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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE
SUCCEED
FOUNDED 1876

Director Central Exp. & Dev. 31, 16
Farm

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

VOL. LI.

ENTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1876.
LONDON, ONTARIO, MAY 4, 1916.

No. 1232

Frost Ornamental Fences Present a Good Front

ANGLE IRON AND WOVEN WIRE

NEAT LOOKING

PRICES REASONABLE

Woven Wire Lawn Fences

(Made in Three Styles—Standard Heights)

Perfectly Woven Fabric—Only Automatic Loom in Canada

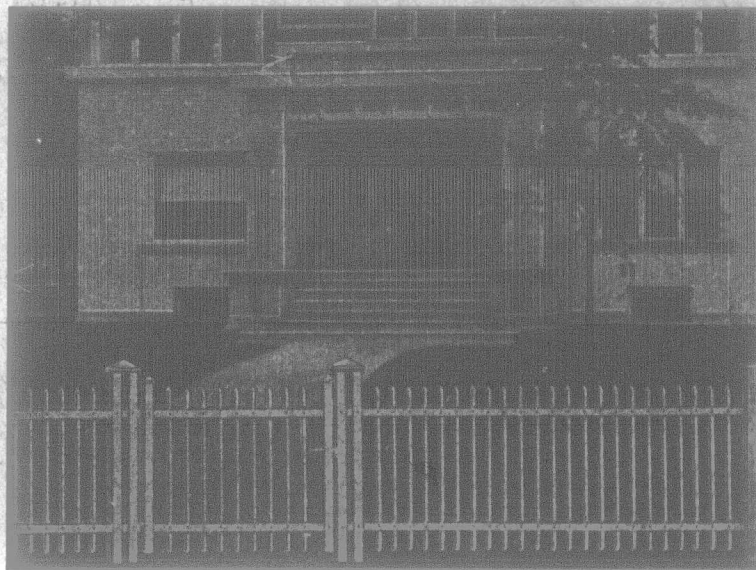
The illustration below is Style "S." There is also Style "L," with the shorter bowed stays omitted, and Style "LP," with stays close all the way to the top.

FROST WOVEN WIRE LAWN FENCES can be built on iron posts with pipe top rail or on wooden posts with scantling at top. We use heavily-galvanized material, as the painted fence soon shows cracks and peelings; rust soon follows. The wire in these fences, like all our material, is drawn and galvanized in our own mills, so we know its quality.

Standard heights: 3, 3½ and 4 feet. Bowed tops are even. The uprights of No. 9 are deeply crimped and securely held in place by a reverse twist of the two No. 13 twisted lateral wires. To prevent the bottom of fence from becoming loose or "pulled out" the uprights are alternately crimped one way, then the other.

Gates are made to match any style or height of iron or woven wire lawn fence.

Flower border, heights 16 inches and 22 inches, same construction as Style "L."



Made From Angles— Strength and Lightness Combined

Being constructed from angles, the fence is light, but stronger than round or square bars of ½-inch or ¾-inch thickness. Quite massive in appearance, but much lower in cost than the ordinary types of iron fences, on account of its lesser weight. FROST ANGLE PICKET FENCE is durable and neat.

MATERIAL IN DETAIL: Horizontal rails, 2-inch angles, ½-inch thick. Pickets, ¾-inch angles, ½-inch thick, fastened to horizontals through a "V" slot and securely rivetted. Fence is practically rigid. Six-inch square posts at ends and gates. These 6-inch posts are made from four of the 2-inch horizontals fastened 2 inches apart by 2-inch steel plates, top and bottom, strongly rivetted. Line posts are made of two horizontals fastened closely, making a 2-inch square post. The made-up panels, 8 feet long, are tightly bolted to line and end posts.


Send in a rough sketch of any property you contemplate fencing, and we shall be glad to give you an estimate of the cost of whatever style you prefer. We have reliable agents in almost every district.

Get a catalogue with detailed information.

Frost Wire Fence Co., Ltd.
Hamilton, Canada



PINE TREE BRAND



TRADE MARK

IT STANDS ALONE
PINE TREE BRAND SEED
Produces heavy yields and clean crops

Ask your dealer for
PINE TREE BRAND
Timothy - Clover - Alfalfa

The valuable Inoculating Material
NOD-O-GEN is FREE
with
PINE TREE BRAND ALFALFA
If your dealer cannot supply you
write:
THE ALBERT DICKINSON CO.
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**Rebuilt Portable and Traction
Engines and Threshers**

All sizes for sale cheap. Complete threshing outfit, traction engine with cab, separator, wind stacker, in good operative condition. **\$875**

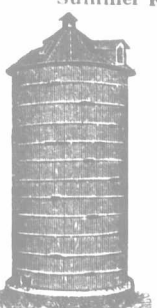
**The Robt. Bell Engine & Thresher
Company, Limited**
SEAFORTH ONTARIO

**A Gold Mine On
Your Farm**

You can double your profits by storing up good green feed in a

BISSELL SILO

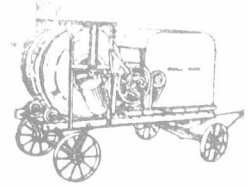
"Summer Feed all Winter Long"



Scientifically built to keep silage fresh, sweet and good to the last. Built of selected timber treated with wood preservatives that prevent decay.

The BISSSELL SILO has strong, rigid walls, air-tight doors, hoops of heavy steel. Sold by dealers or address us direct. Get free folder. Write Dept. W.

T. E. Bissell Co., Ltd.
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BULL DOG
Batch Mixer
Capacity 20 cubic
feet per day. Just
the machine for
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Send for
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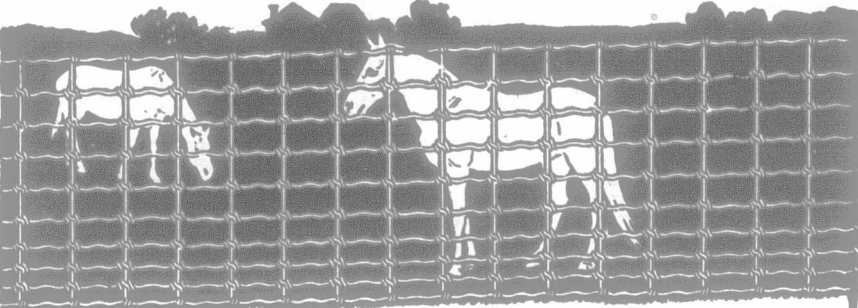
LONDON CONCRETE MACHINERY CO. LTD.
Dept. B, London, Ontario
World's Largest Manufacturers of Concrete
Machinery

Look Out For

The Imperial Life Assurance Company's
big advertisement in next week's
issue, entitled

"Some Fine Day, Bill"

It has an interesting message for YOU



Fencing? Yes, but what kind?

The farmer who thoroughly examines the relative merits of the various brands of wire fences offered to him will not have any difficulty about deciding upon the one he ought to have. Let him decide by that most unerring of all tests—weight. Why judge by weight? Because weight means strength, and strength means durability and long life. Of the different makes of wire fences, there must naturally be one that will weigh heavier than the rest.

**The heavy-weight among fences
is the "Ideal"**

The reason is that all the wires are full gauge No. 9 hard steel wire; every wire is full of life and strength, and heavily galvanized to properly protect and preserve that strength. You therefore get longer service from "Ideal"—most for your money in strength, durability and all-round satisfaction.

Ideal Fence

It is to your interest before buying fencing to get a copy of our catalogue; a postal will bring it.



The McGregor-Banwell Fence Co., Limited
Walkerville, Ontario, Canada. 22

Write TO-DAY for FREE BOOK on SILO CONSTRUCTION



Any farmer can erect this silo without outside help—the best silo on the market to-day. Can be put up in 10 to 15 hours absolutely without scaffolding. In the

BURLINGTON PERFECT SILO

2 x 6 inch Norway pine, selected dry stock, is used, with air-tight adjustable doors, all treated with special preservative, and painted dark red. Our patent galvanized steel cable bands are stronger than iron bands, and have many other advantages over iron rods, having sufficient elasticity to permit of the expansion and contraction due to change of seasons, keeping the silo tight at all times. You will be surprised, not only at the low cost of the Burlington Silo, but at the easy way it is erected. The book tells all about it. Write to-day, using the coupon below.

THE NICHOLSON LUMBER COMPANY, LIMITED
BURLINGTON, ONTARIO

Please send me your FREE BOOK
on SILO CONSTRUCTION

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Address _____

City _____

State _____


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FOR ONE'S TIME

New Ontario

The most desirable, free
land available for cultivation
is now being made
available at the door
of your home.

Write to
The Colonization
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TORONTO, ONT.
J. H. HALLAM, Manager,
100 King Street West,
Toronto, Ontario.



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Dad
wears*

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UNION MADE
GLOVES OVERALLS

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TRAPPERS GUIDE FREE WITH THE ABOVE

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NO. 3 HALLAM BUILDING TORONTO

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A whole World of Stoves!

In this new Gurney-Oxford Catalogue

Low Prices - 100 days approval

If You Are Thinking of a Stove

You want to get the most expert experienced advice possible, especially when it is absolutely free, because a stove purchase is a very serious matter and affects the health and happiness of every member of the family. Affects health and happiness? Yes, indeed, for a good, well designed, heavily-built stove will not only last for years, but it will ensure properly cooked, easily digested food, and it ensures big money savings on fuel which can go towards schooling, travelling and many other things.

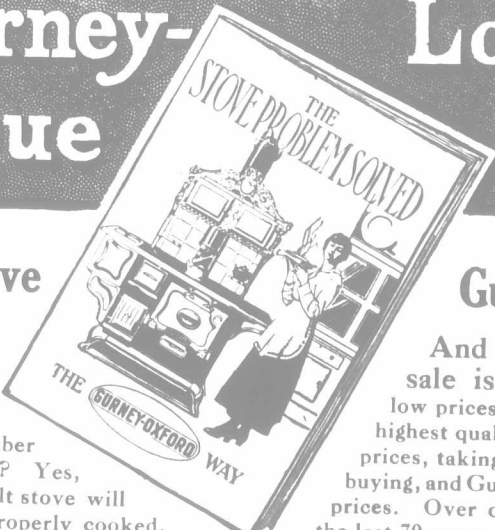
We Pay the Freight

Send for this Free Catalogue To-day

100 days' Approval

It condenses the stove knowledge gained during three generations of progressive stove manufacturing by the famous house of Gurney. Every department in the huge Gurney foundries (the largest of the kind in the Empire) shows how it puts quality, quality and always quality, checked by ceaseless inspections, into the Gurney-Oxford stove you buy. The Gurney-Oxford Catalogue shows page after

page of stoves and stove parts; shows the inside, vitally important parts of Gurney-Oxford Stoves shows how "economy in fuel, with perfect baking results," the Gurney watchword, is worked out. Shows prices on Steel and Iron Ranges, Gas Stoves, Combination Coal-and-Gas and Coal-and-Oil Stoves, explains our 100 day Guarantee. This new Catalogue is entirely free and a copy is waiting you.



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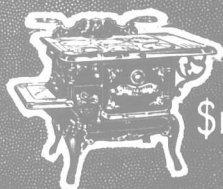


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ROYAL

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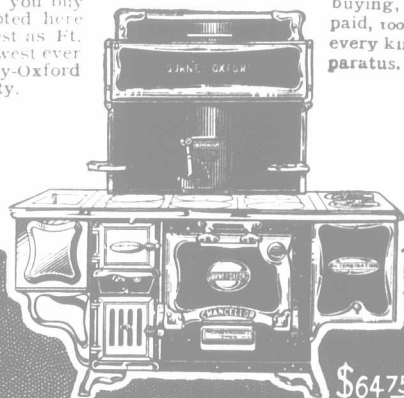
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SENIOR

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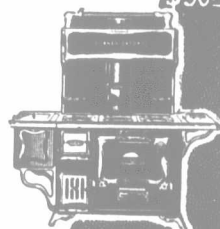
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\$6



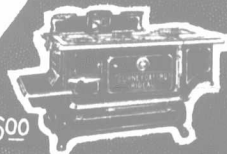
GOLDEN NUGGET

\$3175



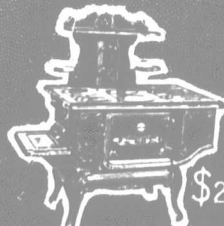
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RIDEAU

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PRINCE

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THE GURNEY FOUNDRY COMPANY, LIMITED

Dept. 815 476-534 West King St., TORONTO

(ALSO AT MONTREAL, HAMILTON, WINNIPEG, CALGARY,

VANCOUVER.)

Never before has such a complete and authoritative guide to stove buying as "The Stove Problem Solved" been compiled by a firm of stove specialists like the firm of Gurney. It will mean money in your pocket to have its advice before you buy your stove. The prices quoted here are all freight paid as far west as Ft. William. They are the lowest ever fixed for stoves of Gurney-Oxford weight and proven quality.

Your name and address on a postal is all that is necessary to get this newest Stove Catalogue, "The Stove Problem Solved," a splendid guide to stove buying, and containing new low, freight paid, 100 day approval prices on any and every kind of cooking and heating apparatus. Send that postal to-day.

Makes the Whole Place Look Prosperous

"A man is judged by his company," etc.—he is also judged by the appearance of his house. Canada Paint gives an appearance of prosperity and permanency to buildings. Paint is as necessary as fire insurance to the life of YOUR buildings; it IS your insurance against the ravages of time and weather. Every can of

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For bare walls use "Sanitone"—
the new washable wall paint.

What-When and How to Paint
Canada Paint Co. Limited

Write today for our free booklet "What, When and How to Paint." It tells you how to get the greatest value out of the paint pot.

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our sales office nearest you for prices and terms on fertilizers adapted to your soil and crops

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No more wood to chop, no more coal, dirt or ashes with a New Perfection Oil Cookstove in your kitchen. It lights and cooks like gas—instant heat, perfect control. No smoke, no smell, and plenty of room to cook the biggest meal.

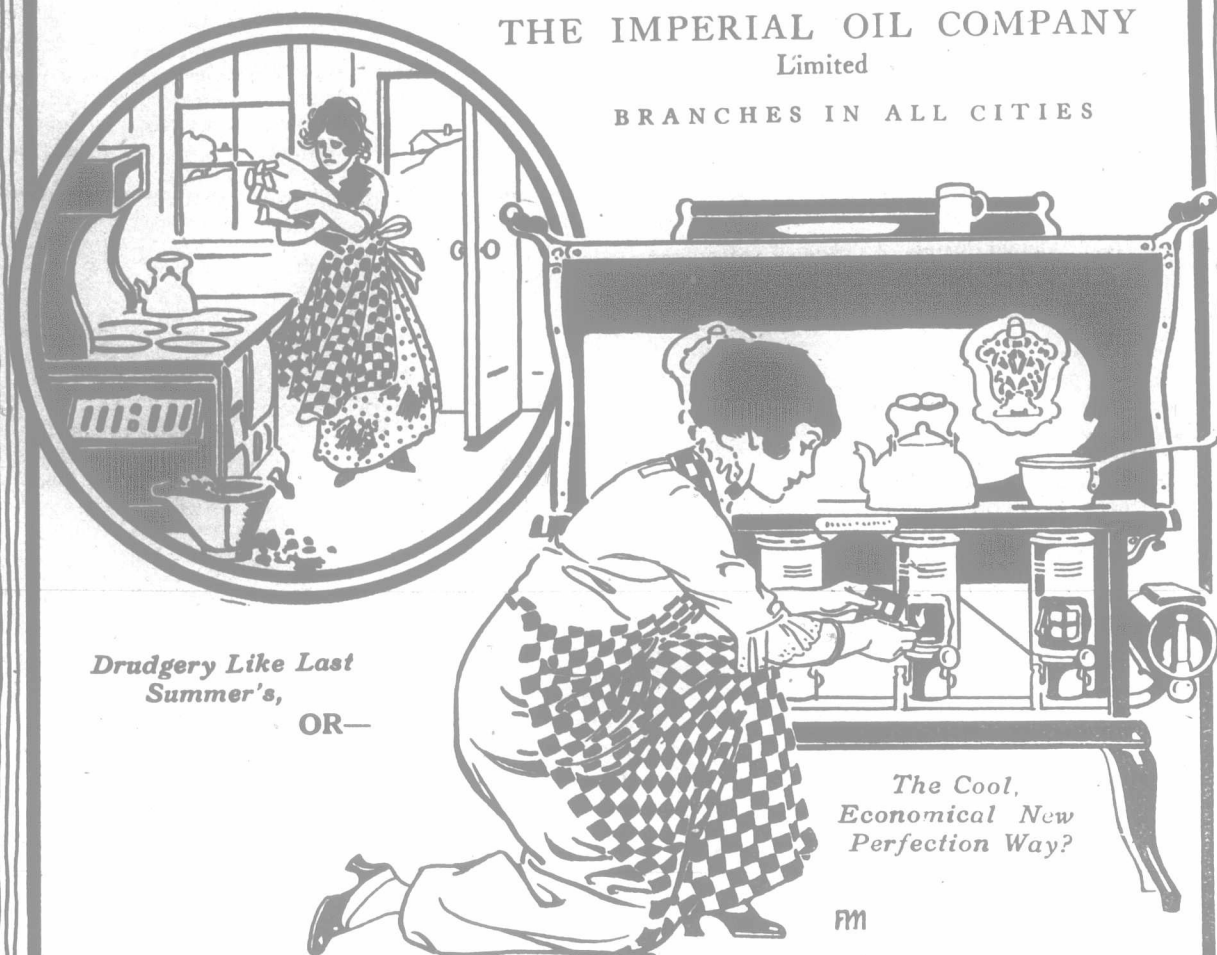
Cheaper than wood, coal or gas. Pays for itself in fuel saved and keeps you cool and comfortable.

1, 2, 3 and 4 burner sizes—the latter with or without fireless cooking oven. At hardware, furniture and general stores.

Royalite Coal Oil gives best results.

THE IMPERIAL OIL COMPANY
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BRANCHES IN ALL CITIES



Drudgery Like Last Summer's,

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The Cool, Economical New Perfection Way?

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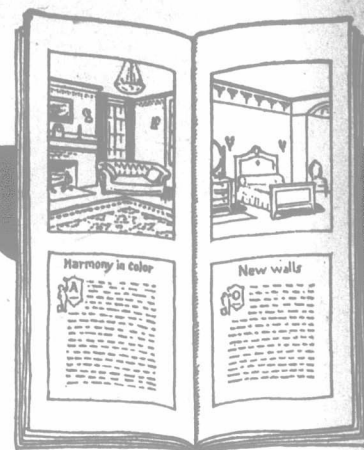
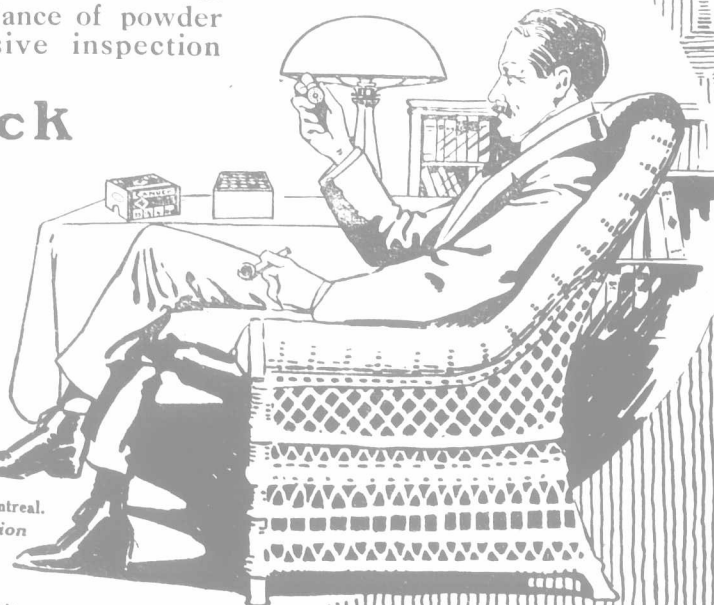
must be a load that is fast, hard-hitting and reliable under all conditions. Careful selection of materials, perfect balance of powder and shot and intensive inspection combine to make

Canuck

the best of all trap loads. It's speed and powerful impact have gained for it an enviable reputation as the "trophy-winner" at the traps. Crown, Sovereign, Regal and Imperial are other popular Dominion smokeless trap loads.

The "Big D" on every box is your guarantee of satisfaction and the best in shot shells and metallic cartridges. All good dealers sell Canadian made Dominion Ammunition. Send for free colored hanger "A Chip of the old Block."

Dominion Cartridge Co., Limited,
529 Transportation Bldg., Montreal.
Ask us about Dominion Hand Trap.



Going to Decorate?

If you are going to "do" the dining-room or the bedroom, or even the kitchen, this spring, you need this book. It illustrates in photogravure, in colors, rooms done with Alabastine. It contains suggestions and ideas for color schemes, and it shows how you can do the work yourself.

Alabastine
Artistic Wall Tints

A copy of "Homes Healthful and Beautiful" costs but 15c. (coin or stamps), but if it saves you from making even one mistake—and there is nothing easier to make than mistakes in color—will it not pay for itself a hundred times over? Then send for it now and study it before you start housecleaning.

THE ALABASTINE COMPANY
LIMITED
86 Willow Street Paris, Ontario

Certain-teed
Roofing

This guarantee, which is on every roll of CERTAIN-TEED, is your protection against disappointment. Accept none that does not have this trade-mark. CERTAIN-TEED is best for your farm buildings, because it saves you money, is weatherproof, easy to lay, looks better and is cheaper than galvanized iron, tin or wood shingles.

It is guaranteed for 5, 10 or 15 years according to ply (1, 2 or 3). This is a real guarantee backed by a business operating the world's largest roofing mills. Don't confuse CERTAIN-TEED with cheap roofing sold by mail. Get CERTAIN-TEED from your local dealer, whom you know and can rely upon. It will save you money in the end. It is sold by good dealers all over Canada, at reasonable prices.

General Roofing Mfg. Co.
World's Largest Manufacturers of
Roofing and Building Papers.

Distributing centers: Toronto, Montreal, Ottawa, Halifax, St. John's, N.F., Winnipeg, Regina, Calgary, Vancouver.



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all our three-dru

We have on
27 inch Rollers,
and twenty-five
\$32, all 8 feet lon

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HEREAFTE
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The Supremacy of the De Laval Cream Separator

Supreme in Skimming Efficiency

Over 85 years of experience and thousands of tests and contests the world over have demonstrated the De Laval to be the only thoroughly clean skimming cream separator, under all the varying actual use conditions, favorable as well as unfavorable.

Supreme in Construction

This applies to every part of the machine—to the bowl, the driving mechanism, the frame and the tinware. The De Laval Patent Protected Split-Wing Tubular Shaft Feeding Device makes possible greater capacity, cleaner skimming and a heavier cream than can be secured with any other machine.

Supreme in Durability

The De Laval is substantially built. The driving mechanism is perfectly oiled and the bowl runs at slow speed, all of which are conducive to durability and the long life of the machine. While the life of other cream separators averages from three to five years, a De Laval will last from fifteen to twenty years.

Order your De Laval now and let it begin saving cream for you right away. Remember that a De Laval may be bought for cash or on such liberal terms as to save its own cost. See the local De Laval agent, or if you don't know him, write to the nearest De Laval office as below.

DE LAVAL DAIRY SUPPLY CO., LIMITED

PETERBORO

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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

Supreme in Improvements

This has been the greatest factor in De Laval success. Not a year goes by but what some improvement is made in De Laval machines. Some of the best engineers in America and Europe are constantly experimenting and testing new devices and methods, and those which stand the test are adopted.

Supreme in Service

With its worldwide organization and with agents and representatives in almost every locality where cows are milked, no stone is left unturned by the De Laval Company to insure that every De Laval user shall get the very best and the greatest possible service from his machine.

Supreme in Satisfaction

De Laval users are satisfied users, not only when the machine is new, but during the many years of its use.

Supreme in Sales

Because they are supreme in efficiency, construction, durability, improvements, service and satisfaction, more De Laval Cream Separators are sold every year than all other makes combined.

ROLLERS at Sacrifice Prices

We are going out of the Roller business, and will therefore clean out at a sacrifice all our three-drum Steel Land Rollers.

We have on hand seventy-five 27 inch Rollers, which we offer at \$31; and twenty-five 30-inch Rollers, at \$32, all 8 feet long; net cash with order,

delivered to any point in Ontario. Points in Quebec add \$1 to above prices.

Guaranteed first-class or money refunded.

B. BELL & SON CO. Ltd.
St. George, Ont.

27 inch
—\$31.00
Freight Paid in Ontario



HEREAFTER we will manufacture only ENSILAGE CUTTERS

Barrett Money Savers for Farmers

Made in Canada

Practical Parables

A FARMER went forth to inspect his farm. It was near the end of his fiscal year and albeit he thought he had left nothing undone he found that things were not as should be. His stock was lean, nervous and not yielding great profits. His fences were straggling and ready to fall, having rotted in the posts. His harrow and certain expensive implements were rusted for he had not painted them. His barn admitted water at the roof, and likewise his own home, and that of his poultry. And the little gutters that should carry the water from roof to ground did leak too and were in sore need of repair. And even more so, the roofs on his many buildings which had cost much gold and labor, were not attractive nor yet durable. So the farmer was exceeding down cast. And it came to pass that a more successful neighbor came unto him and said:



"A LARGE part of my profits are due to watching the little leaks. Barrett Money Savers helped me. Take Carbonol for instance. No farmer should be without it. It has all the merits of carbolic acid without the danger. Effective in a hundred different places. If you cut your hand, apply Carbonol in solution. If your live stock get bruised, Carbonol will fix them. It disinfects sick rooms, and makes house cleaning easier. Begin to economize today by buying Carbonol.

"A LEAKY roof means more than incoming water. It means outgoing money for repairs or damages. Begin right with Amatite, the ready roofing that needs no paint. Put Amatite on your steep roofs and sidings. Wind, rain and weather can't hurt Amatite. Its sparkling mineral surface improves the appearance of any building and guarantees durability. Made in rolls of 110 square feet, with galvanized nails and cement in the centre. Easily laid without skilled labor. I ended my roofing troubles with Amatite.



"THE greatest enemies to live stock and poultry are lice, mites, vermin and flies. I keep my live stock clean and happy by spraying them with Creonoid, and I spray my roosts regularly. It is the most economical and effective animal antiseptic I have ever seen, and I've tried them all. All you have to do is spray your stock once or twice and their pests will go away, leaving your hens, cows, pigs and horses healthy and happy. Be sure to follow directions carefully. There are many other valuable uses for Creonoid and you had better ask them to send you their booklet on the subject. Don't delay when the solution of your problem is so easy.

"I USED to help the Farm Machinery Company pay dividends until I was advised to try Everjet Elastic Paint. You see metal seldom wears out; it rusts out and Everjet positively prevents rust. It never peels, scales or cracks. There is more merit in Everjet than I can tell you of. Everjet is especially recommended for use on 'ready roofings' because of its low price and great covering capacity. Protect your roofs and machinery with Everjet.



"YOUR wooden fences would have been good for twenty years if you had painted the buried parts of the posts with a good wood preservative. Why not do it now? Get some of Barrett's Grade One Creosote Oil. Tests have shown that it is the best wood preservative on the market because it penetrates deeper and lasts longer than any other. You can't beat creosote for insuring the life of the wood. Barrett's is the best creosote.

