborly kindness "paid" far better than the selfish indifference of the two men who were so intent on

their own business that they could not spare a moment to look after even a fellow-countryman whose helplessness was a strong appeal to any man with a heart?

"Sociability"—what is it? Does it mean that we should waste our own lives, and the valuable time of our friends and acquaintances, by rushing about from house to house talking about everything under the sun or over it? Does hospitality consist in always having our house full of guests, until it is more like a summer hotel than a peaceful home? Does "neighborliness" mean that we must attend to our neighbor's business and neglect our own, or fill our lives so full of useful work that we have no time to sit like Mary at the feet of Christ, or lean like the beloved disciple in restful peace upon His heart? If it means all these things, then we shall surely run our souls thin if we are sociable and neighborly; and, instead of being a link between God and our comrades, we shall develop into busybodies who never mind our own business, but are always meddling in affairs which are no concern of ours.

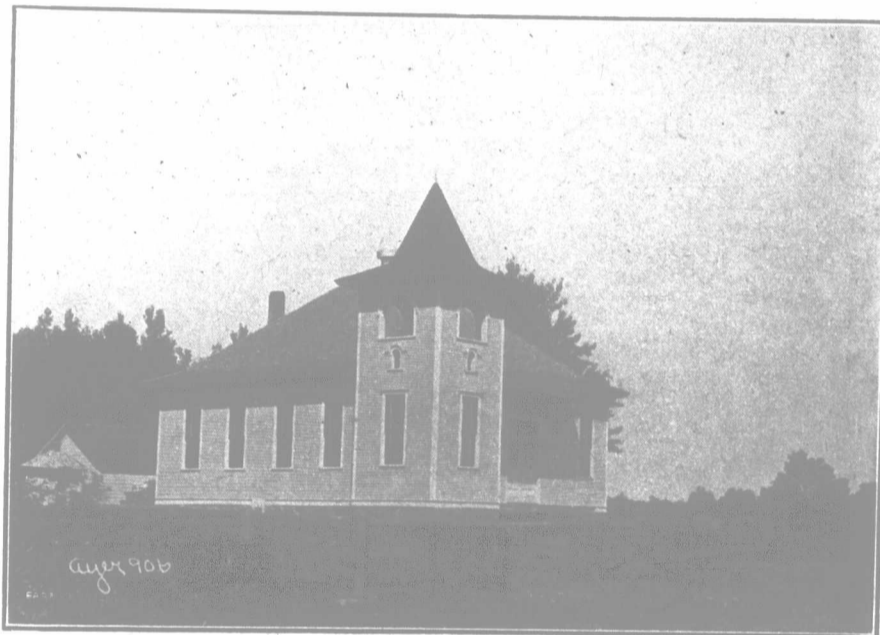
How are we to live balanced lives? We want to avoid the two extremes of neglecting the service of God in order to serve our neighbor, or neglecting our neighbor in order to serve God.

Let us remember our own weakness and emptiness. We have nothing of our own to give, and must go constantly to God to have our hands filled with gifts which we may have the privilege of carrying to those who need. The dis-

earth must be righteous as well as merciful in His demands. Yet sometimes the work seems crushing and overwhelming. Our Lord's great commission to His Church was to make disciples of all the nations. Yet the workers were few and could not cover all the ground; the heathen were dying every minute, and it was impossible to reach them all in time—unless some of them could be reached after death. He Himself—the One Who came to seek and to SAVE all the souls of men—devoted His earthly life to those who were His nearest neighbors—the people of Israel. If this command to make disciples of all nations is not an impossible one, there must be plenty of work waiting for us on the other side of death. God told the Church to do this work, and He is not unjust—therefore He will certainly give the needed opportunity.

The greatest and most important kind of neighborliness is the comforting (that is, strengthening) others with the comfort God has given us. In order to bring them help, we must keep always in living touch with Him. The nearest and surest way to our neighbor's heart is through the Heart of God, and the only way to hold closely to God is to be loving and kindly towards our neighbors. But if this is only beautiful theory, it will not accomplish much. Love must be translated into action, and then it will build itself up, slowly but surely, into habit and enduring character.

Look up joyously into the Master's smiling eyes, many times every day, ask



A Good Rural Schoolhouse in Minnesota.

ciples fed the hungry multitudes—but they had to take each piece of bread straight from the hands of Christ. We can only give love and hope, to comfort and cheer the hearts and lives of others, if we open our hearts always to receive the Life of God. And we have not all the work to do. He has other servants.

Sometimes we are overwhelmed by the amount of work there is to be done, and grow disheartened and hopeless over it. The Good Samaritan had only one wounded stranger to look after. What would he have done if there had been thousands needing attention? If he could only pay proper attention to one, how could he bear to refuse the pleading of the others?

Sometimes we are overwhelmed by well-meant missionary appeals. We are sternly informed that it is our fault that millions are dying every year in the darkness of heathenism, and that we will only do our duty the world will be won for Christ in this generation.

Of course, we are not nearly as full of missionary zeal as we should be, but it does not help us much to be commanded to do impossibilities. If a mother should think it her duty to go out to preach Christ to savages, probably her own children would grow up in heathen ignorance before she had mastered the foreign tongue and converted one black man. And she would have to answer before God for the neglect of the dear duty He had trustfully placed in her hands.

Does God ever demand impossibilities of us? Do the duties He asks of us ever conflict? The Judge of all the

The pears upon my trees are still but green,
But they will ripen in the summer sun.
Our vanity would do all things at once;
God takes His time, and puts us all to shame.
I am for trust, for working with a will,
And waiting long to see what comes of it."

DORA FARNCOMB.

The Ingle Nook.

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

Dear Ingle Nook Friends,—In a week or two from now school will be re-opening, and the chances are ten to one that a new teacher will be coming to your section. Have you thought a bit about just how you are going to receive her? Or have you thought anything at all about her?—You should, you know, because, if you have children, there is no one else in all the neighborhood who must really have so much to do with you and yours as this little new teacher.

In the first place she is likely to be very young. Town and city teachers these days stay on ad infinitum (more or less!), and little wonder. Town and city school-rooms are usually sanitary, well-lighted, well-heated, well-ventilated; there is only one class to each room; the equipment for teaching is sufficient—maps, number-boards, charts, plenty of blackboard space, sand-boards, plenty of colored crayons and plasticene and material for domestic science and manual training—all the paraphernalia, in short, which go to make teaching comparatively easy and pleasant. Moreover, there is a multiplicity of boarding-houses to choose from; the streets are likely to be kept reasonably walkable in winter; a good library is a certainty; and there is all the allurements of concert and theater and lecture hall to be counted upon. . . .

So the teacher counts herself lucky to get into a town or city school, and when once there she stays, provided, of course, the much-lauded "Prince Charming" does not put in appearance,—charming enough to throw to the winds all considerations of present advantages which may have occupied Miss Teacher's little head. Judging from the infrequency with which town teachers marry one is tempted to ask: Does Prince Charming so seldom come to these intelligent young women? Is he not charming enough, as a rule, to come up to their ideal? Or is he, in the city, switched off by the charms of the society girl, who has nothing to do but entertain, and dress, and look her very prettiest at all times and seasons? . . . But we are getting off the track.

When, on the contrary, the young teacher goes into a strange rural section to teach, she may, or she may not, be "up against it." There are some places in the country where there are practically all the advantages of the town—at least all that count, plus a few that are not to be found in the town at all. There are others, strange, backward places where nothing is comfortable, and where the majority of the people are so ignorant and uncouth that the teacher, by very reason of her superior education and refinement, is looked upon almost as an enemy. "If she dares to lick my boy she'll hear about it," is the spirit of the worthy ratepayers, and the boy, knowing this, proceeds to be "smart" and act his worst. Between these two types there are all gradations of civilization; and the teacher who is going into a new place simply has to take chances.

More than likely, however, she finds the people all right, but the schoolhouse not what it should be. Can you tell me, in the name of common sense, why it is that so many country schoolhouses are cold, mere shells against the bitterness of our northern winters? Surely if there is one building in the section that should be comfortable it is the schoolhouse. The children cannot study right when their feet and fingers are tingling with the cold, and while in school they cannot even move about to keep themselves

"You ask for the effect to follow cause Too soon and visibly. 'Twere well to wait—"

warm. Neither can the teacher do her work properly when she is cold, and the chances are that she is the coldest of all. She has to work, a great part of the time, at the blackboard, and pitying the children, she is very likely to let them stand as long as possible with their books about the stove. They don't work there; they jostle and nudge, and grin at one another, but, while there at least, they thaw out; meanwhile they "take up" a goodly proportion of the heat, and the teacher away back at the blackboard freezes.

If I were the Women's Institute all rolled into one, there is one thing that I would do, if I accomplished nothing else. That is, I would work, and preach, and scold, and collect until every schoolhouse in the country was thoroughly comfortable, and thoroughly equipped with everything necessary to make teaching effective. Just think of it;—don't you know that the most important work in this country is being done in just those little ugly, oblong buildings? Compared with the results that are really accomplished by even a fairly poor teacher the work of the strongest Short-horn Association and Holstein Association and Apple-growing Association in the Dominion sinks into paltry insignificance. What signifies the straight back and smooth flanks of a Shorthorn, or the red skin and thirteen-inch-around circumference of a Northern Spy when compared with the mind-and-soul growth of one little bare-footed, freckle-faced boy?

So have the best of schools, then put the best teachers possible in them, even though you have to pay salaries of \$700 per annum to obtain them.

I do not say that the teachers on the whole are doing the most satisfactory work. Rural teachers seem, as a rule, to be too young nowadays. They get through too soon, and are out moulding the character of children before their own is thoroughly moulded. For years this has been the case in the country schools, for there they are continually changing. After a year or so they drift into town schools, or marry some young fellow of the section, or become disgusted with the cold schoolhouses and other things, so throw it all up and take a course at business college. Other fledglings come to take their places, and so the rural school becomes a continuous kindergarten for teachers. I do think the teachers should be older, and more interested, and more sure of themselves. I do think they should, on the whole, know more about what is happening over the big world, and more of the fundamentals of agriculture, and more—immeasurably more—of all the interesting things that are to be found in the country. What a joke, what a pitiful joke is the knowledge that the ordinary rural-school teacher has of "Nature Study"!

Moreover, I do think that the rural-school teachers should be more sensible of the tremendous responsibility resting upon them. You can't make boys and girls of eighteen or twenty very sensible of responsibility, so the only way out of it is to make conditions so pleasant and so inspiring for them that they will stay on and on, developing themselves as the months go by, encouraged by the sympathy of the section to do better and yet better work, inspired by the conversation of intelligent fathers and mothers to cooperate with them in the great work of making noble citizens out of the boys and girls now in the public school,—to-morrow where?

And now, after a long circumlocution I am back to my starting point. Your new teacher is likely to be young,—so pitifully, painfully young. Mother her; don't stand off and coldly criticize,—perhaps you couldn't do any better in her place. And you may stake your bottom dollar on it that she is homesick. Of course she is proud,—she thinks that to acknowledge homesickness would be to give in to a weakness—and so she keeps a brave face. But you don't see her when the tears run down on her pillow, and when, with quivering lip she looks out at the big trembling moon and thinks, "Well, the folk at home can see that anyhow,"—the dear moon, the only connecting link with the blessed home folk!

If you could see the little teacher then, don't you think you would invite her in to tea just so soon?

Maybe, too, she will find trouble in get-

ting a boarding-place. If your home is comfortable and "home-y," and you know how to cook a decent meal—well, think about it. You don't need to keep a boarder,—we know that. A stranger is a nuisance about the house;—oh, ye-es, maybe. But then think of the forlorn, homeless little teacher. There is that room up in the corner that no one uses. Might it not be a little paradise for her contrasted with the environment. She might have to accept somewhere else? Might it not be worth while to put one's self out once in a while for the sake of someone else?

Tolstoi's creed was that we are doing wrong if we do not do the greatest amount of good that we possibly can in our journey through this life. Think about it.

And give the teacher a chance. Don't condemn her off-hand if the bad boys "cut up" on her at first. Turn your attention rather to the boys, if they are yours, and tell them "where they are getting off at"—to be very slangy.

And if the little teacher has to punish your child don't let your husband ram-page down the road to the schoolhouse and shake his fist in her face (if you have a husband who could be so ungentlemanly), and talk so loudly that half the section can hear his voice, and the little teacher shakes in her boots. She may shake, but you may depend upon it that she will despise the man who does that to the bottom of her heart; she will

brine for 48 hours. Dressing— $\frac{1}{2}$ lb. of mustard, 1 tablespoon of black pepper, 4 pints of vinegar, 3 cups of sugar, $\frac{1}{2}$ oz. turmeric, 5 cts. worth of celery seed, 1 cup of flour. Boil the celery seed to get the strength; mix the ingredients with cold vinegar, then stir into hot vinegar and let come to a boil. Pack pickles into bottles and pour the hot dressing over them; seal at once. I hope the household of "Jolly Wife's" will relish this as we do.

Someone spoke of a "badge of distinction for the Ingle Nook friends." Do not nearly all the writers to this department belong to the Women's Institute? The Institute pin is a very neat design and has been the foundation for several interesting conversations for "ships that pass in the night," as I have found with pleasure. Why not wear it always when from home? "JULIET."

Simcoe Co., Ont.

FRENCH MUSTARD PICKLES.

Two quarts cucumbers, 2 qts. small onions, 1 head celery, 1 cauliflower, 2 green tomatoes, 6 green peppers. Soak all in cold salt and water over night in separate dishes. Cut up fine. Bring all to a scald in water and a little vinegar separately, onions last before mixing with the paste; bottle cold.

Paste:—1 gal. white wine vinegar, $\frac{1}{2}$ lb. best mustard, $\frac{1}{2}$ oz. turmeric, 2 cups flour, 6 cups sugar. Boil until thickened.



Deciding the Case.

think him a low-down cur, as he is likely to be if he can rail so at a bit of a girl. But I know that your husband isn't like that. . . . If you are really very much displeased, why not go gently to the little teacher yourself and talk it all out, beginning by asking the whole truth of the matter from start to finish. You know your child is not perfect more than most other children. Mrs. B.'s son may have hit your boy, but then Mrs. B. thinks her boy just as perfect as you think yours. Very possibly the teacher may be the only one to judge justly between the two.

And if it should fall out that your child has been in the wrong, why, give in to it, and try to mend matters. "Giving in" is noble, you know, when one is on the losing side. A stiff-necked never-give-in in a bad cause can never be anything but contemptible.

But, dear me, my space has all run away. I commend the little new school teacher to your mercy. JUNIA.

MUSTARD PICKLES.

(Held over from last year.)

Dear Junia,—In reply to the request of "Jolly Wife," Huron Co., for a good recipe for mustard pickles, am sending ours.

Five quarts of small cucumbers; cut crosswise, 1 qt. silver skinned onions, 1 qt. cauliflower. Leave each in separate

I do not adhere strictly to the recipe. Last year I could not get cucumbers, so put in cauliflower and celery to make up. This will make from seven to eight quarts. A READER.

MUSTARD PICKLES.

Dear Junia and Ingle Nook Friends,—I am a constant reader of "The Farmer's Advocate," and oh, how I enjoy reading your lively and interesting chats! I have often longed to write to you, but was afraid my letter would fail to be interesting in comparison to the other ones; however, I will just make a short call this time.

"Jolly Wife" wanted a recipe for mustard pickles. Here is a very good one: 2 qts. cucumbers, 2 qts. onions, 2 qts. cauliflower, 1 pt. celery. Brine—1 pt. salt to 4 qts. of water. Let cucumbers stand in brine 4 days, onions and cauliflower 24 hours, in separate dishes; then mix and scald in enough brine to cover in kettle, then turn into colander, and drain. Mix 1 cup of flour, 6 tablespoons ground mustard, 1 tablespoon turmeric, 3 cups brown sugar, 3 peppers cut fine, $\frac{1}{2}$ gal. vinegar. Put over slow fire; stir till it boils. Return vegetables to this and heat well. Bottle while hot. Mix flour and mustard well, and moisten with warm vinegar; mix sugar and turmeric together.

Hoping Junia will not be disgusted with

this letter, I will close, wishing "The Farmer's Advocate" every success. COURAGEOUS CORA.

Middlesex Co.

We thank those who have contributed these three recipes very much. So many mustard pickle recipes were sent last year that the first were published and the rest had to stand over. Now they are in good time for this year's pickling season.

Some Seasonable Recipes.

Tapioca Pudding:—Wash 10 tablespoons tapioca in warm water, drain and put in a pan with 1 qt. rich milk. Set the pan into a kettle of boiling water and stir until the pudding thickens a little, then add 2 tablespoons butter, sugar to sweeten slightly, and the grated peel of half a lemon. Cook until done and serve cold.

Cornstarch Pudding:—Put 1 quart good milk in a saucepan. When it is scalding hot add 3 tablespoons cornstarch blended in a little milk and mixed with yolks of 3 beaten eggs, $\frac{1}{2}$ cup sugar and flavoring of lemon or vanilla to taste. Pour all into a baking tin and bake. When done spread with a meringue made of the whites of the 3 eggs beaten with a little sugar and set in the oven to brown. Serve with cream. You may spread with jam before putting the meringue on if you like.

Sunday Pudding:—Boil $\frac{1}{2}$ lb. bread-crumbs in 2 cups milk. Sweeten and flavor, and when thick stir in the yolks of 2 eggs. Put all in a buttered baking dish and bake in a very slow oven $\frac{1}{2}$ hour. Next spread with jam, and over this spread a meringue made of the whites of the eggs beaten stiff with a teaspoonful sifted sugar. Brown in the top of the oven.

Pop-overs:—Beat one whole egg and the yolk of another until light. Add $\frac{1}{2}$ cup milk and beat well, then sift in one cup flour and $\frac{1}{2}$ teaspoon salt and beat with an egg-beater until perfectly smooth, then beat in a second half cup of milk. Turn into deep buttered patty-pans, already heated, and bake in a rather hot oven.

Breakfast Corn-cake:—Cream two-thirds a cup of butter. Beat into it one cup of sugar, the yolks of three eggs, and, alternately, two cups of milk and two cups each of cornmeal and white flour, sifted with one level teaspoonful of soda and three level teaspoonfuls of cream of tartar. Lastly, beat in the whites of three eggs beaten dry.—Boston Cooking School.

A Fruit Cream:—A smooth, velvety cream which may be combined to make a fine dessert with fruit is especially desirable at this season. Put on a pint of milk in the double boiler. Beat two eggs and with a little cold milk stir very smoothly two tablespoonfuls of flour to a paste. Beat this with the eggs until very smooth and light; then add it to the hot milk, and cook until nicely thickened, stirring constantly. Add two-thirds of a cupful of sugar or more if a very acid fruit is to be used, a pinch of salt and a little vanilla or flavoring extract suited to the fruit. If possible let it become ice cold. Just before serving stir in a grated pineapple, bananas or peaches, thinly sliced, or any other high-flavored fruit. The fruit should also be as cold as possible.

Mock Birds:—Select the largest cut of veal cutlets, and have them cut less than half an inch thick. Cut each one in two pieces, removing the bone. On each piece put one tablespoonful of dressing; roll up and either tie or fasten with tooth-picks, like skewers. Fry till brown on all sides in bacon fat, place them in a casserole or basin; season, using a teaspoonful of salt, one-fourth teaspoonful of pepper, and a little cayenne, for four "birds." Add the fat in the frying-pan and one cupful of boiling water, and bake, covered closely, for one hour.

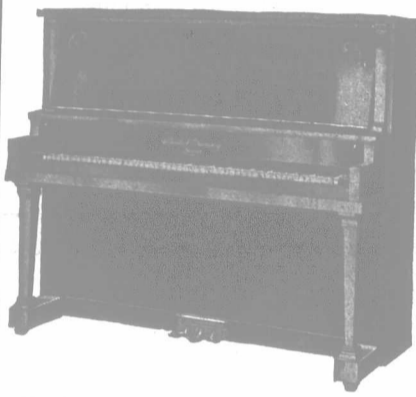
Blueberry Muffins:—Cream together $\frac{1}{2}$ cup butter and $\frac{1}{2}$ cup sugar. Add one beaten egg, and beat all until light. Sift 2 cups flour with 2 teaspoons baking powder, and add to the first mixture alternately with 1 cup milk. Beat well, add 1 cup blueberries, turn into buttered muffin tins and bake 25 minutes in a moderately hot oven.

