

PUBLISHED EVERY WEEK. \$1.50 PER YEAR

Census and Statistics
Dept. of Agriculture
Dec 31, 08

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE
AND
SUCCEED
FOUNDED 1875

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

ENTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875

Vol. XLV.

LONDON, ONTARIO, MAY 5, 1910.

No. 919

Saves Time, Labor and Expense Frost and Wood Crown Gang Plow

We urge you to do your plowing this season with the "Crown" Gang Plow instead of using single-furrow walking plows—or riding plows. The "Crown" turns two furrows where the ordinary walking plough turns one. It turns the furrows faster, cleaner, more evenly, too. You walk twice as far, and take more than twice as long, to do the same amount of work with a single-furrow plow as you can do with the "Crown" Gang.

But why walk at all? Why not use a riding plow, you say? Simply because it isn't good business to do so. When you use a riding plow you hitch on one more horse than the single-furrow plow needs. The extra horse is not to do the work faster. It is needed to pull your extra weight around the field. Now, can you afford the expense of that extra horse merely to enjoy the luxury of riding? Why not use the extra horse on the "Crown" Gang and break twice as much ground?

Just do a little figuring for yourself and you'll prove that the "Crown" Gang will pay for itself in one season in the time, labor and expense it will save you. If you would like your figures verified, send for booklet F 46 which shows how the "Crown" Gang will save you \$15 per week.

46



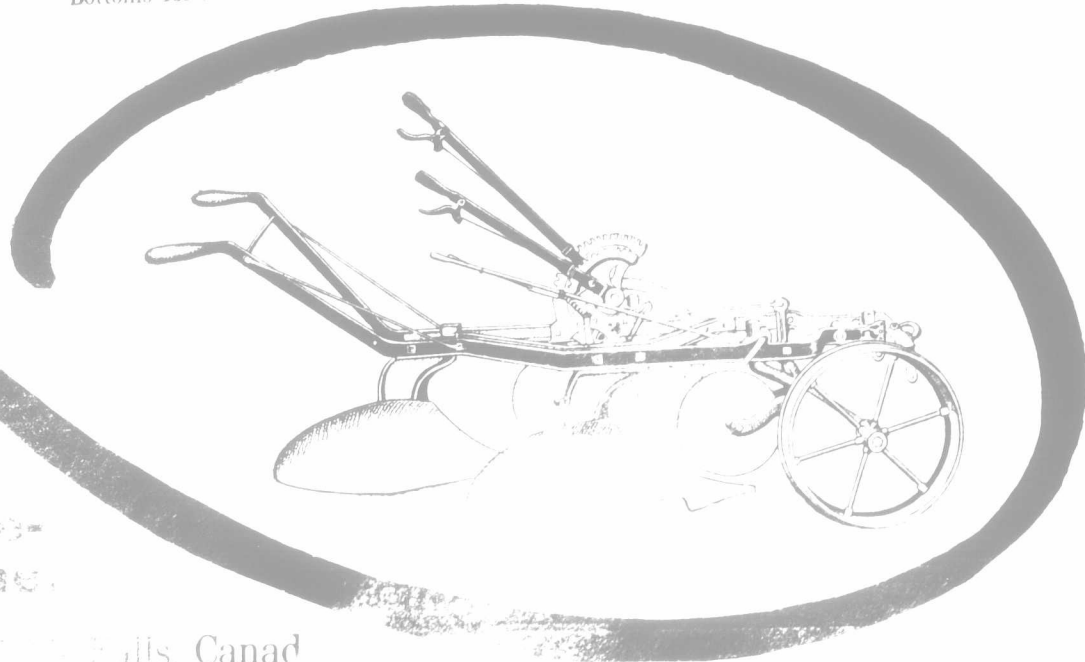
There is a difference in gang plows same as in hired men. You are liable to get hold of a mighty poor-working gang plow, just as you are to get hold of a hired man who barely earns his salt. It pays to take precautions.

We can give you a big list of progressive farmers who swear by the "Crown" Gang — who say it is the surest, steadiest, fastest-working plow they have ever seen or used. The "Crown" is not, like so many others, an old "failure" which has been rebuilt or remodelled. The "Crown" is a plow on which we spent a good long time, and no little cash, to perfect. It was not placed on the market until it had been tested many months under various soil conditions in different sections of the Dominion. We knew the "Crown" was a "success" before we made a single sale, and it has made a record we are proud of.

It's the perfect shape of the mouldboards that makes the "Crown" Gang turn the sod so easily and produce such clean-cut, beautifully even furrows. It's because they are made of soft-centre crucible steel and highly polished that they scour so quickly. The wheels are guaranteed dust-proof, too. And they have roller bearings—which lightens the work for the horses.

Once you set the plow you need not touch the easy-working, conveniently-located levers again. The "Crown" Gang will stay right down to its work and withstand the hard strains of plowing through heavy land. The "Crown" is so sturdily built that it will triumph where an ordinary plow will fail you. So just make up your mind you'll own a Frost & Wood "Crown" Gang Plow this season. You can purchase both sod and stubble Bottoms for the same frame. You can have either Straight or Rolling Coulters or Skimmers.

Turns
Two Clean,
Even Furrows
in Same Time Single-
Furrow Plow Cuts One.



Frost & Wood, Ltd., 100, Front Street East, Toronto, Ont., Canada

Northern Ontario

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

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

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

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

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

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

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

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

Send your remittances by
DOMINION EXPRESS MONEY ORDERS
AND
FOREIGN DRAFTS

Payable everywhere.

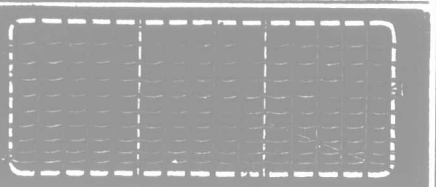
Rates for Money Orders:

\$ 5.00 and under	3c.
Over 5.00 to \$10.00	5c.
" 10.00 to 30.00	10c.
" 30.00 to 50.00	15c.

Money sent by

TELEGRAPH AND CABLE.

Issued in all stations of the Canadian Pacific Railway Co.



12' x 48" DRIVE AND FARM GATE \$4.25

From factory to user, freight prepaid in old Ontario on orders of six or more; Quebec and New Ontario, \$4.50; Maritime Provinces, \$4.65. Constructed of best material; frames 1 3/8 tubular steel welded. No splines plug or coupling at joints to break. Rivets, 3/4 tubular, diagonal braces and filling all heavy No. 9 wire throughout. "Send 'em lock it—they're not as represented," is my guarantee. Money refunded—no argument. Order to-day or write for booklet. If it's fence—iron or wire—write

THE FENCE MAN
M. T. Crown Fence and Supply Co., Toronto
He saves you money—buy direct. 411

Seed Potatoes!

EXTRA FIRST EARLY—Victor.
FIRST EARLY—Express, Early Rose and Boyce.

SECOND EARLY—Duchess of Cornwall and Ideal.

MAIN CROP—Windsor Castle, Eldorado, Delaware, Rural New Yorker, Carman No. 3, Goodfellow, Sir Walter Raleigh, Up-to-Date.

All from seed imported last season from England, Scotland and United States.

Lowest prices—All Cash.

W. P. Niles, Seedsman,
Windsor, ONT.

BANKERS' PREFERRED

THE FARMER'S ADVOCATE

Published by the

THE FARMER'S ADVOCATE CO.,

1564 Terminal Buildings, Toronto, Ont.

THE PAINT TEST



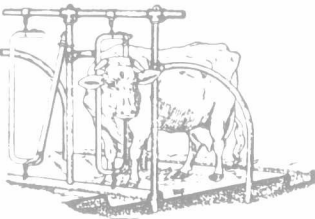
It is the paint that stands up bright and beautiful through rain or shine. That is what you want on your home. You can't experiment. Let

RAMSAYS PAINTS

do the experimenting for you. They have done it already, and are fully guaranteed. Therefore, take no risks. You don't need to. Use Ramsay's Paints for all true painting and be protected. Do you want our Booklet on house painting? It is very beautiful. We send it free. Ask for Booklet AB

A. RAMSAY & SON CO.,
THE PAINT MAKERS, Montreal, Est'd. 1842.

"BT" Steel Stalls and Stanchions

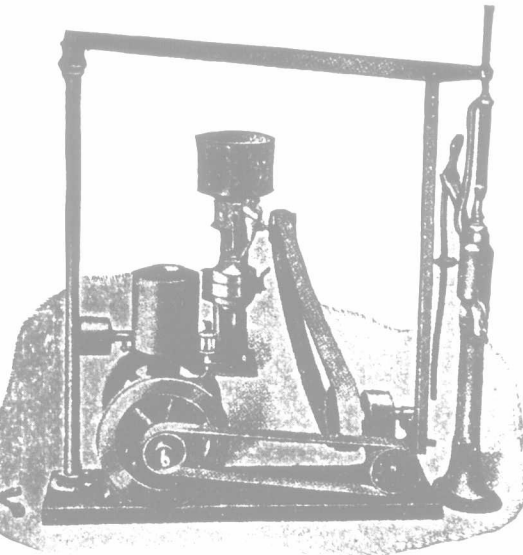


With cement floors reduce labor to a minimum, and make bright and sanitary stables. They are practically indestructible, while the out-of-date stables are constantly in need of repair, and are short-lived when compared with the latest and most up-to-date stables.

Our new catalogue contains a lot of valuable information for you if you are building a new barn or remodelling your old one. It is free, and a post card with your name and address plainly written will bring it. Write: **Beatty Bros, Fergus, Ont.**

IDEAL GASOLINE ENGINES

1 1/2 TO 40 HORSE-POWER.

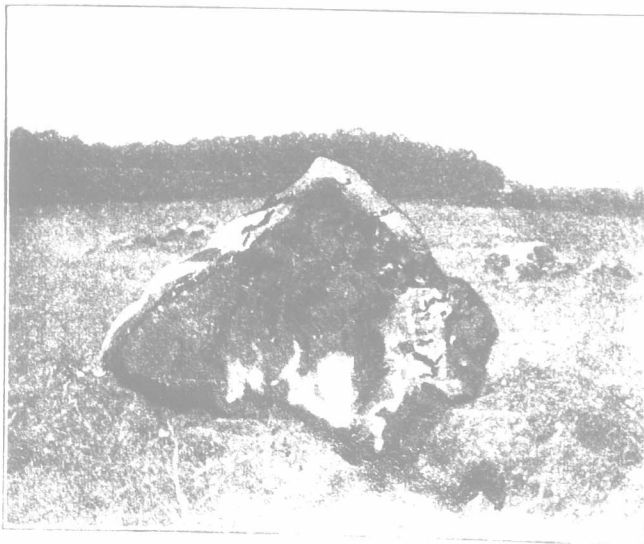


Windmills,
Grain Grinders,
Pumps,
Tanks,
Water Boxes,
Concrete Mixers,
Etc., Etc.

Send for catalogue.

GOULD, SHAPLEY & MUIR CO.,
LIMITED,
Brantford, Canada.

Now
Is the
Time to
Clear
Your
Land
Of the
Stumps
And
Boulders
Thereon



Watch our issues of May and note results at the
BERRY STUMPING POWER

STUMPING POWER

Is just the thing

Hamill

Nearest office to you

P. O., VICTORIA.

We Are Furnishing

Fine Interior Woodwork

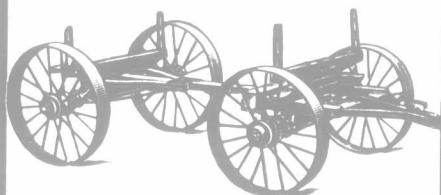
INCLUDING DOORS, ETC., IN

PINE AND HARDWOOD

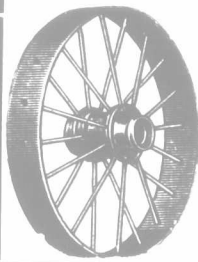
For many of Toronto's best homes. Write us for prices for anything in woodwork you may require for any class of building.

JOHN B. SMITH & SON,
LIMITED,
Toronto.
ESTABLISHED 1851.

BUY THIS WAGON



Dominion Wagons are strong, low, loaded easier than high wagons. Changed to platform pattern instantly, easily. Halves labor. Saves time. Easy on horses. Easy on your pocketbook. Built to last. Can't break. Can't rot. Cuts repair bills.



Dominion Wide-tire Low Steel Wheels—best for stony or muddy roads. Cheaper, lighter than wood. No setting tires. Cold proof. Last a lifetime. Fit all axles. Write for free catalogue now.

Dominion Wrought Iron Wheel Co., Limited,
Orillia, Ontario.

60,000 Acres

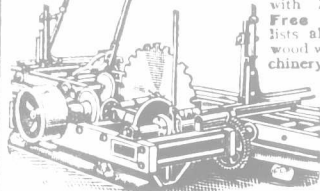
OF CHOICE FARM LAND
WESTERN CANADA.

Excellent selections within a few miles of main line of railway. Prices and terms very reasonable. Call and see us, or write for literature.

The Union Trust Co., Ltd.,
Real-estate Dept.
174-176 Bay St. Toronto, Ont.

Make With An American Money SAW MILL

Lumber is high. A car load or two pays for an American Mill. Supply your needs and your neighbors'. No experience needed. Had mill to timber if desired. All Sizes—All Prices. The Variable Friction Feed, Combined Ratchet Set Works and Quick Re-eler means most work with least power. Free Catalogue lists all kinds of wood working machinery. Ask for it.

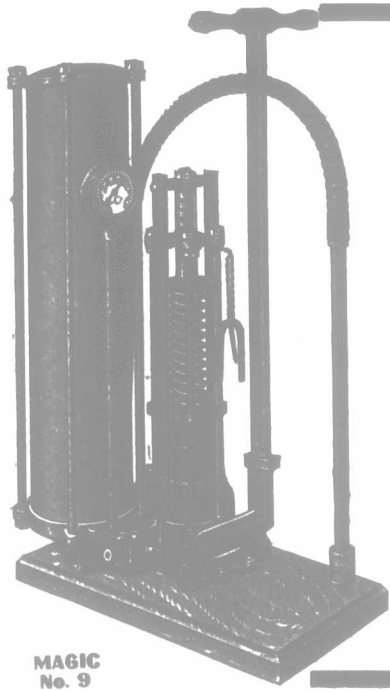


American Saw Mill Machinery Co.,
115 Hope St.,
Hackettstown, N.J.
1564 Terminal Buildings, Toronto, Ontario.

INVENTIONS

These ought to be protected in all countries. EGERTON, TEMPLE BUILDING, TORONTO. Booklet of Patents and Drawing Sheet on request.

Please Remember to Mention "The Farmer's Advocate" When Writing



MAGIC No. 9

MAGIC PUMP No. 9.

Easiest-running hand pump ever made. Largest capacity. Highest pressure.

Challenge Power Sprayer.

Will spray 400 gallons an hour at a pressure of 200 pounds.

LITTLE GIANT No. 70.

High-powered barrel pump.

These pumps are made for DURABILITY, EFFICIENCY and POWER.

WRITE FOR CATALOGUES.

Summer Spray

NIAGARA BRAND LIME-SULPHUR ARSENATE OF LEAD.

NIAGARA is the only absolutely reliable Lime-Sulphur Spray, because it is made right. It is a permanent solution of highest insecticidal and fungicidal power. Analysis is stamped on every package, and it is guaranteed by a strong CANADIAN COMPANY.

ARSENATE OF LEAD is the one poison that kills all kinds of chewing insects. It is endorsed by all leading Entomologists and Horticulturists. It will not burn fruit or foliage. It sticks to the leaves. It mixes easily and stays mixed.

FARMERS AND FRUIT-GROWERS, with these sprays you can grow Apples and Pears free of scab and worm; Potatoes free of blight and bugs; Cherries and Plums free of rot and curculio.

COMBINE these TWO SPRAYS in ONE. This saves time and money. SPRAYING is investment, not expense.

Order now. Be ready when blossoms fall.

Write for our Book: "SPRAYS AND HOW TO USE THEM."

NIAGARA BRAND SPRAY COMPANY, Limited, Burlington, Ont.

NIAGARA SPRAYS ARE ALSO MADE BY:

Niagara Sprayer Co., Middleport, N.Y. Oregon Spray Co., Portland, Oregon.
 Bean Spray Pump Co., Cleveland, Ohio. Medford Spray Co., Medford, Oregon.
 Hood River Spray Mfg. Co., Hood River, Oregon.

Peerless Jr. Poultry Fence

Close enough to keep chickens in.
 Strong enough to keep the cattle out.

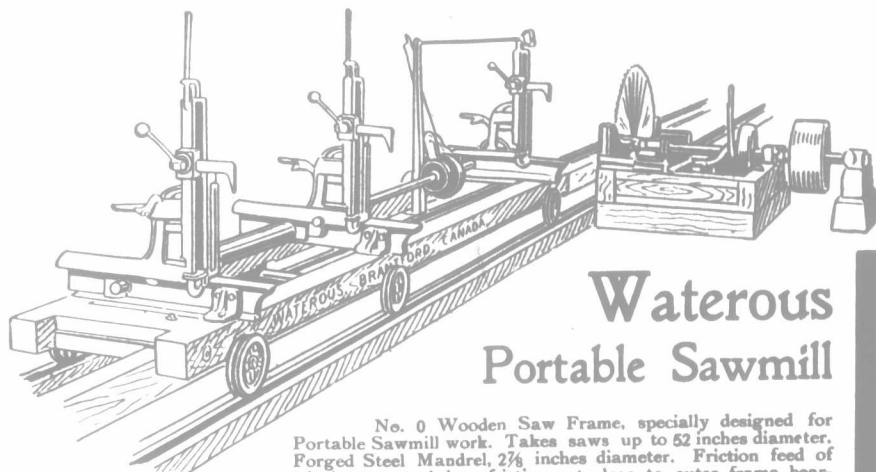
Saves Expense

PEERLESS JUNIOR Poultry Fence will do all you wish of a poultry fence and will do much more. It is built close enough to keep the chickens in, but it is also built strong, rigid and springy. Those heavy, hard steel top and bottom wires, together with intermediate laterals, will take care of a carelessly backed wagon, or an unruly animal and spring back into perfect shape again. It is the most handsome and most effective poultry fence on the market. At every intersection the wires are firmly held together by the never-slip PEERLESS Lock.

The Fence That Saves Expense

because it never needs repairs. It is the cheapest to put up, too. It is stretched up like a field fence. More than half the price can be saved in posts and lumber alone, as required by some other poultry fences. Write to-day for our printed matter. It tells you how to get your full money's worth in fences. We build fences for every purpose.

BANWELL HOXIE WIRE FENCE CO., Limited
 Dept. B
 WINNIPEG, MAN. HAMILTON, ONT.



Waterous Portable Sawmill

No. 0 Wooden Saw Frame, specially designed for Portable Sawmill work. Takes saws up to 52 inches diameter. Forged Steel Mandrel, 2 3/8 inches diameter. Friction feed of 4-inch paper and iron friction, set close to outer frame bearings. Substantial carriage can be returned or giggered from 5 to 10 times as fast as feeding speed. Carriage will accommodate good size logs. Standard carriage for rack feed is 16 feet 11 inches long; rope feed 17 feet 6 inches long. Frame extra wide, of heavy red pine stringers, edges bound with heavy iron. Log seats heavy web. Six-inch eye-beams. Knees and rack cast in one piece. Knees have 3-inch independent taper movement, and are fitted with our patent upper and lower steel hook Feed Dogs, operated by overhead single-acting ratchet networks, having large ratchet wheel. Split steel setting and holding Pawls, designed to eliminate lost motion and permit a set of 1-16 inch. Steel-set shaft 1 1/2-1 3/4 inches diameter and 16 feet long. Carries pinions which operate knees and is fitted with heavy cast iron hand-wheel for hand setting. Track 54 feet long. This is one of the finest Portable Sawmills made. It will pay you to send for our free catalogue, which describes it, as well as many others in detail. Drop us a card to-day.

The Waterous Engine Works Co'y, Ltd.
 BRANTFORD, ONTARIO.

If You Want
 A Big Crop
 Of Vegetables and
 Flowers

PLANT STEELE-BRIGGS SEEDS

The Soil Will Do The Rest

All The Best Merchants Sell

Steele - Briggs Seeds

POTASH MEANS PROFIT

Test the truth of this statement by using Potash this year in conjunction with a Phosphatic and Nitrogenous Fertilizer. Potash is an Absolutely Essential Plant Food, and may be obtained from all leading Fertilizer Dealers and Seedsmen in the highly concentrated forms of

MURIATE OF POTASH AND SULPHATE OF POTASH

Potash promotes maturity, and insures high-class quality of all Farm, Orchard and Garden Crops.

Write us for full particulars and FREE copies of our bulletins, including: "Fertilizers: Their Nature and Use"; "Fertilizing Orchard and Garden"; "The Potato Crop in Canada"; "The Farmer's Companion," etc., etc.

Dominion Agricultural Offices of the Potash Syndicate
 1102-1105 Temple Building, Toronto, Can.

School of Mining

A COLLEGE OF APPLIED SCIENCE,
 Affiliated to Queen's University,
KINGSTON, ONT.

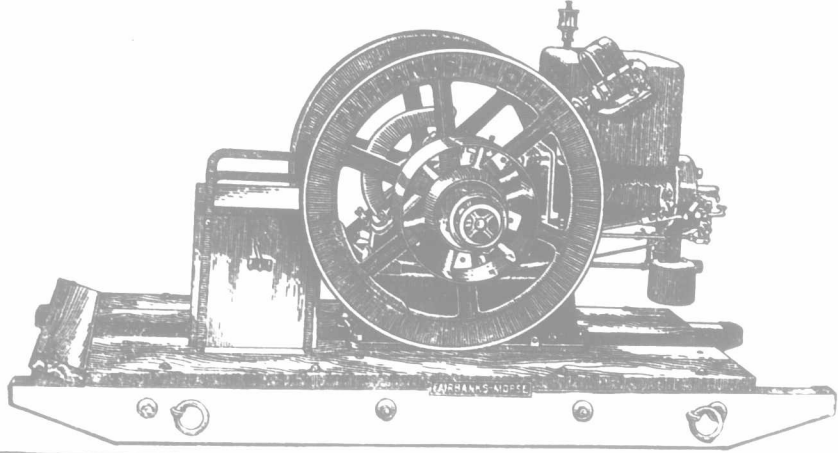
For Calendar of the School and further information, apply to the Secretary, School of Mining, Kingston, Ont.

Mining and Metallurgy.
 Chemistry and Mineralogy.
 Mineralogy and Geology.
 Chemical Engineering.
 Civil Engineering.
 Mechanical Engineering.
 Electrical Engineering.
 Biology and Public Health.
 Power Development.

FAIRBANKS-MORSE

Fairbanks-Morse factories produce the largest line of internal-combustion engines in the world. Hundreds of men in the engineering and experimental departments are employed on all problems connected with gasoline engines. There is no company in the world that has spent as much money as the Fairbanks-Morse Co. on experimental and development work. The name Fairbanks-Morse is synonymous with gas-engine perfection.

Gasoline Engines FOR GENERAL FARM POWER



Horizontal Evaporator Tank Engine mounted on skids.
Sizes: 2, 4 and 6 horse-power.
Built in our Toronto factory, the finest gas-engine factory in the world.

Our farm engines have all the principal features of the well-known Fairbanks-Morse engines, and are made in vertical or horizontal types to meet the requirements of the farmer. Their simplicity means long life.

SPECIAL TERMS TO FARMERS

The Canadian Fairbanks Co., Limited, Montreal

Toronto. St. John, N. B. Winnipeg. Calgary. Vancouver.

F. A THE CANADIAN FAIRBANKS CO., LIMITED. May 5, 1910
Gentlemen,—Please send me your free catalogue G. E. 106, showing full line of farm engines.
Name.....
Address.....

Bell PIPE TONE Organs

THE MOST SATISFACTORY ORGANS FOR HOME USE

Bell Organ

you secure one with the charming tone of a pipe organ, and at a price that will please you. Buy a Bell and get the best made. We are the only makers of the patent Pipe Tone Reed Cells. Send for free catalogue No. 40.

The BELL Piano & Organ Co. GUELPH, (Limited.) ONTARIO.
Largest makers of Pianos, Organs and 2 Playerpianos in Canada.

STEWART M. GRAHAM PORT PERRY, ONTARIO.
Pedigree-live-stock and real-estate AUCTIONEER.
Graduate of Jones' National School.

THE DE LAVAL FAMILY



There's more than a million in it— all related through their bond of satisfaction with the

DE LAVAL Cream Separator

THE BEST

The De Laval Separator Co. 173-177 William Street MONTREAL
WINNIPEG VANCOUVER

Catalogue Free Agents Everywhere

Our 4% Debentures are a Favorite Investment 4%

Our 4% Debentures offer you a profitable investment with absolutely no risk attached. Hundreds of shrewd investors buy them every year. Issued in denominations of \$100 or more, for a year or longer. Interest paid half-yearly.

AGRICULTURAL SAVINGS & LOAN CO., 109 Dundas St., London, Ont.

POTATO DIGGER



Does perfect work. Fully guaranteed. Write for illustrated catalogue of Diggers, Pickers and Sorters. THE HOOVER MFG. CO., Box No. 32 Avery, Ohio. Transfer points—Buffalo, N. Y.; Detroit, Mich.; St. Paul, Minn.; Marshalltown, Ia.; Idaho Falls, Id.; Portland, Ore.; Spokane, Wash.; Winnipeg, Man.; Hamilton, Ont.; Fond du Lac, Wis.

CIDER PRESSES

THE ORIGINAL MT. GILEAD HYDRAULIC PRESS produces more cider from less apples than any other and is a BIG MONEY MAKER. Sizes 10 to 40 barrels daily, hand or power. Presses for all purposes, also cider evaporators, apple-butter cookers, vinegar generators, etc. Catalog free. We are manufacturers, not jobbers. HYDRAULIC PRESS MFG. CO. (Oldest and largest manufacturers of cider presses in the world.) 110 Lincoln Avenue. Mount Gilead, Ohio

GOES LIKE SIXTY SELLS LIKE SIXTY SELLERS \$65 GILSON GASOLINE ENGINE For Pumping, Cream Separators, Churns, Wash Machines, etc. Free Trial. Ask for catalog—all sizes. GILSON MFG. CO.-150 York St., GUELPH, ONT.

CENTRAL Business College

STRATFORD, ONT. A Commercial school of the highest grade. A school without a superior in the Dominion. Catalogue free. Elliott & McLachlan, Principals.

They Cost But 9c. Per Square Per Year

PRESTON SAFE-LOCK SHINGLES

You pay but \$4.50 per square for PRESTON Safe-Lock Shingles. Allowing for 50 years of service their cost per year figures out as 9c. per square. Wooden Shingles and Prepared Roofing only give from ten to twelve years' service. Their cost per year is from 29c. to 25c. per square, according to the grade of roofing or shingle you buy.

PRESTON Safe-Lock Shingles are galvanized so as to pass the British Government's Acid Test. Shingles that will pass this severe test are practically everlasting. PRESTON Safe-Lock Shingles should last over 100 years, which would bring their cost per year down to less than 4c. per square. No other roofing can compare with PRESTON Shingles as an investment. No other is good enough for that, how long you are soon to rest. With no other roofing will you get a Free Lightning Guarantee.

Before making any decision as to the kind of roofing you will buy get a copy of "Truth About Roofing." It tells the truth about the different roofing materials on the market. Contains information you would be willing to pay for. We will send it free, providing you fill in and send the coupon promptly. Send it by next mail.

Metal Shingle & Siding Co., Limited, Preston Ontario BRANCH OFFICE AND FACTORY: MONTREAL, QUE.

Queen Street Factory. Please send your booklet, "Truth About Roofing." I am interested in roofing and would like complete information about PRESTON Shingles.

Name.....
PO Address.....
County..... Prov.....

The Farmer's Advocate

and Home Magazine

"Persevere and Succeed."

Established
1866

Vol. XLV.

LONDON, ONTARIO, MAY 5, 1910

No. 919

EDITORIAL

The problem of soil management is the problem of the season.

Success on the farm is dependent largely upon our appreciation of the knowledge and training required for the proper performance of its work.

An aggressive propaganda for the extension and improvement of live-stock husbandry in Canada presents vast and urgent opportunities to those in charge of the Dominion Experimental Farm system.

At a time when Conservation is being made the slogan of aspirants to Canadian public favor, leaders in the public service of farming will find in the relation of animal husbandry to permanent soil productiveness a splendid field for endeavor.

"Americans Eating Goat Flesh," is the striking heading in a leading American exchange. Goats by the hundred thousands are said to be slaughtered in the United States yearly, and the product sent into the food supply. The meat is said to be good—but it is not all eaten as goat meat.

"The emigrants on the outbound steamers at Liverpool look cheerful and happy, confident of the future in the new land, and this prospect seems to outweigh the sorrow at leaving the homeland," writes our English correspondent. Which means that Canada is now a land of hope, and emigration to it is no longer a desperate resort.

Two recent Congressional landslides from the Republican to the Democratic camp, in bye-elections where better trade relations with Canada were the issue, have disturbed President Taft, as well they might. Their effect, however, would appear to be merely a stimulation of his fanciful and fanciful idea of revising the United States tariff so as to balance up cost of production at home and abroad. The American tariff will never be rationally revised on that principle.

The franking privilege at Ottawa should be abolished. In the end, it will cost the Government nothing worth mentioning to put postage stamps on official communications, and none others are entitled to free use of the mails. So long as franking exists, it is subject to abuse, such as the free distribution of party campaign literature. The incident cited by Mr. Aylesworth, who, when Postmaster-General, was asked to frank a bag of oats, illustrates the length to which privileges may be stretched.

Over two hundred convictions under the Fruit Marks or Inspection and Sale Act, for the season of 1909-10, with others still pending! And at that, hundreds of thousands of barrels of fruit probably went through that would not pass a strict interpretation of the Act. With public opinion behind the law, practically unanimous support from the press, the interest of honest growers to safeguard, and the welfare of an important industry to conserve, increasingly strict enforcement of the Act is called for. Fruit-packing frauds must be checked.

The Prospects for Corn.

With even an approximate continuance of conditions corresponding with the auspicious spring, 1910 ought to be a record year in Canadian corn-growing. For the silo, it most certainly will be. These round receptacles for converting green fodder into silage are going up everywhere, new ones, one might say in thousands, taking the country over, of steel, cement and wood, and rarely is an old one discarded. One large grower of seed corn in Essex County, Ont., writes us that by far the greater number of inquiries were for "ensilage corn," and they came all the way from his own county to Nova Scotia. Another says, "Most of the inquiries are from dairymen who use the crop for silage, and require to buy their seed from year to year." "The demand will exceed former years, unless we are very much mistaken," adds a seed firm, and another, one of the largest houses in the country, wrote us as early as April 16th, that, up to that date, 25 per cent. more corn had actually been sold by them than in former seasons. The demand from Eastern Ontario was being largely increased. Another grower in Essex County reports his trade very much greater than last year, that he was cramped for room, and, to provide improved facilities, he proposes building a large warehouse for the coming autumn. This is one of the needs of the South-western Ontario seed-corn belt—good dry quarters for storing corn in the ear for seed. Judged by the letters he had received, the inquiries for ensilage corn were two to one of those wanted for matured corn. The true policy for the silo is to produce a well-matured plant, ear as well as stalk, with as many tons per acre as can be grown.

The late, wet spring of 1909 taught us some severe lessons regarding the necessity of drainage, early soil preparation, and thorough tillage, which are now being put into effect, and will add to the profits of the 1910 crop. Is it not true, in any given district, no matter what the season's weather is like, that some farms invariably succeed in growing good crops of corn, while perhaps just across the line fence, on precisely similar soil, there is a weedy failure? Why? If we are candid, we must admit that this need not be the case. This year affords an extra good chance to turn a new leaf in corn practice. In several districts that are not particularly early, a large area of corn land was plowed during the week ending April 23rd, six weeks sooner than last year. In the last issue of "The Farmer's Advocate," A. McKenney, Secretary of the Ontario Corn-growers' Association, gave an excellent outline of the best modern practice, based on his own experience and observation. It will repay another study. And once the little plants are through the ground, with harrow, weeder, cultivator and hoe, keep the soil warm, aired, free of weeds, and its moisture regulated for the giant stalks we expect to grow, and ears above.

One of the leading seed-houses of Toronto tells us that they have had heavy bookings of orders for Compton's Early, Longfellow and North Dakota flints, and Early Leaming and Giant Sweet Ensilage of the dent varieties. These are the staple sorts which they found in steady demand. Corn for seed they report chiefly grown in the South-western and Niagara peninsulas of Ontario, but comparatively little is saved in the ear in Eastern, Northern and North-western Ontario. The same firm report, with regret, much of the Canadian-saved corn unfit for seed, owing to dampness when put in the crib last fall. Some samples, very fine in appearance, offered them, were found, under their germination tests, worthless for planting. A South-western Ontario grower wrote us that he looked for a good deal of failure this

year, on account of the quantity of shelled corn that was being shipped for seed. Another corn-growing specialist sends the encouraging news that more of his customers ordered corn on the cob for seed, which becomes popular with those who once try it. Dealers hesitate to buy that way because of its bulkiness, and the risks of mice getting among the sacks. Another, who had tried selling seed for the first time this season, was discouraged at the number of inquirers who wanted cheap corn, and they thought his price, \$1.30 for No. 1 selected ears of White-cap, and \$1.50 for Leaming, too high. When one considers the small quantity of seed really necessary per acre, \$2 per bushel is not excessive for good seed. The all-important point is to secure seed practically every kernel of which will grow. If the same thought and energy were expended in better methods of cultivation that are now devoted to trying to buy cheap seed, the returns would be vastly greater. Carelessly putting off securing seed till the last minute is another mischievous habit. On this point, one letter contains the following suggestive comment:

"If farmers would only wake up, and have a little more business tact, and not cause themselves and others so much trouble, they would be better served. For instance, the secretary of one Farmers' Club caused us to write eleven letters, and the order was for \$10, after we had been good enough to make a slaughter price. This we cannot do, with the wages we have to pay. Another will write about the 25th of May, asking that the corn be sent so as to reach him in two days, sure."

This correspondent, in concluding his letter, added that he found "The Farmer's Advocate" the best medium for advertising in the Dominion, which appears to be the general opinion of those who have something good to sell, and make it known through these pages.

Growth in Wheat and Flour Exports.

Exports of wheat and flour, the produce of Canada, have increased very greatly since 1900. Beginning in 1900 with a value of \$14,787,878, representing 20,365,392 bushels of wheat, which includes flour expressed in terms of bushels of wheat, these exports have increased with a fair measure of regularity, until, in the fiscal year ending March 31st, 1909, they amounted to a value of \$56,139,355 from 57,103,457 bushels of wheat (flour included) exported. This is the highest mark yet reached, both in bushels and value. It will be noticed that values have increased more than bushels, on account of rise in prices. While the number of bushels exported increased to nearly threefold, the value was almost four times as great in 1909 as in 1900.

A small percentage of these exports is sent to the United States, a considerably larger proportion usually goes to other countries not including Great Britain, but Great Britain receives, on the average, nearly 90 per cent. of the whole.

Speculation, Not Farming.

The Canadian Club of Orillia was lately favored with an address, at once comprehensive, illuminating and inspiring, on "Ontario the Land of Opportunity," by C. C. James, Deputy Minister of Agriculture under the Provincial Government. Referring to the exodus to the Northwest, which he conceded was alluring to a man with a large family of strong boys wanting low-priced land, Mr. James added that the trouble was that restless people did not appreciate the advantages of the East, while they overestimated the opportuni-

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 or 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, \$3.50 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 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.

ties of the West. To arrive at sound conclusions, all that was necessary to do was to make a careful calculation as to what an acre of prairie land was worth, what it would produce, and what it would sell for, and make the same calculation with regard to an acre of farm land in Ontario or other Eastern Provinces. On this basis, it would be found that the fortunes of the West were not based on the per-acre production of the soil, but were made by land-dealing and speculation, rather than farming.

Yearbooks for Breed Societies.

The publication of a yearbook, containing, in systematic, tabulated form, information as to the show-yard achievements of individuals in the breed, is suggested by Prof. F. R. Marshall, of Ohio, to those registration societies which now have nothing of the kind. The yearbook of the American Trotting Register, and the performance records of the dairy-breed societies, are referred to in illustration of the advantage of the system, under which the public would more quickly become conversant with the sires of high-class stock. The idea has something to commend it, though it is a question whether the utility of beef cattle, sheep and swine can be so accurately gauged by showing performance as the utility of dairy cattle can be by milk scales and Babcock test. At least, this is true of those beef breeds making pretensions to milking quality. Thrift, for example, is a quality in beef cattle which seldom receives due recognition in the show-ring, where type, depth of fleshing, breed character, handling quality, and other like attributes, command chief attention, almost to the exclusion of growthiness and milking capacity. Indeed, milking quality is often discriminated against. However, so far as the milking function is concerned, there is no reason why a record of dairy performance should not be adopted conjointly with the record of show-yard performance. Whatever systematizes information concerning merit and heredity should prove of service in the cause of stock improvement. The American Hereford, Shorthorn, Angus, Berkshire, and some other associations, already publish in connection with their herdbooks some information, such as Prof. Marshall suggests.

A Crisis in Live-stock Husbandry.

The live-stock situation in Canada is unique. In the face of advancing prices, steady and unprecedented in some respects, the supplies of animals and animal products are wholly unequal to the demand. Home consumption greedily absorbs what once went to make up a large and showy export trade. To meet an American demand, Canadian cream, instead of being manufactured at home, flows across the border; and on the big Toronto live-stock yards we have an "American Invasion" of beef-cattle buyers, stimulating business into unwonted activity. Our last week's Toronto market report recorded that more high-priced cattle were sold the previous week than ever in one week before. The market was flooded with veals, and a lot of heifers and other young stock were sold that should have remained on the farms to be finished. Sheep were dear and scarce. Prices for eggs and butter, then for hogs and steers, take turns in soaring, while the dazed and baffled consumer of the town gazes upward, as he would after the airy transportation vehicles of Count Zeppelin or the Wright brothers. At the urgent behests of the packers, farmers learned to raise bacon hogs. Prices gyrated about for a few years, and at last wearying of the low ebbs and uncertainties, the owner killed the sows whose progeny would have lately been worth its weight in gold. Urged and entreated to refill his breeding pens, he has remained indifferent, but now it is fondly hoped by Parliament that he will be stirred into action by perusing the report of the Royal Commission to Denmark, which tells how to make still more money by buying costly hog-foods, and by co-operation. Is it possible, someone may be tempted to ask, that he has grown too prosperous, and that his coffers are full? If money he still needs, hog-raising would seem a sure way to get it, at prices for live weights double what dressed meat used to bring.

The dog, the dairy cow, and the tariff, are jointly and severally blamed for putting out of business sheep-rearing, which once lined many a man's wallet with easy-made legal tender, and kept his fields clear of weeds. The Veterinary Director-General has muzzled the dog. One of these days the fangs of the tariff will be drawn, and the sheep will again come to her own. For thirty years the angular dairy cow has been crowding the steer out of the stables of Eastern Canada. Men took to dairying, in preference to beef-raising, although it involved more arduous and confining work, for the reason that they saw in it greater returns. In order that the early-spring cheese checks may look as big as possible, thousands of calves are swept into the butcher wagons of Ontario every morning. What becomes of them, nobody knows, and nobody cares. Presently we shall be writing panegyrics on the lost art of calf-raising. Already the situation is growing serious. The system of depending on drovers and railways for supplies of dairy cows or feeding cattle is bad to-day, and to-morrow the consequences will be worse. Evils will multiply. Interest in the intelligent work of rearing good live stock wanes. Men wake up to the disquieting fact that milkers and feeders are not available, and when in haste they seek to repair the lost links in the chain, they find that their hand has lost its cunning, the art itself of calf-raising having in measure departed. The unused arm inevitably loses its strength. In the American corn-belt States, the annual destruction of calves is going on, much the same as in Canada. Unable to regale himself with the beefsteak, the Yankee has taken to eating goat meat, Kansas City killing over 100,000 of these animals yearly, and Chicago about 50,000.

Other mischievous causes shrinking the supplies of animal products have been at work. It has been said that a one-crop system is the ruin of the farmer, and this is true, whether it be corn, cotton or wheat. Nothing is more mischievous than what we call "bumper crops" of grain, for they mislead many to gamble with the resources of the soil, and only hasten the inevitable collapse. It is indeed fortunate that waning yields, weeds, and disasters from adverse weather conditions, like frost and storm, impose a wholesome restraint where the temptations are greatest upon exclusive wheat-growing. Neither the state nor

the individual farmer can do too much to promote live-stock husbandry, in order to the safety and permanence of farming. Rearing more and better live stock broadens and enhances the interest of the farm for intelligent young men. Exclusive grain-farming means a rush of costly work at one season, periods of mischievous idleness, an itinerant and ignorant laboring class, and a spirit of soil-robbing. It has done so in other lands, and history will repeat itself in Canada, unless we resolutely set our faces against it.

The comparatively sudden rise in the cost to the consuming public of animals and animal foods is fortunate. The high-cost-of-living furore is the outcry of the townsman, who has long had access to food supplies at little above the cost of the labor involved in their production. Farmers were not getting enough for their beeves to make the business pay, so they resorted to other lines. Things are now righting themselves, and, naturally, someone feels the pinch of the process. The rise in the price of foods is not temporary. As sold from the farm, prices must remain up, or the stock will not be produced. Its distribution may be simplified and cheapened for the consumer, but the farmer on our high-priced lands must hereafter be assured a reasonable profit. Herein lies the security and immediate need for a great revival of interest that will permanently increase the live-stock supplies on the farms of Canada.

An Unfair Comparison.

In the controversy over Mrs. Hopkins' letter, exception has been properly taken to the familiar habit of comparing farmers with merchants and manufacturing princes. Between urban industry and farming there is this important difference. Manufacturing and commerce are captained, generalised or managed by a few of the brightest and best men engaged therein, a vast body of subordinates and workers serving under these. Farming, on the contrary, is individually directed by the rank and file of those engaged in it, and, it would seem, must always be so to a considerable extent, since it is a business that does not lend itself advantageously to vast extension. Hence, expenditures in technical education, in facilities, in accounting, and many other directions, that would be profitable to a manufacturer conducting a large business, would be out of the question as a profit-producing investment for a farmer operating on a small scale, and employing little but the labor of himself and family. Is it reasonable, therefore, to expect the same studied system, the same exactitude and business method, or the same managerial efficiency, on a farm that would be demanded in a manufacturing plant? Would it be reasonable to expect this, even limiting the comparison to a few of the best farmers? How much less, then, should we expect it when pitting the average farmer against the generals of the industrial world? If manufacturing were financed and managed as is agriculture, by the rank and file of those engaged in it acting as separate units, it would not make the showing it does in respect to enterprise and economy of production. To be sure, profit is not everything, and the farm affords what is better than profit, namely, opportunity for wholesome, natural, many-sided living. The yeomen of the country are the bulwark of the nation, and their sterling character the greatest asset of the state. But when it comes to a comparison of country and city people, as to intellect, enterprise and culture, we submit that this can be fairly drawn only between the average farmer and the average city man, including on this side not only the manufacturer and merchant, but the clerks, artisans and laborers they employ.

Wages of Farm Labor in Britain.

A Farm Laborers' Union was formed in the eastern counties of England in 1906, which has made considerable progress. The annual meeting was recently held at King's Lynn, and about 100 delegates were present. The farm laborer is demanding better housing, more fixity of tenure, higher wages, and shorter hours of work.

The housing problem is difficult, as the employer is usually the owner of the cottage, and in a position to dictate his own terms.

The organization was able to report an advance of wages throughout Norfolk of 1s. per week. How meagre wages are still, was shown by one of the resolutions: "That the minimum

wages of agricultural laborers be not less than 2s. 6d. (60c.) per day." Wages in England do not include food and lodgings, as in Canada.

There was considerable discussion on an eight-hour day, but this was considered not to be practicable. The secretary of the Union remarked that, "The agricultural laborers are still the worst-paid, worst-housed, work longer hours, and have fewer holidays, than any class in the Kingdom."

Electric Power on the Farm.

Agnes C. Laut, a Canadian contributor to some of the leading magazines, has a recent article in *Collier's*, in which she deals with one of the vast and urgent problems of the day. By way of preface, she refers to the problem of help upon the farm as one of the most pressing and expensive at present. Wages have risen enormously, and even at what are considered high wages neither sufficient nor efficient help can be secured. And so profits are lowered, and hours of labor lengthened, and this, according to the writer, tends to make the farm less attractive and to accentuate the trouble by tempting the boy and girl to still further lessen the farm force and go where hours are shorter. This, of course, is a very gloomy picture, and not a true one, but there is some force in it, and it is so drawn in order to emphasize the brighter side, the possibility of help from electric power. We smile at the suggestion, yet we must admit that most of the conveniences we at present enjoy were thought impossible at first.

Water-power is the cheapest form of energy in the world. "Harness me," calls the brook, "and I will do your work." Steam-power has had its day, and electric energy from water-power will drive the wheels in days to come. It is pointed out that water-power costs nothing, once it is started working. The dam and the dynamo, the belt and the wire, are the harness, and the only things that cost. Hitch the brook to the washing machine, the churn, the fanning mill, the cutting box, the thresher and the pump! Light the house and the stables and the lane with a glow direct from the sun!

Making allowances for exaggeration, and for the fact that those conditions, where brooks are plentiful, are in mind, there is probably a prophecy in the article. Electricity may be a source of farm power in coming days, though scarcely likely from the harnessing of small brooks by individual users. To instal a water-wheel and dynamo on a brook to furnish light for farm buildings is an expensive proposition, and makes the light cost very dear. With present conveniences for utilizing water-power in the form of electricity, such a proposition is by experts regarded as impracticable. Prof. Wm. H. Day, of Guelph, advises us that he has figured on the proposition two or three times, always with the same conclusion. When a large number of farms can be supplied from one generating outfit, it is a different proposition. Not from brooks in all parts, but from the power lines being stretched in so many directions, or from some as yet unthought-of sources, will the energy be probably tapped.

A much-needed warning is hinted at in a few sentences pointing out how the water-powers of the continent are being secured by capitalists. When the big capitalists of a country secretly get out after a thing, it is worth getting, and the big capitalists are out after water-power. Canada has immense water-powers, mostly unalienated. These should not be allowed to be gobbled up by corporations. Their value is but beginning to be realized. They are a part of the people's heritage and should be held for the people's benefit.

Basis of Land Values.

Reports of land transactions indicate that improved land in the West is selling at higher prices this spring than ever before. Good quarter-sections in Manitoba are changing hands at as high as \$9,500 each, a trifle less than \$60 per acre. Well-situated farms, with good buildings and clean fields, are selling even better than this, while average quarters are exchanging at from \$7,000 to \$9,000 each. Other farms are selling at much lower figures than these: in fact, so-called "improved land" in the oldest-settled parts of the West can be bought at one-third or less than one-third these prices.

"Farm values are based on a number of factors entirely within the owner's control," remarks *The Farmer's Advocate and Home Journal*, of Winnipeg, commenting on these facts. "It pays in dollars and cents to make the farm a home, as well as a grain mine; it pays to keep the buildings in order, to plant trees, to fence properly, to conserve fertility, to actually 'improve' the farm. There is no investment for capital that will give returns equal to what is possible to earn by investing it intelligently in improving a farm. The basis of land values is careful farming. There are thousands of men starting to farm on the prairies this season who should take to heart the lesson taught by the difference in value between

farms that have been actually improved and farms that have been merely abused. Don't wait twenty-five years to find out whether or not this assertion is true."

Trifling with Danger.

Chatham, April 22.—A cow belonging to Thomas Burke, of Dover Township, died last night from rabies contracted by a bite from a mad dog. This is the third cow to die of rabies this month.

"Since the first of the year, nine cattle and eleven hogs have died from rabies. It has aroused the countryside, and the muzzling regulations are now being strictly enforced.

"Another dog suffering from rabies was killed in Dover Township to-day by a farmer named Frank Stokes. A cow belonging to Thomas J. Sioan, of Harwich, was also killed to-day. The animal showed symptoms of rabies."—(London Free Press.

Some more stable-locking after the horse is gone. When will people learn to take time by the forelock and adopt rational preventive measures, recommended on good authority? How easy it is to jump to the conclusion that there is "No danger in our community!" The fact is there is a risk of just such developments in every district within the area of the dog-muzzling order. It is sheer folly to wait till the live stock and human beings are bitten by mad dogs before waking up to the serious probabilities present. The muzzling regulations should be strictly enforced, whether the special need is apparent in every township or not. Danger lurks, and wise men do not trifle with Danger.

HORSES.

Feeding Work Horses.

The Iowa Experiment Station has been conducting a series of experiments during two seasons, in feeding work-horses. It was believed that a ration could be used in which corn, oil meal, cottonseed meal and gluten meal might take the place of oats, and the experiments were undertaken to determine the effects of using such foods on the health, spirits, strength and flesh of the horses, and also on the economy of the ration. In all, five farm teams were under test while doing

the summer's work. While the effect of two different rations was being compared, one horse of each team received the one ration, and his mate received the other. A substitute ration in place of corn and oats, equal parts by weight, that gave excellent results, contained corn, oats, and oil meal, in the proportions of 12-4-1 by weight. It was found that a larger percentage of oil meal than that had too laxative an effect. Cottonseed meal was also compared with oil meal as a part of ration, and gave practically similar results. Gluten meal was also tried, but, as it was not relished, its use was soon dropped.

The conclusion of the experimenters is that oats are expensive to feed in large quantities, and that the ration may be greatly cheapened by substituting oil meal, cottonseed meal, or gluten feed. The health, spirit and endurance of the horses was the same when fed corn in combination with one of these feeds, as when oats were fed. A hard summer's work was done by the horses on these feeds, without any considerable loss of flesh. Bulletin No. 109, Iowa Experiment Station, Ames, Iowa, contains the published results of these experiments.

Observations on Horse Subjects.

"To all appearances, the horse trade of this country is entering upon a period of unprecedented expansion," writes a Western correspondent signing himself "Equitant," to *The Farmer's Advocate and Home Journal*, of Winnipeg. "It has been expanding at a very desirable rate for the past five or ten years, but, unless the signs are all wrong, horse-breeding is going to advance, and horse prices are going higher, much higher, in the next decade than they did in the past. We are only at the beginning of large things in the horse business, and, so far as this Western country is concerned, it will be some time before we see their end. Breeding stock this year will sell above last year's prices. We can safely figure on a twenty-per-cent. increase in draft-horse prices. Clydesdale females are difficult to procure, both here and on the other side. Percheron importers report a similar condition of affairs in respect to the French breed. We have been drawing so heavily upon the studs of the Old World that they have not kept pace with the demand. We shall probably have to pay more for their pure-bred stock or do without it; and at the present stage of horse-breeding in this country we can expand in this industry in proportion to our growth only as we are able to increase our breeding stock by importations from abroad, and I would say to



Baron Royal (imp.) (11267) [3981].

Clydesdale stallion. Bay; foaled June, 1900. Imported by Graham Bros., Claremont, Ont. One of the group of ten that won the \$200 prize for best ten-horse exhibit at Canadian National Exhibition, Toronto, 1903. Second in aged stallion class. Owned by S. McComb & Sons, Berville, Ont. Sire Baron's Pride (9122).

those contemplating buying stallions or mares of any of the draft breeds, buy now if you are able, for next season you may have to pay more if you decide to leave the purchasing till then."

Views on the Horse Question.

Editor "The Farmer's Advocate":

Much has been said on the different breeds of horses in your paper lately, each writer lauding his particular fancy. The heavy-draft men have it evidently on their minds to push the Clydesdales for all they are worth, both as farm horses and as heavy-drafters for city work. I have not handled many Clydesdales, but as I am now living beside farmers who breed them, I should like to say that too many are expecting the Clydesdales to be a general-purpose horse. This he is not, and should not be used as such. Every farmer should keep one general-purpose horse, or a pair, to save his heavy-draft team trotting round the country. Many a mare has cast her foal through such usage. Trotting is very hard on heavy horses, and will wear them out sooner than steady work. Trotting Shire mares with foal around my old homestead, in England, is punishable by a reduction in wages, or a dismissal from service at a minute's notice.

I must say that I still hanker after the Shire as a heavy-draft animal. He is a good worker, surer than the Clydesdale, heavier, and sells at a higher figure when matured and fitted. I have fitted a good many, and also worked them at two years, and have had good results. I cannot approve of judges trotting heavy horses at the fairs. A good judge, who understands all the points of the heavy classes, can readily see by the brisk walk how to place the ribbons. Trotting horses at the fairs gives farmers the impression that speed is also required, and farmers are not slow to take this advantage, causing them to breed a rather light body on a heavy-draft horse, instead of a deep animal, with a good heart-girth, and deep, well-sprung ribs. Then, again, are we getting the desirable sires to improve our horses? I have the opinion that, with a few exceptions, we are giving too much for the class of horses imported, a great many sires not being sure, and not having the desirable conformation.

The Hackney breed has evidently come to stay with us, as the importers are pushing this breed at whatever cost, and a great many farmers are making a mistake in mating this breed with the heavy horse. I believe that there are more non-descripts from this indifferent breeding of Hackneys than any other breed. While the Hackney is a beautiful animal for carriage work, his breeding should be left to those who understand it better than does the average farmer. I cannot let this chance pass without a word with our friend the Standard-bred correspondent. His judgment re the Thoroughbred cross impresses me that he forgets where the Standard-bred horse sprang from. Was it not the Thoroughbred that gave the Standard-bred horse speed, and also stamina? The Thoroughbred stallion, bred to suitable mares, produces the best general-purpose horses that we can get. But the breeder must choose the sire suitable for the cross; he must be deeper in body than the race-horse, with greater heart-girth, about 1,100 to 1,200 pounds in weight, and move with a different gait than the race-horse. We had very profitable results with a horse of this class, horses selling for a good figure for the London market. Such work as has been taken up by the National Bureau of Breeding should be helped by the Government. OLD COUNTRY JOE, Peel Co., Ont.

[Note.—We are of the fancy that not many will agree with our correspondent in his opinion re trotting heavy horses in the show-ring. The ability to move freely and tolerably truly, is, we think, important in the heavy horse, though the requirement may be, and is, in some cases, carried to extremes.—Editor.]

European Trade in Decrepit Horses.