"IF YOU are not satisfied with your roofs, or want a covering that will keep wind and water out permanently, at low cost, you should try Everlastic Roofing.

EVERLASTIC ROOFING

There is no better 'Rubber Roofing' on the market. It is inexpensive, easy to lay and gives excellent service for years. Just the thing for outbuildings. Made in one, two and three ply weights. The rolls are 36 inches wide. You need some Everlastic Roofing.



"THEN there is a product you ought to have just on general principles. As an aid in quick repairs, Barrett's Elastigum Waterproof Cement is a wonder. And it repairs permanently too. Just the thing to join and reline gutters, whether wood or metal. It seals leaks and joints and is unbeatable for flashings around chimneys."

Send for illustrated booklet describing Barrett Money Savers in detail. Address nearest office. For sale by good dealers everywhere.

THE PATERSON MANUFACTURING COMPANY, LIMITED
MONTREAL TORONTO WINNIPEG VANCOUVER

THE CARRITTE-PATERSON MANUFACTURING CO., LIMITED
ST. JOHN, N. B. HALIFAX, N. S. SYDNEY, N. S.

High Yielding SEED CORN

Grown on our Seed Farms

From seed of our high yielding strains. Our farms are devoted to the production of seed and our object is to supply our customers with seed that will produce large yields of grain and tonnage of silage. Our seed is harvested when mature, every ear cured separately. Tested before shipment. Guaranteed as to variety and germination. Write for circular.

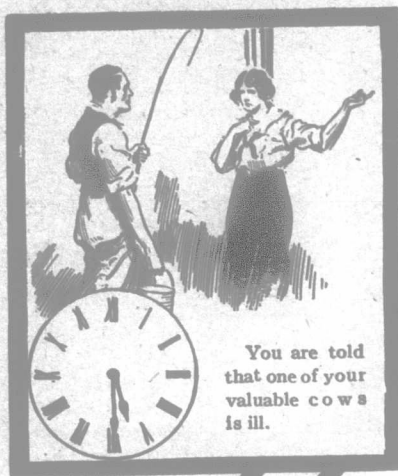
ESSEX COUNTY SEED FARMS, LIMITED

(Growers, not Dealers)

AMHERSTBURG, ONTARIO

G. R. COTTRELLE, President

A. McKENNEY, B.S.A., Superintendent



These Pictures tell a Story of vital interest to YOU.

They show the penalty—yes, penalty of being without a telephone.

When you want a "Vet" you usually want him badly. His immediate attendance means all the difference between life and death to valuable stock.

Or suppose you or one of your family are taken ill with apoplexy or appendicitis or some other equally vital illness, the matter of an hour may mean mortal agony, or death.

Read what these practical farmers say about their experience with the telephone:—

H. J. Bray, of Plympton, Man., says: "The telephone saved my life. I had been away for a holiday, took sick, got home as quickly as I could, my wife phoned for our doctor, he was away in the city but our agent got busy and located the doctor. My wife told him how I was feeling; he said he would be out as soon as possible, got here at 11 o'clock at night, examined me, said it was appendicitis and must be operated on right away. So was off to the city next morning, was operated on at 10 o'clock. The doctors said it was none too soon, another few hours and it would have been too late."

A. Reusch, of Otthon, Sask., says: "I have had it now a little over eight months; it has not cost me quite \$20.00. In that time this \$20.00 has saved me \$200.00 or more in horses by being able to get the vet., in half the time. Not only that, I made over \$100.00 by being able to keep in touch with the local Grain Buyers and was enabled to sell my grain for the best figure."

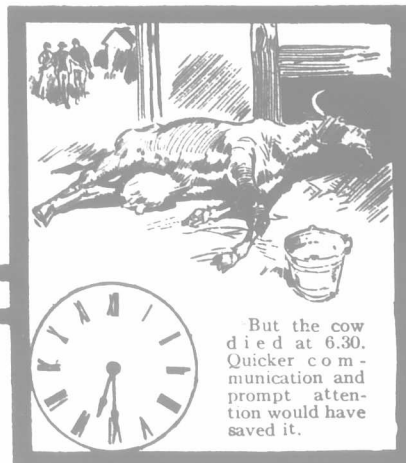
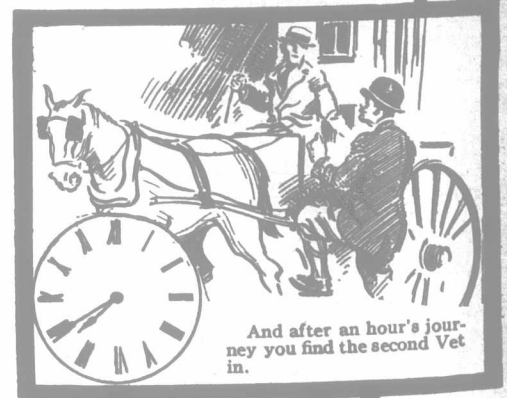
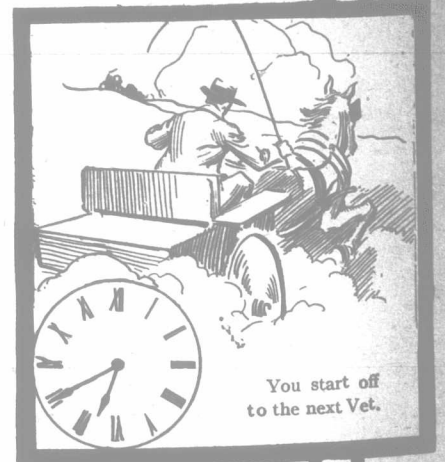
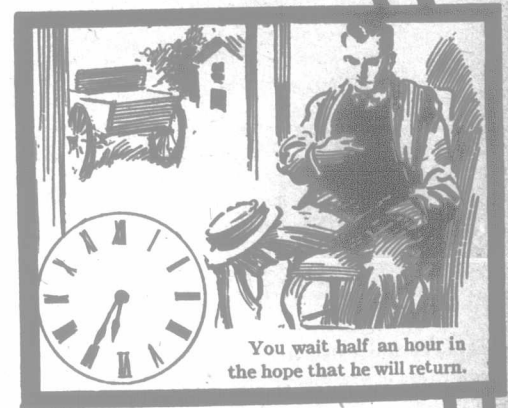
R. G. Thomson, of Clinton, Ont., says: "In case of an accident or sudden illness, its value cannot be reckoned with in dollars and cents. I know of one case where a woman took the wrong medicine by mistake, and had the doctor been twenty minutes later he could not have saved her life."

When the telephone could mean so much to you, why delay? More than 125,000 farmers now have Rural Community telephone lines. Why shouldn't you?

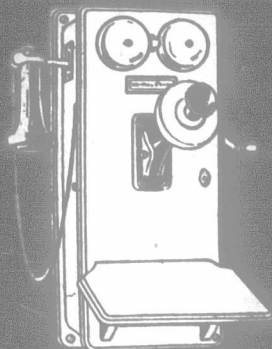
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LI.

LONDON, ONTARIO, MAY 4, 1916.

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EDITORIAL.

Produce what you can.

What land you work, work well.

Kill the weeds early and save labor.

There is time yet to test the seed corn before planting.

We cannot afford to hold any peace parley with weeds.

Has your back yard observed its annual Junk Day cleaning yet?

May may be the most awful month the world has ever known.

The grass is yet too soft to be good feed. Give it a chance.

Increase the good stock and feed more of what the farm grows.

Keep the stock stabled at least another week. More if possible.

Russian troops have been welcomed in France! The German Crown Prince, take notice!

If you would have good summer pasture, do not turn on it too early in the spring.

Give the youngsters a hearty start by providing an early and well-prepared plot for the school fair competition.

Thorough soil preparation means less work with the roots. Here is one place, at least, where preparedness means safety.

If the demand for canned meats keeps up Canada will surely soon have fewer "cutters and cannery" among the cattle stock.

If you do not believe in co-operating to do the farm work, try it on some heavy work and be convinced. Make arrangements with the neighbors.

The noble generosity of the United States for the stricken in the great war has hardly redeemed it from the reproach of a commercialized neutrality.

Horsemen agree that it is not more horses but better horses that Canada needs now. What are your plans for improvement? The use of better sires?

Were the roads ever worse than they have been this spring? Surely those who travel them will know where the bad spots are. When they know is the time to make repairs.

Unless all the great nations come to some agreement toward permanent peace, preparedness for war may not prevent war, but it may mean a measure of protection for helpless women and children if more war should break out.

What people are objecting to is not so much the "Production and Thrift" campaign nor a campaign for more recruits, but the lack of team work and the lack of system, which is responsible for the taking away of men who should stay, and the leaving of men who could go.

Surely More Sheep.

To a man who understands sheep and knows something of their value, there has always seemed to be among farmers in this country considerable prejudice against this class of stock. It is a fact that only a very small percentage of the farms are carrying any sheep at all, and few, indeed, are the holdings which are well stocked. Excuses of different kinds are given for not keeping sheep, but most of them seem rather lame. We are told that there is a dog nuisance, that sheep are difficult to fence against, that they are hard on the pasture, and that they do not pay. This looks like a formidable array against the woolly tribe, but, according to an Act passed by the Ontario Legislature, recently prorogued, municipalities will pay in the future full value for sheep killed by dogs. This should somewhat obviate the difficulty, and we believe that it will have the effect of increasing the tax on dogs in some municipalities, and thus will serve to rid the country of some of the worthless curs which generally do the damage. With a little care the dog nuisance is not as bad as some people believe, and where remuneration in full is possible few should blame the dogs because they have no sheep. From experience with sheep we have not found them difficult to fence against. Of course, the fences must be tight at the bottom, but all fences should, and, in fact, sheep are considered by those who have flocks to be easy on the fences. We are agreed that sheep bite close, and if run in too large numbers with other stock, may be hard on pasture but they will destroy enough weeds to compensate for this, and if properly managed and changed from one field to another occasionally they will not be found to injure the grass very much. And now we come to the most important point. With lamb and mutton selling at prices around \$10 and \$11 per hundredweight and wool at forty to forty-four cents per pound, he is indeed a careless and poor shepherd who cannot make sheep, under favorable conditions, pay their way and leave a fair profit. It is not always the best time to buy when prices are extremely high, but a small flock started on a right foundation and properly looked after surely would be a paying investment.

Keep the Cows.

Owing to the abnormal shortage of labor, in some of the dairy districts adjacent to Canada's larger cities, there is a likelihood of there being a shortage of milk supply, or at least higher prices will prevail. In fact, already, producers supplying the Toronto market are raising their price on this account. This is not the most disturbing element in connection with the dairy business, however. A cent or two a quart up or down may not cause any very appreciable increase or decrease in the number of cows kept for dairy purposes in the Dominion, but, if we mistake not, dairying will receive a hard blow if more men are taken from the farms to the war and labor becomes correspondingly scarcer. Dairying is one branch of farm work, which, so far, has not been mastered by machinery. The milking machine is solving the problem to some extent, but so far has not been very widely adopted by milk producers. If they cannot get the help or have not sufficient labor within their own families, it looks as if some of the cows would have to go. This will not be so bad if only the poor producers are discarded, and the man who has been testing will know which to feed and which to sell, but a marked shortage of labor, such as Canadian farmers will experience this year and until the end of the war, will be sure to have a tendency toward decreasing the number of cows kept for dairy purposes. Wherever possible

it would be better to retain all the good cows and plan for a year or two to do a little extra milking, dropping something else, because, at the close of the war, help will likely be more plentiful, and dairy products are selling and will continue to sell at a price which should make them prove profitable. Besides, dairying is one of Canada's most stable forms of specialized agriculture, and is, as well, one of the best paying branches on a farm where mixed farming is carried on. Canadian agriculture must continue to prosper as mixed farming with live stock. As a general thing it would be a step in the wrong direction to let the cows go unless they were of the unprofitable kind which were not paying their way. Keep the dairy cows and more hogs, at the present time a very valuable class of farm stock in this country.

Put on the Spray.

Some classes of spraying materials are much higher this year than formerly. We believe that bluestone, for instance, is about six times as high in price as it generally is. This may have a tendency to cause some, none too ardent believers in spraying, to discontinue the practice this year. Such should not be the case. We are told that prospects for fruit are good. If a bumper crop of apples is produced, prices may not be very high, but if sale is to be had for the crop it must be good, clean fruit, properly put up. This cannot be expected without proper and thorough spraying. Then there is the potato crop, one of the most important considerations in Canadian field husbandry. It has been demonstrated time and again that to ensure freedom from blight, several applications of Bordeaux mixture are necessary. Surely no one would run the risk of losing a crop of from 250 to 400 bushels of potatoes per acre because bluestone is 25 or 30 cents per pound, as compared with four or five cents per pound, which formerly prevailed. It requires about four pounds of bluestone to do an acre of potatoes each application, and four or five applications generally suffice for the season. The extra cost of four or five dollars per acre is very small, and should not be enough to even cause a grower to consider dropping spraying. Celery growers also find it necessary to spray for blight, and the most successful will use spray material even though it be higher in price.

One Silo, or Two?

Where a farm is carrying all the stock that it should carry, and where it is all arable land, it is sometimes found difficult to provide plenty of pasture for the stock throughout the summer. Various methods of supplying summer feed, such as soiling crops and annual pastures have helped over the difficulty, but it looks more and more each year, particularly as labor grows scarcer, as if the summer silo would be the best means of solving the problem. When labor is as scarce as it is, every stock farm should have at least one silo, and the bulk of the roughage fed to cattle in the winter should be silage. It may be that before very long we shall be saying the same thing about the summer silo. With a small silo filled for summer use, the dairyman or stockman has no reason to worry about his pasture, and he has his feed in such a form that it may be easily fed entailing very little work during the busy season. When soiling crops must be cut and hauled to the barn, considerable work is entailed. Annual pastures will not produce as much feed per acre as will corn. For economical summer feed, as well as for winter roughage, it begins to look as if corn will be the basis of the ration. Those who have no silo at all would likely find it profitable to build one this year, and to plan to fill it with well-matured corn. It may be

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
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JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Journal,"
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easier to get a builder to construct a silo than to get a hired man to hoe the turnips or mangels necessary where no silo is in use, and once a silo has been tried it will never be done without.

Pork, a Luxury.

When pigs go up to anywhere from \$10 to \$12 per hundredweight, alive, pork becomes almost a luxury on the consumer's table, and the producer, if he is a good feeder, and especially if he can utilize some by-product such as skim-milk, has a chance to make a profit on his pork. Apparently pigs are none too plentiful in this country. As a general thing a period of depression follows one of high prices in any line of stock, due largely to the fact that a large number of producers jump into production of any particular line just when that line is high in price, and consequently, in time, the market is overstocked. Canada has a fine opportunity at present to make a name and to establish a larger market for her bacon in the Old Land. We would again caution against attempting to increase the production of pork by the use of anything but an improved type of bacon hog. The British market pays a premium for choice bacon, and when the time comes, as it surely will, that the market is well supplied with hogs, Canada should have established an outlet for all the surplus pork produced here, in the Old Land. It can be done if producers are careful to adhere more closely to the bacon type and not to produce anything which is "just pig." Packing-house buyers should put a premium, when buying hogs in the country, on the hog which best suits their requirements. This would have more effect than anything else that could be done in establishing a uniform type of pigs in this country.

May the tribe of Peter McArthur's red cow increase! Fenceviewer I, thou art a noble brute! Thou hast been the subject of articles in Canada's leading daily papers, as well as in Canada's oldest and best farm paper. Thou hast had thy virtues extolled from public lecture platforms, from Glencoe to fashionable Ottawa. Books have been written of thy greatness. And now thou art the mother of twins! What'll Peter say of thee now? Oh Fenceviewer, thou art the source of much wealth and the cause of much mirth!

Making a Real School Out of the Rural School:

* It is now thoroughly established in the minds of those who have been studying the rural problems in this country that one of the strongest factors causing these problems, is the rural school, and that it must be made one of the most potent factors in solving the trouble. In fact, the whole farm problem as we see it is a matter of education, and the school should, if it is to fulfil its work, fit the child for rural leadership and rural progress. If it is to do these things a reorganization is necessary. The old school must go, and a larger and more thoroughly equipped structure must take its place.

As pointed out in an article which was published in these columns last week, we believe that consolidation is the best means of overcoming some of the difficulties in connection with rural education in Ontario. Under the present system there is little in the school work or about the school itself to encourage the farm boy or girl to remain in the country. What they get at the little school house on the hill simply prepares them for the flit to the town or city where they are to complete their education, and where most remain the rest of their days. An inspector of rural schools speaking of the difficulties in connection with the small, isolated school, as we know it in Ontario, recently, said: "Teachers shift as often as ever. The curriculum is apparently too comprehensive for thoroughness and too bookish for practical rural education. Many teachers overlook the duty of supervising the conduct and the play of the pupil outside of class hours. There is a general lack of life in schools where few pupils attend, and lack of supervision is one of the greatest weaknesses in the conducting of our rural schools."

Consolidation would get over many of these difficulties. In Ontario, where the Educational Department moves slowly, we do not believe that there will be much done toward consolidation or to remedying the present condition of public school affairs until the people of this Province demand a change toward a more progressive rural educational policy. We believe that a start could be made toward consolidation very soon if public sentiment would only make it known that the rank and file of the people living in the rural districts are dissatisfied with the present system. In other words, if the people will show the Educational Department that they want it, and that they are ready to support it, they will get it. It is said of the movement toward consolidation in Manitoba that the most noticeable feature regarding the inception and progress of the work of consolidation was the fact that the people themselves took the lead and worked out the consolidation in each and every case, aided by the Department of Education where the request was made. The movement started in Manitoba in 1906, and has spread rapidly over that Province from that time up to the present, and invariably the trustees and the people whose children attend the school are strong in their praise of consolidation, and would not go back to the old system of small schools poorly attended, or to what they call the one institution that has been merely marking time or marching with leaden footsteps—the old-fashioned rural school.

The greatest difficulty in a Province like Ontario, settled and conservative in its ways, is to create a public opinion in favor of any change, which on the face of it, gives any evidence of increased outlay or of the doing away with old institutions giving place to new. The fact is we dislike to spend the money, and we are loath to give up the old school which was good enough for father and which he thinks is good enough for Johnny and Mary. In regard to this financial side, which looms so large in the eyes of many people, we may say that the actual cost of consolidated schools in Manitoba, in a great many cases, has not been found to be much greater than that of the old one-roomed, rural school, and if value received for money spent is to be the test, as it certainly should be, consolidated schools have proved to be much cheaper. It is generally considered in Manitoba that the cost may be from one-fourth to one-third higher under consolidation. But what is this when the following advantages outlined in a Manitoba bulletin on consolidated schools are considered?

Reduces tardiness.
Better equipment.
Better salaries paid.
Eliminates truancy.
Secures larger schools.

Teachers retained longer.
Attendance more regular.
Secures graded conditions.
More time for recitations.
Insures better attendance.
Ensures regular attendance.
Better class of work is done.
Keeps the boys on the farm.
Petty jealousies interfere less.
Better management is secured.
Better returns for money spent.
Enhances the value of real estate.
Special teachers may be employed.
Gives greatly increased attendance.
Classes larger and more interesting.
Buildings better heated and ventilated.
Number of classes per teacher decreased.
It preserves a balanced course of study.
Keeps older boys and girls longer in school.
It is a school of some character and dignity.
It eliminates waste of time, energy and capital.
School becomes social center in the community.
Better and more experienced teachers employed.
Makes the farm the ideal place to bring up children.
Enables inspector not only to inspect but to supervise.

Greater results in work accomplished in the same time.

Popular with people, teachers and pupils where tried.

It is a more attractive school for both pupils and teachers.

Healthy rivalry awakened through inspiration in numbers.

Principal can prevent errors from inexperience in assistants.

Courses of study enlarged and enriched by special subjects.

Morals of pupils protected going from and coming to school.

Health of pupils better preserved on account of transportation.

It unites and centers the interests of a larger section of people.

It adds tone and dignity to education and to the farm community.

Children of the farm have equal opportunities with those of the town.

Better school officials secured by having larger districts to select from.

Those at a distance have equal advantages with those near at hand.

Evokes pride, interest and support on part of the people interested in the school.

Saves cost of sending children away to school, and in moving to town to educate.

It is the only method of securing and holding trained teachers for country schools.

It makes possible the taking up of any special work of advantage to the community.

The rich and the poor have equal advantages in securing high-school education.

Every child in the farm community is reached by it. All children attend; not a favored few.

School games are made possible on account of larger numbers, thus adding to the attractiveness of school.

Consolidation is the only known method of providing a true country school with home high-school privileges for farm children.

It is at the door of the farm houses, and is more available on account of transportation facilities than the present one-teacher school.

It is the only way of insuring an enrolment large enough to provide the social and cultural contact with companionable associates necessary to the best development of every child.

It is the only method where it is possible to make a division of labor by graded classes whereby teachers may have sufficient time to do good work and choose grades or special subjects for which they are best fitted.

And to these we might add—it makes it possible for Mary to study Domestic Science, and Johnny to study Agriculture, Farm Mechanics, etc., with capable, specially trained instructors, and gives the country boy and girl a fair chance.

Studies in Political Economy—IX.

Last week I submitted certain official figures, together with estimates based on them, to show the actual economic discrimination against agriculture. I propose now to submit other official evidence to show how our present system of Federal taxation in large measure affects this discrimination; and I refer only to the indirect taxation by means of custom duties.

The average amount of duties collected per annum for the 5 years, 1911 to 1915, was about \$92,000,000 (Canada Year Book, 1914—p. 260). Of the total imports about two-thirds were dutiable and one-third free. The average rate of duty on total imports was about 16 per cent. The rate upon dutiable goods was therefore approximately 25 per cent. For the most part the free goods consist of things not manufactured in Canada. After making due allowance for those manufactures which are unprotected by the tariff, the average protection afforded protected manufactures therefore approaches 25 per cent. So far I have been unable to discover the proportion of Canadian manufactures which is unprotected. It is impossible, also, to determine accurately just what enhancement of price is due to the tariff. I shall assume,

however, that prices of 20 per cent are factored in assumption, but in it is inaccurate.

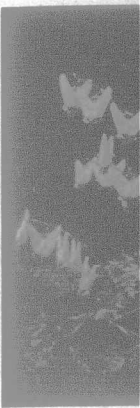


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however, that the tariff causes an enhancement in prices of 20 per cent. on the average on goods manufactured in Canada. Anyone may challenge this assumption, but he must bring evidence to show where in it is inaccurate, and must establish what the price

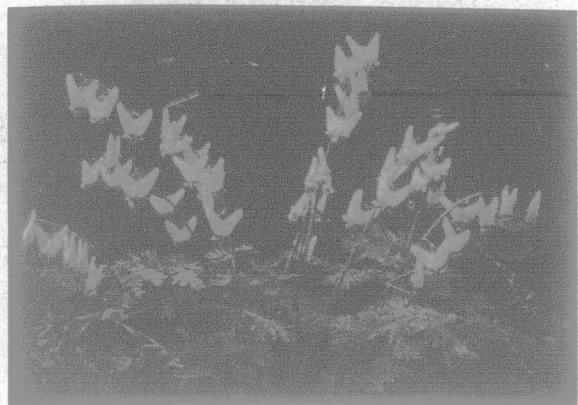


Fig. 1—White-hearts (*Dicentra encullaria*).

enhancement is. So far as the argument is concerned, however, its nature is not altered by any numerical change in this assumption.

The next question is: What is the domestic consumption of articles manufactured in Canada? The average production for the last five years, as has been shown already, may be taken as \$1,400,000,000 per annum. The value of Canadian manufactures exported during the last five years (making allowance for the recent jump due to munitions) may be taken as \$45,000,000 per annum (Canada Year Book, 1914—p. 262). Allow an export of \$50,000,000 per annum, and we have an average annual consumption of \$1,350,000,000 worth of goods manufactured in Canada. With a price enhancement of 20 per cent. there is, therefore, an indirect tax of \$270,000,000 paid by the Canadian consumers to the Canadian manufacturers. The situation is therefore as follows:

Tax which goes into Federal Treasury.....	\$ 92,000,000
Tax which goes into pockets of the protected manufacturers.....	270,000,000
Total tax due to the tariff on Canadian manufactures.....	362,000,000

This tax equals approximately \$50 per capita, or \$250 per annum per family of five. But the tariff tax on manufactured articles falls much more heavily upon farmers and their families than upon the average city resident. Both, it is true have to pay increased prices for clothing, tools, and household equipment, but in addition the farmer has to pay out annually large sums for farm implements, tools, vehicles, and machinery, which the average city worker escapes. A very conservative estimate would place the farmer as purchaser of fully twice as much in the way of manufactured articles as the average city worker. Assuming this figure of the total tax of \$362,000,000, agriculture bears two-thirds, or about \$240,000,000. This is divided between the 714,000 farmers (1911 Census), and figures out as close to \$350 per year per rural family. About one-quarter of this goes into the Federal treasury, and the other three-quarters, or approximately \$250 per year, goes into the pockets of the protected manufacturers. The total amount thus diverted from agriculture to manufacturing is, therefore, about \$180,000,000 per annum (for the 714,000 farmers).

Now, if the reader will refer to Study VIII, he will find Canadian manufacturing during 1910-1914 credited with a surplus profit of \$260,000,000 per annum, while Canadian agriculture faces a deficit of \$110,000,000 per annum. Transfer the \$180,000,000 above mentioned, from manufacturing to agriculture, and the situation is then:

Surplus profit in manufacturing.....	\$80,000,000
Surplus profit in agriculture.....	70,000,000

Comment is needless.

Brant Co., Ont.

W. C. GOOD.

Nature's Diary.

A. D. KLUUGH, M.A.

Two attractive plants now in bloom in our deciduous woods are the White-hearts and the Squirrel-corn. The leaves of these two species are exactly similar, but the difference in the flowers is clearly shown in our illustrations. The difference in the underground portions of these two species is even more marked than that of their flowers—those of the White-hearts consisting of clusters of little tubers, crowded together to form a bulb, while those of the Squirrel-corn consist of little rounded, yellow tubers resembling grains of corn. The names applied to these plants vary in different parts of the country. In some localities the White-hearts is called Dutchman's Breeches, in others it is termed Boys and Girls, while in some sections the White-hearts is called "Boys" and the Squirrel-corn termed "Girls."

The "Spirit of the Northern Lakes" has returned—the voice of the Loon rings out over their waters. No sound is more characteristic of the stretches of our north country with its numberless lakes, big and little, and of all imaginable shapes, than the cry of this bird. The Loon spends its life afloat, and in

swimming and diving it is not excelled by any bird. Its great webbed feet, with the powerful muscles on the lower leg, drive it through the water at a high rate of speed. It can dive "like a flash," and can swim under water for long distances. When pursued it instantly takes refuge beneath the surface, swims rapidly for some distance, thrusts only its head above the surface to take a breath, then dives again, and thus proceeds until it reaches a safe distance.

The Loon is a strong flier once it is on the wing, but it must have a considerable space in which to flap along the surface to enable it to rise. A friend told me of two Loons which were kept in a large tank which had vertical sides so that they could not walk out, and though the top of the tank was perfectly open and the Loon's wings were in perfect order they could not fly away. They would shoot from one end of the tank to the other in endeavoring to rise, but could not get a long enough "start" to enable them to do so.