Sour Cream Salad Dressing:—Whip 1 cup thick sour cream until stiff, and then stir in vinegar enough to give the dressing a slightly tart flavor. Add 1 tablespoon sugar and a pinch salt. This is delicious for vegetable salads.

DE LAVAL CREAM SEPARATORS

THE BEST SUMMER FARM INVESTMENT
When dairy production is largest waste is greatest and quality poorest without a separator.
De Laval Dairy Supply Co. Ltd.
Montreal Winnipeg

"Canada's Biggest Piano Value"



Style 70—Colonial

Sherlock-Manning 20th Century Piano

Examine the Sherlock-Manning 20th Century Piano. Listen to its exquisite singing tone. Ask about its many quality features—Otto Higel Double Repeating Action; Poehlmann Wire (the best imported piano wire); Weickert Felt Hammers; the famous Billings Brass Flange (the flange that endures); and other important features.

Then, when you've found out all there is to know about the Sherlock-Manning 20th Century Piano—when you've been convinced that this instrument represents the best piano value in the Dominion—then ask us the price. You'll find it much less than you expected.

But there are sound reasons to account for the lower prices as for the greater excellence of these splendid instruments.

Write us to-day for full particulars and handsome art catalogue—and we'll tell you how you can save \$100 on the purchase of as fine a piano as can be made at any price. 27

Sherlock-Manning Piano & Organ Co.
London, Canada
(No Street Address necessary)

MENTION "FARMER'S ADVOCATE."

Sour Cream Pie:—Beat yolks of 2 eggs light. Add 1 cup thick sour cream. Mix together $\frac{1}{2}$ teaspoon ground cloves, $\frac{1}{2}$ teaspoon cinnamon, pinch of salt and 1 cup sugar, and add to the cream and eggs. Beat well, then add $\frac{1}{2}$ cup seeded raisins cut in two. Bake slowly as a filling for pie.

Chocolate Gingerbread:—Mix well 1 cup molasses, $\frac{1}{2}$ cup sour milk, 2 teaspoons soft butter, $\frac{1}{2}$ teaspoon salt, 1 teaspoon soda dissolved in 1 tablespoon water, 2 cups flour sifted with 1 teaspoon each of ginger and cinnamon, 4 tablespoons grated chocolate. Bake in a loaf in a steady oven. Cover with vanilla or chocolate icing.

Creamed Beets:—Boil the beets until tender, rub off the skins and slice into a dish. Cover with the following sauce:—Beat 2 tablespoons butter in a saucepan; stir in 2 tablespoons flour, pinch salt, a scant teaspoon sugar and a dash of white pepper, then add gradually 1 cup hot cream. Heat together until smooth. Serve very hot.

Baked Squash:—Parboil a tender squash, then cut in two and remove seeds. Scoop the firm part out and put it in a bowl. Add to it $\frac{1}{2}$ cup bread-crumbs, a little cream, a teaspoon sugar, salt, pepper and butter to taste. Beat all together and heat in a frying-pan for a few minutes. Re-fill the squash shells, sprinkle buttered bread-crumbs over the top, and brown in a hot oven.

Liver Loaf:—Mince together 1 lb. liver and $\frac{1}{2}$ lb. bacon. Add salt and pepper to taste, 1 tablespoon minced parsley and 1 onion chopped fine and fried, the beaten yolk of 1 egg and the whites of two beaten stiff. Line a buttered baking dish with cracker-crumbs put in the loaf, glaze the top with the remaining yolk of egg and bake until done. Serve sliced cold, or hot with tomato sauce.

When Tomatoes Are In.

Tomato Catsup:—Select bright scarlet tomatoes, firm and not over-ripe. To half a bushel of fruit allow half a pint of salt. Slice the tomatoes (they do not need to be peeled), add the salt, and cook in a porcelain kettle until soft. Strain through a coarse sieve to remove skins and seeds. To each gallon of strained tomatoes allow a tablespoonful each red pepper, cinnamon, cloves and white ginger, one teaspoonful each mustard and grated horseradish, and a quart of vinegar. Boil until thick, stirring often. Add the spices about fifteen minutes before taking from the fire and the vinegar when cold.

Tomato and Corn Salad:—Pour boiling water over large, smooth tomatoes to loosen the skins, and set on ice. When cold peel, gouge out the center of each with a spoon and fill the cavity with cold boiled corn mixed with salad dressing. Serve on lettuce with a spoonful of mayonnaise on top of each.

Tomato Salad:—Peel nice round tomatoes and stand on ice until chilled. Just before serving cut each into eighths without separating the lower part stand each on a bed of lettuce leaves, spread the sections apart, and drop a spoonful of mayonnaise in the heart of each.

Fried Green Tomatoes:—Cut each in two, roll in flour and fry. When done pour all but a very little of the dripping out of the pan, add a dessertspoon of butter, then add slowly half a cup of rich milk. Pour this sauce over the tomatoes and serve with ham or with toast.

Jellied Tomatoes:—Cook a large onion with 4 cups stewed tomatoes. Put all through a sieve. While hot add $\frac{1}{2}$ box clear gelatine soaked in cold water. Stir until dissolved. Season, turn into cups, and chill over night.

Tomatoes and Pineapple Salad:—Mix shredded pineapple and chopped nuts with salad dressing, put into tomato cups and serve on lettuce. Chopped cucumber and onion may be used instead for a filling.

Green Tomato Pickle:—Cut in bits, sprinkle lightly with salt, put on a weight, and drain over night. In the morning drain, mix with onion and cook in spiced vinegar.

Whole Tomatoes:—Fill a perfectly clean jar with whole, very firm, just ripe tomatoes. Add some cloves and a little sugar mixed with vinegar and water (half and half) to cover. Put a piece of clean flannel over the tomatoes and well under the vinegar. Tie down with layers of paper, and keep in a very cool place.

Tomato Sauce (will keep for years):—

Cook 1 gal. ripe tomatoes and 5 pods red pepper together. Strain through a coarse cloth, and stir in 2 ozs. black pepper, $\frac{1}{2}$ oz. white mustard seed, $\frac{1}{2}$ oz. allspice and 1 pint vinegar. Boil slowly 3 or 4 hours and bottle while hot, corking tightly.

The Scrap Bag.

TO RESTORE COLOR.

When soda, soap or ammonia has taken color out of goods add vinegar to the rinsing water to bring it back. If acid has taken out the color use ammonia.

FOR GREASE SPOTS.

Solvents for grease are alcohol, ether, benzine, gasoline, and turpentine.

TO PEEL TOMATOES.

Cover the tomatoes with boiling water for half a minute, then put in cold water and leave until perfectly cold. The skin will now come off easily while the tomatoes will be firm.

FRUIT.

Use plenty of fruit on the table. It stimulates and improves appetite and introduces water into the system, acts as a laxative or astringent, stimulates the kidneys and supplies the salts necessary to health. Fruits that are laxatives are figs, prunes, dates, oranges. Those used for diuretics are grapes, black currants, peaches. The refrigerants are red and white currants, gooseberries, lemons, limes and apples. The astringents are blackberries, raspberries, quinces, pears, wild cherries, cranberries.

COOKING ONIONS.

Soak them in warm salt water an hour before cooking. Drain and cook as usual.

HOMEMADE FLY PAPER.

Mix together equal parts by measure of resin and castor oil. Stir over hot water until mixed, then while still a little warm spread on any strong paper that is not porous; foilscape is good.

FRUIT STAINS.

Fruit stains on white material will usually give way to soaking in thick sour milk. Rinse in lukewarm water without soap, and repeat if necessary.

BLUE LINEN.

Before washing blue linen, or white embroidered with blue, soak the article for an hour in water to which sugar of lead has been added, 1 oz. to the gallon of water.

TO REMOVE STAINS FROM A MATRESS.

Cover with a paste of raw starch and water. When dry brush off with a whisk broom.

PINK GINGHAMS.

Use a little red ink in the water, just as you would bluing, when laundering pink articles.

A DUSTLESS DUSTER.

Keep the dust-cloth in a closed can which has some absorbent cotton soaked with coal oil in the bottom. The cloth will absorb enough oil to enable it to take up the dust.

TO SECURE A GOOD COMPLEXION.

Do not eat too much or too little, and but very little pastry or pickles. Eat meat only once a day, and very few greasy or fried foods at any time. Have plenty of fruit and vegetables in the diet. Eat slowly and hygienically, and drink hot water with lemon or salt in it night and morning. If very thin, eat plenty of farinaceous foods, such as rice, cornmeal, oatmeal, also peas, beans, potatoes, eggs, milk, green corn. Cocoa is also very fattening.

BIRDS AND INSECTS.

"The birds destroy enormous quantities of insects. A conservative estimate of the number consumed by each individual insectivorous bird is one hundred a day."

"The figures for Massachusetts alone illustrate what birds can do: A careful estimate gives five insect-eating birds to the acre, making a total of at least 25,600,000 for the State. These birds consume daily, between the first of May and the end of September, 2,560,000,000 insects, or 21,000 bushels of them. The total for the season is about 360,000,000,000 insects, or 3,000,000 bushels. If this bird population could be increased

GOOD HOME-MADE BREAD

Your baking will be successful if you use

WHITE SWAN YEAST CAKES

Makes light, sweet and wholesome bread. If your grocer hasn't got it (6 cakes at 5c.), send us his name and ask for free sample.

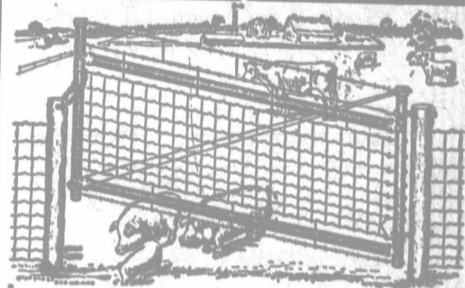
White Swan Spices & Cereals, Limited
Toronto, Ontario.

Something New

To Remove Superfluous Hair

is "discovered" and advertised almost every week. Avoid these humbugs. Electrolysis is positively and absolutely the only permanent treatment. Our method is safe, assured satisfactory and is not painful. Chronic or stubborn cases a specialty. Booklet "E" mailed free. Consultation invited regarding the above or any Skin, Scalp, Hair or Complexional trouble.

HISCOTT DERMATOLOGICAL INSTITUTE
61 College Street, Toronto. Estab. 1892



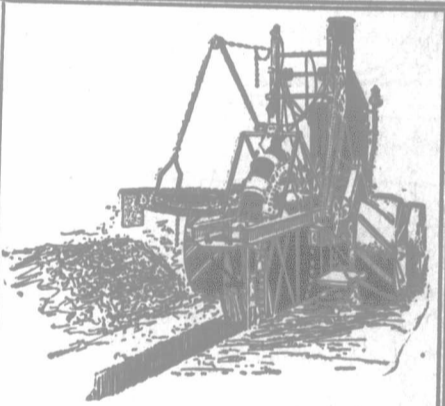
Clay Steel Gates

Can be easily adjusted to let small stock through. (See illustration)

They are the most convenient and serviceable farm gates made. Positively keep back breachy bulls. They cannot bend, sag, break, blow down or rot, and are fully guaranteed.

20,000 Clay Gates sold last year. Write for our 60 days' free trial offer; also our illustrated price list.

CANADIAN GATE CO., LTD.
34 Morris St., Guelph, Ont.



Start a Good Paying Business of Your Own

HUNDREDS of men are earning \$15 to \$18 a day clear profit doing contract ditching with the

BUCKEYE TRACTION DITCHER

No other piece of machinery used on the farm pays as big a profit on the investment. One man can operate the gasoline outfit, or two men the steamer. You can work nine or ten months in the year.

Every farmer wants Buckeye ditches, because they are better and true to grade.

As soon as you buy a BUCKEYE TRACTION DITCHER, gasoline or steam, you'll get all the work you can handle. Farmers who have seen BUCKEYE ditches will not have hand-dug ditches at any price.

Write to-day for Catalogue T, and let us tell you what other men are doing with the BUCKEYE.

The Buckeye Traction Ditcher Co.
FINDLAY, OHIO

PLEASE MENTION THE ADVOCATE.

FARM LABORERS' EXCURSIONS



\$10.00

To Winnipeg via Chicago

Plus half-cent mile from Winnipeg to destination, but not beyond MacLeod, Calgary or Edmonton.

RETURNING

Half-cent mile to Winnipeg, plus \$18 to destination in Eastern Canada.

August 20th—From Toronto to Sarnia Tunnel, inclusive, via Stratford, and all stations south thereof in Ontario.

August 23rd—From all stations north of, but not including Main Line, Toronto to Sarnia Tunnel, via Stratford; all stations Toronto and north and east of Toronto to Kingston and Renfrew.

August 28th—From all stations Toronto and east, and east of Orillia and Scotia Junction.

August 30th—From all stations Toronto to North Bay, inclusive, and west thereof in Ontario.

The Grand Trunk Pacific Railway is the shortest and quickest route between Winnipeg-Saskatoon-Edmonton. New fast Express Service between Winnipeg, Yorkton, Canora and Regina.

Full information, tickets, etc., from any Grand Trunk Agent.

When Writing Advertisers, Please Mention "The Farmer's Advocate"

one bird to the acre, it would mean the destruction of 600,000 more bushels of insects during the five months. Can we therefore afford to sacrifice the life of even one of these industrious servants?"—Teach your children to protect bird life.

THE WOMAN WHO KEEPS YOUNG.

She doesn't allow her face to reflect every mental perplexity. She rests as she goes along—that is, she doesn't keep going until she can't rest. She humors her eyes instead of tormenting them. She doesn't strain them by injudicious overwork, and she remembers that constant blinking tends to make the network of tiny wrinkles around the eyes that are so disfiguring to an otherwise youthful face. She takes good care of her hair and keeps it glossy and well dressed. If her hair is gray, she wears colors that are most becoming, pink, gray, mauve and white. She makes the best of her good points, and any of her points that are not good she tries to improve. She remembers that hands show age almost as much as the face, and she cares for them accordingly. By constant manicuring and by treating the skin to frequent applications of cold cream or a good lotion, and using the best soaps, she keeps them dainty and attractive looking.

If she is approaching middle life she avoids fussiness in dress, keeping to more simple lines and carefully avoiding hats that are too large and materials that are too pronounced in pattern. By closely following this rule and selecting her clothes to suit her own individuality, she will take at least ten years off her age and help to prove the popular theory that there is no such thing as the modern woman's growing old. In planning her gowns she has the good sense to know that she will appear younger in a dress which is really suitable and becoming than she will in one adapted to the age which she wishes to be considered.—New York Mail.

Cunningly - Designed House Dress.

"This is a house dress that serves the purpose of an apron or a wrapper, yet looks neither. It fills all the requirements of the woman in the house, in the camp, or in the garden, for it slips on easily over any dress, covers it completely, and fastens almost of itself. It slips on like a coat, and the belt is carried through a small opening on the opposite side of the garment; then using the loop provided for it at the waist-

line, a second belt is drawn around to the back, where all one has to do is to snap the fastener, and it is on. It is so neat, trim, and tidy, and at the same time comfortable, that it appeals immediately to every woman's innate sense of cleanliness and economy, because it gives so much real service at so little cost. It is made of fashionable percale, in a gray and white nurse's stripe, in checks, polka dots, and light and dark blue chambrays."

The above is what the well-known fashion magazine, "Vogue," says of the unique house dress which was advertised in our issue of July 4th. The garment is just the thing for hot weather, worn as a dress—not an overdress—as it requires very little underclothing. Try one. Address, The Baldwin Garment Co., 589 Richmond St., London, Ont. Price, \$2.00 to \$2.15.

The Beaver Circle.

OUR SENIOR BEAVERS.

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

Senior Beavers' Letter Box.

Dear Puck and Beavers,—I thought I would write, as I am much interested in your Circle. My father has taken "The Farmer's Advocate" for several years. I have been going to school since I was six, and I am now in the Junior Fourth. My teacher's name is Miss Spears, and I like her very much. There are between twenty and twenty-five in our school. I am glad to see so many Beavers interested in this Circle. I wrote once before, but I think I must have got into the w.-p. b. I think my letter is getting long, so I will stop, wishing the Circle every success. Good-bye.

ALICE RAVEN
(Age 14, Jr. IV.)

Cutler's, Ont.

Dear Puck,—I want to tell you about a colt of my uncle's. It is just about a year and a half old, and can do a lot of things you would never think about. I'm just going to tell you what he did one day. He saw a sheep in the yard, so he picked it up and threw it over the barnyard fence, but it did not get killed. Another time he picked up a tin pail and threw it at me, but it hit another horse. Sometimes it is running after the calves. When one of them was just a week or two old, it bit both of its ears off. I tell you that calf's ears were very sore. My youngest brother, who is 17 years old, went to camp in June. As my letter is getting very long, I must close for this time. Here is a verse I would like to tell you:

"One gentle word that I may speak,
Or one kind, loving deed,
May, though a trifle, poor and weak,
Prove like a tiny seed:
And who can tell what good may spring
From such a tiny little thing?"

JENNIE PHILLIPS
(Age 13, Book IV.)

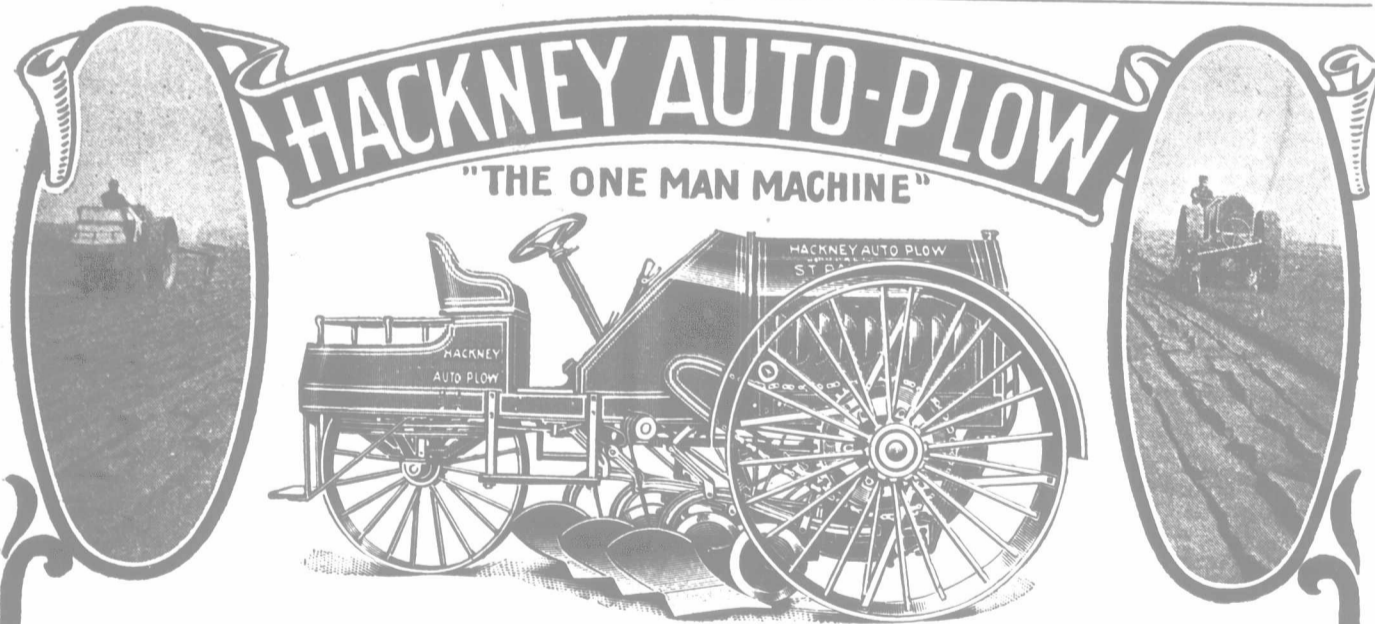
Alberton, Ont., R. R. No. 1.

Dear Puck and Beavers,—I read most of the letters in the Beaver Circle every day, and I think them fine. I received my prize for the best drawing in April, and I like it fine. Thank you ever so much for it, Puck. I am thirteen years old, and tried the Public School Leaving Examination in June. I go to school every day, as we live just about three-quarters of a mile from Hyde Park. We have about ninety chickens out now and five ducks. We did not have very good luck with our ducks, but we have had good luck so far with our chickens. We have also some goose eggs set.