The sufferings of the decrepit horses shipped from England to Holland and Belgium have called forth many protests against the cruelty practiced in many cases. The Society for the Prevention of Cruelty to Animals has just issued a pamphlet on the subject, which comments strongly on the sickening sights witnessed at the ports of Holland. So long as the horses are alive when landed, it does not seem to matter how injured or diseased they may be. It is a significant fact that the reason for the large exportations of decrepit horses (39,749 in 1908) to those countries is because of the scarcity of meat, and the imperative necessity of the poorer classes having cheap animal food—and such food! The English consumer of foreign delicacies has also cause for thought, as the choicer portions of decrepit horses almost certainly find their way back to England in potted or sausage form.

The society urges that animals unfit for the voyage to the continent should not be embarked

at all, but slaughtered without delay, and, in cases of actual cruelty, the consignor should be punished. Questions were recently asked in Parliament as to the prices of horse flesh on the continent, and the answer was that horse flesh in Germany was dearer than good meat in this country. Horse flesh sells there at from 4½d. to 7½d. per pound, while foreign meat of good quality retails in England at from 4d. to 6d. per pound. F. DEWHIRST.



Beginning Young.

Three little daughters of H. C. Treffry, Oxford Co., Ont., with a six-months-old colt they have broken to the halter, and have had in single harness several times. The little girl on the saddle is three years old.

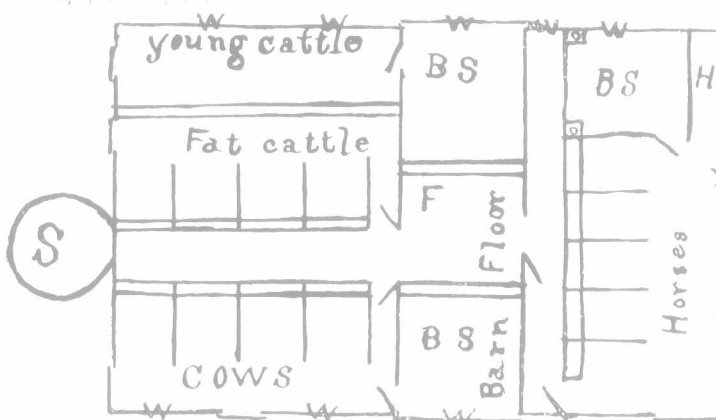
That the majority of deaths among stallions are due to various forms of stomach and intestinal troubles, is said to be the conclusion of a prominent live-stock-insurance company, after analysis of its recent years' records. Seasonal irregularity in feeding and exercise is assigned as the explanation.

LIVE STOCK.

Plan of Farm Stable.

The accompanying plan for a farm stable is intended to show how to make the most of space, and at the same time have things handy.

The horse stalls are 5x8, with an 8-foot space behind them. The wide stall nearest the door is also used as a passageway, and is 8 feet square. The box stall is 10 x 12, and has no manger for horse to rub against, but simply two small oat boxes. H is harness-room, 4 feet wide. The door is 8 feet wide, to allow a team to enter. W marks windows. Feed passage in front of horses, 4 feet wide.



Plan of Stable 66x38 ft. Inside.

The cattle stalls are 7 feet square, with a 5-foot space behind them, and a 4-foot feed passage between them. This leaves a 10-foot space for a loose run for young cattle, or it may be divided into pens.

F is the main feed-room, in the center, and on each side of it is a box stall for young cattle or colts. This space, reaching from side to side of the barn, is 14 feet wide, and is the barn floor in the summer time, the partitions being portable, and the large doors at each end have windows in them. The overlays here are about 4 feet higher than in the rest of the stable, affording ample room for a threshing machine, which is "fed" through a large trapdoor at one end, and the

blower goes up through another at the other end. By this plan, all the space above the barn floor, instead of being waste room, is a big mow filled with fodder. The hay and sheaves are put into the barn by means of slings entering at the end of the barn. The barn floor itself is made use of for box stalls and feed-room in the winter. No partitions in cattle stable reach the ceiling. In addition to this saving of space, there is a great saving of labor, for there is no big bank to build up to the barn door. All through the winter season the feed-room is near the middle of the building, and not very far away from any of the animals. Feed is put down through a chute. The silo, if there is one, is at the end of the feed passage between the cattle stalls.

This stable will accommodate 25 or 30 head of cattle, according to the size of those running loose, and 8 horses, including colts. Its dimensions are 38 by 66 feet, inside of wall.

Perth Co., Ont. A. DOUGLAS CAMERON.

Abortion and Sterility in Cows.

A NEW ZEALAND METHOD OF TREATMENT.

From a leaflet issued by the New Zealand Department of Agriculture, the following concise and systematic directions given by the Chief Veterinarian are extracted for our readers. The treatment advised is very good, probably the best, so far as it goes. It is the treatment our own veterinary authority has recommended for years, except that he recommends corrosive sublimate 1 to 2,000 of water, and to be heated to 100 degrees F. before using. He also recommends the use of an injection pump, or, in the absence of this, a syringe with a long nozzle, or a rubber tube and funnel (as in the article). Corrosive sublimate takes the polish off metal, but does it no real harm, and seems to have little action, except on steel. It does the injection pump (which is usually brass) little harm. In addition to this, he always recommends the administration of 40 to 60 drops carbolic acid in a pint of cold water, sprinkled on the food, or given as a drench, twice daily, to all breeding cows. With regard to the question of possible danger of blood-poisoning through wounds on hands, etc., of the operator, he adds that there is no danger, as the corrosive sublimate is probably the best antiseptic known. We append the New Zealand instructions:

When abortion proper is about to occur in a cow far gone in calf, no symptoms sufficient to attract attention are, as a rule, exhibited. Occasionally, evidences of uneasiness and attempts to apparently prepare for calving may be observed, but generally the event occurs, with no premonition to the owner.

The other manifestations of the disease are practically only that some cows persistently "return to the bull," in some cases regularly, but more often irregularly, it may be in three or more weeks after service, and in all such cases it is only wise to adopt the proper treatment for the eradication of the disease.

TREATMENT.

1. Whenever a cow actually aborts, search immediately for the foetus, and destroy it by burning it on the spot where it lies, if possible. If this is not feasible, it should be buried deeply.

2. Thoroughly dig up the ground on which the foetus has lain, together with an area of, say, three yards on every side of it, and saturate the surface with a liberal quantity of non-poisonous sheep-dip, or other safe disinfectant.

3. Isolate the cow, and keep her isolated for two weeks, using a temporary bail, if necessary, for milking purposes. Meanwhile, apply treatment by irrigation, as described hereafter.

4. In the case of a cow failing to conceive and returning to the bull at short intervals, treatment by irrigation should be applied, as described later.

5. Where several cows in a herd abort, or keep returning to the bull, it is found to be absolutely necessary, in order to prevent the spread of the trouble and insure its complete eradication, that not only these cows, but every cow in the herd, should be treated.

6. In all cases the bull should be treated.

MATERIALS REQUIRED.

From our experience, the antiseptic drug which best combines efficacy with simplicity of application is mercuric chloride (corrosive sublimate). This drug is for such purposes as this put up in flat, circular pellets, each containing a definite quantity.

In addition to the pellets of mercuric chloride, it is also necessary to be provided with a 3-ft. length of thick India-rubber tubing of ½-inch diameter, and a small funnel, either of glass or enamelled metal.

Neither the drug nor its solution must on any account be allowed to come into contact with



Shenley Adonis (imp.).

Shorthorn yearling bull. First in class, Birmingham Spring Show, 1910. Purchased by Sir Wu. Van Horne, Selkirk, Manitoba, at \$3,575.

plain metal, on account of its strong chemical action on such material.

Also, for use in the treatment of the bull, an ordinary enema syringe, with vulcanite fittings, should be obtained.

The strength of the solution of mercuric chloride to be used is as follows:

(a) For cows which are repeatedly returning to the bull, or are apparently sterile, 1 in 1,250. This can be conveniently prepared by dissolving one pellet in an ordinary (clear glass) whiskey-bottleful of water, which has been boiled and allowed to cool to about blood heat.

(b) For a bull, a solution of the same strength (1 in 1,250) should be used.

(c) For cows which have just aborted, a weaker solution (1 in 2,500) should be used, and applied once daily for three successive days, and at weekly intervals afterwards, if there be any discharge from the vagina. This solution can be made by dissolving one pellet in two whiskey-bottlefuls of water.

(d) For in-calf cows more than three months pregnant, which are to be treated as a preventive measure, the solution 1 in 2,500 (as in paragraph c) should be used.

Unless in the case of an actually-aborted cow, one application only is necessary, if properly carried out.

THE METHOD OF TREATING COWS.

1. Boil for five minutes the tube with the funnel inserted into one end, and then apply to the outside of the tube a dressing of salad oil or good lard.

2. Wash the hands and arms thoroughly in hot water to which a disinfectant has been added.

3. Place the free end of the piping, by means of the hand, gently into the womb (or, in the case of an in-calf or sterile cow, as far up the vagina as possible without undue force being used), taking care not to injure the lining membranes. During insertion, the curve of the tubing is better turned downwards.

4. Hold the outer end of the tubing with the funnel about six inches above the root of the cow's tail.

Pour the solution of mercuric chloride, as described, gently into the funnel, and so thoroughly irrigate the parts. If the fluid does not run fairly freely from the tube, the inner end need only be moved gently to and fro to secure a free flow. The intention is to thoroughly irrigate every portion with the solution.

6. Thoroughly wash down the parts from the root of the tail to the bottom of the udder with some of the same solution as that used for irrigating.

THE METHOD OF TREATING A BULL.

Place the animal in a crush pen, or otherwise secure him in such a manner that he may be readily handled without danger. Then grasp the prepucial (or sheath) by the left hand, and pass the nozzle of the syringe inside the sheath, afterwards holding it in position with the same hand. Then, with the right hand pump into the sheath

a quantity of the solution sufficient to thoroughly irrigate the parts.

Be certain that the whole of the pellet is thoroughly dissolved before using the solution, as any undissolved particle lodging on the lining membrane of the vagina or womb would cause intense irritation.

In connection with this treatment it is necessary to remember that mercuric chloride is a highly poisonous drug if swallowed, and, therefore, every care should be exercised in order to prevent accidents.

During the past three years, thousands of cows have been treated in the manner described, and with practically uniform success, as already stated, the only complaints received being undoubtedly traceable to errors in the administration.

The number of sheep in Great Britain last year was 27,618,419, the highest total since 1892. The number of sheep has increased rapidly in recent years, and for the present supply exceeds demand, with consequent low price. The number of horses in Great Britain is said to be 11,552,993, an increase of 7,322 over 1908. A gratifying feature is that in agricultural horses the number is the largest on record. Cattle were also in record numbers, at 7,020,982. Pigs numbered 2,380,887, a decrease of 15.7 per cent., since 1908.



A Thrifty Flock of Leicester Grades.

Succulent Feed for Lambs.

From recent experiments in feeding lambs, conducted at the Iowa Experiment Station, Ames, Iowa, to determine the value of succulent foods for fattening lambs (results published in Bulletin No. 110), the following points are deduced by the experimenters. As to just how far their conclusions are applicable in Canada, is a matter of opinion: That lambs receiving succulent feed had an increased appetite for grain, and consumed more of it than did dry-fed lambs. That gains were greater and finish better when sugar beets were fed than when mangels, turnips, cabbage or silage were given. That dry feed alone put on fat nearly as fast as sugar beets with dry feed, but there was a slower gain and less growth. That lambs will consume of sugar beets or mangels about 6 pounds each per day, while of silage no more than 1.5 to 2 pounds each per day is eaten. That the gains from the use of succulent foods were greatest in the first months of the feeding period, while later on dry feed showed up much better, comparatively. In the last month, the dry matter required by the dry-fed lambs for each 100 pounds gain was really less than that required where succulent feed was given.

When corn was worth 50 cents per bushel, sugar beets combined with dry feed made the cheapest gains, but when corn is at ordinary prices, then, say the experimenters, cheaper gains on lambs may be made with dry feed than with roots or silage. The chief objection to mangels and sugar beets in the Prairie States is the large amount of hand work required to raise them.

Southdown Sheep.

By C. F. McEwen.

The home of the Southdown breed of sheep is in Southern England, and it is there we find them at their best. They were first known as a distinct breed in the hills of Sussex about the year 1776, and, from the accounts of an agricultural writer of that time, they were not of very desirable conformation. They were very active, however, had fine wool, strong constitutions, and produced fine-flavored mutton. Already possessing these very desirable qualities, the breed was readily improved. Their strong vitality and hardy constitutions quickly enabled them to adapt themselves to any change in environment, and we find that in a few years they made an excellent type of mutton sheep.

The first name connected with the improvement of the Southdown is that of John Ellman, who found the breed in a very rough state, but in a few years, by careful selection, without the aid of either inbreeding or outcrossing, brought them to a very high standard for that time. Following Mr. Ellman, and using his stock as a foundation, we find the next great improvement made by Jonas Webb, who, in 1860, won easily with them over all breeds of sheep at the Royal Show. Other names connected with the successful breeding and improvement of Southdowns are: His Majesty King Edward VII., the Duke of Richmond, and Messrs. J. J. Coleman, F. M. Jonas, and Henry Webb.

Except for a slight change in type, we find the Southdown of to-day much the same as when Jonas Webb left them. The breeders following recognized that, so far as physical development was concerned, there was little need of improve-

ment, so they devoted their energies to increasing the length of staple and weight of fleece.

The distinctive characteristics of the Southdown are the brown color of the face and legs, and the density and quality of the fleece, combined with a low-set, compact form. In fact, it has been urged against the breed that it is too small to be of value to the ordinary mutton-producer. This, however, is a mistake too commonly made by the average breeder of to-day in nearly every branch of live stock. He will choose a big, scraggy animal, lacking quality and conformation, that will consume as much feed to produce a pound of flesh as a better-class animal would use to produce three. Combined with this is the fact that the pound of flesh, when produced, is not placed where it will bring the most money on the block.

Three characteristics of the Southdown which should make it a most valuable breed to the farmer of Canada are its hardiness of constitution, its higher-priced mutton, and its untainted breeding. The value of the first two of these is apparent to everyone. Health and a strong constitution are of premier importance in any animal. It is this which enables the Southdown to make the best use of its food, and to produce—what is a proven fact—more pounds of mutton per acre than any other breed. When, combined with this, we have the fact that the mutton and wool bring the top price on the market, we have a sufficient reason for preferring this breed, if its ultimate end is only the block.

The last of these characteristics, though so often overlooked, is one of the most important. Almost every farmer possessing a flock of grade ewes sees the advantage of using a pure-bred ram. The ram is considered half the flock, and what cheaper way has he of improving that flock than by using a good ram?

The whole system of improved breeding hinges on the fact that like produces like to a greater or less degree. Following this principle, is it not most likely that an animal whose ancestors for generations back have been individuals of known merit, will show merit in his offspring? The farther back the ancestors are known, the less chance is there for variation, and the longer they have possessed any one characteristic, the stronger is its prepotency established.

Through one hundred and fifty years of careful breeding, the Southdowns have been noted for hardiness, a high standard of wool and mutton, and early maturity. These qualities have been maintained, and combined with better conformation to make what the breed is to-day. Careful selection and change in environment gave them the form and quality which won the trophy eleven out of twenty years at the Smithfield Show, in England, for the best pen of sheep of any breed, grade or cross.

Is this not a point worthy of consideration in selecting a ram to-day? The Southdown has behind him a long line of prizewinning ancestors, possessing the qualities for which the breed is now famous. Is he not likely to strongly impress these desirable qualities on any ordinary flock of sheep whose ancestors are of mixed origin?

That the Southdown breed is well holding its own in America, against keen competition, is evidenced by the fact that for the last four years in succession the grand-championship prize for the best single wether of any breed, at the International Live-stock Show, at Chicago, has been won by a representative of this breed.

Renewed Opportunity in English Bacon Trade.

"Since last December," wrote our English correspondent, recently, "imports of bacon show a decrease of 16.4 per cent., but the value has increased by 6.5 per cent.—less bacon, and more to pay. Home supplies, too, are decidedly limited. The shortage has been most marked from the United States, and, from the rapid growth of the home population, that source of supply is bound to be of diminishing importance. High prices in Germany also tend to deflect the Danish shipments from England."

"Is there any serious obstacle to prevent Canada from taking the place as a source of bacon now being relinquished by the United States? There should be an excellent opening for Canadian farmers in pig breeding and feeding on a far larger scale than now prevails. No farm animal pays better than pigs at present, and prospects are for a higher range of prices for some time, perhaps permanently."

THE FARM.

Experiments with Cement Tile.—II.

Paper read by Prof. W. H. Day, O.A.C., Guelph, before Cement Convention, London, Ont., 1910.

Next we come to the solubility tests.

First Experiment.—Sample, a piece of cement tile weighing 43.256 grams, after being dried to constant weight at 215 degrees F. This tile was made by the "dry process," in April, 1908, in proportion 6 of sand to 1 of cement. For a few days after being made, it was watered daily, and then it was submerged in water for a period of



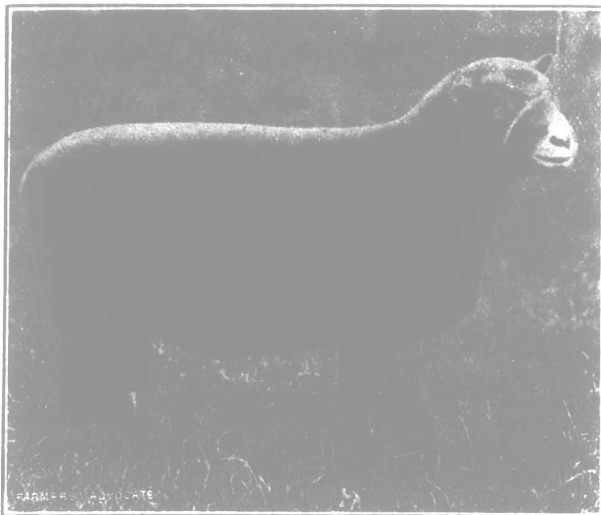
Southdown Yearling Wethers.
Champion pen at Smithfield Show.

six weeks, after which it was removed and transferred to a storage cellar, where it remained until solubility experiments began. Tile quite porous.

Treatment.—After the small piece had been dried to constant weight, it was placed in distilled water for four days, then removed, dried, weighed, and again placed in fresh distilled water. This was repeated sixteen times, the total period of solution being 143 days, and the total loss in that time was .113 grams. The total cement in the sample was 7.1794 grams, hence, at this rate, the cement would all dissolve in 27.7 years.

The experiment was next performed with water from the artesian wells at the College. This water is high in total solids, about 460 to 480 parts per million, made up chiefly of bicarbonate of calcium, bicarbonate of magnesium, or the compound bicarbonate of calcium and magnesium. There is also a small amount of chlorine in it. The sample was tested five times in this water, the total period of solution being 47 days, and the total loss in weight .090 grams. At this rate, it would take only 10 years to dissolve all the cement in the sample.

Experiment 2.—A piece of tile, proportion 6 to 1, watered daily for a week after making, stored in cellar till November, 1909; mixed much wetter than sample used in Experiment 1. Dry weight, 43.213 grams.



A Prizewinning Southdown Shearling.

Treatment, same as sample in Experiment 1, only the number of tests in distilled water numbered eight, instead of 16, the total period in the water being 73 days. During the period the sample lost .025 grams, at which rate it would take 57.4 years to dissolve all the cement in it. When put in the well water, the loss in 47 days was .090 grams, which rate would use up all the cement in 10.3 years.

Experiment 3.—A piece of wet-mixed tile, made the same time as No. 2, and watered and stored in the same way; dry weight, 36.2795 grams, in distilled water for 73 days, well water for 47 days. This sample lost only slightly in distilled water, and gained .0333 grams in well water. At this rate, it would last forever.

Experiment 4.—A piece of tile, proportions 4 of

sand to 1 of cement, made by George Holden, of St. Mary's. Dry weight, 20.4792 grams. Loss in distilled water in 73 days, .0387 grams, at which rate the sample would last 26.5 years. In well water, lost .130 grams in 47 days, at which rate the sample would last only 5.1 years.

Experiment 5.—A piece of tile, proportions 4 of sand to 1 of cement, made by the same maker as No. 4. Dry weight, 35.781 grams. In 73 days in distilled water lost .0175 grams, at which rate the sample would last 102.2 years. In 47 days in well water gained .0165 grams in weight, and thus would never disintegrate.

Experiment 6.—A piece of clay tile, about average quality, possibly burned a little slack; dry weight, 36.660 grams. In distilled water 48 days, weighed five times; in well water 47 days, weighed five times. Loss in distilled water, 1.159 grams, at which rate the sample would last only 9.1 years. Loss in well water, .081 grams, would last 58.3 years.

In estimating the time that samples would last, it has been assumed that they would be subject to solution 365 days in the year, and that the rate of solution would be uniform. The first of these conditions certainly would not hold in practice. During a large portion of the year, possibly half, tiles are dry, and not subject to solution, and consequently would last twice as long as the periods mentioned, provided the rate of solution during the other half of the year was constant. We had hoped to establish something definite as to rate of solution, but we have failed to do so yet. The rate of solution seems to fluctuate with some factor other than time, probably temperature. Just when our curve for rate of solution would reach a constant for two or three readings, this variation would occur and prevent conclusions. In all samples, the rate of solution in distilled water appeared to fall off, slowly in most cases, but very rapidly in a few, especially in the case of clay tile. When placed in the well water, the samples all behaved irregularly at first, giving either large losses or else large gains, and these losses or gains fell off rapidly.

Three other experiments were performed, which probably come nearer natural conditions than the previous experiments do. Three half tiles were placed in running well water on May 6th, 1909, where they have been ever since. At the end of six months they were dried, weighed, and replaced in the water. Then, last week they were dried and weighed again. The results are as follows.

Experiment 7.—A half tile, proportion 6 to 1, made by dry process, May, 1908, watered for a week, stored in cellar; dry weight, 1797.5 grams. In running well water for 10½ months, weighed at 6 months and 10½ months. Tile gained in weight each time; total gain, 3.4 grams.

Experiment 8.—Same as in No. 7. Dry weight, 1,910.25 grams. Treatment, same as in No. 7. No change in weight in first 6 months; a gain of 4.05 grams in next 4½ months.

Thus, these two samples would never disintegrate at this rate.

Experiment 9.—A half tile, proportions 6 to 1, made very wet, allowed to dry, getting a few showers of rain, and then stored in cellar. Dry weight, 2,001.0 grams. Same treatment as in Nos. 7 and 8. Tile lost 1.90 grams first six months, and 2.70 grams next 4½ months. At this rate the sample would last 63.4 years.

It is worthy of note, with regard to these three samples, that those made by the dry process, and, therefore, very porous, were the ones to gain in weight, while that made by the wet was the one to lose.

The behavior of these three large samples contrasts so strongly with that of the small samples as to indicate that experiments with small pieces are apt to be very far from actual conditions. For instance, the rate of solution for the pieces of clay tile would indicate that that sample would all dissolve in less than two generations. And in much less time than that the tile would be so weak as to give way under soil conditions. Experience has shown that such does not occur, and hence we must conclude that the conditions are so artificial that it is not safe to base arguments as to durability upon such tests. It is even doubtful whether the large tile in running well water is very close to natural conditions. In the soil there will be much very fine sediment in the form of clay and colloid particles to lodge in the pores and prevent solution. The process of accretion shown in two out of three of these large samples would doubtless be much more rapid in the soil. Another reason for the slower solution in the large samples was the cooler temperature maintained by the constant introduction of cold water. Basing our conclusions on these larger samples, we are not able to see any danger of the cement tile crumbling.

It is our intention to continue the work on the solubility, as we realize there is much yet to be learned about it.

Porosity.—With regard to the porosity, we find that it varies with the proportions of cement, with kind of sand used, and also with the method of making. The more cement used, the finer the

sand, or
tile. B
much m
After
it as hi
be quit
siderable
tile are
turers a
unless a
lowing

I thi
sowing
to abou
grown a
whether
ing ear
has the
by the
was las
ing buc
fested v
mined t
vised to
as a po
first, a
plow, v
wish to
as to t
acre, a
matter,
accepted

Prof
on "T
of sowi
varies
ferred
middle
too ear
warm
when q
comes.
maturit
the lat
amount
pecks,
your p
per acr

As
account
farmer,
fields
heavily
the gra
or thro
the roc
plant,
the nea
reasoni
probab
fect me
til it h
stage t
most o
which
destroy
justed
ground
extrem
then r
disk h
to slig
is sow
harrow
shades
that
plowed
when
exist t
expect
to dov
A sim
Farm
that a
wheat.

sun

A p
change
he no
means
to see
make
system
awa d
years
never
time
if far
spond
clover
in sur
ten y
tion a
ing of

A p
change
he no
means
to see
make
system
awa d
years
never
time
if far
spond
clover
in sur
ten y
tion a
ing of

sand, or the wetter the mix, the less porous the tile. But even the most compact ones tested were much more porous than clay tile.

After the reading of the paper, Prof. Day gave it as his own opinion that cement tile would yet be quite satisfactory, and might now, with considerable confidence, be recommended where clay tile are difficult to procure. He warned manufacturers against sending out cement-tile machines, unless accompanied with instructions, only by following which good tile could be made.

Buckwheat and Quack Grass.

I think you have quoted the proper time for sowing buckwheat, from about the 15th of June, to about that time in July. As I have never grown any buckwheat, I would wish to kindly ask whether there would be any disadvantage in sowing earlier, say, about the 15th of May, if one has the ground ready, and avoid having it nipped by the frost in the fall, as about the half of it was last year around here. My reason for sowing buckwheat is simply this: I have a field infested with perennial sow thistle, and am determined to rid my farm of them. I have been advised to try buckwheat two years in succession, as a positive remedy. I am going to twin-plow first, and follow a little later with the single plow, working the ground up well, and would wish to be advised by "The Farmer's Advocate" as to the suitable amount of grain to sow per acre, and for other useful hints regarding the matter. Anything in that line will be gratefully accepted. S. B.

Prof. Thomas F. Hunt, in his excellent book on "The Cereals in America," says on the subject of sowing buckwheat: "The date of seeding varies from May 1st to August 1st. The preferred time varies from the middle of June to the middle of July, depending upon locality. If sown too early, the flowers are liable to blast by the warm weather. The plant begins to blossom when quite small, and continues until the frost comes. Thus, the plant has seeds in all stages of maturity. When the earlier blossoms are blasted, the later blossoms produce the seed. . . . The amount of seed used varies from two to five pecks, three to four pecks being common." For your purpose, we would advise sowing five pecks per acre.

As to quack-grass eradication, we append an account of the practice of a certain Minnesota farmer, C. O. Nichols. His method, where large fields are to be treated, is to cover the ground heavily with manure in the winter or spring. After the grass has started, he harrows the manure two or three times so that it will work down among the roots and stimulate the rapid growth of the plant, his theory being that the ranker it grows, the nearer its roots approach the surface. The reasoning may not be quite correct, but quite probably the surface manuring would have the effect mentioned. He then lets the grass alone until it heads out and begins to blossom. At this stage the plant is putting forth all its energy, and most of the vitality is in the stalk and head, which is regarded as the most feasible time for destroying. He then plows, using a chain so adjusted as to turn under the tops, turns over the ground for a depth of six or seven inches, using extreme care to turn under all the grass. He then rolls the ground and goes over it with a disk harrow, using the disks nearly straight, so as to slightly loosen the upper soil. Then buckwheat is sown at the rate of two bushels per acre, and harrowed with a slant-tooth harrow. The crop shades the ground, and chokes down the quack that subsequently grows. The ground is not plowed again until just before freezing in the fall, when the few roots left will have hard work to exist through the winter. Mr. Nichols does not expect to harvest any buckwheat, being satisfied to devote one year to the eradication of the pest. A similar method is practiced on the University Farm at Minnesota Experiment Station, except that a hoe crop is there used, instead of buckwheat.

Summer-fallowing Disapproved by Western Farmer.

A prominent Manitoba farmer, discussing recent changes in methods, stated, the other day, that he no longer adopted the summer-fallow as a means of preparing for higher yields. He prefers to seed down a considerable area each year, and make use of as much manure as possible. This system is popular over a great area in the Neopawa district. Not a few farmers who in bygone years summer-fallowed at regular intervals, now never think of such practice, except under very extreme conditions. There is no doubt but that if farmers in many localities of the West would spend more money on seeding down to grasses, clovers or alfalfa, and less on the labor entailed in summer-fallowing, the cash returns in five or ten years would be increased. Thorough cultivation and judicious seeding-down has been the making of many farms.

Planting Corn.

There is no fixed or best time to plant corn, other than that it is usually planted in May. Under no condition should corn be planted unless the seed-bed has undergone proper preparation. It is much better to keep the seed in the sack than to plant in a heavy, cold soil. There are advantages in planting corn in drills, and likewise in the check system; and many advocates of either method are easily found. One of the objects of growing corn, and one of its advantages over small-grain crops, is the fact that it is a cultivated crop, and, if well cultivated, will tend to clean the land of foul weeds. This object is more thoroughly accomplished if the corn is planted in check rows, and cultivated both ways. In experiments at Guelph, hill corn has also given rather better yields, both of grain and of total crop, than when an equal amount of seed was sown in drills.

It is not wise, says the writer of a press bulletin from the Minnesota Experiment Station, to plant corn more than two inches deep; and, if the soil is heavy, not more than one inch deep is preferable, as it will start more quickly near the surface; and, if heavy rains should come and pack down the soil, the young plants stand a better show of getting through than when planted too deep. When properly prepared, the soil near the surface is warmer, and contains moisture enough to germinate the seed. If the seed has been properly graded, it is no great task to secure a reasonably uniform drop of kernels per hill. No less than three and no more than four kernels per hill will bring best results, when the corn is grown for husking, if the seed be of good vitality.

Corn Versus Oats.

The average yield of corn in Minnesota for ten years has been approximately 30 bushels per acre. The average yield of oats in the State for the same ten years has been approximately 32 bushels per acre. Comparing these two crops by bushels of yield is not a true comparison from a feeder's standpoint. Thirty-two bushels of oats weigh, in round numbers, 1,000 pounds. Thirty bushels of shelled corn weigh, in round numbers, 1,600 pounds.

Comparing these feeds with bran at \$20 per ton, the acre yield of oats (1,000 pounds) is figured by the Minnesota Experiment Station authorities as worth \$9.50, while the acre yield of corn (1,600 pounds) is worth \$17.36. These figures really do not do justice to the oats, for both foods are reckoned on a basis of their value for producing heat, fat and energy, not taking account of the relatively greater percentage of protein in the oats. For fattening animals, however, the comparison is probably not far from right. The cost of production of these two crops in Minnesota is, including rent, \$10.44 per acre for corn husked from standing stalk, and \$8.86 per acre for oats, thus leaving a profit, at the Station's figures, of \$9.64 from the oat crop, and \$6.92 from the corn crop.

Not nearly enough corn is grown either in Minnesota or Canada.

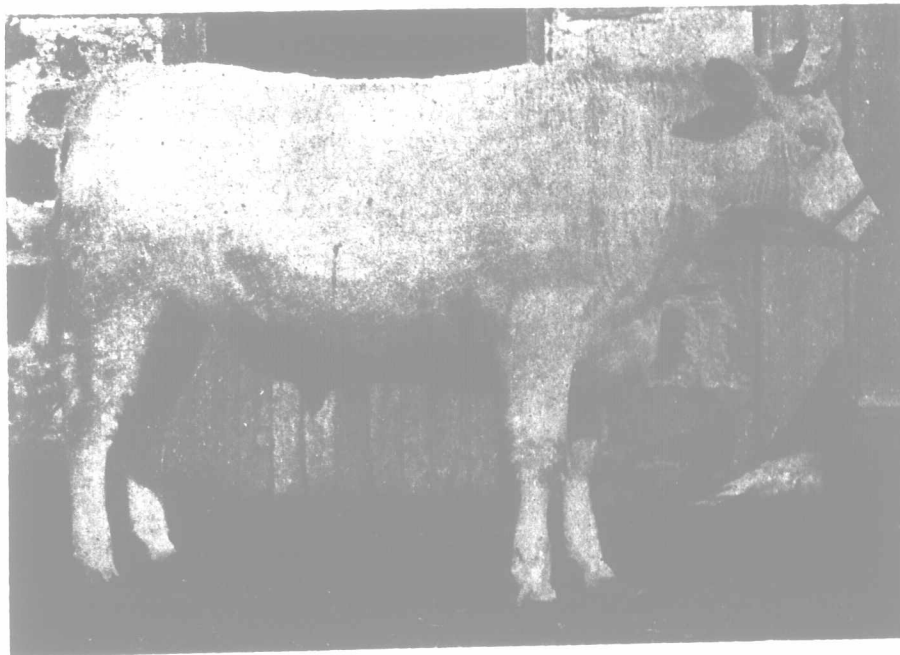
Corn Improvement.

"Inherent values in plant and animal are not easily discovered externally. You look good, but are you good? We'll plant you, an ear to a row, and find out." So said Prof. C. G. Williams, of Ohio Experiment Station, Worcester, Ohio, in the course of an address on "Corn Improvement," at the Essex, Ont., corn show, last winter. He detailed at some length the processes involved in the production of pedigreed corn. This begins by the planting of the first row of corn in a breeding plot, with seed from an individual ear marked number 1, row 2 with seed from ear number 2, and so on, until all the rows are planted, each one with seed from a separate ear bearing the same number as itself. Only about half the grain from each ear is used the first

season, the remainder being left unshelled, and ears kept with numbers attached until the following season. When ripe, the produce of the different rows is husked, and the comparison of yields determined. Great variation is found. In a chart of 20 rows exhibited, yields varying from 55 to 114 bushels per acre were shown. Numbers 7, 9, 11 and 13 were outstandingly the best. The next season, only seed from ears bearing those numbers was planted in the breeding plot. In Prof. Williams' experiments, No. 9 was chosen to be the male parent of the seed to be produced, and seed of the other three numbers was planted in turn in alternate rows, with No. 9 and these alternate rows detasseled. Cross-fertilization of these rows with pollen from No. 9 was thus assured, and only from these rows was seed for future use taken. A similar process is repeated for several generations before pedigreed seed is at last produced.

Prof. Williams does not advise farmers to follow up this work in all its details, though some are doing it. What he does recommend farmers to do is to take seed from the four ears that gave the largest yields in the row test (in the case cited Nos. 7, 9, 11 and 13), mix together and plant, and the product will be a decided improvement over ordinary corn for seed purposes. This seems to be a valuable suggestion, and one not at all difficult to carry out.

J. Lockie Wilson, Superintendent of Agricultural Societies of Ontario, suggests that alfalfa may be one of the crops selected by Agricultural Societies for field-crop competitions. Liberal arrangements have been made for this. Particulars on application to Mr. Wilson.



Grade Shorthorn Steer.

Weight at twelve months old, 1,120 lbs. Sold in Toronto market, to the Harris Abattoir Co., for 10½ cents per lb., dressed out 65 per cent. of his live weight. Bred, fed and sold by Thos. Gregg, Claremont, Ont.

Road Work.

That the old method of doing road work is at its best very defective, was one of the points brought out in an address before the Brant Township Farmers' Club. People frequently try to be pathmaster just to gravel the road fronting their farm. This sort of patchwork is not to be recommended, and should be condemned and stopped. By having a new pathmaster every year, a different method and system is used every year, whereas one system, consistently carried through from year to year, would lead to more permanent roads.

The method of working the earth shoulders of a road up to the center, and putting gravel on this, should be stopped, as, in spring, this loose earth will all squeeze out again and come to the top. The reason for this is to raise the center of the road-bed, to allow water to run off, but why not work the shoulders down, and throw it up towards the fence. In a gravelled road-bed there is from a foot to two feet of solid gravel, so, if the shoulders be taken away in order to expose this gravel-bed, a good macadamized road would soon be the result.

That the present system of everyone putting in so many days of statute labor, was not satisfactory, was the feeling of every member present. It was thought that it would pay the farmer to pay his road work in taxes, and have some competent engineer to look after the roads of a township or a certain district. It is, therefore, up to the township councils to inaugurate a better system of attending to the public highways.

Bruce Co., Ont.

A. E. W.

Grading Tile Drains.

I have just read, with considerable interest, Mr. Campbell's letter, on page 590 of "The Farmer's Advocate," and note especially what he says about tile drainage. Now, I am trying to drain the low places on our farm, and would like a little practical advice from an experienced man. So far, in my operations, I have found it necessary to dig a ditch wide enough to stand in, in order to lay the tile to my satisfaction, using a straight-edge and spirit-level to grade the bottom of the ditch. I am told that the trenches may be all dug from above, and the tile laid with a hook, but I fail to see how a perfect grade can be maintained in this way. If I understand the matter properly, there must be no dips or depressions in the grade, or the tile will here fill with sand. Am I overparticular in using a spirit-level, and, if so, can the flow of water be depended upon? I find, in laying the tile in water, beginning at the lower end of the ditch, the water dams back, more or less, ahead of the tile, thereby making it difficult to tell where the grade is sufficient or lacking. In covering the tile, is there danger of plugging the joints, if clay is used next to tile?

Missisquoi Co., Que. C. S. MOORE.

Your correspondent's inquiries as to the better method in securing a true grade in drain bottoms, are some of the most important, if not the most important of all, in preparing for the placing of the tile. There is not much danger of having the bottom grade run in any part below the level (which is the danger point) where there is a uniform fall of six or more inches in the hundred feet on the surface of the land to be drained.

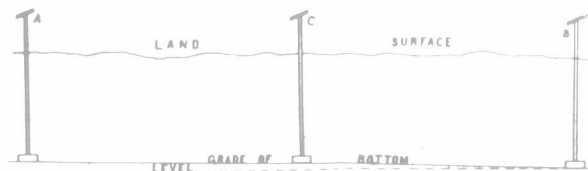
Before starting to dig, where land is comparatively flat, and the fall slight, it is well to carefully use the spirit-level, starting at the outlet, and place a short stake at each hundred feet, marking plainly on them the required depth necessary at each point to secure a regular and uniform fall from stake to stake. To get a true grade between stakes, boning rods can be successfully used. Three stakes, five feet long, set in narrow, heavy blocks of wood, to cause them to stand upright when placed in drain bottom, with a little pressure, and having five-inch cross-bars nailed at top, can be successfully used, as the following illustration will show.

When drain is dug at A and B, the depth, as shown at short stake, the boning rods placed firmly in position, it is quite easy to discover any rise or fall out of line with the calculated grade, by placing the rod C at any point between, and sighting from the cross-bars of A and B. But, as Mr. Moore mentions having water, that, we consider, is the safest and most satisfactory of all guides in getting a sure thing in the way of a regular grade. Where the land has been nearly level, we have found it safe to start at the outlet, and place a dam one inch in height, so as to keep the water apparently level, as we dig back several rods. If much water is found, the flow downwards will be distinctly noticeable, but, if little water is oozing in, no flow can be seen; yet, so long as the depth of water does not increase anywhere in 60 to 100 feet, it is perfectly safe to keep on digging the depth required, if no greater fall can be got. To again illustrate, three years ago, when putting down a six-inch leader, it was found necessary to carry it for twenty-five rods on the apparently dead level, as indicated by the water in drain-bottom; yet, when the lateral drains were entered into the main, a few days later quite a rapid flow was found. Of course, a greater fall would, with same size of tiles, carry away the water more rapidly.

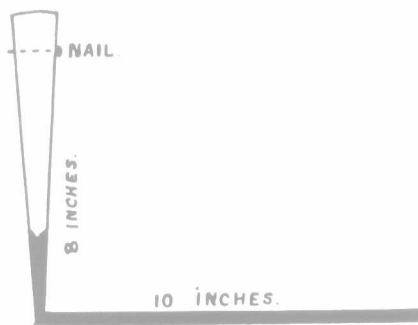
Trusting the means whereby a safe grade can be secured has been made clear, we will next deal with the manner of digging, as asked for by your correspondent. In digging the trenches, it is well to start with a width of ten to twelve inches for a three or four-inch tile, and proportionately wider for larger sizes. The top two feet or more may be dug with the ordinary tiling spades, with two tramps, the loose earth falling behind, shovelled out with a narrow, long handled, round-mouthed shovel. The bottom tramp can then be dug with a tile spade corresponding with the size of tile to be used, and the loose soil removed, by using a double-pointed scoop which is made for the purpose, and varies in width from three to four inches, and about twelve inches long from point to point. The handle, six feet long, is fastened at each side of scoop by an iron which joins to make one shank driven into handle. There is a throat of some five inches made where iron shank is fastened to the sides of scoop at its middle, so as to allow the soil to enter scoop and empty out freely. Any handy blacksmith can make one by using part of an old saw to make the scoop part. If good steel is necessary, so that it cleans readily, the handle must be set at such an angle as will enable the average man to stand upright, straight at his work while standing on one side of the trench he is removing. A yard to four feet is all which should be dug at a time. Then the scoop kept at hand is to be used while the operator stands on the solid soil place the loose part to be removed in making the bot-

tom grade. Any slight inequalities in the bottom can be graded with the sharp ends of scoop, even in hard clay. In such a way it is possible to finish a drain just wide enough for whatever size of tile is to be put in. Another advantage is that, with water in drain, and ground soft, no mudding of the bottom need be made, as would be the case were the trench made wide all the depth, and the bottom made by shovelling out the last-made loose soil.

When the trench is completed with the proper tools, and as described, it is quite easy to lay tile up to five inches in size with the hook made for the purpose. That is nothing more than an iron made in the following shape.



A six-foot handle—size of that used in hand-rakes—does nicely, fitted into the socket, and fastened with a nail put through, and it is ready for use. The ten-inch end, which carries the tiles, should be one inch wide by three-eighths inch thick, and made strong at the angle. The tile being strung along on bank, in reach, the operator, with a foot placed on each bank, and facing from the outlet, puts his hook into a tile, and places it down, with the hooked end away from him. That allows the ready removal of hook, leaving the tile nicely bedded in the narrow channel made for it by the scoop. Should it be seen, in placing the tile, that the upper sides of the tile do not join well, but have an opening, a little practice will enable the operator to turn the tile around on his hook fully as readily as if it were being directly handled. It is quite important to have the upper side of tiles fit close, while any opening should be on the under side as much as possible. If a bit is broken off any ends, and the opening is on the side, it is wisdom to cover the opening with a piece of tile of a larger size. The writer has taken up drains which got closed up because of a small opening which allowed the soil to wash in. That was in clay soil, and in loose, loamy soils the danger is greater. In covering tiles, if they have been



Hook for Laying Tile.

laid as stated, in solid beds, so as not to move up, down or sideways, there is no danger of the joints becoming closed by the clay used in covering. Possibly, there may be clays so impervious as to prevent a ready inflow of water into drains. In that case, a covering of a few inches of more porous soil put on the tiles would be found an advantage.

JOHN CAMPBELL.

Victoria Co., Ont.

Crimson Clover to Thicken Meadow.

Some farmers in the vicinity of London whose stand of clover is patchy, have sown crimson clover seed on such fields at the average rate of about 6 pounds per acre, regulating the amount sown according to the closeness or sparseness of the red-clover plants. Crimson clover being an annual, it is hoped that by this means a much thicker and heavier hay crop can be secured this season.

Most authorities would not commend such practice. Being a tender plant, its use in Canada, they say, is confined to cover or catch crops sown in the summer months for pasture or for plowing under. The result of this experiment in sowing it to thicken the hay crop will be awaited with interest, and published later.

The better prices of wheat in the last two years were responsible for a considerable increase of the acreage devoted to the wheat area in England last year, which increased by 185,501 acres, and was the largest since 1900. The barley acreage decreased by 1,193 acres, and the land under oats was less by 118,898 acres. Fruit-growing is prospering, and the total area in Great Britain devoted to its culture is 310,000 acres. Hops, on the other hand, are a declining crop, the acreage last year being but 32,529 acres, the lowest on record.

THE DAIRY.

Good Dairy Season Anticipated in P. E. Island.

At this writing (April 22nd), the fields are looking quite green. This is the earliest spring here since 1902. Farming operations have begun on most farms, and some little sowing has already been done. The season is fully three weeks earlier than last year.

Clover in the new meadows has a fine appearance. There has been no winter-killing, and the promise is for the best crop of clover hay in recent years.

Farmers will have a long season for planting, and will have time to thoroughly cultivate the land, a thing which is sometimes neglected by some in the rush during our usual short seasons. Stock have wintered well, as the winter was mild and feed plentiful, and will go to the grass in good condition to pay a profit in milk or beef production. Prices are good. Horses are much sought for at prices ranging from \$200 for heavy-draft, to \$150 to \$200 for drivers. Fat cattle are selling as high as \$6.00 per hundred for June delivery, and \$5.50 for present delivery. Carcass pork still sells for 11 cents. Eggs are worth 17 cents. Potatoes are exceedingly low, about 20 cents per bushel.

The outlook for farming is very bright for the future, and the good crops and extra-good prices of the last few years have bettered the financial position of our farmers, and given them a hopeful view of the future, which will inspire them to put forth their best efforts to raise the standard of their productions in quality and quantity.

The dairy season will open with good prospects. Dairying in the co-operative factories, encouraged by the good prices of recent years, has made a strong advance, and is recommending itself to the careful farmer as the most profitable branch of the business. The careless farmer will never be an enthusiastic dairyman. The production of the best quality of cheese and butter carries with it the right to be considered an agriculturist of the highest type, and if ever degrees are conferred on those who study in Nature's University, we will expect the skillful dairyman to get the most letters after his name.

Just now the annual housecleaning is beginning in the cheese factories. The plants are being overhauled and put in order, and new additions made. Quite a number of factories will pasteurize their whey this season.

The greatest need in dairying here is to get patrons to care properly for their Saturday night and Sunday's milk, which in most cases reaches the factories on Monday morning in such an over-ripe condition as to cause great defects in quality, as well as serious loss in quantity of cheese. It takes quite a while to get all patrons to understand and practice the true spirit of co-operation, which is the golden rule of co-operative dairying. But we are moving along in that direction. We are looking for the biggest dairy season we have had for years.

WALTER SIMPSON.
Queen's Co., P. E. I.

Seventy Pounds of Milk Per Day.

In this busy age, when Canada is making a name for herself with big things—water-powers, timber limits, railroads, real-estate deals, and so on—it is perhaps well to remind ourselves that the ordinary farm operations occasionally show very big things. We hear now and then of poor cows and low yields of milk, so we need constantly to bear in mind that huge things are accomplished by the proper combination of the brainy dairyman, good feed, and the selected cow. We have many good cows in Canada, some that give 10,000, 15,000 and 20,000 pounds of milk in a year. One or two big records were made in March by excellent cows, one lot of six in one herd giving a total yield of 9,388 pounds milk, and some giving as much as 70 pounds of milk in one day. Think of it, enough to supply the needs of 56 ordinary people at the rate of one pint each! Such cows are not picked up every day; they are not average cows, but they are an indication of what is being accomplished by brain-work, applied intelligence in dairying. We need to realize that it is perfectly feasible to do a good deal more raising, not only the much-needed raising of the general standard of the average cow, so that the 3,000-pounder is no longer "in our midst," but the raising of a good many more cows of at least the 10,000-pound type. Dairy records of milk produced and feed consumed, will soon show which cow in the stable of the average dairyman is not worth keeping, and which will respond to more liberal feeding, so as to produce milk on about equal terms. Good testing will help every dairyman to secure from the association nearest to him, the assist in forming a new one.

Ottawa. C. E. W.

Exports of Dairy Products.

We learn from the report of Dairy and Cold-storage Commissioner J. A. Ruddick, Ottawa, for the year ending March 31st, 1909, that exports of both butter and cheese have declined since 1904 to 1909 (though subsequent returns indicate a probable increase for the year ending March, 1910). Unfavorable seasons for the production of milk, since 1904, have had something to do with the decrease of these exports. The increase in the condensed-milk industry has also had an appreciable effect on cheese and butter production, but the main reason for the decrease in the exports is to be found in the increased home consumption. Latest returns of dairy exports show that, for the eleven months ending February, 1910, exports of cheese were \$20,975,050; butter, \$943,926; cream (including a trifling quantity of condensed milk), \$508,756; a total of \$22,427,732, an increase over the corresponding eleven months of previous year of \$1,120,865. Butter exports had decreased, but the increase in cream shipments about balanced the decrease in butter. Cheese exports, both in weight and value, show decided gain.

CONDENSED-MILK FACTORIES.

The condensed-milk industry continues to grow. Eleven factories are reported as in operation in the Dominion. Of these, one is at Charlottetown, P. E. I.; two in Nova Scotia, at Truro and Antigonish; two in Quebec, at St. Lin and Huntingdon; and six in Ontario, located at Ingersoll, Brownsville, Aylmer, Hamilton and Tillsonburg.

CARGO INSPECTION.

It is about eight years since the system of cargo inspection at ports in Canada and in Great Britain was inaugurated. Inspectors are on hand when perishable freight is being loaded into steamers, and when it is being discharged therefrom. Because of their oversight, a great improvement has been effected in appliances for handling goods, and in the actual handling of packages by the men themselves. At Portland, where cargo inspectors have never been employed, cheese, apples and other perishable goods are handled much more roughly than at Montreal. At ports of discharge in Britain the inspectors not only look after the manner in which the way-freight is handled, but examine and report as to its condition, due to temperature on board ship in transit, and steamship companies have shown themselves ready to carry out suggestions as to improvement of these.

Irish Butter Trade.

A committee, appointed some time ago by the Irish Agricultural Department, to investigate the Irish butter industry, has made its report. There are three well-defined descriptions of Irish butter: "creameries," "dairies," and "butter factories." The first is the true creamery butter, and the others are of the blended type. The report suggests the restriction of the term "creamery" to the butter actually made in creameries, and the alteration of the misleading "dairies" and "butter factories" terms. It is recommended that all creamery butter should be labelled "Irish Creamery Butter," and that each creamery should ship under a registered number. A special Government brand is also suggested, and an amendment of the parcel post rates, so that packages containing 1 pound, 2 pounds or 3 pounds of butter could be shipped at the present rates for 1-pound, 2-pound or 3-pound parcels, respectively, full weight without the package. That widespread difficulty, how to avoid taking dirty milk at creameries, is mentioned, and refusal to receive at all creameries, and an occasional prosecution, are proposed as remedies for the trouble.

APIARY.

Elementary Instructions in Bee-keeping.—VI.

By Morley Pettit, Provincial Apiarist, O.A.C., Guelph.

HOW TO ATTEND TO A FEW HIVES OF BEES.

This question, in different forms, is often asked of anyone who is considered to be an authority on things apicultural. It is not an easy one to answer off-hand, but in a series of articles, interspersed with digressions, as the humor takes me, I hope to answer "at" it.

The first things to be considered in attending to bees are to keep each hive strong in bees and free from disease, and to give them conveniences for storing honey in the most desirable form. The difference between strong colonies and weak ones is the difference between a honey crop and no crop. To have colonies in condition for the best work, one must attend to them the year around, have them strong all the time, and overflowing with bees at the right time. The year in the apiary really begins at the end of the honey crop. At that time each colony should have a good queen, preferably of that season's rearing. Each hive should contain all worker comb, and have enough

bees to cover six to eight Langstroth combs, and at least 35 pounds of well-ripened sealed stores. Clover, basswood or even buckwheat honey will answer, if well ripened, but the most satisfactory winter feed is sugar syrup, made of best granulated sugar and water, in the proportion of 50 pounds of sugar to 20 pounds of water. Boil the water and stir in the sugar till thoroughly dissolved, then add three teaspoonfuls of tartaric acid, previously dissolved in a little water. When bees are wintered successfully, they come out in the spring nearly as strong and quite as clean and healthy-looking as they were in the fall.

They should be looked over on the first day or spring that is calm and bright and warm enough for them to be flying freely. Such days often come at the end of March in Southern Ontario, or early in April a little farther north. If wintered in the cellar, they should be brought out at this time, and set in a place where they are well sheltered from cold winds, and supplied with water and artificial pollen right in the apiary. In this spring examination, we must remember that the hive is an incubator, and that heat naturally ascends. On this account, do not keep the hive open at the top longer than is absolutely necessary, and have warm covers. A single thickness of board is not enough. It will pay well to use felt, carpet-paper, chaff, or whatever warm covering is most convenient to keep the tops of hives warm. The entrances should be contracted to from a half inch to three inches, according to the strength of the colony; better too small than too large.

Successful management of bees requires a visit from the apiarist at least once a week, and careful inspection of every hive. If each hive has plenty of stores, it may not be necessary to open the hives again until the beginning of fruit bloom. In no case should the brood-chamber be opened, except when the weather is really warm. This matter of conserving the heat of the hive in spring is of the utmost importance.

About the middle of May it will be seen that some colonies require more room. These hives are full of bees from corner to corner, or those which have been contracted in the fall may need to have the division board removed, and more combs added. On the other hand, some colonies will be quite weak, occupying only two or three spaces between combs. I have found it an advantage to remove a strong colony and make it change stands with a weak one. By the field bees returning and entering the weaker hive, the forces are equalized.

When fruit bloom opens, and bees are getting honey, it is safe to open hives freely. The combs are then carefully examined for indications of disease. Anyone who does not understand the symptoms and treatment of brood diseases of bees should write to the Department of Agriculture, Toronto, for a free bulletin on the subject. This watch for disease should never be relaxed. If taken in time, it can be cured without very serious loss, but if neglected, it will ruin the whole apiary, going from one hive to another, and will also jeopardize the other apiaries in the neighborhood.

During this spring examination, the combs should have their frames scraped free of all propolis and superfluous wax, and be transferred, bees and all, to a clean hive. Be careful to keep them in the same order. Do not transfer combs from one hive to another, unless necessary to feed a needy colony, and then not unless you are perfectly sure you have no foul brood.

Watch out for the queen to clip her wing, and when all is in the fresh hive, and it is closed, thoroughly scrape the inside of the empty hive, preparing it for the next colony.

The record kept of each queen should show her age and apparent value, judging by appearance of the queen and the appearance of the brood and eggs, also the strength of the colony.

When all colonies were all nearly alike in the fall, and received the same treatment in the winter, the queen may be held largely responsible for the very weak condition of some colonies in spring. The eggs of a good queen are uniform in size, and stand evenly in the cells, one in each. The brood is uniform as to age of larvae. Where eggs or very young larvae alternate with capped workers, or, worse still, where drone brood appears in worker cells, interspersed with worker brood, the queen is failing, and should be replaced.

At any time bees are short of stores in spring, they can be fed by filling the cells of empty combs with syrup, and hanging these combs in the brood chamber. This should be done in the evening, to avoid robbing.