This species makes its nest either on the shore just at the water's edge or sometimes constructs a little island of vegetation in shallow water to place the nest on. The nests on the shore are sometimes mere hollows in the sand, and sometimes are lined with water-plants. The eggs are usually two in number, though occasionally only one is laid. They are about the size of goose eggs, but somewhat nar-

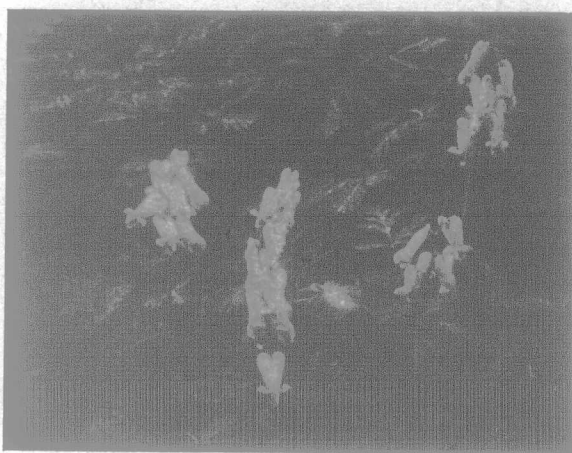


Fig. 2—Squirrel-corn (*Dicentra canadensis*).

rower, and are rich olive-brown, more or less marked with spots and lines of a darker color. The period of incubation is about a month.

The baby Loons are clothed in soft down, black above, white beneath. In a few hours they leave the nest, and are conducted out on to the lake by their parents. Here their youth is spent in alternately swimming and riding on their parents' backs. The parents feed them on bits of fish and aquatic insects until they are old enough to forage for themselves.

Loons are undoubtedly sociable birds, and are often seen in little parties of from three to eight playing a sort of game, half flying, half swimming, they dash over the smooth surface of the water at great speed, forward and back, again and again. Then



Longforth King Cole.

A four-year-old English Shire.

several chase one of the party, which dashes away and suddenly plunges beneath the surface. On reappearing it joins in the chase of another bird. Usually these games are accompanied by a great deal of noise.

The Loon has two main calls—the shrill, laughing cry, and the even louder "Oo-hooooo." This latter is often called its "rain-call," but like most "weather signs" does not really foretell what it is supposed to.

The food of the Loon consists largely of fish, though it also eats frogs, salamanders, leeches, and

fresh-water plants, and I found that one I examined recently had been eating a fresh-water Alga, *Cladophora glomerata*, a form of food not previously included in its published menu. While the Loon is often counted as being injurious to game and food fishes, its influence really is probably negligible, as it is certainly true that the best fishing is to be had on lakes where loons abound and men do not.

During the past winter the Evening Grosbeak broke all records for far eastern migration in Canada, as Mr. McIntosh, Provincial Entomologist of New Brunswick, reports that this species was seen in every county but one in that Province.

THE HORSE.

Lameness in Horses—XX.

Foot Punctures—Pricks in Shoeing.

A "gathered nail" may pierce any part of the sole or frog, but it is probably most frequently found in one of the commissures of the frog (the hollow between the frog and the bar on each side). If the seat of puncture be in one of the commissures about half way between the heel and the point of the frog, and be deep, there is danger of the nail having penetrated the bursa of the navicular joint. The symptoms usually are well marked. The horse goes suddenly lame, in many cases practically progressing on three legs, but in other cases the lameness is slight and in some cases, where the nail has not penetrated sufficiently deep to pierce the sensitive parts, no lameness is noticed, and no suspicion of the horse having "picked or gathered a nail" exists until discovered by the groom when cleaning out the foot at the next grooming. This fact impresses upon our minds the advisability of cleaning out the feet and looking for nails, stones, etc., at each grooming. In a case such as stated the presence of the nail would be detected and its extraction would prevent trouble, while if not noticed and extracted there would be danger of it penetrating farther if the animal stepped upon a stone or other hard substance, at the seat of puncture.

Treatment.—So soon as the horse is noticed going lame, the driver or rider should dismount and carefully examine the lame foot. In some cases the animal may have trodden upon a nail that is somewhat firmly fixed. The horse suddenly lifts his foot which pulls away from the nail but the horse will go lame all the same. In such a case the examiner, of course, will not see any nail, and on account of the elasticity of the horny sole, there will be no hole to mark the seat of puncture as the opening through the sole will have closed as soon as the foot was drawn away from the nail. In some cases there will be a few drops of blood to indicate the trouble, but where this is not the case the examiner is at a loss to know definitely what caused lameness. In these cases the horse may or may not continue to go lame at the time. When the nail, in such cases, has been clean and has not penetrated sufficiently deep to draw blood no untoward results are likely to follow, but if foreign matter has been left in the wound or blood has been drawn, lameness will very probably become evident in the course of a few days. When the nail be present it must be extracted.

This can sometimes be done with the fingers, but in many cases it is too firmly fixed and a pincers or claw hammer is necessary to remove it. If the examiner has not the necessary means of removal he should allow the horse to stand until he can procure it, as, if he drives or rides, or leads him, it is probable that the nail will be forced farther in, hence aggravate matters. If no blood appears when the nail is extracted and the horse goes sound it is probable that no further treatment will be necessary, but if there be blood, or if from the evident depth of puncture, the sensitive parts have been wounded, further treatment will be necessary. Even though no blood should appear, if foreign matter has been introduced or the sensitive parts wounded, pus will form and cause lameness and an opening will have to be made through the sole for its escape. Hence the seat of puncture should be carefully noted and after the horse has reached the stable, his shoe should be removed and with a shoeing-smith's knife a free opening made through the sole to allow escape of clotted blood and other foreign matter. The wound should be thoroughly washed with an antiseptic as a five per cent. solution of carbolic acid or one of the coal-tar antiseptics, and either a poultice of warm linseed meal applied, or the wound filled with a dry dressing, as one part iodoform to four parts boracic acid, and a boot or wrapping put on to prevent entrance of foreign matter. The writer prefers the dry dressing. The wound should be dressed in this manner twice daily until lameness disappears

In some cases a fungoid-looking bulging takes place in the wound. This is simply a swelling of the sensitive sole. It will disappear when the inflammation is allayed, hence caustics should not be used. When lameness has disappeared and the discharge has ceased, the opening should be filled with hot tar and tow, a leather sole put on to prevent entrance of foreign matter into the wound, and a shoe put on. As foot punctures of any kind are liable to be followed by *tetanus* (lock jaw) it is generally wise to get a veterinarian to give the animal an immunitive dose of anti-tetanic serum. When lameness occurs after an apparently harmless puncture, the seat of puncture must be located, an opening made for the escape of pus, and the case treated as above.

Pricks, or punctures in shoeing are of two kinds, viz., those actually penetrating the sensitive structures, and those where the nails not actually penetrating the sensitive parts are driven so near as to cause bulging of the inner layer of horn and pressure upon the sensitive interior, leading to inflammation and lameness, with suppuration. Many cases of lameness follow what are termed drawn nails; that is, the smith, finding that his nail has gone too near or even penetrated the sensitive parts, draws it out and drives it again, taking a more superficial hold of the horn. When the sensitive parts are punctured lameness is usually noticed at once, in other cases it will appear in a few days.

Treatment consists in locating and extracting the offending nail and treating as for other punctures. To locate the seat of puncture of any kind, it is often necessary to remove the shoe, then examine all parts of the sole and frog, by pressing with pincers. When the seat of trouble is pressed upon, the animal will usually evince pain by drawing the foot away. In paring and searching lame feet, care should be taken to avoid bleeding if possible, as this renders it more difficult to follow a spot of discoloration to its termination. When suppuration in the foot occurs from puncture or other causes, and an exit be not made through the sole, the pus burrows upwards between the sensitive and insensitive walls and escapes at the coronet causing what is known as quittor, which we may discuss in a later issue.

WHIF.

LIVE STOCK.

Dangers from Pasturing and How to Avoid Them.

When live stock is first turned to grass in the spring there are certain ailments which frequently cause unexpected losses. During the season other diseases may attack the animal and result in decreased gains, in a diminution of the milk flow or in death to the victim. Later when the weather becomes inclement and vegetation is touched by frost, digestive troubles are not uncommon and further losses are sustained. This is not intended to imply that the pasture season is one long period of disease and misfortunes for live stock. There is no season of the year when herbivorous animals are so free from ailments as when living according to nature's plan on nature's provision. But it must be remembered that horses, cattle and sheep are usually stabled during the winter and cared for according to man's way, which is not always the best way. Under these conditions the animal system is transformed or modified to conform to the environments and feeds provided. Often the animals lose tone; the digestive, respiratory and circulatory systems are not normal, the vitality and ruggedness are gone. At the advent of spring they are turned to grass; there is often a sudden change in the character of the feed, conditions are different, and live stock almost always, at least lose in weight until they become accustomed to their surroundings. Frequently the pasturing animal suffers from infection of some sort, which has harbored in the soil, and this form of contagion is indeed difficult to combat.

A stockman may enjoy several seasons' freedom from misfortunes of this kind, but there are few who can claim absolute immunity from them. It is well to consider these dangers and fortify against them in every regard, and furthermore he is wise who is prepared to meet them when they do appear.

A root-fed or silage-fed creature goes to grass better prepared than does the animal wintered on a ration lacking in succulent feed. The digestive tract in such a case is accustomed to the laxative effect of such fodder, and the bowels are more likely to move normally. A cattle beast which has been fed for months on dry roughage will often suffer from severe purgation on its first fill of green, sappy grass, and even though the animal survive, there will be a loss in flesh consequent to the scouring, which no stockman can very well afford. This phase of the matter must be considered during the seeding, in order that the proper crops may be grown for the succeeding winter's feeding. A few of the dangers incident to pasturing demand consideration at this time, for live stock must soon go out to grass. Let us study them in turn.

Bloat.

A common disease of ruminants on grass, as well as elsewhere, is bloat. A fruitful cause of this ailment in cattle is green feed of various kinds, as clover or grass, turnip tops, rape, etc., especially when eaten in a frosted or wet condition. This is particularly noticeable when the victim has been unaccustomed to green feed for a considerable time. Any kind

of feed that ferments easily if taken in sufficient quantities, is liable to cause an attack, as will sudden changes of fodder. It is these conditions which conduce to a disease, frequently fatal, that renders it necessary to exert a special oversight when the stock first go out.

Treatment in this case must be directed either to eliminate or neutralize the excess of gases and prevent their generation. In an ordinary case the administration of 2 to 4 ounces of oil of turpentine in a pint of raw linseed oil, melted butter or lard, or even sweet milk, will give relief in from thirty minutes to one hour. When no drugs are at hand, one-half cupful of baking soda or two tablepoons of carbonate of ammonia given in a pint of warm water, are often effective. It is also good practice to tie a stick or piece of large rope in the patient's mouth, as this facilitates the escape of gas. A piece of garden hose can often be used as a probary and passed down the gullet to the stomach of the patient. If the end of the probary does not happen to lodge in the solids contained in the stomach, gas will pass off. When a probary or instrument of this kind is used it will be necessary to insert a gag, having a hole through its centre, in the patient's mouth, to prevent injury to the probary and to the hands of the operator. When drugs fail to give relief, and death is likely to occur in a short time from results incident to bloating, the general practice is to resort to the trocar and canula with which the rumen is punctured, and the gas allowed to escape. This instrument, now quite commonly known, consists of a pointed spike about six inches long which fits into a metal tube one-quarter to one-half inch in diameter. They are stabbed into the rumen at the most prominent point, which is usually halfway between the point of the hip and the last rib. The spike is withdrawn and the tube is allowed to remain in place while the gas blows off. After this the tube is removed and the wound treated with a disinfectant daily until it is healed. It is usually well, after recovery, to administer a purgative of one to two pounds Epsom salts, and feed lightly for a few days in order that the stomach may regain its tone. The trocar and canula should be in every stable, or in some convenient place, for it is frequently required on a stock farm, and anyone with good judgment can use it.

Preventive measures should be taken in order to ward off attacks. Give the animal a good fill prior to being turned on to grass or clover, and introduce them to the pasture when it is dry. If convenient it is well to have a small stack of dry hay or straw accessible to the stock. They relish it when their feed is sappy, it dulls their appetites, and absorbs the excessive moisture of the watery outdoor rations.

Inflammation of the Lungs.

Exposure to cold while the animal is yet warm or hot often results in inflammation. When the herd is driven any distance to pasture they should be given time so as not to arrive in a heated condition, for a warm tired creature will frequently lie down when once in the field. A dry spot is not always selected either, as a cold, damp place is more comfortable for the beast with a high temperature. An attack of inflammation is first evidenced by the shivering of the animal, and then a fevered condition. The patient is hot, then cold; the pulse quickens, ranging from 60 to 70 beats per minute. The animal does not eat, stands up much of the time with head dropped, and the ears lopping. Constipation follows, and the temperature rises gradually until it reaches 105 degrees.

The patient should be made as comfortable as possible, and well blanketed, while the legs should be rubbed and bandaged. A veterinarian should be called to advise and treat, for the disease is frequently fatal and requires professional attention.

Indigestion.

Sometimes on account of an abundance of old, dry grass, and the cold, wet nature of their rations in the spring, cattle suffer from attacks of indigestion; sometimes the digestive system is in a run-down condition, and the wet, dewy grass will cause trouble. If bloating results administer the oil of turpentine as advised for bloat and follow with a tonic, consisting of one dram each of sulphate of iron, gentian, ginger and nuxvomica, two or three times daily. If the trouble persists it will be necessary to remove the patient from the grass field and feed on good clover hay, roots and bran, until recovery is permanent.

Foul in the Feet.

Cattle are not infrequently afflicted with sore feet that are a great detriment to thrift and gain. The particular ailment to which we refer is known as foul in the foot. It occurs in the fore and hind feet, chiefly, however, in the latter, and the patient suffers considerable pain. Often the animal will not bear the foot on the ground, and severe lameness is the result. The legs swell, the feet break out between or above the clouts and discharge a fetid matter. Veterinarians claim it is caused by standing in, or walking through irritating substances, such as liquid manure, swampy land, rushes, etc. When the barnyards are bad in the spring, foul in the foot is liable to occur, but we have seldom seen a case in the winter when stock is often standing in manure in the stable. The circumstances connected with most cases indicate that the contributing causes are found chiefly in the soil, and perhaps these are vitalized or made more vigorous when coming in contact with manure,

or liquid manure. It is also apparent that cattle coming to the yard or stable daily are more subject to attacks than those members of the herd which remain afield. It is not a common ailment in cattle beasts which are pastured on dry uplands, but when the animals are obliged to cross through swamps, or subsist on the vegetation of low-lying land, outbreaks are not uncommon.

It is not easy to correct the conditions on a farm or pasture field which contribute to the attacks of foul in the foot. However, if the live stock can be admitted to the stable without being obliged to wallow through the deep mire of a dirty barnyard, it might prevent some casualties. If it is apparent that a swamp or low-lying piece of land in the pasture is inimical to the health of the herd, it could be isolated from the remainder of the field by fencing. Besides taking the precautions mentioned, little can be done to prevent cases of this trouble. It is obvious, however, that it will not be wise to rent pasture in a field that has maintained diseased animals, not that the ailment is contagious in the general sense of the word, but because the soil or surroundings are probably such that further outbreaks are likely. The remedy for foul in the foot is simple, but recovery is often slow. The first move is to put the animal into clean, dry quarters, or into a dry pasture field, and cleanse between the clouts by bathing with warm water. Then apply hot linseed poultices until the acute soreness subsides. After which apply, two or three times daily, a fairly strong solution of some good disinfectant. If proud flesh forms apply butter of antimony, once daily with a feather, for two or three days. Sometimes it is necessary to cut away a part of the hoof to allow the escape of pus and render treatment practicable.

Black Quarter or Blackleg.

Black quarter or blackleg, as it is sometimes known, is the cause of considerable loss in Ontario and elsewhere. It is an infectious disease produced by a parasite which lives and propagates in the soil of infected districts and the bodies of diseased animals. One affected animal will not transmit the disease directly to another. It usually gains entrance to the system by entering a wound in the skin, or mucous membrane of the body, or at the mouth while grazing. Animals over two years of age seldom suffer from attacks. In diseased areas recourse is had to a vaccine distributed by manufacturing chemists, and by the Veterinary Director General's Department, at Ottawa. A suspected case of black quarter should be at once reported to the Veterinary Director General, or one of his representatives, as outbreaks of this disease require organized efforts to combat them. In some counties of Ontario, quantities of vaccine are being procured this spring with which hundreds of young cattle will be treated. It would be well to have all suspicious cases investigated so inoculation or vaccination can be practiced before it is too late. The disease is characterized by the appearance of large swellings on various parts of the body, usually on one of the upper portions of the legs, and never below the hock or knee joints. These swellings vary in size, and are formed by the presence of gas collected in the tissue beneath the skin. When the hand is passed over one of these swellings a peculiar crackling sound can usually be heard. When punctured they emit a bloody fluid possessing a disagreeable and sickening odor.

Pasturing Swine to Reduce Costs.

Hog prices swing like the pendulum, sometimes to one side, sometimes to the other. One vibration to the side of high prices may have reached \$11.25, country points. In the fall of 1914 it swung the other way, as many will still remember. If one had stocked up two years ago and had managed carefully in the meantime, some profits could have been credited to the swine, for the trend in prices has been upwards. To disperse the herd in 1914 and re-stock in 1916 would mean considerable loss. Farmers should not dabble with pigs. Too many dabble in when prices are high and dabble out when they are low, hence the fluctuation in prices. A man in Lambton County, Ontario, who keeps two or three brood sows every year recently said to the writer: "There are not many farmers who like a hog, but they should all keep a few." This system would do away with the speculating or gambling element associated with hog raising, for the prices would be more constant. The most money is made out of hogs by those who keep a few brood sows annually whether the price of pork is high or low. If they make additions it is usually during a depression, in order to be in on the ground floor when the next peak in prices recurs, and the experiences of the last quarter century show that good prices follow bad prices, or bad follow good, whichever way one wishes to look at it.

Conditions influencing the present high prices are somewhat abnormal, and no one knows how long they will exist. So long as the war continues prices will probably remain high, and perhaps after the conclusion of the conflict there will be such a demand for breeding stock in the war-devastated countries of Europe that the demand will still be keen. However, no one has the conceit or the audacity to predict hog prices in 1917 or in 1918. The proper method to pursue is to keep one, two or three brood sows on every farm, and to keep them and their get in such a way as to make good bacon hogs at the least possible cost. This necessitates some feasible means of pasture through the summer, for all swine raisers agree

that grass, clover making gains. be turned off and this is one per year, whichever, a number door run on feed fed acco

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that grass, clover or rape help to reduce the cost of making gains. From thirty to forty-five hogs should be turned off annually from two or three females, and this is only an average of fifteen for each dam per year, which is low for a good breeding sow. However, a number of pigs like this demand some outdoor run on grass, or an outdoor yard with green feed according to the soiling method.

There is a lack of system about pig raising on many farms. It is not looked upon as an important branch, and its management is more haphazard than that of the cattle herd. There is not so much money tied up in breeding swine and equipment as in the case of cattle or horses, but the details should be just as carefully studied, for the rent or interest, and taxes, are frequently paid from the hog cheque. What is required is a specific interest in the production of pigs accompanied by a well-thought-out practice of breeding and rearing, and attention to all the details of feeding and managing. If the business were studied farmers would see the advantage of keeping their breeding stock up to strength all the time, and with proper methods of breeding and rearing they would not be feeding at a loss when prices were low, and when prices were high there would be a fair profit.

Advantages of Pasturing.

The advisability of pasturing is based on conditions or facts. In the first place the breeding stock are healthier and more vigorous when allowed to come in contact with clean soil and plenty of vegetation. A pregnant sow which runs on grass up to farrowing should be in first-class condition to deliver a healthy litter of pigs. There is no place superior to a pasture with a portable pen for a farrowing sow. If they are fed wisely and sufficiently, there appears to be considerable luck connected with pregnant sows when they have the freedom of a pasture field, and can derive from the soil itself those substances that satisfy the cravings of the animal system. Exercise and abundance of green feed are conducive to thrift in young pigs. They develop bone and muscle, so when the finishing period approaches they have a frame to add to, which tends to cheaper gains. The quality of bacon produced in this manner is of the best, so no raiser of swine need worry regarding the character of the product he may have to offer for sale. It is claimed by those who have adopted the system, and by experimentalists, that grass or forage crops reduce the amount of grain required to produce 100 pounds of pork. This is an important item, and a factor that should be remembered by those who pay any appreciable attention to the hog in their farming operations. Additional words in favor of pasturing are seemingly unnecessary, for it is felt that the practice is generally considered a good one. The extra or initial labor involved is an influencing factor governing the extent of its adoption. These are not insurmountable obstacles, however, in such a case.

Pasture Crops.

Alfalfa is almost universally conceded to be the best pasture crop for swine, provided it will stand in the land. On many farms it will not endure pasturing, and even when cut for hay it often succumbs to the inclement winter weather. When it can be grown successfully there is nothing better than alfalfa on which to run a herd of swine. The stock should not be allowed on it too early in the spring, neither should it be allowed to get too far advanced, for then it will become woody and unpalatable. The hogs will relish it almost anytime up to the blossom stage. As a perennial crop this type of legume is supreme in its effect on the herd, but it is not the most popular crop on account of reasons already mentioned.

Among the biennials red clover receives the majority of votes. It can, if managed wisely, be made to serve two years. As with most crops, it often becomes pastured close, and should be allowed sufficient time to recuperate and grow up again. A portable or temporary fence to divide the field will solve this problem. The system recommended by Prof. G. E. Day, of the O. A. C., is very commendable. The method is thus: Sow a field or strip near the buildings to oats or barley, early in the spring, and seed to red clover with this crop at the rate of about 8 or 9 pounds per acre. Cut the grain for green feed, or for hay, late in June and turn the pigs on the clover, which will grow up rapidly, about the middle of July. Fifteen or twenty pigs can be pastured per acre on this seeding.

A correspondent once reported success with rye and clover, but this requires previous preparation and cannot be adopted this spring. In this case, winter rye was sown in the fall. The next spring 10 pounds of red clover per acre were sown, and it was given two or more harrowings. The season was favorable and the rye furnished abundance of pasture, and there was a fine stand of clover. In August the herd was changed to another field to prevent the clover being destroyed by pasturing too closely. On this occasion the one seeding lasted for two years. In another instance the tramping of the hogs destroyed the clover, but under such circumstances the rye could be harvested and the stock turned on later. It would not be a mistake altogether to sow red clover without a nurse crop on a small field near the piggery, and turn the hogs on when it became ready, but an annual, such as rape, is more adapted for speedy growth and early use.

Of the annuals rape is perhaps the most popular as a hog pasture. It can be sown either broadcast

or in drills and cultivated. The latter method is preferable under most conditions, for the pigs do not tramp it so much and the occasional cultivation will force it along in good time. Prepare a good seed-bed and sow from 2½ to 3 pounds of Dwarf Essex rape, in drills 24 to 28 inches apart. A farmer who makes a practice of pasturing his swine, recently told the writer that he has narrowed his drills to 21 inches and finds it satisfactory. About 5 pounds should be used when sowed broadcast. For the first season a good coat of manure will help the crop, but subsequent applications should not be required if the field is pastured. Rape should be allowed to attain to

in the fields. Where plenty of pasturage is available this may work to advantage, but in many cases the supply is not adequate, so it is wise to develop the young pigs in the pens for some time. Prof. Day advises confining the young hogs till they weigh in the vicinity of 100 pounds, and then turning to grass with from ½ to ¾ of a full meal ration.

Grass is good but it is not sufficient to produce adequate gains. Some meal is necessary, and the grass should be considered as an adjunct to the regular ration.

Fatalities from Ptomaine Poisoning.

The attention of "The Farmer's Advocate" has been called to the loss of several valuable cattle lately in Western Ontario herds from eating defective, frozen silage scraped down from silo walls or from feeding old silage held over from the previous season. An appearance of unthriftiness with harsh, staring coats was followed by purging and brain affection ending in death. Too great vigilance cannot be exercised, keeping out of the mangers feed of an unwholesome nature, or decayed fodder of any kind.

Rise in Live Stock Prices.

Without the occurrence of the great world war upsetting all human forecasts and calculations as to food supplies and prices, it has been long regarded as inevitable because of the actual and relatively diminishing supplies of live stock, that a higher level of prices would prevail. This had already been reflected in the higher cost of living, felt more keenly in the cities and towns, though in like manner it affects the bills of the country home. There must now be an enormous falling off in the live-stock production of all European countries in proportion, as they are involved in this conflict. The demand on animal products for army maintenance is something enormous. Few know or realize yet to what it really amounts. Just to illustrate, a newly-arranged company of Canadian and Americans, projected in Toronto, had their calculations based to begin with on a contract for no less than 12,000,000 cans of meat and vegetable rations. Not only is the consumption vast, but the probably unavoidable waste is very great. The absence of a man or two from a home will not greatly lessen the call for meats, etc., there, and money as yet being in plentiful circulation the domestic buying goes on about as freely as ever, so that the extra call is evidently immense. Then these army and other contracts have to be filled with rapidity and regularity, so that the demand is unprecedented, and whether borrowed or not it matters little, the money is forthcoming, and with limited supplies of live animals prices have been bound to rise with startling rapidity. This has been reflected in the course of the hog market by quotations never before equalled in Canada, and this has been followed to some extent in the cattle market. Sheep and lambs never sold higher, and veal sells high.

Notwithstanding the absence of foreign competition at the great London wool sales recently, prices at the end went up instead of down. It is conceded that the trend must continue in that direction for a long time to come and that even the end of the war would not serve to bring about reductions. The flock owner will likewise be paying more for his clothing.

THE FARM.

The Automobile on the Farm.

The automobile has come to the farm to stay. Only a few years ago these "gas wagons", as they were commonly called, were believed to have been created simply to give increased pleasure to the rich, and to allow them to race through the country destroying roads, frightening horses which in some instances caused loss of life. Perhaps there was a reason for the farmer and his family detesting the sight of a car. For a man to be run

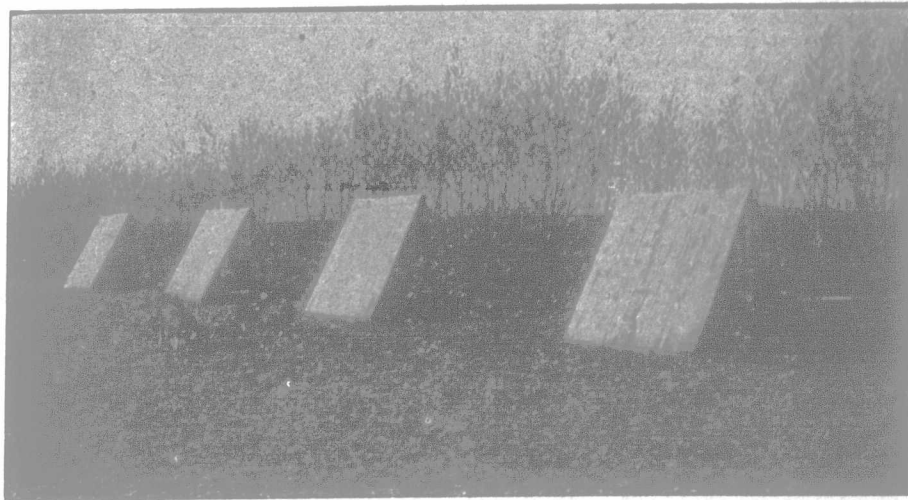
off the road he had labored hard to build, by reckless, inconsiderate chauffeurs, who knew not what it was to handle a frightened horse or build roads, was enough to raise the ire of the most patient man. The fault was in the driver, not the car. However, customs, likes and dislikes change rapidly in this twentieth century. The once-despised automobile has won its way into the heart of rural Canada. The automobile is no longer an experiment; it has been thoroughly tested and has proven that it is capable of being an asset to the farm if properly used. It has become indispensable to the city business man, and present indications point to the fact that it is also indispensable on many farms



Making Pork on Grain and Grass.