For pets I have a rabbit, a cat, and a dog. I have had my rabbit for about a year. Hoping this will escape the w.-p. b., and wishing the Circle every success, I remain,

M. DELL RAMSAY.

Dear Puck and Beavers,—As this is my first letter to the Beaver Circle, I will try not to make it very long. My father has taken "The Farmer's Advo-



Great Labor-Saving Machine For The Farmer

THE bane of almost every farmer's life is being obliged to depend on "hired help." The loss of "man" or "two," at certain seasons of the year, is a very serious matter and often involves loss of crop. The HACKNEY AUTO-PLOW, the only "one man machine" on the market that can be used successfully for plowing, seeding, haying, harvesting, as a stationary engine for power purposes, and as a tractor for hauling loads, etc., makes the farmer INDEPENDENT and solves the vexatious labor problem. It eliminates drudgery and helps to keep the "boys" on the farm.

HACKNEY MANUFACTURING COMPANY,

The Hackney Auto-Plow will do the work of 10 horses and 2 men plowing and plows from 10 to 12 acres per day. It is a tireless worker, day or night, and there is no cost for "keep" except when in operation. So simple in construction and easy to operate that it is really a pleasure to run it. The cost is less than the medium priced automobile.

The Hackney Auto-Plow is the only machine that WORKED EVERY DAY at the field trials at the Minnesota State Fair, Catalog, photographs and testimonial letters, from satisfied users, free on request.

618 Prior Avenue, ST. PAUL, MINNESOTA

"cate" for about ten years, and I have always enjoyed reading the letters of the Beaver Circle. I live about half a mile from school on a farm of over 100 acres, and go to school almost every day, but hope to enjoy the holidays for a change. I will close, wishing the Circle all success with their gardens.

VIOLET CLEMENS
(Age 13, Book IV.)

Ravenswood, Ont.

Dear Puck and Beavers,—As my first letter was printed, I will take courage to write again. It is just lovely in the woods now, the air smells so sweet. We have two cosset lambs, one big one and a small one. You ought to see them play when we let them out of their pen. The big lamb can jump pretty high.

Did you ever make your initials with lilacs? I will show you how. Take a piece of paper and prick your initials on it with a hat-pin. Then pick off the little lilacs and stick them in the holes; then press it in a book. When it is done it is very pretty.

As my letter is getting long, I will close, wishing the Beavers every success.
BERNICE HUNTING (age 12).
Huntingville, Ont.

Dear Puck and Beavers,—I live five miles from Guelph and one and a half miles from Weisenburg Station, on the new C. P. R. line. I like going to school. Ours is a new red-brick school-house, built two summers ago; it is on my mother's farm, so you see I have only to go a few rods and I am there. The teacher's name is Miss H. Elevat, and we like her very much. I am eleven years old and in the Fourth Book. For pets I have guinea-pigs and rabbits, and my little brother, Allan just loves to play with them when I am at school. My father died four years ago. I have a big brother, Jim, who manages the farm for my mother, and one sister, Beatrice, and another brother, Lorne. We have rural mail and telephone in our district, which, we find, is very convenient. We all like "The Farmer's Advocate" very much. My big brother, Jim, could not farm without it. He has got two other boys to subscribe for it. Well, I must close, or I will be dropped into the waste-basket the very first time. Wishing the Beaver Circle every success.

TOMMY HASSON (age 11, Jr. IV.)
Ariss P. O., Ont.

Dear Puck,—This is the first time I have ventured to write to your cozy little corner, but I could not resist the temptation any longer. We live on a farm about two miles from Lakefield and about nine from Peterboro. We have fourteen cows and four little calves. We also have six horses and some pigs. I go to High School at Lakefield and like it very well, but holidays are here now, for which I am very glad. We have thirty-four chickens and thirty-two turkeys. One little turkey got its leg broken, and I have it in the house for a pet. I do not want to make my letter too long, so I will close now, wishing the Beaver Circle every success. Hoping to see this in print in the near future.

ALICE E. JOHNSON
(Age 14, Continuation Class).
Peterboro, Ont., R. R. No. 4.

Dear Puck and Beavers,—I will tell you about the road-work. I could hardly wait till Thursday, which was the day we were going to start. I got out of bed pretty early that morning, brushed off the team, and harnessed it with the best harness. After that I went to breakfast. I hitched up the team about half-past six o'clock, then father and I went back to the pit. There were a few shovellers there, and one team. The shovellers started about seven o'clock. We drew gravel all day till about six o'clock in the evening. Friday went about the same as Thursday, but some men put in a culvert on our concession. We had to work about an hour Saturday before we were done.

I think it is bed-time, so please let this escape the w.-p. b., also excuse my scribbling and blots. Good-bye.

HARRY SCHELL (Sr. IV. Class).
Walkerton P. O., Ont.

Dear Puck and Beavers,—As I have been a silent but interested reader, I thought I would write. My father has taken "The Farmer's Advocate" for over ten years, and thinks it a splendid paper. I live on a farm a mile and a half west of Bath, on the north shore of the Bay of Quinte. We live on a farm of two hundred and fifty acres. I have one brother, seven past, whose name is Walter, and had another brother ten years old who died two years ago. We have a mile and a half to go to school. We have a High School. My brother plays mostly with his pet dog, Watch. He is a kind dog, and will go after the cows every night about half-past five.

DORA D. SWITZER (age 13, Sr. IV.)
Bath, Ont.

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for about twelve years and likes it very much. I like reading the letters very much, so I thought I would make an attempt to write. For pets I have a dog, some hens, and two kittens. My dog's name is Glen, and he will not let anyone touch us that he thinks will hurt us. I have two brothers and one sister, and we live on a farm that contains one hundred acres. I also go to school, and am in the Senior Third. I guess I will close, as my letter is getting long, hoping this will escape the w.-p. b. Good-bye.

JOHNNY EDGAR
(Age 10, Sr. III.)

Gorrie P. O., Ont.

Dear Puck and Beavers,—I see "The Farmer's Advocate" every week, as it comes to our home. I enjoy reading the letters very much. I live about a block from the school. My teacher's name is Miss Edmiston. I like her very much. We are building a new barn, and it is nearly finished. My pet is a canary. I had two kittens, but they both died. I have a garden of my own this year, and think it is a very nice thing for children. I have one sister and one brother; my brother is out West. I haven't seen him for about five years. My sister teaches school here. Wishing the Circle every success.

NORMA STAPLES
(Age 11, Class Sr. III.)

Princeton, Ont.

Dear Puck and Beavers,—I have enjoyed reading the letters in the Beaver Circle since I came here. My home is in North Yakima, Wash., on the Pacific coast. I have visited Portland, Ore., and Seattle, Wash. I came to Ontario January 9, 1912. We came through the States, by way of Chicago. I saw some very pretty scenes on the trip, but we did not enjoy it much an account of the weather being so much colder than our climate. I visited my aunt in Boston, Mass. I am going to school here now, and am in the Third Book. I like going to school here much better than in the States, as they have a better system of teaching. I will close, hoping Puck will not send this to the awful w.-p. b.

MARIAN McPHAIL (age 12, Jr. III.)
Alvinston, Ont.

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for about three years. He takes many other papers also, but he thinks "The Farmer's Advocate" the best of them all. I enjoy reading the letters which the other Beavers write, and have long wished to join your Circle. I live on a farm on the Manitoulin Island, near the town of Gore Bay. We live a few rods from the schoolhouse, and have a very nice teacher; her name is Miss Orr. We have two little colts, but have not named them yet. I have a little kitten; its name is Dick. I have also a dog and a pet cow. The dog's name is Beautiful Joe. The cow's name is Belle. She will follow you around, and every night when it comes milking-time, she will bawl to be milked first. As my letter is getting rather long, I will close with a riddle.

Once in a month, twice in a moment, and never in a hundred years. Ans.—The letter m.

JEAN EMIRY (age 11, Book IV.)
Foxey P. O., Manitoulin Island, Ont.

Dear Puck,—We have been taking "The

IT COSTS YOU LESS TO USE THE BEST

You will pay a little more for the best at the time, but the best is always the cheapest in the end. There are many reasons why for fertilizers you should buy the best.—

HARAB ANIMAL FERTILIZERS

They produce big crops and satisfied customers. They cost very little more, but are without doubt the best. They are natural fertilizers, and contain the true plant food in available form. They are put up in better condition than any other brand on the market, bar none. They can be sown in an ordinary drill. They are made in Canada. Write us direct, or call on nearest agent. We will help you to grow bigger crops of fall wheat with less labor and expense.

HARAB FERTILIZERS
HARAB POULTRY FOODS
HARAB ANIMAL FOODS

Made in Canada by

The Harris Abattoir Co., Ltd.
TORONTO, ONTARIO



50,000 FARM LABORERS WANTED

FOR HARVESTING IN WESTERN CANADA

"GOING TRIP WEST." \$10.00 TO WINNIPEG Plus half cent per mile from Winnipeg up to MacLeod, Calgary, or Edmonton.	"RETURN TRIP EAST." \$18.00 FROM WINNIPEG Plus half cent per mile from all points east of MacLeod, Calgary or Edmonton to Winnipeg
---	--

GOING DATES

AUGUST 20th—From all stations on all lines on and South of the Grand Trunk Main Line, Toronto to Sarnia, including all stations on the C.P.R. Toronto to Windsor (inclusive) and Branch Lines including Guelph sub-division from Guelph South and from Brampton South.
AUGUST 23rd—From Toronto, and all stations north of, but not including the Grand Trunk Main Line, Toronto to Sarnia, and from Toronto east to, but not including Kingston, Sharbot Lake and Renfrew; and C.P.R. Lines west of Renfrew.
AUGUST 25th—From all stations in Ontario, Toronto and East, Orillia and Scotia Junction and east; also east of North Bay, and Eastern Ontario.
AUGUST 30th—From Toronto and all stations west, in Ontario; North Bay and west, including C.P.R. stations, Sudbury to Sault Ste. Marie, Ontario.

ONE-WAY SECOND-CLASS TICKETS WILL BE SOLD TO WINNIPEG ONLY

One-way second class tickets to Winnipeg only will be sold. Each ticket will include a verification certificate, with an extension coupon. When extension coupon has been signed at Winnipeg by a farmer, showing he has engaged the holder to work as a farm laborer, the coupon will be honored up to September 30th for ticket at rate of one-half cent per mile (minimum fifty cents) to any station west of Winnipeg on the Canadian Pacific, Canadian Northern or Grand Trunk Pacific Railways in Manitoba, Saskatchewan or Alberta, but not west of Edmonton, Calgary or McLeod, Alta.

A certificate will be issued entitling purchaser to a second-class ticket good to return from any station on the Canadian Pacific, Canadian Northern, or Grand Trunk Pacific Railways in Alberta, Saskatchewan and Manitoba east of MacLeod, Calgary and Edmonton, to original starting point by the same route as travelled on going journey on or before November 30th, 1912, on payment of one half cent per mile (minimum fifty cents) up to Winnipeg added to \$18.00 from Winnipeg, provided the holder deposits the certificate with the ticket agent on arrival at destination, and works at least thirty days at harvesting. For full particulars see nearest C.P.R. Agent, or write—

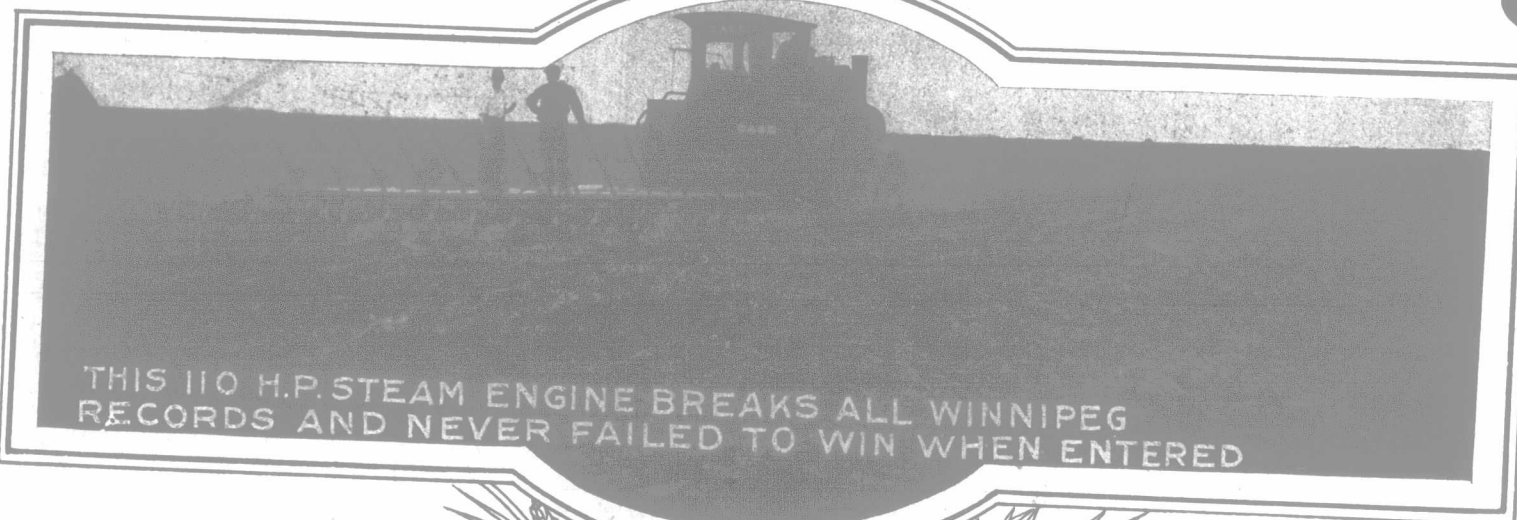
M. G. MURPHY, D.F.A., C.P.R., Toronto

When Writing Advertisers, Please Mention "The Farmer's Advocate"

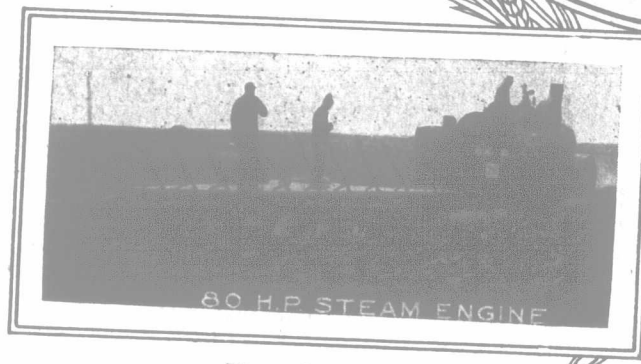
CASE makes Best Records at Winnipeg

in 1912 Motor Contest

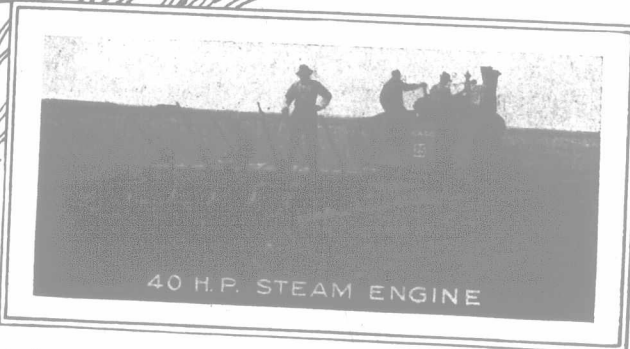
Wins Gold Medal for Steam Engine Wins Gold Medal for Gas Tractor



THIS 110 H.P. STEAM ENGINE BREAKS ALL WINNIPEG RECORDS AND NEVER FAILED TO WIN WHEN ENTERED



60 H.P. STEAM ENGINE



40 H.P. STEAM ENGINE

These Steam Engines broke all Winnipeg Records and were awarded diplomas instead of Gold Medals, because no manufacturers dared to compete in these classes against Case.

"CASE"
THE
ONLY ENTRANT
TO WIN
GOLD MEDALS
IN BOTH
STEAM & GASOLINE
CLASSES.



THIS 40 H.P. GAS TRACTOR OUT-CLASSES ALL WINNIPEG COMPETITORS

The Winnipeg Motor Contest is International, under supervision of the Canadian Government and open to all Manufacturers of Farm Power Machinery.

The remarkable performance of the Case 40 H. P. Gas Tractor at the Winnipeg contest is more evidence of the Absolute Protection afforded by the Case Policy.

It has always been the Policy of the Case Company to do their experimenting at their own expense—not at the expense of the customer. Before a machine or improvement is allowed to go on the market under the Case name, it is tried out time and again by the severest tests that can be devised—subjected to strains and conditions far more severe than will ever be encountered in actual every day use—so that when we are finally satisfied to put the name "Case" on anything, you know beyond all question of doubt that you can safely bank on everything we claim for it.

The Case Gas Tractor is the result of 20 years of experimenting in the Case Laboratories and in the Field. It is backed and guaranteed by the 70-year reputation of the Case Company as builders of Reliable Machinery. Therefore, when we placed it on the market, we knew it was "right" down to the smallest detail of its construc-

tion. By winning the Gold Medal in competition with the pick of the world's best makes, the Case Gas Tractor has given a demonstration of Low Fuel Consumption, Power, Ease of Operation and Perfect Work under severe Field Conditions never equalled by a Gas Tractor.

How can any buyer, in the face of such overwhelming evidence of the All-round Superiority of the Case Gas Tractor, figure that he is getting the worth of his money in purchasing any other?

Every Farm Power User and every one considering the purchase of a Gas Tractor either now or in the future, is vitally interested in learning about the many improvements in Gas Tractor building embodied in the Tractor that proved itself best by winning the Gold Medal at Winnipeg. It certainly wouldn't be wise to buy a Gas Tractor without at least investigating the Case.

Every Case 40 Gas Tractor is an exact duplicate of the one that won the Gold Medal at Winnipeg. They are on exhibition at all our Branch houses as well as the Case 60 H. P. Oil Tractor. Call at our nearest branch house and have them explain it to you, or if you can't do that, write us at once and we will mail you complete specifications and other information of vital interest.

WE have stated in the past that there could be no close competition between Case Engines and those of other makes. When Case competes, it is only against its own records. The truth of these statements is made doubly apparent by the 1912 contest; the nearest competitor in 1912 used 60% more coal per acre than Case. The best competitor's record in 1911 shows over 90% more coal used per acre than Case used in 1912. These results prove conclusively the dominance of the Case Steam Engine and the wisdom of the Case policy in continuing its progress in perfecting and refining the Steam Engine. Thus it has been proven by every possible test that the Case Steam Engines in competition and in every-day performance stand in a class by themselves. Here are shown the results of the 1910, 1911 and 1912 Winnipeg contests tabulated for easy comparison of the Steam Engines in different classes. The figures are official and speak for themselves.

Summary of Brake and Plowing Tests in 1910, 1911 and 1912 Winnipeg Contests for Steam Engines

Entrant	Coal Required to Deliver 10 H. P. for 10 Hours		Coal Required to Plow One Acre
	At the Fly Wheel	At the Draw-Bar	
Entrant No. 13-1910	416	906	147.2 lbs
Case 75 H. P. No. 14-1910	358	746	120.6 "
Entrant No. 15-1910	362	832	149.6 "
Case 110 H. P. No. 16-1910	304	716	99.2 "
Entrant No. 17-1910	407	817	120.8 "
Entrant No. F26-1911	557	"	"
Entrant No. F27-1911	500	1593	236.1 "
Entrant No. G28-1911	399	1490	189.2 "
Entrant No. G30-1911	387	1900	208.0 "
Entrant No. G31-1911	452	1365	206.6 "
Case 80 H. P. No. 26-1912	379	644	97.5 "
Case 110 H. P. No. 27-1912	301	660	99.3 "
Entrant No. 29-1912	423	1004	155.9 "

14 Steam Engines were exhibited at the Winnipeg Fair-grounds, entered by 8 manufacturers. Why weren't they entered in the contest? Because their makers knew that they would have no chance to even make a creditable showing against the Case Engines.

Send for Catalog on Case Steam Engines for all purposes.

Every Case Sale is backed by Case Service—65 Branch Houses and 10,000 Dealers in United States and Canada.