All the old honey should be converted into bees before the opening of clover bloom. This is done by uncapping some every week, and placing next to the brood, so the bees will handle it over, and use it. It stimulates the queen to greater action, and gets rid of dark honey in the hive. Do not spread brood in the spring. When clover comes in bloom, every vestige of dark honey must be removed from the hives. This is one of the most important things in the production of white honey.

POULTRY.

Removing Stains from Eggs.

It is difficult to remove stains from eggs so effectively that no trace of the objectionable stain may be detected, but a British exchange offers a number of methods which may be employed, it is said, to remove dirt from the shell, without, as far as possible, destroying the "bloom" generally possessed by newly-laid eggs. We cannot vouch for the efficacy of the treatments suggested, and do not advocate them, except by way of trial. Prof. W. R. Graham, to whom we have submitted the suggestions, tells us he intends to try them. He would consider them worth a trial, especially the first mentioned. "The prescription looks good," he adds, "if it does not flavor the eggs." The methods are as follows:

1. Eggs washed in a solution made from a quarter ounce of ammonia and one pint of water are superior in appearance to ordinary new-laid eggs. White eggs become snow-white, and tinted eggs are brought to an even, spotless, clean shade that makes them most attractive. The use of ammonia is not objectionable; it does not penetrate the shell, nor does it leave any odor.

2. Wash with water, and rub with a piece of flannel. After this, a mixture of one-fourth of a cup of salt to one-fourth cup of vinegar, should be rubbed over the shell briskly. Should the stain be a deep and obstinate one, it may be removed by rubbing with a little dry and coarse salt. Tepid water should be poured over them to wash off the salt, etc., after which they will be equal to those in appearance which are taken from the nest in a clean condition.

3. Wash the eggs till free from stain in luke-warm water, with a small portion of soap added, and dry; let them lie in unskimmed milk for a few minutes, then wipe dry with a soft cloth; a disused silk handkerchief is the best for the purpose. The above method can also be pursued if the eggs are desired for show purposes.

4. Take a clean, coarse rag, slightly moisten, dip in common salt, rub the stain until it entirely disappears, wash in warm water, and dry on soft cloth.

5. Wash in tepid water, and then pass through warm water to which a little glycerine has been added, and leave to dry. Water invariably removes the bloom—except on some brown eggs—but glycerine will replace it.

6. Steep in buttermilk for 24 hours, afterwards washing and wiping carefully.

7. Wash them in warm water to which some vinegar has been added—a tablespoonful to a pint of water—then leave to dry. This will not remove the bloom, and should be done as soon after being laid as possible. Should they be required for show purposes, rub with a soft duster.

Poultry on the Farm.

Editor "The Farmer's Advocate":

Two good subjects were recently discussed at the meeting of the Brant Township Farmers' Club. The first was, "Poultry on the Farm," and from what was said, it would certainly appear we should pay more attention to that branch of farming. The consumption of eggs is bound to increase; in fact, it is only beginning. It is not only the eggs that are used as a food at the family table that make this demand, but the modern biscuit factories, with their many varied cakes, use up enormous quantities. So we can see the enormous possibilities of the egg trade, and if we wish to benefit by this trade, the time to begin to lay the foundation is now. Years ago, when eggs brought 8 cents per dozen, the poultry industry was neglected, but now, when the average is about 18 cents, it becomes a source of considerable profit, and should be developed much more than it is. Not only is there good profit in the production of eggs alone, but the business of crate-fattening early chickens is also very profitable, and the demand is unlimited.

The one and most important point of profitable poultry-raising is an up-to-date poultry house. To expect a hen to do her best, she must be protected from all inclement weather and conditions. The following points should be considered:

1. Ventilation. There should be no strong drafts, but the damp, strong-smelling air should be removed continually in such a way that no drafts blow directly on the hens. This can best be done by building a gable-roof and laying chicken-netting over the joists, and placing about a foot of straw on top of this. Cut a hole in both gables, and you will have perfect ventilation. If a square opening be left on the south wall, and, instead of a window, a sheet of cotton be tacked over it, it will allow fresh air to enter, without the objectionable draft.

2. It should be warm. Double boards, with a layer or two of tar-paper between, are said to keep the stable warm enough, but two boards, with a real dead-air space between, should be much better. The temperature should never be below freezing. Neither should it be too warm.

for in that case the hens are liable to catch cold when accidentally exposed to a draft. A little above freezing is found to be all right.

3. It should be dry. Good ventilation will partly secure that. Cement floors are liable to be damp. Wooden floors are better. A bed of dry straw frequently will help to keep it dry.

4. Get all the sunshine possible. This can be done by having the length of house run east and west, and having windows set in the south side, and low down. A long, narrow house is better than a square one.

The variety of fowl does not seem to be so important as many people seem to think, except the two large classes into which all breeds may be divided, namely, those best suited for egg-producing, and those best suited for table use. From general observation of the reports of many different breeders of different breeds, investigators have come to the conclusion that there is no best breed. The average of most of them is about the same. The breed that a man takes a fancy to will do the best for him. (The writer believes that an animal is susceptible and sensitive to the sympathetic feeling of its keeper, and does better because of that psychic force.)

One of the professors says a hen can be fed at one-sixth cent per day, but the speaker thought one-quarter cent was necessary. Figuring from that, and taking a hen that lays 135 eggs in a year, she makes a profit, at the present price of eggs, of 200 per cent. A chicken at six months has cost about 40 cents; cost to feed a hen for a year is about 82 cents. The question of soft-shelled eggs came up, and it was said that generally this resulted from feeding on too much fattening food, and not from the lack of lime, oyster-shells, etc.

A. E. W.

[Note.—This is an interesting article, and most of the advice is sound. It is a mistake, however, to say that the temperature of a poultry house should not go lower than freezing point. A dry atmosphere at zero will not hurt any well-nourished hen, and several degrees lower is quite safe for fowl that are used to it, especially for the smaller-combed breeds. The editor of "The Farmer's Advocate" kept a flock last winter in much the kind of house described, only that it was single-boarded. The canvas door was ajar almost every night. There was one Leghorn in the flock. Not a comb froze, and the birds were healthy and bright. Prof. Elford says a healthy hen of the small-combed breeds can hardly be frozen, if well fed, accustomed to fresh air, and kept in a dry atmosphere. Re soft-shelled eggs, with all respect to the opinion expressed, we consider lime and bone important. Feed oyster-shell when the hens are confined, anyway.—Editor.]

GARDEN & ORCHARD.

A Canadian Apple-grower in England.

Editor "The Farmer's Advocate":

Happening to be in England in summer, the writer visited Covent Garden Market, in London, and the Fruit Bazaar in Glasgow, at both of which places his fruit is often sold. To see the rapidity with which the various lots are knocked down by the auctioneer to the highest bidder, from one or two sample packages exhibited, is certainly an eye-opener. It is plain to be seen why a brand that is known to be honest is so quickly known and competed for at a high figure, while uncertain brands go begging. Gradually, our Canadian grades are becoming known and sought for, but, unfortunately, so far, we in Ontario have sent over too little No. 1 stock. Tasmanian apples, in boxes, were offered in abundance, and were clean, bright and fresh-looking in appearance. These were picked up as fast as the attendants could show samples.

With prices often ruling so high in London and Glasgow, it seemed at first strange that so little attention is given to apple-growing in England. We rode hundreds of miles through the South of England, observing only here and there an apple-orchard. But when we visited these orchards, the reason was not far to seek, for the trees do not seem to thrive as they do in Canada, and the English sun shines so seldom that the fruit gets very little color. In some instances we noted the trees, trunk and branch, thickly covered with lichens and mosses, and no attempt was made to clear the bark, either by scraping or by spraying.

As to varieties, they have innumerable, yet many orchards are devoted to the growing of cider-apples. Very few of the Old Country varieties are profitably grown in Ontario, although at first a great many were tried. Among the best, we note the Ribston and the Blenheim. In British Columbia, some of them are especial favorites, notably Cox's Orange.

One of the old English apples which used to bring a very high price was the Api. It was at one time planted quite generally in our older apple districts, under the name, Lady Apple, so

called, it is said, because its small size made it just suited to a lady's mouth. It is really a beautiful little winter dessert apple. Some advise eating it with the skin on, because of the delicate perfume therein contained. In England the apple succeeds well as a dwarf on Doucin or Crab stock, and bears very abundantly; but, in the days when large apples are so much favored, I fear very few in Canada would have patience with so small a variety.

This Api apple has quite a history, being of great antiquity. It is said to have been brought from the Peloponessus to Rome by Appius Claudius, and to be the Appiana apple mentioned by Pliny, who describes it, "Odor est his cotoneorum magnitudo quae Claudianis, color rubens," comparing it in size to another variety, the Claudiana.

It appears to have got its name, Api, because it was grown in Api, Brittany. In the seventeenth century, Worlidge, an English pomologist, mentions, under the name of "Pomme Appease, a curious apple, lately propagated; the fruit is small and pleasant, which the Madames of France carry in their pockets, by reason they yield no unpleasant scent."

In Covent Garden there has been a good demand for this apple, especially the beautiful, high-colored samples wrapped in colored tissue paper, sent over from America. In such estimation was this apple held in the old days, as to give rise to the proverb: "Omne malum, malum praeter appium malum."

Possibly it would be a good variety for a dwarf orchard, to be grown for a fancy export apple, wrapped in tissue paper, and packed in neat, half-bushel cases.

LINUS WOOLVERTON.

Another Step in Co-operation.

That Ontario co-operating fruit-growers should now take another step forward, selling their output through a central organization, is the opinion of D. Johnson, President of the Forest Fruit-growers' and Forwarding Association, one of the most signally successful of our various co-operative fruit-shipping associations. At the Fruit Institute, in Lambeth, Mr. Johnson, in his evening address, described the splendid system of co-operative marketing in California, in an interesting account of a trip to the Western Coast. "California growers organized in a simple way, a few getting together and forming an association. This then became affiliated with a local exchange, which, in turn, is represented by a central organization called the California Fruit Exchange. One of these exchanges, which I visited, had a packing-house 500 x 200 feet, paid out \$175,000 a year for wages, and its freight bill amounts to \$500,000; and there are many others like it. This splendid system of marketing has made the fruit business very profitable in California for those who take good care of their orchards, although there are many out there who are making very little out of their fruit because they go on in a slipshod, haphazard way.

Opportunities here in Eastern Canada are even greater than those out there. Imagine paying \$1,500 an acre for land under citrus fruit, and \$600 to \$800 an acre for the raw land. Canada can produce the best apples grown in the world, and we have no expense here for irrigation or fumigation, and we are near the markets of the world. There are splendid possibilities in growing and marketing good fruit. I read a statement the other day, for the truth of which I cannot vouch, that the apple crop of Oregon last year had averaged \$2.50 a box.

One of our great needs is co-operation, which has been a success where it has been entered into seriously, with proper realization of the obligations involved. The co-operators should stand together, and the stronger must expect to sacrifice a little sometimes in the interests of the weaker. One advantage of co-operation is that it enables the growers to be masters of their own reputation.

Some six years ago we found it difficult to sell our apples. We would consign them to the Old Country, but the rates were not always satisfactory. For another thing, we could not get apple barrels at a reasonable price. We organized a co-operative association known as the Forest Fruit-growers and Forwarding Association, and were able to get for 28 cents better barrels than others had to pay 45 cents for. That was a good start. Since then we have been working on, receiving 50 cents to \$1.00 more for our apples than we formerly did. We have established a grade and reputation for it. The production of the orchards has been greatly increased, and people are taking more interest in the production of good fruit, and raise two or three times as many apples as formerly. Wherever a live co-operative association has been started, interest in fruit-growing has been quickened.

In the Niagara District, some years ago, fruit-growers were dissatisfied with their returns. The St. Catharines Cold-storage and Forwarding Co., Limited, was organized, and last year shipped

from St. Catharines four hundred-odd cars of fruit, realizing fine prices.

The latest development of the co-operative idea has been the organization of the co-operative associations into a central body, which has been the means of keeping the associations in touch with each other, and with the market conditions and price prospects throughout the Province.

I believe we are now ready for another step, and that is that the central organization should take charge and sell the output of all the local organizations represented."

Fruit-packing Frauds.

Apples were packed much better for the season of 1908-9 than during the previous year, but the nine permanent and twelve temporary fruit inspectors were obliged to prosecute too large a number of dealers, though fewer than in 1907-08. Eighty convictions for breaches of the Act are recorded, with names of transgressors attached. For the season of 1909-10 there is a lamentable increase in the number of convictions, 210 being reported to "The Farmer's Advocate" by Mr. Ruddick so far, with some cases still pending. Increased inspection, the character of the crop, and the condition of the market, are given as causes for this unfortunately large number. Complaints are made every year that shippers do not exercise as much care in packing fruit for the Northwest market as when it is intended for export. Much good fruit is undoubtedly sent there, but there is, unfortunately, also a large quantity of very inferior stock. Fruit-growers are urged in their own interests to be honest in their own packing of fruit, and to do what may be in their power to have others also keep up the grade. The value of orchards in the East is affected by the measure of confidence Western individual buyers have in the correspondence between the outside marks on the package and the quality of its contents.

Tobacco Grafted on Potato.

In "The Farmer's Advocate" of January 20th, 1910, an article appeared, entitled, "Tomato-Potato, a Double Plant," translated from the German Agricultural Press, and it may be of interest to hear from the same source about another double plant, which bears potatoes (*Solanum tuberosum*) below, and tobacco (*Nicotiana tabacum*) above. The plant was grown by Professor Arthur Meyer, of the Potanical Garden of the University of Marburg, Germany. As in the case of the tomato-potato plant, so also the tobacco-potato plant is not a hybrid, but a graft. The plant was fully six feet high; the tobacco part was exceptionally well developed, and the potato part bore five well-developed tubers, together with several smaller ones, which, on account of the plant having been early removed from the soil, were not fully grown. Similar graftings were also successful with thorn-apple (*Datura stramonium*) as scion, on potato as stock.

Although the knowledge that such grafts are possible is not new, yet the method is naturally impracticable of application on a large scale. These experiments were conducted in order to discover a possible migration of the poisons from the tobacco and thorn-apple to the potato below.

Is Arsenite of Lime Safe to Use with Lime-Sulphur?

Prof. Scott, of the Bureau of Plant Industry, Washington, D. C., has just reported that, in his experiments in Arkansas, arsenite of lime, used with lime-sulphur, burned apple foliage severely. In my experiments on apples, pears and potatoes, the two substances were used together with safety. Prof. Stewart, of Pennsylvania, also found them safe. Prof. Scott, however, is considered a careful investigator, so it is just possible that different weather conditions this year in Canada might cause this spray mixture to be injurious. Therefore, it seems wise to advise the fruit-growers of the Dominion not to use the arsenite of lime in any but an experimental way this year, and to wait for another season, until the question will have been definitely settled. Meantime, investigators agree that arsenate of lead, 2 pounds to 40 gallons, is the proper poison to use with lime-sulphur, as it is both effective and safe.

L. CAESAR.
Ontario Agricultural College.

Manures and roots of plants are especially useful in controlling soil moisture. Hence, crops grow better where manures and grasses are largely used. A heavy coating of coarse manure plowed under in the spring, may result unfavorably by separating the furrow slice and subsoil, and causing the surface soil to become too dry. It is often better to make lighter applications of manure and to disk it into the surface, rather than to plow it under.

1. The all the ir rado Bee "potato a single p thousands are ready Consequen tatoes ar foliage at Means it is ver early, as out; and, young in they app any injur fresh foli the same hard to some tir spray on tically al 3 pounds every for plaints a control t to leav grow, a when qu spraying to both cellent re some of who use Usually, than Pat longer.

2. F1 very TI tieth of

when di plant to potato, many ki recogniz which it These h but also like the germina doing than attacks which a and cau Mean control lead or tioned a tected.

3. W soil tha will be attack t ing from one-thir brownis tubers a are the seen fly early in their ap tures of the reas such fe remain cases, t is not of that Meat satisfac worms.

Insects Attacking Potatoes.

1. **The Colorado Beetle.**—The most familiar of all the insects that attack potatoes is the Colorado Beetle, or, as it is commonly called, the "potato bug." So prolific is this pest that, from a single pair in the beginning of the season, many thousands of offspring may be produced before they are ready to enter the ground for the winter. Consequently, it is no wonder that unsprayed potatoes are often completely stripped of their foliage and killed.

Means of Control.—In controlling these insects, it is very important, first, to begin to spray early, as soon as any of the eggs are hatching out; and, second, to cover every leaf, so that the young insects may be killed almost as soon as they appear, and thus never have a chance to do any injury. As the plants grow rapidly, and produce fresh foliage, and as all the eggs do not hatch at the same time, and as the adult beetles, being hard to poison, continue to lay their eggs for some time, it will be necessary to repeat the spray once or twice, until the insects are practically all killed. Either 1 pound Paris green or 3 pounds arsenate of lead, should be used with every forty gallons of Bordeaux mixture. Complaints about the failure of arsenate of lead to control these insects can usually be traced either to leaving off spraying until the slugs were well grown, and, therefore, much harder to kill than when quite small, or to not doing thorough spraying. Sometimes, of course, failure was due to both causes. The writer has himself got excellent results from arsenate of lead, and knows some of the best potato-growers in the country, who use it in preference to any other insecticide. Usually, it seems to be less rapid in killing power than Paris green, but remains on the foliage much longer.

2. **Flea Beetles.**—The potato flea beetle is a very tiny black beetle, not more than one-twentieth of an inch in length. It has the habit,

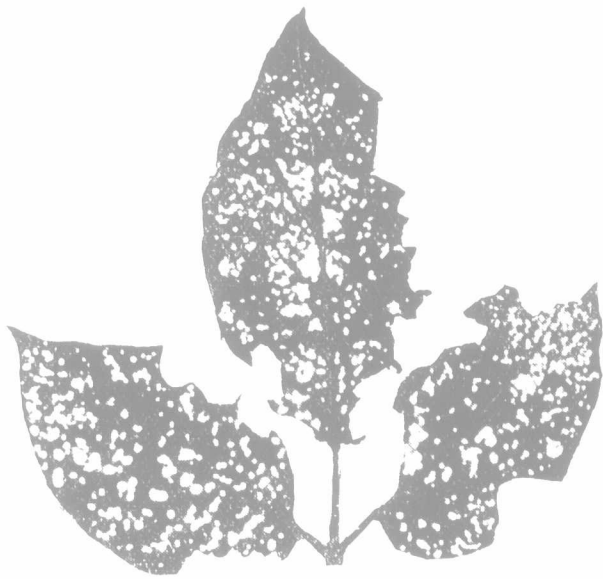


Fig. 1.—Work of Flea Beetles.

when disturbed, of leaping from one part of the plant to another. In addition to attacking the potato, it also attacks tomatoes, cucumbers, and many kinds of weeds. Its presence can readily be recognized by the numerous little round holes which it eats out of the leaf, as shown in Fig. 1. These holes not only weaken the plants greatly, but also allow the spores of destructive diseases, like the Late Blight, to get a favorable place to germinate. In some districts the flea beetles are doing as much harm as, or perhaps even more than, the Colorado beetles. In addition to the attacks of the adults on the foliage, their grubs, which are very small and white, attack the tubers, and cause what is known as "pimply potatoes."

Means of Control.—Poisons alone will not control these tiny insects, but if the arsenate of lead or Paris green is added to Bordeaux, as mentioned above, the plants will be satisfactorily protected.

3. **Wireworms.**—When potatoes are planted in soil that has been broken up from old sod, there will be danger for two or even three years of an attack from wireworms—slender, hard grubs, varying from about one-third of an inch to one and one-third inches in length, and yellowish-white to brownish-white in color. These bore into the tubers and eat cavities out of them. Wireworms are the grub stage of the click beetles that are seen flying and crawling around in large numbers early in the spring, before most insects have made their appearance. These beetles choose old pastures or old sod fields to lay their eggs in, hence the reason for the presence of the wireworms when such fields are broken up. Since the wireworms remain in the soil as grubs for two or, in some cases, three years before changing into beetles, it is not safe to plant potatoes in such soil inside of that length of time.

Means of Control.—There is only one really satisfactory way of keeping a farm free from wireworms, and that is by making a practice of a

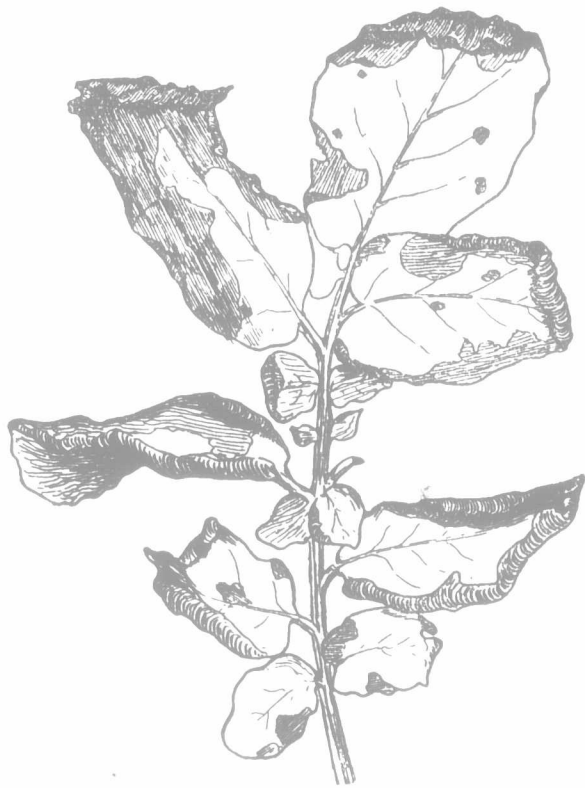


Fig. 2.—Tip Burn on Potato Leaves.

short rotation of crops, so that fields will not be left in sod longer than two years. If, for any reason, a field has been left thus for several years, and it is desired to break it up, this should be done in the fall of the year, as fall plowing and working the land in the fall destroys many of the pupal-cases or freshly-formed adults. It is a good practice to sow rye the first fall, or barley next spring, and to seed it down with clover; next year take off a crop of clover, and plow down as soon afterwards as possible, and sow rye or some other cereal. When this is harvested, plow again in the fall, and next year, as a rule, it is quite safe to plant potatoes or any other crop.

4. **White Grubs.**—Large white grubs, with brownish heads and white, almost transparent bodies, almost always curved into a circle or semi-circle, are the larvæ or grub stage of the well-known June beetles or bugs that fly into the house through open doors or windows in June. Their life-history is very similar to that of the wireworms, and, like the wireworms, they not only attack potato tubers, but many other kinds of plants.

Means of Control.—The same means of control should be used as for wireworms, namely, fall plowing, and a short rotation of crops. If a few furrows are run through an infested field, and hogs are allowed to root in it freely, they will often destroy the pest more rapidly than any other known way.

5. **Potato Aphis.**—In some parts of Ontario, green aphides attack the leaves and stems of potatoes, and do much damage to the plants by sucking the nourishment out of them.

Means of Control.—As soon as the insects are

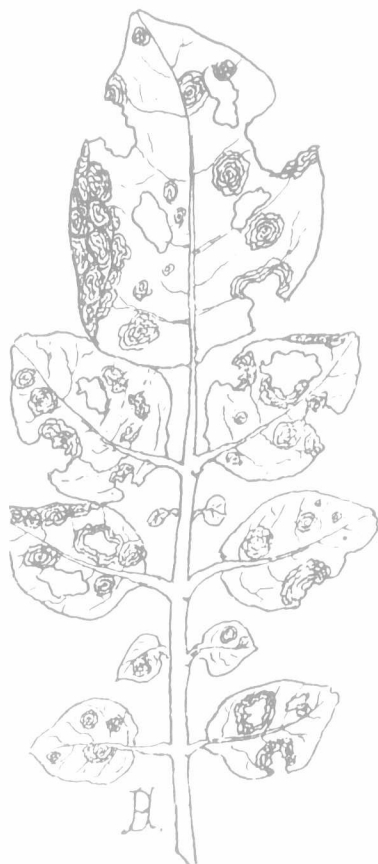


Fig. 3.—Early Blight on Potato Leaves.

seen, spray the plants thoroughly, covering the under surface of the leaf, as well as the upper surface. Use whale-oil soap, 1 pound to six gallons of water, or common soap, 1 pound to four gallons, or kerosene emulsion. Use plenty of pressure, so as to drive the spray forcibly against the insects, and thus make it more certain in its results. Repeat, if necessary.

6. A number of other insects of less importance sometimes attack potatoes. Such insects are Black Blister Beetles, Leaf-hoppers, Potato Stalk Weevils, Four-lined Leaf-bugs, and occasionally species of Cutworms. It is so seldom, however, that very serious loss is caused by any of these insects that it does not seem necessary to outline remedies here.

DISEASES ATTACKING POTATOES.

Potatoes are quite subject to a number of destructive diseases that not infrequently cause either the death of the foliage or the rotting of the tubers, or both. That from 50 to 75 per cent., or sometimes more, of this loss can be prevented by careful selection of seed from healthy plants, and by thorough spraying, even in years very favorable for disease, has been proven many times by potato-growers, both in Canada and in the United States. As there is always a danger of disease being brought into a district on imported seed, it is well to treat all of this with formaldehyde, as for scab, and to reject any tubers that, on cutting, show signs of any kind of disease. The knife used in cutting such tubers should be dipped in strong formaldehyde before cutting any other tuber. The destruction of the insects is also very important in the prevention of diseases, as the spores find in the injuries made suitable places to germinate.

1. **Tip Burn.**—This is not a fungous disease, but seems to be due to a long spell of hot, dry weather, following a period of abundance of moisture and very rapid growth. Under such circumstances, the roots are unable to supply all the moisture required to keep the leaves vigorous and turgid, and, in consequence, they begin to wilt, turn brown, and curl upwards at the tip



Fig. 4.—Late Blight on Potato Leaves.

and along the edges. Often whole fields are severely attacked in this way. In such cases the Early Blight disease sometimes attacks the already weakened foliage, and helps to hasten its death.

Means of Control.—(1) Cultivate frequently, to preserve the moisture in the soil. The cultivation, except at first, should not be deep, but very shallow—just enough to keep the surface well stirred. (2) Spray with Bordeaux, keeping the foliage well covered all the time. It is not known just how Bordeaux is able to prevent, or, rather, to lessen, the amount of Tip Burn, but that it does so has been proven by a number of very careful experimenters.

2. **Early Blight.**—This disease is not so common as Tip Burn, which is often mistakenly called Early Blight. It starts as brown spots on the leaves. These gradually increase in size, and, as shown in Fig. 3, become characterized by a number of concentric rings which form in the dead area. Weakened plants seem to be most readily attacked.

Means of Control.—Keep the foliage well covered with Bordeaux mixture.

3. **Late Blight.**—The Late Blight is much the worst disease of potatoes in Canada. It attacks not only the foliage and stalks, but also the tubers, causing the latter to rot, both in the ground and when stored away, especially if the storing was done when they were not perfectly dry. The disease begins, usually, about the last week in July, and continues through the rest of the season. Wet or moist weather is especially favorable to it, and special precautions should be taken to guard against an outbreak during such weather. Once it is established on a few plants, if the weather is favorable, it spreads so rapidly, by means of spores, which are carried by wind, rain and insects, that it may sweep over a whole field in three or four days, and destroy the

promise of a crop. Rain washes the spores down to the roots, where they germinate, and soon cause the tubers to rot; so that most of the severe potato rots that we have had have been caused by this disease, the wet weather merely giving conditions favorable for its rapid spread and vigorous growth. It is not, as a rule, difficult to distinguish this disease on the leaves from Tip Burn and Early Blight. It has not got the concentric rings shown in the figure of Early Blight, and the leaves do not, as a rule, curl up at the tip and along the sides, as in Tip Burn. Affected leaves show blotches which gradually extend and kill them. Badly-diseased fields have a strong odor, suggestive of rotten potatoes.

Means of Control.—(1) As the disease is believed to pass the winter only on tubers, it is important to endeavor to get seed only from healthy plants in fields that were free from this disease. (2) Keep the leaves well covered with Bordeaux mixture, especially after the 25th of July, as the disease begins about this time. If the weather is wet, take every precaution to spray during the first dry interval. Bordeaux, if once allowed to dry on the leaves, will stand considerable rain without washing off, but spraying during wet weather should be as often as once a week. In hot, dry weather, there is very little danger of early blight, as shown during the last two or three years. (3) When storing diseased potatoes, let them first dry well in the sunlight, to remove all surface moisture. This helps to prevent their rotting later.

4. Dry Rot or Fusarium Disease.—This disease is caused by a fungus. It attacks potatoes both in the field and when stored. The most characteristic thing about it is that it causes a brown ring inside the tuber some little distance below the skin. After a time, the whole interior will turn brown, and this ring becomes black or darker than the rest of the tissues. In the field it begins to attack the plants when about one foot high. The tops for some time look healthy, but gradually the disease works on the stem, under the surface, until they become sickly, and die.

Means of Control.—(1) Select resistant varieties by marking desirable hills or plants in the field, and saving the tubers of these for seed. (2) Use only perfectly healthy seed. To make sure of this, cut the tuber at the stem-end, and see if there is any sign of the brown or darkened ring. If so, reject it, and disinfect the knife at once in formaldehyde. (3) Do not feed diseased potatoes to cattle or hogs without first boiling them, as the manure will otherwise contain the disease. This rule applies to all, or almost all, potato diseases.

5. Potato Scab.—This disease is so familiar to everybody that it requires no description. Like Early and Late Blight, and Dry Rot, it is a fungous disease. If scabby potatoes are planted, they will cause the crop to be scabby, and the same result will follow if clean potatoes are planted in soil where scabby potatoes had been grown for some years previously. This is due to the fact that the disease remains in the soil for several years.

Means of Control.—(1) Select tubers for seed that are apparently free from scab. (2) Immerse all tubers to be used for seed for two hours in a solution of formaldehyde 1 pint and water 30 gallons. This should be done before the tubers are cut. At the end of two hours, they should be scattered on the grass to dry. Precautions must be taken to see that all bags or boxes that are going to be used be also treated with the formaldehyde, lest these reinfest the tubers. The formaldehyde solution may be used over and over again. Formaldehyde liquid solution usually costs about 40 cents a pint, and is not poisonous. (3) Plant, if possible, in fresh soil, where potatoes have not been grown for several years. (4) Avoid the use of lime or wood ashes as fertilizers, as these alkali substances favor the disease. (5) Scabby potatoes should not be fed to stock, without first boiling, as they tend to spread the disease through the manure. (6) If scab-infested soil must be used, green fodder crops, such as clover or peas, should first be plowed down to make the soil somewhat acid.

6. Other Diseases of Less Importance.—There are several minor diseases of potatoes, some of which threaten to become more serious. Of these, the most important are caused by two species of bacteria. These organisms cause soft rot of the potato, and one of them also attacks the stem at the ground, causing it to become black, and the plant above to die. From this characteristic the disease has been given the name of "Black Leg."

No very successful means of combating these diseases has yet been found, but too great care cannot be exercised in selecting tubers for seed from hills or plants marked out while still growing, because of their healthy appearance and the good yield of tubers. Such seed should be kept separate from the rest of the tubers when stored. Crop rotation also plays a great part in preventing new diseases from becoming established. Of course, if there are only a few diseased plants in a field, these can be pulled or dug, and destroyed.

Summary of Spraying for Potatoes.—Begin to

spray early, just as soon as the earliest hatching of the eggs of the Colorado Beetle, or when the plants are about five inches high. Keep the leaves well covered with Bordeaux, using a poison with it in each case, until the insects are destroyed, but no longer. If the weather is wet at any time from the 25th of July up to the end of the growing season, take extra precautions to see that the foliage is well covered with Bordeaux, lest the Late Blight get a start. In no season should there be fewer than three sprayings, and in most seasons there should be from six to eight. Bordeaux may be used at the strength of 5-5-10, instead of the usual 4-4-40. It is not desirable to substitute lime-sulphur for Bordeaux, on potatoes. One pound of Paris green or three pounds arsenate of lead are strong enough as a poison for a forty-gallon barrel of Bordeaux.

L. CAESAR.

THE FARM BULLETIN.

Conservation of a Community.

By Warren H. Wilson, Ph. D.

The farmers of Rock Creek, Illinois, found that the retirement of farmers from their farms, for residence in the towns, was destroying the social and religious life of the community. They took counsel to devise measures by which to save the community.

Their first proposal was a farmers' union or syndicate which would rent the land offered by retired farmers, and sublet it to desirable tenants, whose presence in the community would not be a detriment. But this plan soon proved its weakness. The retiring farmers were only too willing to put their lands in the hands of the syndicate, and go to the town or city, reassured that, while they were enjoying town life, its good schools, its music and lectures—for the retiring farmer is an intelligent, aspiring man—that their farms would be well rented.

So the sons of the early settlers decided that they must go deeper. They undertook to provide their community with better schools. They erected a building as good as one finds in town or city, and they abandoned the old country schools, with their small districts and poor teaching. They thus assembled about a hundred children in one school company. They hired wagons to carry them back and forth. They employed good teachers, and put in laboratories, workbenches, sewing machines and ranges, for teaching manual training and domestic science. They heated it well, and lighted with gas; and in the third floor they had room for a meeting-place for all the people of the community. Out of doors they have grounds for games, baseball, tennis and football.

The result has been that the retirement from the farm has been stopped. The place has come to be so desirable as a place of residence that the rental of land has gone up, and the average tenant will not go there. Foreigners are excluded, and the drifting element of the population has ceased to be restless. Social life has been restored, and the continuous life of the institutions of the countryside has been assured.

This cannot be accomplished by mere prosperity of the individual farmer, nor by the increase of the general products of the soil. Without the saving of the community, all other gains are only partial. Even the saving of some souls will be inadequate, unless they have a home to live in, and that home a part of a growing, intelligent community, in which women shall be happy and children shall be contented to live all their lives. The country community must make itself the best place on earth, not only to the man who makes the money, but to all the members of the family, among whom the money will have its greatest value.

Where the Strictures Do Not Apply.

Editor "The Farmer's Advocate":

After reading a letter written by Mrs. Hopkins, in your issue of April 21st, I felt as though I would like to contradict some of the statements she made of the father's treatment of his sons, and also of the ignorance that the farmer seems to be in as to his general appearance. It is not that I care for Mrs. Hopkins' opinions of us farmers, but should anyone else read such a letter, it would be a disgrace to the occupation, for I consider it is wrongly represented. There are exceptions in all cases. She seems to be trying to bring before our eyes the contrast between the city folk and farmers. A farmer shows on the outside what he really is. But go to the city and see some of those up-to-date gentlemen that Mrs. Hopkins seems to admire, and you will find them well dressed, with clever ways and cultivated tongues, yet on the quiet bawling around the up-to-date hotels, gambling. Is this not often heard in the towns? "Do you know whether Mr. So and so uses tobacco or drinks?" and the answer con-

erally is, "I don't know; they say he does." And so he does, but on the sly.

The farmer must dress according to the kind of work he is engaged in, and the general farm work calls for coarse clothes, but with a wife as kind and open-hearted, as most are to-day, he can be kept fairly respectable. But even with grimy hands (which are easily washed before coming to the dining-room), is he still not healthier than an office clerk or some of the poor pale fellows who never see a speck of dirt from one day to the next? Need a farmer be despised, after driving fifteen or twenty head of fat cattle to town, just because he isn't "it" when looked at by one of the clean gentlemen who have the bottom of their trunks on their backs? The farmer probably carries a check for nearly a thousand. But when he hitches up and takes his wife to town, I do not think there is much trouble over the baskets of butter and eggs. The men are generally on deck for the heavy-lifting. On the other hand, if the woman has any love for her husband, she will do all she can to help him along, and the general rule is that most men dress neatly enough to meet the queen, if necessary.

Rough ways and habits are dying out as civilization increases, and men to-day are better educated than their fathers were. Education and religion are softening men's hearts, bring them to understand that God created them for a purpose, and they are trying to live up to it.

Mrs. Hopkins attacks the father, who has worked for years and earned a home, and sent his son to the agricultural college, and when he comes home will not let him practice what he learned. I cannot understand the father's idea for sending him to college. She says: "Show me the farmer who, as long as he is able to walk, will let his boy have any lead in the management of the farm." I suppose Mrs. Hopkins and I are a long ways apart, but if she will come to our home, I will show her one. I have two brothers, none of us college boys, either, and we are consulted about everything in the farming line, and I know of many other homes just the same in that respect. There are exceptions in all cases, as Mrs. Hopkins admits, but I believe that the tight-fisted kind are not the rule, but the exception. I believe that an open-hearted father, with love for his boys will be as anxious for the boys' ideas as the boys are to give them. And when this is the case, the boys will stay with him. I am sorry that Mrs. Hopkins holds the opinion she does about the average father on the farm, for I am sure it is not true in our part of the farming world.

N. W. R.

Haldimand Co., Ont.

Husband Holds the Purse-strings.

Editor "The Farmer's Advocate":

I have noticed and read with much interest the discussion going on between Mrs. Hopkins and some others. I, too, think Mrs. Hopkins is too hard on the farmer, or else she is judging the many by the few.

Here, on our "tight little island," where the majority of the people are tillers of the soil, we have no such caricatures as she pictures. At least, there has never been one come under the writer's observation. Of course, we have slovenly farmers, just as there are untidy persons in every walk of life, but those same slovenly persons are not paragons for the merchant or preacher to follow, and we do not judge every merchant or preacher by his untidy brother in the profession. And the same rule applies to farmers.

As to farmers' sons having to ask for money, as one writer complains, is it any harder for the growing girl or boy, think you, than it is for the wife and mother to have to ask for every cent she spends either for herself or the house, church collections, and all other purposes?

How many times has the farmer's wife had her cheeks reddened when asked for money for some legitimate purpose, to have to say, "I am sorry I can't give you anything to-day; Mr. F. is not at home," feeling all the time as though the collector must think it queer, and knowing full well that her husband has money, and lots of it, in his trousers' pocket. But she never gets a cent with out asking for it. The kind girl fares better, for her wages are paid when due, and how many girls would have had that to ask for their wages? Of course, the wife and mother will always get money when she "ask" for it; but, to many women, as in their husbands for money seems like begging. Although I have been married twenty-five years, my husband has never yet said, "Here is five dollars; spend it all on yourself, or any way you like." Nor is this state of affairs just to the ones who have the care and burden of home and children. How long would our American cousins stand it?

Have the women a right to ask for money any more than the men have? What is the idea of the women on this subject? It seems to me to be more honorable than giving the women a vote. For my part, if our husband would lay twenty-five cents a day on the table, might we not dress-

table, and say, "That is for you," it would help me over many a mortification and hard place.

Now, am I unduly sensitive on this subject? Will the women who read this paper answer?
F. E. I. NEMO.

The Noblemen and the Smocks.

Editor "The Farmer's Advocate":

The late John Dryden told this story: He advertised seed wheat. A stranger at some distance thought a Minister of Agriculture must have great wheat. Mr. Dryden and his man were transferring a heifer from one stable to another, across a muddy barnyard. The stranger arrived in time to see Mr. Dryden on one end of a rope, and a headstrong heifer on the other, plowing across a muddy yard. The heifer tied, Mr. Dryden, with tall boots, and pants tucked inside, hastened to meet the stranger. "Is Mr. Dryden home?" asked the stranger. "I'm Mr. Dryden," replied Mr. Dryden. His countenance fell, he was disappointed; he could see the muddy boots and the plain garb of a farmer, but he could not see Mr. Dryden, the man loved and honored by stockmen of Britain and the United States, the pride of the great Province of Ontario, as well he might be.

Yes, Mrs. Hopkins is like the man who came for seed wheat—can see the muddy boots, the overalls and milking smock, but she cannot see the great, warm, honest, noble heart of the farmer. Poor Mrs. Hopkins has tackled too big a job when she stands upon the corporation line dividing city from country, with uplifted finger, assuring readers of "The Farmer's Advocate" that inside of this line the dwellers are tidy, clean, well-dressed, honest, courteous, well-mannered, and can gracefully raise their hats, if even they could not raise a dollar these times of high-priced food; and that, outside of this line, the dwellers are clodhoppers, clothed in muddy boots, overalls and milking smocks. My dear Mrs. Hopkins, let us counsel together, and see whether the poet was not right when he said:

"Honor and rank no conditions rise,
Act well your part, there all the honor lies."

Or, again, it may be possible that Burns was right when he said: "The honest man, be he e'er so poor, is king of men for a' that," whether he dwells in city or country? THOS. B. SCOTT,
Middlesex Co., Ont.

If I Were a Minister.

(An Allegorical Reply to "If I Were a Farmer.")
By a Farmer's Wife.

After reading the article, "If I Were a Farmer," by one belonging to the ministerial fraternity, I thought it but fitting that there should be a reply from one of the "farming fraternity," upon the kindred subject, "If I were a Minister." And thinking thus, my reflections shaped themselves into the following parable. If any reader does not grasp its significance, I will be happy to give the interpretation in another issue of "The Farmer's Advocate."

If I were a minister upon a country circuit, I would rise at half-past four or a quarter to five o'clock in summer mornings, and not later than six upon winter mornings, saddle my finely-groomed horse, and ride at a brisk pace to Mr. Absent-Last-Sunday's, my object being to obtain the reason for his non-attendance. If it should happen to be "smallpox" in the family, I would ride to the nearest grocer's, and bring over all the provisions they might need for several days, and arrange with myself or some neighbor to attend to the milking of his cows and the doing of his chores during the siege, so that the man of the house would be free to help the mother in the home, wait upon their family, and the weekly income for butter, eggs, etc., would be forthcoming, as usual.

All this would perhaps occupy an hour, so I would still have time to hunt up the man who looks after the acetylene plant, and find out the reason for no light being shed upon sermon, preacher or people the previous Sabbath evening. Dropping him at the church door, we, my driver and I, would canter off for the parsonage.

By this time, I think probably my helpmate would have the children dressed and washed, the porridge stirred, and breakfast laid, unless she had thought to help me out by milking "Brindle," since the supply for the children's porridge had probably expired. In that case, if all the domestic affairs were not up to the mark, I would endeavor to be cheerful, and help get the children to the table, and the breakfast on, and we would proceed as usual.

After family prayers, I would announce to my wife my intention of taking a drive around one of the six two-mile flocks of my pastorate to see what the farmers were at, and get some hints for next Sunday's sermon. Sermons drawn from subjects nearest the minds of the people are likely to strike surest hold of the hearts. This would perhaps occupy the time till the noon hour. In the meantime, it being Monday morning, my wife

would have been toiling over the wash, with old, deaf Minerva puttering about the house, washing up dishes, buttoning jackets, and straightening up after every intermittent cyclone caused by the inrush and egress of our five hearty boys, ranging in age from three to ten, besides the baby—darling of our hearts—sitting up in her high-chair, screaming at the topmost pitch for her dinner.

After washing my hands and combing my hair, I would take her up and try to comfort her by letting her pull my hair and moustache out by the roots, or jerking my well-worn tie askew.

In the afternoon, after things had quieted down, the children locked in the nursery, or out at play, and my wife duly settled upon the couch for a few minutes' steadying of the nerves before taking up her sewing, I would sit down in my study chair to hunt up a subject for a sermon. This feat accomplished, I would again hitch up my driver, preparatory to making a few pastoral calls, telling my wife I would not be home for tea, so they need not bother fixing up any extras, since it was only themselves.

Arriving at the parsonage for the third time that day, at half-past eight o'clock, or even nine, tired in body, but surely with the mind as keen and fresh as ever, feeling that a good day's work had been accomplished, I would feel entitled to a rest by taking a dip into "The Epworth Era," followed by a page or two of "The Christian Guardian," with perhaps a glance over "The Farmer's Advocate," to see how the farmers in the country were getting along. Then, perhaps, for a half hour I could enjoy the latest book of critical criticism, by the "Rev. Clod Cloudy-mind," on "Whether the Deluge Actually Covered the Dominion of Canada, or Not," and, if it did not, how in the world could it be said to cover the earth? And if it didn't cover the whole earth, what a fabrication the whole thing must be; therefore, we must conclude that it did cover Canada, as well as Palestine, that the pillars of our ancient beliefs may not crumble to the dust. And with that matter satisfactorily arranged, I would retire early, at eleven o'clock, to the "land of sweet dreams"—unless the children were wakeful, to be up and astir at the same early hour on Tuesday.

It would be tedious to enumerate all the work and routine of the week, and the many difficulties, domestic and otherwise, overcome by the help and advice of my faithful helper, just as it would be to enumerate all the little hitches and troubles of the farmer and his helpers. The other days would be but a repetition of the first in point of activity and unsparing energetic force, so that one day may serve as a sample of the six, except on Saturday I would make a desperate effort to catch up on all things left somewhat in the rear by the press of the day's duties, and especially in the weekly sermon. But on the Sabbath I would not humor the inclination to remain longer than usual in the arms of Morpheus, but would be up and astir at the usual hour, or nearly so, and a brisk walk for a mile or two over the hills, conning my sermon, would prove a good appetizer; and that important work all to my satisfaction, I could help my wife do up the morning's work, and get the children ready for church. But, as the farmer has his family carriage for bringing the people to church, so I, the Rev. Able-as-Farmer, would have a family carriage, and a fine team to draw it, holding high their heads, and lifting up their hoofs in true blood style; and what people the farmers' overflowing carriages would not hold, I would pick up and pack in beside my wife and children and myself, and so would I help swell my own congregation.

It would, perhaps, be out of the question for the people of my congregation to install all the modern conveniences in the parsonage, since they could not afford them in their own homes. So I would put in one or two of the more important ones at my own expense, at each circuit on which I labored. In time, if all did this, our parsonage would be stocked in all modern methods for carrying on housework, and the work would be greatly lightened for the minister's wife, and she would have more time for visiting with her husband and attending upon the Ladies' Aid, etc. Of course, all this would cost money, but money was meant to be scattered, especially the minister's money, who can only claim what is given him anyway by the people's generosity and lovingness of heart, not to speak of the tightness of the purse-strings. Therefore, the minister, having nothing to call his own, should spend freely, and not lay up for a rainy day.

Of course, I would stand for, and labor with all my might for circulating libraries in school and church, and would contribute to the same for good day and Sunday teachers in the school and church; for good politicians and councillors, and I would go stump-speaking in their behalf; and, if no better could be found, would run for office myself. I would have ample time for attending to my pastoral work and this public work. But I would let the choir work out its own salvation, as it is bound to do, anyway.

If I could get a worthy substitute, so that "Mr. Astride-the-Fence" wouldn't leave my

flock and go over to my neighbor, "Mr. Pulling-lard's," during my absence, I would take a week or so off in the heat of summer, when all the farmers were busy at harvest, and too tired to come out to church on Sundays. If I could not arrange it thus, however, I would feel it incumbent upon me to stay at home and look after my charge, lest I should have no charge to look after upon my return.

But, above all things, I would prepare good sermons—elevating sermons—so that people would forget themselves and their common surroundings and work, once a week, and be lifted above themselves into the seventh heaven of philanthropy, morality, and missionology.

I forgot to say that my garden would be the model of the parish for neatness and variety, and I would keep my young boys out of mischief, hoeing and weeding in it, so that the farmers' sons should not say they were mischievous, idle, lazy, or afraid of work, or, because they were the parson's sons, they did not have to work. In all these things I would strive to be a model, and not fall behind the times. And we would give a party once a year to the young folks, once a year to the young married folks, once a year to the older married folks, and take them out to parties along with the other boys. In this way my wife and I would keep young in looks and spirits, and even our children would soon learn that we belonged to the people, soul and body; for this we were called, for this we were chosen, and for this we must live.

And, finally, if I were a minister, with a great and growing country charge, I wouldn't envy any farmer with only a hundred acres to call his own—after the mortgage was paid. But I would think myself the happiest man in the universe, only second in state to that of the angels; and my work, that of teaching the humble laborer on the land to look from nature up to nature's God, the greatest in the universe; and I wouldn't envy any man his hundred acres of property and the work it entails, even if I did have to labor nearly as hard as did he, rising early, and eating my bread by the sweat of my brow and strength of my brain.

To Export Chilled Meat.

Those interested in the live-stock industry in Alberta seem confident that an export market for chilled meat will be established. Writing to "The Farmer's Advocate," recently, E. G. Palmer, secretary of the company taking active steps in the matter, says:

"Following the work accomplished by the Chilled Meat Committee, regarding the establishment of a system of meat exporting from this country, a company has been formed by men interested in live-stock pursuits in Manitoba, Saskatchewan and Alberta, under the name of 'Meat Exports, Limited,' for the purpose of carrying out the necessary preliminary work essential to the inauguration of a thoroughly-organized system of chilling, packing and exporting from those Western Provinces, and at the same time provide a thoroughly representative body with whom the Government may deal in the matter.

"The object is to have the industry initiated as early as practicable in the smallest possible way compatible with success, on a sound and permanent basis, and with the interests of the producers adequately protected. To insure a continuous (yet not necessarily large) supply of stock suitable for exporting purposes, and which is requisite to build up this meat export trade on a healthy and durable footing, it is considered necessary to provide for the erection and operation of one complete central depot, say at Winnipeg, another somewhat similar but smaller depot in Alberta, and five small works, or feeders, distributed over the principal stock-producing centers of the three Provinces, each of which would in themselves form the nucleus for a complete plant as soon as the business in their particular districts warranted it."

It is estimated that the erection and equipment of these depots and sub-stations, along with refrigerator cars, etc., would cost \$2,000,000, and an effort is being made to secure financial aid from the Dominion Government.

New interest in the corn crop has been aroused in New England, which culminates in the Corn Exposition, to be held in Worcester, Mass., in October. The Experiment Station has developed a sweet corn which will mature during Maine's shortest season, and the Director, with his assistants, is working to improve the field corn. Both flint and dent, much gain having already been made with the former.

Large quantities of Western-grown oats were shipped South this season, and sold for seed to the farmers of the corn belt. Canadian oats weighing from 40 to 45 pounds per bushel sell in the Central West at good prices, these sections not being climatically situated for the growing of large-yielding, heavy-weighting oats.

The Toronto Horse and Military Show.

In a blaze of gorgeous splendor, the production of the master decorator's art, Toronto's Canadian and Military Horse Show for 1910 was officially opened by His Honor Lieutenant-Governor Gibson, promptly at 8.30 p. m., Tuesday, April 26th, with an attendance considerably in excess of that of any former opening in the fifteen years of the show's history. The decorations of the Armories, in which the show was held, were most elaborate, the prevailing colors being old gold and blue, the entire ceiling being hidden by a canopy of pale blue and white, in alternate stripes, from which hung clusters of flowers. Fully 2,500 visitors were present on opening night, the many rows of boxes and tiers of seats being comfortably filled with the elite of Ontario's metropolis, their brilliant costumes and overflowing good-nature blending remarkably well with the sleek, well-groomed equine aristocrats in their rich trappings, which, at the bugle's call, came prancing into the ring to the music of the bands of the Royal Grenadiers, 48th Highlanders, Queen's Own, Governor-General's Body Guard, and Horse Show Orchestra.

The number of entries for the various classes totaled about 1,000, which was the largest entry ever made in Canada for a show of this kind, being second only to the great show at Madison Square Gardens, New York, while the quality of the exhibits was probably never excelled at any show in America. Sensational in practically every class, and most sensational in many, fittingly describes the show; and to the management, and the secretary, W. J. Stark, in particular, is due every credit for the masterly and very efficient manner in which the whole programme was smoothly and punctually carried out. The judges of the various events were: James T. Hyde, James G. Marshall and John R. Townsend, of New York; Julien C. Keith, Warrenton, Va.; Dr. Routledge, Lambeth, Ont.; Ed. Sheppard, Montreal; Major Wm. Hendrie, Hamilton, and Colonel Lessard, Ottawa. While very little fault could be found with the placing of the awards as a whole, there were a few cases that were very hard to understand by those outside the ring.

Of paramount interest to the vast majority of the readers of "The Farmer's Advocate" were the breeding classes, and of these, by far the most interesting was the class for Hackney stallions. Seven came forward at the call of the bugle, an entry that, for high-class quality and sensational acting, was never equalled in any show-ring in this country, every one of them a former winner of more or less note. Brigham Radiant, the unbeaten champion, the property of Graham & Renfrew; Derwent Performer, the champion at the late winter show at Ottawa, owned by G. H. Pickering, of Brampton; Samuel Smiles, the Western champion, owned by J. B. Hogate, of Weston; Crayke Mikado, the Toronto and Chicago champion, owned by Miss K. L. Wilks, of Galt; Marion Cassius, winner of championship at this show two years ago, owned by Dr. T. H. Hassard, of Markham; King's Chocolate, a Toronto first-prize winner, owned by A. E. Yeager, of Simcoe, constituted the class. The round after round of applause that greeted these great horses as they were put through their paces on the tanbark-covered floor of the ring, was evidence of the outstanding popularity of the Hackney with the masses of the people. The invincible Brigham Radiant was again decked with the winning colors, with Derwent Performer second, King's Chocolate third, and Marion Cassius fourth. The class for Hackney mares shown on line had only two entries, Everline, owned by Miss K. L. Wilks, and Oak Park Daisy, owned by T. A. Cox, of Brantford; the Galt entry proved an easy winner.

Standard-bred stallions, in a class of four entries, were easily headed by the renowned champion of two flags, Mograzia, owned by Miss Wilks; Jim Todd, from the same stables, getting second; Young Bryson, exhibited by H. W. Field, of Hamilton, third; and Imperial Jr., owned by Fred Garbut, of Lambton Mills, fourth.

Thoroughbred stallions, with the largest series of prizes of any class of the entire show, brought out an entry of eight. Halfling, owned by Patterson Bros., of East Toronto, was an outstanding winner. Kirkfield, exhibited by the Ottawa Hunt Club, got second; Procession, exhibited by Wm. McKay, of Todmorden, third, and Valjean, from the Canadian National Breeding Bureau, fourth.

In the class for Pony stallions shown on line, the unbeaten champion, Plymouth Horace, owned by Graham & Renfrew, again demonstrated his superiority, with Daylight, the property of J. Lloyd-Jones, of Burford, second.

Class 16 was for stallions, in harness, best calculated to improve the type of heavy-harness horses. There were five entries, but only two faced the music, Marion Cassius, the well-known champion of former years in the harness class at Toronto, owned by Dr. T. H. Hassard, and King's Chocolate, the first-prize winner of former years, the property of A. E. Yeager. With two such top-notchers competing for premier honors in

the same ring, it goes without saying that excitement and enthusiasm was at fever-heat, demonstrated by a continuous roar of applause and hand-clapping, all of which only stimulated the horses to greater exertions. Marion Cassius, without doubt the greatest living harness horse in Canada to-day, was declared the winner, with King's Chocolate a close second.