10 or 12 inches in height before admitting the stock; yet, on the other hand, it should not become coarse. A temporary fence, or a permanent fence between two fields can be used to good advantage in the pasturing system. By alternating the herd between the two lots, neither crop will be destroyed by excessive tramping or grazing.

Some experiments were conducted at the Missouri Experiment Station to determine the value of different forage crops for hogs. Corn was used chiefly as grain, and according to Missouri valuations the different feeds ranked as follows: corn and skim-milk, cheapest; corn and alfalfa, second; corn and red



Farrowing Pens for Sows on Pasture.

clover, third; corn and blue grass, fourth; corn and rape, fifth; corn and ship stuff, sixth. A saving of 75 cents a hundred in the cost of grain was effected by using green clover instead of fresh blue grass. A saving of \$1.00 a hundred was effected by using alfalfa instead of blue grass. The investigators recommended a succession of crops for profitable hog pasture.

Turning to Pasture.

Some farmers are so partial to grazing hogs that the sows and their litters are turned out early in the season and are obliged to spend the entire summer

Many inventions have been perfected in the past that have directly aided in taking the drudgery out of farm life. Free mail delivery and the telephone have done a good deal in bringing the rural districts in closer touch with the world in general, but the automobile in connection with these conveniences will banish loneliness and isolation. Agricultural life will become more attractive because of the advent of the car which makes it possible for the farmer and his family to mingle with humanity outside their own small community. Even if the car is used only for pleasure it is possible that it may pay big dividends, maybe not in cold cash but in the renewed health and vigor of the owner and his family. Some may say that the tiller of the soil secures plenty of fresh air when at his regular work, and it is to his bed he should go rather than joy-riding when the day's toil is over. True, he may be tired, but a few miles "spin" in a car will rest both mind and body and the privilege of seeing what is being done on farms ten miles distant gives new ideas to think about and put into practice on his own farm. After a chat with a neighbor or friend, and seeing how they are up with their work, both the farmer and his wife return to their home with renewed energy and with either a feeling of satisfaction with their own place, or a determination to improve home surroundings. No matter what business a man is engaged in, it is necessary for him to mingle with men whose work and interests are similar, in order that he may make the greatest possible success. The man who lives entirely to himself and seldom goes beyond the line-fence surrounding his property, becomes very narrow-minded. A car takes its owner and his family to view distant scenes and materially enlarges the horizon of their life.

On every farm there is a certain amount of "running around" to be done and a driver must be kept specially for this during the summer, as the regular work horses may be used for driving in the winter. A car saves the price of one horse and permits of making necessary trips much more quickly. Hardly a week passes but someone must go to market for supplies, or to deliver produce. Frequently cream or milk is shipped from the depot or delivered at a creamery. A car may often be used for this and those who use one have been heard to remark that where from two to three hours a day were required for this work it can now be done in less than an hour. If a man's time is worth 20 cents an hour the saving in a single season can be estimated. Stockmen are obliged to travel long distances purchasing stockers to fill their stables, or buying pure-bred animals. A car covers the distance quickly and easily. Fruitmen and vegetable growers have a perishable product to market and quick delivery is necessary. The custom has been for these men to locate close to a market in order to facilitate and lessen the expense of reaching the consumer. Land naturally rises in value in such districts and the interest on investment is increased. There is land many miles from market, suitable for growing fruit and vegetables, and by the use of a car these may be placed on the market in as fresh condition as the produce grown on the higher-priced land close to a big market. A trailer may be attached to the car for hauling loads, and in this way any kind of freight may be carried without scratching or injuring the car in anyway. On large farms motor trucks are coming into use, as experiments have proven that for long hauls they are cheaper than horse power. However, the motor truck will never come into general use on the farm itself. Cars have been used to drive the separator, churn, pulper, cutting box, circular saw, etc., but they were never intended for this work.

Once an automobile has been in use for a few months on a farm, the general verdict is, "We don't know how we ever got along without it." It is a means of rapid transit which results in it being a time saver, and time is money. This is especially true if a part of an implement or machine breaks in the midst of the busy season. Work ceases, but the laborer's pay goes on while the repairs are being secured. With a car the distance between town and needed repairs is quickly covered. It is difficult to estimate the cash value of rapid transit in a case like this. There are numerous ways in which a car may be used on a farm, and it has been noticed that where cars are owned in the country, greater interest and enthusiasm is shown in fixing up the roads, which not only benefits car owners but the whole travelling public, and indirectly increases the assets of the country.

Securing sufficient labor and keeping the boys and girls on the farm are frequently quoted as the farmer's most difficult problems. Perhaps the auto may help solve them. If it does not make farm life more attractive to the "hired man", it certainly is a help to the employer in case of emergency or rush of work. Day laborers can usually be secured in the nearby town, provided they can get home at nights. By means of quick transportation this class of help is made available. In case of the boy and girl of the farm, some of them are required in the city and on the highways of commerce, but many who are in the city would make better citizens and more useful men and women were they back on the soil. Some authorities claim that the motor car will be a means of retaining the country-bred boys and girls on the farms. Its use, at least, makes life in the country more interesting and is a strong tie that binds many to the farm that would otherwise leave. Industrially, economically, and socially the life of the country is being revolutionized by the motor car. It is the farmer's servant.

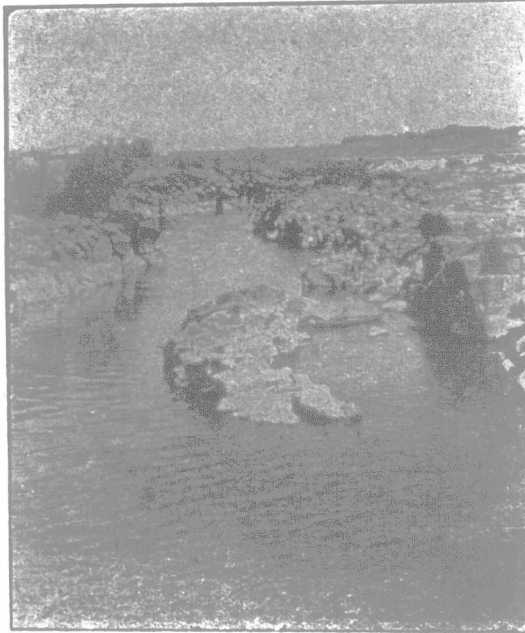
It requires considerable cash to purchase an automobile, and gasoline, oils, and repairs come rather expensive, but if properly looked after and carefully handled, cars are serviceable for several years. The motor car permits of getting in touch with people and places that would be unthought of without its

use; it gives every member of the family a broader vision and a new interest in life. True its use can be badly abused, but if a car is purchased, plan to be its master; do not let it master you.

A Week in Idaho.

A Canadian Farmer on a Tour.

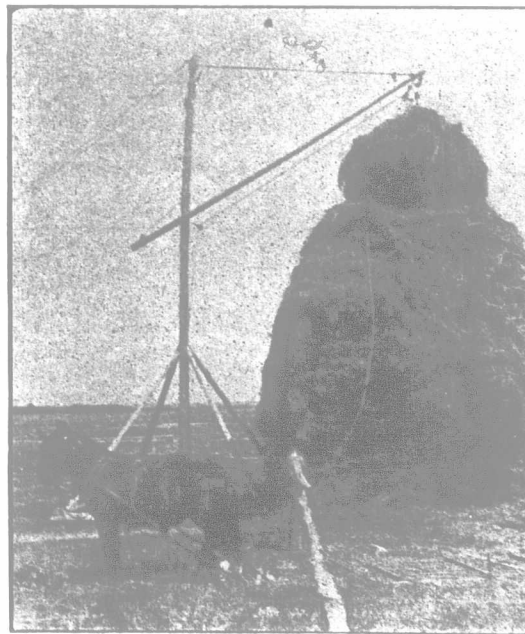
It was to visit relatives that the side trip to Idaho was undertaken. Such an unlikely idea as that there was anything else worth seeing in that half wild, far-off section of the United States had not entered the mind. One should have known better. Should have remembered that He, "in whose hand are the deep places of the earth; the strength of hills being His also," made the most remote corners not only worth looking at, but



Snake River, Idaho. Showing cut into lava rock. Idaho Falls in the background.

to throb and pulse with interest and wonder to all who have eyes to see.

Among the States of the Union Idaho seems to have been one of the left-overs. Settlement proceeded westward mostly, but it also moved from the Pacific eastward. In the northern tier of States, after Minnesota and Dakota had been peopled from the east, there still remained the semi-arid territory of Montana stretching west to the Rocky Mountains. On the Pacific slope, after the California gold fever had subsided and attention returned to the more enduring rewards of agriculture, it became known that a rich country lay to the north, and soon the States of Oregon and Washington filled up with emigrants. The eastern boundary of these



An Idaho Stacker at Work.

States running from California to British Columbia is a straight north and south line. The area between this line and the Rocky Mountains (which are the western boundaries of Montana) constitutes the State of Idaho. As the course of the Rocky Mountain chain is here strongly northwest the State, which is of fair width at the southern end, narrows almost to a point at the Canadian border.

The part of the State visited is in the Snake River Valley, within sight of the Rockies to the east, and 220 miles due north of Salt Lake City. The valley is probably forty miles in width almost level, being only slightly depressed in the middle, and of an average altitude of 5,000 feet. The climate, as to temperature is much the same as that of Ontario but the rainfall is very deficient, and, in summer, nil. The underlying rock,

which is exposed at the river and is nowhere very far down is lava, black and porous at the surface, but solid a few feet down. But where did it come from? Looking westward over the wide plain one sees, 30 or 40 miles off, a solitary mountain with a double peak breaking the horizon line. Local tradition says that this is a volcano, and that it smoked recently. But geologists tell us that not from the west but from the northwest the lava flowed. From two volcanoes in Yellowstone Park 100 miles away, the flood of white hot melted rock, which now forms the foundation bed of this wide valley, was poured forth. The soil is of a grayish color, easily worked, and absolutely without a subsoil as we understand that term, being of just the same color and texture three feet down as at the surface. Originally, the only vegetation was a large species of sage brush which grew to a height of four or five feet. At the present time in the district visited, no sage brush is to be seen except in the waste places, the land being fully occupied and cultivated.

On the higher portions which cannot be reached by present irrigation plants, grain crops, mostly wheat, are grown. Yields are light of course but so are expenses and the quality of the grain is excellent. Farms are large, one visited being of 10,000 acres and the grain is harvested by great machines which head and thresh at the one operation as in California. The system of farming followed is extremely simple. If not grain continuously, then it is grain and summer fallow time about.

But for miles on either side of the river irrigation is practised, the water being diverted from the stream into canals, at a point of a much higher level and miles away. From these canals smaller streams are led off in various directions and these again diverge into ditches which run along roadsides, flow across the head of fields and wherever wanted. Irrigation there is a common every-day affair though to us it suggests mystery. Like the Scotchman in France to whom the greatest wonder was that even the children talked French, it was a surprise to hear two little girls speaking in a matter-of-fact way about a sluggish trickle of water at the roadside as "Mr. Blank's sugar beet ditch." One meets there a man on horseback with a shovel over his shoulder riding along the roads and going in and out of the farms. He is a ditch-rider, a very important official indeed. He is in charge of a section of irrigated territory, goes his round every day to see that all is right and to him application for water for any field and date has to be made.

Dams are built across ditches of all sizes at the proper places so that the water may be held up to the level suitable for the fields adjoining. Thus in going about among the farms the splash and gurgle of water-falls is heard on every hand. This makes the country originally desert, seem more abundantly watered than ours where the necessary moisture is distilled from the clouds of heaven. In many respects the section of Idaho visited resembles Ontario. As for instance in the kinds of farm crops, wheat, oats, alfalfa and potatoes, in the important place that dairying and the swine industry hold, in orchard culture, the attention given to shade trees and even in the foothold that sweet clover has secured on the roadsides, particularly on the banks of the smaller irrigation ditches.

In view of the prominence given of late to the necessary taking of men's place and work by women it may be pertinent to report some facts regarding three women farmers of Idaho, learned at first hand. These three are sisters and though brought up on a farm, were a few years ago in professional and business occupations in a large western city. Unmarried, they lived together and doubtless had a good time. Whether from failing health or from some other inscrutable woman's reason they, having duly prospected several neighborhoods, bought a farm in Idaho and promptly went to live on it and work it. Instead of the pen they took up the pitchfork, and in place of the office stool they occupied at stated times a more lowly specimen with three legs whose place, when in use, is close to the ever-to-be-admired dairy cow. Their venture has been a success. One point in favor of such a life for them is that public opinion there did not view it with critical eyes. To see a woman on a load of hay or doing other outdoor work to help her husband is thought nothing of. It is there as it used to be here sixty or eighty years ago. These young women have had a busy time, no doubt, but from both the financial standpoint and that of health they have succeeded. They milk eighteen cows before breakfast and, as they said, have no such lack of appetite as used to make that meal a mere pretence. And with this improvement in financial and physical lines the mental powers seem to be in fullest exercise instead of being dulled. They have had their full share of the difficulties incident to new undertakings. A recital of their experiences in one line may best illustrate the spirit with which troubles have been faced. Alfalfa has been mentioned as one of the principal crops of the irrigated section. It is indeed practically the one hay and pasture plant of the region. While no risk is involved in its use as hay, it is different when pastured. If the pasture is at all rank, cattle are very liable to bloat dangerously. These women farmers, when such cases occurred, tried giving soda, turpentine, tying a stick in the cattle's mouths, and everything, to use their own words, yet they lost several cases. As a last resort they procured a trocar with full instructions. The need for its use came only too soon. The one of the trio who had the best head for mechanics, and possibly the steadiest nerves prepared to plunge the trocar into the distressed animal, the others undoubtedly being very sympathetic "rooters". But it wouldn't plunge. The skin seemed unnaturally tough; then she thought of the hammer. But the harder she

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struck with the hammer the higher the trocar bounced. In the end she made an incision in the skin with a sharp knife and through it pushed the trocar home. The center was pulled out, the tube stayed in place, the gas blew off and the cow was saved. After that first case the instrument was used without hesitation, and, strange to say, without difficulty. In one day, their big day, they punctured six. Prevention in the way of shorter pasture and more hay fed in summer has much reduced the need for such home surgery but they still keep the trocar ready.

When these girls first began to farm about five years ago, they worked the whole eighty acre place, hiring a man to help them keep up with the work, the management, however, being entirely in their own hands. (It ought to be said here that one of them is a school teacher and is home only during holidays.) But for the last two years they have rented the land under crop on shares to a young man, retaining only the pasture land and the stock for themselves. They find this lightens their work and care. The young man keeps batch in a shack on the place, has a good team and is at hand when a job like taking a load of live hogs to the station or such like has to be done. If no such help were available the hogs would be got there all the same. Their stock when seen consisted of eighteen cows, eleven calves that were being fed milk, some young stock between these ages including a Jersey bull, seventy-five hogs big and little and a team of horses. They take cream and milk every day to a town two miles distant having as customers restaurants, confectioners, bakers etc. There is no need to add that they are not playing at farming, they are into the real thing.

No one who has not seen it with his own eyes could believe or at least wholly believe the truthful tales that might be told of the magnificent crops grown under irrigation. How does this sound?—Land to be devoted to potatoes brings a cash yearly rental in the Snake River Valley of \$11 per acre. An ordinary crop of spring wheat there yields fifty bushels per acre. One farmer stated that in 1914 his average per acre for his whole spring wheat crop was sixty-five bushels. Hard to believe, is it not? Yet any practical farmer who had actually seen the crops ripening would not think of questioning the statement. When it comes to the growing of alfalfa those dry countries where water can be obtained at will have all others beaten completely. That plant delights in a dry deep under-soil and yet must have a sufficiency of moisture for fullest growth and this can be applied as needed. But it is specially in the curing of the crop that the rainless summer climate excels. In the accompanying illustration of the stacker it is alfalfa hay that is being handled. The farmer who is seen holding the trip rope said that it had been cut eight days before hauling and raked and bunched (not cocked) the same day. It had not been touched between times. Not a drop of rain had fallen and it was in perfect condition without a trace of discoloration even in the part that rested on the ground.

The stacker itself is worthy of a little notice. It has a triangular frame of round cedar logs lying flat on the earth which supports the mast and on which it may be hauled from place to place. By means of a lever and blocking this frame is set so as to give the mast a slight incline towards the centre of the stack. By this means the moveable arm, which holds up the forkful or slingful, of itself swings to the right spot after it has risen above the level to which the stack has been built. The mast is further stayed with guy wires from the top.

In view of the possibilities as to crop production in that part of the State and in spite of the fact that it is remote from markets, it will be no surprise to hear that the price of improved land in the irrigated district is away above what prevails in Ontario. Though recently settled the modern conveniences of rural mail delivery and rural telephones are enjoyed by practically all the farmers, and automobiles by a much larger percentage than with us.

Idaho, on the whole, is said to be a very rough State, mountainous and rocky. Free homesteads can yet be secured in some parts, which probably would be worth no more than they cost. But wonders have been wrought in that territory so long avoided by settlers. There is, of course, a newness and rawness very noticeable

to an Easterner. But it is impossible to praise too highly the Yankee enterprise and industry which have made of such naturally uninviting country a land habitable and productive.

Middlesex County, Ont.

T. B.

We Can Get What We Want.

EDITOR "THE FARMER'S ADVOCATE"

I wis lookin' over a magazine a while back, an' I cam' across an advertisement that offered tae tell me how I could get what I wanted, na maitter what it was. Gin I wad send them ten cents they wad tell me the secret. I thocht maybe it wis some trick tae get ma money, but says I tae mase' "I'll tak' a chance onyway. There's an unco' number o' things I'm wantin', an' gin I can find oot hoo tae get them for ten cents it will be money weel invested." Sae I sent along ma dime an' in a few days I got the wee book that wis tae point oot the road tae an easy life an' plenty o' money. It turned oot tae be no' exactly what I expectit, but though it didna' tell me where I could find siller for the pickin' up, it explained how a mon might get some things worth haein', gin he were willin' tae exert himsel' tae a certain extent. It sounds unco' reasonable tae me, but I think I'll just repeat a few o' the points an' argyments that they mak' use o' tae prove that they can mak' onything o' ye frae a mon tae a millionaire. In the first place the wee book says that "the cause o' success is always in the person wha succeeds." Na doot this is true, for na maitter what kind o' a hole ye pit some men intae they'll climb oot, an' ithers again that ye'd think got a pretty fair start in life keep slidin' doon hill as fast as their friends can pull them up. An' they generally hit the bottom in the end in spite o' everything. "Noo," the book gae on tae say, "since all minds contain the same faculties it must be possible for ony mon tae succeed. The difference in men is just that these faculties are mair highly developed in some than in ithers. An' a mon can fully develop ony faculty that he possesses." An' this is what the author seems tae want tae impress on the reader's mind mair than onything; the fact that he can dae what he wants tae dae. When we ken for certain that this is possible for us we are on the straight road tae success. It's doubtin' his ain ability tae get rich that keeps the poor mon poor, mair than half the time. A' his efforts are half-hearted because o' his state o' mind.

The next thing, according tae the book, noo that we ken that success is possible for us, is tae proceed in the richt way. An' this is what it thinks is the richt way. To mak' use o' the abilities that ye are possessed o' at the present time. An' the mair perfectly ye use them the faster ye will get ahead, an' the sooner ye will get what ye want.

Sae it a' amounts tae this, that we must live oor life an' dae oor wark to-day in the best way we ken how, an' the meenute we become perfect in ony line o' wark or get tae mair than fill the place we're in, that meenute the chance for something better will come. This seems tae be a law o' nature a'richt, an' frae what I hae observed it's the secret o' getting tae the top o' the ladder, or, as the wee book says, "o' gettin' what ye want." This brings tae ma mind something that is a sort o' an illustration o' a' this, an' when ye can get an illustration frae real life it's generally mair convincing than a' the theories ye can be thinkin' oot. There was twa brithers that used tae live not far frae ma hame when I wis a young chap, an' twa men mair different in their natures I never met or heard tell about. The auldest, Duncan by name, wis ane o' these men that hae a guid conceit o' themselves, as the sayin' is, an' whatever he had an' whatever he did was always the best thing he could possibly have or dae. He wis what ye wad ca' a real optimist. I mind one day he had a loggin' bee or somethin' o' the kind, an' at noon he cam' oot tae the barn where the men were feedin' the horses their aits, an' says he, "gie them plenty, boys, there's na poverty here." We had oor laugh when he wis gone, but at the same time we kened weel that it wis that same spirit o' pride an' hopefulness that had

helped tae pit him as far on as he wis. When he got his farm first there wis just a wee bit o' a clearin' on it, o' maybe five or six acres an' a sma' log hoose. But he wisna' afear'd o' wark an' he never doubted that he wad be weel aff an' comfortable some day, an' he proved he wis richt in the end. He is no' livin' to-day, but the farm is there, cleared, weel-fenced, an' wi' a braw hoose an' barns on it tae show that a mon can get what he wants by beleivin' in himsel' an' showin' his faith by his warks. He was a guid example o' what oor wee book said about the cause o' success bein' always in the person wha succeeds.

Noo, as I said, his brither wis a different sort o' a mon a'thegither. He was weel liked by his neebors, for he wad aye be praisin' up what they had an' rinnin' doon what he had himsel'. When his feyther died he left him the hame place, a' cleared an' fenced an' wi' guid buildin's on it, an' a wee bit o' siller besides. But it didna' dae him muckle guid. He wis aye lookin' on the black side o' things an' fearin' about the future, an' bein' sorry about the past, an' daein' naething in the present. He had na mair hope o' makin' a success o' farmin' than he had o' goin' intae politics an' becomin' Premier of Canada. The natural result wis that he lost his farm an' spent his last days warkin' for men that werena' half as guid as he was himsel' in mony ways, but wha had better ideas about hoo tae get what they wanted. Sae it looks as if the wee book might be aboot richt when it says that "the cause o' success is always in the person wha succeeds." A guid start or a bad start in life doesna' seem tae coont for much either way. What the feenish will be like a' depends on the attitude of mind o' the mon himsel'. It's a fair field an' no favors, an' ilka mon can win oot gin he kens how tae train himsel' for the race. Na doot aboot it. We can get what we want.

SANDY FRASER.

A Small Farm Well Tilled.

The profits from a farm cannot be reckoned by the number of acres tilled, as it sometimes happens that a man with a small farm will handle it in such a way that his returns are greater than the returns from a much larger acreage. The nature and fertility of the soil, the method of farming, kind of crops grown, and how the crops are disposed of, are factors which influence the profits from a farm. It is possible for a small farm to be handled in a manner that it will show a greater net profit than a farm twice the size. A small farm well tilled often proves a greater source of revenue than does a larger farm. Many people believe that a farm of 100 to 150 acres can be most economically handled when labor and investment in buildings and implements are considered. However, H. S. Clarry, of York County, is satisfied that his sixty-acre farm gives him a greater profit than the average one-hundred acres in the community.

The soil is a clay loam, running to sandy loam in places. The owner has made a study of his farm and grows the crops for which the soil is best adapted. About twenty acres are seeded with clover and timothy each spring, but only ten acres are left for hay, the remainder is broken up in the spring for potatoes and mangels. By seeding more than is required to be left for hay, there is a greater chance of having a good meadow for hay each year. Clover is valued highly as a soil renovator. The field for hay is only left in grass one year, and is then broken up for corn or wheat. Corn, for silage, is considered the best yielding crop on the farm, and six or seven acres are planted to this crop each spring. Corn is sown in rows and thoroughly cultivated throughout the season. A variety is grown that will mature fairly well before there is danger of early frosts, as mature silage is preferred for fattening cattle. A small acreage of wheat is grown every year, as wheat yields fairly well, and gives a bulk of straw, which is used freely for bedding, thus increasing the amount of manure to be applied to the land. A couple of acres are used for growing mangels, and from eight to ten acres are planted to potatoes. A planter and digger are used for assisting in the work, and in an average season potatoes return a good profit. About three acres of the farm are not broken as yet, and the remainder of the sixty acres is sown to oats.

Mr. Clarry is a firm believer in thorough cultivation and keeps three heavy draft horses for doing the work. Three horses are used on all the cultivating implements, and one man is kept busy with the team from spring to fall. No attempt is made to work the farm single-handed. There is always plenty of work for two men, even on the small farm. While one is working the team, the other is busy keeping the place in order, hoeing, etc. In this way they are always right up with their work, or a little ahead of it, and the farm presents a neat, tidy appearance. There is time to combat the weeds, and so prevent them from taking plant-food and moisture from the soil that should go to nourish the growing crops. However, all farmers are not so successful in securing suitable labor, and on many farms the work that is done must be accomplished by one man. Where from sixteen to eighteen acres of a sixty-acre farm are devoted to cultivated crops, considerable cultivating, and hoeing must of necessity be done, which furnishes work for two men. These crops usually respond bountifully to proper cultivation, while if the work is thoroughly done, any weeds that might be in the soil are given a hard run for their lives. Sufficient manure is secured from the stables during the winter to give a liberal coating to the hoed crop and also to fall wheat land. As much as possible of the manure is drawn to the field and spread during the winter, when time is not such a



An Idaho Woman Farmer in Her Crop of Spring Wheat.

valuable factor as it is in the growing season. Under the system of cropping and treatment that it is getting the soil is gradually becoming more productive year by year; the more fertile the soil the less chance of a crop failure. Thorough cultivation, seeding down a third of the farm each spring, and an abundant supply of barnyard manure, are factors which should tend to improve any farm.