J.I. CASE THRESHING MACHINE
CANADIAN BRANCHES, TORONTO,

CO. RACINE · WIS · U · S · A · INCORPORATED
WINNIPEG, REGINA & CALGARY



POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

CHOICE S.-O. White Leghorn Cockerels for sale, \$1.00 each. Geo. D. Fletcher, Binkham P.O., Erin Sta., C.P.R.

\$6.41 PER HEN—Write for our beautiful illustrated catalogue. Photos from life. B. P. Rocks, White Wyandottes, R.C.R.I. Reds, S.-O. White Leghorns. Eggs: \$1.50 per 15; \$2.75 per 30; \$7.00 per 100. L. R. Guild, Box 16, Rockwood, Ont.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock. **TERMS**—Three cents per word each insertion. Each initial counts for one word and figures for advertisement inserted for less than 50 cents.

ALBERTA FARMS—Famous Red Deer district for mixed farming. We control twenty thousand acres close-in. Catalogue on request. Cunningham Land Company, 21 Ross Street, Red Deer, Alberta.

EXPERIENCED Canadian farmer (married) wishing position taking charge of farm. Apply: Box 21, FARMER'S ADVOCATE, London.

FARM—Want to buy good farm, from owner only. State price and description. Address: Malcolm, Box 754, Chicago, Ill.

FOR SALE—100 acres clay loam to clay; frame house; bank barn; five miles from Victoria Harbor and Port McNicol, 1 1/2 miles from Vasey; good for grain, fruit and dairying. Price, \$3,500. Apply to George Jones, Vasey, Ontario.

ON SHARES—100-acre dairy farm; good soil and buildings; small house; cement silo; all stock and implements supplied, except horses. Address: W. G., "Farmer's Advocate," London.

VANCOUVER ISLAND, BRITISH COLUMBIA, offers sunshiny, mild climate; good profits for men with small capital in fruit-growing, poultry, mixed farming, timber, manufacturing, fisheries, new towns. Good chances for the boys. Investments sale at 5 per cent. For reliable information, free booklets, write Vancouver Island Development League, Room A, 23 Broughton Street, Victoria, British Columbia.

VALUABLE FARM FOR SALE—The undersigned offers for sale that valuable farm known as the Case Homestead, on the London Road, 1 1/2 miles north of Exeter, being lot 7, in the 1st Concession of the Township of Hay, in the County of Huron, containing 97 acres of land of the very best quality. This farm is considered one of the best in the populous and productive district in which it is situated. There is a first-class brick house with slate roof, hard and soft water, sink, bath and other modern appointments. Also an up-to-date bank barn, 52x86, with water throughout and hay-fork tracks; litter carrier in the stables and a power windmill. The land is clean and in first-class condition. Intending purchasers are invited to inspect the crop now growing on the land. There are 5 acres of hard maple bush and 1 acre of orchard. Possession after harvest this year. For further particulars apply to: Dickson & Carling, Barristers, etc., Exeter, Ontario.

WANTED—Cash paid for Military Land Grants in Northern Ontario. Please state price and location. Box 88, Brantford.

WANTED—At once, assistant buttermaker. State wages and experience. Geo. Jaques, Winchelsea, Ontario.

WANTED in Toronto—Two housemaids, holidays at Christmas; two months off in summer. Drawer 30, Woodstock.

223 ACRES, York County, Township of Vaughan, 15 miles north of Toronto, good soil for grain or fruits; well watered, good buildings, two good dwelling houses; one mile from Yonge street, convenient to church, school, post office. Terms cash. Apply: Mrs. Fullerton Gibson, Richmond Hill, Ont.

167 ACRE FARM—11 miles from East Toronto, 2 1/2 miles to Unionville, 1/2 mile to school, 1 1/2 miles to good roads being built through York County. Good frame house, plenty of timber to build barn. Excellent chance anyone wanting good wheat-growing farm, at \$65 per acre. Apply to J. Bell, Amber, Ontario.

Dawson's Golden Chaff Wheat

Highest yielder at experimental farm last sixteen years. Average yield 54.1 bushels. Withstood last winter well. Free of weeds. \$1.50 per bush.; over ten bush., 5% discount.

W. C. PEARCE, IONA, ONT.

Large English Berkshires—Present offering: Sows bred and ready to breed. Two choice year-old boars; also young stock of both sexes. All from imported stock. Prices reasonable.

C. J. LANG, Hampton, Ont.

Farmer's Advocate" for some time, and I enjoy reading the Beaver letters very much. I live on a farm about three miles from Alvinston. We have seven horses and a little colt that was born on the twenty-fourth of May. Our driver's name is Minnie. I go to Maple Ridge school, just a short distance from our place. It is situated on the corner. There are two large maple trees out in front of it, besides many evergreens. The schoolhouse is painted white, trimmed with red. There are only seventeen pupils attending. Three from our school wrote on the Entrance. I was one of those. We are anxious until we hear the report, and no doubt many of the Beavers are, too, but perhaps some of us will know it soon enough. I will now close, wishing all the Beavers ever success, and may they all have a good time in the holidays.

KATHLEEN MCPHAIL (age 12).

You will have heard, long ago, about the result of your examination. We all hope you have passed.

Beaver Circle Notes.

Edna Henderson (age 11), Perth, Ont., wishes Pearl Armstrong to write to her. Clarence Fitz Randolph (age 11), Bridgetown, Nova Scotia, wishes some of the Beavers to correspond with him.

Florence MacDonald wrote on both sides of the paper, so her description of the toucan had to go into the w.-p. b. Write again, Florence, but please tell us, next time, about something that you have seen.

Dorothy Rose.

Dorothy Rose had a turned-up nose. Did she worry about it, do you suppose? O, no; but a plan she began to hatch To make the rest of her features match.

First of all, she trained her eyes, Turning them up to the sunny skies. Look at the mud and dust, not she! Nothing but sunshine would Dorothy see.

A flower that droops has begun to wilt, So up went her chin, with a saucy tilt. An ounce of pluck's worth a pound of sigh, And courage comes with a head held high.

Lastly, her lips turned their corners up, Brimming with smiles like a rosy cup. O, a charming child is Dorothy Rose— And it all began with a turned-up nose!

—Pauline Frances Camp.

I Love De Banjo Best.

Dere am music in de medder, an' dere's music in de trees,
Dere am music in de summah win' an' eb'ryt'ing one sees;
But yo' nebbber gits real music till yo' feel de day's work's done,
An' yo's got a vab'rite song ter sing, an' banjo tuned up some.

Ain't no feelin' lak comes o'er me w'en de banjo sta'ts ter play,
Es I picks the strings so soft—plink, plunk—plink, plunk—ter clost de day;
Den my soul is full of longin' foh ter sing dese songs I love,
Es I t'inks about my Lizer, who am happy up above.

W'en she went erway las' summah dere was bloom upon de trees,
An' she seems de mos' lak wid me in some moments same es dese.
Dere's de cabin, ole an' shaky, whah we spent our golden days—
Oh, de mem'ry of de bygone, an' her happy, happy ways.

All de day ah knows dere's music, kase de birds mak' melody,
An' de bees keep hummin' constant 'bout de place ah' flowers be;
But I's allers feelin' lonesome, an' I's sometimes mighty blue,
Till de eb'nin sun gits sinkin', an' de day's work almos' through.

Foh I knows dere ain't no music dat my Lizer 'd lak "just so"
Es to hear me pickin' soft—plink plunk—plink, plunk—my ole banjo;
So ah plays in summah eb'nin's, toon es eb'ryt'ing's at rest,
An' ah feels dat Lizer's list'nin', den ah loves de banjo best.

—John Mac MacTavish, Seaforth, Ont., in the Buffalo Express.

REDUCES FEED BILLS PRODUCES BETTER HOGS

Saves You Money

Makes You Money

Write for prices on

HARAB' DIGESTIVE TANKAGE

The Harris Abattoir Company, Limited
TORONTO, ONTARIO

Wanted! Broilers

We are open to handle live broilers, or live poultry or any kind, in large or small shipments. Highest market prices paid. Write us for quotations

HENRY GATEHOUSE,

Fish, Game, Poultry, Eggs and Vegetables. Dept. F.A. 348 West Dorchester St., Montreal

ALWAYS WINS field competitions because of its wonderful capacity

See The
"Bissell"

Disc Harrow in action and you'll buy no other. Write for Harrow Catalog to Dept. W

T. E. Bissell Co., Limited
Etora, Ontario

ONTARIO LADIES' COLLEGE

(Trafalgar Castle)

Whitby, Ont., Canada

Perfect surroundings. Full courses in

Literature. Music. Fine Arts. Elocution. Commercial and household Science. Splendid organization. Rates moderate. Write to principal for catalogue.

REV. J. J. HARE, Ph.D.

PRINCIPAL

GIRLS WANTED

Girls from the country, without experience, are making over five dollars per week in biscuit and candy departments. For information apply: THE McCORMICK MFG. CO., LONDON

BOYS WANTED

Boys from fourteen to eighteen can make good wages. For particulars apply: THE McCORMICK MFG. CO., LONDON

TRADE TOPIC.

The makers of the well-known Canadian Gas and Gasoline Engines have decided to change the name of their engine to "Monarch." The name was changed in order to enable the company to register the name and thus protect their patents. The old name could not be registered. The manufacturers have also decided to change their firm name, formerly "The Canadian-American Gas and Gasoline Engine Co., Limited," to the "Canadian Engines, Limited." The firm name was changed because it was rather lengthy. It is unnecessary to say that the change is in the name only. The reputation of the engine for ease and economy in operation will continue undiminished, and there will be no change in the management of the business, so the same fair dealing and prompt service to their customers will continue as before. Readers are invited to send for a new pamphlet being published by Canadian Engines, Limited, Dunnville, Ont., which will leave no one in doubt that the name "Monarch" is well and consistently chosen.

Single-combed White Leghorn cockerels are advertised for sale in this issue by the Maple Leaf Poultry Farm, 70 Thornton avenue, London, Ont. These cockerels are bred right, coming from bred-to-lay stock in the United States. They will be sold right. See the advertisement in another column.

To a Money-Grabber.

Mr. Hustler, you sit in your office all day, and I note that your hair has turned gray;

You've spent all your life buckled down to your work, and you take not a moment for play.

The song of the birds and the purr of the brook are things I have always held dear,

But the dull, senseless click your cash register makes is the one kind of music you hear.

I walk through the garden of life with a smile, and I love every blossom I find.

But you're always worried and groping along with eyes that are pitifully blind.

The things that you clasp are the things that I shun, for they worry, annoy one, and jar,

So I'd rather be as poor as I am than you as rich as you are!

You look upon me as an idler, I know, and my free, careless air you despise; But my heart warms with pity whenever I see that cold, vacant look in your eyes.

I am sad for the man who spends all of his days in the midst of the turmoil and strife—

Whose heart knows no love and whose lips never smile as he goes down the pathway of life.

Be a sport, Mr. Hustler, and play the game right! Don't you know that the old sky is blue?

Don't you know that the people you pass on the way want a smile and a greeting from you?

I may be an idler, just as you say, but I laugh and the laughter rings far; Yes, I'd rather be as poor as I am than you as rich as you are.

I know, when at last I step from the ranks, that things will go on just the same;

I fill a small place in this great, busy world, and I'm only a pawn in the game.

But you are a very great man, I'll admit, and when all your business you drop,

You're bound to be missed, and, I will confess, this world is more likely to stop.

And yet, I'll not envy your wealth or your fame as the candle burns down to the end—

As, shoulder to shoulder, we grope in the vale where dreams and realities blend.

You've worshipped an image of gold in the mart, while I have but worshipped a star,

But I'd rather be as poor as I am than you as rich as you are!

—Louis E. Thayer, in New York Times.

Why should I use Canada Cement?

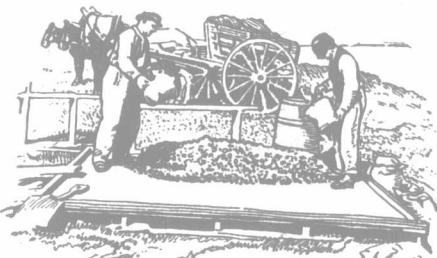


NO FARMER who has used Canada Cement asks that question, because his first trial answered it to his complete satisfaction. Yet it is only natural that a farmer who has never used concrete—perhaps yourself—should require convincing reasons before deciding to use it himself.

If we knew where you lived, and knew your name and the names of your neighbors, we could tell you of many men in your own locality who would be glad to tell why they are using Canada Cement. Since that is impossible, this advertisement will try to give you an answer to your question.

“What is Concrete?”

CONCRETE is an artificial stone. It is a mixture of cement, sand and stone, or of cement and gravel, with water. The proportions of the various materials vary according to the purpose for which the



THE mixing and placing of concrete is simple, and is easily learned. No elaborate tools are needed.

concrete is to be used. This mixture hardens into an artificial stone. This hardening process is rapid at first, and in a few days the mixture is as hard as rock. After that, time and weather, instead of making it crumble, actually make it stronger.

Since stone, sand and gravel may be found on nearly every farm, the only cash outlay is that required for cement. Cement forms only a small part of finished concrete, and this expense is relatively small.

Concrete may be mixed and placed at any season of the year (in extremely cold weather certain precautions must be observed) by your-



CONCRETE is the ideal material for barns and silos. Being fire, wind and weather proof, it protects the contents perfectly.

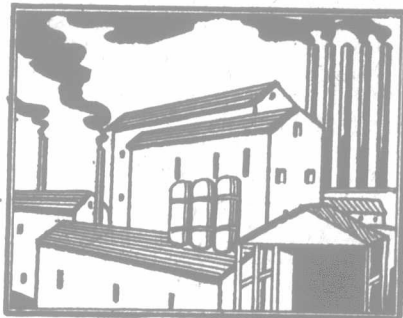
“What Can I Use Concrete For?”

CONCRETE can be used for all kinds of improvements. By having a small supply of cement on hand you will be able to turn many an otherwise idle afternoon to good account by putting a new step on the porch, or making a few fence posts,

or repairing an old foundation wall. It is a mistake to suppose that you have to be ready for a new barn or silo to be interested in concrete. Besides, it is just as well to become familiar with the use of concrete on small jobs, for then you will be better able to handle big jobs later on.

First cost is last cost when you build of concrete. Concrete improvements never need to be repaired. They are there to stay, and every dollar put into them adds several dollars to the cash value of your farm, and in many cases improvements of this everlasting material are actually cheaper in first cost than if they were built of wood. The cost of lumber is constantly increasing, and it will not be many years before its cost will be prohibitive.

YOU should use concrete, because by so doing you can make your farm more attractive, more convenient, more profitable and more valuable.



OUR mills are located all over Canada, so that no matter where you live you can get Canada Cement without paying high prices caused by long freight hauls.

“Why Should I Use Canada Cement?”

WE were the first cement company to investigate the farmer's needs, and to point out to the farmers of Canada how they could save money by using concrete. We conducted an exhaustive investigation into the subject, learned the difficulties they were likely to encounter, and how to overcome them, and published a book, “What the Farmer Can Do With Concrete,” containing all the information that the farmer could need.

*We have made a special effort to give the farmers of Canada not only the best cement that can be

made, but also every possible assistance in the use of concrete. Our free Farmers' Information Bureau is at the service of every farmer in Canada. All

questions concerning the use of concrete are answered at once, and the Bureau is always glad to receive suggestions from farmers who have discovered new uses for cement. Last year we conducted a \$3,600 Cash Prize Contest, in which farmers in every Province participated. A second contest, in which three times as many prizes are offered, has been announced for this year.

You can easily see why a company that is devoting this much attention to the farmers' needs is in better position to give you—a farmer—satisfactory service. Canada Cement will always give you satisfactory results. Every bag and barrel must undergo the most rigid inspection before leaving the factory.

YOU should use “CANADA” Cement because its makers offer you not only the best cement made, but also careful, conscientious, personal assistance in making use of it.



THIS sign hangs in front of nearly all our dealers' stores. Let it guide you to the place where the best cement is sold.



THIS book of 160 pages, handsomely bound and illustrated with photographs, was the first, and is the best work describing the farmers' uses for concrete ever published. See free offer on this page.

IF you haven't received a copy of “What the Farmer Can Do With Concrete,” write for it at once. It will be sent absolutely free, without obligating you in any way. Use a post card or clip out the coupon. We will also send particulars of the 1912 Cash Prize Contest. Address:

CANADA CEMENT COMPANY, LTD.
550 Herald Building, Montreal

Please send me, free, your book: “What the Farmer Can Do With Concrete,” and full particulars of the 1912 Cash Prize Contest.

My name is.....

Address.....

**Canada
Cement Company
LIMITED**

Farmers' Information Bureau
550 Herald Bldg. MONTREAL, QUE.



Take A Handful Of "St. Lawrence" Sugar Out To The Store Door

—out where the light can fall on it—and see the brilliant, diamond-like sparkle the pure white color, of every grain.

That's the way to test any sugar—that's the way we hope you will test

St. Lawrence
Sugar

Compare it with any other sugar—compare its pure, white sparkle—its even grain—its matchless sweetness.

Better still, get a 20 pound or 100 pound bag at your grocer's and test "St. Lawrence Sugar" in your home.

ST. LAWRENCE SUGAR REFINERIES LIMITED, MONTREAL.

67A

CANADIAN NATIONAL EXHIBITION

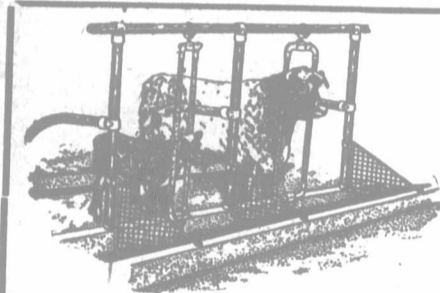
Aug. 24 TORONTO Sept. 9

Greatest Live-stock Show on the Continent.
\$55,000 in prizes for products of the farm, the home and the garden.

ALL ENTRIES CLOSE AUGUST 15th.

For prize lists and information, write:

J. O. ORR, SECRETARY AND MANAGER, CITY HALL, TORONTO, CANADA



The SUPERIOR, the only Stanchion that you can adjust to tie from your smallest calf to your largest export steer.

STABLE YOUR CATTLE THE SUPERIOR WAY

By doing so you will give them the greatest advantage in producing the maximum of the highest priced product. With SUPERIOR equipment you will have the greatest possible SANITATION, COMFORT, CONVENIENCE and DURABILITY in stable construction for very little expense.

If building or remodeling, write for our free book before you decide on your equipment. Drop us a card to-day. Agents wanted.

The Superior Barn Equipment Co.
Fergus, Canada



A First-class Potato Digger for \$20.00.

SHAKER POTATO DIGGER

With Fore Carriage

Natural temper steel blade. Weed Fender and gauge wheel. The Shaker Digger has a perfectly flat blade and will not cut the potatoes. The back grating shakes the earth clear and leaves the potatoes clean and on top of the ground.

ERIE IRON WORKS, Limited, Makers | ST. THOMAS, Ont.

POLES OF STERLING QUALITY

Michigan White Cedar Telephone Poles

W. C. STERLING & SON COMPANY

Oldest Cedar Pole Firm in Business

Producers for 12 Years

1880

MONROE, MICHIGAN

1912



MT. VICTORIA STOCK FARM, Hudson Heights, P. Q.

We have some very choice young stock for sale, both sexes. Clydesdales and Backneys from champion sires and well bred dams, at reasonable prices.

T. B. MACAULAY, Prop.

E. WATSON, Mgr.

BIG QUALITY CLYDESDALES

We have them on hand imported this year, Stallions and Fillies, many of them winners, the best blood of the breed, with size, character and quality. There are none better and no firm can sell cheaper.

R. NESS & SON, Howick, Que.



Please Mention this Paper.

Embarrassment of Years.

By Laura Wolcott, in The Independent.

But why should you make calls?" the Nice Young Person said. "At your time of life why not let your friends come to you instead?"

What is my time of life? The phrase is superfluous. "Impertinent?" you ask. Oh, not from my friendliest Nice Young Person! But really—

At my time of life? I can go up many flights of stairs—with landings. I climb hills also, with the added pleasure of pausing to view the landscape, which younger people miss.

I remember dates, and people's names, and current events; and the past is no more charming to me than the present except that it was in itself more charming.

I can weed flower-beds, even like Celia Thaxter of vivid memory, at Appledore. I love all human kind from soft babyhood for play to hard age withering and waiting to be consoled.