The total number of classes that went to make up the entire show was 90, with a full entry in nearly every class, those of the saddle classes being particularly heavy, with representatives from as far east as Montreal, and as far west as London. The usual number of mishaps occurred in the hurdle-jumping contests, but, luckily, without any very serious results. Exceedingly daring horsemanship was a feature in some of the events, prominent among which was that of Miss Shrainger, of Philadelphia, who took the hurdles with a dash that was at once reckless and inspiring. The principal winners were, for singles in harness in the high-stepping classes: A. E. Yeager, Simcoe; Mrs. Adam Beck, London; Ennisclare Farms, Oakville; C. Ed. Gudewill, Montreal; John Stewart, Westmount; Burns & Sheppard and Crow & Murray, Toronto. In the classes for high-stepping doubles, Ennisclare Farm won the lion's share, other winners being: W. D. Beardmore, Toronto; E. Langdon Wilks, Galt; A. E. Yeager, Simcoe; Crow & Murray, Toronto; C. Ed. Gudewill, Montreal.

In the classes for pacers in harness, the honors were about evenly divided between Miss Wilks, of Galt; Ald. S. McBride, Toronto; P. Mayer and C. W. Maginn, Toronto. For trotters in harness, Crow & Murray and Ald. S. McBride were the principal winners. In the hurdle contests the principal honors were pretty evenly divided between Hon. Adam Beck, London; C. W. Warren, Geo. Pepper, J. Kilgour, Crow & Murray, Hugh Blake, Amilius Jarvis, and Allan Case, all of Toronto; Ennisclare Farm, Oakville; F. Willeore, Corbyville; Dr. R. E. Webster, Ottawa, and H. S. Wilson, Oakville. Some most sensational classes came out in the tandems, both single and double, the premier honors going to the Ennisclare Farm, the other principal winners being Miss Wilks, Galt; J. T. R. Laurendeau, Montreal; A. E. Yeager, Simcoe; Dr. W. A. Young, Toronto, and Geo. W. Beardmore, Toronto.

Governor-General's cup for best Canadian-bred gelding or mare, four years old, suitable for riding or cavalry purposes, sired by a Thoroughbred—1, Geo. Pepper, on "The Governor."

Champion pony in harness—1, Mrs. Chas. Wilmot, on Bathgate Swell.

Champion harness mare or gelding, 15.2 or under—1, H. C. Cox.

Champion saddle horse, mare or gelding, 15.2 or under—1, Crow & Murray, on Lownsbrough Madge.

Champion roadster—1, Miss K. L. Wilks, on Oakum Belle.

Champion pair harness horses—1, H. C. Cox. Champion saddle horse, exceeding 15.2 hands—1, H. C. Cox, on Jasmine.

Four-in-hands—1, Ennisclare Farm.

High-jumping Contest—1, Crow & Murray, on Confidence.

Champion heavyweight hunters—1, Hume Blake, Toronto, on Gamecock.

Champion middleweight hunters—1, Crow & Murray, Toronto, on The Wasp.

Champion lightweight hunters—1, Crow & Murray, Toronto, on Stayaway.

That the show was an unqualified success, was conceded by everyone, and the intense interest manifested from the time class 1 was called, until class 90 was decked with their winning colors, was evidence that man's best friend, the horse, will always hold the proud position he has held for thousands of years in the affections of the people.

Prof. Gamble Leaves O. A. C.

Prof. W. P. Gamble, B. S. A., who has for some years been connected with the Chemistry Department at the Ontario Agricultural College, where he has latterly occupied the position of Professor of Soil Chemistry, severed his official connection with the institution on Saturday, April 30th. Prof. Gamble, whose origin is recorded as Russell Co., Ont., graduated from the College in 1897, and is one of the most capable, popular and highly-respected men who have ever passed through the O. A. C. He has done good work both in teaching and investigation, though his time for the latter has been limited. His place will not be easy to fill.

It is feared that there will be little fruit in a number of States west of the Great Lakes. Owing to the unusually warm weather in March, everything was remarkably forward, and then, in the course of two weeks, in the latter part of April, freezing temperatures and blizzards prevailed. The prospects for fruit had never been so fine, and the losses are, therefore, especially great. The States affected are the Dakotas, Nebraska, Minnesota, Iowa, Missouri, Illinois and Michigan.

Lo, the Poor Father!

Editor "The Farmer's Advocate":

In reading Mrs. Hopkins' first letter, I came to the conclusion that she was an old maid, who had been jilted by one of those despicable farmers, hence her ill-feeling towards them. But in her second letter, Mr. Editor, I have somewhat changed my mind. But she must have married one of those dirty farmers, who perhaps takes a bath once a year, whether he needs one or not.

In her first letter she does not blame the poor old father for the boys leaving the farm, but blames his mother for spoiling him right from the cradle. Now, in her second letter she has changed her tactics, and blames the poor old father; and even you, Mr. Editor, she has to give a dig on petting the farmers through your valuable paper. I can show her more than one instance where the father has handed over the reins to his son, a college graduate, and much to his sorrow.

Mrs. Hopkins says she is writing as a help, not as a criticism, but I contend it is not only a criticism, but a slur on the father, when she says he likes to be monarch of all he surveys, as far as his line-fence. If not for his family, for whom is he striving? And who has a better right to enjoy the fruits of his labor than the parents? I think, Mr. Editor, that, to follow Mrs. Hopkins' advice, and give the boy the reins, the poorhouse would soon have to increase its accommodation. I think such letters as Mrs. Hopkins' create and encourage this spirit of unrest and dissatisfaction among the young people of both sexes on the farm. I would advise Mrs. Hopkins to read the letter written by Geo. Rice, in the issue of February 24th; it will throw considerable light on this subject of why boys and girls leave the farm. H.

Oxford Co., Ont.

Alfalfa Competition in Saskatchewan.

Saskatchewan is to have a competition in alfalfa-growing which promises to be one of the biggest contests known to Canadian agriculture. The growing of this leguminous crop is to be encouraged by an offer of cash prizes aggregating \$6,300, as well as trophies and medals.

The movement was inaugurated at the Agricultural Societies' Convention, held at Regina in January last, when it was decided that a prize of \$1,000 would be awarded for the best ten-acre field of alfalfa in Saskatchewan in 1914. Recently, William Mackenzie, president of the Canadian Northern Railway, offered to provide the required \$1,000, and, needless to say, his offer was accepted immediately. But the competition has outgrown the first plan; ten times \$1,000 would hardly be more than sufficient to finance the competition as now planned.

The approved plan provides for a division of the Province into four parts. Prizes will be offered for the six best fields of alfalfa in each of the districts. The prizes will be as follows: First, \$500; second, \$400; third, \$300; fourth, \$200; fifth, \$100; sixth, \$75. The first-prize field in each of the four districts will be scored for the championship, which will consist of a magnificent silver trophy.

All contestants must be paid-up members of the nearest agricultural society. Entry must be made before August 1st, 1903, and the crop must have been sown not later than the season of 1912. The entry fee has been fixed at the nominal sum of \$5.00, and must accompany the entry which is to be sent to the director of extension work previous to the date specified. The field of alfalfa must consist of not less than ten acres, but if the size of the plot exceeds the minimum, the whole field will be scored. No artificially irrigated crop will be eligible for entry in the competition.

Scoring Weed Exhibits and Essays.

The offering of prizes at the autumn exhibitions for essays on farm weeds and collections of pressed and mounted weeds, is not only valuable in promoting a competitive feature of interest, but of decided educational benefit in the localities where the weeds are gathered and the display prepared. This is one of the many excellent ways in which the war against weeds can be effectually promoted. It trains the sharp eyes of young people to discover and identify these pests. The book, "Farm Weeds," issued by the Department of Agriculture, Ottawa, would be very helpful in making such collections. In some cases persons have encouraged this feature by offering special prizes to be competed for. Competitions for suitable trophies can be held for public schools, as well as for individuals. Local fair boards that have not already done so might well encourage such competitions this season, either from their own funds, or by securing from generously-disposed persons special prizes of cash, or trophies that will be of much greater benefit than many of the so-called "attractions."

Great Increase in Spraying— Working Up Western Fruit Trade.

"There is a large increase in the amount of spraying done this year," remarked P. W. Hodgetts, Director Fruit Branch, Toronto, to "The Farmer's Advocate" last week. "There is probably four or five times as much lime-sulphur being used in Ontario this year as last. There is a large increase in the sales of commercial lime-sulphur, as well as in the home manufacture of the concentrated storable solution. In Prince Edward County, for instance, quite a number of growers, being unable to get the commercial article in time, went ahead and made up a quantity of the concentrated solution. The Niagara Peninsula has been pretty well covered with lime-sulphur this spring. In South-western Ontario there is a large increase in the amount of it used, but still room for much more. I saw one fine, large young apple orchard being destroyed by San Jose scale, and the owner would not even then use the lime-sulphur. It is a burning shame to see such an orchard killed, when it can be so easily saved.

"Some of our growers this year have put on lime-sulphur up to nearly the end of April, using the solution somewhat weaker than the usual spring strength. While it affects the outer leaves somewhat, the benefit is believed to far outweigh any such slight injury. Of course, where possible, it is better to spray just before the buds burst, when the full spring strength may be used with complete safety.

"There is a very great showing of bloom in the Niagara District—Robt. Thompson says about the greatest he ever saw. Recent weather, however, has not been very favorable for pollination. Representatives of both growers and dealers are already in the West working up business, all making strenuous efforts to push their products into that market, and land them in good shape. The adoption of brand marks is a help in this connection. The 'Prairie' brand of the St. Catharines Cold-storage and Forwarding Association has become well-known in Winnipeg. The Norfolk Association's brand is also well and favorably advertised."

Bean-growers Organize.

The Bean-growers of Kent and neighboring counties in South-western Ontario have organized along lines and with purposes similar to those of the Ontario Corn-growers' Association. Effort had been made last year to get into the Corn-growers' organization, but this body considered its scope as broad as it were advisable to make it. The Bean-growers then appealed to the Provincial Department of Agriculture. On Monday, April 25th, P. W. Hodgetts, representing the Department, went down and met them at Ridgetown. The Bean-growers set forth three troubles, of which the first and greatest is seed; second, insect pests; third, lack of knowledge of fertilizers. The dealers, of whom there are three in Ridgetown, claim there has been, in many cases, at least, no change of seed since the industry was started, forty years ago, and little of the seed is selected. One dealer stated that only about 20 per cent. of his patrons would buy improved seed. Michigan bean-growers, on the other hand, come over every four or five years and get new seed.

The extent of the bean-growing industry may be gathered from the fact that shipments from Ridgetown alone amount to 350,000 bushels, of which a low valuation would be \$1.10 to \$1.25 per bushel. The price is quite variable. Lately, they have been paying \$1.75 a bushel for one-pound pickers. The growers have asked the Department to hold a big meeting at Ridgetown on May 14th, to be addressed by some prominent man from Michigan, and someone from the O. A. C. Their other request is for experiments to be conducted by the Department on, say, a two-acre plot, (a) comparing selected seed from different soils in their own counties, and imported seed from, say, New York and Michigan; (b) a few experiments with fertilizers. The matter awaits early consideration by the Minister of Agriculture. The officers of the new association are: President, W. E. Galbraith; Secretary, David Wilson; both of Morpeth, Ont.

The bill introduced by Hon. Mackenzie King, Minister of Labor, which provides for the investigation of combines, monopolies and trusts, passed its third reading in the Commons April 26th. While it reads penalties for breaches of the law, the main stress is laid upon publicity, and the information and pressure of public opinion. In addition to ordinary commercial combines, the bill will take effect upon monopolistic misuse of patents and rate agreements between subsidized steamship companies.

Farm Conditions Improved.

Editor "The Farmer's Advocate":

I see Mrs. Hopkins is still on the warpath against farmers, but it is evident that she must live in a very backward section of the Province, as the men there do not wash oftener than once in six months, and don't know the use of either a tooth-brush or nail-file. The men in this locality know the use of both these instruments, but they wouldn't get much work done if they stopped to clean and file their nails every time they got dirty. Mrs. Hopkins is wrong when she says that the farmer's rough clothes make his personality unlovely and uninviting, for the clothes by no means make the man, and, as for individuality, I am sure the farmer shows more of it when he is dressed according to his taste than he would in a conventional city costume. Mrs. Hopkins also draws some exaggerated pictures of farm life in her first letter. When the farm lad goes to the city with his produce, he isn't afraid to get outside the shadow of his wagon, and he doesn't make half the fool of himself that the city dude does when he comes to the country. I have never heard of a woman climbing over the wheel of a wagon with a basket on each arm, but I think it would be a physical impossibility. The farmers in this locality don't take the lumber wagon to market, but, instead, they take the democrat, while their wives generally take the train. Farm life in this vicinity has lost most of the rudeness that it used to have, and has social aspects that compare favorably with those in the towns. In the winter time there are plenty of parties and dances, and big sleigh-loads are made up to go to them. There is a well-equipped skating rink near-by, where the lads and lasses can assemble for an evening's fun; and the rural telephone is installed in many of the homes. The boys are not pampered in the way she says, either, and I think that if she came here I could show her some very courteous and gentlemanly farmers, several manly young farmers' sons, and also plenty of wash-basins and tooth-brushes, if she hasn't forgotten what they are like.

Halton Co., Ont.

FARMER'S SON.

New Ontario as a Potato-growing Country.

To advertise and develop New Ontario as a potato-growing country, is the object of a little demonstration work planned by J. Lockie Wilson, Superintendent of Agricultural Societies, in conjunction with Donald Sutherland, Director of Colonization. Mr. Wilson declares that the finest potatoes he ever used on his table were grown in New Ontario. He further asserts that even though the tops be frozen off at a certain stage, before they have quite matured, the tubers will still be good for seed. The plan of experiment is, therefore, to plant on the Government farm, at Dridtfoot, in New Ontario, twenty bushels of first-class seed potatoes of tested varieties from New Brunswick, from two sections of the United States, and from Old Ontario. The produce of the crop is to be distributed over the Province to advertise New Ontario as a potato-growing country.

The wool-tariff committee, appointed at the last annual meeting of the Dominion Sheep-breeders' Association, has been taking action, with a view to stopping some of the anomalies in the wool-tariff situation. Meeting in Toronto, in the office of Secretary A. P. Westervelt, they appointed a sub-committee to go to Ottawa. This delegation, consisting of Lt.-Col. D. McCrae, John Campbell, and A. W. Smith, M. P., had a favorable hearing before the Ministers of Agriculture, Customs and Finance. The Ministers suggested that they call together representatives of the Canadian woolen manufacturers to appear with the sheep-breeders before the representatives of the Government. This meeting is expected to take place as soon as possible after Parliament adjourns.

It is unofficially stated in the Globe that the Ontario Government intends to further develop the plan of agricultural training in the schools. Agricultural teachers have been at work in eleven High Schools or Collegiates, and provision was made at the recent session of the Legislature for four more. An encouraging increase in the enrollment is reported. In Prince Edward County, 32 students now participate in the agricultural class, 21 attend at Simcoe, while at Collingwood 17 have entered.

The Norfolk Fruit-growers' Association already numbers 309 members this year—this in a district where seven years ago apple-growers were discouraged and orchards were valued at less than unplanted land alongside. The Manager, James E. Johnson, is determined to keep the quality up, and any who are not prepared to produce and deliver good fruit need not apply.

Environment Affects Quality of Wheat.

"Is the quality of wheat influenced by environment?" was the question discussed in a paper read by Frank T. Shutt, M. A., Chemist, Experimental Farm, Ottawa, at the Canadian Seed-growers' Convention, Ottawa, February 11th, 1910. Mr. Shutt has been conducting investigations along the lines indicated for some years now, the idea having occurred to him long ago that the high quality of our North-western wheat might be due in some degree to climatic conditions, rather than to richness of soil, as was first supposed. Much is due to heredity. The Red Fife has always a high percentage of gluten, and, in consequence, makes strong baking flour. But it was observed that the gluten content differed in different districts of Manitoba, differed even in certain parts of the same district, and also somewhat from season to season. These differences were due to environment. It was further found that wheat from newly-cleared scrub-land contained less gluten than that from land which had been in cultivation for some years. Soil analysis showed that the former soil contained 30 per cent. moisture, the latter but 20 per cent. The difference in the gluten content was between two and three per cent. Similar results were obtained several years in succession, the softer or more starchy wheat being always obtained from the moister land. Analyses of wheat grown on irrigated and non-irrigated lands near Lethbridge, Alta., but confirm the conclusion that soil moisture has a powerful effect on the composition of grain. In 1909, wheat from non-irrigated soil, which dried out greatly, contained 17.6 per cent. protein, while from irrigated land, wheat containing but 12.84 per cent. protein was produced. Mr. Shutt believes it has been demonstrated that it was climatic condition of the soil which prevailed during the formative period of the kernel that determined the amount of gluten in the grain. "It was a question, undoubtedly, of the regulation of the vegetative period by the abundance or otherwise of moisture in the soil."

Orchard Contest in Maine.

BEN DAVIS NEED NOT APPLY.

The Maine State College of Agriculture has inaugurated a standing-crop and orchard contest by offering valuable prizes to farmers in oats, corn, potatoes and orcharding.

The deposit of a thousand-dollar first mortgage bond, the interest of which, to the amount of \$200, at intervals of five years, beginning with the spring of 1910, will be paid to the orchardist who can show the most excellent orchard of his own or more, grown on his own land, trees of one acre selection (Ben Davis excepted), and of his own planting, has awakened an interest in fruit-growing, second only to that aroused by the recent New England Fruit Show, and indications are that considerable area will be set to fruit this spring.

Maine is certainly awake to the possibilities of the new agriculture, and the interest and activity of her State officials and the faculty of her university is indicative of marked agricultural progress.

M. B. A.

Canada's trade continues to increase. For the fiscal year ending March last, the total trade reached a record figure, \$677,142,189. This is an increase over the preceding twelve months of \$117,506,238, and of \$26,000,000 over the year 1907-8, which till now held the highest place. The present monthly increases over those of last year are more than \$10,000,000. There was a decided gain in all lines of exports in 1909-10, but chiefly in the products of agriculture and the forest.

That seed doesn't necessarily run out because it is grown on one farm a long time, is shown by the experiments at Minnesota University Farm, and at experiment stations of other States. Experiments comparing home-grown seed with that brought from a distance, have resulted in every case in favor of the home-grown seed, when the stations have used the proper care in seed selection.

Five hundred and seventy Women's Institute meetings are to be held in Ontario this summer, of which a hundred in Northern Ontario are to be joint meetings of the Farmers' and Women's Institutes. Thirty seed meetings are also being arranged.

The compromise anti-race-track-gambling bill was given its third reading in the Dominion Senate last week, several amendments being lost.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In Veterinary questions the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

CAPPED HOCKS, ETC.

1. Four-year-old mare has had capped hocks for over a year.

2. Yearling colt had distemper, and as a result one hock is enlarged. N. S.

Ans.—1. Capped hocks are very hard to reduce. If there be considerable liquid in the abscesses, they should be lanced, and then flushed out, twice daily, with a five-per-cent. solution of carbolic acid, until healed. If little liquid be present, the enlargement can be reduced some in time by rubbing a little of the following liniment well in, once daily, viz.: 4 drams each of iodine and iodide of potassium, mixed with 4 ounces each of alcohol and glycerine. Repeatedly blistering the parts is sometimes practiced instead of using the liniment.

2. The same treatment as for question 1. V.

SIDEBONES.

Four-year-old filly has a sidebone on the outside of each front foot, and she is lame on the near foot. How can I remove them? She has never been shod. Would shoeing her do any good? J. A. M.

Ans.—A sidebone cannot be removed. It consists in the conversion of a cartilage into bone, and no treatment will reconvert it into cartilage. Shoeing will do no good. The lameness, in many cases, can be cured by blistering. Take 2 drams each of biniodide of mercury and cantharides and mix with 2 ounces of vaseline. Clip the hair off the parts. Tie so she cannot bite the parts. Rub well with the blister, once daily, for two days; on the third day apply sweet oil. You may turn on pasture now, but oil every day. As soon as the scale comes off, blister again. If this does not stop the lameness, get your veterinarian to fire her. In some cases the lameness is very hard to check. V.

Miscellaneous.

SALE OF STEERS.

A man sold a bunch of steers at so much a pound, and, shortly after selling, a lump was noticed on one of their jaws.

1. If the drover noticed the lump, can he leave the animal on the farmer's hands?

2. If he refuses to take him, would that break the bargain sufficiently to empower the owner to hold all the cattle and give the drover back the money he paid on them?

3. Or can he demand the rest of the cattle? AN ENQUIRER.

Ontario.

Ans.—1. We do not see that he is in a position legally to do so.

2 and 3. The vendor would seem, in that event, to be entitled to insist upon the purchaser's taking all or none.

FENCING A ROADWAY.

A long time ago a road was put through the farm I now own. It was put zigzag, 10 to 15 rods from where it should be on the line. It is over 200 rods long. Can the council compel me to leave 40 or 60 feet, as the case may be, when I fence it, or can I put a fence up to the wagon track, say 12 feet wide? Ontario.

Ans.—It is impossible to tell from your statement alone what your and the municipal corporation's respective rights are with regard to the roadway in question. In order to form an opinion, it would be necessary to make some examination of the title, and also to read the municipal by-laws respecting the road in conjunction with the Municipal Act. But, assuming that it is a public road of the municipality, we think it is altogether probable that you cannot legally fence up to the track as suggested.

SEEDING BLACK-MUCK FIELD.

What would be the best grasses to seed a black-muck field for permanent pasture, and what proportion of each?

A SUBSCRIBER.

Ans.—It is not stated whether the land is wet or not, but assuming that it is, the following mixture of seeds is recommended: Red Top, 6 pounds; Kentucky Blue grass, 4 pounds; timothy, 4 pounds, and alsike, 3 pounds per acre. The timothy would occupy the ground for a time until the other grasses got established.

DELAY IN CUSTOMS OFFICE.

1. Eggs for hatching come from the United States by express, and are held at the Customs office so long that they are of no use for hatching. Who is responsible, the Express Company or the Customs officer?

2. Has a Customs officer any right to hold a parcel, an invoice being with it?

3. To whom would I put in my claim for damages?

Ontario. SUBSCRIBER.

Ans.—1. Probably the latter, if either.

2. He ought, according to the usual practice, to notify the party with all reasonable promptness.

3. We would suggest that you see, personally, the local Collector of Customs.

MILK FEVER.

I have a sow that gave birth to fifteen pigs. When the pigs were thirty-six hours old the sow was taken with milk fever and was sick for three days, and had no milk for her pigs. I called in a veterinarian, and, with careful treatment, have her well again. I fed the pigs by hand, and after three days the milk came back, and she is now feeding her pigs all right. If I keep her to have pigs again, is there any danger of her getting milk fever again? SUBSCRIBER.

Ans.—Milk fever is not a stated disease of the sow. We have not known of a case of a sow with anything like the symptoms of so-called milk fever in cows. The sow may have had a fever which checked the flow of milk, possibly caused by overfeeding or constipation. Seeing that her milk came again all right, we think there would be very little risk in keeping her to breed again if she is given ample exercise during the period of pregnancy and is fed laxative food when near to parturition.

KICKING COLT.

Have a colt four years old; a blood. Had her hitched a year ago this spring, drove her in harness, and she kicks just when not expected. A year ago I hitched her in the cutter, and a portion of the harness broke and she kicked, and on one or two occasions since she has kicked, once in the cart and again in the harness.

AN OLD SUBSCRIBER.

Ans.—Your colt would probably get over her habit of kicking when in harness if she were driven regularly. Judging from what you say, she has been hitched only occasionally, and is still somewhat nervous in harness. It is wise when young, active horses are put in shafts to use a kicking strap for some time; that is, a strong strap over the hind quarters, fastened down at each side to shafts, but so as not to interfere with free movement.

A correspondent in the February 3rd issue of "The Farmer's Advocate" describes a contrivance to stop a horse from kicking in harness, which he says is effective. "Tie a steel ring securely to the top of the bridle, having it directly over the horse's poll; tie another similarly to the crupper, about four inches back of the highest point of the rump. Get two pieces of quarter- or half-inch rope, each piece about 12 feet long. Tie one end of each piece to the bit-ring, one on each side, carry the ropes through the ring at the top of the bridle; run through each of the rings on the back band, then both through one ring on the crupper. Now pass each rope down and tie to the shaft or crossbar, but so that the horse can move without causing ropes to jerk on the bit. When he tries to kick, he will be surprised." This might be tried where kicking is persistent and vicious, but persistence in gentler methods is generally better and usually succeed.

SOWING ALFALFA.

I have a field to sow to alfalfa, and would like to know:

1. What time of year is the best time to sow?

2. Should I sow any other grain with it, or just sow the seed alone?

3. Should the seed be covered shallow or deep? M. R.

Ans.—1. Positive conclusions as to the best time of year for sowing alfalfa seed in Canada have not been reached, but spring seeding is in most favor. Early in May is a very good time.

2. On the question of sowing alone or with a nurse crop, opinions differ also. A bushel of barley to the acre will not hinder the catch much, will help to keep down weeds, and will insure some return the year of seeding down.

3. Sowing seed in front of drills, the land being afterwards rolled and harrowed, gives sufficient depth, if ground is fine and moderately moist.

RED WATER-BREEDING FOUR-YEAR-OLD MARE.

1. Cow, twelve years old, not in calf, having red water for at least nine months, refuses now food of any kind. A few days ago, large quantities of blood, thick and clotted, passed from her; now the urine is of a very dark red, or nearly black, and scanty.

2. Are there any objections to breed a mare aged four? Will the colt, as a rule, be as strong and healthy when the mare is that age as if older? She had a foal alive and smart this spring. S. G. F.

Ans.—It is to be feared that the cow has got beyond the stage when she can be helped by treatment. For this trouble, a drench of 1 ounce tincture of iron in a pint of water, three times daily, is recommended, the cow to be kept quiet, and given rich, easily-digested food. Some authorities believe that red water is a blood disease, communicated by ticks, and that much more depends on nursing and good food, than on administration of medicine.

2. There are no objections whatever to breeding a mare at the age of four years. No fear of the colt lacking strength.

AMOUNT AND COST OF MATERIAL FOR SPRAYING.

Where could I get commercial lime-sulphur (and about how much would I need for 600 apple trees, 20 years old); about what would it cost per barrel? H. C. R.

Ans.—Two Canadian firms have been advertising concentrated commercial lime-sulphur in "The Farmer's Advocate" more or less regularly for months back. Look up the advertising columns. The quantity required will depend upon the number of applications. By the time you see this, it will probably be too late to secure material and spray before the blossom buds open. If so, your first application will be just after the petals fall. For this, the lime-sulphur should be diluted about 35 times; that is, one barrel of the concentrated wash, will make 36 barrels of spray. Now, this application should be very thorough, especially on the trees which have bloomed. One barrel of the dilute mixture should not be expected to cover more than ten trees, or possibly not more than eight. Thus, you will need from 60 to 75 barrels of spray mixture, to make which you will need in the neighborhood of two barrels of concentrated solution. This will probably be quoted to you at around \$8 per barrel, f. o. b. shipping point. Freight may amount to nearly \$2 per barrel to your station. If so, the cost of material laid down will be about \$20 for two barrels. For the next spray, ten days or two weeks after the first, a little less material will be required, as the trees need not be so thoroughly drenched. It should, accordingly, be mixed a little stronger, say 1 to 30. With the lime-sulphur, use lead arsenate as poison, two pounds to the barrel of dilute lime-sulphur. Order from the same firms. Do not use Paris green with lime-sulphur.

CEMENT QUERY—STICKY INCUBATOR CHICKS.

1. How many yards would one bag of cement make mixed 1 to 8?

2. What is the cause of a gluey substance forming in incubator eggs? Sometimes it dries over where a chick has pipped the shell and kills it.

OLD READER.

Ans.—1. A bag of cement contains one cubic foot. In mixing with gravel, the cement goes into the interstices of gravel and does not increase its bulk. Mixed 1 to 8, the quantity of concrete from one bag of cement would thus be eight cubic feet, loose, or seven cubic feet packed. If spread out to a thickness of two inches it would cover, approximately, $4\frac{1}{2}$ square yards.

2. There is more or less of this sticky substance in every egg when the chick comes out. It is the heavy part of the white, or albumen. An excess of it is often caused by lack of vitality in the germ, or by overheating or underheating in the incubator.

GOSSIP.

AN ENGLISH JERSEY SALE.

At a sale of Jersey cattle, from the herd of Lady de Rothschild, of Aston, Clinton, England, recently, 50 head sold for an average of \$215. The yearling English-bred bull, Combination, sold for \$1,155, and the cow, Lady Phyllis, his dam, sold for \$1,075. Both were bought to remain in England.

SALE DATES CLAIMED.

May 3rd.—T. L. Pardo & Son, Cedar Springs, Ont.; Shorthorns.

June 7th.—At Guelph, Harry Smith and others; Shorthorns.

June 8th.—E. Jeffs & Son, Bond Head, Ont.; Shorthorns.

June 15th.—R. H. Reid & Sons, Pine River, Ont.; Shorthorns.

An event of importance in the Shorthorn world was the recent sale of a selection from the famous Maiseyhampton herd of J. T. Hobbs, Gloucestershire, England. The family of Hobbs have bred pedigreed Shorthorns for 65 years, and Bates blood rules in the herd, which is noted for the milking capacity of the cows. Although buyers were present in large numbers, there were no outstanding prices realized, though the average was fairly good. The best price of the sale was 96 guineas, paid by S. Dennis, for the red yearling bull, Hampton Thistle. Forty-seven lots were sold at an average of £43.

The Roller Towel.

Gertrude McKenzie, in Judge.

The latest crusade of Kansas is against the roller towel of fond memory. What has become of a similar movement started last year by the New York Commercial Travellers' Association?

Roll on, thou stiff and dark old towel—roll!

A hundred hands are wiped on thee each day;

Thou hearest mystic records, like a seroll,

And finger prints of all who passed thy way;

And where be those that said thou shouldst not stay?

The New York Travelling Men who bade thee hence,

The Kansas people, who did sternly say,

"Each his own towel-count not the expense?"

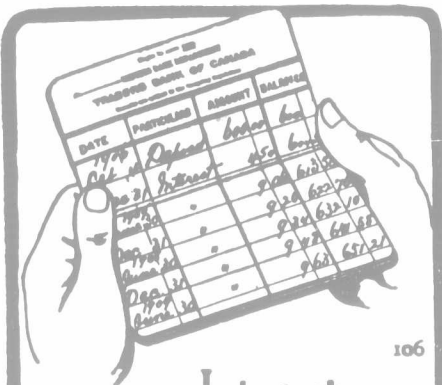
They pass—but thou still rol'st thy length immense!

The usual crowd of small boys was gathered about the entrance of a circus tent in a small town one day, pushing and trying to get a glimpse of the interior. A man standing near watched them for a few moments, then walking up to the ticket-taker he said with an air of authority:

"Let all these boys in, and count them as they pass."

The gateman did as requested, and when the last one had gone he turned and said: "Twenty-eight, sir."

"Good," said the man, smiling as he walked away. "I thought I guessed right."



Interest Accumulates

every hour, day and night, on your deposits in the Savings Bank Department of the Traders Bank. In time the interest amounts to as much as the original savings, thus doubling your saving power.

The money is not tied up either, for you can draw out what you want at any time without delay or bother.

A Bank Pass-Book is a first-class start on the road to independence, if not wealth.

THE TRADERS BANK OF CANADA

Capital and Surplus, \$6,550,000

MARKETS.

Toronto.

LIVE STOCK.

At West Toronto, on Monday, May 2nd, receipts numbered 135 cars. Quality of cattle medium to good; trade slow; butchers' selling slowly at a decline of 25 cents per cwt., for common to medium cattle; prime picked cattle firm; four yearlings sold at \$8 and one at \$7.25; loads of good, \$7 to \$7.25; medium to good, \$6.25 to \$6.75; common to medium, \$5.50 to \$6; milkers, firm, at \$4 to \$7; veal calves, easier, at \$3 to \$6.50 per cwt. Sheep—Ewes, \$6 to \$7; rams, \$5 to \$6 per cwt; yearling lambs, \$8 to \$9 per cwt.; spring lambs, \$4 to \$7 each. Hogs—\$9 per cwt., fed and watered, and \$8.75 to \$8.75, f. o. b. cars.

REVIEW OF LAST WEEK'S MARKET.
The total receipts of live stock at the City and Union Stock-yards last week were as follows:

	City.	Union.	Total.
Cars	220	181	401
Cattle	3,449	3,519	6,968
Hogs	3,267	1,585	4,852
Sheep	645	172	817
Calves	1,116	183	1,299
Horses	28	81	109

The total receipts for the corresponding week of last year at the two yards were:

	City.	Union.	Total.
Cars	157	61	221
Cattle	2,567	856	3,422
Hogs	3,572	1,265	4,837
Sheep	540	89	629
Calves	655	179	834
Horses	1	126	127

The above figures show a total increase of live stock at the two yards of 180 cars; 3,546 cattle, 15 hogs, 188 sheep, 465 calves; but a decrease of 18 horses.

Receipts of live stock at the City and Union Stock-yards last week were moderately large. The quality of fat cattle

was generally good. The demand for heavy steers, no matter how good, was not as strong as for the previous week, and prices for these were, on an average, from 15c. to 25c. per cwt. lower, although the best two loads, comprising 40 cattle, sold at \$7.60. Light cattle, well finished, were higher than at any previous market, selling at 10c. to 15c. per cwt. higher. Receipts of export cattle were heavy enough to give the buyers the advantage, and, of course, they used that advantage to a certain degree. At the close of the week there was an easier feeling pervading the market, not only for exporters, but butchers' also, and should there be a heavy delivery next week, prices would likely be lower.

Exporters.—The Swift Co. bought 200 steers for London market, 1,200 to 1,250 lbs. each, at \$6.85 to \$7.60; 45 export heifers for London, 1,000 to 1,100 lbs. each, at \$6.75 to \$7; 150 steers for Liverpool, 1,150 to 1,200 lbs. each, at \$6.75 to \$7.25; export bulls sold at \$5.25 to \$6.35.

Geo. Campbell bought for Morris & Co., 400 Liverpool and Manchester cattle, 1,050 to 1,300 lbs., at \$6.50 to \$7.25.

The S. & S. Co. bought 67 exporters, at \$7.15 to \$7.35 per cwt.

Butchers.—Prime picked butchers' sold at \$7.25 to \$7.50; loads of good, \$7 to \$7.25; medium, \$6.25 to \$6.75; common, \$5.50 to \$6; cows, \$1.50 to \$6.25 per cwt.

Stockers and Feeders.—A few loads of short-keep feeders were bought at \$6.25 to \$6.90, weighing 1,000 to 1,100 lbs. each; steers, 500 to 900 lbs., sold at \$4.50 to \$5.75.

Milkers and Springers.—All week the demand was strong for good to choice cows, and all of that kind sold readily, at a little higher price. Most of the supply went to Montreal and Quebec. A few selected cows sold at \$70, and one extra-large Holstein springer at \$90, and the bulk of medium to good at \$40 to \$65 each. The butchers are taking most of the backward springers for killing purposes.

Veal Calves.—Receipts were large, with prices about \$1 per cwt. lower. Prices ranged from \$3 to \$7 for the bulk, but a few of the better class sold at \$7.50. There is a broad outlet for veal on account of the high price of mutton.

Sheep and Lambs.—Receipts were light; sheep firm. Ewes, \$6.50 to \$7.25 per cwt.; yearlings, \$8 to \$9.50 per cwt.; rams, \$5 to \$6 per cwt.; spring lambs, \$5 to \$8 each.

Hogs.—Packers started out at the beginning of the week at \$8.90 for selects, fed and watered at the market, and \$8.65, f. o. b. cars, at country points; but few hogs were bought at these prices. At the close of the week, \$9, for hogs fed and watered, and \$8.75, f. o. b. cars, were the prices paid.

Horses.—This being show week at the Armouries, trade was reported light at all the sale stables. Mr. Smith, of the Union Horse Exchange, reports light receipts, not enough to supply the demand. Mr. Smith stated that he had received orders for several car lots of work horses for the Northwest, but did not know where to get the horses to fill them, as farmers refuse to set a price on their horses until the rush of spring work is over. Prices remain firm at out last quotations.

BREADSTUFFS.

Wheat.—No. 2 white or mixed winter wheat sold at \$1.05 to \$1.06. Manitoba—No. 1 northern, \$1.05; No. 2 northern, \$1.04; at lake ports. Rye—No. 2, 67c. to 68c. Peas—No. 2, 75c. to 76c. Buckwheat, No. 2, 51c. Barley—No. 2, 52c. to 53c.; No. 3X, 51c.; No. 3, 47c., outside. Oats—No. 2, 36c., at points outside. Corn—Kiln-dried, No. 3 yellow, 67c.; Canadian corn, 60c. to 61c., Toronto freights. Flour—Ninety per cent. patents, Ontario, for export, \$4 to \$4.05, in buyers' bags, outside. Manitoba flour—Quotations at Toronto are: First patents, \$5.70; second patents, \$5.20; strong bakers', \$5.

HAY AND MILLEFEED.

Hay.—Baled, in car lots, at Toronto, No. 1, \$15 to \$15.50; No. 2, \$14 to \$14.50. Straw.—Baled, in car lots, at Toronto, \$7.50 to \$8. Bran.—Car lots, in sacks, at Toronto, \$22 to \$22.50 per ton, shorts, \$1 more.

HIDES AND WOOL.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 11c.; No. 2 inspected steers and cows, 10c.; No. 3 inspected steers, cows and bulls, 9c.; country hides, 10c. to 10c.; calf skins, 13c. to 15c.; horse hides, No. 1, \$3.00; horse hair, per lb., 32c.; tallow, per lb., 5c. to 6c.; sheep skins, 90c. to \$1.10 each. Wool and raw-fur prices given on request.

COUNTRY PRODUCE.

Butter.—Supplies still continue to be light; that is, of choice quality. Prices are very firm, as follows: Creamery pound rolls, 32c. to 33c., and Locust Hill brand, 34c.; separator dairy, 28c. to 29c.; store lots, 2c. to 27c.

Honey.—Market unchanged. Extracted, 10c.; combs, per dozen sections, \$2.25 to \$3.

Eggs.—Receipts have been very large, with a strong demand, at 21c. to 22c. for case lots.

Beans.—Receipts moderate, but equal to demand, with prices unchanged. Hand-picked, \$2.15 to \$2.20; primes, \$2 to \$2.10.

Potatoes.—Ontario potatoes are plentiful and cheap, at 30c. to 35c., f. o. b. cars at Toronto, and New Brunswick Delawares, 43c. to 45c.

Poultry.—Receipts continue to be light. Turkeys, 18c. to 23c.; fowl, 15c. to 17c. Spring chickens, weighing from three to four pounds per pair, sold on the farmer's market April 23rd, at 55c. to 60c. per lb.

FRUITS AND VEGETABLES.

The Toronto market is flooded with apples, which are generally of poor quality, selling at whatever the dealers can get offered for them. Choice Spies are worth \$3 to \$3.50, but not many of these to be had; No. 2 Spies, \$2 to \$2.50 per barrel; other varieties sell from \$1 to \$2 per barrel; onions, per bag, \$1.35 to \$1.60; carrots, per bag, 50c. to 60c.; parsnips, per bag, 50c. to 60c.; beets, per bag, 65c.; cabbage, per barrel, \$1.75 to \$2.50.

Montreal.

Live Stock.—The price of cattle continued last week to advance on the local market, quotations being higher than ever experienced before in the history of the trade. Ontario steers were selling at 8c. per lb., live weight, this being higher than used to be paid for fancy Christmas beef. It would seem that the demand from American exporters for Ontario beef, together with the strength of the English market for cattle, is largely responsible for the strength of the local market during the past month or so. Choice steers sold at 7c. to 8c. per lb., fine being 7c., good 6c. to 7c., medium being 5c. to 6c., and common down to 4c. to 5c. Small meats, also, were firm in tone. There were very few old sheep on the market, and prices for these were from 5c. to 5c. per lb., while spring lambs ranged all the way from \$1 to \$9, according to size. There were quite a few calves on the market; these sold at \$3 to \$6 for common, and \$7 to \$11 for best. Hogs were the only weak item on the list. The price of these declined somewhat, owing to increased deliveries. Sales of selects were made at around 10c. per lb., weighed off cars, some being fractionally higher and some rather lower.

Horses.—Dealers report great difficulty in obtaining supplies. Demand, however, is comparatively light. Heavy draft, 1,500 to 1,700 lbs., \$250 to \$325 each; light draft, 1,400 to 1,500 lbs., \$200 to \$250 each; light horses, 1,000 to 1,100 lbs., \$100 to \$175 each; inferior, broken-down animals, \$50 to \$100 each.

Dressed Hogs.—Abattoir-dressed, selects, sold at 13c. to 14c. per lb. The general provision market is holding about steady, and demand is very fair.

Potatoes.—Green Mountain stock is costing 37c. to 40c. per 90 lbs., car lots, store, selling at 38c. to 45c. Demand only fair. Some are quoting the market 5c. to 10c. higher than the above figures.

Apples.—Market steady at previous prices. At auction, apples have been selling as follows, in good-sized lots: No. 2 Spies are \$2 to \$2.50 per barrel, and No. 3 are \$1.75 to \$2.10. Ben Davis and Baldwins are \$1.75 to \$2 for No. 2, and \$1.50 to \$1.60 for No. 3.

Eggs.—Straight stock last week was costing in the vicinity of 18c. to 19c. per dozen, in the country, and selling here at about 21c. to 22c., according to quantity, while No. 1 stock was about 21c., and even less. Packing is going forward actively.

Butter.—Little offering, save fresh-made creamery. Old stock seems to be pretty well out of the market, and dealers say that there are little or no dairy butter or rolls offering. New creamery ranged from 30c. to 31c. per lb. Prices were expected to ease off this week.

Cheese.—Nothing doing in local market as yet, but ideas on country boards have been around 12c., shading down to 11c. at end of week.

Grain.—Market for oats was decidedly easier last week. Prices, store, car lots, were as follows: No. 2 Ontario white, 39c. to 39c.; No. 3, one cent less, and No. 4 yet a cent less. No. 2 Canadian Western, 40c. to 41c., and No. 3 one cent less. No. 3 barley, 56c.; No. 4, 55c., and feed barley, 54c.

Flour.—\$5.60 per barrel, for Manitoba first patents; \$5.10 for seconds, and \$4.90 for strong bakers'. Ontario winter patents, \$5.40 to \$5.50, and straight rollers, \$5 to \$5.15.

Feed.—Ontario bran still quoted at \$20.50 to \$21 per ton, in car lots, middlings being \$22 to \$23, pure grain meal being \$32 to \$33, and mixed \$25 to \$28. Manitoba bran \$21 per ton, and shorts \$21 to \$22. Cotton-seed meal selling at \$35 to \$40 per ton.

Hay.—Prices were lower, at \$14.50 to \$15 per ton for No. 1 hay; \$18.50 to \$14 for No. 2 extra; \$12 to \$12.50 for No. 2 hay; \$11 to \$11.50 for clover mixed, and \$10 to \$11 for clover.

Seeds.—Dealers report a good demand, at steady prices, being \$17.50 to \$19 per 100 lbs. for red clover; \$13 to \$17 for alsike, and \$5.25 to \$7.25 for timothy. Alfalfa, 23c. to 25c. per lb.

Hides.—Market unchanged. Dealers paying 10c. per lb. for uninspected hides, 10c., 11c. and 12c. per lb., respectively, for Nos. 3, 2 and 1 country hides, and 1c. over this for city hides. Sheep skins, \$1 to \$1.25; lambs skins, 10c. each; horse hides, \$1.75 to \$2.50 each.

Chicago.

Cattle.—Steers, \$6.25 to \$8.50; cows, \$4.85 to \$7.25; heifers, \$4.25 to \$7.50; bulls, \$5 to \$6.75; calves, \$3 to \$8.00; stockers and feeders, \$4.75 to \$7. Hogs.—Choice heavy, \$9.55 to \$9.65; butchers', \$9.50 to \$9.60; light, mixed, \$9.30 to \$9.50; choice, light, \$9.45 to \$9.55; packing, \$9.40 to \$9.55; pigs, \$9.10 to \$9.30; bulk of sales, \$9.50 to \$9.60.

Sheep and Lambs.—Sheep, \$7 to \$8.15; lambs, \$8.10 to \$9.50; spring lambs, \$10 to \$15; yearlings, \$8.10 to \$8.40.

Buffalo.

Cattle.—Prime steers, \$8 to \$8.40. Veals.—\$6 to \$9.25. Hogs.—Heavy and mixed, \$10 to \$10.10; Yorkers, \$9.90 to \$10.10; pigs, \$9.85 to \$9.90; roughs, \$9 to \$9.05; stags, \$7.50 to \$8.25; dairies, \$9.85 to \$10. Sheep and Lambs.—Sheep, mixed, \$4 to \$7.50; yearlings, \$7.75 to \$8.25; lambs, \$7.25 to \$8.90.

Cheese Markets.

Belleville, Ont., 11c., 11 7-16c. and 11c. Winchester, Ont., 11c. Stirling, Ont., 11 3-16c. and 11c.; Picton, Ont., 11 5-16c.; Cornwall, Ont., 11 5-16c.; Iroquois, Ont., 11c.

British Cattle Markets.

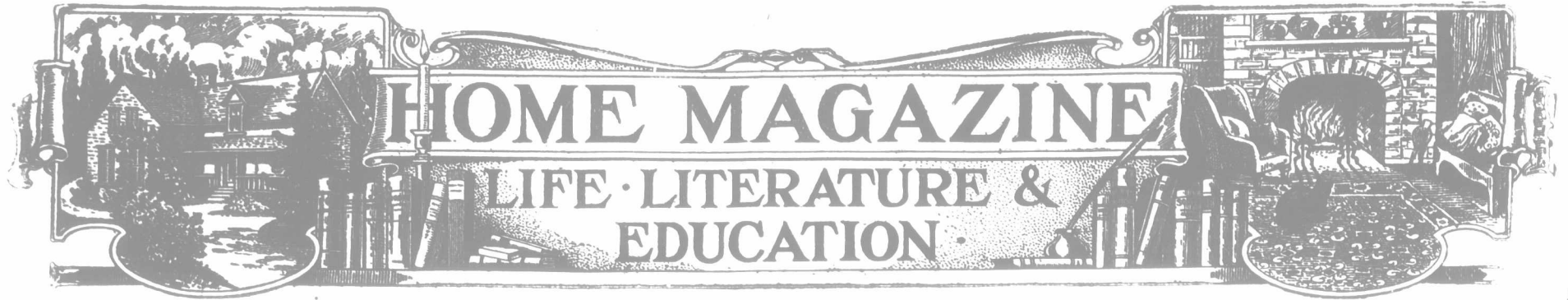
London and Liverpool cables quoted live cattle (American) 14c. to 15c., dressed weight; refrigerator beef, 11c. to 11c. per pound.

TRADE TOPIC.

WHEN PLANNING YOUR SUMMER OUTING

Bear in mind that the Grand Trunk is the "popular tourist route" to Muskoka, Lake of Bays, Temagami, Algonquin Park, Georgian Bay, Kawartha Lakes, Magnetawan River, etc. A variety of fresh-water voyages are also offered at attractive rates.

Full information from Grand Trunk Agents, or address J. B. McDonald, District Passenger Agent, Toronto, Ont.



Men of To-day.



Winston Spencer Churchill.

President of the British Board of Trade.

Chas. E. Hughes, Governor of New York State, has accepted the nomination of President Taft to an appointment on the United States Supreme Court, as successor to the late Justice Brewer. The nomination does credit to the administration. Than Governor Hughes no man has done more, if as much, for the purification of public life, for moral reform, and the elevation of public ideals in his State, and his advent in the national political field had been long looked for. In the interpretation and administration of law in the highest court of the Republic, his legal acumen, commanding influence and common sense will assuredly make itself felt in the interests of the people, as against undue corporate or other sinister influences.

The Ghetto women of New York succeeded recently in closing the Kosher butcher shops, as a protest against high prices. Armed with bottles of kerosene, bands of women and children descended upon such shops as dared to open, wrecked the furniture, beat the proprietors, and drenched the stock with oil.

In many cases, it is asserted, the retail butchers are in sympathy with the boycotters, but declare themselves powerless to hold the prices down when the Beef Trust decides to force them up. Representatives of the Beef Trust declare that present prices are due to a shortage of animals, and that still higher prices are inevitable; but the excuse is contested. Mr. Charles Brown, an ex-dealer, asserts that the big packers alone are responsible for the high price of meat, and that they deceive the Government as to the facts by paying high prices to a few favored cattle dealers, to whom the Government representatives are referred for substantiation of the Beef Trust's claims. Other dealers, he states, are paid less than half for their cattle.

Some Hints from an Excellent Gardening Manual.

Prof. L. H. Bailey's new book, "Manual of Gardening," is not a showy book, but it is seldom that so much information is packed into 526 pages. It treats of flowers, vegetables, fruits, lawns, landscape gardening, giving all necessary information as to culture, etc.

Starting out with the postulate, "A person will get from a garden what he puts into it," the writer proceeds to demonstrate by results, and to present his theories, giving good reasons therefor.

Taking first the lawn and garden: "Planting," he says, "should not be meaningless. Every yard should be a picture," the season of summer beauty being extended by planting things that bloom early in spring and late in fall. He would not, however, resort to flowers alone for the attractiveness of the home. Appealing to nature, he shows that masses of trees and shrubbery planted in an effective way must be chiefly depended upon for the "home" atmosphere. He would exercise great care in the choosing of trees and bushes, giving wide berth to those with freak or grotesque growths and colorings—"abnormal foliage"—and fixing upon those which harmonize best with the general landscape, and retain their beauty throughout the summer: "The value of plants may lie in foliage and form, rather than in bloom."

The arrangement or disposition of the trees and plants is far more important than the kinds—"Flowers are transitory, but foliage and plant forms are abiding." Then he goes on to show the effects that may be obtained by making use of the opportunities at our very doors: "Wild bushes are nearly always attractive in form and habit, when planted in borders and groups. . . . In most home grounds in the country the body of the planting may be very effectively composed of bushes taken from the adjacent woods and fields. The masses may then be enlivened by the addition, here and there, of cultivated bushes, and the planting of flowers and herbs about the borders."

Of grotesque forms he would be chary. Even the Lombardy, if in stiff rows, comes in for his disapproval. "A row of Lombardies along a roadside is like a row of exclamation points. But the Lombardy can often be used to good effect as one factor in a group of trees, where its spire-like shape, towering above the surrounding foliage, may lend a spirited charm to the landscape. It combines well in such groups if it stands in visual nearness to chimneys or other tall, formal objects. Then it gives a sort of architectural finish and spirit."

In general, his plan for home grounds is that which has always been advocated in these pages: masses of trees as a background for the house; shrubbery to conceal the foundations; an open lawn space in

front, with trees and shrubbery in irregular borders or "bays" on each side; possibly a single tree or two on the lawn for shade; flowers among the shrubbery, in clumps or corners, or in a separate garden by themselves to side or rear; vines for coziness, at the veranda, and to conceal ugly fences or walls. Above all things, the lawn must not be "spotted" by trees or bushes or flower-beds. "The easiest way to spoil a good lawn is to put a flower-bed in it."

He warns against too much pruning for bushes: "The pruning knife is the most inveterate enemy of shrubbery"—and he makes fun enough of "sheared" trees. The natural way is, as a rule, best. "I must hasten to say that I have not the slightest objection to the shearing of trees. The only trouble is in calling the practice art, and in putting the trees where people must see them. . . . Some persons like painted stones, others iron bulldogs, in the front yard, and the word "welcome" worked into the door-mat, and others like barbered trees. So long as these likes are purely personal, it would seem to be in better taste to put such curiosities in the back yard, where the owner may admire them without molestation."

When pruning is absolutely necessary, as it sometimes evidently is, he calls attention to the following facts: (1) The spring-blooming, woody plants usually produce their flowers from buds perfected the fall before, and remaining dormant over winter. . . . The proper time to prune such plants (unless one intends to reduce or thin the bloom) is just after the flowering season. (2) The summer-blooming woody plants usually produce their flowers on shoots that grow early in the same season. . . . Pruning in winter or early spring to secure new, strong shoots is, therefore, the proper procedure in these cases."

Occasionally, rather severe pruning is resorted to to secure excellence of flower or fruit, that is, when the gracefulness of form of the plant is of little account. In such cases even annual plants may often be pruned to advantage. "This is true of tomatoes, from which the superfluous or crowding shoots may be removed, especially if the land is so rich that they grow very luxuriantly; sometimes they are trained to a stem, and most of the side shoots are taken away as they appear."

A useful hint when planting seeds is the following: "Land may be prevented from baking over the seeds by scattering a very thin layer of fine litter, as chaff, or sifted moss or mold over the row." When transplanting, "It is nearly always advisable to remove some of the foliage, particularly if the plant has several leaves, and if it has not been grown in a pot. With the foliage all left on, the plants are likely to wilt."

He notes the necessity of a sufficient variety of garden tools to make work easy, rapid, and effective, among these, particularly, hoes with points, tools that scratch the surface, hand-weeders, and spuds with a brace on for the foot.

The above quotations will give some idea of the comprehensiveness of Professor Bailey's book. In conclusion, we may say that the writer is The Professor Bailey of Cornell, well known as an authority in floriculture and horticulture.

The Windrow.

During the recent eruption of Mount Etna, a cinematograph concern was busily engaged in taking pictures. Moving pictures of this kind are instructive, and it is to be hoped they will be shown in Canada.

The sowing of poppy seed is now prohibited in many of the Provinces of China.

The Right Rev. Michael Fallon, D. D., was consecrated, with imposing ceremonial, as Bishop of London (Ont.) last week.

It is said that Col. Roosevelt is to be paid at the rate of a dollar a word for his stories of the African Jungle.

Magazines and civic boards in the United States are undertaking a campaign against the promiscuous use of fireworks and firecrackers on the 4th of July. During last year's celebrations, 171 children lost one or more fingers by accident, and 215 boys and girls were killed.