The system of marketing the crops practiced on this York County farm may be of interest. Potatoes are the only cash crop grown, and they usually give very remunerative returns; but last year they were not altogether immune from the attack of blight, which materially reduced the yield. Practically all the other crops grown are marketed on foot. It is found to be more profitable and decidedly better for the farm to feed cattle than to sell grain and hay. This method also has the advantage of furnishing work for the winter months. Only one or two cattle are kept during the summer, consequently pasture land is not required, as the three acres of unbroken land furnishes grass for stock kept during the summer. Horses are fed green feed in the stable during the summer in preference to allowing them to graze. Stockers are purchased a few weeks before time to stable cattle for the winter, and they are fed so as to be ready for the block before seeding commences in the spring. Twenty cattle are usually fed, although there is generally feed enough grown to fatten several more. Mr. Clary knows a good stocker when he sees it, and endeavors to fill his stable with animals that will make good returns for the feed consumed. The past winter grade Angus and grade Shorthorn heifers and steers were fed. They were all low-set, deep, thick-bodied, blocky animals and weighed between 850 and 900 pounds when they were purchased the latter part of October. Silage composed the bulk of the winter ration, although straw, a few mangels, and a small amount of hay were also fed. Very little grain was used when the cattle were first stabled, but the amount was gradually increased until towards the end of the feeding period,

each animal was getting ten pounds of chop per day. The chop consisted of two pails of wheat to a bag of oats. Some of the cattle were tied; others ran loose all winter. Feeding and watering was done regularly and the cattle were kept clean. By the system of feeding and management employed in this stable the average gain in weight from the last of October to April 9 was about 270 pounds. No account was kept of the exact weight and value of feed consumed, but Mr. Clary considers that the gain in weight cost meal price to produce, and if it were not for an increase in price per pound for finished animals over stockers, there would be no money in feeding cattle. However, these cattle made a very good gain in weight, and owing to the high price of finished bullocks this spring, a spread in price of nearly two-and-one-half cents per pound was received. With this spread in price, cattle feeding is a profitable business when the right type of animals are fed. This carload of cattle was shipped to Buffalo, where they brought the top car-lot price. The transit shrinkage from Locust Hill station to Buffalo averaged thirty-three-and-a-half pounds per head. The expense of shipping these cattle and placing them on the market was \$83.51. This included freight, feed, commission, insurance, yardage, switching, disinfecting car and consular invoice. Estimating the feed at market price, this carload of cattle gave a fair profit over and above cost of feed and labor.

Besides supplying roughage and grain to fatten twenty cattle, this small farm furnished feed for three work horses, one driver, and six sheep. After carrying this amount of stock through the winter, there was about 600 bushels of oats, 200 bushels of wheat and an abundance of straw left in the barn the first week in April. Last year the crops, with the exception of potatoes, yielded a little above the average. However, it is claimed that the farm is becoming more productive each year. The results attained on this farm show the possibilities of land when it is properly looked after, and the crops grown for which the soil is adapted.

Preparing for the Root Crop.

The root crops, including mangels, sugar mangels, turnips and carrots, are highly prized by stockmen for feeding purposes. Although roots contain a large percentage of water, the dry matter of which they are composed is high in available energy. One pound of dry matter in roots is considered equal to one pound of dry matter in grain. Therefore, roots might be termed watered concentrates. Besides having a fairly high feeding value, they act as a tonic and aid in keeping the animal's system in good condition. They are a valuable feed for breeding stock, being palatable, easily digested and very nutritious. For all classes of stock roots possess a value in addition to the actual feed constituents contained in them due to their succulency and physical character, which cannot be measured in definite terms, especially when used in connection with dry fodder. Pulped roots mixed with cut straw several hours before feeding greatly enhances the value of the straw as a feed. Even if ten tons of water are handled in order to secure one ton of dry matter, feeders consider that it pays to grow roots. While silage adds the necessary succulency to the ration and contains more dry matter, crude fat, fibre and carbohydrate than does roots, and is less expensive to grow, it will never altogether displace the root crop.

The mangel contains about 90.6 per cent. water, 1 per cent. ash, 1.4 per cent. crude protein, .8 per cent. fibre, 6.1 per cent. carbohydrates, and .1 per cent. fat. The sugar mangel contains less water and is considerably higher in carbohydrates, which gives it a little higher feeding value than that of the mangel. The composition of turnips and carrots is similar to that of the mangel. Horsemen prefer carrots, although mangels and turnips are also frequently fed. Dairy men find the most satisfaction from feeding mangels or sugar mangels, as there is little danger of them tainting the milk, although turnips will produce as large a flow of milk. Many steer-feeders plan to have turnips or swedes for fattening their cattle. Sheep and swine also winter better if they have a supply of roots. Preparing the soil, summer cultivation and harvesting roots entails a good deal of work, and the acreage sown has decreased somewhat during the past few years, while the acreage of corn for silage is gradually increasing. Silage adds succulency to the ration and in part takes the place of roots, but it is doubtful whether it has the toning effect on the animal system that roots have.

Preparation for Sowing.

Roots thrive best in cool, moist weather and appear to reach perfection on the British Isles, where the root crop is a regular part of the rotation system, and is prized for feeding all classes of stock. The average season in Canada is favorable to growing roots, and a considerable acreage is still grown, especially in districts where silos are not used. Roots will grow on almost any kind of soil, provided it is thoroughly worked and given a liberal quantity of barnyard manure. They are rather heavy feeders and require a good supply of readily available plant-food in order to produce heavily. On a heavy soil an application of coarse manure usually proves advantageous, while for light land only fine, well-rotted manure should be applied. For the mangel crop, which must be sown in the spring, it is a good plan to apply the manure in the fall and plow

it under. For turnips manure may be applied any time before preparation for seeding in the spring, so long as there is time to thoroughly incorporate it in the soil. From twelve to fifteen tons per acre is a fairly good coating of manure, although many growers prefer a heavier application. Commercial fertilizers are frequently used and very satisfactory results have been obtained. Salt is sometimes applied to land that is to be sown to mangels, and appears to have beneficial effects.

The custom of having roots in the dirtiest field on the farm in order that the extra cultivation which is necessary to produce a crop might destroy the weeds is losing favor, as the use of the hoe is too expensive a method of eradicating weeds. If the field for roots the following year is weedy, a good deal can be done towards cleaning it by early fall cultivation. Roots do well on a well-rotted clover sod. When the first crop of clover is harvested, the second growth may be plowed under. This provides ideal conditions for the following crop. The sod may be plowed shallow early in August and then worked at intervals until October, when it should be sufficiently well rotted to plow the field again a little deeper than at first. For this plowing a double mold-board plow is frequently used, which leaves the land in ridges and permits the frost to more easily do its beneficial work. The manure for mangels should be applied just before the last plowing. Some growers prefer to plow the sod quite deeply, immediately after haying, and then give it thorough cultivation during the fall, and if there is any manure to apply, it is cultivated in rather than plowed under. This method proves quite satisfactory and is effective in destroying many weeds. Sod is not always available for the root crop. In fact, many make a practice of putting the roots on stubble land and apply a heavier coat of manure than they would for sod. Roots do all right on stubble; but it is usually a little more difficult to keep the crop clean. As a rule, land should be plowed again in the spring and thoroughly worked to make a fine, yet compact, seed bed. If the ground is loose and open, owing to lack of cultivation, there is danger of there not being sufficient moisture to germinate the mangel seed. By spring plowing, the soil is loosened to a fair depth, which gives the crop a larger area to feed in to supply the demands for plant-food. The roots of the mangel penetrate to a considerable depth and have been known to clog tile drains in which water was running continually. The better the manure is incorporated in the soil, the easier it will be to cultivate and look after the crop. There is not much time for destroying weeds and grasses by cultivation before sowing the mangel seed, but for the turnip crop, which is usually sown three weeks or a month later, the land can be fairly well cleaned before time of seeding, and thus save a good deal of work later on.

Putting in the Seed.

A good many varieties of mangels are grown, but those which have given the heaviest yield in various tests are the Mammoth Long Red, Ideal, Yellow Leviathan, Yellow Globe, and Yellow Intermediate. All of these, with the exception of the Long Red, grow fairly well out of the ground, which makes harvesting much easier than when the roots grow deep into the soil. The sugar mangels which stand highest on the list are the Tankard Cream, Giant White Feeder

and Jumbo. Considerable work has been done the past year or two in determining the value of home-grown mangel seed, and results are in favor of the seed grown in this country. By selecting the desired type of roots from the field in the fall, and storing them in sand in a cool root cellar over winter, and then planting them in the spring, it is possible for each farmer to produce his own mangel seed and have it of better quality than it is possible for him to purchase.

As a rule, mangels are sown as soon as the land can be prepared after the cereal crop is sown. Many claim that the sooner the seed can be put in the ground the better, while others prefer to thoroughly work the soil and delay planting until about May 24, claiming that by allowing the soil to become thoroughly warmed before planting there will be a more uniform catch. The plants will also make a rapid growth and thus keep ahead of the weeds more easily than if planted when the soil is still cold. If the soil can be put in good tilth and the weather is favorable, early planting may be advisable, but it is better to delay seeding rather than sow on poorly-prepared soil. Mangel seed does not germinate quickly, and if the field is anyway grassy, the young plants may be smothered out before they are high enough to permit of using the cultivator. A common practice is to sow turnip seed or buckwheat, which grows quickly, with the mangels in order to follow the rows and keep the weeds in check. Mangel seed is frequently sown with the turnip drill, which sows two rows at once. For this method the land is drilled in ridges about thirty inches apart and then rolled with a heavy roller before sowing, in order to firm the loose soil. About five pounds of seed is sown per acre, and the seed is covered from one-and-one-half to two inches deep. If the soil is dry, the roller is again used, as the soil particles must be close around the seed to give moisture to start growth. Mangel seed should germinate 150 per cent., but plenty of seed should be sown in order to secure a uniform stand. Lack of moisture or adverse conditions materially affect the stand of crop. The grain drill may be used for sowing mangel seed on the flat, but this method requires a little more seed than the former. The land is put in good tilth and then rolled before sowing. All the spouts, except those used for sowing, are removed. If an eleven-hoe drill is used, the second tube from each end and the centre one would be left on, and by driving the wheel in its own track made the previous time across, the rows would all be left 28 inches apart and three rows could be sown at once. A wider or a narrower drill could be arranged to have the rows the correct distance apart. Care should be taken to have the soil level, or there will be danger of having some seed covered too deeply. If the soil is loose, it should be rolled after sowing, but it is often a good plan to give a stroke with the light harrow a few days after seeding, especially if there has been a rain. This will break the crust and make it easier for the tiny plants to push their way to the light. A modification of this system is to fasten the spouts from which the seed is sown so that they just touch the surface of the ground, then attach a cultivator tooth to each side of the spouts to cover the seed, which is sown on top of the ground. This method makes hoeing a little easier. Where only an acre or two of mangels are sown, the hand-seeder is frequently used. It gives better results than the other methods, although it takes a little longer to do the work. By its use the depth of planting is easily controlled, and a more uniform stand is secured. For all the difference in time it takes for planting, it probably pays to use the hand planter. The check-row corn planter can be used to good advantage to sow mangels on the flat. Sowing the seed on the flat is preferable on most soils to sowing in drills, as it ensures a greater amount of moisture, which is necessary to soften the hard hull surrounding the seed. It is possible to have too much moisture, and, like all other crops, mangels do best on a well-drained soil. As soon as the rows can be followed, the cultivator should be used to break the crust and kill weeds. Some growers use the hand-wheel hoe for the first cultivation, as it can be used much sooner than the horse cultivator. If the weeds are getting ahead of the mangels, it may be a good plan to use the hoe and cut the weeds away from the side of the row, so as to give the mangel plant a chance. Many may think that this takes too much time, but it makes the thinning much easier. Extra time that is taken in the first hoeing is saved later on and the crop is improved. When the plants are large enough, they should be thinned to a foot or fifteen inches apart, leaving the strongest and most vigorous plants wherever possible. Blanks in the row are sometimes filled in by transplanting, but this is not always successful. Frequent cultivation during the summer is necessary to destroy weeds, conserve moisture, and keep the soil in good condition. A second hoeing to remove weeds in the row is generally advisable.

Carrots.

Only a small acreage of carrots is grown, as it is rather tedious work hoeing and thinning them. The varieties most prominent are the Improved Giant, Short White, Mammoth Intermediate White, and Mammoth Short White. Carrots may be planted on well-prepared soil about the same time as mangels. The rows are made about two feet apart, and from two to three pounds of seed is required per acre. Growth is very slow and weeds often get the start. The hand wheel-hoe is almost indispensable for giving first cultivation. Carrots should be thinned to six or eight inches in the row. Cultivation is necessary throughout the summer to keep weeds in check.

Turnips.

Turnips are easier to grow and handle than the

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two crops previously mentioned. As the seed is not usually sown until on in June, there is time to give soil a partial summer fallowing, which kills weeds or grass, and leaves it in fine tilth for seeding. The more cultivation that can be given the fall previous the better, but it is not so essential as for mangels and carrots. Varieties of swedes which stand well up in the list for yield are the Purple Tops, Good Luck, Canadian Gem, Hall's Westbury, Jumbo, the Bronze Tops.

While some growers sow their turnip seed the latter part of May, it is believed that, by delaying seeding until the middle of June, a firmer and better keeping root is produced. Turnips are usually sown in drills from twenty-eight to thirty inches apart. The turnip seeder is used for sowing the seed, and depth and thickness of seeding can be regulated. About two pounds per acre is the usual amount sown, and the seed should not be covered too deeply. If the soil is moist, germination is rapid and a few days after seeding the young plants show quite plainly. When the plants are large enough to thin, a scuffer is generally used to scrape the sides off the rows, which facilitates the work of hoeing the first time. Plants should be left about one foot apart. Frequent cultivation through the season is necessary to keep weeds in check, and the soil loosened. A yield of from eight hundred to a thousand bushels of roots to an acre is not uncommon.

If the soil is carefully prepared before planting, and then given judicious cultivation throughout the summer, the land is left clean and in good condition for the succeeding crop. Working the land when it is wet, tends to spread, rather than eradicate weeds, especially if they are of the nature of sow-thistle or twitch grass. While considerable work is entailed in growing a crop of roots, they are a valuable product to have in store for winter feeding even if there is also a silo full of silage.

THE DAIRY.

From Stall to Pasture.

Regularity is one of the important rules in a successful dairy stable. The aim is to feed the same kind of feed, at the same hour each day. If a change of feed is made, it is done gradually, as a sudden change tends to affect the animal system and decreases the flow of milk. Milking must also be done at a certain time each day, and by the same person. Any deviation from the accustomed time is readily noticed when the milk is placed on the scales. If it is necessary for the dairyman, who has a herd under test, to closely follow a schedule in order to get the most from his cows, it is equally important that the same regularity be given the ordinary herd in order that they may produce to their maximum. In a few weeks a decided, and in many cases a sudden, change will be made in the feed of most herds. From dry fodder to fresh, green grass in a day is sufficient to disturb the best bovine digestive system.

It is a mistake to turn stock to pasture in the spring before the grass has attained considerable growth. The young, immature grass contains a large amount of water, and a considerable quantity must be consumed in order that the animal may receive sufficient dry matter, or food nutrients, to sustain the body and accomplish the regular amount of work in the form of producing milk. Not only is too much of the "washy" grass injurious to the animal, but the pastures are kept cropped short and never supply the amount of feed through the season that they would have, had the grass been given a chance to get a start in the spring. The effect of soft grass is not noticed on young stock, but is plainly shown by the milch cow. At first the flow is slightly decreased, but as she becomes accustomed to her new rations, and the grass becomes more mature, a favorable influence is exerted upon both the quantity and quality of the milk. When the animals have an opportunity of consuming a large quantity of grass without too much exertion, they obtain a ration equal in nutritive value to the grains. The fresh grass is also more digestible than dry fodder or cereal concentrates.

Fresh grass contains a higher percentage of protein than older grass. It is not a balanced ration, and for economical feeding some dry roughage or concentrates should be fed the first week or two that cows are on grass. By the middle of June a good clover or meadow grass pasture will provide a ration that will permit a cow to do her best. Analysis of red clover cut at certain dates show that the amount of protein and mineral substance is greatest in the young plant, but gradually decreases, and carbohydrates and fibre increase as the plant matures. This points to the fact that feeds to supplement new grass should be of a carbonaceous nature in order to balance the ration, but as the summer advances and pastures become drier, feeds that will bolster up the protein side are necessary.

The change from the comparatively dry feed of winter to the succulent grass should be made by degrees. Give the cow her regular feed of dry fodder before turning her out on grass the first few days. Once the cow secures a good feed of grass it is well to avoid feeding legume hay or bran, as these feeds are rich in the same substance that fresh grass contains. Something is required that is rich in carbohydrates in order to balance the ration. When the season opens up warm, grass soon becomes firm, and may be considered a perfect feed in itself. So long as there is sufficient of this kind of pasture, supplementary feeds are not required. As the season advances, grass becomes more or less mature and is frequently rather short. It is then a little heavy on the carbohydrate side of the

ration, and additional feeds should be of a protein nature.

Cows do better if given a frequent change of pasture. It is a mistake to allow grass to be too closely cropped, although it is difficult to avoid in a dry season. A ten-acre field, divided into two five-acre lots, and cows pastured on it week about will give much better results than the same area with the cows on it continually. By use of a temporary fence the pasture field could be divided in order to give the grass every chance.

Early in the season the nights are usually chilly and the ground damp. Both these conditions have a detrimental effect on the animal system as well as on the udder. In order to run no risk of cows becoming disabled, it is a good plan to stable them at night for the first week or two, and also on wet nights during the summer. This may entail a little more work, but a cow's life may be saved by it. Extreme changes should be avoided if possible. If the cows are kept in the stable in the spring until there is good picking in the pasture field, the increased amount of feed resulting from giving the grass a chance will amply repay for the extra week's feeding of dry fodder in the stable.

POULTRY.

Enemies of the Poultry Pen.

There are a number of parasites which tend to make life miserable for poultry, unless some means are taken to keep them in check. The hen-louse and poultry-mite are among the most common, as well as the most troublesome. They infest all parts of the pen as well as the bird. The lice are permanent residents, while the mites, whose habits are nocturnal, are only temporary, as they attack the fowl at night but leave them in the morning, and spend the day in cracks and crevices of the perches, nests and walls of the poultry-house. The food of these mites is believed to consist wholly of blood. Hens that are affected will often cease laying, and the productiveness of a flock may be greatly reduced by allowing these minute insects to visit the fowl. Sitting hens frequently succumb to attacks of these mites, and newly-hatched chicks also suffer severely unless treatment is applied.



Ducks' Delight.

Lack of light, and filth, are the two chief causes of the presence of mites and other parasites in the poultry-pen. When building a poultry-house provision should be made for light to penetrate every part of it. The house should also be built so that all equipment, as perches, nests, feed boxes, etc., can be taken out, as they are more easily cleaned if removed from the pen. Having these things moveable also facilitates cleaning the walls. Prevention of vermin is easier than effecting a cure. If the house is frequently cleaned and thoroughly treated with kerosene or carbolic acid, and whitewashed, it will greatly lessen the danger of infection.

If the pen where poultry are housed becomes infested with mites, the perches, nest and anything else moveable should be taken out so that insecticides may be more effectively applied. It is a good plan to sweep the dust from the walls and clean out the pen, then spray with kerosene or crude petroleum, forcing it into every crack and crevice in the building. The liquid will destroy the eggs of the mites that it comes in contact with, but some are sure to escape, and the pen should be thoroughly gone over again in about a week to kill young mites that may hatch. Sometimes a third application is necessary to completely rid the pen of the pest. Old nests and perches should be treated similarly to the walls of the building before being replaced. Poultry will never be profitable if kept in a mite-infested pen.

It is a mistake to set hens on eggs in the same pen with other fowl, as mites infest brooding hens and multiply rapidly in the nests. For the comfort of the sitting hen, she should be set in a clean box or nest and placed in a quiet place away from other fowl. The nest should be kept clean and the hen

dusted with insect powder occasionally. Most hens make frequent use of a dust bath if one is available. The dust aids in keeping the hen-louse in check. Keeping the hen free from lice, will lessen the danger of young chicks becoming affected. Chicks soon succumb to attacks of lice. If they become affected, it is a good plan to rub a little lard or vaseline around the head and under the wings. Vermin is a destructive enemy of the flock, consequently every poultryman should be on guard and prevent its inroads into the poultry-house. Cleanliness and light are effective weapons in fighting these parasites.

A Chance to Improve Our Egg Markets.

EDITOR "THE FARMER'S ADVOCATE":

I wrote you some time ago regarding the advantage to be gained by farmers getting together in the egg business and shipping to Britain. Since then in your issue of March 23, J. W. Clark, who has been addressing Farmers' Institutes, calls attention to the need of a large supply in the hospitals in England and France, and closes by saying that "Canada's reputation in an egg trade with Europe can only be maintained by a proper government system of inspection. I have taken this matter up with a government representative who was here helping to promote co-operation amongst fruit growers, and learn from him that there are sixty co-operative egg circles in Canada, but he is of the opinion that it would be difficult to get a uniform pack from them. Now it seems to me that if these gentlemen are right, it is useless to attempt co-operation at all. If farmers are unwilling or unable to have their eggs graded through a co-operative company, it is useless to attempt to get the best results. I cannot, however, believe this if they are shown the advantages to be derived from so doing, and I do not think there is any practical difficulty in the way. If the different co-operative circles in Ontario, to begin with, will get together and settle on what is required in order to sell to the best advantage, then each separate co-operative circle can carry out this requirement. All should then ship to some central point, where the eggs will be repacked before shipment to England, and again

graded at this shipping centre. To overcome the difficulty of having the Canadian product depreciated by shipment made by dealers, whether of American or Canadian eggs of inferior quality, let a brand be registered and all shipments marked and sold under this brand. If this is done I have no fear of the results, and I am not arriving at this opinion theoretically, but am judging from my own experience. I have been shipping all my eggs for some years, and I never think of taking them to the local grocer.

Some of my neighbors, knowing this, have asked me to handle their eggs as well. We have not formed a co-operative circle, but work together in this way. Last month I had 245 dozen of my own, and from my neighbors received 410 dozen. I have a contract from

a restaurant for sixty dozen per week, and the balance I sold to consumers and to a retail grocer in Toronto. I have never shipped eggs on commission or to a wholesale dealer. Now, my system of handling is this: To be select, all eggs must be clean; they should not only weigh 24 ounces to the dozen, as has been suggested as a standard, but I do not put an egg in a case of selects that weighs under 2 ounces. I do not weigh all the eggs in order to do this. Occasionally I weigh one as a guide, or if in doubt, but by practice I have come to know an egg that is too light on sight. Eggs lighter than 2 ounces are put to one side and packed by themselves. In packing I keep the colors separate, packing white eggs by themselves, and the same with brown. I get for selects the price at which they are being sold by the wholesale dealers to the trade, and for the lighter ones ten per cent. less. In the lighter ones I do not pack any eggs that will not weigh 1 1/2 ounces; as a matter of fact the lighter ones weigh 22 ounces to the dozen. It may seem as if I lose by this culling out the smaller eggs, but I am getting more for the small eggs than the local grocer pays for them in trade, and more for the selects than the local grocer gets for his eggs. What I am doing in a small way can be done far better on a larger scale, and if we can rise to the occasion and get our eggs on the English market on a par with the Danish eggs it will make a material difference to all keepers of poultry. If the co-operative egg circles take hold of this they can get all the necessary information as to the Danish system from the Department of Agriculture, Toronto. I believe the Deputy Minister has been in Denmark and will know about it. The British market wants our eggs. They are already enquiring for them through

the Department of Trade and Commerce. Shipments have already been made, but not on the proper basis. We want to reach the highest standard and get the best that is to be had, and we should control the business ourselves and not have it go through the hands of the wholesale dealer.

Lincoln Co., Ont.

PETER BERTRAM.

What's in Poultry Feeds?

EDITOR "THE FARMER'S ADVOCATE":

The poultryman who looks backward a decade or two is likely to be impressed with some of the changes that have taken place in the poultry-feed business. Then, shelled corn, cracked corn, wheat and corn meal constituted practically the entire chicken menu of the day—a simple proposition compared with present methods. No one bothered about buckwheat, sunflower seed or the like. Morning and evening a feed of corn and wheat was scattered about for the birds; the intervening time they were left to their own resources in supplying further requirements by foraging about the stables and in the fields. When a fowl was wanted for table use recourse was had to corn meal as a fattener.

But while the system of feeding then employed would now be considered somewhat primitive, it must be remembered that eggs were seldom high in price and other foodstuffs comparatively cheap. However, as the cost of living steadily advanced the demand for eggs became stronger and with it prices advanced. To-day strictly fresh eggs and poultry find a ready market at figures which would then have been considered fabulous. Thus their cost to the consumer caused them to be looked upon as a profitable line from the producer's standpoint. That individual in his turn found that the price of grain had also gone up and his profits narrowed accordingly. As the feed bill represented his largest expense he began to study the question both practically and scientifically. This resulted in several discoveries. First, a hen fed entirely on corn became too fat to lay eggs. Second, that the cost of wheat was too great to be fed extensively. Third, a laying hen required variation in her diet and did her best work when furnished with a mixture of several grains.

Having reached these conclusions, the progressive poultryman proceeded to mix five or six grains and seeds together and called the combination a scratch feed. Then his local feed dealer, who was also an enterprising man of business, quickly took it up and through him the big distributors learned of a new field in the grain trade. Almost immediately several scratch feeds, bearing the respective brands of their promoters, appeared on the market, and being extensively advertised large orders followed. Then followed the compounding of poultry mashes to be used in connection with the scratching feed, thousands of tons being to-day manufactured for both domestic and foreign use.

Naturally the competition among manufacturers of these feeds has become very keen, and for this reason there is but a small margin of profit, the business being dependent on the quantity of output. Hence, certain manufacturers who originally built up their trade with a good quality product have fallen into unscrupulous ways. They have sought to cut down costs by gradually working in unsound and inferior grain. Another scheme is to mix in poultry grit, sometimes from 200 to 250 pounds to the ton. Compare your dealer's price for good honest grain such as wheat and corn with what he charges you for grit and you can figure out pretty accurately what kind of a profit the manufacturer is getting on the transaction. Still another method of reducing price is to increase the amount of corn used because as a rule, it is the cheapest ingredient in a scratch feed. This is not especially harmful, if not overdone, but forty per cent. of this grain should be the limit. It not infrequently happens that the manufacturer, who is particularly zealous in his own interests, will include as much as sixty per cent. of corn. This cheapening of the feeds enables him to meet competition by dropping the price below that of standard goods. Frankly, he is often encouraged to do this by poultrymen themselves, who will buy the cheaper feed in preference to the really honest mixture that must be sold for a few cents more, forgetting that the material he buys must necessarily be cheapened by adulteration to allow the maker to sell it at a reduced price.

Successful poultrymen agree that oats contain valuable egg material. Hence, they are worthy of a place in any good scratch feed. For this purpose clipped oats are the best; that is, oats with the end of the husk clipped off. This removes the goat or slender stem that holds the oat to the stalk, and through which the oat is supplied with nourishment. When the oat is cured, it dries out, this goat assumes a needle-like sharpness and is said to be the cause of craws becoming punctured.

The question of a good mash feed is of even more importance than the scratch feed for through it is generally supplied most of the material necessary for egg making. It, however, affords a splendid opportunity for using inferior ingredients. If the manufacturer is susceptible to temptations of this kind it is an easy matter to save some sweepings from the mill floor, mix in some brown middlings and oat-hulls and get up a fairly presentable looking mash, which even an expert, unless he made a careful analysis, would have trouble in distinguishing from an honestly mixed feed. Of course a mixture of this kind can be sold much cheaper, but many feeders who have invested some of their money in it have realized afterward that the experience thus obtained was about the only real

value they received. Sawdust also makes a fine filler from the dealer's standpoint. It cheapens the mash, allowing him to undersell competitors and when the mixing is well done the best feed judge in the world might easily overlook it.