My time of life! I can thread needles. Points may come first, in the exasperating way of modern needles, but in time—

I can read into the small hours of the morning and then lie down to cheerful dreams or dreamless sleep like a babe on its mother's breast.

I can thrill to bird songs from the exultant wood-thrush's freedom song to the lonesome whippoorwill's complaint.

I love the meanest flower—yes, weed—that blows. It does not suggest thoughts too deep for tears. All my thoughts are of the exquisite bliss of living. If sunshine have its charm, so has the rain. Was it not Elizabeth Stuart Phelps who deplored the old hymn sung on pitiless July Sundays?—

"No midnight shade, no clouded sun,
But sacred, high eternal noon."

I go out into my dewy garden and watch every seed that sends up from the mystery below two tiny leaves like to the far-away spread of bird wings against the blue; just two crooked lives full of expectation.

"Fine salads some day," says the Nice Young Person, peering for the tiny growth and trying to look sympathetic.

Some day? Perhaps. But my life is in the Now. What are green-white curly leaves under Lucca oil and lemon juice with talkative folk about the table but ministers to a lower sense? The spirituality of the salad lies in its Antean touch—its slow sucking out of disreputable earth that which lifts its head to the skies.

From my south window I watch a wabby robin tilting on a Norway spruce limb against the high wind; shifting its clinging feet, half spreading foolish, untried wings that know no joy of the air, only terror of the earth. Under the dull, ruffled feathers, a timid heart, pea-size, quakes up and down as the branch flies; a wide bill opens to let out "yes, ma'am, yes ma'am," trailing off in quick "s ma'ams"—as the high wind wrestles with the tree—as if remembering its promise to sit still till mother came, forced to break the letter, but keeping the spirit, and sustained by a quivering hope.

Gladly would I fetch the looked-for worm, except that courtesies of the sort are apt to be misunderstood even in human society. And the swaying limb is high. And the mother is returning with her prey, delved for successfully in the richness of my lawn. Both their cups of bliss are full; the mother's with service, the baby's with being served.

I can see them as plainly as I could—a certain number of years ago. And the joy of it all is greater by far. In youth one's eyes focus on larger things, and the mind follows.

For reading, I confess to glasses; though headings and posters are still clear to the unhelped vision.

At my age indeed!

Now that I think of it, my Nice Young Person does come to see me very often. She is always welcome, as she well knows; but a sudden suggestion from an over-sensitive mind that it is to spare me, sends the blood back to my heart! (Why did I meanly think of that?)

To be sure, she always takes my elbow and says: "Here are four steps," when she comes out of an unaccustomed house with me. Does she think I cannot count as well as the crow? "Two, but not three," the legend says. Why not four? And do I not know the feel of mother earth, of step-mother pavement, as my foot touches it? Why say, "Now you are down!" with an offensive hint of superior sense?—as if one would naturally stay up and not know it!

On travelling days, why do car conductors grasp me by an arm that is seldom free from bruised finger-marks and always painful at the time? And on a street car, why will no one allow me to ride backward—my own choice? They rise alarmingly, embarrassingly, to a man, to a woman even, and leave me the forward privilege. If I decline, it seems ungracious after all their inconvenience. So the wind blows in my face instead of being tempered by the window back of the motorman.

I can cross a crowded street at my age (!) quicker than my younger friends, and escape daredevil automobiles while they are holding me back by one elbow in the very forefront of danger.

"If I hadn't been here!" the Nice Young Person gasps. Yes, my dear, if you hadn't I should have been safely across in time to escape the odious, smothering blast in the trail of the monster.

"Be sure you step in the middle of the canoe," they say, when we go out on the lake. Yes, two or three say it at once. A well-meant but discourteous chorus. Why, I knew that before they were born! I always step in the exact middle. I balance, adjust myself, sit down discreetly. Long practice has made me perfect. There is something to be said in favor of the flight of time. Yet I know that behind my back, with raised eyebrows they are saying, "Wonderful!" or its equivalent in polite pantomime.

I commiserate Methuselah with all his descendants—even more, dim, pathetic old Priam, with a son to set him right at every turn. "Father, the predictions are that there will be a flood. Don't go out in sandals. And do be careful of the heavy dew at your time of life! Here are your highest pattens; don't forget." Or, "The Greek arrows are so swift, the chariots rush along at such a mad pace—and you know you don't see as far as you once did!" Poor old heroes! Better Abel dying in his young beauty by the altar that blazed so well—a comely sight; better splendid Hector, his plume bedraggled, laid on his lofty funeral pyre!

But no! Ah, no! "Whom the gods love die old"; full the wealth of years and deathless memories. At my time of life the world is ripe fruit to be tasted with zest, its juices concentrated, its acidity turned to sweetness. Poor young Abel! Poor young Hector!

My age—whatever it may be—is but the lengthening record of delectable days; of happy summers with sunshine and June roses; of cozy hearth-fires and soft snowfalls, muffling all harsh sounds, and a world diamonded with ice; a record of more thrills and ecstasies than callow sixteen so much as dreams of.

In my indiscriminating youth I was terribly afraid of people. Now I find them no more alarming than myself. As for my years, they jog on merrily and keep no count.

I know now that there are horizons beyond horizons.

But my Nice Young Person is limited, dear soul! by the things she sees and hears, the multitudinous things she knows. Always beyond her depth in the salt sea of promiscuous charities, committees, clubs, schemes for the heathen who will soon send missionaries to teach us respect and veneration, projects for the amelioration of man—what weary years she must wait, till at my age she may possibly sit down with her life acool and rest it, and see the belated glory of it all.

She was rather a plump old lady and had always tried to be accommodating to her neighbors; but even her obliging spirit had to refuse a request from a neighbor who sent by her little boy the following message:

"Please, ma'am, mother sent me over to see if I couldn't get a couple of pounds of lard off you."

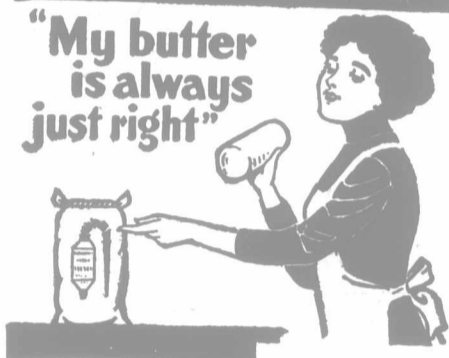
McClary's

"Sunshine" Furnace

floods the house with balmy June weather in the coldest days. That's why the "Sunshine" is called

The Understudy of The Sun. 309

"My butter is always just right"



What's The Matter With Your Butter?

Does it lose its flavor quickly?
Does it acquire a bitter taste in a few days?
Are you receiving any complaints about the butter not keeping well?
Use the salt that does make good butter every time and all the time—

WINDSOR DAIRY SALT

It is always the same in purity and strength. It won't cake—dissolves evenly—and makes the most delicious butter you ever tasted.

The prize-winners at all the fairs, used Windsor Dairy Salt—that's why they won all the prizes. 72D

Mrs. Fonda—"There! Isn't baby the image of his father?"
Oldchum—"Absolutely! Same lack of expression, same red nose, no teeth to speak of—and, by George, prematurely bald, too!"

SIMPLIFY YOUR COOKING

Much of the pleasure of life is lost in the worry of preparing meals. Bovril in the hands of a resourceful woman solves the problem. Bovril stirred simply into hot water and flavored to taste makes an excellent bouillon. Meats reheated have their original flavor restored and enhanced by a little Bovril. Bovril Sandwiches are in constant demand by old and young, especially by children. Bovril Tea—hot or cold—can be served at any time with crackers, and as a last thing at night to induce sound sleep, hot Bovril is unequalled. 27-12

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.
2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.
3rd.—In Veterinary questions the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.
4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Miscellaneous.

RESPONSIBILITY FOR CATTLE.

1. If I receive cattle to pasture for the season at so much per head, am I responsible for those cattle whilst in my pasture?
2. For instance, if one fell into an open box well, not covered, and drowned, who loses the beast?
3. Or if one strays, who is supposed to look it up? No written agreement about pasturing cattle—only word of mouth as to price. H. P. Quebec.

Ans.—1. Yes; that is to say, you are bound to take reasonable care of them.
2. You would probably be the loser.
3. You.

CURB.

I have a valuable horse with a curb. Blistering does not take off the lump. He is not lame now. Would caustic, rubbed on, do any harm to the horse, or what would you advise doing to remove the lump, if it is possible to do so? L. R.

Ans.—To remove curb requires repeated monthly blistering. One or two applications are not likely to prove effectual. Have the horse shod with the heel calkins an inch higher than the toe. For blistering, use two drams each of biniodide of mercury and cantharides, and two ounces of vaseline. Clip the hair off the part, and rub the blister in with smart friction. Tie him so that he cannot bite the parts. In 24 hours rub well again with the blister, and in another 24 hours wash off and apply sweet oil, and turn the horse loose in a box stall. Apply vaseline every day until the scale comes off, when he can be tied up and blistered again as at first. The lameness is easily cured, but to remove the lump often takes a long time and persistent blistering.

BLACKHEAD.

Can you tell me if there is any cure for blackhead in turkeys? I had 52 good, healthy turkeys, and about two weeks ago they got sick. I think it is blackhead. Let me know at once what to do, as they are dying in great numbers? G. H.

Ans.—Blackhead is a very infectious disease, and land where affected turkeys have ranged is unsafe for turkeys or poultry the following year. To diagnose blackhead positively a post-mortem examination is necessary. The walls of the caeca (or blind pouches at the lower end of the small intestines), will be found thickened either throughout or in spots. The membrane lining of the caeca becomes reddened and eroded, and from this inflamed surface there is poured into the caeca a quantity of creamy material or exudate more or less tinted with blood. The liver is enlarged and darkened, while scattered over its surface are distinct round spots, sometimes whitish, or sometimes with a yellowish tinge. Young birds are more especially subject to infection, and it is not confined to turkeys, but may also attack hens. First satisfy yourself that the disease is blackhead, then commence treatment. Medical treatment of this disease in individuals in which it has developed so much as to show the external symptoms which identify it, is generally ineffective. Various remedies have been suggested, but the safest is to kill and burn all birds showing unmistakable outward signs of the disease. Where the disease has gained much headway in a flock, it is generally advisable to clean out the flock entirely and begin with a new flock on a new run. Disinfect all buildings and runs with a carbolic-acid solution. Allow an interval of two or three years to elapse before commencing again with turkeys. A remedy sometimes advised is to give the birds water to drink containing muriatic acid, a teaspoonful to a quart of water.

TELEPHONE LINEMAN.

To whom should one apply for a position as lineman for the — Telephone Company? G. I.

Ans.—Make inquiry at your local central office, and they will doubtless be able to tell you to whom to apply.

THE DANGEROUS AUTOMOBILE.

When sending milk to the cheese factory my horses became frightened at an automobile and ran away. A boy of about 17 years was in charge of the team. The accident happened at a curve of the road, where the auto could not be seen till it was right in front of the horses. The roads in this part of the country are very narrow. Some places it is even dangerous for two rigs to meet.

1. Could I claim damages from the owner of the automobile?
2. Would the council of the municipality have the right to pass a by-law which would compel automobile owners to pay damages resulting through similar accidents?
3. Has the council the right to tax automobiles?
4. If so, how much could be charged for each year? Quebec.

Ans.—1. Yes.
2 and 4. A local lawyer should be consulted as to these questions.
3. Yes.

CHICKENS DYING.

I have two Plymouth Rock chicks about four or five weeks old that have got something that is strange to me, and I would like some information through your columns. About three weeks ago one chick took to going about as if it was dizzy or too heavy in front, and fall forward, and at last would only go a few steps at a time and fall down, but would eat well and drink like the rest of chicks. I feed wheat, and they have plenty of separated milk and good, fresh water to drink. That one died, and two more have it, and another shows symptoms. All that have it are Plymouth Rocks. P. C.

Ans.—It is impossible to state exactly what ails the chickens. As no discharge from any member of the body is mentioned, such as nasal discharges, diarrhoea, etc., we can only state that the disease may be a giddiness or form of mild apoplexy, due perhaps to a rush of blood to the brain. Worms in fowl have been known to cause this trouble, but without a more explicit detailed account of the symptoms, a definite answer is hard to give. If any more should die, perform a post-mortem examination, which may reveal the trouble. There is also a chance that the birds are overfed with the wheat, which is a strong food. Examine carefully for lice, and if present use insect powder freely.

GOSSIP.

Hodgkinson & Tisdale, importers and breeders of Clydesdales and Percherons, Beaverton, Ont., advise us that they have just got their new importation of Percherons safely landed in their stables, the horses having stood the trip remarkably well, not a single one even having a cough.

THE LONDON CLYDESDALE SALE.

As advertised on another page, a new importation of 14 Clydesdale fillies, 12 of which have been bred to high-class horses in Scotland, will be sold by auction in London, Ont., on Wednesday, August 14th. These have been carefully selected personally by the importer, who is a breeder of Clydesdales in Scotland, and who knows the type required in Canada, he having visited this country more than once, and knows its conditions from East to West. This sale should afford a good opportunity to secure a useful young draft mare at the buyer's own price.

As the train whirled through the beautiful valley, the inquisitive traveller persisted in sticking his head out of the window to get a better view of the scenery.

"Keep your head inside, can't you?" shouted the conductor.
"Why?"
"So's you won't damage any of the ironwork on the bridges."

WOOD WORK

FOR CLEANING (PAINTED & UNPAINTED)

Old Dutch Cleanser

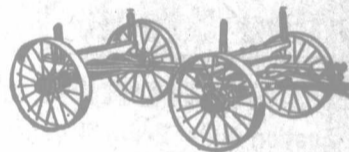
Full directions and many uses on Large Sifter-Can, 10¢

Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbones, Curbs, Splints, Windgalls, Capped Hocks, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.

This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:

J. A. JOHNSTON & CO., Druggists, 171 King St. E. TORONTO, ONT.



Buy a Wagon You Can Depend On!

For convenience, strength and durability—get a T-A Handy Farm Wagon. Designed especially for farm work, will give everlasting service under the roughest usage to which a wagon can be put. And besides—it is easy on horses.

T-A Wide-Tire Steel Wheels & Handy Farm Wagons

Carefully and strongly built, of the highest grade material, these T-A Wide-Tire Steel Wheels will carry 25 to 50 per cent. heavier loads without the least danger of breaking down or getting stuck.

We will be pleased to send you descriptive catalogue. Write for it.

Tudhope-Anderson Co'y, Ltd. Orillia, Ontario

BUSINESS AND SHORTHAND

Subjects taught by expert instructors at the

Westervelt School

Y. M. C. A. BLDG., LONDON, ONT.

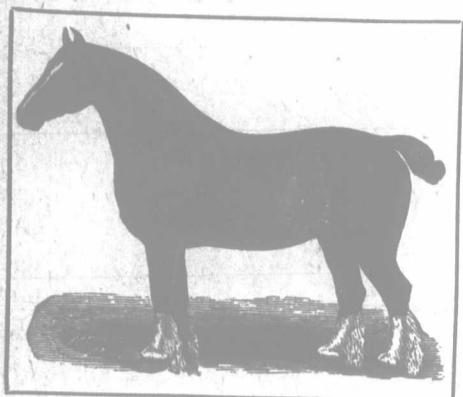
Students assisted to positions. College in session from Sept. 3rd. Catalogue free. Enter any time.

J. W. Westervelt, Principal J. W. Westervelt, Jr., Chartered Accountant Vice-Principal



Lump Rock Salt, \$10.00 for ton lots, f.o.b. Toronto Toronto Salt Works, 128 Adelaide St. E., G. J. CLIFF, MANAGER. Toronto, Ont.

IMPORTED CLYDESDALES AT AUCTION



12 two-year-old fillies, stunted to high-class stallions in Scotland, and 2 yearlings personally selected by the Importer who is a breeder of Clydesdales at Throsk, Stirling, Scot. These fillies have plenty of size combined with quality of bone and hair to suit the most exacting breeder.

Sale at 1 p. m. on
Wednesday, Aug. 14, '12
at **Hiscox Stables**
Rear of the Bank of British North
America, Queens Avenue, London, Ont.

For information apply to

CAPT. T. E. ROBSON,
Auctioneer, London, Ont.

BEN FINLAYSON,
Proprietor.

CANUCK BRAND

Baby Chick Feed and Scratch Feed

Are made up from pure grains in proper proportions to secure best feeding value and most satisfactory results. Write for full information and give name of your feed dealer.

The Chisholm Milling Co'y
Toronto, Ontario

Union Stock Yards of Toronto, Ltd.

HORSE DEPARTMENT

Auction Sale Every Wednesday Private Sales Every Day
Railroad Loading Facilities at Barn Doors

W. W. SUTHERLAND,
In Office.

J. H. ASHCRAFT, JR.,
Manager.

GRAHAM & RENFREW COMPANY CLYDESDALES AND HACKNEYS

Our winnings at all shows are your guarantee that whatever you buy from us will be the best in the land. You cannot afford to buy without first seeing our importations.
Address all correspondence to Bedford Park P.O., Ont. Telegrams to Toronto. Telephone North 4483, Toronto.

Clydesdales, Imp., Just Arrived Our new importation has arrived safely, and we are now in a position to supply the trade with stallions from 1 year old up to 4, with more draft character, big, strong, flat bone, and better breeding than any other firm in the trade. Prices and terms as favorable as any other importer in Canada.
BARBER BROS., GATINEAU PT., QUEBEC, NEAR HULL.

A Few Choice Clyde Fillies—I am offering several choice and particularly well-bred Clydesdale fillies from foals of 1911 up to 3 years of age, imp. sires and dams. Also one stallion colt of 1911, imp. sire and dam. These are the kind that make the money.
HARRY SMITH; Hay P.O., Ont. Exeter Sta. L.-D. Phone.

BLAIRGOWRIE IS OFFERING AT PRESENT:

CLYDESDALE MARES, imported and Canadian-bred, from one year up to 5 years; also a pair of Canadian-bred stallions, rising three years. Young cows with calves by side, and heifers well on or in calf. Children's ponies, well broken and quiet, from 11½ to 14 hands.
Myrtle, C. P. R. Stn. L.-D. Phone. JOHN MILLER, JR., Ashburn, P.O.

CLYDES, SHIRES, PERCHERONS

Now offering 8 imp. Clydesdale fillies, rising 3 years; 1 imp. Clydesdale stallion 12 years, a good one, and several stallions 2 and 3 years; one Shire stallion, sure foal-getter; two black Percheron stallions, 6 and 8 years, and one Thoroughbred stallion. All will be sold at bargain prices.
T. D. ELLIOTT, Bolton, Ont. Long-distance Phone.

ORMSBY GRANGE STOCK FARM, Ormstown, P. Que.

My fall importation, which will be the largest yet made by me, will be personally selected, will arrive last week in September. Good colors, heavy bone, best of pedigrees and reasonable prices. Wait for them if you want good ones.
D. McEachran.

Clydesdale Stallions with both size and quality, all prize-winners and breeding of the best blood in Scotland. Prices and terms the best in Canada.
John A. Boag & Son, Bay View Farm, Queensville, Ont.
On the Toronto & Sutton Radial Railway Line. Long-distance Phone.

When Writing Advertisers, Please Mention "The Farmer's Advocate"

QUESTIONS AND ANSWERS. Miscellaneous.

SPRAYING POTATOES.

Will you kindly publish a formula for spraying potatoes for the prevention of rot?
D. H. M.

Ans.—Potato rot, or late blight, is so common that in many districts it is called potato disease. It is a sporadic disease, scientifically known as Phytophthora infestosa. It attacks the leaves, stems, and tubers. The attacked areas on a leaf spread very rapidly. The fungus secretes a poison which kills the plant cells, and then it feeds on the food which oozes out. On the under side of the leaf a downy border is formed around the spot. This is caused by or is made up of the spore-bearing mycelium. Wet seasons are especially well suited to the development and spread of the disease. The leaf is completely destroyed, thus cutting off the plant's power of assimilation. The tubers become affected and rot ensues. The means of control is spraying with Bordeaux mixture. This is not a cure, but if properly used, is a prevention, as the spores are destroyed during germination by the copper of the mixture. Three sprayings are sometimes sufficient, but four are generally better. It is ordinarily advisable to begin spraying with 5-5-50 Bordeaux, when the plants are about six inches high, and follow this up at intervals of every ten days or two weeks until four applications have been given. It is believed that the mycelium is carried over winter in the tubers, so every effort should be put forward to secure seed potatoes from a field in which the blight or rot has not appeared. Five pounds of lime, five of copper sulphate, and fifty gallons of water, is the Bordeaux formula for this disease.