Some Comet Incidents.—"Hannibal committed suicide on account of a comet. So did Mithridates. So did Louis Tomas, a wealthy owner, of Hungary, only a few weeks ago. . . . King Louis the Debonair, of France, died from fear of a comet. So did Louise of Savoy, mother of Francis I. of France. Emperor Charles V. was so moved by the appearance of a comet in 1556 that he gave up his imperial crown, and became a monk."—Edwin Emerson's Comet Lore. And yet the world has gone on as usual.

Some keen observers think the adulation ex-President Roosevelt is receiving on his tour through Europe is due to a general belief, in higher places, that he will again be elected President of the United States. He will visit London last, and will set sail for New York on June 10th.

The trackless trolley is now in operation for passengers and freight in various parts of Germany, France and Holland.

The Isthmian Canal Commission is sending to New York about 100,000 tons of old junk, locomotives, dump cars, tanks, barges, boilers, etc., left on the Isthmus of Panama by the French when they abandoned their attempt to construct a canal across the isthmus some twenty-five years ago. Part of the supplies and equipment, amounting to \$1,000,000, have been used in the present work.

On the opening evening of a picture exhibition, recently given by the "Independent Artists" of New York, a crowd stood for hours struggling for admittance. The aim of the exhibition was to provide "an independent means for the expression of individuality and of the spirit of the people of to-day."

Rev. Father Louis Conrady is dying of leprosy among the lepers, near Canton, China, to whom he went as a missionary. He was Father Damien's companion for a year in Hawaii, and after the latter's death continued his work for seven years. A year ago he bought an island in the Canton River, transported to it 500 lepers, and built them shelters. He was physician, nurse, attendant, priest and executive head for the colony.

Hope's Quiet Hour.

Climbing Higher.

Look round you in the world and you will see that everything is either climbing higher or falling back. The trees in the orchard drop their beautiful blossoms without fretting over the loss, because they are busy bringing the fruit to perfection. Plants send out the first tiny shoots bravely and hopefully, pushing on and up,—first the blade, then the ear, then the full corn in the ear. Even then, the change still goes on—a change which may look like a retrograde movement, but is really upward still. The seed, which has taken so long to develop, gives up its life and climbs higher in the sacrifice, whether it fall into the ground and die—bringing forth much fruit—or is eaten by man—reaching up in his flesh to new heights.

Have you been keeping all the Commandments from your youth up—like the rich young ruler who asked Christ his next duty? Is it easy for you to stand on the height of Christian attainment that you have reached by past struggling? Then climb higher! To stand still is to fail. The farmer is pleased with the look of his crops when each separate plant is gathering nourishment from earth and air, from sunshine and from rain, and is building everything into the fibre of its being. And God can only be pleased with us when we are growing—gaining more and more life, the eternal life, which is knowledge of Himself.

Perhaps your days are already full of unselfish service, and you hardly see any opportunity of doing more than you already are shouldering. This preaching about the necessity of constant improvement may seem a stern and impossible order. But God, very probably, is not saying to you, "Work harder!" Perhaps He may be telling you to be less occupied in everyday work, so that you may have leisure to think about Him, to speak to Him, to listen to Him—to grow in His likeness, to help others in their climbing.

There is plenty of room for growth in the best of lives. How careless and hurried our prayers are, how worldliness—business, pleasure, or the ambition to get ahead of other people—crowds out the very remembrance of God! When you lie down at night, feeling that you have accomplished a lot of hard work during the day, don't be too self-satisfied about it. Have you grown spiritually? Have you seen the face of God more clearly, walked with Him more joyously and trustfully, been a channel of communication between Him and His other children. If God sees that we are no farther advanced in the spiritual life than we were last year, can He be pleased? We must press nearer to Him, trust Him more deeply, obey Him more eagerly, climbing from strength to strength. We must gather spiritual strength and nourishment from pleasure and work, from pain and perplexity, from sunshiny seasons and days of storm.

Don't get discouraged at your failures. God is very patient when He sees that souls are determined to make progress. Of course He is patient—He is growing the most priceless thing in creation, and all eternity is ahead for development towards perfection. But we can't climb without real effort, and to stand still is always to fall back. Are we finding it easy to be Christians? Then let us be more intense, making the service of God our great business. He may not ask us to do any different work than we are already doing; but we certainly can consecrate that work more and more. The room may be swept for Christ's sake, and then the simple act will no longer be commonplace (as Herbert says), but will be a glorious act of service—an act which angels might desire to do for their King.

Let us never be satisfied with second-best service, but try harder and harder to offer to God golden days, set with shining hours. So many of our gifts are spoiled by selfishness. We try to win praise for ourselves, we want to be considered unselfish, and try to cover the unworthy motive by an appearance of consideration for others. Or we plod through the day's work, knowing it has to be done, but missing the glory and gladness of it, because the Presence of God is forgotten.

We can never expect to make satisfactory progress unless we take from God's hand the help He offers. He says He will give the Holy Spirit—the Lord and Giver of Life—to those who ask earnestly. Are we so conscious of our weakness, and so eager to climb, that we pray with resolute desire for the Life of God to fill us with power?

Our Lord says that He will dwell in those who eat His flesh and drink His blood, and will give them eternal life—the life which is increasing knowledge of God. Are you trying to struggle on without the help given in the Lord's Supper? Are you so strong and so good that you can climb alone, refusing His offered hand? Judging from the number of people who crowd out of the churches when Christ says: "Do this in remembrance of Me!" it would seem as though many of His professed disciples cared little to obey His command, or accept His offered strength. If this has been your habit in the past, will you not form a new and better habit now? We are climbing towards perfection—commanded to be perfect as our Father—and we need all the help available. We need not only God with us, but God in us.

"Like a snowy mountain peak above us,
"Be ye perfect" dazzles our dim eyes.
Canst Thou look from Thy pure height
and love us?
May our earth-clogged feet to Thee
arise?
We before the Vision veil our faces,
Yet would have it not a ray less bright;
Shine into our sin's dark hiding places,
Flood our lives with Thy transfiguring
light."

DORA FARNCOMB.

Editor "Quiet Hour":

Dear Hope,—If this is not too lengthy, will you please insert? E. F. S.
Rightly dividing the word of truth,
2 Tim., 2: 15.

The Christian reader may always find comfort and blessing in the Bible, but how much more is received when there is a clear understanding of the divisions of it. Then can be seen the different

My Dear Hope,—How we do all enjoy the beautiful words of counsel which we receive from you each week.

Enclosed I am sending you two short original poems, which I should be very pleased to see in print.

May God still continue to bless you in your mission of love is the fervent prayer of
M. L. Y.

One of the enclosed poems is especially suitable for Easter, and will be held over—this is the second one written by our correspondent:

"Come Unto Me."

Stop, ye maddened throng of people,
Listen to the words of love,
"Come to me all ye that labour"—
Says our Saviour from above.
Why will ye force your own destruction,
Why continue in your sin,
Since your Heavenly Saviour loves you,
Come to earth your soul to win?
Know ye not how He has suffered,
Toiled and bled and died for thee,
That thy sins might be forgiven
By thy faith in Calvary's tree?
Sinner, why delay you longer?
Yield to Him this very night,
He will cast away all darkness,
Clothe you now in spotless white.
Come! my sister; come! my brother;
There is danger while you roam,
Come and join with His disciples,
Share with us the heavenly home.
M. L. Y.

The Beaver Circle.

[All children in second part and second books, will write for the Junior Beavers' Department. Those in third and fourth books, also those who have left school, or are in High School, between the ages of 11 and 15, inclusive, will write for Senior Beavers'. Kindly state book at school, or age, if you have left school, in each letter sent to the Beaver Circle.]

Competition: Gardening.

The prizes in the Senior Beavers' section go to John Cusick, Vernon Augustine, Laura Barber, Milton Charlton.



A Little Beaver.

Madeline Driscoll, Brinston, Ont., and her dog, "Dixie."

prophecies fulfilled and yet to be, and the line of truth presented in each book. God's governmental dealings, also the different resurrections, and judgments, the time and place of each, and to whom they apply; all this and very much more will be noted by the careful reader. We thank God for the Bible, for those who have made deep and prayerful study of it. By the aid of the Holy Spirit, they have brought forth from its rich mines, precious things, new and old, imparting them to others, both by oral and written ministry. One of these publications, entitled, "From Genesis to Revelations," by S. Bidout, is indeed very helpful, and can be obtained at Home Friend Office, 150 Yonge street, Toronto.

I read a small pamphlet, some years ago, entitled, "Will the Old Book Stand?" I have forgotten the author and from whence it came. If any of the readers of "The Farmer's Advocate" know of it, will they kindly make known where it can be obtained? E. F. S.

Honor Roll.—Marjorie McLean, Margaret Stafford, Luella Killough, Margaret Campbell, Winna Harper, Lottie Howey, Zilpha Adams, Annie Roes.

Two essays arrived too late for consideration.

Two of the Junior Beavers (Book II.) wrote on "Gardening" also, which was the wrong subject for them. We will, however, publish their nice little letters later; also announce Junior Beavers' prizes.

Gardening.

(Prize Essay.)

Gardening, to my mind, is like many other things, it can be done in so many different ways. I never had a garden of my own. I have done quite a lot at gardening, but it always seemed to be my task to do the digging and the hoeing.

I think that every girl and boy should have for her or his own, some part of

the garden, if obtainable, and all the children in the family should have it as a contest for some prize. That is, they should try who could keep the cleanest and the prettiest; not only for the sake of the prize, but it teaches the children to be careful and tidy, and to do their work right. They will also learn to know vegetables and flowers from weeds, and not do as I did one time, hoe out squashes for burdocks.

If I were having a vegetable garden of my own, I would have it one-half a rod wide by one rod long. I would have it plowed or dug in the fall, as the fall plowing is better than the spring plowing. I would plant my tomatoes the first week in March in a box, put a woollen cloth over it, and set it in a warm place, and as soon as they sprout the cloth should be removed.

I would have the rows running crosswise so as to have the different kinds separate, and the rows on the flat. In spring, when the ground gets good and dry, I would make a mulch of about three inches all over it, mark off the plot in rows to suit its length, twenty-three inches apart.

I would have two rows of tomatoes, one-third of a row of lettuce and the remainder of the row in carrots, one row of multiplier unions and one row of Dutch sets. For cucumbers, I would dig holes one foot from the edge, and another three feet from the edge, and the same in two rows, making four hills in all, about six inches deep, fill them with manure to about two inches from the top, and then level it up with earth. Then I would plant the seed above this. I have seen cucumbers grown upwards of ten inches long from such planting. In the other end of the same two rows I would plant citrons, after the same fashion as the cucumbers. In the last row I would plant it half with beets and half with radishes.

As for pumpkins and squashes, I think that they can be grown to greater advantage among the corn in the field.

Of course, this is only a small plot for a young gardener to practice on. So much for the vegetable garden; I will give my ideas of a flower garden.

I will not wait to give my system for a flower garden as I did a vegetable garden, for it can be done a great many ways, too. If the house is not too far from the road, I would put a row of flowers on each side of the road for teams, but if there is a footpath to the road, I would prefer it rowed with flowers, and let each one of the family have a section to look after. If it be too far to the road, a garden could be made, and each one could have a part of it.

Early in the spring, as soon as the snow is off the ground, a hotbed could be made. Drive four stakes in the ground and enclose the space with boards about a foot high, then cover it with glass of some kind, storm windows are generally the handiest for that. Lettuce, radish, and other such vegetables, can be grown very quickly in such a place. Flowers, too, can be grown very early in spring. The earth in such a place should be well manured and well delved before planting.

But the parents should be "boss" of these, as it were, especially the hotbeds, for children differ widely in ideas. Girls and boys should all take the old schoolmaster's advice, "Boys, while you are young is the time to learn."

JOHN CUSICK (age 16.)

Huron Co., Ont.

How I Made My First Garden.

(Prize Essay.)

Last year I decided to have a garden of my own, so I got my father to give me the use of an eighth of an acre of land. He had sent away for some commercial fertilizer, and I bought enough from him to cover my garden, which cost about two dollars.

After the ground was plowed, harrowed, rolled, and harrowed again, I hand-raked it all over, making it nice and level.

I sowed part in onion seeds, and on the rest I sowed peas, cabbage, beets, tomatoes, and planted cucumbers and popcorn. I sowed the onion seed with a garden drill, at the rate of three pounds to the acre. When the vegetables were up about two inches above the ground, I took a weeder and weeded and thinned them. My father had a

hand cultivator which I borrowed to cultivate them with. I cultivated them once every two weeks to loosen the ground and let in the warmth and sunlight.

I planted my cucumbers in raised drills, which is better than when they are planted in hills.

As the tomatoes grow very thick, I planted them four feet each way, and the cabbage two feet. The popcorn I planted from four to five kernels in a hill, with the hills two and a half feet apart.

The onions had to be weeded three times, and when in a weedy place they need to be weeded four times, which I did after I came home from school, and on Saturdays.

My father owns a large berry patch, and when he went to market, I would pick my peas and go along. I sold my peas for ten cents a quart. The popcorn I kept to pop on stormy winter nights. The cabbage I sold for five cents a head, and the cucumbers for ten cents a dozen. My beets I stored in the cellar till about the middle of winter, and then sold them at fifty cents a bushel. The onions brought a dollar a bushel.

Out of part of the proceeds I bought a new suit of clothes and purchased a ticket to accompany my father on a trip to the Horticultural Show, Toronto. I am putting in another garden this year.

VERNON C. AUGUSTINE.
(Age 11, Book IV.)

Aughrim, Ont.

A School Garden.
(Prize Essay.)

Dear Puck,—On seeing that the next competition in our dear Circle was on a garden, I felt compelled to write, as I have had so many opportunities of having a garden at school.

My first garden was given me when I was in the Second book. It was a small plot about two by four feet. Of course, this plot had been spaded for us, as we were not able to do such heavy work.

The first thing we did was to use our hands, or a weeder, to break up all the lumps of earth, then take our hoes and rakes and put the plots in a good shape. The paths between the plots were now to be considered and attended, while the older boys were stretching lines for us to put in our seed by. By the line, about six inches from the lower end of the plot, we took our hoes and made a trench about three-quarters of an inch deep, and in this trench placed some lettuce seed, then lightly covered it with earth. About twelve inches from that we proceeded in the same manner to put in a row of onions. The rest of this small plot was occupied by a row of carrots, one of beets, and a row of nasturtiums at the head. Now, these were not yet completed; they had to be watered during the dry weather, and also weeded all through summer.

In the fall, our class took up our vegetables, topped and cleaned them, then sold them and used the money to buy books for our library.

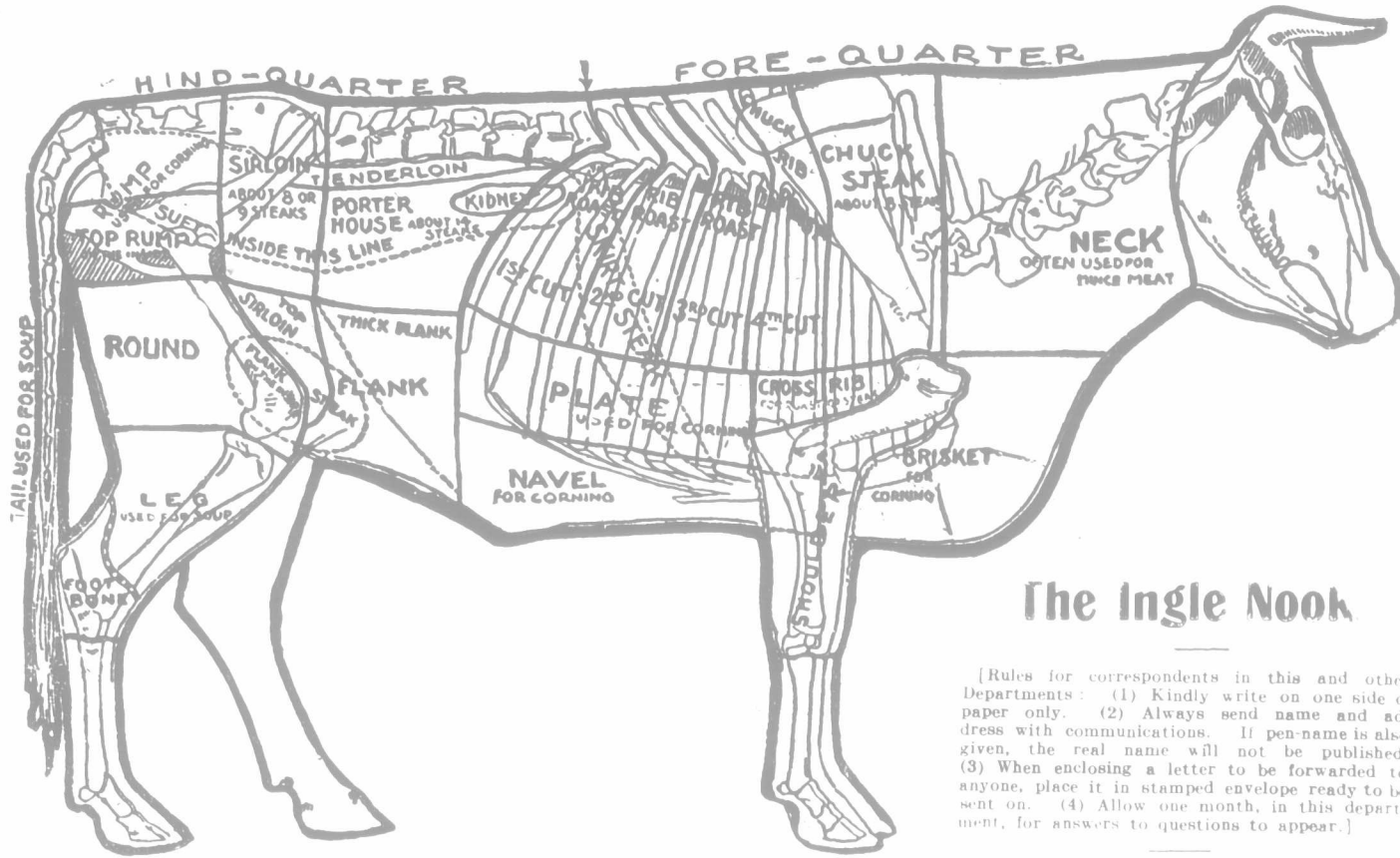
Besides each one having a separate plot, each class had a large plot in which to plant flowers.

The next year, as we were promoted into a higher class, we had larger plots, about six by three feet. We proceeded in the same way as we had done the last (only we had to learn how to spade it ourselves), to prepare and sow our gardens. These plots consisted of a row of portulaca at the head, followed by two rows of carrots, one of beets, one of parsnips, one of onions, and, lastly, one of lettuce.

When we passed into the Fourth Class, we had still larger plots, about four by ten feet. This time we had a portion, about one and one-half by four feet, set apart for flowers, in which we sowed aster and gladioli seed, in any design we wished. The rest contained two rows of carrots, one of salsify, two of beets, two of onions, one of turnips, and one of lettuce.

By these descriptions, you see we have had lettuce at the lower end, in each case our idea being to have a row of green as an edging.

After finishing the seeding, we all anxiously watched for the first appearance of the little shoots. Soon we saw, to our satisfaction, the little green sprouts popping their heads out of the earth. Later on we watched these little sprouts form-



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.]

Chart, Showing Cuts of Beef.

Cut this out, paste it on pasteboard, and hang it in your kitchen. It is valuable.

Economical Use of Meat in the Home.

The importance of meat as a source of protein (essential for the construction and maintenance of the body), and fat (useful as a heat and energy producer), has been noted often enough in these columns to render repetition at this time superfluous. To those who have been interested in the subject, however,—we trust they have not been few,—the following table from a bulletin (No. 391) recently issued by the United States Department of Agriculture will prove not only interesting, but suggestive:

AVERAGE COMPOSITION OF CUTS OF MEAT.

Kind of Meat.	Fuel Value				
	Water, Per cent.	Protein, Per cent.	Fat, Per cent.	Ash, Per cent.	Calories, per lb.
Beef—					
Brisket	54.6	15.8	28.5	0.9	1,495
Chuck rib	66.8	19.0	13.4	1.0	920
Flank	59.3	19.6	21.1	.9	1,255
Porterhouse	60.0	21.9	20.4	1.0	1,270
Neck	66.3	20.7	12.7	1.0	920
Ribs	57.0	17.8	24.6	.9	1,370
Round	67.8	20.9	10.6	1.1	835
Shank	70.3	21.4	8.1	.9	740
Side	62.2	18.8	18.8	.9	1,145
Veal—					
Side with kidney fat and tallow	71.3	24.2	8.1	1.0	715
Mutton—					
Side without tallow	53.6	16.2	29.8	.8	1,560
Lamb—					
Side without tallow	58.2	17.6	23.1	1.1	1,390
Pork—					
Tenderloin	66.5	18.9	13.0	1.0	900
Chops	50.7	16.4	32.0	.9	1,655

It will be noted that the difference between the cuts is chiefly due to the varying amount of fat, with consequent difference in fuel value. So far as proteins, a very important part of food, are concerned, very little difference is found. From this, it appears that in this respect brisket is almost as nourishing as porterhouse steak. The difference in price, however, is considerable; hence the housekeeper who wishes to economize in money, without diminishing in the nutriment supplied, has her cue.

Quoting from the bulletin: "The portion of cooked meat which may be referred to as an ordinary 'helping,' three to five ounces, may be considered to contain some 19 to 29 grams of protein. An egg or a glass of milk contains about 8 grams more, so the housekeeper who gives each adult member of the family a helping of meat each day, and eggs, milk, or cheese, together with the puddings or other dishes which contain eggs and milk, can feel sure that she is supplying suffi-

sun will not spoil them. If you plant your garden at the first opportunity, you will have young potatoes very early.

Racks should be made for the flowers to climb upon, and where they look very beautiful.

When the vegetables are gathered, you will have much satisfaction in showing your skill and work to your friends. Although it is very interesting, it cannot be done without some work, so let us quietly go to work and try our skill at gardening.

MILTON S. CHARLTON,
Springfield, Ont.

Married Courting.

The man who imagines that after marriage his wife will be satisfied to take his love for granted, does not know women.

Before marriage he never wearies of reiterating his love. The woman lives in an atmosphere of petting and praise, an atmosphere that all human beings take very kindly to.

Then, after marriage, he, practical and un sentimental, would like to settle into a life of routine, where love is taken for granted.

But the poor little wife has become used to being made much of, and misses it cruelly.

She does not expect that her husband should be always assuring her of his undying devotion, of course, but she would like him to go back just once in a while to the dear old days of courting.

She would like her new gown to be praised, and when she tires herself out in getting up a nice dinner she would like to know that her efforts were appreciated.

He can still say pretty things to other girls if the opportunity arises, so why leave out the girl who loves him best of all?

Not many of us have the happy knack of making pretty loving speeches to the ones we love, and yet we all know how pleasant it is to hear them ourselves.

Sometimes, when it is too late, we feel we would give anything on earth to be able to tell our dear ones how much we loved them.

The thing to do is to think of that row, and to let no opportunity of assuring them of our love and appreciation pass by.

Love is the thing that most of all needs encouraging and fostering.

The least neglect blights it. It cannot thrive on silence.

Treat it with reverence and gentleness, and it will tarry long, but neglect and treat it harshly, and it will open its wings and fly away. Selected

ing into small green leaves, which rapidly grew into strong and sturdy protectors for the plant. From the center of a little cluster of flower leaves, we soon observed the little bud emerging its head, soon to become a beautiful flower. We also took great delight in watching the different stages of the formation of the vegetables.

This year, as I am now in the Continuation Class, I will have to help to attend to the kitchen gardens, instead of having a separate plot. These gardens are to grow vegetables such as carrots, onions, lettuce, etc., and also potatoes and tomatoes for use in our domestic-science lessons.

Hoping I am not taking up too much room in this precious Circle, I remain,
LAURA BARBER,
(Continuation Class.)
Paisley Road, Guelph.

Still Another Garden.

(Prize Essay.)

To make a garden, we must first find a convenient piece of ground. A good clay loam is fine for a garden spot. The ground should not be too rich, and not sheltered by trees. The garden will be a great place of interest if it is not too big, because some boys would not like to do the necessary work to have a good garden.

Let us find a plot of ground about 20x40 feet, and, if it has been plowed, it can be worked with a shovel or a fork. When it is well worked, a line should be procured for a guide to make the rows straight. Half the plot should be used for beds, and the other half for rows. Beds should be about 4 x 5 feet, and one foot apart; the rows about two feet apart and plants two feet apart.

In the beds we will plant onions, lettuce and flowers, or any plant we wish. Two plots should be left for flowers. In the rows, plant potatoes, cabbage and tomatoes. The potatoes should be cut so that there are about four sprouts in a hill. The onion seed and lettuce seed should be in rows about one foot apart. When they have all been planted, they should be watered. Now, do not hoe around the plots until you can see the plants very plainly, because you might cut off the plants and leave the weeds. After they are hoed they may be watered by pouring on the water, not dashing it.

When the tomatoes are about one foot high, a stake should be driven down and the plant tied to it. This should be done every six inches until the plant is about three feet high. In this way, sometimes blossoms are found at the top and ripe tomatoes at the bottom. The potatoes should be watched and all bugs knocked off. They should be kept almost covered with dirt, so that the

cient protein, for the remainder necessary will be supplied by bread, cereals, and other vegetable food." The total amount of protein needed each day is, by the way, usually estimated at 100 grams, or 3 1/2 ounces.

In reckoning the food value of any material, digestibility must, of course, be considered; a food rich in nutritive qualities is not, clearly, of much use, if the digestive organs cannot make use of it. Investigation has been made with meats in this respect, and it has been shown that there is practically no difference between the various cuts of meat, if properly prepared, in regard to digestibility. The difference in preparation is chiefly this, that the cheaper cuts must, as a rule, be slowly cooked, and for a long time. A porterhouse steak, for instance, is at its best when fried quickly, and with just a suspicion of rareness, over a hot fire; round steak, on the other hand, is likely to be better if seared on both sides and slowly simmered in a very little water, closely covered, for about three hours. Cheap cuts are, in fact, just as nutritious and just as palatable as the more expensive ones, provided you know how to cook them.

In estimating the real value of cuts of meat, allowance must, of course, be made for bone. By a process of reasoning, which it is not necessary to follow out here, the bulletin estimates that when porterhouse steak sells for 25 cents a pound, round steak at 15 cents, and chuck ribs 10 cents, the relative prices of the edible portions would really be 28 1/2 cents for porterhouse, 16 1/2 for round, and 22 cents for chuck ribs. Round steak would, therefore, give the most value for the money, even more than chuck ribs at only 10 cents per lb.

These are details which the housewife must look out for. In doing so, the following table may be of use to her:

Kind of Meat.	Bone or Waste In Cut.	Edible Material In Cut.	Assumed Market Price.	Net Price per Pound of Edible Portion.
	Per cent.	Per cent.	Cents.	Cents.
Beef—				
Brisket.....	23.3	76.7	7.0	9.0
Rump.....	19.0	81.0	10.0	12.5
Flank.....	5.5	94.5	7.0	7.5
Chuck rib.....	53.8	46.2	10.0	22.0
Porterhouse.....	12.7	87.3	20.0	23.0
Neck.....	31.2	68.8	7.0	10.0
Ribs.....	20.1	79.9	15.0	20.0
Round.....	8.5	91.5	15.0	16.0
Shin.....	38.3	61.7	3.0	5.0
Heart.....	5.9	94.1	5.0	5.3
Tongue.....	26.5	73.5	22.0	29.8
Veal—				
Cutlets.....	3.4	96.6	20.0	21.0
Breast.....	24.5	75.5	12.5	17.0
Mutton—				
Leg.....	17.7	82.3	15.0	18.0
Chops.....	14.8	85.2	15.0	17.5
Fore quarter.....	21.2	78.8	12.5	20.0
Pork—				
Loin.....	19.3	80.7	15.0	20.0
Salt pork.....	8.1	91.9	12.5	13.0
Bacon.....	8.7	91.3	20.0	22.0
Ham.....	12.2	87.8	20.0	23.0

It will be noted by the chart that the tenderest cuts are those in the upper portions of the body, which are not moved as the animal goes about. The tougher cuts are all lower down. They may be converted to tenderness by long and slow cooking in water, the outside having first been seared in a very hot oven, or hot pan on the stove, or by boiling water, to keep the juice in. Sometimes a tough steak is soaked in olive oil, a rather expensive process, which, however, adds to the nutritive qualities, as olive oil is itself a valuable food. A tough piece of meat may also be softened by soaking it in vinegar and water, although the vinegar may slightly retard digestion.

(To be continued.)

Some Ways of Cooking the Cheaper Cuts.

Flank Steak.—Have the dealer peel off the fat and outer tissues, and cut the surface of the meat diagonally in both directions. Lay the steak on a board spread over it a thin layer of bread

dressing, roll up very compactly and sew the side and ends up. Cut one or two slices of fat pork or bacon in bits, and let cook until the fat is out; dredge the roll of meat with flour and rub it in thoroughly, then brown it in the fat on all sides. Set the meat in a dish that can be tightly closed; put in, also, an onion sliced very thin, half a carrot cut in thin slices, and a cup of canned or stewed tomatoes. Rinse the frying-pan with a cup of boiling water, turn this also into the dish, cover, and let cook, three hours or longer, in the oven, in a very moderate heat. When cooked, put the roll on a platter, thicken the gravy with two tablespoons flour, and pour over the roll. Set boiled onions around the dish. The roll may also be sliced cold.

Dressing for Above.—1 large cup soft bread crumbs seasoned with salt, and herbs to taste. Add also a chili pepper and a slice of onion chopped fine, and one-fourth cup melted butter or bacon-fat.

Hamburg Roast (to be made from pieces of flank, bits of round, neck, or any scraps of the cheaper portions).—For four or five people, 2 lbs. is enough. Put the meat, two branches parsley, a slice of onion, and a piece of red or green pepper, through the food-chopper. Add one-fourth cup bread crumbs which have been soaked in cold water and squeezed dry, one egg beaten light, and salt to season. Mix all together and press into a compact roll. Set in a baking-pan and put a slice of fat salt pork above. Put into a hot oven, and after ten minutes reduce the heat. Baste often with the fat in the pan. Cook from 30 to 40 minutes. Serve with brown gravy or tomato sauce.

Hungarian Dish.—Cut 2 lbs. meat from the chuck ribs or neck near the chuck ribs, into inch cubes. Put these into a granite dish, pour over them two tablespoons vinegar and let stand an hour or two. Heat two tablespoons beef dripping in a pan, add two tablespoons chopped onion, and cook until yellow. Add the meat, 1/4 teaspoon each of caraway seed and sweet marjoram (these may be omitted), and cover, close. Let simmer slowly for an hour. Thicken with a tablespoon flour blended in a little cold water. Let all simmer until the meat is tender, then add salt, paprika or pepper, and 1/2 cup cream.

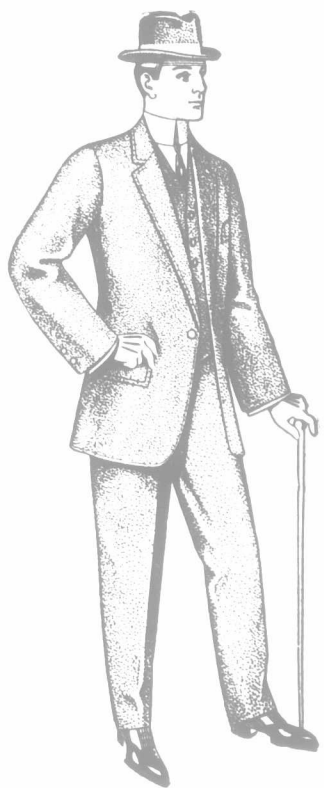
Beef Curry.—Cut two pounds of neck, chuck ribs, flank, or round, into two-inch bits. Mix four tablespoons flour with one teaspoon curry powder, in this roll the meat. Cook an onion, sliced thin, in 1/2 cup beef drippings until well browned, then skim out the onion and cook the meat in the fat until browned on both sides. Put the meat in an earthen dish, return the onion to the frying-pan, add a pint boiling water and stir until smooth, then strain over the meat. Cover the dish tightly and let cook in a very moderate oven five or six hours. Before serving add salt, a tablespoon vinegar or lemon juice, and two tablespoons fruit jelly. Serve with boiled rice. (In summer, this dish may be made on ironing day, and reheated for use.)

Beef and Macaroni.—Cook one cup macaroni, in inch lengths, in boiling salted water until tender, drain, rinse in cold water and drain again. In the meanwhile cook one pint canned tomatoes, 1/2 cup sliced onion, and 1/2 teaspoon salt until the onion is tender. Stir 1 lb. finely-chopped beef in a very hot frying-pan until it turns brown, then add the macaroni, 1/2 cup marrow or butter beaten to a cream, 1/2 cup grated cheese, herbs if liked, and the hot tomato and onion. Toss the whole with a fork and spoon until well mixed, then serve at once. (Boston Cooking School.)

For the Woman Who Must Economize.

Not only by exercising care in the selection and making of clothes can economy be exercised, but also in the care taken of them afterwards. Everyone knows the girl or woman who never looks just right, chiefly because her clothes have not been put on properly, or have not been kept with that attention to cleanliness, pressing, etc., that makes them "put their best foot foremost" as long as they are wearable, sometimes almost doubling the length of their natural (?) life.

Spots should be removed as soon as



PAQUET GUARANTEED CLOTHES

The Tangible Result of a Growing Demand

THE increasing demand for perfect-fitting clothes, at a reasonable price, is responsible for the introduction of PAQUET Guaranteed CLOTHES. Heretofore, the main features in Men's Clothes have been STYLE and QUALITY. If a man wanted STYLE at a reasonable price, he was forced to accept low-grade materials—if he wanted QUALITY, he had to be satisfied with less Style or else pay more money.

The idea back of PAQUET Guaranteed CLOTHES is entirely opposed to both of these old conditions. The first consideration in the making of PAQUET Guaranteed CLOTHES is FIT—the second, QUALITY—the last, STYLE. A Suit or Overcoat, to look well, MUST fit PERFECTLY. The Materials, to give lasting satisfaction, MUST possess QUALITY. The Style, to be suitable, MUST BE FASHIONABLE. Our New System of Clothes Making combines these three essentials. For \$10.00 to \$14.25 we GUARANTEE you \$13.50 to \$20.00 values.

THE SUIT ILLUSTRATED

is made from absolutely PURE WOOL navy or black serge, best Indigo Dye, thoroughly shrunk and absolutely guaranteed to keep its color. The workmanship is unequalled in this Country. The pockets are made according to our special process, and will neither sag nor get out of shape. The real value is \$13.50. Our Special Price, PREPAID to any part of Canada... **\$10**

Sizes 36, to 44 only. Larger sizes, 75c. per size extra.

Write for FREE Style Book

illustrating New York's latest models, and containing samples of the very newest materials certain to be fitted PERFECTLY. Write NOW! Don't put it off until another time—a post card will do—you'll get the Style Book by return mail.



THE GREAT SKIMMING MACHINE

MAGNET CREAM SEPARATOR No. 6

SKIMS 1,000 LBS. AN HOUR.

CHILDREN OPERATE IT.



The MAGNET Cream Separator, 1,000 lbs. an hour, can be operated by children, to take care of the milk of 50 cows.

The Dairy Farmer with large herds has been waiting for this. No need for gasoline or steam engines, and does not even require a man. It has the MAGNET square-gear construction, the large steel bowl, supported at both ends. MAGNET brake, one-piece skimmer, easily cleaned, will skim perfectly as fast as ten can milk.

Made strong and durable to outlast your time and run as well for the next generation.

The MAGNET has six sizes in capacity, all run by the same driving gear and fit the same stand.

F. W. Hodson, Esq., formerly Live Stock Commissioner, says: "I have tested your machines of different sizes, and consider your separator of 1,000 lbs. an hour capacity excels even the others for obvious reasons."

If you have a large herd of cows, write us, and it will not cost you a cent to learn how easily the MAGNET will take care of your milk.

A MAGNET "Sanitary" Strainer on the tank, the only strainer approved of by Dairy Authorities, "MAGNET PATENT."

The MAGNET will not wear out in fifty years.

The Petrie Manufacturing Company, Ltd.

Head Office and Factory: HAMILTON, CANADA.

Winnipeg, Man. St. John, N. B. Calgary, Alta. Regina, Sask. Montreal, Que. Vancouver, B. C.

noticed, and, as they are of divers causes and qualities, a number of cleansers should be kept on hand. A good plan is to paste clippings describing the methods of taking out various spots on a piece of pasteboard, and keep it, with the bottles containing the various "remedies," in a cabinet by themselves.

Gasoline, mixed with salt, and rubbed on a spot with a pad of blotting paper beneath, will usually remove grease, etc., from dark woollen materials. A good rubbing with powdered magnesia will often suffice to remove a similar spot from light-colored silk. Alcohol will remove grass stains. Soap-bark is an excellent cleanser, and there are many other good cleansing preparations sold in drug stores.

When a dress has become so uniformly soiled that cleaning it at home is no longer possible, do not take it for "the house." Send it to a good professional cleaner and it will have a new lease of life. If you understand how to be sufficiently careful with gasoline, however, you may clean "easy dresses," such as those made of voile, crepe de chine, veiling, etc., at home. Brush the gown well and shake all the dust out, then place in a crock, cover with gasoline, and leave overnight in a cool place, preferably out in some shed, or even out of doors. Next day rub out lightly, rinse again, if necessary, in clean gasoline, hang on the line in the open air, not exposed to sunshine, to dry, then press out at leisure. Although the thing has been a thousand times said, it may perhaps be necessary to repeat: Do not use gasoline in a room in which fire or lights are burning. Do not even permit a match to be struck or a lighted cigar brought near it. Open windows of any room in which it has been used, to drive the gas out, and do not rub the material vigorously while washing, lest heat enough be generated by friction to ignite the fluid and thus cause explosion. This precaution is to be especially taken with silk. . . . This method, by the way, will make a rusty voile dress (which has not actually faded) look almost as well as new.

A dress or suit of good quality, but which has become at all faded or shabby, may often be given a new lease of life by dyeing it. Any dye of good standing may often be used quite successfully at home for dresses, if directions are exactly followed, but it is usually much safer to send a suit to a good professional dyer. It is not necessary to rip either coat or skirt when sending, but it is better to remove the buttons. The price charged averages about \$2.75, but this is much less than the price of a new suit.

When making over old material in which old machine-stitching shows badly, wet the stitch marks thoroughly, and let the goods dry, then cover the goods with a wet cloth, steam thoroughly, and press. Old velvet may be made into very good panne velvet by brushing and steaming well, then pressing on the right side. Light chiffon may be cleaned by the use of powdered starch and powdered borax, two parts starch to one of borax. Rub the chiffon well with the mixture and shake well, repeating once or twice. If still at all soiled, fill the chiffon with clean powder and roll it up in a cloth. In a day or two, shake out.

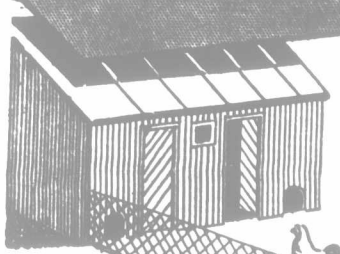
Always have petticoats short enough to escape the mud—the French woman's petticoats hardly fall below the shoe-tops—and do not fail to have boots mended as holes appear. Boots may be worn twice as long if mended and half-soled as necessary.

Often muslins and gingham which have been slightly faded may be restored by a little judicious doctoring. A half-cup of vinegar in the rinsing water will revive many of the delicate tints, such as blue, purple and gray.

To set the color in blue wash goods, soak for two hours before washing in two gallons water in which 1 oz. sugar of lead has been dissolved. For purple, black and lavender, use 2 tablespoons vinegar to 1 quart water; for red, 1 pint salt to 4 gallons water, or 2 ozs. alum to each gallon of water, soaking one hour. When washing a white dress that has become yellow, put a few drops of turpentine into the water and dry in bright sunshine. To freshen up black satin and tulle, sponge with a cupful of strong tea and a teaspoon of ammonia, and press on the wrong side over a dampened cloth.

As a last word in this talk, remember

PAROID ROOFING



OUR OFFER

When you see Paroid on your roof—if it is not satisfactory tell us and we will send you a cheque for the cost of the roofing and the cost of applying it. If any Bird Neponset Product ever proves defective in manufacture we will replace it. If a broader guarantee than this could be made we would make it.

David Harum knew the horse business, but even David himself could never have sold you a horse on his mere say-so. You'd want to see the horse—want positive evidence of his "good points" before you'd pass over a dollar. Good horse-sense too!



Why not use common-sense and caution when it comes to buying roofing? A roof costs money. It takes time and money to apply it whether it is good, bad or indifferent. And a bad or indifferent roof will cost you a lot of money in the long run. You want wear when you want roofing. Wear is told by actual duration—not fanciful claims and slyly-worded guarantees. That's exactly why you should insist on Paroid Roofing.

More than likely your dealer can show you a Paroid Roof, or tell you where you can see one. Send us your name and address and we'll tell you where you can see a Paroid Roof if your dealer can't show you one.

Paroid Roofing is one of the famous Neponset Products. The "Little Girl" Trade Mark is your protection—a guarantee of quality and durability. We will replace any Neponset Product or refund your money if it proves defective in manufacture. Look for the "Little Girl" Trade Mark.

N.B.—Write to our Building Council Department for free information concerning any building problem you may have to solve. Give full particulars and state exact dimensions. Write for samples of Neponset Products and we will give you name and address of your nearest dealer.

F. W. BIRD & SON, 510 Lottridge Street HAMILTON, ONT.
Established in U.S. 1795

Western Branch—123 Bannatyne St. E., Winnipeg. Eastern Branch—144 Union St., St. John, N.B.

2271

"MELOTTE" Cream Separators ALWAYS IN THE LEAD.

1910 Model



Style A—E. Capacities, 280—720 lbs. per hour.
Can be operated entirely by a boy or girl.

Skimming qualities unexcelled.

Sales larger this year than ever.

Satisfaction guaranteed.

If you want a separator, send for a

Melotte

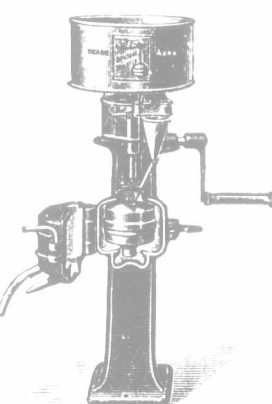
It is

Easy to turn, Easy to wash, Economical and almost everlasting.

Good value and a guarantee go with every "Melotte."
Send for catalogue, testimonials and prices.

R. A. Lister & Co., Ltd.
58-60 Stewart St., Toronto.

1910 Model



Style I—6. Capacities, 400—1,300 lbs. per hour.
Can be driven by hand, belt or jet of steam.

that it is always economy to own a raincoat. Many people do without this very useful article of apparel, and as a consequence run the risk of having clothes ruined, if not health. Besides, a raincoat does not go out of fashion. It may be worn year after year, and may often be made to do duty as a dust-coat, even as a wrap for cold days, if worn over one

of the now fashionable sweaters or golf-coats.

Letter from a Prizewinner.

Dear Bunc Durden,—I suppose a discussion the same as we have in our Institutes will be allowed on the essays "My Vegetable Garden," not, however, in

a spirit of controversy or criticism, but to bring out points that may be beneficial to some. Well, to begin with, I expected some would bring me to task for recommending that seeds should be sown late rather than early, and you mentioned it first thing; but I am pleased also to see that you noted the difference in the climate between this county and the County of Lambton. There is a great difference. At the same time, we can grow seeds early here too, if we go to a lot of trouble, but I was thinking of the average farmer's wife, and not of the market gardener, or the very few who have the time and inclination to go in for such. Lots of my neighbors grow tomato seeds and such in boxes in the house, and have good success, too, but I prefer not to be in too big a hurry and make sure of the main crop, for you know a woman cannot attend to everything. If gardening was our calling and we had no house work it would be different. We have all different notions and inclinations, and some of us take time for one thing and some for another. "The Woman with the Hoe" writes of having her potatoes sprouted in the cellar and planting them out carefully, not to break the sprouts. It is a good way to have early potatoes. In the Old Country, along the banks of the Clyde, that practice is carried on extensively by farmers who grow potatoes for early market. They have numerous numbers of boxes for the purpose, and have the potatoes arranged in them and put in a temperature where they will sprout quickly, shortly after the New Year, and plant them out as early as February and March. I am never in any hurry for a new potato, however. I don't think they are as good for us as the old ones, and I don't think they taste any better on the 12th of July than on the 1st of August. There isn't a sprout yet on the potatoes in our cellar (written April 11th), nor will not be for long enough, and there are heaps of them, and we always keep sufficient to do us till the new ones come, and are never without. We can also keep apples—such as Russet and Ben Davis—till the new ones come, and I have had old beets one week and new ones the next, and cucumbers ditto, and so on. I have known people who never could grow enough of potatoes to do. They would be scarce in the spring, and start at the new ones when they were no bigger than marbles, and when it was a waste to use them, and have them all done before the later ones came on; and they would always be scarce, and with other vegetables the same. I would not

like to
your re

Now,
make
as I su
average
has nei
nor the
as she
below
lect it
advocat
but wa
when t
least f
few w
things,

Another
out pl
shingle
I wait
looks l
drizzly

As yo
throug
of a s
ring of
be wat
someti
Advoca
peating
garden
the hor
ingly,
turned

I into
about
enough,
north
also, t
to wor
Lanksh
the sar
thought
but al
main u
tiful
again
next in
Grey.

1 lb.
some fl
4 teas
mixed
brandy
cream,
well, a
brandy,
remain
cook in
This
cakes.
Lenni

Dear
wife—v
farms,
year v
founda
had an
for us,
This
of gar
age of
and Su
ers, r
three
billy of
which
sides t
plants.
Very
"Wrinkl
love he
Now,
wrinkle
Milk
shallow
pans m
Sauce
should
when v
ment v
some d
Let it
into a
Hash,
sour m
masses
being w
To Re
Shower
the pat
put sal
shower
To S
bound

like to suppose, Dear Dame, that any of your readers were like that.

Now, about seeds. I know how to make a scientific seed-bed all right, but as I said before, I was thinking of the average farmer's wife, who sometimes has neither the time, nor the inclination, nor the experience to go in for such, and as she may get it either too hot from below and have spindly plants, or neglect it and get it chilled, I for one would advocate not to be in too big a hurry, but wait till the growing season comes, when things can grow right along—at least for the general crop. But if a few women want to go in for early things, why let them.

Another thing I never do when I set out plants is to go along and stick up shingles to protect them from the sun. I wait till we have a dull day, when it looks like rain, or when there is a nice drizzly Scotch mist on.

As your other correspondents have said, thorough cultivation is the great secret of a successful garden. Frequent stirring of the soil is better than always to be watering, although water is necessary sometimes. I saw a good skit in "The Advocate" last year, which will bear repeating. The city man said, when his garden needed watering he just turned on the hose, and the farmer repeated, musingly, that was just what they did too, turned on the "hoses."

I intended to have said a little more about seeds, but I think I have said enough, only that my garden rows run north and south, which I think is best; also, that we who are strong and able to work should give a thought to poor Lankshire Lass, who is not able to share the same blessed benefit. I have often thought about her, and intended to write, but always let the good intentions remain unfulfilled. We have had a beautiful spring up here, but have snow again on the 11th of April. Who comes next in this discussion after Grey Co. GRAYBIRD.

Drop Cakes (Good).

1 lb. sugar, ½ lb. butter (or 14 ozs. of some flour), 1 lb. currants, 1½ lbs. flour, 4 teaspoons ammonia (well powdered and mixed in flour), 4 eggs, and 1 gill of brandy or whiskey. Beat butter to cream, add yolks of eggs and sugar, beat well, and add currants, part of flour, brandy, whites of eggs beaten stiff, and remainder of flour. Drop in pan and cook in rather a good oven.

This recipe makes six or seven dozen cakes. MRS. D. W. A. Lennox Co., Ont.

A Budget.

Dear Dame Durden,—I am a busy housewife—very busy, indeed, for we have two farms, with buildings on both. This year we have been putting a cement foundation under the barn, and we have had an "unlawful" dose of men working for us, and they kept me pretty busy.

This year I intend to do a "streak" of gardening, as we are getting a package of all the seeds in Eaton's "Spring and Summer" catalogue, and some flowers, too, as I love flowers. We have three kinds of lilacs, three kinds of roses, lily of the valley, and another plant which I do not know the name of. Besides these, we have about twenty house plants.

Very many thanks to "Jack's Wife," "Wrinkles," and "Dora Farncomb." I love her piece in "The Quiet Hour."

Now, as Wrinkles says, "Just a few wrinkles and I am done."

Milk keeps from souring better in a shallow pan than in a pitcher. Deep pans make an equal amount of cream.

Sauce, plain, and for immediate use, should not be put into a jar and covered when warm, else it will change and ferment very quickly. It will keep for some days with care in the putting up. Let it stand till perfectly cold, then put into a stone jar.

Hash, smoothly plastered down, will sour more readily than if left in broken masses in the chopping bowl, each mass being well exposed to the air.

To Restore from Stroke of Lightning.—Shower with cold water for two hours; if the patient does not show signs of life, put salt in the water, and continue to shower an hour longer.

To Stop Bleeding.—A handful of flour bound on the cut.

Put Your Feet in a Pair at Our Risk! STEEL SHOES

Will Surprise and Delight You With Their Lightness, Neatness and Comfort —Their Almost Unbelievable Durability

We want you to slip your feet into a pair of Steel Shoes—to feel and see and know how much lighter, neater, stronger, more comfortable they are than any other work shoes in existence. Hence we are making this special Free Examination Offer, merely asking a deposit of the price, while you are "sizing up" the shoes. If they fail to convince you immediately you can notify us to send for them at our expense and we will refund your money.

Must Sell Themselves

We ask no favors for Steel Shoes. Compare them with the best all leather work shoes you can find. Give them the most rigid inspection inside and out. Let them tell their own story. It's no sale unless, of your own accord, you decide that you must have them.

Better Than the Best All-Leather Work Shoes

Steel Shoes are the strongest and easiest working shoes made. There's more good wear in one pair of Steel Shoes than in three to six pairs of the best all-leather work shoes. The leather is waterproof. The Steel Soles are wear-proof and rust-resisting. They are lighter than all-leather work shoes. Need no breaking in. Comfortable from the first moment you put them on. Impossible to get out of shape. They keep the feet dry. They retain their flexibility in spite of mud, slush or water. They cure corns and bunions, prevent colds and rheumatism—save doctors' bills and medicines.

Thousands of Farmers Shout Their Praises

The enthusiasm of users knows no bounds. People can't say enough for their comfort, economy, lightness and astonishing durability. The introduction of Steel Shoes in a neighborhood always arouses such interest that an avalanche of orders follows. Here is the way Steel Shoes are made: The uppers are made of a superior quality of leather, as waterproof as leather can be tanned. Wonderfully soft and pliable—never gets stiff! The soles and sides are made out of one piece of special light, thin, springy, rust-resisting Steel. Soles and heels are studded with adjustable Steel Rivets, which prevent the bottoms from wearing out. Rivets easily replaced when partly worn. 60 extra rivets cost only 30 cents and should keep the shoes in good repair for at least two years! No other repairs ever needed! The uppers are tightly joined to the steel by small rivets of rust-resisting metal, so that no water can get between. The soles are lined with soft, springy, comfortable Hair Cushions, which absorb perspiration and odors and add to ease of walking.



FREE!

Send for Book, "The Sole of Steel," or order Steel Shoes on blank below.

Sizes 5 to 12. Black or Tan Color. 6, 9, 12 and 16 inches High

Steel Shoes, 6 inches high, \$2.50 per pair. Steel Shoes, 6 inches high, better grade of leather, \$3.00 per pair. Steel Shoes, 6 inches high, extra grade of leather, black or tan color, \$3.50 per pair. Steel Shoes, 9 inches high, extra grade of leather, black or tan color, \$5.00 per pair. Steel Shoes, 12 inches high, \$5.00 per pair. Steel Shoes, 12 inches high, extra grade of leather, black or tan color, \$5.00 per pair. Steel Shoes, 16 inches high, \$6.00 per pair. Steel Shoes, 16 inches high, extra grade of leather, black or tan color, \$7.00 per pair.

R. M. Ruthstein STEEL SHOE CO., Dept. 439, Toronto, Can. Main Factory, Racine, Wis., U.S.A. Great Britain Factory, Northampton, England

Our Three Great Factories in Racine, Toronto and Northampton, England, Almost Overwhelmed by the World-Wide Demand

The success of Steel Shoes is almost startling. Within three years we have established Steel Shoe factories in Racine, Wis., Toronto, Canada, and Northampton, England. These great factories, running at full capacity, can scarcely keep up with the demand from all over the world. The public is rapidly learning that Steel Shoes are

Good for the Feet! Good for the Health! Good for the Bank Account!

These shoes are better for the feet, better for the health, better for the pocket-book than heavy work shoes or rubber boots.

You Actually Save \$5 to \$10 a Year

by wearing Steel Shoes. Figure it out for yourself. One pair will outlast 3 to 6 pairs of ordinary work shoes. They save all repair bills and keep your feet in perfect condition.

Free Examination


And Your Money Back Promptly If It Looks Better Than the Shoes!

You owe it to yourself to investigate. Get a pair of Steel Shoes for Free Examination by sending the price, which will be returned if you and your own feet are not convinced of their merits.

Why Wait? Send Now!

No risk! No bother! No obligation! Don't hesitate! Act while this offer is open! Simply state size of shoe you wear, enclose the price and get the shoes for Free Examination.

For general field work we strongly recommend our 6-inch high Steel Shoes at \$3.50 per pair or the 9-inch at \$5.00 per pair. For all classes of work requiring high-cut shoes our 12 or 16-inch high Steel Shoes are absolutely indispensable. Shoes can be returned at once if not O. K. and the money will be refunded.



THE PREMIER

CREAM SEPARATOR

Has Captured the Trade

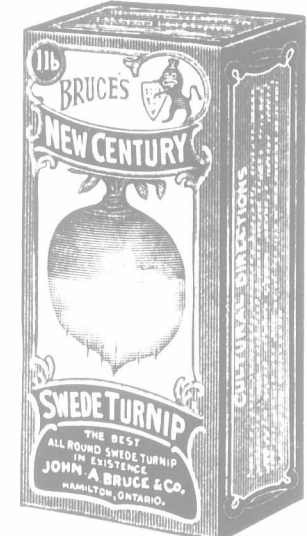
"THE PREMIER" has filled the insistent demand for a CLEAN SKIMMING, SIMPLE and DURABLE SEPARATOR. Wherever you go there are agents to show you The Matchless Simplicity of "THE PREMIER."