However, don't get the impression that all feed dealers are dishonest. Rather, I think, such are the exception. Yet once fooled a man is likely to become twice wise. Not long ago, the writer took advantage of an opportunity to visit an establishment where the different kinds of poultry feeds were prepared for the market. Here, so far as could be seen, every care was taken in selecting only sound and wholesome grains. It was also pointed out with decided emphasis that the maker of honest goods is no more in love with the ways of his tricky brethren than the poultryman who is the ultimate victim of their machinations. As a matter of fact, the consumer has the remedy for this evil largely in his own hands. Once he finds a brand of feed that contains good sound grain and grain products, properly mixed, so that results are obtained in the egg basket let him stick to it and cheerfully pay the price, ignoring the "just as good" talk of the fluent salesman who has something cheap to sell. To assist in making a choice, here are a couple of formulas used by one of the big poultry-feed houses whose customers report satisfactory results. Scratch feed: Cracked corn, 35 per cent.; wheat 24½ per cent.; white clipped oats 20 per cent.; kaffir 10 per cent.; buckwheat 10 per cent.; sunflower seed ½ per cent. Mash: Bran 20 per cent.; middlings 20 per cent.; ground oats 20 per cent.; corn meal 10 per cent.; gluten feed 10 per cent.; beef-scrap 9 per cent.; alfalfa meal 9 per cent.; salt 1 per cent.; charcoal 1 per cent.

Elgin Co., Ont.

AGRICOLA.

HORTICULTURE.

An Orchard in Each of Four Seasons

EDITOR THE FARMER'S ADVOCATE:

"Beneath these fruit-tree boughs that shed
Their snow-white blossoms on my head,
With brightest sunshine round me spread
Of spring's unclouded weather.
In this sequestered nook, how sweet
To sit upon my orchard seat
And birds and flowers once more to greet
My last year's friends together."

The warm air is once more tingling with new life, and in the orchard, where the limbs of the old apple trees were red and shiny with rain and sleet a short time ago, they have changed to misty green. The jubilant birds sing as though each throat was a fountain of joy, just bubbling over and giving vent to itself in hilarious song. They flutter about, from tree to tree, singing all the while and making it seem that the whole orchard is alive with songsters. We hear a whistle of wings and become aware that we have alarmed a mourning-dove, which was bowing, cooing, and paying more homage than really was due his pert little mate, while she, with slate-colored back and iridescent neck, did not even look as though she were willing to admit the nearness to flattery of his attentions.

In the early morning, when the mist was disappearing mysteriously, and the sun was gradually creeping higher and higher, trying to love back into life and hope everything upon which its genial rays were shed, the robin, emblem of buoyancy, bounced along under the trees. If you wish to study the birds, come out early. You will find that they all have faith in the old saying, "the early bird gets the worm." Have patience. Stay in some sequestered nook and watch. You will be well repaid and will not have to watch long before you will see many specimens of the bird family.

On one particular morning I found great pleasure in watching this way, and, not much time had elapsed before I saw robins, song-sparrows, cat birds, black-birds, a wood-pecker, a snipe and doves, all hurrying about, each intent upon securing his breakfast before another bird had found it. Every now and again one stopped to give vent to the pent-up feelings of his little bird-heart, by a gush of delightful song; but, on the whole, they were remarkably quiet for their number.

This was their feeding hour, and, though all the birds were on the ground during the greater part of the time, it was not difficult to distinguish some of the characteristics of each. For instance, the robin, of all the birds of North America undoubtedly the best known and loved, is a walker, and, as he raised his head, took a critical survey of all around him, expanded his chest and with mighty hops fairly bounced along the ground for a distance of from two to three yards, I saw before me an example of cheerfulness under all circumstances.

Perhaps one reason for the popularity of the robin is his confidence in mankind. He places his hemispherical nest, made of grasses and sticks held together by hardened mud, in the fork of a tree in the orchard, and usually just at the top of the trunk, where the blue eggs, which finally are deposited there, are in extreme danger. He seems to appeal to our sense of honor perhaps more than any other bird does because he trusts us so.

After the first modest chant of the song-sparrow, that sweet, clear, ringing note, which seems to speak more plainly than words, of innocence and joy, of hope and cheer, we almost forget his presence and leave him to his mate and his nest, which is built of fine, dry grass and rootlets and is placed in low bushes or on the ground.

To those who delight in the cadence of sweet song there can be no other bird so dear as the orchard-oriole.

Though years may elapse, we can always recall the first rich warble, which seemed a finished song in itself, as we heard it long ago across golden pools of water, where the slanting rays of the setting sun proclaimed that day was well-nigh spent.

Suddenly there comes an unforgettable odor of golden-green shrubbery, and we are aware that spring has advanced and that the orchard is transformed into a veritable fairy bower of pink and white blossoms, which exhale a deliciously intoxicating odor. For a little while we stand enraptured by the scene which breathes of purity on every hand: fresh, green grass as even and as soft as a carpet; trees of pink and white which lean in a friendly manner toward each other. Above the trees the blue sky smiles down. It is no longer chill and grey, for winter has gone and spring has come. Sheep stray about the orchard, spotting the shadows under the trees with their dun-colored bodies, while their ungainly little ones caper unsteadily by their sides.

Who can keep from creeping close to the heart of the big outdoors? We go to observe; but our minds are far away, and in imagination we hear the tinkle of bells from the hillsides, or the sound of frogs, faint and mournful across twilight meadows, for we are not living in the gay present; but have drifted to a land where all is in harmony with our feelings and we are reflective, yes—sometimes sad.

Before we are aware of the change which has stolen upon us without warning, the pink and white trees have been transformed to leafy green, which stirs and makes a very welcome breeze, for the air has become warm and it is summer time.

Now and then a gaily-colored butterfly flits past, or a golden canary makes its undulating flight across the orchard. The bees murmur, and though we find it so warm that we enjoy indolence, books or fancy-work on a rustic seat in a shady corner, these little nectar-gatherers cease not in their labors.

Through the silence there falls upon the ear the shrill cry of the bluejay, for

"Along the line of smoky hills
The crimson forest stands,
And all day long the blue jay calls
Throughout the autumn lands."

Summer, with its warm, crowded streets in town and its drowsy hum of bees in the country, is past, and we find ourselves entering upon the brown and yellow season, that of purple haze and thanksgiving. When, through the hush, there falls upon the ear the sound of heavy loads of fruits, being gathered in.

The leaves on the apple trees have begun to turn to russet brown. Looking under the spreading boughs at the fields in the distance we see a vaporous curtain of purplish hue, hanging over everything, though the sun shines brightly. There is an indefinable, a mysterious something to which our hearts respond at this particular time of year. One is aware of a sensation which throbs through one making one feel that it is good to live and meet that we should keep still, in the hush of all which surrounds us.

The sky has lost its brilliancy and has assumed a quieter color. Near the horizon it shades into bluish grey and the hills in the distance, as viewed through the smoky air, are tinged with purple. The maples have donned their most gorgeous reds and yellows, as if they were making a glorious and riotous display before meekly submitting to the howling wind and fury of the winter blast. All this we see while looking under the boughs and between the trunks. It is the time of gathering in and of thanksgiving. The friendly apple trees seem to assume a still more social attitude as they bend their arms laden with delicious red fruit toward the ground. The scene has altered decidedly. Here and there under the trees we see barrels, some filled, some ready to receive the delicious fruit, which is to be taken away and stored for the merry winter days hard by.

The sky grows grayer, the clouds hang low or scud across the sky. The wind howls. There is a nip in the air all day long, and at night the frost comes with its chilling grip. The denuded boughs allow nature to make a kind of music among them, and another kind of music in the row of dear old spruce trees, which have grown there, at the end of the orchard, for many a long year, a murmuring, a real sob for something which can never be and which seems to relieve us somehow. Once again we are aware that nature has uttered our inexpressible feelings for us.

The earth is just ready to turn white. A few brief weeks elapse and we awaken to find a world of purity. The evergreens are bowed with white. Oh! the many joyful associations! The merry bells, the happy little ones and the silent orchard now forsaken, except by us! We love it still, and so we go there upon glittering skates to skim up and down the hollows, which are now covered with shining ice, between the trees, while the dear old orchard glad of our companionship once again catches and reflects our voices from tree to tree and

"Our hearts beat light
With a music bright,
As merrily on we glide."

Middlesex Co., Ont

OLIVE HAMM-MARTIN.

George Bernard Shaw, with his usual terseness, describes the German militarist as a "very common sort of blackguard" who proved his stupid brutality by shooting nurse Cavell, and his idiotic heartlessness by sinking the Lusitania.

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An Advocacy of Thorough Pruning.

EDITOR "FARMER'S ADVOCATE":

The article on developing young orchards in the issue of March 16, is very interesting. As for the "brighter days coming" a lecturer going through here stated that 80 per cent. of the trees in Canada and United States never come into bearing. In other words only 20 per cent. of the fruit trees the nurserymen sell and which are planted out, get sufficient care to bring them into profitable bearing. There is much in what you say about taking the advice of public men in over-doses. In the Okanagan we got something of that in the planting of apricots.

Your opinion on the two-year-old trees is no doubt based on the stock carried by the eastern nurseries. Here we can get nothing but year-old trees from the nurseries but they are, in all probability, as large as the eastern two-year-old for they are invariably a forced growth or grown in virgin soil. This is no doubt the practice since here all orchardists prune to a whip at planting, and nearly all head back to 24 inches or less. All the trees are put in for commercial orchards and with the intention of getting the apples into bearing at four, and profitable bearing by seven and eight years. Most of those planted have been put in on virgin soil. The hole is dug and not often do the growers put the surface soil back into the hole, claiming that it is of no lasting benefit, for the trees' roots will be out into the gravel subsoil inside of the first year, and that it will pack harder around the roots than is advisable.

Among the young trees here we grow our vegetables and where vegetables are not grown the tree rows are kept cultivated, but between the rows alfalfa is generally grown. I have never seen the mulch of alfalfa as you mentioned but would like to see it before I would try it. Trees ought to do better with the soil open to the air. One reason why trees grown in sod, it seems to me, do not have the growth is on account of the lack of air and sun heat at the roots. Of course we must grant that there is a contest on for the nourishment but that alone is not accounting for the deficiency in growth. On July 15 we sow oats in the tree rows and allow them to get the moisture which will check the growth and encourage the young wood to ripen. Then in the spring we have no sod to plough but can go right among the trees with an ordinary cultivator. They need the ripening for more root winter-killing and early top-freezing is caused by an over-dose of moisture than any other cause.

When I first read your article I agreed with most of it and hailed your championing of the no-pruning idea, with delight and approval but I am afraid I have gone back on it again. Two days after your paper arrived we had an annual meeting of the Okanagan United Growers and at noon I was having dinner with the crowd. At our end of the table I, knowing they would all pounce on me, advocated your idea of no pruning. One fellow next to me went at it this way. Leave a tree to grow as it likes and it will fill out into a nice shape with a lot of short branches close together and will be attending to nature's job of reproduction. It will eventually start to bear, but since it will be after seed, that is what it is going to get. There is likely to be a countless number of small apples filled with seeds, the fruit more or less under color and bruised. The Secretary of the Farmers' Institute was at the head of the table and could see nothing in it. His objections were that long branches trailing on the ground would be the result and that when the tree had reached eight years of age it would still be small if it were then thinned out to allow for the fruit that it ought to be bearing at that age. He mentioned a few orchards that gave some idea as to what the result would be. There was not a man in the crowd who approved of the method of pruning adopted by the growers you quoted, Dempseys of Hastings County, the Fishers of Halton County and P. E. Angle of Norfolk County.

I went home thinking it over and re-read your article. Since then I have had occasion to look over some orchards and went to see one in particular. I took a tapeline with me and here is the result. One of my neighbors who has ten acres, thirteen years old, planted 15x30 with peach fillers. The fillers were cut out this year and most of them three years ago. This orchard was clean cultivated for three years and has been heavily pruned for shape every year. The last two years all of it has been in clover or alfalfa with the tree rows still kept clean. Other years more or less vegetables have been grown among the trees. Peaches as you know are robbers of nourishment yet with that to contend with his trees are now so high that standing on a twelve-foot ladder he cannot reach the top branches to prune. The trees of average size that I measured are 21 to 26 inches around the trunk, half way between the ground and where the branches start. The first branches are ten to thirteen inches around, half way between the trunk and where they branch out. I measured some of our own trees nine years old, treated the same except that they have had sod in the rows, the last two years. They measured, on McIntosh Reds, 19 inches around the trunk halfway between the ground and branching. The branches, that is the first branches halfway from the trunk to where they divided, went nine inches on an average. On our four-year-old Wageners the trunks, halfway from the ground to the first branches, went 7, 10, 12 on the average-size trees. The first branches went 4 to 6 inches halfway between the trunk and the point where they branched off. These four-year-old trees have had one year clean cultivation and have had the tree rows in sod but the spaces between the tree rows

have been used for vegetables. The four-year-old trees have been pruned since planting, leaving four leaders only. The old trees, that is the McIntosh Reds, were pruned till the last two years when the fruit scarcely permitted the growth to reach a length where it needed much cutting. The four-year-old trees are now in bearing and will have a good crop this year but we will not let them bear more than half a box each. They could, so far as strength is concerned, carry two boxes easily but we will thin out and not sap the trees' strength, but let them grow some more.

I spoke to the gentleman in charge of the Experimental Vegetable Station here and he said he had seen an orchard let go, up the lake a piece, and of all the sights that was the worst he had witnessed. The branches were trailing, wind-broken and the trees of very little size. Of course here we have more phosphates and nitrates in the soil than I believe is the case in rainy districts and it is mostly virgin land when the trees are planted but that may not make much difference between the growth here and in the East. It would be interesting to me to know the growth by the measurements given above that was made on the trees of the growers you mentioned.

In pruning a young tree I leave the centre in and leave three branches only (am finding four too many in most cases) starting at different heights from the main stalk. Above those three, I leave three more not directly above the first three, but so they will be above the spaces between the three lower branches and observe the same again in the third group.

The first lesson anyone who wishes to prune, should get is to go picking the fruit. That may seem a queer statement to make but when we remember that it is in order to get good fruit that we prune then it will not seem so far out. Some of the bad fruit is caused by branches dropping too low and allowing fruit to be injured by branches moving in the wind. Long branches with a load of fruit and not stout enough to carry it will bend till they not only injure the fruit they carry but the branches below. That is why I avoid leaving one branch above another. A nicely colored apple sells best but a tree too closely branched and thickly leaved will shade fruit and many branches on the south side of the tree will shut off sunlight from the apples on the north side of the tree. When picking fruit you see those things, and a hundred others.

I am afraid I have gone back on your evident opinion not to prune, but as I am planting a few trees this spring I shall leave some and see how they compare in five years from now. There is one thing you missed that appears to me to be of primary importance and that is variety. Apples sell best in mixed car lots; a straight car goes hunting a buyer. I believe in planting so that when the orchard is in bearing a car of three or four varieties can be made from the orchard but I do not like the idea so many have here of tackling the job that should be left to the experimental farms. Every catalogue paints some varieties, but fight shy of those new ones that are not known.

British Columbia. WALTER M. WRIGHT.

The Prairie Farmer and the Apple Duty.

Apparently the grain growers of the Prairie Provinces do not take kindly to the additional tariff of 50 cents per barrel on apples, recently imposed by the Dominion Parliament. This, with the previous tax, makes the duty 90 cents per barrel, which they consider altogether too high. At a meeting of the Canadian Council of Agriculture some time ago the following resolution was adopted:

"Whereas, at the request of the British Columbia fruit growers, the duty on apples has been raised from 40 cents to 90 cents per barrel; whereas, this is an enormously high duty—approximately 100 per cent. ad valorem on the cost of production of apples in Canada, and whereas, the evident purpose of the imposition of this duty is to force the prairie consumer to pay a higher price for apples; therefore, be it resolved that this, the Canadian Council of Agriculture, in meeting, declares this to be an unrighteous attempt to exploit the prairie farmer for the benefit of British Columbia fruit-land speculators, fruit growers and middlemen, and we advise the farmers of Alberta, Saskatchewan and Manitoba, that if this becomes law and they are to be taxed in this manner, they pay these taxes into the federal treasury by purchasing imported apples, rather than pay the same duty together with profit thereon to British Columbia land speculators, fruit growers and middlemen."

The grain growers are obliged to purchase practically all the fruit used in their homes so they will naturally feel the effect of the protection afforded the British Columbia apple. To boost the tariff on apples and balk "Free Wheat" at one session of Parliament has rather provoked the men of the West. The prairie consumer will feel the influence of the increased duty most, and they can see no reason why thousands of grain growers should be taxed in order to protect a few fruit growers in the Pacific Province.

When presenting their case to Parliament, the British Columbia growers claimed that the competition they encountered on the market was of an unfair character, and of the kind that did not and could not exist in the world of manufacture. They showed how 75 per cent. of the fruit plantings in the Northwestern States must go under to enable the balance to survive. In four years, ending 1915, the average selling price, according to authorities in the Northwestern States, was more than 20 cents a box below the average cost of production. They use Western Canada as a place

to get rid of their low-grade apples. Over 85 per cent. of their shipments to Canada are "C" grade, about equal to our No. 2. The average f. o. b. selling price in the past four years was under 70 cents per box, while their average cost of production was about \$1.06 $\frac{3}{4}$ per box, showing a loss of nearly 40 cents. In the face of this competition British Columbia has been forced to market 90 per cent. of its crop. The cost of production in the latter Province is about 25 per cent. higher than that in the Northwestern States, ranging from \$1.20 to \$1.28 per box. They did not mind competing with the products of other Canadian orchards, but they thought it unfair to compete with a country where over-production was forcing growers to market at a price far below what it cost to produce the fruit. On these grounds the B. C. growers asked for protection.

Eighty-one days after the last session the report of the Western New York Horticultural Society Convention was this year in the hands of members and the press. This is an old organization. The Convention held last January 26, 27 and 28, at Rochester, N. Y., was its sixty-first annual meeting, but with age it does not become feeble or tardy in getting out its reports. A volume containing 252 pages, well compiled and plainly printed, this year carries the convention to the homes of the members before the rush of the season starts. The secretaries of all the associations usually do their parts well, but there is need of speeding up the press responsible for similar reports of conventions in this country.

FARM BULLETIN.

A Step in the Right Direction.

EDITOR "THE FARMER'S ADVOCATE":

There was held in Charlottetown, Prince Edward Island, on March 7th, a non-partisan representative conference for the purpose of discussing the resources of the province and the present systems in vogue, under which many of the industries were being pursued, more particularly agriculture and fisheries. Education was included. Methods for the immediate advancement, reorganization or development was discussed.

A permanent committee of twenty was appointed which was to meet later and resolve themselves into sub-committees to carry on the work.

The committee met April 10th and the Chairman, Frank Hearty, made the following statement:

"In the first place I want you to distinctly understand that this is a non-partisan committee. Politics have been eliminated in the selection, and we must endeavor to keep politics out of it. You may not all agree with me, but I am under the impression that political jealousies in the past and even at the present time are materially retarding the growth, development and progress of this province. If we are to get results we have to put aside all narrow-minded political bickerings and approach this great work, which we have been appointed to complete, in an open-minded manner, resolved to carry it through untrammelled by prejudices of any and of every sort. This is not going to be a mere scratching of the surface, but an important and forward movement, which we must make up our minds to carry through to completion, and I have no hesitation in saying that if we eventually get the results that we are after, and we must get them, we who have participated in this movement, will in after days feel as proud as if we had been decorated for valor in the present great war."

Sub-committees were appointed to consider Agriculture, Fisheries, Education, Immigration, New Industries, and Transportation. A preliminary report will be submitted about the end of May and doubtless emphasis will then be placed upon those features where redress is most necessary or where development is most feasible.

Many realize that there are resources untouched that might be developed, and our fishing industry, though good, does not reach the proportions that it should. Now, the work has been lifted out of politics, neither party being able to claim credit. There is every reason to expect very substantial results, because the committee is composed of successful business men, farmers and educationists.

W. R. R.

A Transportation Epoch.

Concurrent with the rapid application of electrical power to transportation in Canada, particularly in the Province of Ontario, comes the interesting and encouraging announcement that the Chicago, Milwaukee & St. Paul Railway has about completed the great task of electrifying 440 miles of its track across the Rocky Mountains. In importance this achievement ranks comparably with the first journey of a steam locomotive. The progress made in states like New York, Ohio, and Michigan in handling suburban traffic, as well as what we see at our own doors, indicates what is coming from the advent of electrical transport, and what a tremendous asset rightly retained and developed, the people possess in the Niagara and other sources of electrical power. Including sidings and yardage, the trackage electrified by the Chicago, Milwaukee & St. Paul Corporation will aggregate 650 miles, and in the elimination of cinders, ashes, water tanks, fuel storage, reduction of noise and other important economics that appeal strongly to the travelling public, the undertaking is simply revolutionary and epoch making. The main power plant is located at Great Falls, Montana.

After the War.

BY PETER MCARTHUR.

Lime-sulphur wash is one of the things that does not improve with acquaintanceship. Of course I acknowledge its virtues but I don't like it. This is the fourth season that I have handled the nozzle and I must say, the wretched stuff smells as offensive to me as ever. I can't seem to get used to it. In addition I had several fresh scratches and "barked" spots on my hands and the way that stuff stung was a caution. But they say that the San Jose scale is in the neighborhood and the spraying simply had to be done. We put on the dormant spray as strong as the law allows and it seemed to have an unusual amount of "pep" in it. Also we put it on as thoroughly as we could, giving every tree a drenching. And we were after more than the scale. I have been told that if the dormant spray is delayed until the leafbuds are beginning to burst there is a good chance of killing the aphids. We waited until the swelling buds showed a tip of green, but that green was not the green of the leaves. By no means. Under a microscope it was easy to see that the green was made up of myriads of young aphids that had mobilized on the ends of the buds and were waiting for the little leaves to open so that they could make their spring drive. During the past few years the aphids have increased almost to a pest in the orchard and although I sprayed thoroughly with a soap and kerosene emulsion it did not seem to affect the critters when full grown. I am hopeful that the lime sulphur would catch them when they are as young and tender as they are just now. If they can stand the solution we squirted at them they can stand anything. By the way, I wonder if any of our boys at the front who have worked in orchards have thought how effective a spraying outfit with a plentiful supply of lime sulphur would be in repelling the enemy? With the wind in the right direction and a good power sprayer at work it seems to me that lime sulphur could be made as effective as any poisonous gas that could be used. I am afraid that if I were on the firing line and anyone tried it on me I would be likely to travel ahead of it at no ordinary rate of speed.

Those who are giving thought to the future are already discussing what shall be done with the returned soldiers and the workmen who will be reduced to idleness by the closing of the munition factories. Even though the end of the war is not in sight, this kind of discussion is entirely proper. The after effects of the war will undoubtedly cause more hardship and suffering than the war itself. Nations, like individuals, feel their wounds more acutely long after they have been inflicted. It does not seem at all probable that the end of the war will be followed by an immediate boom, in all the leading industries, that will give employment to those who will need it. Wise statesmanship will be needed in the period of reconstruction even more than during the war. What the war calls for is generalship and that differs from the work of the statesman as much as the work of the soldier does from that of the physician. The munition industry, while giving an unexpected boom to manufacturing is disorganizing our normal industrial situation and few industries will be able to take up their work where they left it. All those who are giving thought to the subject seem to be agreed that as agriculture is the basic industry of Canada efforts must be made to promote its expansion so as to provide for those who will be idle. This seems reasonable but there may be difficulties in the way. It is inevitable that agriculture must bear in one way or another most of the burdens of the war and it is not entirely certain that the nations impoverished by fighting will be able to offer the old-time market for farm products. Whether farming as a business will profit by a sudden stimulation of this kind is open to question.

At the same time we must not overlook the fact that it is from the land that the people can most readily earn a living. Few of the pioneers knew anything

about clearing the land or farming and yet they managed to wrest a living from the wilderness. Few of them made wealth, but most of them were able to secure what they needed in the way of food, shelter and clothing. If a plan could be developed by which those who must seek a subsistence could be trained and placed on the land without having to suffer the hardships borne by the pioneers it would be the quickest way to make them comfortable and independent. If they were instructed and helped during the first few years, they could learn to provide for themselves and the added products that they would put on the market would not be sufficient to disturb existing conditions. Besides, the agricultural industry of the country would be gradually strengthened by this natural increase of the number of farmers who own their land and would be taking their livings from it. There is bound to be a back-to-the-land movement after the war, but unless it is handled wisely it will complicate rather than relieve the situation.

I notice that many of those who are dealing with the subject favor the plan of having the farmers now on the land build houses for the accommodation of hired men and their families. This plan may prove attractive to well-to-do farmers but many who need hired help could not afford the outlay. With building materials at their present prices, and the cost of construction so high I doubt if a farmer could put up a house that would be comfortable both summer and winter for less than a thousand dollars. Few would have the money on hand for such an investment, and would be obliged to borrow at a rate of interest that would add materially to the expense of employing a hired man. But even if the scheme were entirely practicable and if every farmer would provide for his help in this way I venture to hope that the problem will not be solved along these lines. The tenant and landlord system is one that I hope will never find a footing in Canada. It was to escape the oppressions of landlordism that our fathers came to Canada where they could get homes of their own. If we stimulate landlordism in any of its forms we will only be helping to establish in this country the evils that made the older land intolerable. I would much rather see the present holdings broken up into farms of more workable size so that farmers could get along with less help rather than develop a permanent supply of hired men. The landlord and tenant system inevitably breeds class distinction and we should view with concern any scheme that would tend to lessen the freedom and equality that has been until now the boast of Canada. By all means let us get people on the land but it must be done in such a way that they will be free and independent. The quality of our citizenship is of much greater importance than any increase of our products.

O. A. C. Examination Results.

The following is a list of successful candidates at the annual O. A. C. spring examinations in the first three years, according to merit:

First Year, Maximum—2,500.

- 1, Shales, 2027; 2, Campbell, 1924; 3, Hart, 1923; 4, Flatt, 1895; 5, Grant, 1868; 6, Musgrave, 1856; 7, Odell, 1784; 8, Munroe, 1758; 9, Gunn, 1734; 10, Gowland, 1728; 11, Barber, 1671; 12, Kimball, 1640; 13, Oliver, 1611; 14, Matheson, 1608; 15, Steckle, 1603; 16, Hardy, 1584; 17, Bateson, 1568; 18, Hodgins, 1559; 19, Caldwell, W. C., 1523; 20, Hunter, 1515; *12; 21, Mason, 1514; 22, Shield, 1509; 23, Surgenor, 1506; 24, McKay, 1479; 25, Toole, 1477; 26, Scouten, 1461; *13; 27, Kezar, 1455; 28, Goudie, 1453; *11; 29, Way, 1434; 30, Pearsall, 1422; 31, Atkin R., 1419; 32, Stewart, 1401; 33, Aylsworth, 1394; 34, Stillwell, 1383; 35, Peters, 1380; 36, Delamore, 1373; 37, Higgins, 1366; 38, Ziegler, 1366; *13; 39, Minielly, 1325; *12; 40, Jones, 1323; *11; 41, Crews, 1315; 42, Moore, 1312; *12; 43, Sibbick, 1291; 44, Allan, 1288; *12; 20; 45, Wadsworth, 1269; 46, Patterson, 1267; 47, Secord, 1260; 48, Karn, F. N., 1255; *13; 49, Rutter, 1253,

- *6, 12; 50, Argue, 1231; *9; 51, Andress, 1224; *12; 52, Jackson, 1201; 53, Costogue, 1185; *1, 13; 54, Raymond, 1173; *8, 12; 55, McLean, 1166; 56, Tice, 1154; *4, 12; 57, Cook, 1151; 58, Mills, 1092; *10, 13; 59, Duff, 1080; *1, 12; 60, Wood, 1078; *8, 10; 61, McDonald, 1077; *6, 12; 62, Hale, 1070; *10, 12; 63, Carr, 1027; *1, 9.