SILO CONSTRUCTION—MARE FAILS TO BREED.

I am going to build a cement silo, and would like you to answer the following: My silo is to be 12 x 30 feet.

1. How much cement will be required?
2. Would it be advisable to mix in small stone, and if so, how many loads or yards could be used?
3. How many yards of good gravel will it take?
4. How thick does the wall need to be built?
5. What size of iron rods would there need to be put in to reinforce the wall?
6. I have a Hackney mare that I cannot get in foal. She had a colt two years in succession, 1910 and 1911. Before she comes in season her udder swells and milk comes in it. What is the trouble, and how can I remedy it, as I would like to breed her, as she is a valuable mare?

W. J. R.

- Ans.—1. Between 25 and 30 barrels.
2. A few stones may be used in the foundation.
3. It will require about nine cords of good gravel.
4. Nine inches at the bottom, tapering to six inches at the top.
5. Three-eighths inch.

6. The appearance of milk in the mamma during oestrus is singular. The mare may have some mechanical impediment which prevents successful coition, or she may have a disease of the ovaries, or she may be barren, due to an acrid condition of the secretions of the generative organs. For the last-named condition the yeast treatment might be tried. Take an ordinary two-cent cake of yeast and make it into a paste with a little warm water. Allow this to remain in a moderately warm place for 12 hours, then add one pint of freshly-boiled water, mix, and allow to stand for another 12 hours. Prepare the mixture 24 hours ahead of the time the mare is expected to come in heat, and inject it into her vagina the moment she is noticed to be in heat. Breed just as the heat period is passing off. She may have disease of the ovaries, and if so, nothing can be done.

Mistress—"Jane, what do you mean by having six blouses out drying on the line? It is quite absurd. My daughter can do with two a week."

Jane—"Well, you see, mum, Miss Matilda is courtin' a bank clerk, and I've courtin' a sweep."

Horse Owners! Use GOMBAULT'S



Caustic Balsam

A Safe, Speedy, and Positive Cure

The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.
The Lawrence-Williams Co., Toronto, Ont.

Save-The-Horse Spavin Remedy

(Trade-Mark Registered)



Whether on Spavin, Puff, Tendon, or any kind of lameness a permanent cure is guaranteed. Sixteen years a success.

\$5. And every bottle sold with an iron-clad contract to cure or refund money. This contract has \$60,000 paid-up capital back of it to secure and make its promise good. Send for copy, also latest book and testimonials from breeders and business men on every kind of case.

TROY CHEMICAL CO., Toronto, Ont.
and Binghamton, N. Y.

Druggists everywhere sell Save-The-Horse with a legal contract to cure or refund money.

ABSORBINE

will reduce inflamed, swollen joints, Bruises, Soft Bunches, Cure Bolls, Poll Evil, Quitor, Fistula or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. \$2 per bottle delivered. Book 7 E free. ABSORBINE, JR., liniment for man and horse. Reduces Painful, Swollen Veins, Gout, Wens, Strains, Bruises, stops Pain and Inflammation. Price \$1.00 per bottle at dealers or delivered. Will tell you more if you write. Manufactured only by **W. F. YOUNG, F. D.F., 268 Lyman Bldg., Montreal, Ca.**

MERCHANTS PRODUCE CO.

Butter Eggs Poultry Honey
Beans Apples Potatoes, etc.

Our constantly growing trade demands large supplies of choice farm produce. We need yours. Write for weekly market letter.

57 Front St. E., Toronto
Established 1889

Messrs. Hickman & Scruby

COURT LODGE, EGBERTON, KENT, ENG.

EXPORTERS OF

Live Stock of all Descriptions

Draft horses of all breeds a specialty. Intending buyers should write us for particulars, as we can place before them the most attractive proposition they have yet experienced. We can send highest references from satisfied buyers of nearly all breeds.

NOTICE TO HORSE IMPORTERS

GERALD POWELL

Commission Agent and Interpreter
Nogent Le Rotrou, France

will meet importers at any port in France or Belgium, and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking, and pedigrees. Many years experience; best references. Correspondence solicited.

Balmedie Aberdeen-Angus I am offering for sale young bulls and heifers of the highest types of the breed. Show stock in show condition a specialty. Bred on the most popular lines. **Thos. B. Broadfoot, Fergus Sta., Wellington Co., Ont.**

Aberdeen-Angus—A few bulls to sell yet; also females. Come and see them before buying. Drumbo Station.
Walter Hall, Washington, Ont.

OAKLAND SHORTHORNS I

Present offering is five choice young bulls, from 7 to 22 months old, reds and roans, out of good dual-purpose dams, and sired by our champion Scotch Grey bull 72692. Visitors find things as represented. Good cattle and no big prices.

JOHN HLDER & SON, HENSALL, ONTARIO

Fletcher's Shorthorns

Herd headed by (Imp.)—Royal Bruce = 55038 = (89909) a choice lot of heifers for sale, bred or calves at foot.

Geo. D. Fletcher Binkham P. O., Ont.
Erie Sta., C. P. R.

**Insects and Alfalfa Seed-
ing.**

It is a well-known fact that honey-making insects play a very important part in the growing of several of the clover seeds. As pointed out by the Canadian Bee Journal, alfalfa depends very largely upon bees for its chances of seeding.

Nearly all experiments show that if insects are excluded from alfalfa flowers by means of screens, very few or no seeds are produced, whereas adjoining plants not screened produce an abundance of seed if other conditions are favorable. However, in northern Montana heavy seed crops have been obtained in certain seasons when general observations failed to indicate the presence of insects in numbers anywhere near what was considered sufficient to account for the fertilization of the flowers. The principal effect of the insects appears to be the tripping or releasing of certain of the flower parts, which operation is essential to fertilization. This tripping can be done artificially by thrusting a pencil point or other object into the flower, or by pressing the flower between the thumb and finger, when the tripping can readily be observed. Observations indicate that the ordinary honey bee trips the flower much less frequently than do bumblebees or some of the wild bees. The honey bee ordinarily inserts its proboscis at the side of the tripping mechanism without releasing it, while the bee's weight on the flower is not sufficient to set on the tripping mechanism, as is the case with the bumblebee. The small wild bees trip the flower owing to the fact that they must struggle to reach the nectar, and in this struggling they release the tripping mechanism. Ordinarily the alfalfa flower is fertilized with pollen from some other flower, but it is able to set seed with its own pollen if the flower be tripped.

TRADE TOPIC.

The scheme of the Central Canada Exhibition management to pay freight charges on exhibits up to 100 miles of Ottawa, so as to equal conditions for farmers and stockmen in remote places, has brought entries from every Province in Canada. British Columbia fruit-growers are likely to send many exhibits. Many entry forms have been applied for by maritime farmers, and by distant ones in Ontario and Quebec. J. Lockie Wilson, who has charge of the field crop competitions from all the Provinces, says the outlook for keen competition and a splendid showing of produce could not be better. Farm implement makers are taking generously of the space for educative displays in the new \$100,000 machinery hall, nearing completion. It is not expected accommodation, outside of the grounds, will be needed for horses this year, as 150 extra stalls have been provided. The total horse exhibit will reach 500.

GOSSIP.

Robert McEwen, Byron, Ont., writes: "Five days after the collie announcement appeared in your paper I had orders for every puppy that I could part with. They were good ones, and I wish I had more like them. In meantime I am changing advertisement again. The sheep and lambs are doing well, and the lambs growing like weeds. There will be some good ones for this season's trade, but as the number is limited, to insure getting one, it pays to order early."

A well-known politician had occasion to stop at a country hotel.

In a conspicuous place in the parlor was an inscription: "Ici en parle Français."

The politician turned to the proprietor, and said: "I see you speak French here!"

"Not me," the man replied, "English is good enough for me."

"Well, then," said the politician, "why do you have that inscription on the wall?" That means French is spoken here.

"You don't mean it!" exclaimed the hotel-keeper. "Well, I'll be blowed! A young chap who sold it to me said it meant 'God bless our home.'"

**Save one ton
in seven**



**LET us send you
this Book. It tells**

how to heat your home comfortably—and save one-seventh of your Coal Bill. ¶ The Hecla steel-ribbed fire-pot makes this saving. With three times the radiating surface of any other furnace, it sends more heat to the living rooms and less to the chimney. ¶ Everyone who is building a home, everyone who has a worn-out furnace or one that is wasting coal, will value the suggestions and information contained in "Comfort & Health."

Hecla Furnace

FOR COAL AND WOOD

Healthful heating is not possible with a leaky furnace. Coal Gas is not only unpleasant—it is a menace to health. The Hecla will supply your whole house with pure warm air because it cannot leak gas or dust.



Every point where a leak might otherwise occur is fused by our patent process absolutely tight. Time and use cannot loosen the Hecla Fused Joint.

Is 1/7 of your Coal bill worth saving? Do you want more healthful heat?

Write for "Comfort & Health," a book on the sane heating of homes.

Steel-ribbed Fire-pot



CLARE BROS. & CO., LIMITED,
Dept. L, Preston, Ont.

ORCHARD GROVE HEREFORDS

Champions of 1911 shows, winning both senior and junior herds at Winnipeg, Brandon, Regina, Edmonton, Toronto and London; also fifteen championships. Young stock, both sexes, for sale at reasonable prices. Long distance Phone. L. O. CLIFFORD, Oshawa, Ont.

Scotch Shorthorns

FOR SALE. One promising 12 months Imported Bull Calf, a Marr. Flora, recently Imported; 12 bull calves from 6 to 11 months old, all by Imported Sire—some good ones among these; also 30 choice cows and heifers in calf, at reasonable prices. Farm 1/4-mile from Burlington Jct. Station. MITCHELL BROS., Burlington, Ont.

THIS IS A GOOD TIME, AND I HAVE A GOOD PLACE, TO GET A HIGH-CLASS SCOTCH SHORTHORN BULL CALF by my great Whitehall Sultan sire, or a young cow in calf to him, to start a herd that will be shorthorned SHROPSHIRE RAMS AND EWES, too, at low prices. CHILDREN'S PONIES, A CLYDES DALE FILLY, such as I can send you, is one of the best things any man can buy. Just write me and say as nearly as possible what you want, and I will surprise you with prices on goods that are genuine. **ROBERT MILLER, STOUFFVILLE ONTARIO**



Shire Stallions and Mares, Shorthorn Cattle (both sexes); also Hampshire Swine. Prices reasonable.

Porter Bros., Appleby, Ont., Burlington Sta. Phone

When Writing Advertisers, Please Mention "The Farmer's Advocate"

WILLOW BANK STOCK FARM
Shorthorns and Leicesters

Herd established 1865, flock 1946, have a special good lot of Shorthorns of either sex to offer of various ages; also a grand lot of Leicester sheep of either sex—a few imported ones to offer. JAMES DOUGLAS, Caledonia, Ontario

Shorthorns of Show Calibre

At present one nice red bull 12 months old (of the Bellona family) for sale at low price. Heifers of breeding age all sold.

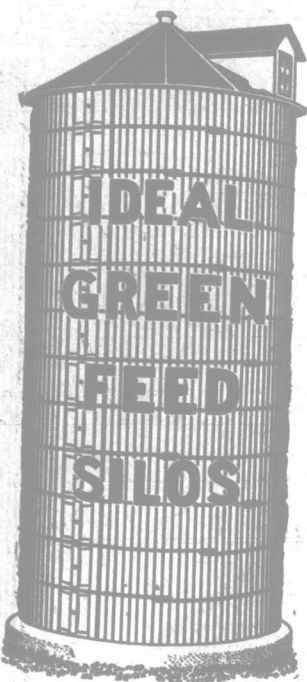
Geo. Gier & Son, Grand Valley, Ont.

Shorthorns and Swine—Am now offering a very choice lot of cows and heifers, safe in calf, and some choice young bulls for the fall trade; also Berkshire and Yorkshire pigs; showyard material.

ISRAEL GROFF, Elmira, Ont.

SHORTHORNS & CLYDESDALES

Write us for what you require. W. G. PETTIT & SONS, Freeman, Ont. Burlington Junction, G. T. R.



Are Sweeping the Silo Field

Orders and inquiries are coming in faster than ever before.

Canadian dairymen are coming to realize the advantages of the Silo and appreciate just how much better the Ideal Green Feed Silo is than any other make.

Here are some of the points of superiority which make these Silos so popular:

Material: Canadian Spruce especially selected for our own use.

All lumber is saturated with a solution which prevents rot and decay and reduces the tendency of the staves to swell or shrink and adds two or three times to the life of the Silo.

Hooped with heavy round iron hoops every 30 inches apart.

Only malleable iron lugs are used.

All doors on the Ideal Green Feed Silos are self-sealing.

Doors are only 6 inches apart, can be removed instantly and are always air tight. The roof is self-supporting; built without rafters.

Dormer window facilitates filling Silo clear to the top. All sizes furnished.

Write for Our New Silo Catalogue To-Day.

De Laval Dairy Supply Co., Ltd.

LARGEST AND OLDEST SILO MANUFACTURERS IN DOMINION.

173 William Street, MONTREAL
14 Princess Street, WINNIPEG

1854 Maple Lodge Stock Farm 1912

Have some **SHORTHORN HEIFERS** two years old from cows giving 50 pounds milk per day, and in calf to my stock bull, Senator Lavender.

Grand young **LEICESTERS** from imp. Wooler of Sandy Knowe, champion at Toronto, and imp. Royal Connaught.

A. W. SMITH, MAPLE LODGE, ONTARIO
Lucan Crossing, G. T. Ry., one mile.

"The Manor" Scotch Shorthorns

Present offering: Three choice yearling bulls. Young cows in calf. Yearling heifers: Clippers, Minas, Wimples, Julias, etc. Inspection solicited. Prices moderate. Phone connection.

J. T. GIBSON, DENFIELD, ONTARIO

SPRING VALLEY SHORTHORNS

Herd headed by the two imported bulls, Newton Ringleader, =73783=, and Scottish Pride, =36106=. The females are of the best Scottish families. Young stock of both sexes for sale at reasonable prices. Telephone connection.

KYLE BROS. - - - Ayr, Ontario

QUESTIONS AND ANSWERS. Miscellaneous.

LICE ON HORSES.

Please state in "The Farmer's Advocate" what will kill lice on horses and colts.

G. G.

Ans.—Try one part insect powder, or hellebore, in three or four parts cement. Dust the mixture along the back, and keep the animals dry until it has worked into the hair and smothered the lice. It might be well in bad cases to work the mixture into the hair with a brush.

HOED CROPS.

1. What hoe crops pay best?

2. What acreage should one man, with no other work, be able to handle of these crops?

3. Will extensive hoe crops pay as well as mixed farming?

This year I have a crop of 1 acre of strawberries, 1½ acres of potatoes, 17 acres of field (White Wonder) beans, 5 acres of corn, and 35 acres of hay.

G. R. R.

Ans.—1. This depends upon the soil, its condition as to fertility and tilth, and the location as regards market. It is impossible to state definitely what crops pay best without knowing all the conditions. Market demands in the locality have some effect. If small fruits may be called hoeed crops, perhaps they are as profitable as any. Potatoes usually pay well. Beans are now in good demand, and if soil and climate are suitable, should prove profitable. Of course, if help may be obtained, the garden vegetables pay best.

2. Experience and ability, together with the condition of the soil and the crops grown, decide this matter.

3. They should, if properly worked.

PERENNIAL STITCHWORT.

What is the accompanying weed, and the best way of killing it?

G. A.

Ans.—The specimen is another European weed, the perennial stitchwort (*Stellaria graminea*). It resembles the common chickweed, but it is smoother, has more wiry and longer stems, narrower leaves, and stronger root. To advise intelligently as to treatment, one needs to know the situation or conditions in which it is proving troublesome. Under hedges or bushes it may make a tangle that can be pulled out with a rake. Raking or cutting and burning the stems shortly after flowering begins, should keep the plant in check. We have not known it to give serious trouble in the cultivated field or open meadow, but in hedgerows and grassy places not easily reached, it is capable of taking possession of the sward. Notwithstanding its enormous number of flowers, it does not usually produce many seeds. We should like to hear from our correspondent again, giving details of his experience with it. Can he collect for us a half- or even a quarter-thimbleful of its seed?

J. D.

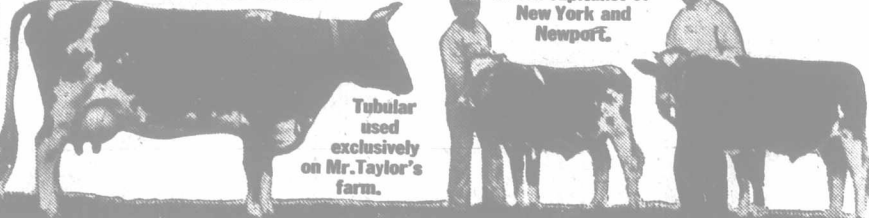
GOSSIP.

R. Hamilton & Son, the well-known Percheron breeders of Simcoe, Ontario, writing from Paris, France, July 17th last, states that they have finished purchasing their fall importation of Percheron stallions and mares, and were delayed on account of the seamen's strike, but expected to leave for Canada with the horses July 27th. The importation is what the owners consider the best that has ever been purchased for Canada. The animals range in age from two to five years, and are all of the big, drafty, heavy-boned type, with the best of feet and legs, and show good action. Nearly all will make top horses when mature. Several prizewinners at the great shows at Paris and Alencon are among the number which Chas. Avelin, President of the Percheron Society of France, termed the best and most uniform lot of stallions and mares to go to Canada from La Perche.

A sow belonging to a publican at Clothall, Ireland, is reported to have had a litter of 20 pigs. Her record so far is 74 pigs in five litters.

The Great Guernsey "MARION OF THE GLEN" and Her Twin Calves.

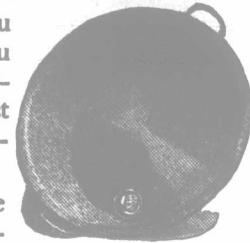
Owned by Mr. H. A. C. Taylor, noted capitalist of New York and Newport.



What You SEE You KNOW



That is why we show you these two pans. We want you to SEE and KNOW the difference between the World's Best Cream Separator and less modern machines.



The full pan contains the disks taken from one of the thousands of separators which have been replaced by Tubulars. They tire a woman and try her patience; they rust, wear loose, eventually give cream a metallic or disky flavor, and waste cream in the skimmed milk.

The other pan contains the only piece used inside the marvelously simple, wonderfully clean skimming, everlastingly durable

SHARPLES Dairy Tubular Cream SEPARATOR

What a difference! Take your choice, of course, but remember that mistakes are unpleasant and costly and must eventually be corrected. Why not ask those who have discarded other separators for Tubulars? Their advice is valuable; they have paid good money for experience—they know the difference.

Write for a full, free trial. Other separators taken in part payment for Tubulars. To get prompt attention, ask for Catalog 193.

The Sharples Separator Co.
Toronto, Can. Winnipeg, Can.

Present Special Offering

20 High-Class Scotch Shorthorn Heifers
40 High-Class Young Shorthorn Cows
5 High-Class Scotch Shorthorn Bulls

At moderate prices, including Marr Missies, Emmas, Cruickshank Nonpareils, Duchess of Glosters, Village Girls, Bridesmaids, Butterflies, Kinellar Claretts, Miss Ramsdens, Crimson Flowers; also a number of the grand old milking tribe, which have been famous in the showing.

ARTHUR J. HOWDEN & CO.
Columbus, Ontario



SHORTHORNS

Have now a choice lot of young bulls to offer; also with something nice in heifers. Catalogue of herd and list of young animals on application.