There are users to tell you of the close-skimming qualities of "THE PREMIER," the durability of "THE PREMIER," and what "THE PREMIER" HAS SAVED FOR THEM.

Will you let "THE PREMIER" save money for you? Send us the names of four farmers in your district who should have separators, and we will send you a copy of our "Farmer's Complete Bookkeeper," which we have had published and copyrighted at considerable expense.

PREMIER CREAM SEPARATOR CO.,

669 and 671 KING STREET WEST, TORONTO, ONTARIO.



BRUCE'S NEW CENTURY SWEDE TURNIP

SALES season 1901, when first introduced, 16 lbs.; 1906, 4,351 lbs.; 1909, 9,370 lbs. The best all-round variety. It is one of the few Swedes that resist mildew, the best shipping variety, and for cooking purposes cannot be excelled by any other Swede. It is a purple-topped variety, resembling Westbury, of splendid uniform growth, of fine quality, a heavy cropper, and the roots are clean and of handsome shape. In sections where large quantities are grown for the American market, the growers and shippers will have no other. ¼ lb., 17c.; ½ lb., 28c.; 1 lb., 45c.; 4 lbs., \$1.60, postpaid.


Bruce's Mam. Inter. Smooth White Carrot

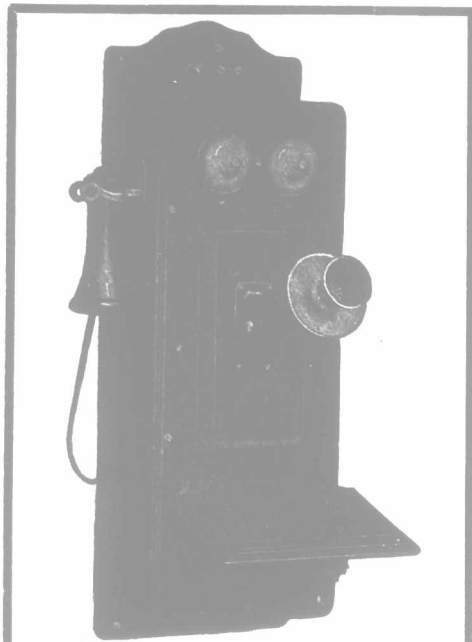
Sales, season 1891 when first introduced, 14 lbs., now 1,352 lbs. The best of all field Carrots, and invaluable for horses. This grand half-long Carrot is of large size, solid, productive, of finest quality, a splendid keeper, and has the advantage of being much more early harvested than the old long varieties. ¼ lb., 12c.; ½ lb., 33c.; 1 lb., 55c., postpaid.

Send for our handsomely illustrated, 104-page Catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc. FREE.

J. A. BRUCE & CO'Y, LTD., HAMILTON, ONT.

Seed Merchants. Established 60 Years.





Independent Telephones.

Have made a record for quality. Why? Because all that was up-to-date and the best experience and ability was utilized to full advantage when we undertook to make telephones for the Canadian Independent Telephone Companies and Associations. We started with up-to-date ideals, established a high standard of quality, and have maintained that standard.

The Result.

The result is that we have now hundreds of companies, associations and municipalities using our telephones, and we are daily securing as new customers those who had been using other makes of telephones. They are changing, not on account of our price, for we maintain our price, because it is essential to quality. They are changing because they have either made a trial of our telephones on their own lines, or have heard the good opinions of others who were using our telephones. It is quality that is winning the business for us.

The Question.

The question for you to decide is whether you are getting the best value in the telephone you are purchasing. You may get a telephone that will cost a dollar or two less, but has not got the standing qualities. It very soon becomes a source of constant expense and trouble to keep it in repair. The question should be decided when you are purchasing, whether you are getting first-class quality in your telephone. It will pay you to make sure of this. This being the fact, we would ask you to write us if you are putting new telephones on your lines, or if you are starting in the business and likely to purchase. We shall be only too glad to discuss the matter with you and submit prices.

Construction Material.

If you are extending your lines, or if you are organizing a company and starting into the business, it will pay you to let us quote you on construction material. We carry a large stock constantly on hand, and make a specialty of prompt shipments. We send out nothing but first-class materials.

Free of Cost.

We shall be pleased to send you a copy of our No. 2 Bulletin if you are about to build a line. It gives you full instructions in regard to construction work. We also will be pleased to send you a copy of our latest book, entitled, "Canada and the Telephone," which contains thirty-two illustrations of the value of the telephone in the rural home. These will be sent free of charge at request. PROMPT SHIPMENTS AND GEAR ENTERED SATISFACTION ARE MAKING OUR SUCCESS.

Canadian Independent Telephone Company, Ltd.,
18-20 Duncan St., Toronto.

Could you tell me how cress is made up, and what is the most popular way of using it; also salsify?

Say, Dame, do you think Canadian women should vote? I do. I think that women have as good heads as men. I know that when I went to school the girls did better work (and far neater, too) than the boys.

I think I had better close, for surely the time's up long ago.

LOUISA MAY.

Huron Co., Ont.

Cress is usually served alone, with salt.

I think the very nicest salsify dish is made as follows: Scrape the roots and slice thin. Put on the stove in a granite kettle with a very little water and boil until tender, adding a few shreds of dried codfish. When tender, drain off the water and cover with the amount of milk required. Let heat, season, and serve in soup-plates, with a rolled cracker on top of each plateful.

Personally, I am not anxious to vote, yet I think women should be permitted to, if they want to, in any country that professes to be "free." It often seems to me that even the men who are voting to-day need, as a rule, a good deal more education on the subject of government than they possess. An English lady, speaking as a suffragist, said: "My coachman has a vote, I have none. Yet the other day when I asked him if he were going to exercise the franchise, he wanted to know if that was the name of the new horse." Such illustrations might be multiplied indefinitely.

"I Will."

Men are standing upon the glittering summits of achievement all about us.

Was it easy for them to climb to the top?

No.

Our great lawyers, physicians, educators, authors, statesmen, ministers, and merchants, went up by a road that was both steep and rough. By years of toil and many sacrifices and utter consecration to the supreme aim of this life, they have lifted themselves out of obscurity and mediocrity. Even those who have reached places of average influence in life have had to pay the price. Circumstances have favored some more than they have favored others. But it was the resolute "I will" which nerved every one of them for the climb.

The young fellow who cannot say "I will" is a predestined failure. There are many such. They greatly covet success. And they have many admirable qualities which would surely aid them in achieving the ambitions of their hearts. But they are irresolute. They lack moral nerve. They shrink from self-denials. A long, steep, rough pathway they will not travel. The price is too great. They will not pay it. Hence they will never rise. Five, ten, twenty years from now you will find them where they are to-day—looking enviously toward the heights where stand the men who resolutely exclaimed, "I will!"—Young People's Weekly.

Contentment.

Give me a lawn that cools my feet,
Close-grown and fresh and soft and clean.

A clump of trees to check the heat,
A flush of roses on the green.

An ancient stream that flows thereby,
With all its thousand smiles displayed,
A hammock swinging not too high,
Well hung with a magic shade;

Three little maids with hair of gold,
Whose laughter scarce disturbs my dream;
A jug of cider icy cold,
A dish of strawberries and cream;

And for a guardian of our ground,
Well tried through many changing years
A fond and faithful little hound,
With bandy legs and sprawling ears

And let the world go ringing past,
Let others range from shore to shore;
These simple pleasures bind me fast,
Give me but these, I ask no more.

—R. C. Lehmann.

The "Farmer's Advocate" Fashions.



DESIGN BY MAY MANTON.

6258 Misses' Semi-Princesse Dress.

Size 14 to 16 years.

To be made of linen, cotton poplin, chambray, gingham, foulard, pongee, cashmere or serge. Yoke of tucked muslin.



6620 One-Piece Night Gown.

14, 16 and 18 years.

For misses and small women.



6549 Misses' Dress.

Price — Evenings, 12, 14 and 16 years.

Misses' Patterns. Give age when ordering. Price ten cents per pattern. Ad dress: Fashion Dept., "The Farmer's Advocate," London, Ont.

Annabel Lee.

It was many and many a year ago,
In a kingdom by the sea,
That a maiden there lived whom you may know

By the name of Annabel Lee;
And this maiden lived with no other thought
Than to love and be loved by me.

I was a child, and she was a child,
In this kingdom by the sea;
But she loved with a love that was more than love—

I and my Annabel Lee;
With a love that the winged seraphs of heaven
Coveted her and me.

And this was the reason that, long ago,
In this kingdom by the sea,
A wind blew out of a cloud, chilling
My beautiful Annabel Lee;
So that her high-born kinsman came
And bore her away from me,
To shut her up in a sepulchre
In this kingdom by the sea.

The angels, not half so happy in heaven,
Went envying her and me—
Yes! that was the reason (as all men know)

In this kingdom by the sea)
That the wind came out of the cloud by night,
Chilling and killing my Annabel Lee.

But our love it was stronger by far than the love

Of those who were older than we—
Of many far wiser than we—
And neither the angels in heaven above,
Nor the demons down under the sea,
Can ever dissever my soul from the soul
Of the beautiful Annabel Lee;

For the moon never beams without bringing
me dreams
Of the beautiful Annabel Lee;

And the stars never rise, but I feel the
bright eyes
Of the beautiful Annabel Lee;

And so, all the night-tide, I lie down by
the side
Of my darling—my darling—my life and
my bride,
In the sepulchre there by the sea,
In her tomb by the sounding sea.

—E. A. Poe.

Our Own.

If I had known in the morning
How wearily all the day,
The words unkind

Would trouble my mind
I said when you went away,
I had been more careful, darling,
Nor given you needless pain,
But we vex our own

With looks and tone
We might never take back again

For though in the quiet evening
You might give the kiss of peace,
Yet well it might be

That never for me
The pain of heart should cease,
How many go forth in the morning
Who never come home at night,
And hearts have broken

From harsh words spoken,
That sorrow can ne'er set right.

We have careful thought for the stranger,
And smile for the sometime guest,
But oft for our own

The bitter tone,
Though we love our own the best,
Ah! lips with the curve impatient;
Ah! brow with the look of scorn,
'Twere a cruel fate

Were the night too late
To undo the work of morn.

—Margaret Sangster.

Talking of jokes, one of the best which has come out of the late British election is that reported from the Holmthir Division of Yorkshire. Here was a three-cornered fight, and the Labor candidate was a peppery and vinegary gentleman named Pickles. "Ep jumps Pickles at a meeting," "We can do without whiskey, men," he cried, "we can do without tobacco, and at a pinch we can even do without beer." "Yes," retorted the inevitable "yeoman," "and at another pinch we can do without Pickles."

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.

ANDALUSIANS, Blue; S. S. Hamburgs; Buff Leghorns, 15 for \$1.25; 30, \$2. Black Minorcas, 15 for \$1; 30, \$1.75; 60, \$2.50. D. McKay, Cowal, Ontario.

BLACK LANGSHANS—Have flesh like turkey and are good layers. Eggs, \$3 a doz. Glenloch Farm, 396 Yonge St., Toronto.

BUFF ORPINGTON EGGS—From three pens specially selected for good laying and table qualities, headed by strong, vigorous males from one of Canada's best pens; 15 for \$1; fifty for \$3. Orders taken for young stock. Edgar Staples, Bright, Ontario.

BARRED ROCKS FOR SALE—Bred from New York prizewinners. My birds won at leading Canadian shows. Eggs, two, three, and five dollars per fifteen. Thos. Andrew, Pickering.

BLACK MINORCAS—S. C., pure-bred, from heavy-laying strains. Eggs in Morgan baskets, one dollar per thirteen. A few cockerels for sale. Oscar Eaman, Wales.

BARRED Rock eggs, safely packed in Morgan baskets, \$1.00 per 15. C. H. Chalmers, Smith's Falls, Ont.

BARRED and White Rock eggs, \$1 per 15; \$4 per 100. S. L. Jayne, Grafton, Ont.

BUFF Orpington eggs that hatch; nine chicks guaranteed. Four special pens, \$3 setting. Splendid utility stock, extra heavy layers, \$1 setting. Illustrated catalogue free. Hugh A. Scott, Caledonia, Ont.

BARRED Rock Eggs—From grand matings. Write for mating list. W. W. Dods, Alton, Ontario.

CANADA'S best Anconas. Winter layers. Very profitable. Free circulars. Tells all about Anconas and Leghorns. Edmund Carlyle Apps, Box 224, Vice-President International Ancona Club, Brantford, Ontario.

EGGS FOR HATCHING—From heavy-laying strain of pure-bred Black Minorcas. One dollar for thirteen. Ed. Haecker, Beachville, Ontario.

EGGS from pure Indian Runner ducks, 10c each. Single-Comb Rhode Island Reds, \$1 per 15. Frank Bainard, Glanworth, Ont.

EGGS at \$1.50 per 15, shipped in special egg baskets, from the following varieties: Rose and Single Comb White, Single-Comb Black Leghorns; also Black Columbia and White Wyandottes. Mention this paper. A. & P. Read, 236 Paisley St., Guelph, Ontario.

EGGS—Barred Rock, Buff Orpington. Best laying strains, \$1.00 per setting; \$4.00 per 100. Wilbur Bennett, Box 938, Peterboro.

MY BIRDS won over five hundred first prizes at eleven shows. Barred and White Rocks, White and Brown Leghorns, Black and Spangled Hamburgs, Buff Orpingtons, Black Javas, White-crested Black Polands, White and Silver-necked Wyandottes, Rose and Single-Comb R. I. Reds; Blue Andalusians; two pens of each breed; No. 1, \$2.00; No. 2, \$1.00, per 15 eggs. Black Orpingtons, Houdans, Light Brahmas, Partridge and Buff Cochins, Silver Pencilled and Columbia Wyandottes, Buff Rocks, Anconas, Golden Sobright Bantams; one pen only; \$2.00 for fifteen eggs. F. W. Krouse, Guelph, Ontario.

PURE-BRED Barred Rocks and Buff Leghorns, good color, excellent layers; \$1.00 per 15. William Facey, Tavistock, Ont.

RHODE Island Reds, Rose-Comb; bred eleven years from carefully-selected heavy winter layers of large brown eggs. Fifteen eggs, \$1.50. Satisfaction guaranteed. Jno. Tinscombe, Meriton, Ont.

RHODE ISLAND RED EGGS—One and two dollars a setting. "Ontario," "Western," "London Show" and "Dorset" winners. Circular free. Red Feather Yards, London, Canada.

RHODE Island Reds—Rose-Comb. Best general-purpose fowl in the market. Eggs for hatching from imported heavy-laying strain. Two dollars for fifteen from number one pen; one fifty from number two. B. Colwell, Box 617, Cooksville, Ont.

S. C. W. LEGHORNS—Prize-winning and great laying stock. Eggs, \$1.00 per 15. A hatch guaranteed. Geo. D. Fletcher, Birkham P.O., Ontario.

SLAYER-LACED WYANDOTTES—Eggs for hatching, one dollar for thirteen. Geo. S. Harris, Lynden, Ontario.

SINGLE-COMB Black Minorcas—Stock and eggs for sale. Ontario winners and great layers. Satisfaction guaranteed. For particulars, write: H. Dunlop, Thornton, Ont.

TWO fine White Wyandotte Cocks, four old, bred from best Canadian strains, set for sale. For quick sale, \$2.50 each. Good cooking pair. Single Comb White Bantams, first set, \$1.50. H. T. Ferguson, Kilmorie, Ont.

WHITE WYANDOTTES—Exclusively, standard shape, vigorous layers. Eggs, \$1 per 15. W. W. Meredith, Caledonia, Ontario.

WHITE Wyandottes Exclusively—Bred for heavy eggs production and standard points. Eggs, \$1.00 per 15. Good hatch guaranteed. Thos. F. Pirie, Banner, Ont.

WANTED—A few private farmers to ship me Poultry, Eggs, Dairy Butter, Syrup, and all other farm produce. Will pay highest market price. W. J. Falle, Prince Albert Ave., Westmount, Montreal.

WHITE Wyandottes (Martin and Russell strain), Rose-Comb, Rhode Island Reds. Eggs, fifteen, \$1.25; thirty, \$2.00. Hatch guaranteed. A. & D. McTavish, Chesley, Ont.

WHITE Wyandotte Eggs—From choice matings, \$1.50 per 30 in Morgan crates. W. A. Bryant, Cairngorm, Ont.

WHITE ROCK eggs at \$1.50 per setting; R.C. Rhode Island Red eggs at \$2; also some choice cockerels of both breeds for sale. Howard Smith, Winona, Ontario.

Pleasant Valley Farm offers WHITE WYANDOTTE EGGS for hatching from 2 pens of grand winter layers. Large white birds. \$1.00 and \$1.50 per 15, \$4.00 and \$5.00 per 100. G. AMOS & SONS, Moffat, Ont.

Imported Indian Runner Ducks A few choice Indian Runner Ducks and Drakes for sale. The original fawn and white strain, and very select. Also eggs for setting. Prices on application. H. B. HARRISON, Importer and Breeder, Ridgeway, Ont.

SPRING BANK FARM Offers S. C. Brown Leghorn eggs at \$1 per 15, \$4 per 100. Excellent layers from prizewinning strain. Satisfaction guaranteed. Wm. Barnett & Sons, Fergus P. O., Ont.

A Prayer Upon First Awakening.

The night is gone. O Son of Righteousness, Arise, and fill with light this soul of mine. Dispel all gloom; with Thy rich presence bless, And with Thy peace divine.

Thro' all the hours of this new day, dear Lord, Be ever near, to comfort, guide, defend. And prove Thyself, according to Thy Word, An ever-present friend.

What can I do for Thee or Thine to-day? May I not be to some poor thirsting one A cup of blessing? Let me, if I may, O Thy sweet errands run.

What trials lie before me in the way; What thorns my feet must press are known to Thee, Enough for me to know—that as my day My strength shall surely be.

And if these hours on earth should be my last; If ere the nightfall Thou shouldst call me home; Alas, well—Thy loving arms shall hold me fast; Even so, Lord Jesus, come.

To Return.

Love me now, and love me aye— Life is but a passing day— (But the day is still reborn.) Love me now, and love me aye, When all lives have passed away— On some fair Eternal Morn!

Still I pass, and thou dost pass, Like the raindrops on the glass, Shared between the sun and wind; Thou and I, we onward pass To return? but we alas! How shall we each other find?

Thou and I to come and go, Know each other or not know, Flung together—flung apart! Thou and I to come and go, Ever side by side, behind us strow— Shall I find thee where thou art?

We shall pass—shall we return? Shall the soul its own discern? When the myriad lives are fled? We shall pass—... Ere we return, To set some lamp to burn On the far ways we must tread!

1910, M. Tinscombe, in THE FARMER'S BAZAR

Barbara Graham.

By Margaret E. Sangster.

Elstow is a little village in the back country, nearly twenty miles from the railroad, and is reached only by stage or private conveyance from the nearest station on the line. In the old days, it was a thriving little place, with one or two local industries that supplied the farm people in the adjacent districts with certain products which they could buy at less expense there than they could by sending to New York or Boston. In the course of time, these industries have lapsed, and the old mills now stand deserted, tenanted only by bats and owls, while cobwebs stream across the broken windows, and the wild winds rave through the desolate and empty rooms.

The young men leave the place as soon as they reach a self-supporting age, and latterly, the girls are going, too, so that Elstow has become a residence chiefly of old and middle-aged people. There is a noticeable absence of child life, as there are no longer young married folk there, and it seems probable that before many years the village itself will be as abandoned as the mills. Yet the site is one of exceeding beauty. It lies in what might be called a happy valley, deep bosomed among green hills, and when occasionally an artist or a poet tramping about in the summer in search of health or impressions comes by accident upon Elstow, he or she thanks heaven for another draught of the joy of life.

Barbara Graham heard of Elstow from a girl who sat beside her in the studio the winter when she was twenty-three. The girl had been born and brought up in that lovely nook among the hills, had left it with her entire family to seek a home in the city, but when Barbara met her, she had not become used to her new surroundings and pined a little for the freedom and space, the peace and contentment of God's great uplands. This girl's name was Janet Stell. Later she and Barbara joined their forces and opened a studio of their own in town, and for several years spent their summers at Elstow, keeping house in great simplicity and painting bits or making drawings for future use. Time had slipped by softly, Janet had married, and one summer, Barbara now at the age of thirty-two, had sought the resting-place at Elstow by herself.

The villagers noted that she was much changed, and had, somehow, grown gray. Instead of the sweet, bright bloom that had been hers, there was pallor; dark shadows lay under the eyes, her thick, wavy hair had changed from brown to silver, and her dress was of a uniform leaden hue. Barbara Graham was the spectre of herself. The change had been wrought in three years, and the good old mothers and grandmothers, as well as the kind old grandfathers, wondered what in the world had happened. Several things had happened. Barbara had had a long illness, and it had sapped her strength and made demands upon her vitality to an extent that returning health had not made good.

The promise of success that had at first attended Barbara's work had been nipped in the bud, and she had found herself financially much embarrassed through inability to sell her pictures, or make profitable connections with publishing houses. But neither illness nor disappointment was sufficient to account for Barbara's rapid aging and lack of vitality. Janet Stell and her husband, talking the matter over in confidence, had decided truly that it was the disappearance of Evan Sinclair that had taken from Barbara an object in life and well-nigh broken her heart.

They were right in their supposition that Barbara's breakdown was mainly to be attributed to the mystery about Evan Sinclair. She and Evan had been good comrades—close friends, and finally engaged lovers. Evan had left her one evening with a tender farewell to go on board ship for the beginning of a journey that was to last five or six months. He had, it was ascertained, landed safe at Liverpool, but had never been heard of since. His own people and his employers had instituted every possible search, but it seemed that the earth had opened and swallowed him up. Nothing is so wearisome as suspense. The anguish of hope deferred is harder to bear than the sharp, steady pain of the reality of what the worst

CORRUGATED PORTABLE GRANARIES Fire, Lightning and Storm Proof Protects the grain—absolutely vermin proof. Write for particulars THE Metallic Roofing Co. LIMITED, MANUFACTURERS, TORONTO and WINNIPEG. 2376

Buchanan's Self-Compressing Long Sling—the result of 33 years experience in making Pitching Machines. Consists of three slings and sectional pulley for drawing ends together. Easy to operate, quick to work, and exceptionally strong. We make all kinds of Pitching Machines—Swivel Carriers and Tracks, Slings, Harpoon Forks, etc. Write for catalogue. M. T. BUCHANAN & CO., INGERSOLL, Ont. 2

WALTERS

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock. TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

BEEES WANTED—Free from disease. Describe condition, strength, hive, and lowest price. Geo. Braven, Dunnville, Ont.

FOR SALE—New Woven Wire Fencing, all sizes and lengths, at half price. Write quick to Imperial Waste & Metal Co., 7 Queen St., Montreal.

GOVERNMENT STANDARD SEEDS—Golden Vine Peas, \$1.00; Southern White Corn, Pride of the North, Lemming Fodder Corn, \$1; bags, 25c each extra. Sir Walter Raleigh, Green Mountain, Empire State Potatoes, 75c. bags; bags included. Caledonia Milling Co., Caledonia, Ontario.

IF interested in growing strawberries send for my catalogue; it's free. Tells you how to grow them. Jno. Downham, Strathroy, Ontario.

SEED POTATOES "Shipper's Pride." Late White, good yielders, long keepers, \$1.00 per bag; 10 lb. bags. CREAM SEPARATOR, 300 lbs. per hour capacity, used only three months; too small for herd. Jas. H. Oswald, St. Therese, Que.

10,000 CEDAR FENCE POSTS for sale. Write for quotations on car lots. Finlay & Anderson, Torv Hill, Ont.

WE HAVE FARMS of all sizes and suitable for all kinds of farming in every county in Western Ontario. Send for our catalogue. The Western Real Estate Exchange, Ltd., 78 Dundas St. London, Ont.

HIGHLY-BRED GLYDESDALES FOR SALE Always on hand, stallions, colts, mares and fillies. The champion stallion, "Baron Howes" (13847), was purchased from this stud. Apply: JOHN R. BEATTIE, Baurch Farm, Annon, Scotland.

PROF. BAILEY'S GARDENING BOOK, renewed in this number, will be sent from this office on receipt of \$1.50, plus 12 cents for postage.



BREEDERS!

Insure your mares and foals against risk of death during foaling. Why take a chance of loss of a valuable mare when a policy in

The General Animals Insurance Company of Canada

will protect you? If you are shipping horses West, we will insure you against loss while en route, from any cause whatever. Write for particulars to

The GENERAL ANIMALS INSURANCE CO., Limited
25 Toronto St., TORONTO.

J. D. REESOR, Manager Western Ontario.
Telephone, Main 4154.

is known. Barbara felt that she might have borne anything, could she only have known something definite. Almost the worst feature of the case was her rebellion against Divine Providence. How could her Heavenly Father let her suffer so? What disaster had befallen Evan Sinclair?

One morning in October, a sunny morning, when the air was amber and the hills were opal, and a sweet Indian-summer warmth enfolded the old-fashioned gardens, Dr. Foss drew rein at Barbara's gate. The old doctor moved with deliberation, but he had no need to tie his old brown pony. It was accustomed to stand at any door in a circuit of miles, so long as it pleased Dr. Foss to linger indoors with a patient. He walked up the little path to the door, lifted the iron knocker, and gave a gentle tap; then opened the door and entered the room.

"You did not send for me, Miss Barbara," he said, "but here I am. Your doctor in town has written to me and has given you in my charge. What have you been doing all summer?"

"Nothing," answered Barbara, with a wan smile. "Nothing except thinking and thinking all day long."

"I see," said the doctor. "I see. Taking no exercise, living on starvation diet and sleeping very badly. My dear child, this will not do. Tell me the trouble. I am an old hand at the business. Perhaps I can help you."

There was something sympathetic and magnetic about the good physician who had spent forty years healing every sort of ills in a community widely scattered. He ministered to the mind as well as to the body.

"Miss Barbara," said the doctor, after a while, "you have stayed here as long as you ought. It is my duty to tell you that it will soon be cold and dreary, and that you must collect your forces and go back to your work. You will never get strong here. You brood too much."

"I don't know that I want to get strong. I don't mind growing weaker."

"This," said the doctor, "is the declaration of a coward, and I don't believe you are really a coward. Besides, who knows but there may be some reason of which you have not dreamed why you ought to go back to your own place? I understand that you had given up hope about the friend you have lost, yet it is not in the least impossible that at this very hour he may be alive and may be crossing the ocean with the purpose in his heart to go straight to you."

The color suddenly surged to Barbara's cheek, fixing on it an almost scarlet stain. "Why, doctor," she exclaimed, "how could that be?"

"Of course," he added, "it may not be. Yet men have lost themselves in strange lands, have lost their own identity by some turn of fate, or untoward accident, and after a long absence have been found in a hospital or asylum or in the street or a workshop, or have had a slight operation, and the past has rolled away, and they have come back to their world. Very few mysterious disappearances continue always unsolved mysteries. For

Amatite ROOFING

A Frank Statement

How many manufacturers of ready roofing will tell you frankly how their goods are made?

Mighty few.

They will talk about "secret formulas," "special waterproofing compounds," etc.—all nonsense.

They don't tell you what the goods are made of because they don't dare.

From the start we have never hesitated to tell the buying public just what Amatite is made of and just what it will do.

How Amatite is Made

Amatite is made of two layers of *Coal Tar Pitch*—the greatest waterproofing material known.

Alternating with these two layers of pitch are two layers of coal-tar-saturated *wool felt* to give it tensile strength.

On top of these four layers is a *real mineral surface*—five layers of protection. The mineral surface is permanent, fireproof, and absolutely requires no painting.

It Needs No Painting

Roofings that require painting are a worry and an expense. Every year or two you have to climb up and give them a coating with some special compound sold by the manufacturers, or you are pretty sure to have a leaky roof.

Amatite is Making Good

We are constantly receiving letters from customers telling us how satisfied they are with Amatite—how much better it is than the old-fashioned roofing.

Year after year, in all weather, Amatite will give perfect service without any painting or attention of any kind.

Surely this is the kind of service that wins and keeps customers.

Free Sample

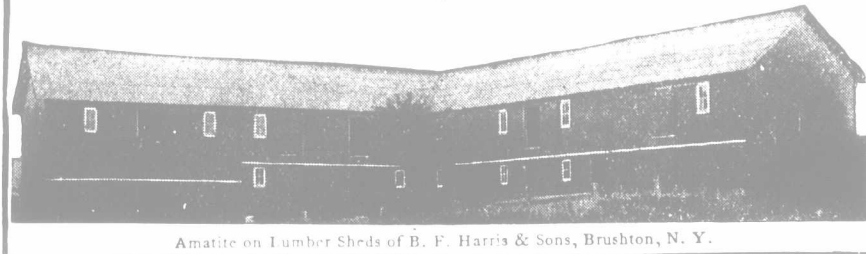
Before you go to your dealer and buy a roofing, we should be very glad to send you a sample, so that you can see for yourself just what we are talking about—what a solid, substantial, reliable roofing we are offering to the public.

Something Back of It

Remember, in this connection, that Amatite is made by the *largest manufacturers of roofing materials* in the world, and that when you buy this roofing there is something behind it. We stand back of every roll. We know we are offering the best and the most economical ready roofing on the market.

For the sample and booklet address our nearest office.

THE PATERSON MFG. CO., Ltd.
Toronto. Montreal.
Winnipeg. Vancouver.



Amatite on Lumber Sheds of B. F. Harris & Sons, Brushton, N. Y.

ought that you or I can tell, Evan Sinclair may be on this earth. If he is on the earth, when he comes to himself, he will return at once to the old home. If he is not on the earth, but is living in heaven, what do you suppose he thinks of you throwing away your youthful life and strength on hopeless grief? We are not here to be happy merely, we are here to do our work, and my message to you to-day is to drop the apathy that is veiling you like a shadowy cloak and go back to your work. No, I am not prescribing drugs, nor tonics, aside from a brave resolution and prayer to God."

After the doctor had gone, Barbara wrapped a shawl about her, for the air began to grow chill, and walking through the little garden she gazed at the opal

hills and took deep drafts of the crystal air. A text or two that she had forgotten was suddenly audible in her soul. "I will lift up mine eyes unto the hills, from whence cometh my help." "God is our refuge and strength." "The Lord hear thee in the day of trouble."

She went back to the house and packed her trunk. Next morning she gave the key to a neighbor, and twenty-four hours afterward was in her studio. Beginning work again was not easy, but Barbara had an ally in her new endeavor. Though still aware of her weakness, she had not now to fight with torpor and inertia. She accepted suspense as the burden she had to carry, but half consciously she leaned on a hope the doctor had given her, and almost imperceptibly the hope

changed to anticipation. Thus she was not greatly surprised one day in November, when the postman in the morning mail handed her a foreign letter. It bore a French postmark. She turned dizzy and faint as she saw the writing, and fell, gasping, into a chair. But joy does not kill. When she felt the touch of the paper in her hand, her pulse steadied, her eyes brightened, and dashing away sudden tears, she read the words that Evan Sinclair's hand had penned.

The story that the letter told was of an attack, a robbery, and long aberration due to a blow on the head. In some way, to be explained later, Evan had found himself in France, his case had attracted the attention of a surgeon, there had been an operation just as Dr. Foss had suggested as possible, and, in brief, he was coming home to gather up the threads of his life; he was coming home to his family and the girl he loved, and to whatever work he could find to do.

It may well be imagined how the tide turned. The first thing Barbara did was to thank God. The next, only a woman can understand. She went to her dressing-room and took off the ashen-gray gown that had expressed the state of her mind when she dwelt under a gray cloud.

"I shall never wear that again," she said. In the corner of her wardrobe hung a soft robe of warm crimson, a dress that Evan had liked. She put it on and looked at herself in the glass. Already it seemed to her that her youth was flooding in again as if it were spring instead of autumn. Then she put on her hat and went to see Janet to tell the good news. Together they went to Evan's mother and found her transfigured with joy. The mother's grief had been as deep as Barbara's, but she had borne it with a larger patience.

It was a beautiful Thanksgiving which they all kept, when Evan came home—*American Messenger*.

Work with the Hands.

Work with the hands! Let others toil
With magic pen and mighty brain.
But you and I, let's till the soil
And plant bright roses on the plain.
Let genius dwell on peak in cloud,
But in the sunlit lower lands
Tasks wait for us that call aloud
Work with the hands!

Let's rise at dawn, then morn is young—
Let's do that thing that we should do.
Out of each task is triumph wrung.

Out of pain is the soul made new,
Let's use our common tools with pride,
Let's join the strong heroic bands
That answer to the summons wide—
Work with the hands!

Sweet peace shall light our days with cheer,
And gladness crown us like a sun.

We shall have conquest of our fear
From sorrow and from travail won.
As Christ of Nazareth toiled with art
Obeying all the Lord's commands,
So shall we give Him with rapt heart
Work with the hands!

—Edward Wilbur Mason.

The Defence of Teawatha.

A TALE OF 1837.

By W. F. Young.

[The following story, founded, as the writer tells us, "on a local legend," will be read with appreciation of its humor, no matter what the political color of the reader. At this day, the justice of Mackenzie's objections to the "Family Compact" is evident to all; nevertheless, the terror which his name "as rebel" carried among good Conservative settlements of the time, may be readily imagined. The names of the places, etc., have, of course, been disguised.]

Early in the spring of 1815 a canoe might have been seen on the Ooze River, passing the Town of Teawatha. A few miles above that village, it left the main stream, and was paddled westward up Blackman's Creek, in the direction of the Vienna Plains. The occupants of the canoe were two men, whose appearance, movement and carriage of body betrayed them to the watcher as soldiers. In fact, they were no less individuals than Lieutenant Dorrit and Ensign Graham, both lately of His Majesty's th Horse.

They had won enough glory in war, so they said, since they had almost captured Marshal Soult in one of the numerous skirmishes in that long-drawn-out battle of the Pyrenees; and had had many other hairbreadth escapes, out of which their wonderful skill and bravery brought them safely; but in which men of less skill and bravery would inevitably have perished. Now, in the new country of Upper Canada, they were going to settle, to conquer the giants of the forest, and hew out homes in nature's wilderness.

There have been many laughable stories told of the early blunders made by young Englishmen farming on Canadian soil; but neither is Lieutenant Dorrit or Ensign Graham the subject of any such tale. They took as naturally to farming as a duck does to water; or, to use their own simile, as naturally as they had previously taken to warfare. Whenever Ensign Graham would make the above remark he would lay his hand on a long scar across his cheek, cut by the sword of Marshal Soult, and the whole details of that wonderful episode would be poured into the listener's ear.

Dorrit settled on the Vienna Plains, two miles south of the Village of Claremont. His friend went farther north, crossing the town line and settling on the second concession of the newly-organized township of Waterloo. It was esteemed a lucky epoch by the local bodies of volunteers the day that brought those two veterans of Wellington's battles into their companies. They hailed them as superiors, and soon colonelships in the local regiments became the property of the two officers.

Still, old men tell stories of "training day," which was held annually on George III's birthday; when all the farmers of Claremont Township, mullen storks in place of guns in their hands, "marched," "wheeled," "tioned," and performed one thousand and one other manoeuvres at the command of Colonel Dorrit. In the heat of the June day, stacking their arms by the roadside, they would lie down in the shade and listen to the Colonel tell tales of the "Peninsular War." Never was Dorrit known to forget to tell that great event of his life in full detail, always ending with words much like these: "And so, boys, you see, if my horse had not stumbled at the critical moment, and Colonel Graham's sword flying through the air in such an unaccountable manner, we would surely have captured Marshal Soult."

As time passed on, the reputations of the Colonels increased steadily among their neighbors. At logging bees, school meetings, or at country dances, they were clearly in their element, and took the lead in everything.

Little Jimmy Price was an orphaned English boy—one of the first of his social position to cross the Atlantic to labor on a Canadian farm. He worked for Colonel Dorrit. While

others respected his master, Jimmy worshipped him. His delight on a winter's evening was to draw his chair to the fireside and listen to the Colonel's wonderful tales of Spanish battlefields. Of almost equal rank to Colonel Dorrit in Jimmy's opinion was Colonel Graham. Days when the latter came from his home in Waterloo Township to visit Colonel Dorrit were indeed colored letter days to Jimmy Price. The two soldiers would sit side by side on the rail fence and recount reminiscences of olden days; and Jimmy lying on the ground below drank in the stories with eager gusto. What, though the stories were practically the same day after day! Who would ever weary of true tales of heroes recounted by themselves? Jimmy Price often wondered why people talked so much about the Duke of Wellington, when the success of nearly all his plans was brought about by the skill and daring of either Colonel Graham or Colonel Dorrit. At such times he felt like regarding the Iron Duke as one who had stolen his reputation from the deeds of men lower in rank but higher in military knowledge and soldier-like conduct than himself. To do the Colonels justice, they never to their dying day spoke of their old General with any words but those expressing the deepest regard and enthusiasm, which Price considered to be great magnanimity on their part.

Troublous times came to Canada. Wars and rumors of wars filled the air. William Lyon Mackenzie, the "arch-traitor," from publishing seditious articles in his "Colonial Advocate," had appealed to the sword. Mr. Torkington, member for Teawatha County, was not only tainted with Mackenzie's heresy, but was actually urging by all the force of his eloquence his constituents to rise in arms against the "tyrannical" Family Compact.

"A good thing it is," said the loyal man to his friend, "that we have Colonel Dorrit in the county. It won't take him long to crush the rebels if they should rise."

It is not the purpose of the author to weary the reader with an account of any of the prominent battles of the rebellion of '37. Any good history of the country gives full details of everything that took place. This tale is concerned with a rumor that spread through the country in the month of October, 1838; a report which declared that Mackenzie, with his horde of border ruffians, had crossed from Navy Island to the mainland, had repulsed McNab, captured the Welland Canal, and was in full march toward Teawatha.

Stories of the atrocities of the rebels filled the air. Robbery, arson and murder were being committed along the line of march. Fear filled the souls of the citizens of Teawatha. What was to be done? The town council quickly decided. The place was to be defended at all costs. Messengers were to be sent to every loyal person in the county, bidding them hasten to the defence of Teawatha. Colonel Graham and Dorrit were to have command.

Bad news travels fast. Tidings of what was impending and what had been decided reached Claremont before Lieutenant Grace, the civic messenger. Colonel Dorrit and Jimmy Price were out in the fields husking corn. A gun lay in the reach of each. Raising his eyes, the Colonel saw a man on horseback riding across the fields towards them.

"See here," said Dorrit, rising to his feet in his excitement. "I am going to the forest to hunt. If yonder horseman is from town with a message for me to lead the brave volunteers against the rebels, fire off your gun three times, pausing a few seconds between each shot, and I shall promptly return to perform my duty to my King and country."

Then without waiting for the man to drive one hundred yards, he vaulted over the fence and disappeared among the trees, leaving the English boy full of surprise and wonder at his master's strange conduct.

Lieutenant Grace soon approached and delivered to the boy his message. Though Jimmy did precisely

**NEW SCALE WILLIAMS
PLAYER PIANO**

answers that oft repeated statement "of what use would a Piano be in our house? Nobody can play".

The fingers of the great pianists are but highly trained pieces of mechanism. It is the soul of the artist, communicated to the fingers, which plays the music.

The New Scale Williams Player Piano gives you the fingers of the masters. The years of drudgery of practice—the expense of teachers—are wiped away.

The man and woman, who had not the time or opportunity to train their fingers, can still produce the music that is a part of their being.

The New Scale Williams Player Piano brings forth the enchanting melodies of the masterpieces just as the masters wrote them.

You—without knowledge of the purely mechanical

part of piano playing—can still put into this music all the soulful expression which you possess.

New Scale Williams Player Piano is the universal storehouse of music. Playing 88 notes, it reproduces everything that has been written for the piano—the classics, grand opera scores, favorite hymns, songs and melodies in a lighter vein.

We make both the 88 and 65 note New Scale Williams Player Piano in Louis XV, Mission and other handsome designs.

Our richly illustrated booklets show the wonderful mechanism of this Player Piano and give descriptions in details. Write for free copies and also our plan of easy payments.

THE WILLIAMS PIANO CO. LIMITED, - OSHAWA, Ont.

BRANCH OFFICES: { Winnipeg, Man., 823 Portage Ave.
Montreal, Que., 733 St. Catherine St. W.
London, Ont., 261 Dundas St. 105A



**SPRINGTIME—
FRECKLE TIME**



Now's the time, if you freckle, to get ahead of those wee pests that disfigure a good complexion. Don't wait until they appear, begin now.

**PRINCESS
COMPLEXION
PURIFIER**

An antiseptic remedy, removes tan, freckles, mothpatches and discolorations, and makes the skin clear, smooth and healthy; cures pimples, rashes and blackheads. Price, \$1.50. Express paid.

SUPERFLUOUS HAIR. Moles, etc., eradicated forever by Electrolysis. Satisfaction assured. Booklet "F" mailed free.

HISCOTT DERMATOLOGICAL INSTITUTE
61 College St., Toronto.
Established 1892.

Boys for Farm Help

The managers of Dr. Barnardo's Homes invite applications from farmers, or others, for the boys who are arriving periodically from England to be placed in this country. The young immigrants are mostly between 11 and 13 years of age; all will have passed through a period of training in Dr. Barnardo's English Institutions, and will have been carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars as to the terms and conditions upon which the boys are placed may be obtained upon application to Mr. Alfred B. Owen, Agent Dr. Barnardo's Homes, 60-62 Peter St., Toronto.

**Cowan's
Cake Icings**

If you had trouble with prepared Cake Icing, it was not Cowan's.

Even a child can ice a cake perfectly, in three minutes, with Cowan's Icing. Eight delicious flavors. Sold everywhere.

The Cowan Co. Limited,
Toronto. 89



Sixty-four-page illustrated catalogue, showing the scores of styles and sizes, free at the dealers or by mail.
Canadian Kodak Co. Limited.
Toronto, Canada.
Anybody can Kodak.

Please Remember to Mention "The Farmer's Advocate" When Writing

**Sherlock-
Manning**

Every One Can
be the
Proud Possessor
of the



LOUIS XV.

Sherlock-Manning 20th Century Piano

It is sold on terms to suit your convenience. Just write us for particulars. We can save you a hundred dollars.

Sherlock - Manning Organ Co., London, Ontario.

BEAUTY, STRENGTH AND EFFICIENCY

(the essential qualities of a Stove or Range) characterize the

BRITISH TREASURE



Smooth Iron Range. combining to make it, without exception, the finest and best in Canada.

Castings being smooth, and all nickel parts removable, makes range easy and handy to clean and blacken.

Castings in all "TREASURE" STOVES AND RANGES are made of High-grade No. 1 Pig Iron exclusively.

The Company's guarantee covers every "Treasure" Stove or Range.

THE D. MOORE COMPANY, LIMITED, HAMILTON, ONT., MFRS.

SOLD BY LEADING DEALERS ALL OVER CANADA.

Get out of the rut

Give your buildings the benefit of progress—same as you give the farm itself. Cover every building on the farm with Genasco Ready Roofing—the economical roofing that protects and lasts.

Genasco Ready Roofing

is made of Trinidad Lake asphalt—Nature's everlasting waterproofer. It prevents cracks, breaks, and leaks, and does away with damage and repairs. Easily applied without experienced help.

The Kant-leak Kleet does away entirely with cement and large-headed nails. Keeps seams absolutely watertight. Saves time in laying. Makes a beautiful finish. Ask for Genasco rolls with the Kleet packed in them.

Ask your dealer for Genasco. Mineral or smooth surface. Be sure you see the hemisphere trade mark. A written guarantee, if you want it. Gold medal (highest award) Seattle, 1909. Write for samples and the Good Roof Guide Book.

THE BARBER ASPHALT PAVING COMPANY.

Largest producers of asphalt, and largest manufacturers of ready roofing in the world.
Philadelphia New York San Francisco Chicago
Roofer's Supply Co., Ltd., Bay and Lake Sts., Toronto.
D. H. Howden & Co., Ltd., 200 York St., London, Ont.
J. L. La Chance, Ltd., Quebec.



Cross-section, Genasco Stone-surface Ready-Roofing



as he was ordered, no answer came from the woods, and no Colonel showed himself. It was exactly thirty days before human eyes again beheld Dorrit. Even then he refused to return to civilization until he was assured that not only was Teawatha safe, but that the Union Jack in place of the Two-starred banner was flying over Navy Island.

Jimmy Price and Lieutenant Grace searched far and near through the neighboring swamp for Colonel Dorrit. They thought, perhaps, some accident might have happened to him. But at last Lieutenant Grace declared that Dorrit was nothing but a hypocritical old coward; in which opinion Jimmy was at last forced to concur. But, oh! who can tell the emotions that filled his heart when he saw how completely his idol had fallen from the lofty pedestal on which he had placed it.

Still he had faith in his other hero, and in the company with the messenger from Teawatha, he rode over to the second concession of Waterloo. Colonel Graham did not fly to the woods—not he. Neither was he surprised to hear of Dorrit's defection.

"George was always a big coward," he commented. "Why, if it had not been for his cowardice, we would have captured Marshal Soult, but he kept off at a distance and left all the fighting to me. As soon as Soult knocked my sword out of my hand, and gave me this cut across the cheek, Dorrit jumped off his horse and hid in a wheat field, and did not reappear till the Frenchman was out of sight."

Price was surprised to hear this version of the story, somewhat different from what he had formerly heard; yet, judging from Dorrit's recent action, he concluded it was nearer the truth. He was glad to find that one of the soldiers was the man he pretended to be, for Graham accepted with alacrity the task of defending Teawatha.

Soon, mounted on his black horse, in company with Price and Grace, he was on the way to the place where glory was waiting. Apparently all the lust for military renown which had once blazed in his breast had revived therein. He whiled away the time telling stories about the Peninsular War, extracting material here and there to be employed in the coming engagement. As the stories proceeded, it became more and more evident that Dorrit had always been a coward and blockhead, but Graham—on the other hand—was the wisest and bravest man who ever buckled on sword.

The reader has no doubt been picturing Teawatha in his mind as the great manufacturing city she now is, but in the time we are speaking about it had been but recently incorporated as a town. Nearly everybody in the settlement kept a horse, cow, pigs and hens. In the morning Tommy, the herd boy, gathered together the cattle and drove them out into the county to graze, returning with his charge in the evening.

During the first days of excitement following the announcement of the coming of the rebel army, Tommy had been constantly warned against crossing the river with his herd. On the third morning, since the citizens had become more used to living in a state of danger, no warning was given to him. Perhaps people thought that after a statement had been given twice in succession, the boy would know enough to stay on the near side of the river. But Tommy knew where there was an eagle's nest on the top of an old pine. He knew where Farmer Downey's watermelon patch was, and chestnut trees were more plentiful on the east side; good and sufficient reasons, surely, to risk something. So it befell, on the morning of the 20th of October, in the year 1838, that Tommy drove his cows across the bridge that spanned the river Ooze.

Excitement was cooling down in the town. Nothing further had been heard of the movements of the enemy. A few wisemen were heard to declare that the news of the defeat of

McNab's army was not as certain as people appeared to think, and that they would sooner believe that McNab had taken Navy Island than that Mackenzie would attack Teawatha. But all such opinions were silenced, and all the excitement was roused again, when about noon Colonel Graham and two companions rode into town.

The Ooze River, in the neighborhood of Teawatha, is now crossed by a steel bridge, known far and near as Lisgar Bridge, named after a prominent Governor-General of Canada; but in the time we are writing about, the river was spanned by a plain wooden structure. The bank nearer the town is, as is well known, very steep and high. On the other side low flats extend, which, before two huge dykes were erected, were flooded by every extensive rainfall. The practiced eye of Colonel Graham at once selected the high bank as the proper place to post his little army for the defence of the town. There in the afternoon the loyal volunteers dug trenches, erected barricades, and otherwise prepared for the oncoming struggle. It was currently believed on the streets that the enemy at four o'clock had entered Abelford, only five miles away.

At seven everything was ready for the rebels. General Graham, mounting his horse and posing in full view, addressed the men. "No short speech was then uttered. No mere 'Fight the ship,' or 'England expects every man to do his duty.' Lawrence and Nelson were no orators, or they would have known better than that. It is impossible, I am sorry to state, to give you the exact words of all that wonderful oration. No shorthand writer was in the audience that day; even the newspaper reporter was absent.

After exhorting them to stand firm and imitate the example set them by their Colonel, he narrated incident after incident connected with Salamanca, Badajos and Vittoria, showing how a single brave man was able to retrieve the day and conquer countless opponents.

"If you will be but half as brave as I shall be," said he, "Mackenzie shall long rue the day he attempted to cross the Ooze River. Well can I remember the day when, as my companion, Colonel Dorrit (Lieutenant Dorrit he then was), and I were returning to camp one day from a wolf hunt in the Pyrenees Mountains, we saw a Frenchman, mounted, riding towards us. From his gray horse we recognized our opponent as no other than Marshal Soult. Dorrit wished to gallop away, but I said, 'No, let us win eternal glory by capturing him,' and on went the story, showing how if Dorrit had only played half the man Soult would have been captured."

"Now, boys," said he, "will you stand by me?" "Aye! aye, sir!" shouted the men, cheering and throwing their caps in the air, and Jimmy Price vowed to himself that he would attack the whole rebel army alone before he deserted his post.

The speech was ended, and Colonel Graham was about to get off his horse to take charge of the only cannon they had (to his great delight, Jimmy had been chosen to take charge of the gun's ammunition) when a distant sound struck the ears of all. From far away came the noise of discordant music, such as one would expect from a rabble crew, mingled with the regular tramp of an approaching multitude. Graham steadied himself on his horse and listened, and then: "They come! they come!" he cried, wildly, and wheeling his horse dashed madly off up the town street, never stopping nor staying his horse till he was twenty-two miles away, safely housed on his farm in the second concession of Waterloo.

And what of his men? Truly they obeyed their leader in following his example. In three minutes the hill, canon, trenches, barricades, were as silent and deserted as the Dorrit homestead in Claremont. "Deserted" not quite. By the cannon stood a lone figure, Jimmy Price's. Right behind the gun he stood, in the posi-

More Butter



The amount of butter you get out of your cream, depends much on the kind of churn you use.

There are more "FAVORITE" Churns used in Canada than any other. Because the farmers and dairymen know that the "FAVORITE" is best, and they won't use any other.

Our new "CHAMPION" is the champion of all washing machines. Easiest, quickest hand washer ever made.

DAVID MAXWELL & SONS, - ST. MARY'S, ONT.

Just Six Minutes to Wash a Tubful!

This is the greatest washer the world has ever known. So easy to run that it's almost fun to work it.



Any woman can have a 1900 GRAVITY WASHER On 30 days' free trial.

Don't send money. If you are responsible, you can try it first. Let us pay the freight. See the wonders it performs. Thousands being used. Every user delighted.

F. A. D. BACH, Manager The 1900 Washer Co., 357 Yonge Street TORONTO, CANADA

Both boys had been rude to their mother. She put them to bed earlier than usual, and then complained to their father about them.

"Here comes papa," said Maurice; "I am going to make believe I am asleep."

PEASE "ECONOMY" FURNACE (Warm Air)

Absolute heating satisfaction—no fuss—no trouble—no dust—no ashes to sift. Write for free booklet—"The Question of Heating."

PEASE FOUNDRY COMPANY LIMITED Toronto - Winnipeg 2337

tion he was ordered to keep, struggling to overpower the bitter feelings that were rising from his heart.

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.

TREATING POTATOES FOR SCAB.

Kindly give directions for treating potatoes affected with scab with formaldehyde.

STEEL SILO INSIDE PAINT.

Do you know of any kind of paint having been successfully used on the inside of steel silos to keep the silage from rusting them?

Ans.—The company that manufactures steel silos have supplied paint for the inside of silos that seemed to satisfy the most of their customers last year.

STAVE SILO.

I intend building a stave silo this summer on a concrete floor, and would like to know: (1) How to fasten the silo to the floor? (2) Which make the best staves, pine or hemlock?

Ans.—1. It need not be fastened to the floor at all. Simply see that the staves stand plumb on a level rim of the cement foundation.

2. Pine would make the better staves, but hemlock will answer, and is cheaper. It is liable to be shaky, though, and rots more easily.

SALE OF DIRTY GRAIN TO NEIGHBOR.

If I sell seed grain to my neighbor, and I do not guarantee it to be free from all kinds of dirt, and after he has sown it and finds that it had more dirt than he thought for, can he or the law take any action against me?

Ans.—Section 5 of the Seed Control Act reads as follows:

"The provisions contained in the next following section (Section 6), shall not apply to the sale of seed that is grown, sold and delivered by any farmer on his own premises, for seeding by the purchaser himself, unless the purchaser of said seed obtains from the seller at the time of the sale thereof, a certificate that the said seed is supplied to him subject to the provisions of this Act."

Section 6 of the Act, provides in substance that seed grain containing seed of mustard, wild oats, sow thistle, cockle, and certain other weeds, when exposed for sale, must be plainly labelled, so that the purchaser may clearly understand that the seed that he may be about to buy contains some of these noxious weed seeds.

Section 5 of the Act, exempts the farmer, when selling seeds under conditions as named therein, from having to attach the label to the seed which he may be selling to his neighbor. It is assumed that most farmers are able to recognize noxious weeds, although they may not know the correct name of them, and have or are able to get information

as to noxious weeds and the cleanness of any farm before giving to that farm to purchase their supplies of seed.

COMPARATIVE VALUE OF YELLOW AND GRANULATED SUGAR.

What is the comparative value, according to analysis, of yellow and granulated sugar?

Ans.—The yellow sugar contains more moisture than the granulated, and, consequently, less sugar. Two samples of yellow sugar analyzed in our laboratory this past winter, we found to contain 83 and 88 per cent. of sugar.

Ontario Agricultural College, Guelph.

GOSSIP.

H. D. Smith, Hamilton, Ont., advertises for sale two right good, well-bred young Hereford bulls.

Wm. Mulhouson, Walkerton, Ont., writes "The Farmer's Advocate": "I have recently sold to D. C. Platt & Son, of Millgrove, Ont., a Holstein heifer that has been in milk over three months, and is still giving seventy-five pounds a day.

The American Shropshire Registry Association has published for distribution, a liberal 1910 list of special prizes, donated by the Association, for Shropshires, at the principal State and Provincial fairs, and at the International Exposition, Chicago, \$100 being assigned to the Toronto Industrial, and \$18 to the Ontario Provincial Winter Fair.