List of Subjects.

- 1, English Literature; 2, Composition; 3, Arithmetic and Drainage; 4, Book-keeping; 5, Hydrostatics; 6, Soil Physics; 7, Mechanics; 8, Manual Training; 9, Chemistry; 10, Geology; 11, Botany; 12, Zoology; 13, Horticulture; 14, Field Husbandry; 15, Animal Husbandry; 16, Dairying; 17, Poultry; 18, Apiculture; 19, Vet. Anatomy; 20, Vet. Materia Medica.

Second Year, Maximum—3200.

- 1, Cooper, 2381; 2, Logan, 2381; 3, Brenner, 2379; 4, Brown, 2353; 5, Snyder, E. S., 2349; 6, Heimpel, 2341; 7, Ferguson, 2328; 8, Arnold, 2300; 9, James, 2292; 10, Patterson, 2266; 11, Andrew, 2265; 12, McEwen, 2230; 13, Malyon, 2229; 14, Wilson, 2228; 15, Sullivan, 2222; 16, Snyder, A. W., 2186; 17, Newton, 2155; 18, Lowell, 2137; 19, Jakes, 2123; 20, DeLong, 2116; 21, Walker, C. V., 2212; 22, Dodding, 2101; 23, Parfitt, 2051; 24, Robinson, 2030; 25, McCulloch, 2019; 26, Nelson, 2003; 27, Munroe, 1992; *18; 28, Michael, 1991; 29, Halsey, 1959; *22; 30, Shorey, 1953; *22; 31, McLeod, 1949; 32, Hoard, 1946; E.33, Smith, 1942; 34, Hamilton, 1935; 35, Knowles, 1925; 36, McBeath, 1922; 37, Wallace, 1837; 38, Scott, 1828; *8; 39, Walker, J. L., 1821; *18; 40, Hawley, 1795; 41, Finch, 1765; 42, Lambert, 1750; 43, Lavis, 1740; 44, Richards, 1722; E.45, Moore, 1670; *22; E.46, Shaw, 1647.

List of Subjects.

- 1, English Literature; 2, Composition; 3, Public Speaking; 4, Economics; 5, Thesis; 6, Surveying and Drainage; 7, Agr. Engineering; 8, Electricity; 9, Farm Mechanics; 10, Organic Chemistry; 11, Soil Chemistry; 12, Animal Chemistry; 13, Bacteriology; 14, Entomology; 15, Horticulture; 16, Botany (Xmas); 17, Economic Botany; 18, Phy. Botany; 19, Field Husbandry; 20, Animal Husbandry (Xmas); 21, Feeding and Man.; 22, Principles of Breed; 23, Live Stock; 24, Horse Judging; 25, Dairying; 26, Poultry; 27, Vet. Pathology; 28, Vet. Obstetrics; 29, Forestry.

E indicated less than 60% in English.

Third Year, Maximum—2400.

- 1, White, 1891; 2, Austin, 1790; 3, Mason, 1780; 4, Slack, 1752; 5, Evans, 1742; 6, Davey, 1740; 7, Schurman, 1726; 8, Guild, 1726; 9, Wiggins, 1709; 10, Murdock, 1672; 11, Sutton, 1663; 12, Mantou, 1661; 13, Van Every, 1657; 14, Selwyn, 1641; 15, McKillican, 1622; 16, Clark, 1606; 17, Martin, 1604; 18, Neff, 1571; 19, Waterman, 1537; 20, Stokes, 1533; 21, Redmond, 1507; 22, Murrill, 1496; 23, Fleming, 1461; 24, Hunter, 1452; 25, McConkey, 1452; 26, Skinner, 1442; 27, Merkle, 1318; 28, McCurry, 1256; *7, 11.

List of Subjects.

- 1, English Composition; 2, Composition; 3, Public Speaking; 4, Economics; 5, French; 6, Heat; 7, Meteorology; 8, Cold Storage and Ventilation; 9, Inorganic Chemistry; 10, Qualitative Chemistry; 11, Quantitative Chemistry; 12, Organic Chemistry; 13, Geology; 14, Crypt. Botany; 15, Plant Physiology; 16, Syst. Entomology; 17, Economic Entomology; 18, Bacteriology.

* indicates subjects on which pass standing was not secured.

Embargo Against U. S. Stock Removed.

We are informed by Dr. F. Torrance, Veterinary Director General, that after May 1, there will be no special restrictions against the importation of stock, their parts or products, from any of the States of the Union. It will, however, be necessary for importers to observe the usual regulations of this Branch, which under normal conditions govern these entries.

Toronto, Montreal, Buffalo and Other Leading Markets.

Toronto.

Receipts at the Union Stock Yards, West Toronto, from Saturday, April 29 to Monday May 1, numbered, 126 cars, 2,650 cattle, 232 hogs, 71 sheep, 322 calves and 40 horses. Heavy steers, 15c. to 25c. per cwt. lower; butchers' cattle, 15 cents lower. Cows and bulls firm. Several loads of choice, heavy cattle sold at \$9 that would have brought \$9.15 to \$9.25 a week ago. Sheep, lambs and calves unchanged. Hogs lower at \$11.75, weighed off cars.

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

	City	Union	Total
Cars.....	41	364	405
Cattle.....	531	3,672	4,203
Hogs.....	288	9,777	10,065
Sheep.....	36	233	269
Calves.....	509	1,541	2,050
Horses.....	142	1,113	1,255

The total receipts of live stock at the two markets for the corresponding week of 1915 were:

	City	Union	Total
Cars.....	41	375	416
Cattle.....	405	4,543	4,948
Hogs.....	750	7,462	8,212
Sheep.....	87	169	256
Calves.....	225	1,871	2,096
Horses.....	145	1,198	1,343

The total receipts of live stock for the past week at the two markets, show a decrease of 11 car loads, 745 cattle, 46 calves; and an increase of 1,853 hogs, 13 sheep and 88 horses, compared with the corresponding week of 1915.

The feature of the Toronto Live Stock Market for the past week was the advance in prices for cattle and hogs.

Receipts in all the different classes of live stock were away short of supplying the demand, especially in cattle. Receipts on Monday were not more than half what they usually are on the first day of the week, and on each succeeding day the supply failed to make up the shortage, the result being that prices steadily advanced in all classes of fat cattle. Where in our last

letter small lots of choice cattle sold at \$9 to \$9.25, loads have now reached those figures, and the small lots have reached as high as \$9.50. The same advance has taken place all the way down through the different classes. Quality considered there has been an advance of from 40 to 50 cents per cwt. during the week.

The number of finished cattle sold this week was small not more than ten per cent. of the deliveries were good and choice, and, of course, these classes advanced quickly. But all classes were affected, as the best classes being short, dealers had to do the next best thing which was to buy the best they could get out of the common and medium classes, as well as the bulls and cows all of which sold at much higher prices, bulls selling up to \$7.75 and \$8; while cows sold in many instances at \$7.50 to \$7.75.

Stockers and Feeders—These were in strong demand more orders coming forward than could be filled. Several American buyers were on hand, but had to depart empty handed, leaving their

orders with Commission firms. Choice selected feeders de-horned 800 to 900 lbs., sold at \$7.75 to \$8 and not half enough to supply the demand; steers, 700 to 850 lbs., \$7.25 to \$7.50; stockers, 600 to 700 lbs., \$6.75 to \$7.

Milkers and Springers—The demand for these was greater than the supply, many orders going unfilled; but prices did not advance proportionately, as they, too, like many other classes, have about reached their limit. Choice cows sold from \$90 to \$100 each.

Veal Calves—These were more plentiful but prices did not recede as the demand was large.

Sheep and Lambs—Receipts did not begin to fill the demand, and values were firm but unchanged.

Hogs—Receipts were moderate but twice as many would have been taken so great was the demand. Prices advanced to \$11.95, weighed off cars which constitutes a record, as that is the highest price ever paid on the Toronto Market.

Butchers' Cattle—Choice, heavy

steers at \$9 cattle, \$8.75 medium, \$7 to \$7.15; choice medium cows, \$5.50 to \$5.25 to \$5.2 good bulls medium but

Stockers—horned—steers \$8; steers 700 stockers, 600

Milkers and ers and spring cows at \$6 to \$5.50

Veal Calves to \$10.50; good heavy fat calves \$7.50 to \$8.

Sheep and Hogs—Selected to \$11.95; fat to \$11.75; and \$

Wheat—Outside No. 1, \$1.03; No. 2, No. 3 commie to freights of 88c., according to wheat (Track \$1.25; No. 1, northern, \$1.

Oats—Ontario to 45c., according to commercial C. W. 53c.; No. 1 feed, 51c.; No. 2 according to 86c. to 88c., according to Buckwheat—according to

Barley—Ontario according to barley, 59c. to outside.

American Corn track, Toronto Canadian track, Toronto

Peas—No. according to Flour—Ontario track, Toronto seaboard; Ma Toronto were second patents \$5.80, in jute

Hay—Baled No. 1, best grade per ton, low grade Straw—Baled track, Toronto

Bran—\$24 shorts, \$26, M \$26 to \$27; M flour, per bag, freights.

Cou Butter—Price the wholesales Creamery, fresh 34c. to 35c.; 33c.; separator Eggs—New about stationary per dozen.

Cheese—18c. Honey—Is of Beans—Prime Poultry (live to 20c. per lb.; fowl, light, 16c. per lb.; geese, young, 20c. per

Hide City hides, cured, 16c. to 14c. to 15c.; kip skins, per lb. \$2 to \$3; she to \$2; lamb s \$1.25; horse ha horse hides, No to \$4. Wool, lb.; wool, reject wool, unwashed Tallow, No. 1, to 7c.

Wholesale Fr Potatoes dec wholesales during Brunswick Dela

steers at \$9. to \$9.25; choice butchers' cattle, \$8.75 to \$9.; good, \$8.25 to \$8.75; medium, \$7.75 to \$8.; common, \$6.75 to \$7.15; choice cows, \$7.25 to \$7.40; medium cows, \$6. to \$6.25; common cows, \$5.50 to \$6.; canners and cutters, \$4.25 to \$5.25; choice bulls, \$7.50 to \$8.; good bulls, \$6.75 to \$7.; common and medium bulls, \$5.25 to \$6.25.

Stockers and Feeders—Choice dehorned-steers 800 to 950 lbs., \$7.75 to \$8.; steers 700 to 850 lbs., \$7.25 to \$7.50; stockers, 600 to 700 lbs., \$6.75 to \$7.

Milkers and Springers—Choice milkers and springers at \$80 to \$100; good cows at \$60 to \$75; common cows at \$50 to \$65.

Veal Calves—Choice veal calves \$9.50 to \$10.50; good, \$8.50 to \$9.50; medium, \$7.50 to \$8.25; common, \$7.50 to \$8.; heavy fat calves, \$7 to \$8.

Sheep and Lambs—Light sheep, \$9 to \$10; yearling lambs, \$12.50 to \$14; heavy sheep, \$8 to \$9; spring lambs, \$8 to \$12 each.

Hogs—Selects weighed off cars, \$11.85 to \$11.95; fed and watered \$11.65 to \$11.75; and \$11 f. o. b. cars.

Breadstuffs.

Wheat—Ontario, (according to freights outside) No. 1 commercial, \$1.01 to \$1.03; No. 2 commercial, 99c. to \$1.01; No. 3 commercial, 96c. to 98c., according to freights outside; feed wheat, 86c. to 88c., according to sample. Manitoba wheat (Track, Bay Ports.) No. 1 northern, \$1.25; No. 2 northern, \$1.23; No. 3 northern, \$1.19.

Oats—Ontario, No. 3 white, 43 1/2c. to 45c., according to freights outside; commercial oats, 42 1/2c. to 44c. Manitoba oats (Track, Bay Ports.) No. 2 C. W. 53c.; No. 3 C. W., 51c.; extra No. 1 feed, 51c.; No. 1 feed, 50c.

Rye—No. 1 commercial, 90c. to 91c., according to freights outside; rejected, 86c. to 88c., according to sample.

Buckwheat—Nominal, 69c. to 70c., according to freights outside.

Barley—Ontario, malting, 63c. to 64c., according to freights outside; feed barley, 59c. to 62c., according to freights outside.

American Corn—No. 3 yellow, 86 1/2c., track, Toronto.

Canadian Corn—Feed, 74c. to 76c., track, Toronto.

Peas—No. 2, \$1.65; sample peas, according to sample, \$1.30 to \$1.50.

Flour—Ontario, winter, \$4.20 to \$4.30, track, Toronto, \$4.25 to \$4.35 bulk seaboard; Manitoba flour—Prices at Toronto were: First patents, \$6.50; second patents, \$6, in jute; strong bakers', \$5.80, in jute; in cotton, 10c. more.

Hay and Millfeed.

Hay—Baled, car lots, track, Toronto, No. 1, best grade, \$20 to \$21; No. 2, per ton, low grade, \$15 to \$18.

Straw—Baled, car lots, \$6.50 to \$7 track, Toronto.

Bran—\$24 per ton, Montreal freights; shorts, \$26, Montreal freights; middlings, \$26 to \$27; Montreal freights; good feed flour, per bag, \$1.60 to \$1.70, Montreal freights.

Country Produce.

Butter—Prices remained stationary on the wholesales during the past week. Creamery, fresh-made pound squares, 34c. to 35c.; creamery solids, 32c. to 33c.; separator dairy, 32c.

Eggs—New-laid eggs also remained about stationary, selling at 24c. to 25c. per dozen.

Cheese—18c. to 19 1/2c.

Honey—Is off the market.

Beans—Primes, \$4.

Poultry (live weight)—Chickens, 18c. to 20c. per lb.; fowl, heavy, 18c. per lb.; fowl, light, 16c. per lb.; ducks, 18c. per lb.; geese, 12c. per lb.; turkeys, young, 20c. per lb.; old, 18c. per lb.

Hides and Skins.

City hides, flat 18c.; country hides, cured, 16c. to 17c.; country hides, part cured, 15c. to 16c.; country hides, green, 14c. to 15c.; calf skins, per lb., 20c.; kip skins, per lb., 18c.; sheep skins, city, \$2 to \$3; sheep skins, country, \$1.50 to \$2; lamb skins and pelts, \$1.20 to \$1.25; horse hair, per lb., 37c. to 40c.; horse hides, No. 1, \$4 to \$5; No. 2, \$3 to \$4. Wool, washed, 40c. to 44c. per lb.; wool, rejections, 33c. to 35c. per lb.; wool, unwashed, 28c. to 32c., per lb.

Tallow, No. 1, 6 1/2c. to 7 1/2c.; solids, 6c. to 7c.

Wholesale Fruits and Vegetables.

Potatoes declined slightly on the wholesales during the week; the New Brunswick Delawares selling at \$1.90

to \$1.95 per bag. There are very few Ontario's on the market.

New Potatoes are beginning to come in freely from Florida—selling at \$3.25 per hamper and \$10 per bbl.

Old carrots have an easier tendency, as the new ones are taking their place; the old now sell at \$1.10 to \$1.15 per bag; the new bringing \$2 per hamper.

Hot-house Rhubarb has been extremely scarce, and now sells at \$1 to \$1.10 per dozen bunches.

Hot-house Cucumbers from Leamington are coming in, in large quantities and have declined to \$2.50 per 11-quart basket for the best, and range from that down to \$1.50. The Florida's selling at \$5 per hamper (about 100 cucumbers).

Strawberries are now coming in by the car lots from Louisiana, and have declined to 20c. to 23c. per box.

California cherries came in for the first time this season on Tuesday, selling at \$5 per 10 lb. box, and have now declined to \$4 per box.

Montreal.

Supplies of choice cattle on the local cattle market were light last week, and, as demand was fairly good, the tone of the market was firm. There was every indication also that this will continue to be the situation for some time to come. A few good steers sold at 8 1/2c. per lb., but the general range was around 8c. for the best, and these were none too good. Medium stock sold in the vicinity of 7 1/2c., while ordinary grades brought 6 3/4c. to 7c. Butchers' cows ranged all the way from 6 1/2c. to 8c., covering common to choice qualities, while fine bulls sold as high as 8 1/2c., and ordinary stock around 7c. per lb. Supplies of calves were liberal, and these are taking the place of other meats to some extent. Choice stock sold at 8c. to 9c. per lb., and lower grades at 4c. to 6c. per lb. Spring lambs are becoming more plentiful, but prices continued firm, being \$4 to \$8 each. Yearling lambs and old sheep were very scarce and in good demand at around 11 1/2c. to 12c. per lb. for yearlings, and 7 1/2c. to 8 1/2c. for sheep. The price for hogs continued firm, and select lots changed hands at 12c. to fractionally higher per lb., weighed off cars.

Horses.—The market for horses was duller last week, and dealers report that very few animals have been changing hands. A few common animals were purchased by farmers. Prices continued unchanged, as follows: Heavy draft horses, weighing 1,500 to 1,700 lbs., have been reported sold at \$200 to \$250 each, while draft horses, weighing 1,400 to 1,500 lbs., were quoted at \$150 to \$200 each. Small horses were \$100 to \$125 each, and culls \$50 to \$75 each. Occasional sales of fine saddle and carriage animals were made at \$200 to \$250 each.

Dressed Hogs.—The market for dressed hogs continued steady under good demand. Supplies continued practically unchanged, prices were very high, being 16 1/2c. to 16 3/4c. for abattoir-dressed, fresh-killed stock.

Poultry.—Dealers continued to quote 24c. to 27c. per lb. for turkeys, 22c. to 24c. for chickens, and 17c. to 19c. for geese and fowl, and 19c. to 20c. for ducks.

Potatoes.—Offerings of potatoes increased slightly and were rather in excess of requirements. Prices were slightly lower, being \$1.70 to \$1.72 1/2 per bag of 90 lbs., ex-track, for choice, and \$1.5c. to 20c. in excess of these prices in a smaller way.

Honey and Maple Syrup.—Receipts of maple syrup have been somewhat larger of late, and demand was quite active. Prices were showing very little change, quotations being 85c. to 95c. for 8-lb. cans; \$1 to \$1.10 for 10-lb. cans, and \$1.25 for 13-lb. cans. Some very choice, large tins brought \$1.40 to \$1.45 each. Maple sugar sold at 12c. to 14c. per lb. Honey was steady at 14 1/2c. to 15c. per lb. for white clover comb, and 12c. to 12 1/2c. for extracted; 12c. to 13c. for brown clover comb, and 10c. to 11c. for extracted. Buckwheat honey was 9c. to 10c. per lb.

Eggs.—Supplies came along freely, the demand was large, and, as a consequence, prices continued fairly firm, being 25c. per doz. on large lots.

Butter.—Supplies of new milk creamery are now increasing every day, and the quality is good, so that prices

for this quality, while lower than a week ago, were higher than those for finest held creamery. The best new milk goods sold at 31c. to 31 1/2c. per lb., while fine stock sold around 30c. Finest held creamery could be had as low as 30c. per lb., with good at 29 1/2c. Second grades of creamery were quoted at 26c. to 27c., and dairy butter at 23c. to 24c.

Cheese.—The market was lower, being 18c. to 18 1/2c. for finest, and 17 1/2c. to 17 3/4c. for fine, undergrades being 17c. to 17 1/2c. per lb.

Grain.—The market for wheat has been firm of late, and dealers quoted in the vicinity of \$1.05 to \$1.10 per bushel for No. 1 commercial white winter wheat, in car lots. Oats were decidedly firm and prices were higher, being 54c. to 54 1/2c. for No. 2 Canadian Western, car lots, 53c. for No. 3, and No. 1 extra feed; 52 1/2c. for No. 1 feed and 51 1/2c. for No. 2 feed. Ontario and Quebec No. 2 white oats were 51 1/2c.; No. 3 being 50 1/2c., and No. 4, 49 1/2c. per bushel, ex-store.

Flour.—The market was unchanged at \$6.60 per barrel, in bags, for Manitoba spring wheat first patents; \$6.10 for seconds, and \$5.90 for strong bakers. Winter wheat patents were \$6, and straight rollers \$5.30 to \$5.40 per barrel, in wood, and \$2.45 per bag for the latter.

Hay.—The market was steady at \$21.50 to \$22 per ton for No. 1 hay; \$21 for extra good No. 2; \$20.50 for No. 2; \$19 to \$20 for No. 3, and \$18 for clover mixed.

Seeds.—Demand was active at \$10 to \$15 per 100 lbs. for timothy; \$22 to \$27 for red clover, and \$17 to \$24 for alsike, Montreal.

Hides.—Prices were steady at 30c. per lb. for No. 1 calf skins, and 28c. for No. 2; 21c., 20c. and 19c. for Nos. 1, 2 and 3, beef; \$2.50 each for sheep skins; \$2.50 to \$3.50 for horse hides; 1 1/2c. to 2 1/2c. per lb. for rough tallow, and 7c. to 7 1/2c. for rendered.

Buffalo.

Cattle.—Prices on shipping cattle eased off somewhat last week, dropping top weighty steers—from 1,500 to 1,600 lbs.—to \$9.75, several loads having brought this price. A 1 grades of butchering cattle sold a dime to fifteen cents higher. Demand was strong in all divisions. Canadians sold very high, a load of steers and heifers mixed, including a small number of well finished steers, several on the plain, commonish order and four or five heifers, landing at \$8.90. Good Canadians are quoted above nine cents. Yearlings—both steers and heifers, sold up to \$9.25 to \$9.50, and best handy butchering steers generally brought \$9 to \$9.25, some good kinds selling around \$8.75 to \$8.85. As the trade for the week progressed, however, prices eased off some, as the result of heavy runs in Chicago. Sellers generally are taking a favorable view for the trade right along now, belief being that there will be none too many of the real choice grades, in either the weightier or handy cattle, to meet the demands. Stockers and feeders are bringing good, strong prices, 700 to 750 lbs., feeders of good and uniform quality, selling up to \$7.75 to \$8, and with the grass getting in condition for grazing, grazing cattle are expected to hold to a high level. Receipts last week were 3,800 head, as against 3,975 for the previous week, and 4,000 head for the corresponding week last year. Quotations:

Shipping Steers.—Choice to prime natives, \$9.40 to \$9.75; fair to good, \$8.75 to \$9.15; plain, \$8.40 to \$8.60; very coarse and common, \$8 to \$8.25; best Canadians, \$8.75 to \$9.25; fair to good, \$8.25 to \$8.50; common and plain, \$7.75 to \$8.10.

Butchering Steers.—Choice heavy, \$8.75 to \$9; fair to good, \$8 to \$8.50; best handy, \$8.85 to \$9.25; common to good, \$8 to \$8.75; light, thin, \$7.50 to \$7.85; Yearlings, prime, \$8.75 to \$9.35; yearlings, common to good, \$8.25 to \$8.65.

Cows and Heifers.—Prime weighty heifers, \$7.50 to \$8.50; best handy butcher heifers, \$7.75 to \$8.25; common to good, \$6.50 to \$7.50; best heavy fat cows, \$6.50 to \$7.50; good butchering cows, \$6 to \$6.50; medium to fair, \$5 to \$5.75; cutters, \$4.25 to \$4.75; Canners, \$3.25 to \$4.

Stockers and Feeders.—Best feeders, \$7.25 to \$7.50; common to good, \$6.50 to \$6.75; best stockers, \$6.50 to \$6.75; common to good, \$5.75 to \$6.25.

Bulls.—Best heavy, \$7.25 to \$7.75; good butchering, \$6.50 to \$6.75.

Hogs.—Market was pretty uniform last week on all grades except pigs and a good clearance was had from day to day. Demand for good hogs, which are getting scarcer right along, is most urgent and anything on the weighty order is outselling the lighter grades by from ten to fifteen cents. Most of the good hogs offered last week brought \$10.25 and the lighter grades, hogs running from 150 to 180 pounds, sold from \$10.10 to \$10.20, bulk going around \$10.15. Pigs the fore part of the week brought up to \$9.35 and the low day for these weights was Friday, when bulk moved at \$9. Roughts around \$9 and \$9.15, and stags mostly \$7.50 down. Receipts last week reached approximately 27,000 head, as compared with 23,939 head for the week previous and 25,000 head for the same week a year ago.

Sheep and Lambs.—Market showed a downward tendency last week and while some lots got fairly good action, anything weighty proved as bad a sale as any previous time this year. Choice lambs weighing around 95 and 100 pounds, undersold the 75 to 78 pound lambs, by as much as \$1.50 to \$1.75, per cwt., and they were slow to find sale at that. Monday and Tuesday were the high days for clipped lambs the past week, when the bulk of the handy lots went at \$10.25, with one deck reaching \$10.35. Wednesday not many sold above \$10.00, Thursday bulk went at \$9.90 and \$10.00 and Friday with the trade stronger, one load reached \$10.25 and the balance of the most desirable kinds went at \$10.00 and \$10.15. Choice lambs weighing around 90 pounds sold at \$9.00 and \$9.25 and the heavier ones went as low as \$8.50. Cull lambs showed a wide range selling from \$8.50 down, skips as low as \$5.50. No yearlings the past week brought above \$8.25, top wether sheep sold from \$7.75 to \$8.00 and ewes \$7.25 down. Only four or five loads of wool lambs were here the past week and they sold at \$11.50 and \$11.60. Receipts last week were 21,900 head, as against 21,267 head for the previous week and 16,150 head for the same week a year ago.

Calves.—Market last week was active and prices held steady. Bulk of the top veals sold at \$10.00, fair grades landed at \$9.25, \$9.50 and \$9.75 and culls went from \$9.00 down. Receipts last week reached around 4,300 head, being against 5,943 head for the week before and 5,700 head for the same week a year ago.

Chicago.

Cattle.—Beeves, \$7.85 to \$9.85; stockers and feeders, \$5.80 to \$8.60; cows and heifers, \$4 to \$9.20; calves, \$6.25 to \$9.25.

Hogs.—Light, \$9.50 to \$10.10; mixed, \$9.65 to \$10.05; heavy, \$9.55 to \$10.05; rough, \$9.55 to \$9.70; pigs, \$7.30 to \$9.15.

Sheep.—Native, \$6.65 to \$9.10; lambs, native, \$7.50 to \$11.65.