H. CARGILL & SON, Proprietors, Cargill, Ont., Bruce Co.
JOHN CLANCY, Manager



Scotch Shorthorn Females for Sale I am offering at very reasonable prices, females from one year to five years of age. The youngsters are by my grand old stock bull, Scottish Hero (imp.) =55042= (90065), and the older ones have calves at foot by him, or are well gone in calf to him. Their breeding is unexcelled, and there are show animals amongst them. **A. EDWARD MEYER, Box 378, GUELPH, ONT.**

SALEM SHORTHORNS

Headed by Gainford Marquis, undefeated bull of three countries. See our show herd at the leading fairs, starting at Winnipeg. **J. A. WATT, SALEM, ELORA STA., G. T. and C. P. R.**

Stockwood Ayrshires HIGH-CLASS AYRSHIRES

are coming to the front wherever shows. This herd is now headed by White Herd Free Trader (Imp.) No. 33273, championship bull at Sherbrooke; also headed the 1st-prize aged herd. Stock of all ages for sale. Satisfaction guaranteed.

D. M. WATT, ST. LOUIS STATION, QUE.
Telephone in house.

If you are wanting a richly-bred young bull out of a 30-lb. a day and over cow, imported or Canadian-bred dam and sire, write me. Females all ages. Prices are easy. **D. A. Macfarlane, Kelso, Que.**

Dungannon Ayrshires and Yorkshires—For immediate sale are: Three choice young bulls and a few heifers; also young sows of breeding age, quality and breeding combined.

W. H. FURBER, Cobourg, Ont. L.-D. Phone.

STONEHOUSE AYRSHIRES

Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers.

HECTOR GORDON, Howick, Quebec.

AYRSHIRES FOR SALE CHERRYBANK AYRSHIRES I

Seven bulls and a few heifers of different ages, sired by Woodroffe Comrade, whose first heifer in milk, gave 11,392 lbs. milk, 480 lbs. butterfat in one year. Prices right. **H. C. HAMIL, BOX GROVE P. O. ONT., Markham, G. T. R.; Locust Hill, C. P. R.** Bell phone connection from Markham.

We are offering 5 young bulls fit for service, from dams of 40 lbs. to 50 lbs. daily of 4½ milk. Anything else in the herd priced reasonable. This herd won over \$1,200 prize money in 1911.

P. D. McArthur, North Georgetown, Que.

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

City View Ayrshires All from R. O. P. bulls of January, March, May and July, 1911; also calves of 1912. Right good ones. Males only for sale. Write, phone or call. **JAMES BEGG, R. R. No. 1 half mile west. ST. THOMAS, ONT.**

Hillcrest Ayrshires—At head of herd is a son of the champion Ayrshire cow, Primrose of Tanglewild, R. O. P. test 16,195 lbs. milk and 625.62 lbs. fat; 60 head to select from. Inspection invited.

F. H. HARRIS, Mt. Elgin, Ont.

Ayrshires and Yorkshires—We have still some good young bulls. Now is the time to buy for the coming season, before the best go. We have females any age, and can fill orders for carlots of Ayrshires. Pigs of either sex on hand.

ALEX. HUME & CO., Menie, Ont.



When you want to clear your house of flies, see that you get

WILSON'S FLY PADS

Imitations are always unsatisfactory.



SALT

Ask your dealer for

RICE'S SALT

Your butter will bring a higher price if you use Rice's. It's pure and can always be depended upon for household use. The salt in the neat package

FOR ALL PURPOSES.

North American Chemical Co.,

LIMITED

CLINTON, ONTARIO



Purebred Registered Holstein Cattle

The most profitable dairy breed, greatest in size, milk, butter-fat and in vitality. Send for FREE illustrated descriptive booklets

HOLSTEIN-FRIESIAN ASSO.

F. L. Houghton, Sec'y, Box 127, Brantford, Ont.

Holsteins of Quality

Write us to-day for our proposition, telling you how any good dairyman may own a registered Holstein bull from a Record-of-Performance cow without investing a cent for him.

MONRO & LAWLESS, "Elmdale Farm" Thorold, Ontario



MINSTER FARM

Offers YORKSHIRES of both sexes, and a HOLSTEIN BULL CA F from a daughter of P. P. C. Burke, whose daughters are testing from 4.4 to 5.5% fat; sired by Lakeview Burke Fayne, whose dam and sire's dam average 23.14; his sire has 10 sisters averaging 30.63. For extended pedigree write: RICHARD HONEY & SONS, BRICKLEY, ONT.

The Maples Holstein Herd

offers a splendid lot of bull calves, all sired by Prince Aaggie Mechthilde and all from record of merit dams. For pedigrees and prices write

WALBURN RIVERS,

Felden, Ontario

Maple Grove Holsteins Herd headed by King Lyons Hengerveld, the greatest 30 lbs. back butter-bred bull of the breed in this country. For stock of this kind, address:

H. BOLIERT, Tavistock, R. R. No. 5, Ontario

Maple Line Holsteins and Yorkshires—

Herd headed by Homestead Colantha Sir Abbecker 2nd, whose dam, sire's dam, g. dam, average 29.61 lbs. butter 7 days. For sale at bargain prices, choice bull calves from R.O.P. cows. W. A. BRYANT, Middlesex Co., Cairnform, Ont.

Balaphorene A. J. Jerseys—Founda-

tion stock, St. Lambert, Coomassie, Combination; stock from a grandson of Bim of Dentonia; also a grandson of the great Blue Blood of Dentonia, for sale. W. Wyandotte eggs, \$1 per 13. Joseph Seabrook Havelock, Peterboro Co., Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

WELL CURB AND FILTER.

I thought of digging a well 8 x 12. Which would be cheaper, to wall it up, stone or cement? I want to run water off barn into it. I want to use it to drink. Can you tell me how to make a filter? J. W. C.

Ans.—In this case the cement would likely prove most satisfactory, although, if plentiful, stone would be cheaper. With regard to a filter, we reprint an answer given by Prof. J. B. Reynolds, of Guelph, to a similar question asked some time ago.

The necessity for filtering water, and the method by which it is to be accomplished, depend upon the character of the substances held in suspension or solution by the water. The first to be mentioned are mineral sediments, consisting of gravelly pebbles, disintegrated rock and sand. It is not likely that there would be any of this to be filtered from the water in this instance. In any event, a condition of separation of mineral substances is, generally, quietude for a short time, during which the substances will settle to the bottom. Other mineral impurities consist of fine silt and clay, so fine that the process of separation by gravity is very slow. The filter about to be described below will generally remove substances of this character. Next are the organic impurities, consisting of decaying leaves and other vegetable matter. These have so nearly the same specific gravity as water that the process of separation by gravity cannot be waited for, and, besides, these substances, being partially soluble, leave the water tainted even after their solid parts have been removed.

It must be borne in mind that the finest filters, acting mechanically, can remove only solid impurities. Impurities that have passed into solution yield only to chemical treatment. If the water be strongly impregnated with vegetable solutions, it would be wise to let it alone and seek a supply from some other source for table use. In this instance, the rain-water falling upon a roof, unless it is situated close to a factory, is not likely to have anything objectionable contained in it that cannot be removed by mechanical filter.

A filter of this sort should consist of a basin or tank containing about four square feet of surface; that is, if square, should be two square feet; and should be seven to eight feet in depth; the filter so placed that the top of it is as nearly as possible level with the top of tank which supplies it. As to the material of the filter, it should consist, from the bottom upward, of first, a drain pipe, having joints or perforations for receiving the water; second, one foot of coarse gravel; third, one foot of fine gravel; then from one to two feet of medium sand. Care should be taken to have the material of these layers of uniform grade. Each grade should be sifted, and the finer, as well as the coarser grades removed. Any want of uniformity in the size of the particles composing each layer will interfere seriously with their permeability. In order to furnish a sufficient head to force the water through the filter, there should be a depth of about three feet of water above the filter.

If there is much solid material in suspension in the water, it will be caught in the top layer of the filter, and will gradually clog the filter. The top layer should, therefore, be occasionally examined and renewed when required by scraping off until clean sand is reached, and replacing to the required depth with fresh sand.

GOSSIP.

Official records of 261 Holstein-Friesian cows were accepted by the American Holstein Association, from May 29th to June 4th, 1912. This herd of 261 animals, of which fully one-half were heifers with first or second calves, produced in seven consecutive days, 109,599.3 lbs. of milk containing 3,924,472 lbs. of butter-fat; thus showing an average of 3.58 per cent. fat. The average production for each animal was 419.9 lbs. of milk containing 15,036 lbs. of butter-fat; equivalent to over 59.98 lbs. or 28.56 quarts of milk per day, and 17.54 lbs. of the best commercial butter per week.



One Man and a Boy Do the Work of Four Good Men

One man and a boy (to carry milk and assist) milk 100 cows in two hours with a Sharples Mechanical Milker.

Just think of what that means. Think of the relief from the long hours of awful drudgery twice a day. Think of the freedom from worry and unreliable 'hired help'. Think of the extra profit—at least \$15 more per cow each year—you can make with a Sharples Milker. Think of the opportunity you have of doubling your herd, thus more than doubling your dairy profits without increasing the labor expense a cent.

These are but a few of the many advantages of

The Sharples Mechanical Milker

The one recognized successful milker on the market today. Used in the world's finest and largest dairies. Over five hundred of these machines in regular use.

"The Sharples Milker produces cleaner milk than hand milking and is easy to keep clean. I do not see how it can affect the cows, or affect the milk flow except a tendency to increase it by the uniformity of its milking. We are handling a herd of 140 cows with one-third the labor that was required before. Very truly yours, John V. Bishop."

One secret of the success of The Sharples Milker is "The Patented Teat Cup With the Upward Squeeze"

Instead of continually drawing the blood down with the milk as ordinary suction machines do, it gives the teat a gentle "upward" squeeze after each suction or pulsation, and thus avoids the congestion, swelling, soreness and other objections. We can't explain it all here. Just send for Catalog and see for yourself the wonderful advantages of this wonderful machine. We gladly put them in and give you ample time for trial.

A Postal Brings Catalog M

THE SHARPLES SEPARATOR CO. WEST CHESTER, PA. Toronto, Can. Winnipeg, Can. Agencies Everywhere

KING SEGIS WALKER

The highest pedigreed sire in Canada. Average record of dam, gr. dams, and g. gr. dams: Butter, 28.36 lbs.; milk, 544.42 lbs.; fat, 4.24 lbs. Fee for service, \$25. This sire's get are 80 per cent. females. For sale: A grandson of King Segis and Pontiac Pet, record 37.67 lbs. butter and the world's champion; also a bull calf whose dam is a daughter of Pontiac Korndyke, and just completed a record of 722 lbs. in 7 days. A. A. FAREWELL, OSHAWA, ONTARIO

LAKEVIEW HOLSTEINS!

Bull calves sired by Dutchland Colantha Sir Mona, and out of heifers sired by Count Hengerveld Fayne De Kol.

Telephone. E. F. OSLER, BRONTE, ONTARIO

Fairview Farms Herd

Is where you can secure a son of Pontiac Korndyke, admitted by all breeders to be the greatest Holstein sire that ever lived. Look what his daughters are doing. Two of them with records over 37 lbs. each. Then, look at the work his sons are doing. HE IS THE GREATEST PRODUCING SIRE OF THE BREED, THROUGH HIS SONS. Every son of Pontiac Korndyke that has daughters old enough to milk is a sire of good ones. We can offer you several young ones that will give you great daughters.

E. H. DOLLAR,

HURVELTON, N. Y.

SUMMER HILL HOLSTEIN CATTLE and YORKSHIRE HOGS

Our senior herd bull, Sir Admiral Ormsby, is the sire of the world's record 2-year-old for yearly butter production. Also sire of the three highest record four-year-olds in Canada. The dam of our junior herd bull made 34.60 lbs. butter in 7 days, and gave 111 lbs. milk per day. Come and make your selections from over 70 head.

In Improved English Yorkshires we have won 95 per cent. of all first prizes at Toronto Exhibition for ten years. We are still breeding them bigger and better than ever.

Buy Summer Hill Yorkshires, the big, quick-maturing kind, and double your profits.

D. C. FLATT & SON, R. F. D. No 2 Hamilton, Ontario, Bell phone: 2471, Hamilton.



Holsteins, Yorkshires, Hackneys

Our herd of over 30 Holstein females, from calves up, are for sale. Come and make your own selection. In Yorkshires we have a large number of young sows, bred and ready to breed, of the Minnie and Bloom tribes. No fancy prices asked. A. WATSON & SONS, R. R. No. 1, St. Thomas, Ont. L.-D. phone from Fingal.

EVERGREEN STOCK FARM HIGH-CLASS HOLSTEINS

Present offering: Two young bull calves; good individuals; nicely marked and well bred; the dam of one of them being Uniclay Abbecker, the cow that topped the consignment sale of the Oxford District Holstein Breeders' Club. Priced right for immediate sale. A. E. Hulet, Norwich, Ont.



Silver Creek Holsteins

We are now offering about a dozen yearling heifers and 3 young bulls. They are all of superior type, and 7-day records that average 27 lbs., in at head of herd. A. H. TEEPLE, CURRIES P. O., Ont. Woodstock Station. Phone connection.

Brampton Jerseys

Bulls fit for service are getting scarce. Just a few left. Yearling heifers in calf are in great demand; 6 for sale; 6 now being bred. Brampton Stockwell the sire. A few good cows and some calves for sale. Production and quality. B. H. BULL & SON, Brampton, Ont.

Was Confined To Bed FOR FOUR MONTHS

RHEUMATISM THE CAUSE

DOAN'S KIDNEY PILLS CURED HIM

Mr. W. H. Riley, Ruddell, Sask., writes:—"It is with the greatest of pleasure that I can recommend Doan's Kidney Pills to all suffering with rheumatism. I was so bad with this terrible disease, I was unable to get up from my bed for four months, and nothing seemed to relieve me until a friend recommended Doan's Kidney Pills. I had my doubts about them, but was so desperate I would try anything suggested to me. After taking half a box I was able to get up, and after taking two boxes could get around quite well. After taking six boxes I was completely cured, and able to work for the first time in five months, and have not had a touch of rheumatism since. Anyone who saw me then would not know me now, as I am so strong and active since taking your valuable medicine."

Doan's Kidney Pills are 50 cents per box, or 3 boxes for \$1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

In ordering direct, specify "Doan's."

STOP THIS WITH COOPER'S FLY KNOCKER

It pays to keep your stock free of flies—contented cows give 1/2 more milk; horses work harder and on less feed. Costs less than 1/2 cent a head per day. Use Cooper's Fly Knocker and save money. Easy to use—economical—efficient—safe. Quarts (Imperial) 50c; Gallons (Imperial) \$1.00. Special circular free—tells what others say about Cooper's. Any dealer or WM. COOPER & NEPHEWS - TORONTO

FARNHAM OXFORDS and HAMPSHIRE

The Oldest-established Flock in America
Our present offering is a grand lot of yearling rams and ram lambs of both breeds. Also a few fitted yearling ewes and ewe lambs by our imported champion rams, and some from imported dams; also 50 fine yearling field ewes. Prices moderate.

HENRY ARKELL & SON, ARKELL, ONTARIO
Phone connection Guelph.

Cattle and Sheep Labels

Size Price dec. Fifty tags
Cattle 75c. \$2.00
Light Cattle .. 60c. 1.50
Sheep or Hog. 40c. 1.00
No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample. Mailed free. F. G. JAMES, Bowmanville, Ont.

Southdown Sheep

The market to-day demands quality. It pays to breed what the market wants. Can you do this more cheaply or quickly than by heading your flock with a right good ram of this most perfect of mutton breeds?
Orders taken for a few sturdy young rams for fall delivery.

ROBT. McEWEEN, Alloway Lodge Stock Farm
Byron, Ontario

A teacher asked his pupil if there were eleven sheep in a field and six jumped through the gap in the hedge how many would be left. "There would be none," was the reply. The teacher reasoned with his pupil as to his backwardness in subtraction—"Well, I'm blowed," was the retort, "you may know arithmetic, but you know nothing about sheep."

CLEAN HANDS



15c a Tin.
Don't let them fool you with a cheap imitation SNAP is the ORIGINAL and BEST HAND CLEANER. Will remove grease and stains of all kinds.

QUESTIONS AND ANSWERS. Miscellaneous.

SPLINT LAMENESS.

Have a three-year-old road colt that has been lame for about a month. I have found a small splint which I think causes lameness. Please advise how to treat it. Should she be used when treating?
P. M.

Ans.—Splint lameness is quite common, and sometimes quite alarming in young horses, and occasionally in horses of all ages. Lameness is usually present only during the inflammatory stage. When the exudate becomes ossified (converted into bone), the inflammatory action ceases and lameness disappears, unless the enlargement be of sufficient size and so situated that it causes irritation to the suspensory ligament or involves the knee joint. Splint lameness sometimes disappears very suddenly. A horse may be driven a journey and go perfectly sound, and after a rest, when taken out to drive home, may go very lame when asked to go faster than a walk. Treatment should be directed to allay the inflammation. Of course, the horse must be given rest. The seat of the splint should be showered with cold water several times daily for two or three days. This is often all that is necessary, and he will go sound, and after a while the enlargement will be noticed. In other cases lameness is more persistent, and it becomes necessary to apply a blister. A second or third blister is sometimes necessary, and in some cases it is necessary to have the animal fired by a veterinarian. In rare cases the lameness is persistent, and a long rest is necessary, and, as stated, lameness may be permanent. When lameness does not exist, it is seldom considered necessary to treat. Friction, or blistering, has a tendency to hasten absorption of the enlargement, but in most cases nature effects this without extraneous assistance. As a simple matter of fact, there are few horses that have done considerable road work that are free from splints, although they may never have gone lame and there is no visible enlargement. Unless a splint is very large, double, or very close to the joint, it is not considered an unsoundness.

RECURRENT COLIC.

Kindly tell me, through your valuable paper, what ails my horse, and if there is any cure for him? He will paw with his fore foot, then crouch, twist the tail, and finally lie down and roll, when get up again and take a mouthful or two of hay, then another spasm will come on. He acts like this for an hour or two; passes manure in large quantities, also gas, both having an offensive smell. These attacks come on about every two or four weeks. He had one about a week ago. When he is very bad, he sweats till he is dripping wet. He was in good condition last summer, and up till fall, when he had a very bad attack, being sick about three hours. We gave him three ounces of spirits of sweet nitre, at intervals of half an hour, before he got relief. Since, he has been failing. We have been giving him a colic cure lately, which relieves him, but does not give a complete cure. We have given him four bottles. The last two attacks we gave him a tablespoonful of mustard, which relieved him for a time. These spasms have been on him for nearly two years. We feed timothy hay, 12 quarts oats, and a little bran a day. Lately he has had a little grass at night. The same horse has a habit similar to wind-sucking. He will move his mouth as if eating something, draw the head inward, and move the mouth as if taking a mouthful of food, throwing the head downward. Sometimes he will seize the manger. Would this cause his sickness? He has been doing this for about a year.
J. L. M.

Ans.—This is due to a weakness of the digestive glands. Give tonic daily, one dram each of ginger, gentian, and nuxvomica, and feed carefully a food of first-class quality. As the trouble has continued so long, it is somewhat doubtful whether treatment will be entirely successful, and one of the attacks may prove fatal.

COOPER'S SHEEP SALE
August 20th, 1912, at Sugar Grove, Ills.
SHROPSHIRE, OXFORDS, HAMPSHIRE, COTSWOLDS
Show and breeding stock. Write for full particulars.
WM. COOPER & NEPHEWS PEDIGREE STOCK CO.
64 W. Illinois St., Chicago, Ills.

IMPORTED SHEEP

Those wishing an imported ram, a few choice imported ewes or a few show sheep to make up their show flock, should write me, after this date, to
MOLESCROFT, BEVERLEY, E. YORKS, ENGLAND

C. HODGSON, Brantford, Ontario

Shropshires and Cotswolds!

In SHROPSHIRE I have for sale 35 imp. shearing rams and ewes from some of England's best flocks, a lot of fine home-bred rams and ewes bred from Minton and Buttar ewes. In COTSWOLDS a lot of rams and ewes, and an extra good lot of lambs. A few of each breed fitted for showing. Order early and get a good choice. Prices very reasonable.

Claremont Station, C. P. R., three miles.
Pickering Station, G. T. R., seven miles.
John Miller, Brougham, Ont.