Captain T. E. Robson, of London, Ont., who has recently returned from a two months' visit with stock-breeders in England and Scotland, reports an exceedingly active demand for Shorthorn cattle, and particularly for high-class young bulls. These are unusually difficult to secure, owing to the strong competition of buyers from the Argentine and New Zealand, who are prepared to pay abnormal prices for such as suit their purpose.

THE GREGG STEER.

The picture of the white steer appearing elsewhere in this issue, is that of the twelve-months-old white steer bred, fed and sold by Thos. Gregg, of Claremont, Ont., to the Harris Abattoir Co., of Toronto, for 10 1/2 cents per pound, not 9 cents, as reported in some other papers. At twelve months of age, after being shipped to Toronto, he weighed 1,120 pounds, and dressed out 65 per cent.

MILBURN'S LAXA-LIVER PILLS

Stimulate the Sluggish Liver.

Clean the coated tongue, sweeten the breath, clear away all waste and poisonous material from the system in Nature's easy manner, and prevent as well as cure Constipation, Sick Headache, Biliousness, Heartburn, Catarrh of the Stomach, Sour Stomach, Water Brash, and all troubles arising from a disordered state of the Stomach, Liver or Bowels.

Mrs. J. C. Westberg, Swan River, Man., writes: "I suffered for years, more than tongue can tell, from liver trouble. I tried several kinds of medicine, but could get no relief until I got Milburn's Laxa-Liver Pills. I cannot praise them too highly for what they have done for me."

Price 25 cents a vial, or 5 for \$1.00, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Lucerne Stock Farm FOR SALE.

Containing 175 acres, lot 10, con. 11, in the Township of Sombra, County of Lambton. Brick veneer house, nearly new. Two barns 36 x 66; two good poultry houses; new implement shed 20 x 40.

J. F. Selman, Wilkesport, Ont.



"Mrs. A.—'Why did you discharge Bridget? Didn't she cook well?'" Mrs. B.—"Oh, yes, splendidly; but I really couldn't keep up with her in dressing, you know."

"After all, a man who marries takes a big chance." "You're right. I have a friend who contracted a severe case of hay fever immediately after he had married a grass widow."

HE INHERITED HIS ILL-HEALTH

But Dodd's Kidney Pills Cured J. Baillargeon's Rheumatism.

Further proof that no case of Kidney Disease can stand before the old reliable Kidney Remedy.

Monte Bello, Labelle Co., Que., May 2.—(Special).—That a man may be cured even of inherited ill-health if he keeps his blood pure and his body toned up by using Dodd's Kidney Pills is the experience of John Baillargeon, of this place.

"I inherited poor health from my parents," Mr. Baillargeon says. "I was bothered with Rheumatism, Lumbago and Gravel. I was always tired and nervous. In fact, I was a total wreck. I tried all kinds of medicines, but I got no relief till I tried Dodd's Kidney Pills. They did me good and no mistake. I took fifteen boxes in all, but I am cured."

"My wife also has taken Dodd's Kidney Pills and received great benefit from them." "Dodd's Kidney Pills cure the Kidneys. Cured Kidneys strain out all impurities, all that disease feeds on, out of the blood. That is why they always cure Rheumatism, Lumbago, Dropsy and Heart Disease."

Cawthra Mulock & Co.,

OWN AND OFFER FOR SALE

AT PAR, \$100 PER SHARE,

\$2,000,000 of the 7% Cumulative Preferred Stock, with a bonus of 25% Common Stock, of

MAPLE LEAF MILLING CO.,

LIMITED.

(Incorporated under the Laws of the Province of Ontario)

Head Office, - - Toronto, Canada

Capital Stock, Issued and Fully Paid Up.

Preferred (7% Cumulative)	- - -	\$2,500,000
Common	- - -	2,500,000
		\$5,000,000

THE COMPANY HAS NO BONDS ISSUED OR AUTHORIZED

GUARDIAN TRUST COMPANY, Limited

is prepared to receive subscriptions for \$2,000,000 of the above seven-per-cent. cumulative preferred stock at the price of \$100 for each share, with a bonus of common stock equal in par value to 25 per cent. of the par value of the preferred stock allotted, to be delivered on payment of subscription in full.

The dividends on the preferred stock accrue from April 5th, 1910.

Subscriptions will be payable as follows:-

10 per cent. on application, and 90 per cent. on allotment.	or	In installments as follows, in which case interest at the rate of 6 per cent. will be charged:
100 per cent.		10 per cent. on application.
		15 per cent. on allotment.
		25 per cent. on 1st June, 1910.
		25 per cent. on 1st July, 1910, and
		25 per cent. on 1st August, 1910.
		100 per cent.

The right is reserved to allot only such subscriptions and for such amounts as may be approved, and to close the subscription book without notice.

Application will be made for the listing of the securities of the Company on the Toronto Stock Exchange.

The subscription list was opened at the office of the Guardian Trust Company, Ltd., Toronto, on Monday, April 25th, 1910, and will be closed on or before Monday, the 9th day of May, 1910, at 3 p.m.

Bankers of Company:

Imperial Bank of Canada and Bank of Montreal.

Board of Directors:

D. C. CAMERON, Winnipeg, President. President Rat Portage Lumber Company, Limited.	JOHN I. A. HUNT, London,* President Goderich Elevator & Transit Company, Vice-President Hunt Bros., Ltd., Millers.
CAWTHRA MULOCK, Toronto, Vice-President. Director Imperial Bank of Canada; Director Confederation Life Association.	CHARLES WURTELE, Toronto, Vice-President National Iron Works, Limited.
HEDLEY SHAW, Toronto, Managing Director. Vice-President and Managing Director The Maple Leaf Flour Mills Co., Limited.	JOHN CARRICK, Toronto, Secretary The Maple Leaf Flour Mills Company, Limited.
	CHARLES W. BAND, Toronto, Vice-President James Carruthers Company, Limited, Grain Exporters.

Security and Earning Power.

The assets of the old Companies taken over as above stand in excess of all liabilities and without any allowance for goodwill, trade marks, etc., at \$3,770,524.11, this amount being ascertained on the basis of an appraisal by the Canadian-American Appraisal Company, Limited, as of March 17th, 1910, of the capital assets taken over, and the certificate of Messrs. Price, Waterhouse & Company, as of February 28th, 1910, as to current assets and current liabilities, with a liberal allowance for all contingencies. There has also been placed in the Treasury \$1,000,000 of additional cash, which, besides permitting of the completion of a 6,000-barrel mill and a million-bushel elevator and storage warehouse at Port Colborne, and of fifteen additional elevators in the West, will provide the new Company with further working capital.

As per certificate of Messrs. Price, Waterhouse & Co., of London, the earnings of the old Company on the present plant amounted from September 25th, 1908, to August 20th, 1909, to \$218,843.38 and from August 21st, 1909, to February 28th, 1910, to \$166,793.29 being for the latter period at a rate equal to over 13 per cent. on the preferred stock of the Company.

Prospectuses and forms of application may be obtained at any branch of the Imperial Bank of Canada, or The Royal Bank of Canada, from Guardian Trust Company, Limited, Toronto, and from Cawthra Mulock & Company, Toronto.

Applications for shares should be made upon the form accompanying the prospectus, and should be sent together with the remittance due on application to

Any Branch of The Imperial Bank of Canada,
or The Royal Bank of Canada,
Guardian Trust Company, Limited, Toronto,
or to Cawthra Mulock & Company,
Members Toronto Stock Exchange,
Royal Bank Building, Toronto, Ontario

QUESTIONS AND ANSWERS. Miscellaneous.

RUPTURED PIGS.

My young boar pigs are ruptured. How should they be castrated, or, if left as they are, at what age would they become unfit for human food?

C. H. W.

Ans.—Ruptured pigs can be successfully castrated if the operator has an assistant, who, during the operation, keeps the bowel from protruding, and until some stitches are inserted in each cut. They should not be left as they are more than three months, if intended for slaughter.

FERTILIZER FOR MELONS.

Kindly inform me what you consider to be the best fertilizer to put in the hills for growing melons.

W. C.

Ans.—It is impossible to give a definite prescription for melons, as you do not mention either the class of soil on which you are putting the crop, or the previous cropping and manuring. However, on an average soil, the following quantities would likely give profitable results: Sulphate of potash, 200 lbs.; acid phosphate, 400 lbs.; nitrate of soda, 200 lbs. The potash and phosphate should be thoroughly mixed together and applied broadcast as soon as convenient, and lightly harrowed in. The nitrate of soda should be given as top dressings, one when the plants have fairly started growth, and the other a couple of weeks later. Do not apply the nitrate of soda when leaves are wet with dew or rain.

W. S.

MARE FAILS TO BREED.

1. I have a mare 12 years old; her colt died last year and I bred her every three weeks last summer, but could not get her in colt. She is now in season again. What can I do to get her in colt this year?

2. What is good for a mare that is in season all the time?

A SUBSCRIBER.

Ans.—1. The mare may have diseased ovaries, or be incurably barren from some other cause. The operation of opening the os uteri, or mouth of the womb, might be tried. A veterinarian, or possibly the stallion groom, would be qualified to perform it. What is known as the yeast treatment is said to be effective in some cases. 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 this mixture 24 hours ahead of the time the mare is expected to come in heat, and inject into her vagina the moment she is seen to be in heat. Breed her just as she is going out of heat.

2. Breeding her might be tried, though probably something is wrong with her generative organs.

RAISING DUCKS.

Will you kindly give me, through your paper, some suggestions on raising ducks? I have tried them, but have never had good luck, so would like to hear from someone that has made a success of raising them. Would it be best to make a little yard for them, where they will get plenty of fresh grass by moving the pen every few days, or let them run? They will be with a hen. Also state what kind of feed should be given, and how often they should be fed.

Ans.—For the first two weeks of their lives, ducks should be kept out of the sun and rain, and at all times they should have access to shade. A duck requires water to drink each time it is fed, though water to swim in is not at all necessary. Green food and grit are also essential, and sometimes the grit, say 5 per cent. of sand, has to be mixed in with their feed, or they will not take enough. A good mash may be made as follows, and the ducklings will do well on it from the start: Bran, shorts, and corn meal, in about equal parts, mixed with skim milk, or if there is no skim milk, about 10 or 15 per cent. of beef scrap or other animal food should be added. Feed four times a day. Mixed grains ground together, such as oats, barley and corn, would also answer very well. A little yard on the grass would do well for a time, but later on they should be allowed more exercise.

GOSSIP.

Official records of 140 Holstein-Friesian cows were accepted by the American Holstein Association from April 5th to April 12th, 1910. This herd of 140 animals, of which a little over one-third were full-aged cows, produced in seven consecutive days, 56,262.7 lbs. of milk, containing 2,046.552 lbs. of butter-fat; thus showing an average of 3.64 per cent. fat. The average production for each animal was 401.9 lbs. milk, containing 14.618 lbs. of butter-fat; equivalent to 57.4 lbs. or 27½ quarts of milk per day, and over 17 lbs. of the best commercial butter per week.

MERRYTON SALE OF CLYDESDALES.

A correspondent of the Scottish Farmer, in turning over his old newspaper cuttings, came upon a report of the late Lawrence Drew's sale of Clydesdale horses at Merryton, in 1884, including Prince of Wales (673), sold for 900 guineas, which may interest the younger generation of Clydesdale fanciers. The Merryton sale was a great event in the history of the Clydesdale breed, and we willingly publish the following particulars, showing the number of animals sold and the total sums and highest prices realized for the different classes:

	Highest Price in Gs.	Total in Gs.
12 stallions	900	3,749
7 two-year-old colts	400	968
8 one-year-old colts	170	517
5 one-year-old fillies	110	418
5 two-year-old fillies	230	565
4 three-year-old fillies	230	610
22 mares	360	2,301

CANADA'S GREATEST SHORTHORN SALE.

An event of international importance to breeders and admirers of Shorthorn cattle will take place at Guelph on Tuesday, June 7th, 1910, when there will be sold by auction 60 head of specially-selected top-notchers, from the noted herds of Harry Smith, Hay, Ont.; Capt. T. E. Robson, Ilderton; H. Cargill & Son, Cargill; J. T. Gibson, Denfield; A. E. Meyer, Guelph; W. R. Elliott & Sons, Guelph; J. F. Mitchell, Burlington, and Israel Groff, Elmira. The offering will be all young, in the pink of condition, bred on the most fashionable lines, every one possessed of exceptional merit, and the whole will be the most uniform lot ever offered at auction in Canada; and with such salesmen as George Bellows, of Marysville, Mo.; Carey M. Jones, of Chicago, and Capt. T. E. Robson, of London, crying the sale, it is safe to predict that interest will be kept at fever heat until the last drop of the hammer. Look for further particulars next week.

TRADE TOPIC.

BIGGER DAIRY PROFITS.—We have just received a large catalogue from W. A. Drummond & Co., of 157 King street East, Toronto, which is full of suggestions for dairy farmers, large and small. The firm in question is one of the largest manufacturers of dairy supplies in Canada, and, judging from their catalogue, we should say that quality and low prices characterize all the goods they sell. To mention only a few of their popular lines, Sterilac Milk Pail, Purity Cooler, Babcock Milk Tester, Automatic Scales, Milk Cans, Milk Bottles, and that wonderful machine, The Root Sanitary Cooler—these are only a few of hundreds of useful and convenient articles listed in the large catalogue, and we have no hesitation in stating that many articles of this firm's goods will make money for any man who owns one cow or more. In view of the increasing price of feed, and the vigilance which is being exercised by the Government and municipal authorities with reference to the absolute purity and sweetness of all milk supplies, our dairying readers should certainly install some of these profit-making implements. W. A. Drummond & Co. state that they will send a catalogue to any of our readers free, and we certainly advise everyone to take advantage of this offer, mentioning at the same time any particular thing they are in need of.



WINDSOR BUTTER SALT

Prize Butter

—the kind that wins cash and medals at the fairs, and brings top prices in the market—is always made with

Windsor Butter Salt

QUESTIONS AND ANSWERS.
Miscellaneous.

HIRING BY THE MONTH.

A hires B for one month. B commenced work on the 18th of February. When is his month in, not losing any time? R.

Ans.—March 17th.

PUMPING WATER FROM DISTANCE.

Would it be possible to have water brought to the house from a well seven rods from the house, there being no windmill? Would it be successful by having iron pipes laid in the ground and an iron pump at the house, or would the pump not have suction enough to draw the water so far? The well is fifty feet deep, and the water about fourteen feet from the top of the well. Or is there some better way? G. H. C.

Ans.—By having pipes laid from house to well, the water could be drawn by means of a pump at the house, so long as the water in the well did not get more than, say, 28 feet below level of pump sucker. The pump would not work quite so easily as if placed at well. The friction caused by drawing water through the length of pipe would be reduced if fairly large pipe of two inches in diameter were used instead of smaller tubing.

DRAINING BARN-FOUNDATION WALL.

Please describe method of draining under barn wall. Concrete will be used under hollow-brick wall. Ground is fairly level, but will drain. The plan you described for basement was quite suitable. C. V. R.

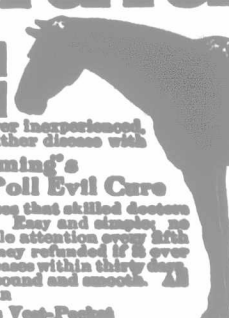
Ans.—One barn wall of which we have knowledge was satisfactorily drained by making an excavation sufficient to hold tiles all around the lower outside edge of foundation trench. In this excavation, tiles were placed on a level with trench bottom, and outside the foundation, an outlet being, of course, provided. Another excellent plan would be to dig an underdrain at a distance of two or three feet all around the outside of foundation, care being taken to go as deep as wall, and to have a good outlet secured. That would be better than putting drain inside of wall, though that also would be allowable if the ground level were such as to make the other impracticable. It is not considered prudent to put drain tiles directly under wall. Field stone may be filled in the bottom of the trench dug for wall, and tile laid from the lowest point.

TANNING SKINS.

I have a fine collie dog skin which I would like to tan for a mat, or pair of mats. Have it stretched against the granary, and salt rubbed in it. Please publish a simple recipe for tanning that I could do at home. S. H.

Ans.—Once more, for about the fiftieth time, let us advise against attempting to tan skins at home. Sending to a tannery is better and cheaper, time considered. You will find the advertisement of a reliable tanner in "The Farmer's Advocate" a few issues back, March 31st, containing the last insertion. However, here are the directions for tanning. Soak well in soft water for about two or three days to make it perfectly soft, then scrape off all the flesh and fat. When thoroughly cleaned, put the skin into a tan composed of equal parts of alum and salt dissolved in hot water, seven pounds of alum and salt to twelve pounds of water, or in these proportions. The skin can be left in the brine for two days, after which it should be hung up and well scraped or shaved to soften it. After shaving well, put the hide back into the brine for a day or two; then hang up till quite dry, and shave or scrape again. After this, apply a coat of oil, roll up in damp sawdust, and lay away till dry. Apply a good coat of soft soap, and lay away again in sawdust. As scraping is the main operation in softening the skin, it should be well worked again when dry. Two men drawing the skin back and forth over a round pole will impart a pliability to it.

fistula and Poll Evil



Any person, however inexperienced, can readily cure either disease with Fleming's

Fleming's Fistula and Poll Evil Cure

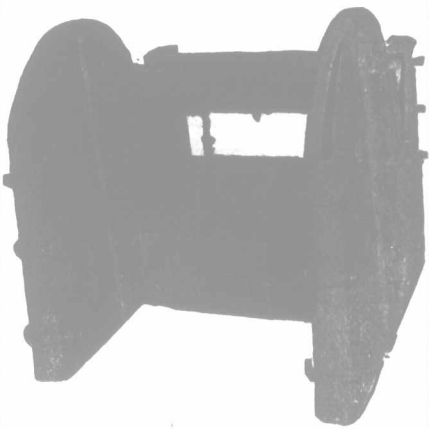
—even bad old cases that skilled doctors have abandoned. Easy and simple to apply; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in

Fleming's Vet-Book
Veterinary Advice.

Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated.

FLEMING BROS., Chemists
78 Church St., Toronto, Ontario

STABLE MOULDS



Adjustable mould for forming concrete mangers, stalls and water-troughs for cattle and horses. Pat. Oct. 24, 1909. For pamphlets, instructions to operate, and for prices, apply to

A. D. SCHMIDT,
Elmira Sta. North Woolwich P.O., Ont.

Nitrate of Soda

The Modern High Grade Straight Fertilizer

Cheapest, Cleanest
Odorless

Can be used anywhere on any crop
Convenient for use

\$3.00 worth of Nitrate on an acre of Grass has given an increased crop of 1000 lbs. of barn-cured Hay. Effective alone or as a supplement to other fertilizers.

Prime hay has sold for \$25 per ton in New York this season.
Books on the crops which interest you will be sent free.

Send name and address on Postal Card

DR. W. S. MYERS
Nitrate Propaganda
71 Nassau Street, New York

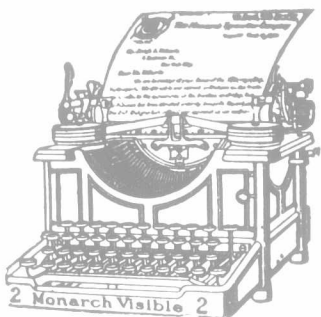
Importation of Stock

Space in the Association cars will be reserved for all stock coming from the East to B. C., providing the owners or importers make application for definite space before April 30th, to

R. W. HODSON,
Live-stock Commissioner,
Victoria, B.C.

The B.C. Stock-breeders' and B.C. Dairymen's Associations pay half the transportation expenses.

ANY TYPEWRITER will write letters and do it for a reasonable period. Some typewriters will print invoices, or make out this or that special report that demands attention day by day. Some other typewriters will write card records. But there is just one that will do ALL these things and a lot more, with the utmost all-round satisfaction. It's THE modern machine, built for modern needs, at an honest price. It's the 14 6/10 inch carriage model of the



MONARCH

The Monarch Typewriter Co., Ltd.,
98 KING STREET WEST, TORONTO, ONT.

Anti-Trust Prices Freight Prepaid To You—No Duty

on FARM and TOWN Telephones and Switchboards

Poles, Wire, Brackets, Insulators, Tools, Lightning Arresters, Ground Rods, Batteries, Insulated Wire, and everything necessary.

NO CHARGE for our experts' letters of advice, drawings, explanations, instructions, telling you in any language, non-technical, just how to build, own and operate your rural, town or long distance lines in a good but economical way and at a profit, thereby getting your own telephone free.

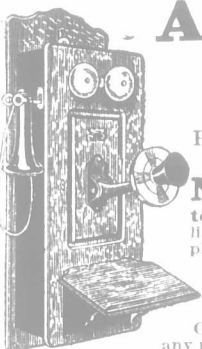
We are the largest, exclusive and the only bona-fide Independent Telephone and switchboard makers in Canada or Great Britain.

Our Telephones are extensively used in Canada, England, France and by the U. S. Government.

Our great illustrated book on the Telephone sent Free to anyone writing us about any new Telephone lines or systems being talked of or organized.

We have a splendid money-making proposition for good agents.

The Dominion Telephone Mfg Co., Ltd. Dept. C, Waterford, Ont., Canada.



Simplicity of Construction means durability—easy running

The Frictionless Empire has fewer wearing parts than any other cream separator. For instance, it has no closed bearings on the spindle where other separators have at least one and generally two. The less parts the less wear—the less chances for getting out of order.

The EMPIRE Line of Cream Separators

You don't have to be a mechanic in order to take the Frictionless Empire apart and put it together again correctly. The Frictionless Empire is so constructed that each part is made to fit just one place and to go in that place in one way only. It is simply impossible to put the parts of Frictionless Empire together wrong.

The Frictionless Empire outclasses all other cone separators the same as the Empire Disc outclasses all other disc machines.

Whichever style of Empire separator you choose you are bound to be satisfied, for both are sold with a guarantee as good as a gold bond.

The Empire Cream Separator Company of Canada, Limited
Sussex, N. B. TORONTO, ONT. Winnipeg, Man



QUESTIONS AND ANSWERS. Veterinary.

DISEASED TONGUE.

Dog's tongue is swollen and coated with a white skin. D. E.

Ans.—Dress the tongue several times daily with equal parts white wine vinegar and water. V.

BURSAL ENLARGEMENTS.

Pony has a fleshy enlargement as large as a hen's egg on each hind leg, just below the hock. They are soft and do not change in size; are not sore and do not cause lameness. They have been present for more than a year. J. H. W.

Ans.—These enlargements are not fleshy. They consist in distension of little sacs that contain synovia, and are called "bursal enlargements." They are very hard to reduce. Get a liniment made of 4 drams each of iodine and iodide of potassium and 4 ounces each of alcohol and glycerine. Rub a little of this well into the parts once daily. This treatment should reduce them some in time, but you will have to continue treatment and have patience for a few months. V.

LUXATION OF PATELLA.

Mare takes cramps. She holds one hind leg stiff and trails it, then jerks it up quick and goes all right. F. J. M.

Ans.—This is luxation of the patella (commonly called stifle). Clip the hair on the front and inside of the stifle. Get a blister made of two drams each of biniodide of mercury and cantharides, mixed with two ounces of vaseline. Tie her head so that she cannot bite the parts. Rub well with the blister, once daily, for two days; on the third day apply sweet oil. Turn her in a box stall now, and oil every day. Keep her loose in a box stall when in the stable, and the bone will not be nearly so liable to become disarticulated. If necessary, repeat the blistering. V.

APHTHA.

Several cattle have little sores on their tongues and do not eat well. A. D.

Ans.—This is aphtha. It often appears as an epidemic, and is infectious. The diseased should be isolated, or better remove the healthy from quarters in which the diseased are kept. Make a solution of alum, an ounce to a quart of water, and inject two or three ounces into the mouth of a diseased animal twice daily. This solution is supposed to be used as a gargle, and, if given out of a bottle, the patient is liable to swallow it, hence we recommend the use of a syringe. If any of the sores become an ulcer that will not heal, dress once daily with equal parts butter of antimony and tincture of myrrh, applied with a feather. V.

Miscellaneous.

TERMS OF AUCTION SALE.

A has an auction sale of cows, advertising them supposed to be in calf. B buys two, and after two months finds that one of them is farrow. Is A under obligation, either morally or legally, to take the farrow cow back, or make compensation? SUBSCRIBER.

Ans.—No.

QUANTITY OF LEAD ARSENATE

I have always used the Bordeaux mixture with Paris green, just as the blossoms are falling, for codling moth and scab, but this year intend using arsenate lead. I see in your issue of April 21st, page 679, you recommend 2 lbs. arsenate lead to 50 gallons of lime-sulphur diluted for application. Should I use 2 lbs. arsenate of lead to 40 gallons Bordeaux mixture? The firm from which I am getting my arsenate of lead recommend only 1 lb. M. S. B.

Ans.—Doctors differ. Some recommend as little as one pound of lead arsenate to the barrel, and others as high as three pounds. Mr. Caesar recommends two pounds, which is the quantity we used last year, and the quantity we shall use this year. There is little or no danger of injuring the foliage with lead arsenate, and for the slight difference in cost between one pound and two pounds of material per barrel, we would strongly advise against taking chances of imperfect results. Use two pounds to the barrel.

Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, 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.

BICKMORE'S GALL CURE

Be sure and work the horse

No salve in the world like Bickmore's Gall Cure for common horse ailments. Don't try unknown remedies. Bickmore's Gall Cure is standard everywhere. Cures galls, sores, cuts, wounds, grease heel, etc., without losing a single day's work. Sold everywhere by local dealers who are directed to refund your money if it fails. Send direct for trial package, enclosing 2c. postage.

Wingate Chemical Company, Ltd.,
888 Notre Dame St. W., Montreal, Can.

KENDALL'S SPAVIN CURE

Sure Cure for Spavin

Seattle, Wash. Nov. 1st. 1909
"I have used your Spavin Cure and find that it is a sure cure for Spavin and Ringbone."
Yours truly, A. T. Lynch.
Equally good for Curb, Splint, Sprain, Swollen Joints and all Lameness.
Hundreds of thousands of horse owners have used it in the past 40 years. Today, it is the world's standard remedy. Good for man and beast.
\$1. a bottle—6 for \$5. Buy at dealers and get free copy of our book—"A Treatise On The Horse"—or write us.

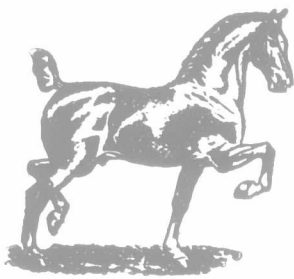
DR. B. J. KENDALL CO.,
Eosburg Falls, Vt.

High-class Driving Ponies AND OUTFITS.

Twelve ponies, ranging in height from 10 hands to 13 hands, and of bay, brown, sorrel, black and piebald colors, and from 2 to 5 years of age. For prices and particulars write:

E. Dymont, Copetown, Wentworth Co., Ont.

Tim Park Clydes, Aberdeen-Angus and Suffolks. We have at present six Clyde mares recorded in both Canadian and American Studbooks. Three of them sired by Lord Charming [2264], and two of them in foal to Monticello Marquis [6735]. Our cattle number fifty-five head of both sexes. Our Suffolk sheep are doing well, and flock numbers sixty-seven. James Bowman, Tim Park, Guelph, Ont.



UNION STOCK-YARDS Horse Exchange WEST TORONTO, CANADA.

The Greatest Wholesale and Retail Horse Commission Market.

Auction sales of Horses, Carriages, Harness, etc., every Monday and Wednesday. Horses and harness on hand for private sale every day.

The largest, best equipped and most sanitary stables in Canada. Half-mile of railway loading chutes at stable door. Quarter-mile open track for showing horses. Northwest trade a specialty. HERBERT SMITH, Manager. (Late Grand's Repository.)

Imported Clyde and Hackney Stallions

One imported Clyde stallion, a ton in weight; smooth and full of quality all over. A sire of prize stock. Also two imported Hackney stallions—show horses, one of them second at Toronto.

For further particulars write:

O. Sorby, Guelph, Ont.

CLYDESDALES AND FRENCH COACHERS

We have still on hand a few choice Clydesdale stallions—all young—that for size, style and quality will stand inspection. We have also a few Clyde fillies—imported and Canadian-bred, and two French Coach stallions. Correspondence and inspection invited. Our prices are easy and terms to suit. Phone connection.

R. NESS & SON, HOWICK, QUEBEC.

CRUICKSTON STOCK FARM, GALT, ONTARIO

The services of any one of the following high-class stallions can be secured for approved mares by applying to the manager: Mograzia, Champion Standard bred stallion; Blingen Pilot, by Blingen, 2.06'4; Jim Tod, by Tod, 2.14'4, also sire of Kentucky Tod; Crayke Mikado, Hackney stallion, Champion at Chicago International, and the Canadian National, Toronto; Baron Howes, Champion Clydesdale stallion, considered by expert judges to be the best Clydesdale stallion in America. For all particulars, apply to

JAS. WETHERILL, Manager, Galt, Ont.

CLYDESDALES and HACKNEYS

We have for sale a few choice Clydesdale mares, imported and Canadian-bred; also some Canadian-bred Clydesdale stallions. Hackney stallions and mares for sale always. Long-distance phone. Hodgkinson & Tisdale, Beaverton, Ont. G. T. R. and C. N. R.

IMPORTED CLYDESDALE FILLIES

I have still on hand six Clydesdale fillies. They are big, smooth fillies, exceptionally well bred, and their underpinning is the kind Canadians like. I have only one stallion left, a right good one. My prices are as low as any man's in the business. Phone connection.

GEORGE G. STEWART, HOWICK, QUEBEC.

Imported Clydesdales

My first importation for 1910 has just arrived. Stallions up to a ton in weight, from 1 to 5 years of age. Draft fillies 2 and 3 years of age. WM. COLQUHOUN, MITCHELL, ONT. Phone connection.

SMITH & RICHARDSON'S CLYDESDALES.

Black Ivory, Commodore, Royal Gretna, Pride of Newmills, Dunure Acknowledgment, Dunure Souter, Captain Vasey, Look Again, Baron Acme, and some younger ones, all sold, but a few good ones left yet, and at moderate prices. SMITH & RICHARDSON, COLUMBUS, ONT. Myrtle, C. P. R.; Brooklyn, G. T. R. Phone.

IMPORTED CLYDESDALES AND HACKNEYS

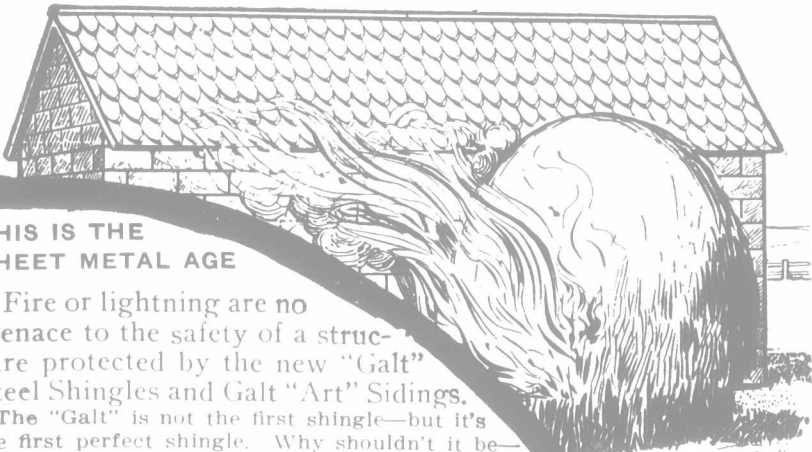
In my stables at Ingersoll, Ont., I have always on hand Clydesdale stallions and fillies, and Hackney stallions, personally selected in Scotland for their high-class type, quality and breeding. Let me know your wants.

W. E. BUTLER, INGERSOLL, ONT.

WAVERLY CLYDESDALES AND HACKNEYS

My 1910 importation of Clydesdale stallions and fillies, and Hackney stallions and fillies, are now in my barns. One and two-year-old Clyde fillies of a character and quality never before excelled. My Hackney stud was never so strong in high-class animals. All are for sale and prices right. ROBT. BEITH, BOWMANVILLE, ONT.

Please Mention this Paper.



THIS IS THE SHEET METAL AGE

Fire or lightning are no menace to the safety of a structure protected by the new "Galt" Steel Shingles and Galt "Art" Sidings.

The "Galt" is not the first shingle—but it's the first perfect shingle. Why shouldn't it be—haven't we the weaknesses of all others to warn us?

The hercest gale can't drive rain or snow through the Gale-proof, Closed-end, Side-locks, or the continuous overlapping and interlocking bottom lock of the "Galt" Shingles.

Covered nailing flanges both top and sides—no wind can loosen them. No openings or cleats. Easiest and quickest to lay. Handsome Bold Gothic Tile patterns—fit for a palace. Best British Galvanized Steel Sheets—Guaranteed to last a life time. Ask for Catalog "B-3"—it tells all about them.

THE GALT ART METAL CO., LIMITED, GALT, ONT.
Sales and Distributing Agents: Dunn Bros., Winnipeg and Regina.

"Galt" Shingles

All Horse-Collar Troubles Now Prevented or Quickly Cured

Every horse-owner who will now consider the practical in valuable time and horseflesh by using a set of HUMANE HORSE COLLARS to prevent all collar troubles, will certainly buy a set with his spring harness. Or get a set to cure your sore horses while they work. The success of the HUMANE HORSE COLLARS for the past three years proves this. Investigate.

HUMANE HORSE COLLARS

It is a fact that only one set of HUMANE HORSE COLLARS on a farm will cure up and keep cured of collar troubles all your horses. Don't use "sweat pads"—it's cruel—especially in hot weather—injures your horses; and besides, the sweat pads cost you more than most collars before you get through. You don't need them with these collars. Every set comes complete with short tugs and ready to use—less trouble to put on and take off—and fit any horse perfectly all the time by simple adjustment. Built to last for years by expert workmen, and durable materials.

Don't think of buying your spring harness until you write or fully investigate THE HUMANE HORSE COLLARS. Get our book first.

WHIPPLE HORSE COLLAR COMPANY, LIMITED
Hamilton, Ontario.

20 Imp. Percheron Stallions 20



Our 1909 importation of 20 Percheron stallions, from 1 to 5 years of age, are now in our stables. Up to over a ton in weight. Big, stylish, choke-full of flashy quality, and faultless movers. Prizewinners among them. The best lot ever imported to Canada. All are for sale on terms to suit.

HAMILTON & HAWTHORNE,
Simcoe, Ontario.

T. H. HASSARD'S NEW IMPORTATION!

MY NEW IMPORTATION OF

Clydesdale Stallions and Fillies

are now in my stables at Markham, Ont., and, as usual, I have a big range for selection, of a type, breeding and quality seldom equalled, never excelled, by any previous importation. Call and see them. Phone connection.

T. H. HASSARD, Markham, Ont.

CLYDESDALES AND HACKNEYS

We have still for sale several good Clydesdale Stallions; also our prizewinning Hackney Stallion, Black Surprise, and a few good Clydesdale and Hackney Mares. All of which will be sold on reasonable terms. Phone connection.

JOHN A. BOAG & SON, Bayview Farm, Queensville, Ont.

Imported Clydesdales

1910 have arrived. They were selected to comply with the Canadian standard, combining size, style, quality and faultless underpinning with Scotland's richest blood. They will be priced right, and on terms to suit. C. W. BARBER, GATINEAU PT., QUEBEC.

CLYDESDALES, Imported and Canadian-bred. I have on hand 2 Imported Clydesdale Stallions, one 4, the other 3 yrs. old; one other 5 yrs. old; 2 Canadian-bred Clydesdale Stallions, one 2, the other 3 yrs. old; one French Coach Stallion, 4 yrs. old; one Shire Stallion, and the noted Hackney Stallion, Chocolate Jr. I will sell these horses cheap for quick sale. T. D. Elliott, Bolton, Ont.

ORMSBY GRANGE STOCK FARM, ORMSTOWN, P. QUE.

I have arranged to make a special importation of yearling and 2-year-old fillies this spring for the benefit of those wishing to obtain pedigreed stock at cost price. Those wishing to co-operate with me in this, should write me at once; the saving will be about one half of the prices charged by agents in Canada. Duncan McEachran. My object is to promote Clyde breeding in Canada.

QUESTIONS AND ANSWERS. Veterinary.

FATALITY IN SOW.

Sow, within a week of farrowing, and fed slush from kitchen, potato peelings and a quart of mixed oats and buckwheat, and allowed to run about, was all right when I went to dinner, and when I came out of the house again she was dying, and died in a few minutes. A couple of days before she died I saw her lying in water; the day was very warm. A post-mortem revealed ten pigs in the womb, and all organs apparently healthy.

Ans.—I do not think lying in the water had any injurious action. It would have required a careful post-mortem by a veterinarian to determine the cause of death. Pigs sometimes die suddenly from acute indigestion; from foreign matter getting into the windpipe; from obstruction of the small intestines by worms, or other substances; from rupture of an internal blood vessel; from poison, etc., etc., but, as stated, it requires a careful post-mortem to ascertain the cause of death. Cerebral apoplexy sometimes causes sudden death.

LAME COLT.

Three-year-old colt was born with crooked fore legs. The legs are now straight, but the pasterns set back too far. There is a hard lump on the inside of leg, just above the fetlock joint. It is about half the size of a hen's egg, hard, and not sore to pressure. He has been lame for a year; sometimes quite lame, and at others almost sound. When the hoof is allowed to grow out the lameness is worse. He has not been worked, and driven only enough to make him handy, and has never been shod.

Ans.—I don't think the lump mentioned causes lameness. He has weak pasterns, and their position causes too much stress on the back tendons. He may get over this as he grows older. I would advise keeping the feet trimmed to the normal shape, and, if driving him, get him shod. Shower the fetlock and pastern with cold water, and apply bandages soaked in cold water for a few hours each day. The repeated application of a blister will have a tendency to strengthen the parts.

BREEDING MARES.

1. Mare, now 12 years old, has bred four times. She produced three colts by a Coach horse and one by a Percheron. These foals were produced in successive years, the last when she was ten years old. I bred her several times that year, but she failed to conceive. Last year she was not bred. I am told that if I breed her to a light horse, the prospects of conception will be greater. Is there any particular class of light horses that is more sure than others? I would like to breed her to a Hackney.

2. Her last filly by the Coach horse is a nice Coach mare, but has little action. Would it be wise to breed her to a Hackney?

Ans.—1. A Hackney is as potent as a horse of any other breed, hence there is no reason why you should not follow your tastes in this respect. As the mare has only failed to conceive one year out of five, it is not probable you will have trouble this year.

2. As this half-bred Coach mare has size and quality, your idea of mating her with a Hackney is quite correct, as he should impart action to the progeny.

GOSSIP.

J. H. M. Parker, Lennoxville, Que., breeder of Chester White swine and Shorthorn cattle, whose advertisement runs in this paper, has received from A. H. Boswell, Marshfield, P. E. I., the following letter: "Received pig all right. It is a nice one, and I am well pleased with it."

"Stockmen assert," observes the Breeders' Gazette, of Chicago, "that the day is at hand when Holstein calves will find favor with beef-makers, as they make decent beef cattle and cheaper stockers is the need feeders are feeling most now." Unless the stockers are produced by a superior breed of truly dual-purpose cattle, this prophecy will unquestionably come true.

HORSE OWNERS! USE

GOMBAULT'S CAUSTIC BALSAM.
A safe, speedy and positive cure. The safest, Best BALM ever used. Removes all blemishes from Horses. Impossible to produce scar or blemish. Send for descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Toronto, Can.

Ring-Bone

There is no case so old or bad that we will not guarantee Fleming's Spavin and Ringbone Paste to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of Fleming's Vest-Pocket Veterinary Adviser. Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durably bound, indexed and illustrated. Make a right beginning by sending for this book. FLEMING BROS., Chemists, 26 Church St., Toronto, Ontario.

Horse Breeders

Artificial MARE IMPREGNATORS
We GUARANTEE you can get from \$250 to \$500 more in foal from one service of stallion or jack. Increase the profits from your breeding stables by using these Impregnators. No experience necessary to use them successfully. Prices, \$1.00 to \$5.00 each prepaid. Popular SAFETY IMPREGNATING OUTFIT, especially recommended for impregnating so-called barren and irregular breeding mares, \$7.50 prepaid. Write for CATALOGUE which illustrates and describes our Impregnating Devices, Breeding Hobbles, Stallion Bridles, Shields, Supports, Service Hooks, Etc. CRITTENDEN & CO., Dept. 38, Cleveland, Ohio, U.S.A.

Increase Your Profits

Clydesdales and Percherons

To my many friends, and the public generally, I wish to say that in my stables at Weston, Ont., I have my 1909 importation of 10 Clydesdale and 8 Percheron stallions; a lot that for true draft character, faultless underpinning, choice quality and breeding were never surpassed. Terms to suit and prices right.
J. B. HOGATE,
Weston, Ont. and Brandon, Man.
W. D. COLBY, Mgr. Weston, Ont.

Don't Have a Blind One

Wonderful Discovery "VISIO"
MOON BLINDNESS and all Diseases of the Eye successfully treated with this NEW REMEDY. Money Back if it fails to cure. \$2.00 per bottle postpaid on receipt of price. Visio Remedy Ass'n., Dept. 20, 1823 Wabash Av., Chicago, Ill.

ABSORBINE

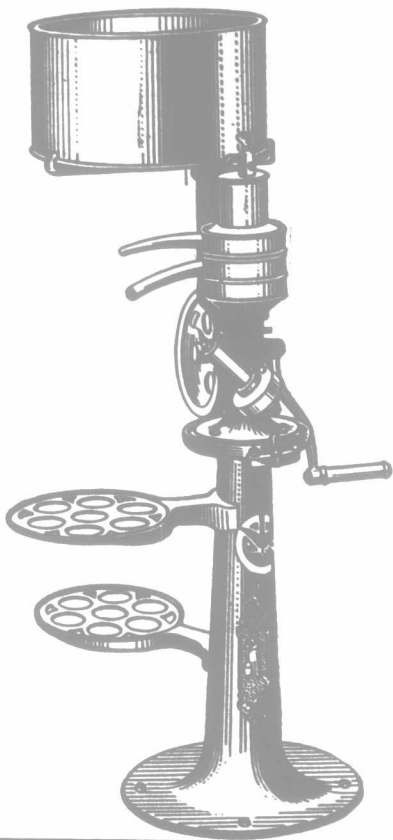
Will reduce inflamed, strained, swollen Tendons, Ligaments, Muscles or Bruises. Cure the Lameness and stop pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone. Horse can be used. \$2.00 a bottle, delivered. Horse Book 2 E free. Before After. ABSORBINE, JR., for manking, \$1 and \$2. Reduces strained, torn ligaments, enlarged glands, bruises, sprains, and all other ailments. Your veins or muscles—heals ulcers—always pain. Your druggist can supply and give references. Will tell you more if you write. Book Free. Manufactured only by W. F. YOUNG, P. O. F., 258 Temple St., Springfield, Mass. Canadian Agents: Lyman's Ltd., Montreal.

AGENTS 200% PROFIT

HAME FASTENER
Handy, Automatic HAME FASTENER. Do away with old hame strap. Horse owners and teamsters wild about them. Fasten instantly with gloves on. Outwear the harness. Money back if not satisfactory. Write today for confidential terms to agents. F. Thomas Mfg. Co., 744 Wayne St., Dayton, Ohio

For Sale: REGISTERED HACKNEY STALLION, COCK ROBIN.

Three years old; 15 1/2 hands; chestnut; hind feet white. Sire Commodore 3rd, imp., (6695), by Chocolate Jr. (4185). Dam Ada Adair (181), by Robin Adair 2nd, imp., (3907). For description, terms, etc., address: G. W. CLEMONS, ST. GEORGE, ONT. When Writing Mention The Advocate



The CAPITAL Is the Cream Separator that will "Buy Itself" For You.

As soon as you have read this advertisement, sit down and write a post card for The Capital book—the book that not only tells the story of the easy-running, cream-saving separator, but that tells how you can put The Capital in your own dairy practically without costing you a cent.

The book also tells all about the wonderful Capital gears, about their perfect meshing and non-wearing qualities—how they run in oil—how an automatic clutch stops them running the minute you let go of the handle—and about how they give the light, three-and-a-half-pound bowl, 7,000 revolutions a minute.

It tells how and why The Capital skims closer—why The Capital wastes less than one-fifth the cream that other separators waste—and then explains how the machine can be made sweet and clean in two minutes after you are through using it.

This book is full of hard-and-fast facts—separator facts—which every dairyman owes it to himself to know; facts which will prove a revelation to the dairyman who is not familiar with The Capital.

Write for the book to-day—NOW.

THE NATIONAL MFG. CO., LIMITED.

Head Office: Ottawa.

Factories: Ottawa and Brockville.

Branch Offices:—Regina, Sask.; Edmonton, Alta.; Moncton, N.B.

STOCK MEN

When you are wanting any cuts of Poultry, Live Stock, or for Advertising, try our specially deep-etched plates.

PRINT CLEAN
WEAR LONGER
PRICE REASONABLE

Write us your wants.

**ROBERTS
ENGRAVING
COMPANY**
LONDON-CANADA

MESSRS. HICKMAN & SCRUBY

Court Lodge, Egerton, Kent, England.
Export pedigree live stock of every description. Owing to rapid increase in business, Mr. L. C. Scruby has been taken into partnership. During the spring months the export of horses will be a specialty. We are at this business all the year round, and can do better for you than you can do for yourself, even if you do come over to do your own business. Send us your orders, and we will do the best we can for you. Nobody can do more.

HEREFORD BULLS

You can buy two right good, well-bred Hereford bulls cheaply if you write me quickly. Do it now.

H. D. SMITH, HAMILTON, ONT.
"Ingleside Farm."

Homestead Aberdeen - Angus

Bulls all sold, but must sell a number of cows, as I am short of grass. Will be priced low for quick sale. Come and see them before buying.

Wm. Ische, Sebringville, Ont.
Long-distance phone.

FOR SALE: SOME NICE YOUNG

Aberdeen-Angus Bulls
and some females of all ages. Also a first-class Clydesdale stallion. J. W. Burt, Coningsby, Ont.

ABERDEEN - ANGUS

Will sell both sexes: fair prices. Come and see them before buying. Drumbo station.

WALTER HALL, Washington, Ont.

Aberdeen-Angus Cattle

7 choice Aberdeen-Angus bulls for quick sale, from 9 to 10 months.

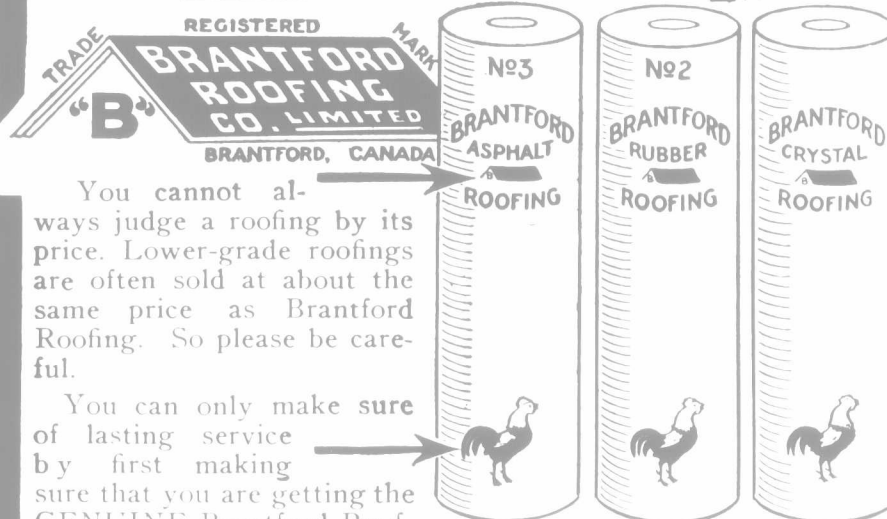
Geo. Davis & Sons, Alton, Ont.

SHORTHORNS

Choice young bulls and heifers, dark roans and reds. One white bull calf at a bargain. Dams all from a milking strain. A few Shropshire ewe lambs. Write for prices.

JOHN RACEY, Lennoxville, Que.

Brantford Roofing has two trade-marks



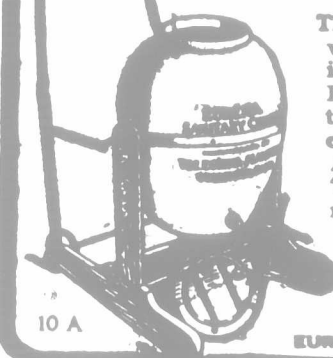
You cannot always judge a roofing by its price. Lower-grade roofings are often sold at about the same price as Brantford Roofing. So please be careful.

You can only make sure of lasting service by first making sure that you are getting the GENUINE Brantford Roofing. Remember that each roll of the genuine bears two trade-marks. One trade-mark is "a roof with a big letter B in the gable." The other is a "rooster" in the act of crowing.

Send right now for our big roofing book. It tells our reasons for making Brantford Roofing higher in quality than any other ready roofing. We believe you'll appreciate these reasons. It also tells why we make Brantford Roofing in THREE finishes—Asphalt, Rubber and Crystal.

BRANTFORD ROOFING COMPANY, LIMITED,
Brantford, Canada.

EUREKA SANITARY CHURN



There's no comparison between the ordinary wooden churn and the "EUREKA". Barrel is stoneware—top is clear glass. Besides being absolutely sanitary, the glass top enables you to see how the churning is coming along without opening the churn.

Also made with Aluminum top. The "EUREKA" is the easiest churn on the market to operate. By tilting back the frame until the weight rests on the wheels, the churn can be quickly and easily moved—while the barrel remains upright.

If your dealer does not handle the "EUREKA," do not take a substitute but write us for catalogue. EUREKA PLANTER CO. LIMITED, WOODSTOCK, ONT.

QUESTIONS AND ANSWERS. Miscellaneous.

POULTRY TRESPASS.

1. What would be the proper steps to take where a neighbor allows his poultry to run and destroy grain at seeding and harvesting time?

2. Is a man compelled to fence against poultry, on the back end of a hundred acres, one-half mile from our buildings?

A SUBSCRIBER.

Ans.—1. You may have the poultry impounded under Sec. 3 of the Act Respecting Pounds (Revised Statutes of Ontario, 1897, Chapter 272), or may serve your neighbor with notice in writing of their trespass, and, if thereafter he refuses or neglects to prevent the poultry from further trespassing on your premises, you may have him brought before a Justice of the Peace and fined.

2. No.

SPRUCE GALL-LOUSE.

I have a row of spruce trees six or seven years old. Last fall I noticed the leaves on one looking brown; thought little about it, but this spring it is dead. I can see it starting on others. It looks a little like black knot on a plum tree. Please tell me how to prevent it from killing them.

C. R.

Ans.—The trouble with your spruce trees is that they are attacked by a spruce gall-louse. Of these insects there are several species, and the same remedy will not always apply to each of these. If you will kindly forward a specimen to me at the Ontario Agricultural College, Guelph, I shall tell you which one it is that is troubling your trees. The remedy for the most common spruce gall-louse is to give your trees a thorough spraying before May, with either whale-oil soap (1 lb. to about 5 gallons of water), or with lime-sulphur of the regular spring strength used in orchards. If the lime-sulphur is the commercial variety, use it at the strength of 1 to 9 or 1 to 10. Either of these sprays will, at this time of the year, rid the trees of the pest, if thoroughly done. It is quite possible that there is also some other cause that is helping to weaken the trees that are badly attacked.

L. CAESAR.

RE TELEPHONE SERVICE.

I would like to get a little more information in reference to an article in your March 24th issue, by H. J. Davis, of Oxford Co., Ont.

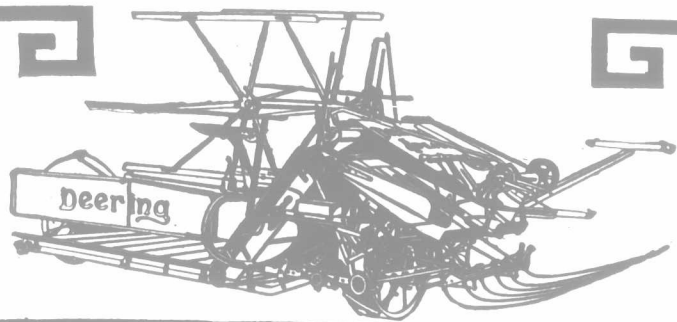
I have been a subscriber on a rural Bell line for a term of three years, and must say got the best of service, but before the end of the term the Bell Co. sold the line to a stock company. By this time the farmers of the district—North Huron and South Bruce—were ready to use 'phones, but they wanted them at cost, so we organized as a mutual company, to put up our own system, and each pay alike—ten dollars a year until our system is paid for. Now, Mr. Davis says ten subscribers and himself built at a cost of \$80 a mile two miles of line, including 'phones, wire and erection.

The way I understand this, it would mean two miles of line and eleven 'phones for \$160. We would be very much obliged if we could get a detailed account of cost of line and 'phones.

C. JOHANN.

Ans.—I did not mean all the 'phones were on the line of two miles; there are three on the two miles we rent from the company. It is pretty hard to give figures accurately of a line like this. The poles cost 75c. for 30 ft., and 60c. for 25 ft. poles, f.o.b., Dundalk. They were drawn and erected by the subscribers. Each three-battery long-distance 'phone costs about \$13.00, with push buttons, wire, 34 cents per pound; glass and other fixings make the cost of each 'phone, if the residence is near the road, figure out about \$17. The better way for subscribers to do is to communicate with the head office of the Bell Co. at Montreal, who will send a man to give all estimates, and will give information free, and will put the contract in shape for signing; also, write the firms advertising in this paper for the supplies.

Oxford Co., Ont. H. J. DAVIS.



GET ALL THE CROP THIS YEAR

THINK back to the last harvest time. Did you get all the profit from your acres that should have been yours? Or through delays, caused by tinkering with broken-down or inefficient machines, did you lose valuable time? Did you get all the grain—tangled or down—or did your machine leave a part of your profit in every field? Ask yourself today. Did I get the best results possible from my harvesting machines last year, and, if so, are they in condition to give me the same service this year? If not—

Now is the time to choose the machines that will get all the crop this year in the shortest time—with the least effort on your part. That means the Deering. They are machines that will give you the very best service. They are built to meet the conditions encountered on Canadian farms. The Deering binder is a model of convenience for operating. It is a strong machine. You will not be troubled with breakages. It has light draft and has such a wide range of adjustment that it is adapted for all conditions of grain and fields.