AMERICAN SHROPSHIRE REGISTRY ASSOCIATION
Only Shropshire Association recognized by U. S. Government Largest membership of any live-stock association in the world. Life membership \$5.00. No yearly dues. Write for information. J. M. WADE, SECRETARY, LAFAYETTE, INDIANA

MAPLE GROVE YORKSHIRES

AS GOOD AS ANY.
S. H. Jack (imp.) champion and silver medal boar at Toronto for three successive years at head of the herd. Present offering: Fifteen young sows all good, being bred. Eight young boars fit for use; choice long fellows of excellent breeding and younger pigs of various ages. Pairs not related. Our prices will suit the average farmer, but are consistent with the best quality. Stock shipped C. O. D. and on approval. Correspondence and personal inspection invited. Long-distance phone via St. Thomas.
H. S. McDIARMID, FINGAL, ONTARIO
Shedden Station, P. M. and M. C. R.

Large White Yorkshires

Have a choice lot of sows in pig. Boars ready for service and young pigs of both sexes supplied not akin, at reasonable prices. All breeding stock imported, or from imported stock, from the best British herds. Write or call on:
H. J. Davis, Woodstock, Ont.
C. F. R. and G. T. R. Long-distance phone.

HAMPSHIRE SWINE

Both sexes and all ages, from imported stock. Prices reasonable.
C. A. POWELL, Arva, Ontario
Four miles north of London.

Duroc Jersey Swine

A choice lot of boars for service. WANTED—Twenty dairy calves, seven to twenty days old, grades or pure bred; state price F.O.B.
Mac Campbell & Sons, Northwood, Ont.

The **Tamworths in Canada**—I have a particularly nice lot of young Tamworths just now of both sexes, from youngsters up to breeding age. If you want the best types of the breed, write me. **HERBERT GERMAN, St. George, Ont.** Long-distance phone.

Tamworths—We can supply Tamworth Swine both sexes and any age, bred from the champions of Canada; show stock a specialty.
D. DOUGLAS & SONS, Mitchell, Ontario.

ELMHURST LARGE ENGLISH BERKSHIRES
Present offering: Select sows. Choice boars ready for service also younger stock, lively guaranteed. **H. M. VANDERLIP, Reeder and Importer, CAINSVILLE P. O. Langford station, Brantford and Hamilton Radial.**

Newcastle Tamworths and Shorthorns

Present offering: Seven boars from 6 to 10 months old; boars and sow pigs 6 weeks to 4 months; sows bred and others ready to breed, from such noted stock as Colwill's Choice, Canada's champion boar, 1901, '02, '03 and '05, and Imp. Cholderton Golden Secret. Also a few choice Shorthorn heifers in calf; beef and milk combined. Show stock a specialty. Prices right.
L.-D. Phone. A. A. Colwill, Newcastle, Ont.

Registered Tamworths—Merton Lodge

worths, is offering Tamworths, either sex, from six weeks to four months old. The true bacon type, having great bone and length. We pay express charges and guarantee satisfaction.
W. W. GEORGE, Crampton, Ont.

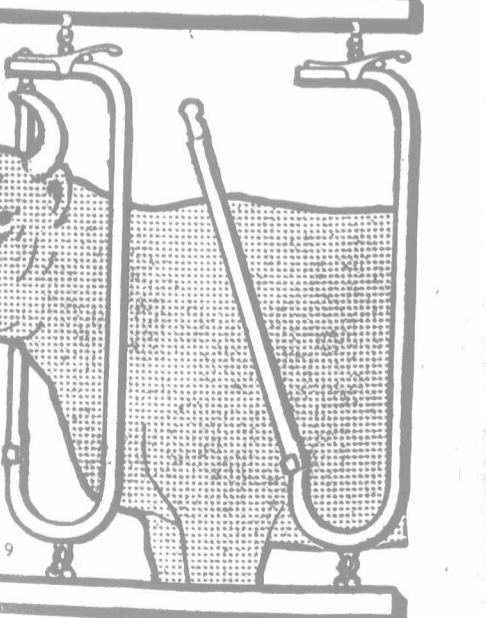
Hampshire Pigs

PRESENT OFFERING—7 Sows in pig
Also a number of young pigs 3 months old from imported stock. Write for prices. Long-distance phone.
J. H. RUTHERFORD, Box 62, Caledon East, Ont.

Morrison Tamworths

Bred from the prize winning herds of England; choice stock for sale; also Shorthorns of the deep milking strain.
CHAS. CURRIE, Morrison, Ontario

FACTS—NOT THEORY —ABOUT O.K. CANADIAN U-BAR STEEL STANCHIONS



When big stables like the Central Experimental Farm at Ottawa—the new barn at Silver Spring Dairy Farm, Ottawa—the Brindale Farm at Toronto—are equipped with O.K. Canadian U-Bar Patented Steel Stanchions—there are good reasons for it.
O.K. U-Bar Steel Stanchions are of one piece—have no rivets or joints—therefore never sag and stand up against the most severe usage. Made in 5 sizes. We also make O.K. Canadian Stalls, Water Basins and a complete line of Stable Equipment. Write for catalogue.

Canadian Potato Machinery Co., Limited, Galt, Ont.

When Writing Advertisers, Please Mention "The Farmer's Advocate"

WHEN THE LIVER IS INACTIVE CONSTIPATION SOON FOLLOWS

The duty of the liver is to prepare and secrete bile, and serve as a filter to the blood, cleansing it of all impurities and poisons.

Healthy bile in sufficient quantity is Nature's provision to secure regular action of the bowels, and therefore when the liver is inactive, failing to secrete bile in sufficient quantity, constipation soon follows.

Mr. Henry Pearce, Owen Sound, Ont., writes:—"Having been troubled for years with constipation, and trying many so-called remedies, which did me no good whatever, I was persuaded to try Milburn's Laxa-Liver Pills. I have found them most beneficial; they are, indeed, a splendid pill, and I can heartily recommend them to all suffering from constipation."

Milburn's Laxa-Liver Pills are 25 cents per vial, or 5 vials for \$1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

GRAND TRUNK RAILWAY SYSTEM

Homeseekers' Excursions

July 23 August 6 and 20
September 3 and 17
Via Sarnia or Chicago.

WINNIPEG AND RETURN, - \$34 00
EDMONTON AND RETURN, - \$42 00

Tickets good for 60 days.
NO CHANGE OF CARS

Special train will leave Toronto 10.30 p.m. on above dates, via Chicago and St. Paul, carrying through coaches and Pullman Tourist Sleeping Cars.

The Grand Trunk Pacific Railway is the shortest and quickest route between Winnipeg-Saskatoon-Edmonton.

New Fast Express Service between Winnipeg, Yorkton, Canora and Regina. Smooth roadbed, Electric lighted Sleeping Cars, Superb Dining Car Service.

Lv. Winnipeg,	8.45 am	6.00 pm
Ar. Yorkton,	7.10 pm	9.30 am
Ar. Canora,	8.30 pm	11.45 am
Ar. Regina,	9.00 pm	7.00 am
Ar. Saskatoon,		8.18 am
Ar. Edmonton,		9.00 pm

UPPER LAKE SAILINGS

Sailings from Sarnia for Sault Ste. Marie and Port Arthur 3.30 p.m. Mondays, Wednesdays and Saturdays.

Ask any Grand Trunk Agent for full information, or write

A. E. DUFF, D. P. A.,
Union Station, Toronto, Ont.



SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS.

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

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

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

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

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price, \$3.00 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$30.00.

W. W. CORY,

Deputy of the Minister of the Interior.
N.B.—Unauthorized publication of this advertisement will not be paid for.

GOSSIP.

THE LAND "SKINNER."

A recent editorial article in the New York Independent, observes that "every year hundreds of thousands of Americans, journeying between New York and Chicago, have a remarkable opportunity to observe from their Pullman windows the difference between good farming and poor. Going one way through Ohio and Pennsylvania, and the other way through Canada from Buffalo to Detroit, it is necessary only to look for obvious things to learn the different way of our own fellow citizens of the agricultural vocation and the painstaking thrift of our British-American neighbors.

The best representation of farming is not always along the railway lines, so the following reference may not do full justice to Ohio, but it is frankly truthful regarding Southern Ontario: "South of Lake Erie litter and disorder about barns, houses and outbuildings, hedges of weeds and bushes along the fence lines, and unsheltered farm machinery, tell of the farmer who either has never been properly trained to his work, or whose mind is on something else than the careful administration of his domain. North of Lake Erie one rolls through mile after mile of beautifully tilled fields, noting fences and buildings in perfect repair, and field boundaries absolutely clean. The shrubs and bushes that stand have been kept for a purpose, not through negligence or because of inadequate energy to use the brush-hook. On the Canadian side of the lake live stock is abundant. Sheep, cattle and horses, always in the landscape, give evidence that the farmers there have learned how impossible it is without live stock to keep up the fertility and productiveness of their acres. South of the lake, except in specialized areas, like the grape-growing region about Cleveland, the old land-skipping game goes merrily on.

"The Mohawk Valley and the Valley of the Ohio were once the potential garden of the world. Enormous crops of wheat could be raised there, as now in the Red River Valley of North Dakota. The land-skinner exploited them and then moved on to the prairies of Illinois and Iowa. Having exhausted in those States also the possibilities of making fortunes out of nothing, he is now pushing into the great Northwest of Canada. We have heard lamentations over the departure of American farmers from Iowa, and have read the Canadian newspaper rejoicings as the Iowans have crossed the border. Lamentations and rejoicings are both misplaced. The United States should view the departure of land-skippers with something better than equanimity. Canada will rue their enterprise.

"Good farming is coming in this country, but slowly. From New England, through the Middle West and into the Dakotas and Montana it is making its way, partly through the influence of the agricultural colleges and experimental stations, partly through the coming of people who know how to farm and are willing to put the necessary thought and labor into their vocation to carry it on properly.

"The virtues of the old American stock were many, and we are among those who sincerely hope that it has left an enduring intellectual and moral influence upon the larger American people that is now in the making. But it would not be truthful to maintain that the old stock consisted largely of exemplary farmers, though most of it nominally followed agriculture as an occupation. The American has been a land speculator, a land exploiter, a forest destroyer, a mining speculator, and a stock speculator, but not, as a rule, a thrifty, patient, practical, scientific, far-seeing farmer. A great population of really good farmers would mean more for the material and moral prosperity of this country than almost any other one thing that could be named."

"My dear girl," exclaimed an elderly lady, "do you know that the man you are intending to marry drinks and gambles?"

"Yes, I know; I am going to marry him to reform him."

"Listen to me, my girl. Try one experiment before you do that."

"What experiment?"

"Take in a week's washing to do and see how you like it."—Town Topics.

How MUCH?



YOU KNOW how much butter-fat there is in the cream which you sell. Do you know how much plant food there is in the fertilizer which you buy — or do you leave it to the agent and let him send you any kind of fer-

tilizer he sells, at what seems to be a reasonable price?

Are you getting as much phosphoric acid as you need in an available form to perfectly ripen the wheat berry so that it will turn out plump hard A-1 grade?

HOMESTEAD

BONE BLACK FERTILIZERS

are known as crop producers and every analysis is guaranteed to be as represented. They are easily applied because they are so finely ground. They can be sown with a grain drill before planting or scattered by hand from the wagon if you have no drill, and then harrowed in.

At Dashwood, Ontario, Louis Walper says: "I had one of the biggest crops ever seen on this farm, following the use of 'HOMESTEAD' fertilizers."

At Thetford, Ontario, Wilson Bros., say: "We are well satisfied that it does not pay to sow wheat without them;" and Mr. H. Wilson of the same place writes: "Each year I sow a piece without fertilizer and the difference is so great I am fully convinced it does not pay me to sow wheat without the 'HOMESTEAD'."

At Arkona, Ontario, Mr. J. A. Gordon says: "I have used 'HOMESTEAD' fertilizer about five years. The first year I shut it off once across the field and my neighbor said he could see that strip 8 rods away; and it could be seen two years afterward in the meadow, so I think it pays all right."

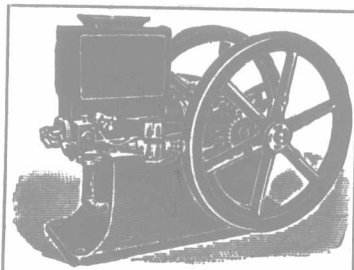
Every farmer should read our 52 page book on Fertilizers and "How to Fight Drouth with Fertility," sent free, postage paid. Write us today and tell your friends to do the same.

WE WANT AGENTS FOR UNOCCUPIED TERRITORY

The American Agricultural Chemical Co.

Michigan Carbon Works, Detroit, Mich.

A NEW NAME for the BEST Farm Engine



Made in air-cooled or water-cooled styles. Sizes 1 1/2 to 20 h.p. Send for catalogue, prices and buying terms for farmers.

We have changed the name of our famous "CANADIAN" air-cooled and water-cooled engines to a name that also signifies superiority.

Hereafter, these engines will be known as the Monarch.

It is a Monarch among farm engines. No engine runs better, is more compact, easier started, surer and steadier than this. Always remember the "MONARCH".

Every part is true to 1/500 in. or less. Experts work on every part. Material is the best money can buy. Bearings are compact and every part is reachable. The "MONARCH" is reliable, simple, durable, powerful and dependable. Easy buying terms. Write us for catalogue. Our Company has a new name too.

big and wide. The design is compact and every part is reachable. The "MONARCH" is reliable, simple, durable, powerful and dependable. Easy buying terms. Write us for catalogue. Our Company has a new name too.

THE CANADIAN ENGINES, LIMITED

Formerly Canadian-American Gas & Gasoline Engine Co., Limited.

DUNNVILLE, ONTARIO

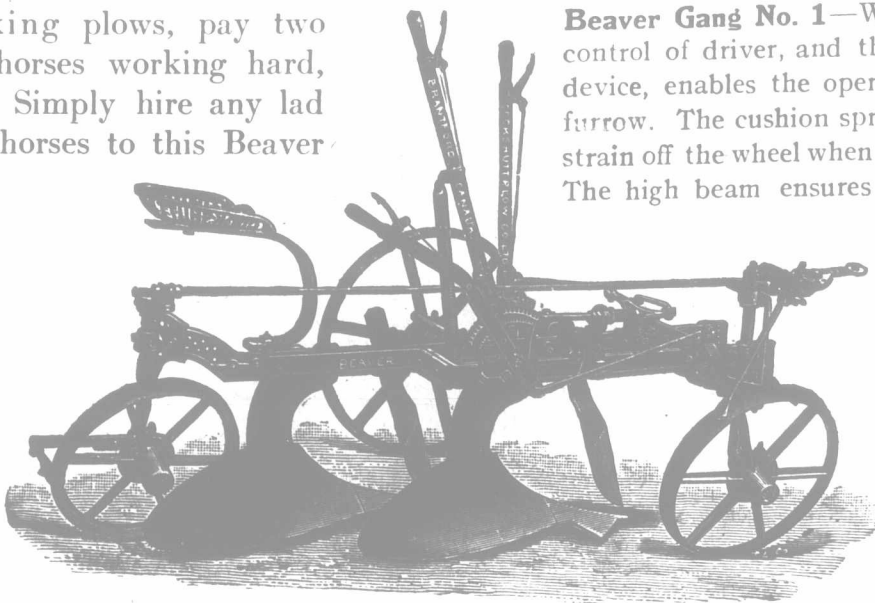
Frost & Wood, Ltd., Smith's Falls, Sole Selling Agents for East'n Ont., Que. and Mar. Prov.

Please Mention The Advocate

This Beaver Gang Will Reduce Your Plowing Expenses 40c. on Every Dollar — Plows Better-Quicker-Easier

Why use two ordinary walking plows, pay two skilled men and keep four horses working hard, when there's a better way? Simply hire any lad who can drive, hitch up three horses to this Beaver Gang and tell the boy to go ahead. He needn't be an expert—the plow is so simple and easy to operate.

And this Gang Plow will make better furrows, plow quicker and save you nearly half your plowing expenses, than if you used two ordinary walking plows. Read all about it.



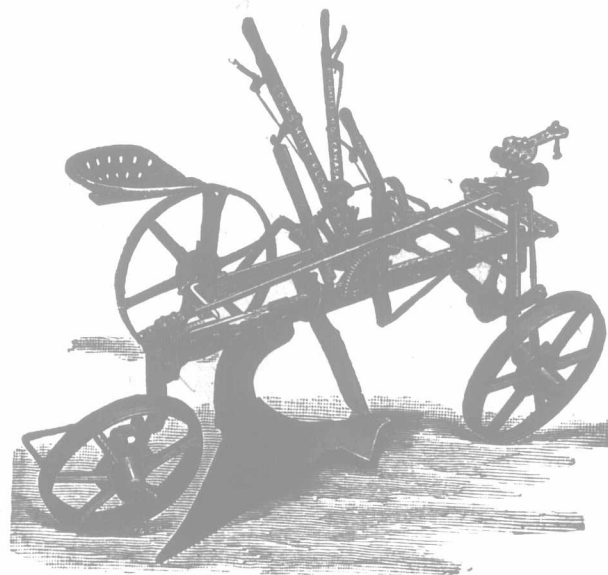
Cockshutt Beaver Gang

Beaver Gang No. 1—Wheels of this Gang are always under control of driver, and this, combined with our straightener device, enables the operator to keep an absolutely straight furrow. The cushion spring on land wheel axle arm, takes the strain off the wheel when striking obstructions in rough work. The high beam ensures good clearance. This plow is also

built with adjustable beams, which can be set for wide or narrow work. Our new lifting spring for furrow wheel makes it possible to raise the plows without effort. The land wheel is extra large, making the plow run steady and easy. Can be supplied with wide or narrow bottoms, knife colters, shares, tripletrees and wrench. We cannot recommend this plow too strongly to farmers who want good work done quickly and cheaply—the great demand we have for this Beaver Gang is sufficient proof of its efficiency.

This Plow Draws as Light as an Ordinary Walking Plow

This Beaver Sulky has all the features of the Beaver Gang. The beam for carrying the plow is made of extra heavy high carbon steel, making it a perfect plow for hard work. The wheels are absolutely dust proof, are always under the control of the driver, and are so arranged that the plow will automatically adjust itself to the unevenness of the



Cockshutt Beaver Sulky

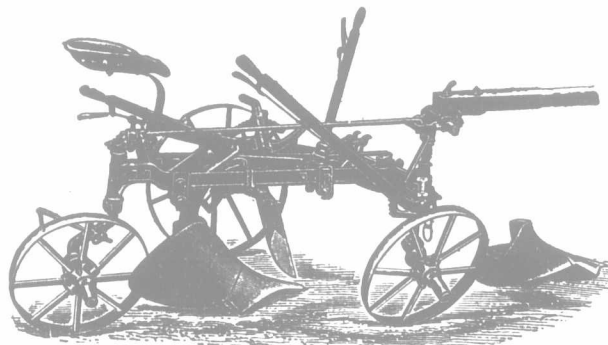
Does Better Work—Ensures Rest for Driver

ground. The land wheel is extra large—a great advantage in operating the plow. The plow can be easily raised by means of our new lever and spring lift, and bottoms can be supplied to suit any soil. This is without question the lightest draft sulky plow made, and we know it will give full satisfaction under all conditions.

This New Footlift Sulky Leads All Others

For clay land we recommend our Judy bottom, which turns a furrow from 7 to 10 inches wide. For loamy soil our No. 21 bottom is most suitable—it turns a furrow from 10 to 12 inches wide. The excellent reputation of these bottoms makes detail unnecessary.

The distinctive feature of this plow is the **Footlift Attachment**. The levers are within reach, but need only be used to give the plow the width and depth of furrow, for once the plow is leveled, it is operated entirely by the footlift attachment, thus leaving the operator's both hands



Cockshutt New Footlift Sulky

You Can Change the Bottoms for Different Soils

free to manage the team. A special device locks the plow up when raised from the ground, and locks it down when set for work. Can be fitted with rolling colter, knife colter or jointer. This Footlift Sulky is away ahead of any other sulky plow in America—it is up to the minute in improvements, and will easily outclass any other sulky plow on the market.

Let us arrange with one of our dealers to show you this implement, because we know that its superiority will be readily appreciated.

Catalogue illustrating our complete line of Farm Implements will be gladly sent to you free. Ask for it to-day. It is worthy of a place in your home.

Sold in Western Ontario and Western Canada by

COCKSHUTT PLOW CO., Ltd.
Brantford, Ontario

Sold in Eastern Ontario, Quebec and the Maritime Provinces by

The FROST & WOOD CO., Ltd.
Smith's Falls, Ontario