You will be sure of satisfaction with a Deering. It is a proved machine. In addition to binders, the Deering line comprises various other machines in harvesting and haying machine lines, seeding and tillage implements. The Deering local dealer handles I H C gasoline engines, cream separators, manure spreaders, wagons, hay presses and motor vehicles.

Investigate the Deering line. Learn what Deering machines will do for you. Call on local dealer for catalogue and particulars or write to nearest branch house.

CANADIAN BRANCHES—International Harvester Company America at Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

INTERNATIONAL HARVESTER COMPANY OF AMERICA CHICAGO U S A (Incorporated)



SPRAY TO KILL

all the parasites and fungi that lay waste your garden and orchard. You pay dearly for those you allow to escape. "VANCO" Spray Chemicals will enable you to make a sure job of your spraying. They are much more reliable and effective than home-made solutions because they are prepared and blended by skilled chemists, with an accuracy impossible to one who is making up a small quantity at home.

"VANCO" Lime Sulphur Solution shows a uniformly higher percentage of active sulphur than other brands. It is most effective for San José Scale, Aphid, Bud Moth, Apple and Pear Scabs and similar fungi and parasites. Free from sediment, and sprays freely. \$3.00 per bbl., f. o. b. Toronto. One barrel makes 12 for spring or 50 for summer spray.

"VANCO" Lead Arsenate contains from 15% to 16% Arsenic Oxide and only 40% moisture average. It is the best all-around spray for Codling Moths, Potato Bugs, Canker Worms and other leaf-eating insects. 10c. to 13c. per lb. according to quantity.

Club your orders and save on freight. We introduce the idea of High Quality at Lowest Price. "VANCO" Spray Chemicals are prepared by practical men, and have successfully passed Government analyses and practical tests.

Chemical Laboratories Limited 11 126-136 Van Horne Street, - - TORONTO.

Eddy's "Silent" Matches SATISFY THE MOST PARTICULAR PEOPLE

They are the most perfect made. Noiseless, as their name implies. No sputter. No smell of sulphur. Are quick and safe.

ALL FIRST-CLASS DEALERS KEEP THEM. THE E. B. EDDY COMPANY, HULL, CANADA. HERE SINCE 1851. DONALD McLEAN, Agent, London, Canada.

QUESTIONS AND ANSWERS. Miscellaneous.

SEED FROM ALFALFA.

Does alfalfa produce seed in this Province, and, if so, from what cutting is it obtained? T. C.

Essex Co., Ont.

Ans.—It does produce seed in Canada, though in uncertain and usually small quantities. Usually the second cutting is left for seed.

INSECTS.

I am sending a sample of a bug which was very numerous last summer, and is showing itself this spring. I have been told by some that it is the bug that lays the egg of the Buffalo moth.

Durham Co., Ont.

MRS. A. K.

Ans.—The bug inclosed is not the insect that lays the egg of the Buffalo moth. It is the "lady-bug," or "lady-bird" (family Coccinellidae). Instead of being harmful, this insect is useful, as it feeds chiefly on plant-lice and scale insects. It should never be wantonly destroyed.

SYMPTOMS AND TREATMENT OF ANTHRAX.

What are the first symptoms of anthrax, and what is the best treatment? H. G.

Ans.—The direct cause of anthrax is always infection either from a diseased animal or through the virus of an animal that died of the disease remaining in the ground on which other stock is pasturing, the infection taking place through inoculation or contact of the bacillus or its spores with an abraded surface or mucous membrane on a sound animal. There are no regular symptoms. One animal may only appear dull, rapidly get weaker, lie down and die without a struggle; others have colicky pains, which continue until death ensues in from four to six hours. Treatment is hopeless, and the dead animal should be burned or deeply buried and covered with lime. The disease is communicable to man, and great care should be taken in dealing with the carcass, not to attempt to skin or handle it, or to drag it over grass on which stock pastures. Immunity from the disease consists in inoculating the sound animals of the herd with anthrax vaccine, which may be had by applying to Dr. J. G. Rutherford, Veterinary Director—General, Ottawa. The price of the vaccine is 5 cents per dose, and the price of the outfit for vaccinating is 50 cents. Instructions for use accompany the outfit.

DISTEMPER—CHOICE OF SHEEP AND POULTRY.

1. What is a cure for distemper, and what is the best thing to feed a horse when sick with distemper?
2. What would be the best kind of sheep for a person to start on, and about what price would be right to pay?
3. What breed of hens are the best for laying the year round?
4. Where could a person get a good cattle dog, what breed, and anything under four months of age?

GOODFELLOW.

Ans.—1. Ordinary light cases require but little treatment beyond diet, bathing the throat with hot water, steaming the head by pouring hot water on hay in a sack and holding it under the horse's nostrils, keeping him warm by blanketing if weather is cold or stable drafty. If the fever is excessive, give a handful of Glauber's salts in feed, three times daily, as a laxative, and small doses of antimony, iodide of potash, or quinine. The swelling of the glands should be treated with very warm water, by bathing with hot water and applying flax-seed poultices, and as soon as there is any evidence of the formation of matter, it should be opened. Boiled oats and bran, with good clover hay and a few carrots, are the best feed while ailing.

2. The breed you fancy, or the breed which has done best in your district. 3. No one breed has a sure claim. Plymouth Rocks, Orpingtons and Wyandottes are all good general-purpose breeds. The Mediterranean breeds, such as Leghorns and Minorcas, lay most eggs perhaps in the course of a year.

4. Advertise in "The Farmer's Advocate."

Blood Was Bad.

From impure blood comes Pimples, Boils, Ulcers, Tumors, Abscesses, Festering Sores, Rash, Constipation, Headaches, etc.

Get pure blood and keep it pure by removing every trace of impure morbid matter from the system by using

BURDOCK BLOOD BITTERS.

Mrs. Fred. Biggs, Kingston, Ont., writes:—"I was completely run down, my blood was out of order, and I used to get so weak I would be compelled to stay in bed for weeks at a time. I could not eat, was pale and thin; every one thought I was going into consumption. I tried everything and different doctors until a friend advised me to use Burdock Blood Bitters. I did not have one bottle used when my appetite began to improve. I used six bottles. I gained ten pounds in two weeks. When I began to take it I only weighed ninety-three pounds. It just seemed to pull me from the grave as I never expected to be strong again. I will tell every sufferer of your wonderful medicine."

For sale by all dealers.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

PILES CURED at HOME by New Absorption Method.

If you suffer from bleeding, itching, blind or protruding Piles, send me your address, and I will tell you how to cure yourself at home by the absorption treatment; and will also send some of this home treatment free for trial, with references from your own locality if requested. Immediate relief and permanent cure assured. Send no money, but tell others of this offer. Write to-day to Mrs. M. Summers, Box 821 Windsor, Ont.

HAWTHORN HERD OF DUAL-PURPOSE

Shorthorns

For sale: Young cows and heifers; bred right; priced right; and the right kind. Come and see them.

Wm. Grainger & Son, Londesboro, Ont.

A. Edward Meyer P. O. Box 378, Guelph, Ont.,

Breeds SCOTCH SHORTHORNS Exclusively. Twelve of the most noted Scotch tribes have representatives in my herd. Herd bulls; Scottish Hero (imp.) = 55042 = (90065) 295765 A. H. B.; Gloster King = 63703 = 283004 A. H. B. Young stock for sale. Long-distance phone in house.

Scotch Shorthorns

At Toronto Exhibition this fall yearling bulls bred by us won 1st and 3rd in class and junior champion. We also bred the sire of these bulls. The grand champion steer at Guelph was sired by a bull of our breeding. We have 10 young bulls for sale now, bred the same. Write for breeding and prices.

John Miller, Brougham P. O., Ontario. Claremont Stn., C. P. R., 3 miles.

HIGH-CLASS SHORTHORNS

I have on hand young bulls and heifers of high-class show type, pure Scotch and Scotch-topped, sired by that sire of champions, Mildred's Royal. If you want a show bull or heifer, write me.

GEO. GIER, Grand Valley P. O. and station, also Waldemar station.

Spring Valley Shorthorns

Herd headed by Clipper Chief (imp.) = 64220 = (94673). If you want to get an imported bull, or a good Canadian-bred one to head your herd, be sure and write, or come and see them. Long-distance telephone.

KYLE BROS., AYR P. O., ONT.

Bud's Emblem = 63860 = (284905) A. H. B. First-prize aged bull C. N. E., 1909, by that famous champion and sire of champions, Old Lancaster, imp. = 50068 =, heads the Old Meldrum herd of SHORTHORNS, near Guelph. A. F. & G. Auld, Eden Mills P. O., Ont.

SHORTHORNS One choice young Lady Fanny bull for sale—good herd header; also several young heifers. A few prizewinning Berkshires, both sexes. Write or come and see them. Prices moderate. ISRAEL GROFF ELMIRA, ONTARIO

When Writing Mention This Paper.

Thrifty Chicks Make Paying Fowls

That's reason and common sense. What the chick is, the fowl will likely be. The important matter, then, for every poultry raiser is to give the growing chickens a *good start*. Not at all a difficult thing to do, either, if you get Dr. Hess Poultry Pan-a-ce-a to help you. This is a Tonic to mix once a day in the soft feed—a system known among poultry men as "The Dr. Hess Idea" of feeding. Only a little of it is needed, but its effect is surprising. You can almost see and measure the daily development of the little peepers, from tender weaklings to vigorous, growing young fowls.

DR. HESS Poultry PAN-A-CE-A

Will carry them on from the growing stage to early maturity and pay you abundantly for the little extra attention you have given them. It cures Gapes, Cholera, Roup, etc.; it makes the pullets lay *early* and keep it up the whole season round, because it acts on the *digestive organs* of the hen and gives her power to assimilate large quantities of food and turn it into eggs. In the same way it helps to fat the cockerels and other birds you wish to sell. It gives strength to pass the moulting season and *good health* always. A penny's worth feeds 30 fowls one day. Sold on a written guarantee.

1 1/2 lbs. 35c; 5 lbs. 85c; 12 lbs. \$1.75; 25 lb. pail \$3.50.
Duty paid.
DR. HESS & CLARK, Ashland, Ohio, U. S. A.
Send 2c for Dr. Hess 48 page poultry book, free.

DR. HESS STOCK FOOD

Is a *guaranteed* animal tonic, formulated by an experienced live stock farmer (Dr. Hess, M.D., D.V.S.) for the sole purpose of bringing about an *economical* system of feeding. It acts on the *digestive organs*, keeps them healthy and *active* and relieves the minor stock ailments. The animal receiving it can consume and *put to use* a large ration. Thus it helps the cow to give more milk and the steer, sheep or hog to fat quicker. No live stock owner can afford to do without Dr. Hess Stock Food. Fed twice a day in small doses. Sold on a written guarantee.

100 lbs. \$7.00; 25 lb. pail \$2.00. Smaller quantities at a slight advance. Duty paid.
Send 2c for Dr. Hess Stock Book, free.

INSTANT LOUSE KILLER KILLS LICE



ELECTRIC BEANS
CREATE RICH RED BLOOD
ARE A TONIC
BLOOD MAKING BEAN.

ELECTRIC BEANS
Stand supreme as a Blood and Nerve Tonic.

They are unequalled for Biliousness, Sick Headache, Constipation, Heart Palpitation, Indigestion and Anemia.

Those who are in a position to know what is best use "ELECTRIC BEANS."

Write for Free Sample
50c. a Box at all Dealers or upon receipt of price, from
THE ELECTRIC BEAN CHEMICAL CO. Ltd.
OTTAWA.

Shorthorns

FOR SALE! Several choice Canadian-bred bulls ready for service; also a good imp. two-year-old bull of the Brawith Bud family. A number of cows and heifers of different ages of right type and quality. Write or call on
H. J. DAVIS,
Woodstock, Ontario.
Long-distance Bell phone. C. P. R., G. T. R. main lines

SHORTHORN BULLS

I have some choice young bulls, from imp. sire and dams. Good ones at reasonable rate. Come and see them. Prices right. Also some choice heifers.

J. Brydone,
MILVERTON, ONTARIO,
G. T. R. and C. P. R. Station.

Willow Bank Stock Farm

SHORTHORNS AND LEICESTERS.

Herd established 1855; flock 1848. The great Duthie-bred bull, Imp. Joy of Morning = 32070-, and the Missie bull, Royal Star = 72502=, heads my herd. Choice selections to offer at all times in both bulls and females.

JAMES DOUGLAS, CALEDONIA, ONTARIO.

Shorthorn Cattle

Would price my stock bull, Star Prince = 53900=, Red; also one yearling bull, a winner in Toronto and London. Females of all ages. Some very good heifers in nice condition. All reds or good roans.

J. T. GIBSON, DENFIELD, ONT.

275 BURLINGTON SHORTHORNS 275

3 Choice Imported Scotch Shorthorn Bulls—yearlings.
1 Imported 2-year-old Bull, red—an extra sire.
10 Bulls, 9 to 16 months old—all by imported sire.
30 Choice Young Cows and Heifers—mostly bred or have Calves at foot. Long-distance telephone. Farm 1/4 mile from Burlington Jct. Sta., G. T. R. **J. F. MITCHELL, Burlington, Ont.**

SCOTCH SHORTHORNS

Eight extra good young bulls, from 10 to 15 months old; 20 choice cows and heifers, forward in calf or with calves at foot. Prices reasonable. Inspection invited.
Farms close to Burlington Jct., G. T. R. **W. G. PETTIT & SONS, Freeman, Ont.**

INVERNESS SHORTHORNS

I can supply Shorthorns of all ages, with richest Scotch breeding and high-class individuality.
Farms close to Burlington Jct., G. T. R. **W. H. BASTERBROOK, Freeman, Ont.**

Maple Leaf Shires, Shorthorns, Hampshire Hogs

1- and 2-yr.-old Shire stallions, females from yearling fillies up; Shorthorns, both bulls and heifers; a choice lot of young Hampshire pigs, both sexes, beautifully belted.
PORTER BROS., APPLEBY P.O., BURLINGTON STA. Phone.

30 HEIFERS AND 29 BULLS

PRESENT OFFERING.

Bred right, made right and at prices to make you feel right. Come early and get your choice. List of these, with catalogue, will be mailed to those who ask for them.

H. CARGILL & SON, CARGILL, ONT.

VALLEY HOME SHORTHORNS AND BERKSHIRES

If you want a first-class Shorthorn bull or heifer come and see what we have, or if you want a show animal with a choice pedigree we have them. For description of herd see Xmas Number of The Farmer's Advocate, on last page. **S. J. PEARSON, SON & CO., MEADOWVALE, ONT., P. O. AND STATION, C. P. R.**

CHOICE SCOTCH BULLS

FOR SALE. HERD-HEADING QUALITY.

H. SMITH, R. R. 3, Hay, Huron Co., Ont. Farm adjoins Exeter, on G. T. R.

SALEM SHORTHORNS

I have generally what you want in choice Shorthorns.

Elora Station, G. T. R. and C. P. R. J. A. WATT, SALEM.

Maple Hall Shorthorns

Are bred on most fashionable Scotch lines, and are of high-class individuality. For sale are 6 young bulls from 6 to 10 months of age. A low, thick, sappy lot. Also 10 yearlings and 10 two-year-old heifers. Show material in this lot. Telephone connection. **DAVID BIRRELL & SON, GREENWOOD P. O., ONT., CLAREMONT STATION.**

IRVINE SIDE SHORTHORNS

One good red bull, 16 months old, by Imp. Pride of Scotland, and out of a Miss Ramsden dam (from imp. sire and dam). Will be priced away down, as he is the last of last year's calves. Will price a few young heifers safe in calf.
Elora Sta., G. T. R. and C. P. R. **J. WATT & SON, Salem P. O.**

Three Shorthorn Bulls for Sale.

Show animals, choice breeding. Prices reasonable. Stock bull, Benachie (imp.).
Geo. D. Fletcher, Binkham P. O., Erin Sta., C.P.R.

GOSSIP.

AN IRISH BULL.

A Shorthorn bull was sold in the Glasgow market last month which weighed 2,954 lbs. The animal was consigned by a County Cork dealer, and his immense size, combined with good quality, attracted the attention of the frequenters of the market. Councillor T. J. Irwin purchased the animal at \$220. The bull was between four and five years old, and as straight on the top line as a yearling, quite free from patchiness, and stood over 5 feet 6 inches in height. His length appeared to exceed 9 feet.

Things are certainly moving some around the Cairnbrogie stables of Graham Bros., at Claremont, Ont. They report an almost unprecedented demand for Clydesdales, both stallions and mares, with a decided demand for better quality, more size and draft character. Since last September they have sold a total of 47 Clydesdale stallions, 20 of them going to Western Canada, 32 being shipped from Claremont station inside of seventeen days, surely record work. They have also shipped to Iowa, 67 registered mares, which, on arrival, were sold by auction at Storm Lake, Iowa, and made the grand average of \$487 each, which speaks unmistakably of their quality. Graham Bros. are also making arrangements to ship 14 more to the same firm. Besides these, they have sold to R. A. Fairburn, of Fairfield, New Jersey, 12 registered mares, the champion Clyde stallion, Garty Pride, and the winning Hackney stallion, B. B. Critic. There also went to Mr. Spoor, President of the Union Stock-yards, Chicago, a pair of high-class Clyde mares. Mr. Spoor was formerly an enthusiast of the Percheron, but has come to realize that the Clyde is par excellence the greatest of them all. Horsemen, wake up, and let us know what you are doing.

HILLVIEW SPECIALTIES.

The specialties in pure-bred stock breeding at Hillview Stock Farm are Clydesdale horses, Shorthorn cattle, Yorkshire hogs, Barred Plymouth Rock and Houdan poultry. This noted breeding farm lies in the County of Ontario, six miles from Pickering Station, G. T. R., on the south, or Claremont Station, C. P. R., on the north, and is the property of W. F. Disney, Greenwood P. O., one of the rising young men of South Ontario. Owing to the record demand for Clydesdales for the last few months, there is only one left for sale, Minnie Darnley, a brown, nine years of age, sired by Linkwood Boy, by Cairnbrogie Stamp, dam Darnley Rose, by Darnley (222). She is exceptionally well-bred, and, in condition, will shove the ton very close; a right good mare. Her last year's colt was sold a few days ago for a long price. The Shorthorns are Scotch and Scotch topped, of the Miss Ramsden, Duchess of Bercham Abley families, and others, going to Imp. Daisy = 105=.

For years, Shorthorns have been bred on this farm with the object of increasing their usefulness as producers of milk. The stock bull lately in service was Lavender's Pride = 76052 =, by Lancaster Champion, dam Lavender Beauty 3rd, by Prince Gloster. All the heifers old enough are in calf to him, and are sired by Imp. Royal Scott. Several of these are for sale, as well as Hillview Royal Ramsden, a red bull calf, eight months old, sired by Royal Ramsden = 66770=, dam Hillview Miss Ramsden, by Imp. Royal Scott. He is thus doubly infused with the blood of that popular old milking strain of Shorthorns, the Miss Ramsdens, and will make a right good, thick, sappy bull. The Yorkshires are all that could be desired for type, size and quality; imported and home-bred. Among the several choice brood sows are such well-bred ones as Broomhouse Sally 2nd (imp.), sired by Broomhouse Candidate. She has a splendid, even litter at foot, by O. L. Julian 42nd. O. L. Violet 32nd is by O. L. Chancellor 1st, and has a litter by Craigcrook Duke (imp.), the main stock boar in service. Several of the other sows are of the popular Cinderella strain. For sale, are both sexes, along about six weeks of age, an exceptionally choice lot. The Barred Rocks and Houdan poultry are a well-selected lot, from which eggs for hatching are now for sale.

MAY

T
You

ture of industries
Sharples
Dairy
Tubular.
The World's
Best.
THE S
TOR

The M

of Record of
Kol. Not
bull calves for
two good co

WALBURN

High-cla
nearest dam
sire's dam,
lbs. butter in
orders for
A. R. O. dar

WM. C. S

HOLSTE

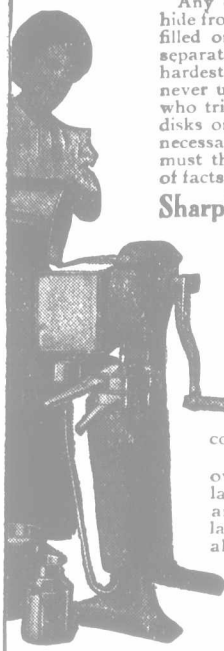
DOG

ing strains.
ABBOTT, H

A very
thirteen ye
nose, and
came to
the other
fore takin
follows:
"Miss B
not being
troat, it
tick him
troat, it
boy licked
caught him
of a sled
Then his
him another
his pa, se
next time
keep in se

K
OPRA
CRES
F

THEY THINK You Don't Know



Any one who thinks he can hide from you the fact that disk filled or other common cream separators are complicated and hardest to clean must think you never use your eyes. Any one who tries to convince you that disks or other contraptions are necessary in a modern separator must think you know nothing of facts.

Sharples Dairy Tubular Cream Separators

have neither disks nor other contraptions, yet produce at least twice the skimming force, skim at least twice as clean, wash many times easier, and wear a good many years longer than common, complicated separators.

That is why farmers all over the world call Tubulars "The World's Best", and it explains why Tubular sales exceed most, if not all, others combined and why Tubulars probably replace more common separators than any one maker of such machines sells. The manufacture of Tubulars is one of Canada's leading industries. Write for Catalogue No. 193

Sharples Dairy Tubular. The World's Best.

30 Yrs

THE SHARPLES SEPARATOR CO.
TORONTO, ONT. WINNIPEG, MAN.

The Maples Holstein Herd

of Record-of-Merit cows, headed by King Posch De Kol. Nothing for sale at present except choice bull calves from Record-of-Merit cows. Also one or two good cows.

WALBURN RIVERS, FOLDEN'S, ONTARIO

High-class Holsteins—Head of herd, Pietje Korndyke Lad. Two nearest dams average 26.09 lbs. butter in 7 days. His sire's dam, Pietje 22nd, has a record of 31.62 lbs. butter in 7 days. Present offering: now booking orders for bull calves sired by above sire and out of A. R. O. dams.

WM. C. STEVENS, PHILLIPSVILLE, ONT.

HOLSTEINS AND YORKSHIRES

R. HONEY, Brickley, Ont. Northumberland Co. Offers a choice lot of boars and sows ready to mate; also orders taken for the coming crop of calves from Prince Posh Calamity Bleske and R.O.P. cows.

DON'T Buy a HOLSTEIN BULL till you get my prices on choice goods from thirteen months down, from best producing strains. "Fairview Stock Farm." FRED ABBOTT, Harrietsville, Ont.

A very subdued-looking boy of about thirteen years, with a long scratch on his nose, and an air of general dejection, came to his teacher in a public school the other day and handed her a note before taking his seat. The note read as follows:

"Miss B—: Please excuse James for not being there yesterday. He played trogant, but I guess you don't need to lick him for it, as the boy he played trogant with an' him fell out, an' the boy licked him, an' a man they sassed caught him an' licked him, an' the driver of a sled they hung on to licked him also. Then his pa licked him, an' I had to give him another one for sassing me for telling his pa, so you need not lick him till next time. I guess he thinks he better keep in school hereafter."

BOOK REVIEW.

TWO NEW BOOKS ON DAIRYING.

"Questions and Answers on Buttermaking," "Questions and Answers on Milk and Milk-testing," the former by Dr. C. A. Publow, and the latter by Publow & Troy, both published by the Orange Judd Co., New York, are the latest aspirants for a place in English dairy literature. Until we have effective criticism of books aspiring for a permanent place in dairy libraries, the books are likely to be more or less "wishy-washy" in character. Most of the reviews given of agricultural and dairy books are of the "namby-pamby" order that make a reader "tired," to use a more or less slangy expression.

Criticism may be of two kinds—constructive or destructive. A combination of these two is probably best where a work merits healthy criticism.

The author of the work on Buttermaking is a Canadian, who was formerly a Cheese Instructor in Eastern Ontario, but is now Assistant Professor of Dairy Industry in Cornell University, New York, U. S. A.

The titles of the books suggest a society column in a fashion or department journal, but the matter is better than the title, as it deals largely with facts which the dairy student meets with every day. Both books open in the same way, and with exactly the same matter relating to the composition of cow's milk. This suggests lack of material, but may be justified when one considers the nature of the books. The average percentage of fat in cow's milk is given as 4, which is rather high for Canadian milk, and above the standard set by any of the States. The percentage of the various fats which go to make up milk-fat is given in both works. Fleischmann says it is practically impossible to separate these fats.

Both works contain exactly the same matter with reference to moisture tests, and in other parts there is considerable overlapping. The definition of "over-run" is rather weak and indefinite. We notice that a list of the best pasteurizers and combined churns and workers is given, which, by the way, seems to combine nearly all on the market, but a similar list of the cream separators is not attempted. The separator manufacturers will surely feel slighted. As an indication of the difficulties in the method of treating a subject like dairying according to the question-and-answer plan, note p. 20 in answer to the question, "What are the important features in a pasteurizing machine?" Among the "features" is mentioned, "Cost." We hardly see how "Cost" can be a "feature" of a pasteurizer.

There are several other "slips" of a similar nature, which are due to the method of treating the subject, and after carefully looking over the work, we are doubtful of its value as a method of instruction in buttermaking. The subject and the method do not harmonize very well. The last topic, sewage disposal, appears to be tacked on as an after-thought.

We do not know the order in which the books were written, but the one relating to milk and milk-testing appears to be the better work. One reason for this is that the subject lends itself to the method much more effectively, and the author appears to be more at home in this branch of dairying. Pope laid down the principle that there must be a relation between the sound and the sense in poetry. His well-known lines,

"When Ajax strives some rock's vast weight to throw,
The line, too, labors, and the words move slow."

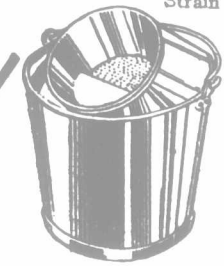
are one of the best examples of his dictum. Scientific prose must also conform to well-known laws of writing, among which clearness is the most important principle. This principle is violated on p. 5, where Prof. Sterch is quoted as saying that the envelope surrounding fat-globules "is composed of 94 per cent. water and 61 per cent. proteins." This is like the statement of an agent who called at my office yesterday selling a certain article which contained "106 per cent. of effective compounds."

Canadian readers need to bear in mind that the argument on p. 23 relates to

(Continued on page 794.)

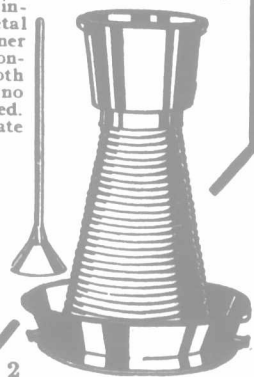
MAKE DAIRYING PAY BETTER

Strain your milk as it leaves the cow, not afterwards, and see that you strain milk only, not milk, dirt and bacteria. You can make pure milk an absolute certainty by using the



STERILAC SANITARY PAIL

Note its clever construction. The funnel is detachable. As the milk falls on the slant towards the milk, it passes direct to the strainer into the pail. All dirt falling into the opening is caught on a deep metal shelf inside the funnel—not on the strainer—thus milk and dirt never come in contact. You can use ordinary cheese-cloth for straining. Capacity 14 quarts, no joints on the inside; it is easily cleaned. Price, \$2.50. Used by all up-to-date



PURITY MILK COOLER-AERATOR

Cools milk rapidly, within 2 degrees of running ice water, well or spring water, whichever you use. Rapid cooling and thorough aeration ensures milk keeping sweet for 48 hours and destroys odors. The milk flows through the perforated pan on top on to the corrugated body which ensures the milk running down slowly so that it is perfectly cool when it reaches the retainer pan. There are outlets at each side of this pan. This cooler is well made, has soldered seams, is easy to clean and simple to operate. Will last for years. Price, \$6.50. Guaranteed as represented. Write for large catalogue of dairy supplies, FREE.

W. A. DRUMMOND & Co., 175 King St. E., Toronto

MERTON LODGE HOLSTEINS.



I am offering my entire crop of spring calves, sired by a son of De Kol the 2nd Butter Boy the 3rd. I also offer a few young cows and heifers sired by a son of Hengerveld De Kol, the greatest sire of the breed; also a number of high-grade calves sired by our imported Bull, Butter Boy Calamity.

W. W. GEORGE.

Crampton, Ont.

HOMWOOD HOLSTEINS, headed

by Grace Fayne 2nd's Sir Colantha, one of the richest bred bulls of the day. (The home of Lady Aaggie De Kol, sweepstake cow at Guelph Winter Fair, '08-'09.) Official record 27 1/4 lbs. of butter in 7 days. Also Queen's Butter Baroness, champion 33-year-old of Canada; official record 23.66 lbs. of butter in 7 days; and several others with records of over 20 lbs. of butter in 7 days. Only a few choice bull calves for sale. M. L. & M. H. Haley, Springford, Ont.

CENTRE AND HILLVIEW Holsteins

140 head, 45 females in R. O. M. Herd headed by Brookbank Butter Baron, Bonheur Statesman and Sir Sadie Cornucopia Clothide. The average of dam, sire's dam and grandam is: milk in 7 days, 662.85 lbs.; butter in 7 days, 30.58 lbs. We have bulls born Mar., '09, to two weeks old for sale, from Record-of-Merit dams. Long-distance telephone. P. D. Ede, Oxford Centre, Ont. Woodstock Sta.

Holstein - Friesians

FAIRVIEW FARM offers young bulls, sired by Pontiac Korndyke and Rag Apple Korndyke, without question the two greatest Korndyke bulls in the world, and out of cows with large A. R. O. records and testing 4% fat. Come and see them, or write.

E. H. DOLLAR, Heuvelton, N. Y. Near Prescott.

LAKEVIEW HOLSTEINS!

Herd headed by Count Hengerveld Fayne De Kol, whose sire, Pietertje Hengerveld Count De Kol, is the sire of De Kol Creamelle, the world's champion milk cow, with 119 lbs. milk in 1 day, 780 lbs. in 7 days, 10,017 lbs. in 100 days. He has five daughters that average 30 lbs. in 7 days, and 120 lbs. in 30 days. His dam, Grace Fayne 2nd, 26 30 lbs. in 7 days, is dam of Grace Fayne 2nd's Homestead with the following records:

7 days, 4 years old,	29.16 lbs.	% fat 4.12	Bull
30 " 4 " "	119.22 "	" 4.09	calves
7 " 5 " "	30.55 "	" 4.37	for
7 " 6 " "	35.55 "	" 5.42	sale.

E. F. OSLER
BRONTE, ONTARIO.

Elmwood Holsteins Choice bred calves for April and May delivery. Sired by imported Ykema Sir Posch and Pontiac Sarcastic, a grandson of Sarcastic Lad. Registered. Delivered. Express paid. Safe delivery guaranteed. E. D. GEORGE & SONS, PUTNAM, ONT.

Evergreen Stock Farm For sale: A fine bull calf 2 months old, from Pauline Pet, record 16,000 lbs. of milk per year for 8 years; sired by Sir Mercena Favorite. Also other bull calves at moderate prices. F. E. PETTIT, BURGESSVILLE, ONT.

Silver Creek Holsteins Fayne Segis Clothide, his 7 nearest dams' records average 27 lbs. For sale are young stock of both sexes, sired by bull with high official backing and out of Record cows. A. H. TEEPLE, Currie's P.O., Ont., Woodstock, Sta. Phone connection.

Trout Run Ayrshires—My present offering is several heifers and cows in milk, a number of heifer calves, 3 young bulls fit for service, one of them from imp. sire and dam; dam's record 45 lbs. a day. My herd are heavy producers and critically selected. Am also offering 20 Toulouse geese at \$4 and \$5 a pair. WM. THORN, Lynedoch, Ont.

CHERRY BANK AYRSHIRES! Now is the time to order your bull calf, sired by Netherhall Milkman, the first-prize aged bull at Canadian National Exhibition, Toronto, and champion of the breed at Ottawa in 1909. Can fill orders for yearling bulls fit for service, or last fall calves. Females any age. Nothing but the best is our motto. Satisfaction guaranteed. Visitors welcome. P. D. McARTHUR, North Georgetown, Que. 3/4 mile from Howick station.

Ayrshires and Yorkshires!

We still have a few choice individuals of almost any age on hand in Ayrshires, and are always ready to price any. Other breeders in this section. Bull calves from Record of Performance cows. A few young Yorkshires on hand.

Long-distance phone. ALEX. HUME & CO., MENIE, ONT.

Ayrshires—Four young bulls, all bred on dairy lines, out of famous dams; fashionable in color, as well as in breeding. Will be sold worth the money. Females all ages. N. DYMENT, Clappison's Corners, Ont.

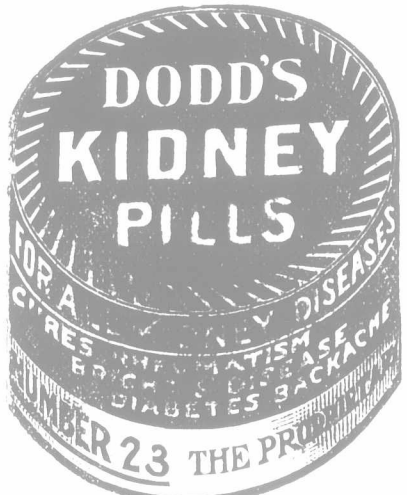
HILLCREST AYRSHIRES—Bred for production and large teats. Record of Performance work a specialty. Fifty head to select from. Prices right. FRANK HARRIS, Mount Elgin, Ont.

Stonehouse Ayrshires 36 head to select from. All imported or out of imported sire and dam. For sale: females of Hector Gordon, Howick, Quebec.

Springbank Ayrshires! Canada's leading herd of Record-of-Performance Ayrshires. Big records, big cattle, big udders and big teats. Over 50 head to select from; 13 yearling heifers, 7 yearling calves. All in good condition. A. S. TURNER, RYCKMAN'S CORNERS, ONT. 3 Miles South of Hamilton.

Springhill Ayrshires Headed by two bulls whose dams have the highest official records in Scotland. Order a bull calf out of our best cows. We can please you in all ages and sexes. Robt. Hunter & Sons, Maxville, Ont.

STOCKWOOD AYRSHIRES Are producers of milk testing high in butter-fat. In my herd I have a range of selection, either imp. or Canadian-bred, of either young bulls or females, unexcelled in Canada. Price and terms to suit purchaser. D. M. WATT, ST. LOUIS STA., QUE.





Beware Imitations.

When you buy Roofing Look for the RUBEROID MAN

There are upwards of 300 imitations of the genuine RUBEROID. This is one of the strongest proofs of its high quality. A worthless article is never imitated.

RUBEROID ROOFING

(TRADE MARK REGISTERED.)

can always be identified by the large picture of the RUBEROID MAN on the outside of each Roll and the word "RUBEROID" stamped on the underside of the material, every few feet.

Ask the Ruberoid dealer in your neighborhood to show you a sample of Ruberoid that has actually given service for 17 years. If he does not happen to have a sample write direct to us and we will send you one by mail.

We want every house owner to read our book "All About Roofing." It gives valuable information as to cost and service of all kinds of Roofing.

Sent free on request. Write to-day.

THE STANDARD PAINT COMPANY OF CANADA, LIMITED,
MANUFACTURERS, MONTREAL. AGENTS EVERYWHERE.

STOCK MEN

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

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

**THE
TORONTO ENGRAVING
COMPANY LIMITED,
TORONTO - CANADA.
DESIGNERS, ILLUSTRATORS, ENGRAVERS.**

ARE YOU IN WANT OF A CHOICE BULL TO HEAD YOUR HERD?

We are offering choice bull calves sired by Fountain's Boyle, who won first prize at Toronto, London and Ottawa, who also headed first-prize herd at Toronto and Ottawa. Also offering some choice heifers.

D. DUNCAN, DON, ONT.
DUNCAN STATION, C. N. O.

BRAMPTON Jerseys

CANADA'S GREATEST JERSEY HERD
We are offering for sale one 2-year-old bull and four yearlings, fit for service; also six bull calves; females of all ages. Come and see them, or write.

B. H. BULL & SON, BRAMPTON, ONT.

High Grove Jerseys and Yorkshires.
No better blood in Canada. Present offering: Two young bulls, 12 and 20 months old, respectively; females all ages. Prices and all information on application.
ARTHUR H. TUFTS, P.O. Box 111, Tweed, Ont.

CALVES Raise Them Without MILK.

Booklet free. The Steel, Briggs Seed Co., Toronto, Ont.

When Writing Mention This Paper.

LINCOLN LONG-WOOL SHEEP And Shorthorn Cattle.

The Riby Grove Flock and Herd, owned by
MR. HENRY DUDDING,

Is the source to which practically all the leading export buyers have resorted from time to time to obtain stud sires and dams, and rams and ewes of unrivalled merit and quality. The record of its show-yard success is unequalled, and so are its sale averages. Selections of Sheep and Cattle always for sale.

Apply: **THE OWNER, RIBY GROVE, STALLINGBOROUGH, GRIMSBY, ENGLAND.**
Supply limited, demand unlimited.
Circular and prices on application to
J. & D. J. Campbell, Fairview Farm, Woodville, Ont.

FAIRVIEW SHROPSHIRE OFFERING:
Choice rams, shearlings and lambs.
Extra good ewes, shearlings and older.
They are of the very best breeding.
Quality and condition beyond criticism.
If you want a few, order immediately.
Supply limited, demand unlimited.
Circular and prices on application to
J. & D. J. Campbell, Fairview Farm, Woodville, Ont.

When Writing Mention The Advocate

I WILL SHEEP of the different English breeds for those wanting them. Selections will be made with the greatest care, and the charges will be moderate. Will also bring a few **CLYDESDALES** and **SHORTHORNS** on order. Let me know what you want, and ask for particulars. Have two Shorthorn bulls just landed that will be sold worth the money, and they are high-class in every way. Have as usual home-bred Shorthorns. **ROBERT MILLER, Stouffville, Ont.**

HILLVIEW YORKSHIRES

Are ideal in type and quality. We have young things of both sexes for sale. Also one Clyde mare. Shorthorns of both sexes. And Barred Rock and Houdan eggs. **W. F. DISNEY, Greenwood P.O., Ont.** Phone connection.

MAPLE LEAF BERKSHIRES

For sale: Young sows bred and ready to breed; boars fit for service; also young pigs farrowed in March and April. Imp. sires and dams. Pairs not akin. **C. P. R. and G. T. R. Joshua Lawrence, Oxford Centre P. O., Ontario.**

Hillcrest Tamworths are second to none in America for type and quality. For sale are both sexes and all ages, from sows bred and boars fit for service down to youngsters. **Herbert German, St. George, Ont.**

Monkland Yorkshires With very nearly 100 sows in breeding, of modern type and high-class quality, our herd will stand comparison with any in Canada. We are always in a position to fill large or small orders with despatch. Long-distance phone. **JAMES WILSON & SONS, FERGUS, ONT.**

Willowdale Berkshires!

Nothing to offer but suckers and three extra choice young sows, bred to farrow May and June. Be quick if you want one. **J. J. WILSON, Importer and Breeder, Milton P. O. and Station. C. P. R. and G. T. R.**

DUROC - JERSEY SWINE

Imported and home-bred. Sows ready to breed Boars fit for service, and younger ones either sex. Also Embden geese. **MAC CAMPBELL & SONS, HARWICH, ONT.**

WOOL

WE WANT TO BUY YOURS.
WRITE NOW FOR OUR PRICES.

E. T. CARTER & CO.,
84 FRONT ST. E., TORONTO, CANADA.

LABELS
Metal Ear Labels
for Cattle, Sheep
and Hogs.

The old standby for all who have stock liable to stray, or to dispute as to identification or ownership; for herd or flock records, or for general convenience. Send for free circular and sample. It may save you much trouble. Write to-day.

F. G. JAMES, BOWMANVILLE, ONTARIO.

MAPLE GROVE YORKSHIRES.

To make room for the natural increase in our herd, we now offer for immediate disposal: 25 choice young and very typical sows, an exceedingly choice, easy-feeding bunch. Many of them sired by M. G. Champion—20102—, champion and silver-medal boar at Toronto in 1907, and first as a three-year-old in the aged class in 1908, a grand stock-getter. Many of our sows are prize-winners, and are of the best Yorkshire blood in England and Canada. 100 Feb., Mar., and April pigs—pairs not related. We are putting prices low, because we must sell. Satisfaction guaranteed.

H. S. McDIARMID, Fingal, Ont.
Shedden Station. Long-distance phone in house.

SUNNYSIDE CHESTER WHITE HOGS.

I am now offering some very choice young things of both sexes, of breeding age. A few Shropshire sheep of both sexes. A number of Bronze turkeys and toms, and Red Cap cockerels and pullets.
W. F. WRIGHT, Glanworth P. O., Ont.

Newcastle Tamworths and Shorthorns

FOR SALE: Young sows due April and May, by imp. boar, dams by Colwill's Choice, Canada's Champion boar in 1901-2-3-5; also choice pigs, both sexes. Two yearling Shorthorn bulls, Syme and Lavender families, and six choice heifers and heifer calves. Prices right. **Box 9, Newcastle, Ont.**

Tamworths

Aggrand lot of young boars from 2 to 4 months also young sows (dandies). Some just bred. Some in farrow to first-class boars from best herd in England. Prices reasonable.
Chas. Currie, Morriston, Ont.

(Continued from page 793.)

"wine" quarts of milk and water, and is not correct for the "Imperial" quart, which is the Canadian standard. Much confusion results where this is not borne in mind.

I hope my American readers will forgive me for saying that they (Americans) have a marvellous faculty of taking some well-known principle or method that is as old as chemistry or dairying, giving it some distinctive name, and then palming it off on the public as something which they have discovered. There are a few cases of this kind in the work under review, but not all of them by the authors. In the "slanguage of the street," they are what is known as a "bluff."

We are glad that we can heartily recommend the book on Milk and Milk-testing to dairy students, to factorymen, to farmers, and to all who have been puzzled over the many difficulties presented with reference to milk and testing. We never saw more material of a practical and scientific nature offered for 50 cents. Buy it; read it; digest it; practice the principles laid down, and you will be not far from the kingdom of dairy knowledge, as it relates to milk and milk-testing.
H. H. D.

TRADE TOPIC.

A FLOURISHING CEMENT MACHINERY BUSINESS.—London Concrete Machinery Co., Ltd., 19 Marmora street, London, Ont., are now making arrangements for the erection of a new plant about eight times the size of their present one. This firm has built every year since its organization, but within the last year they have added several heavy lines of concrete machinery, such as mixers, crushers, etc., and their business has also increased four-fold the past year. Within the last few months they have had to have a large part of their work done in other shops, by contract, and on this account the directors have decided to secure about two acres of land, and immediately proceed to build a new plant. Their present building, although new and quite large and commodious, will, no doubt, be used for other manufacturing purposes.

GOSSIP.

Bawden & Mossip, St. Mary's, Ont., importers of heavy draft and Hackney horses, have disposed of four of the stallions recently advertised in "The Farmer's Advocate," as follows: To Dr. Medd, V. S., Duncannon, Ont., Coynachie (imp.), Clydesdale; to John Coursey, Luan, Ont., King's Friendship (imp.), Clydesdale; to Geo. Guest, Hyde Park, Ont., Low Lynn (imp.), Clydesdale; to Willis & Gynter, Dushville, Ont., The Miller (imp.), Shire. These are all big, heavy horses, of good quality, suitable to improve the draft stock in the districts to which they have gone.

The demand for Scotch-bred Shorthorn stock bulls of high-class type, quality and breeding, is much stronger of late months than for some years past. This is but the natural outcome resulting from the record prices being paid for beef cattle, prices which, owing to the enormous shortage of available cattle, are bound to remain at high-water mark. The conditions thus brought about have caused a demand for stock bulls quite equal to the supply, with the result that bulls of modern type, fleshing qualities and breeding, are getting as scarce as the proverbial "hen's teeth." The Maple Hall herd of Scotch Shorthorns, the property of David Birrell & Son, Greenwood, Ont., is one of the very best herds in the country, both from the pedigree standpoint and for individual excellence. Only first-class imported sires have been used in the herd for about thirty years. A visit to this herd will convince any intending buyer that here is just what he is looking for. There are four young bulls of breeding age for sale, two of them Bruce Mayflowers, one a Duchess of Gloster, the other a Crimson Flower, all sired by the stock bull, Imp. Spicy Count, a Marr Clara. These bulls are gilt-edged in type and breeding; look after them if wanting one.



\$1,000 for a Coat of Paint

It seems hard to believe, yet that is the sum of money that a coat of *Martin-Senour Paint 100% Pure* added to the selling price of a certain house.

For several seasons, a shabby weather-beaten house had been offered for sale. There were no buyers until a shrewd real estate broker purchased the property and, with a single coat of paint, magically changed it from a shabby house to that of a home of dignity—a home of comfort and elegance; furthermore, he sold it within a very short time clearing \$1,000.

Nothing so preserves and maintains the value of your property like

Martin-Senour Paint 100% Pure

whose mission is to paint your buildings uniformly, economically, safely and surely.

The coat of Paint made the sale. Don't let your property depreciate in value for the need of paint.

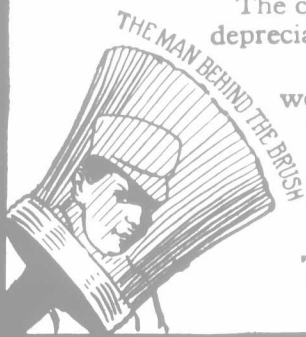
If your dealer cannot supply you, notify us and we will gladly direct you to where our paints are to be had.

Decline All Substitutes

Write for illustrated booklet, "Home Beautiful," and interesting color card. Free for the asking.

The Martin-Senour Co., (Limited) Montreal

Pioneers Pure Paint



Two Good Things For Farmers

—a trouble-proof fence and a trouble-proof fencepost.

STANDARD Woven Wire Fence

is all No. 9 hard drawn steel wire, heavily galvanized—with "The Tie That Binds", which locks on the running wire and lies smooth on both sides.

OUR NEW STEEL POSTS are bent at right angles, which gives the necessary strength without the expense of solid or tubular steel.

Don't buy blindly. Learn the facts about wire fences in our book. Sent free if you write—also sample lock.

The Standard Wire Fence Co. of Woodstock Limited, Woodstock, Ont. and Brandon, Man.

GRAND TRUNK RAILWAY SYSTEM

HOMESEEKERS' EXCURSIONS TO WESTERN CANADA

Through the metropolis of Chicago, thence via Duluth and Fort Frances, or through Chicago and the twin cities of Minneapolis and St. Paul.

May 3, 17, 31

Via Sarnia & Northern Navigation Company. Steamer leaves Sarnia 3:30 p. m., May 4 and 30.

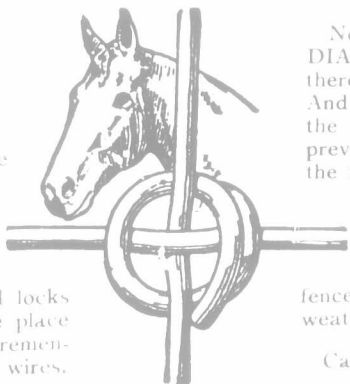
Winnipeg and return - \$32.00
Edmonton and return - 42.50

Proportionate rates to other Western points. Tickets good for 60 days. Secure tickets and full information from Grand Trunk Agents.

Monarch Stiff-Stay fence

The fence with no hidden weaknesses

Why do you see so many broken fence wires? Nine times out of ten they are the result of hidden weaknesses—weaknesses the purchaser was unaware existed. These weaknesses are result of inferior grades of wire—unduly kinked laterals—severely-applied locks. By severely-applied locks we mean locks driven DIRECTLY over the place where stay and strand wires cross. This tremendous direct pressure bruises and injures the wires.



This is quite apparent if you remove the lock, and is sufficient to make the wires an easy prey to frost, snow or heavy strains.

Now, in the Monarch, the lock is applied DIAGONALLY with the strand, which means there is no pressure applied at the crossing. And the ends of lock are neatly hooked over the strand wire. Thus the Monarch lock is prevented from spreading or loosening. And the fence is made of best grade No. 9 Hard Coiled Wire. Also, there is no undue kinking of laterals.

No Hidden Weaknesses in the Monarch fence. It will stand the most severe tests of weather, animal or man.

Catalogue free if you'll ask for it.

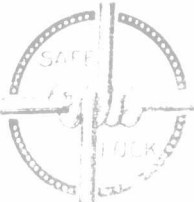
The Safe-Lock Fence

Has a "Safe-Lock" for three reasons:

- 1st.—It locks to stay where it is put—won't slip.
- 2nd.—It is made of No. 9 Hard wire, therefore is as strong and will last as long as the rest of a No. 9 wire fence.
- 3rd.—The strand wires are left absolutely straight (excepting the coil spring), and on this account are two hundred pounds stronger than a kinked wire.

For clearer illustration see detail lock. "Not so" by us—you do a little comparing now.

The Owen Sound Wire Fence Co., Ltd. Owen Sound, Ontario.



More Agents Required

Energetic men will find our line of fencing and gates the best-selling on the market. No other agents have two such superior and different fences as the Monarch and Safe-Lock. In comparison with other agents, our representatives have double the chances of securing an order. Just write for agency particulars.



"ELECTRO BALM" CURES ECZEMA,

Also Piles, Burns, Scalds, Chapped Hands and Face.

Gentlemen use it after shaving. This Balm is handled by the best firms, and is highly recommended by those who have used it.

Write for Free Sample

50c. a Box at all Dealers or upon receipt of price, from THE ELECTRIC BIAN CHEMICAL CO., 112, OTTAWA.

AGENTS - \$33.30 A WEEK

Why not make it? Jack Wood did it. He writes: "Hurry up, 100 more sold last lot in 2 days. Best in the line saw. Hundreds of agents waiting." Why not make it? Write for particulars.

When Writing Please Mention The Advocate

40 Million Square Feet of Oshawa Shingles Cover Canadian Roofs Today

A ROOFER'S square is 10x10 ft.—100 square feet. There are 400,000 such squares of Oshawa Steel Shingles in use to-day in

THEY KEEP ON SELLING BECAUSE THEY MAKE GOOD

Canada. Enough steel, that, to make a pathway a foot wide and 7,576 miles long. Almost thrice the length of the C.P.R. tracks. Nearly enough to roof in a thousand acres of land! And the greater part of those Oshawa Shingles will be right on the job, good, weather-tight, rain-proof roofs, when your grandsons are old, old men. They are good for 100 years.

This is the One Roofing It Pays Best to Buy

Figured by price-cost, "Oshawa" Guaranteed Steel Shingles are as cheap as the poorest wood shingles. Figured by service-cost—the length of time they will make even a passably good roof—wood shingles cost Ten Times as much; slate costs six times as much; and the stuff they call "ready roofing" costs Thirty-Three Times as much! These are facts. They can be proved to you. Proved by figures; by the experience of hundreds of other people who doubted at first, just as you perhaps doubt. Proved, absolutely! You want that proof before you roof. Get it! Send for it to-day.

No Other Roofing Does This

Stays rain - and - snow - and - wet - proof for fully a hundred years. Absolutely fireproofs the top of the building for a hundred years. Protects the building from lightning for a hundred years. Resists the hardest winds that blow for a hundred years. Keeps the building it covers cooler in summer, warmer in winter, for a hundred years. Gathers no moisture, and never sweats on the under side for a hundred years. Needs no painting, no patching, no care nor attention for a hundred years. **WHAT MORE CAN YOU ASK OF A ROOF?**

steel, that, to make a pathway a foot wide and 7,576 miles long. Almost



The picture above, on the right, shows the new Spanish pattern Oshawa Galvanized Steel Shingle (Guaranteed). That on left is the standard pattern.

OSHAWA STEEL SHINGLES are made of 28 gauge steel, specially toughened and heavily galvanized to make them rust-proof. Thus they weigh about **seventy-eight** pounds to the square. With the box about 88 pounds to the square. When considering metal shingles always learn the **weight of metal** per square offered and be sure that the weight is of the **metal only**. Make the weight test yourself. First be sure the scales are accurate. Then unbox a square of Oshawa Shingles and weigh them. Note that the weight averages 78 pounds **without the box**. Don't go by the box weight. Some boxes weigh fourteen pounds or more.

G. A. Pedlar

It Will Pay You To Pedlarize All Your Buildings

"To Pedlarize" means to sheathe your whole home with handsome, lasting and beautiful steel ceilings, side walls, outside, roof. It means to protect yourself against cold; against fire; against much disease; against repair-bills. Ask us and we will tell you the whole story. Just use a post-card and say: "How about Pedlarizing my house?" State whether brick or timber. Write to-day.

ADVERTISING alone never sold that vast area of Pedlar Shingles. Smooth salesman-ship never kept them selling; nor glib talk; nor lying abuse of competing goods; nor cut price. Those things do sell shingles, right here

THEY DO ALL WE SAY THEY WILL AND MORE TOO

in Canada's roofing trade. But Oshawa Shingles sell, and keep on selling, for a different reason. They make good. They keep out the wet, year after year, as we say they will. They protect buildings from fire and lightning, as we say they will. They make good.

This is the One Roofing That is Guaranteed

Some makers of 'metal shingles' (ever notice how careful they are to avoid saying steel?) point with pride to roofs of their 25 years in service. **BUT THEY DON'T GUARANTEE** their shingles for 25 years to come. You buy Oshawa Steel Shingles—the only kind that IS guaranteed—upon the plain English warranty that if the roof goes back on you in the next quarter-century you get a new roof for nothing. You can read the Guarantee before you decide. Send for it. See if it isn't as fair as your own lawyer would make it on your behalf. Isn't that square?

Book and Sample Shingle Free

Send for free book and free sample of the Oshawa Shingle itself. It will interest you to study it. You will see the actual construction. You will see that the Pedlar Improved Lock, on all four edges of the shingle, makes it certain that moisture never can get through any Oshawa-shingled roof. You will see how the Pedlar process of galvanizing drives the zinc right into the steel so it never can flake off. You will be in no doubt about which roofing after you have studied this shingle. **Send to-day for Sample Shingle and "Roofing Right" Booklet No. 16**

SEVENTY-EIGHT POUNDS OF STEEL TO THE SQUARE 310



THE PEDLAR PEOPLE OF OSHAWA

ST. JOHN, N.B.

12, 46 Prince William St.

WINNIPEG

76 L.

WARRIOR

LONDON

200 King St. W.

CHATHAM

200 King St. W.

VICTORIA

5-11 Kingston St.

1111