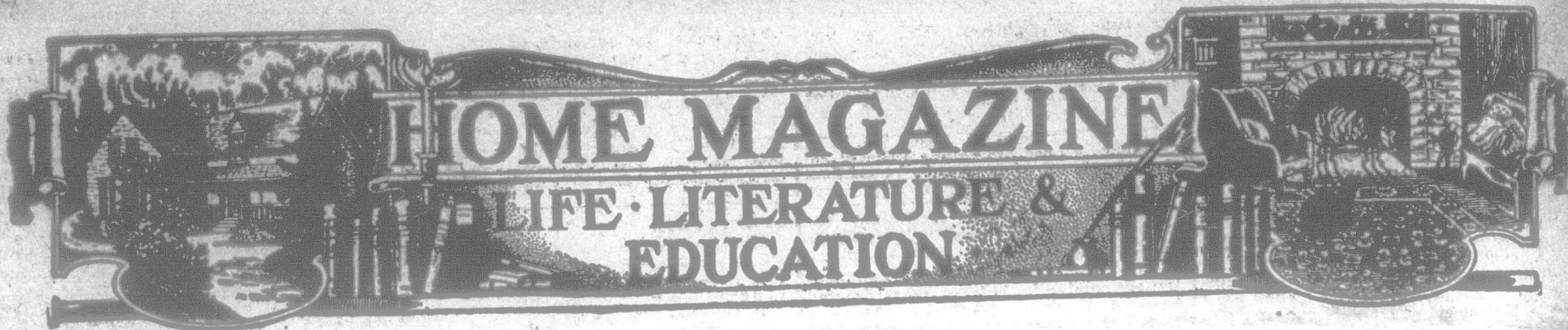
Sale Dates Claimed.

May 11.—Sir H. M. Pellat, Lake Marie, King, Ont.; Holsteins.

May 17.—A. C. Hardy, Brockville, Ont.; Holsteins.

June 10.—Watt, Gardhouse, Miller, Elora, Ont.; Scotch Shorthorns.

On May 17 the public will have an opportunity of securing high-class male and female animals from the noted herd of A. C. Hardy, Brockville. Seldom are so many females showing excellent quality and high records for both milk and butter fat found in one herd. Among the offerings at this sale is a yearling bull which is a good individual with excellent breeding, being a grandson of May Echo Sylvia, the cow that has 41 pounds butter and 1,005 pounds milk to her credit in seven days, which is 85 pounds higher than any other cow. Her best day was 148 pounds of milk. At the end of 30 days this splendid cow has started at a 43 pound rate and has been keeping up over 140 pounds milk per day for a couple of weeks. The cows offered are, or will be by the date of the sale, bred to one of May Echo Sylvia's sons. This will be the only chance to get this blood direct as these bulls will not be open to the general public for a long time. Parties wanting Holsteins above the average in individuality and rich official breeding should attend this sale. See the advertisement in this issue.



Who Sleeps?

(By Eleanor Alexander, in the 'Times,' London.)

Midnight and England; in the curtained room
Shadow upon grey shadow creeps
Till black, all conquering, dominates
the gloom,
And darkness cries—who sleeps?

Who sleeps—the bride? She girt him
for the fight,
Gay when her happy warrior went,
Now empty arms she stretches to the
night
With passionate lament.

Who sleeps—the old man? Up the wind-
swept street
He heard a brown battalion come,
And all night long his weary worn old feet
Keep measure with the drum.

Who sleeps—the mother? Immemorial
throes
Torture her heart and labored breath;
This hour, it may be, her beloved goes
Undaunted into death.

Who sleeps—the barren woman, for her
breast
Passion, nor pain, nor rapture stirs?
She wakes and watches for the first and
best,
A thousand sons are hers.

On desolated far-off fields, who sleep?
We know not, but through summers
green,
We know their rigid hands that hold, will
keep
The flag of England clean.

Who sleeps faint and forsworn, no
sentinel
Between the trenches' snarling lips;
Not one on guard where moonlit waters
swell
Under the battleships.

They sleep not for whom furnace smoke-
clouds roll,
Nor they who forge for England's care,
Armor laid on the anvil of her soul
And hammered out with prayer.

Who sleeps—your God on His eternal
hill,
And Zion falls, and Rachel weeps?
Captain of hosts and our salvation still,
He slumbers not nor sleeps.

Travel Notes.

(FROM HELEN'S DIARY.)

Geneva, Switz., Feb. 10, 1916.
Switzerland has donned a nurse's cap
and apron, and is going to take charge of
two thousand sick soldiers from the
prisoners' camps in France and Germany.
A great many of these soldiers have
already arrived and are interned in
various parts of Switzerland in localities
especially suitable to their particular
disease. Quite a number of French
soldiers suffering from nervous dis-
orders and stomach troubles are located
at Montreux, and also in several other
places in that section. Those afflicted
with tuberculosis are taken to the high
Alps, where they are supplied with every
comfort, receive the best medical atten-
tion, and get the benefit of the glorious
sunshine and the pure Alpine air. In all
cases the German soldiers are sent to
German Switzerland, and the French
soldiers to French Switzerland. The
tubercular German prisoners are sent to
Davos, in the Engadine, and the French
to Leysin. Both of these places are very
high, about five thousand feet, and well
equipped with modern sanatoriums.

The arrival of the first contingent of
French soldiers at Leysin is described by
a Geneva newspaper correspondent some-
what in this style:—

"It is 5.30 in the morning, still" and
cold. In the moonlight one can see dark
figures in the streets of Aigle, and in the
open space near the station. Some are
walking, some are standing in groups.
All are waiting. In another hour the
train will arrive. One would never
imagine that in such a little village there
could be so many people. They move
here and there; they talk together in
groups; they regard the cloudless sky,
studded with twinkling stars, and one
says, 'It will be a beautiful day for the
ascent!'"

The train arrives. The French soldiers
descend. The people burst into en-
thusiastic cheers and crowd around them,
giving them flowers, and little flags, and
cigarettes and chocolate and fruit. They
walk with them to the hotel, where a
luncheon has been prepared for the
invalids by the Red Cross.

The Mayor welcomes them with a
few cordial words, and they take their
places around the flower-decked tables.
They look pale and exhausted, and their
eyes fill easily with tears. What im-
presses one especially is their attitude of
docility. Their emotion, their joy, does
not express itself in words. They seem
stunned. Seventeen months of captivity
in Germany has deprived them of their
French vivacity. But it will return.
Oh, yes, without doubt.

"When we are cured, in a month or
two, will they send us back to Germany?"
asked one.

"You won't know yourself in three
weeks."

Thus did the villagers cheer up the
invalids.

The soldiers received so many presents
that they could not carry them, but were
obliged to leave them at the hotel, to be
sent up to Leysin afterwards.

At every station along the route up
the mountain enthusiastic natives were
waiting to welcome them, and bestow
upon them more presents. Chocolates
and cigarettes continued to rain.

Just before we reached Leysin the sun
burst through the clouds in dazzling
brilliance. The cars were flooded with
sunshine, but the daylight revealed,
alas! the haggard faces of the suffering
soldiers, the tears gleaming in their eyes.
Many of them had never seen snow-
capped mountains before, and were
filled with wonder and delight at the
vast slopes of snow and the glistening
crest of the Dent du Midi.

The sound of a bugle! Up leaps every
soldier. They crowd to the windows,
and what do they see? A little boy,
standing all alone on a high rock, tooting
a welcome on his trumpet!

"Ah," said one, "It's a long, long time
since we have seen anything like that.
I have a little boy—in France. I wonder"
—and his voice trailed away to a mere
whisper—"if—I—will ever see him
—again!"

The station at Leysin. A crowd of
shouting people. They cheer. They

Our guests are already accustomed to
their new life. They did not expect to
find it so warm away up on the mountain
heights. They are not so sad and de-
pressed as they were. They are getting
back their French spirits. Good food,
plenty of rest, and the glorious sunshine
have done wonders for them.

But what impresses them more than
anything else is the atmosphere of
sympathy and affection which surrounds
them. Everybody in the village has
made of their coming a festival. The
sick children at one of the sanatoriums
have asked to go without dessert for a
week so that they can buy something to
give to the sick French soldiers. One
little invalid of four years insisted on
sending them his Christmas elephant,
"because," he said, "it was just as good
as new." Another small boy contributed
all the pennies in his bank.

The French soldiers spent their first
day in Switzerland in making up packages
of presents, from the vast collection of
articles they themselves had received, to
send back to their comrades in the prison
camps in Germany. They also sent a
huge basket of oranges to the children at
the Children's Sanatorium.

March 6th.

Winter and Spring are having their
annual March squabble and, as a result
an epidemic of Grippe is raging in the
land. One day we slosh around in
rubbers under dripping umbrellas; the
next day all the world is white with
snow and we are feeding crumbs to
the hungry birds. The air is full of
sneezes and coughs and microbes and the
wails of the afflicted. Everyone who
isn't down with the Grippe, is either
just getting it, or just getting over it.

This has been the meanest kind of a
mean day. It has been raining and
snowing and sleeting and blowing all
day long. And so dark! Gloom with-
out and gloom within. Aunt Julia
sneezed six times in succession and
consequently is full of morbid fore-
bodings. Knows she's getting it. Uncle
Ned has rheumatism or gout or some-
thing twingey in his foot and his temper
is not angelic. He has been By Jove-
ing and By George-ing, and Confound-
ing, and sending things to the Dickens
all day long. He says he's mighty
thankful he isn't a centipede—that
one foot gives him quite trouble enough.
About four o'clock this afternoon life
seemed such a tragedy, and my room so
like a prison cell, that I fled downstairs
to the lounge to console myself with a
cup of tea. Someway a good hot cup
of tea always seems to make life assume
a more roseate hue.

There were only a few people in the
lounge, half the house being laid up with
the Grippe. The American gentleman
was in sole possession of the American
Corner. He was sprawled out in a big,
leather arm-chair, with a cigar in one
hand, a letter in the other, and on his
face was a large-sized grin. He glanced
up at me over his eye-glasses and pointed
invitingly to the vacant chair beside
him.

"Say, what do you think!" he began,
in his breezy western way, "I've just
had a birthday present. And what do
you think I got? A poem, by Jove; a
real, original, hand-decorated poem".
He held up the letter for me to look at.
"I'd like to read it to you. It's a hum-
mer all right. It's from that little
American chap who was here a few
months ago. Remember? Had pneu-
monia. Nice boy. One of his lungs
touched a bit. Doctor sent him up
to Leysin. Pretty tough on a kid to get
shelved like that. I've been sending
him American Magazines every few
weeks to cheer him up a bit. Says he's
getting along fine now. This is his
birthday too. Yes, we discovered
when he was here that we both had the
same birthday. He is just sixteen



Leysin, Altitude 4,500 Feet.

Nearly all of these buildings are sanatoriums.

"You must stay in Switzerland longer
than that," we say. "You must have the
best of care, plenty to eat, and a long,
long rest. No, no, they will not send
you back to Germany. Switzerland will
be your home till the war is over."

The villagers escort the soldiers to the
funicular station, carry their parcels and
their bags, give them presents and ex-
press in every way their sympathy and
encouragement.

"Don't worry. You will soon get well
up there in that fine, bracing air."

"Here, take these cigarettes. You can
tuck them away in some corner."

"Oh, you won't find it dull up there."

wave the flags of Switzerland and of
France. The band plays the Swiss
National Anthem. A choir of young
women sing the Marseillaise. The Mayor
of Leysin and the French Ambassador
speak a few words, but all the official
ceremonies are made very brief owing to
the exhausted condition of the soldiers.

At the hotel the big dining room is
decorated with flowers and flags and
portraits of French Generals, and the
soldiers sit at the table while their names
are being called. The French Ambassador
is shown the bedrooms, all white and full
of sunshine, with good beds that can be
rolled out on the balconies.

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"Fifty-six,
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The older a
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He is certain
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and he adju
began:—

"The German
But what I
Is why, when
'Germania

The English
But what I ca
Is why, when
'John Bull

And we, we
We worship la
Who always
To those v

And next to
We love this li
Its valleys an
We'll ne'er

For it has been
From it the wa
Here, we are sa
And so we

"Now, what
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for a boy of
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Germania" sta
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was it—?

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Suffer

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bare our sickness

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And where

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The difficulty
The Psalmist w
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to-day, and I am—say, how many years would you give me?
He looked at me inquiringly, but did not give me time to answer. I was glad of that.

"Fifty-six," he said. "Fifty-six to-day. And the little chap has remembered it. I call that pretty decent of him, don't you? You know when a fellow gets a white thatch on his head he appreciates all these little attentions. The older a man gets the more of a kid he is in some ways. Likes to be petted and fussed over. Now that kid probably sat up nights getting this thing up. Look at the sketches around the margin. He is certainly some artist, that boy. But I'll read it to you first and you can look at the sketches afterwards."

I poured out a cup of steaming tea, and he adjusted his eye-glasses and began:—

"The Germans love their Fatherland,
But what I cannot understand,
Is why, when 'tis a Fatherland,
'Germania is a Woman.'

The English love their Motherland,
But what I cannot understand,
Is why, when 'tis a Motherland,
'John Bull is not a woman'.

And we, we love our Uncle-land,
We worship lanky Uncle Sam,
Who always lends a helping hand,
To those who need it.

And next to our loved native land,
We love this little Switzerland,
Its valleys and its mountains grand,
We'll ne'er forget them.

For it has been our Refuge-land,
From it the warring world we've scanned,
Here, we are safe from War's Red Hand,
And so we say: "Vive Switzerland!"

"Now, what do you think of that? I'm no poet, but I call that pretty good for a boy of sixteen. And look at the clever way he has worked in these sketches around the verses. Look at Germania standing up there proud and pompous! Look at old John Bull with his top-hat and side whiskers! And Uncle Sam in his striped trousers and star-spangled tail-coat! And that Swiss flag waving across the page there! Isn't that pretty? You know, I'm just tickled to death over this. First time I ever received a poem. Fact! And to think that little sick kid went to all that work for an old codger like me! I tell you I appreciate this. It means a lot to me. Makes me feel good all over."

And somehow I began to feel good all over too.

Could it have been the tea? or was it—?

Hope's Quiet Hour.

Suffering With Us.

Himself took our infirmities, and bare our sicknesses.—S. Matt. viii: 17.

Thus everywhere we find our suffering God,
And where He trod
May set our steps: the Cross on Calvary
Uplifted high
Beams on the martyr host, a beacon light
In open fight.
To the still wrestlings of the lonely heart
He doth impart
The virtue of His midnight agony.

KEBLE.

Yesterday a sick woman in the hospital said to me: "Oh, I wish you had come yesterday. I wanted you to talk to a patient who has just gone home. She told me she could not believe in God, because He permitted the good people in Belgium to be tortured and killed."

The difficulty is not a new one. The Psalmist was amazed to find that though he had cleansed his heart, and lived in innocence, trouble came down on him. If we are to lose our faith in God because He allows His faithful children to be persecuted and killed, we don't need to think only of the sufferings of this present time. From

the time of righteous Abel we find innocent people "tortured, not accepting deliverance; that they might obtain a better resurrection; and others had trial of cruel mockings and scourgings. . . . they were stoned, they were sawn assunder . . . being destitute, afflicted, tormented."

I am not able to explain the mystery. Our Lord has told us that there are things done by Him which we do not understand now, but we shall know hereafter. But there is another side to the question. Satan's taunt against Job was: "Doth Job fear God for naught." His righteousness was being paid for by prosperity. God had defended him from enemies, had blessed

"He feeleth for our sadness,
And He shareth in our gladness."

How often we read in the Gospels that our Lord "had compassion" on a sufferer. He or she might be approaching Him alone, or might be one of a multitude, nothing could hinder the Lord's compassion. Now that word, "compassion," is one we use lightly very often, forgetting its full significance. It really means "suffering together." We say we have compassion on a sufferer when we are sorry for him and ready to do something to ease his pain. But our Lord's compassion is infinitely greater than that. He "suffers with" each child of His love.



One of the Big Sanatoriums at Leysin.

Every room has a large balcony and gets the sun all day long.

the work of his hands, and increased his possessions so that he was the greatest of all the men in the east.

If righteousness always enriched men, shielding them from pain and sorrow, it would be a splendid investment from a worldly point of view. Faith would soon decay from want of exercise, for we should never need to trust God when we could always see a smooth and easy road ahead. Other virtues—patience, courage, endurance, etc.—would never have a chance to grow. We should live our lives on a low level, if untroubled comfort and ease were our portion.

I know there is a wide gap between the ordinary sufferings of humanity

Why did their mighty Friend weep with the sisters of Lazarus? He was about to change their sorrow into joy, why should He weep instead of smiling over their coming joy? His evident sorrow made the Jews exclaim, "Behold how He loved him!" Even then they were puzzled to understand why this Man, Who was able to open the eyes of the blind, had not interfered to save His trustful friends from grief. They had appealed to Him in their need—and He did not come to them until it seemed too late. Why did He weep? I think it was because He "suffered with" the heart-broken sisters. He knew their pain would soon be turned into joy, but He shared the



Some of the French Soldiers at Leysin.

All of these men are seriously ill with consumption.

and the awful misery now being caused by "man's inhumanity to man." As I said, the explanation is one we must wait for. God will justify His ways in His own time.

In the meantime we are not left to grope our way in utter darkness. God has come down to earth to walk beside us and suffer with us. Those mysterious words of our text are true. The Son of God was made sin for us (2 Cor. v:21) sharing our infirmities that we may share His righteousness.

pain while it lasted.

Look at another scene. The King and Kinsman of the Jews was receiving loud demonstrations of loyalty. The people were shouting His praises and carpeting the road for His feet. Knowing how soon the loyalty of the crowd would be exchanged for fury, and the cries of "Hosanna!" would be replaced by "Crucify Him!" we cannot wonder that He stopped the procession and burst into loud weeping. But—notice the cause of His tears. He had turned

the shoulder of the Mount of Olives and saw before Him the beautiful city of Jerusalem, "the joy of the whole earth."

Those tears were not for His own agony, but for the sorrow of His people. He saw their coming doom; and the dreadful misery of the siege of Jerusalem was felt by Him more intensely than His own personal pain. Then, on the way to Calvary, He turned to the woman who were bewailing His torturing death, and said, "Daughters of Jerusalem, weep not for Me, but weep for yourselves, and for your children." Even in that hour His thoughts were for others.

If the doom of Jerusalem caused the Master of the world so much suffering, why did He not interfere to prevent it? There is the unanswered question again, you see. Those who mocked the Saviour of the world, as He hung in apparent helplessness upon the Cross, were ready to draw what seemed a reasonable inference from appearances. If He had the power to escape agony, of course He would come down from the Cross. Then they would believe in Him—but not until then. So they missed their chance of faith. Shall we demand the same signs, and refuse to believe in God until He explains everything He does or permits to be done? Then, indeed, we must put off believing until after death.

No, the torture of the innocent is no proof of the helplessness of God. He does not see fit to give the "sign" we demand, but He gives one far more wonderful. He does not drive His soldiers, but goes before them. If they are enduring hardships He is still having compassion—that is, "suffering with" them. Even when the darkness is so great that we cannot see His face, we can stretch out a hand and find it clasped in His own. When the three faithful Hebrews were flung into a fiery furnace, One—invisible before—walked with them through the flame.

There is a story of the Duke of Wellington which tells how he once asked an officer to undertake a dangerous project. The officer said: "Sir, if you will give me one grasp of your conquering hand, I will." Then—inspired by that handclasp—he dashed off to attempt and achieve the apparently impossible.

If we comfort-loving mortals were given our own way we would eagerly sweep pain and sorrow from this earth. Our precious school-time—the time for learning difficult but priceless lessons—would become a long (and probably tedious) vacation. Self-indulgence would replace heroism, and God's children would never grow up "into a full-grown man, unto the measure of the stature of the fulness of Christ."

Did it ever strike you that God is better able to guide and govern His own world than we are? We pray, but too often our prayers are presumptuous. We tell Him what we think is best, and then question His wisdom and love when a harder lesson is set instead of the holiday we are demanding. We call ourselves "soldiers of the Cross," resolving to follow our Master to the death; and then we make a fuss over trifling discomforts, and forget His Presence when we are called to Calvary. To be on the Cross means to be beside our Lord. If we enter into the fellowship of His sufferings, He is also sharing ours. Our forgetfulness of Him does not drive Him away. As the soldier in the trenches said:

"Though we forgot You—You will not forget us—
We feel so sure You will not forget us,
But stay with us until this dream is past.
And so we ask for courage, strength,
and pardon—
Especially I think we ask for pardon—
And that You'll stand beside us to the last."

You notice he did not ask to escape hardships or death. In fact, the motto we used to see everywhere—"Safety first!"—does not inspire us with much admiration in these days. We are growing a little ashamed of our prayers for our own comfort, safety and prosperity. What should we think of a soldier who pleaded to be stationed as far as possible from the danger line? What should we think of a soldier who lost all confidence in his commander as soon as he was ordered forward, away from the comfort and



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safety of the barracks? We are called to endure hardships as good soldiers of Jesus Christ, and He is with us as our Captain. DORA FARNCOMB.

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The Beaver Circle

Our Senior Beavers.

[For Beavers from Senior Third Class to Junior High School Form, inclusive.]

A Bird Garden.

Dear Beavers,—I heard to-day about a garden for birds, so thought you might like to hear about it too. It belongs to Mrs. Elizabeth Grinnell, of Pasadena, California, and in it she spends many a happy hour, watching her dainty little friends and hearing them sing. For the birds have found out that they are safe there, and they like the spot; indeed some of them have grown almost tame, and one actually so tame that it delights to come down and light on Mrs. Grinnell's head or shoulder.

This garden is, of course, full of trees, and part of it is covered with long grass. All about, too, have been planted trees and shrubs bearing fruit and seeds that the birds love to eat, with plenty of sunflowers; and here and there among the branches little bird-boxes have been placed. Upon one stand a shallow basin, is kept full of water, and there the birds love to congregate, drinking and splashing at their own sweet will. During the nesting season Mrs. Grinnell hangs bits of string and threads about on the trees, and often has the satisfaction of seeing the birds carry them off to build their nests.

I do not know whether she has ever watched to see which color is the favorite, but I head of another woman who hung out strings of various colors, then watched to see which would be carried off first. In every case the white and light gray were chosen, the red and yellow being left untouched. And now, Beavers, what do you think was the reason for this? Were the birds possessed of a dainty taste which led them to reject the gaudy colors? Or did they know that the bright yellow and red would make their nests conspicuous, and perhaps attract enemies to them?

Speaking of bird enemies, I suppose you know that snakes, cats, and red squirrels are about the worst. Even mice will destroy the eggs and young birds in the nest. Julian Burroughs—a son of dear old John Burroughs, of whom perhaps some of you know—invented a sort of bird-box which is quite safe, and tells about it in "Country Life in America," as follows:

"It is a very simple matter. Get a hollow limb or make a box of weather-beaten boards, close both ends, rain-tight, and make a two-inch opening near the top. The cavity inside should be about three inches across and four or five inches deep. Nail or wire the box to a post set securely in the open where no squirrel or cat can jump down on it from above. Then stop everything from coming up the post by a sheet of tin or an old pan that encircles the post. This result is best accomplished by cutting an "X" in the tin and showing the post through; then nail down the flaps of the "X" to the post."

I hope our boys and girls are watching the birds this summer, and learning to make friends of them. Usually they are very shy at first, but if you sit perfectly motionless under the trees, or lie quite still in a hammock, some of them will be likely to come quite close to you, so that you can see their coloring and watch their odd little flirting ways. They are very curious, and like to come close enough to you to see what kind of a creature you are. If you are very gentle in your movements and take care not to frighten them they soon gain confidence in you.

I wonder if any of you have a good field-glass in your home. If so you will find it just the thing for watching the birds. I do not own one yet, but hope to some day.

Senior Beavers' Letter Box.

Dear Puck.—This is my second letter to the Beaver Circle. Our farm is near a lake which is thirty miles long. I go in bathing in the summertime. I can swim with water wings a little. In the winter-time the lake is frozen over, and when there is not very much snow on it the boys like

to skate. The... which run on... time; their na... Lake," and... have one big... me about on... about two mi... home. I gu... the Beaver... letter does no

Magog, R.

Dear Beav... ters in "The... two years. I... dark and ra... pounds. I do... girls as stou... live on a fa... any of the c... been to scho... ten when I... in the house... was five year... England fou... I have no pe... about animal... I had a lett... the other da... Zepps are... Well, I hope... Here is a rid... How many... the shepherd

Your Gipsy Frances.

Dear Puck... to write you... tures of a Ca...

Not many... factory all in... came and put... was finished... room. I was... felt good ov... moved to a... carts were.

I was not... man came in... took me out... fine horse. A... city it was a... reached the... around quite... before I read...

My new ho... had a good c... In a little att... kinds of tras... bits of glass...

I went out... cause I heard... was a town... knew why tha... Some of the... some were ve... went out wh... was washed o...

After a wh... man. Now... new master... He always lik... that one day... and finding I... I was left be... over the das... shouting a lan... stand.

After a wh... another horse... day he went... gone far whe... This scared th... the road unt... tops.

On and on... sudden he s... smashed all... My master to... home and pu... was left to cr...

(Age 14, 1 Jerseyville,

Dear Puck... of 13 years of... I go to the st... the milk, for... On Saturdays... or drive my... and I do not... stick to steer... on my sledge... a long distanc... I bring him... up with his p... then I get a p... his hay and... come out and

to skate. There are two big boats which run on the lake in the summer-time; their names are "The Lady of the Lake," and "The Anthemis." We have one big Collie dog which draws me about on my sleigh. Our school is about two miles and a half away from home. I guess I will close, wishing the Beaver Circle success. Hope my letter does not get too near the w.-p. b.

MARGARET ALLEN.

Magog, R. R. No. 3, Que.

Dear Beavers.—I have read the letters in "The Farmer's Advocate" for two years. I am a girl 14 years old, dark and rather short. I weigh 118 pounds. I don't think there are many girls as stout or weigh as much. I live on a farm. I can't milk nor do any of the chores outside. I have not been to school for four years. I was ten when I left. I work all the time in the house. My mother died when I was five years old, and I came from England four years ago this April. I have no pets, and I don't care much about animals. Isn't this war terrible? I had a letter from Liverpool, Eng., the other day, and it said that the Zeppes are getting quite dangerous. Well, I hope that w.-p. b. isn't empty. Here is a riddle:

How many feet has forty sheep, the shepherd and his dog?

FRANCES MERCER.

Your Gipsy story arrived too late Frances.

Dear Puck and Beavers,—I am going to write you a story called "The adventures of a Cart."

Not many years ago I lay in a large factory all in pieces. After a while men came and put me together. When that was finished I was moved to a painting-room. I was painted and varnished and felt good over it. After this I was moved to a store-house where other carts were.

I was not in this place long when a man came in and bought me. He took me out and hitched me to a fine horse. As long as I was in the city it was all right, but as soon as I reached the mud roads I bounced around quite a bit. I went quite a way before I reached my new home.

My new home was a large barn, and had a good cement floor and was dry. In a little attic above I could see all kinds of trash imaginable, old churns, bits of glass and other rubbish.

I went out for a drive quite often, because I heard people say that my owner was a township councillor. Then I knew why that I had gone out so often. Some of the roads were very good and some were very rough. Many times I went out when it was muddy, but I was washed off when I got home.

After a while I was sold to another man. Now my troubles began. My new master had a high-spirited horse. He always liked to run. He ran so fast that one day he went to jump a fence, and finding I would not come over too I was left behind, and the man went over the dashboard like a shot and shouting a language I could not understand.

After a while my master came with another horse and drove home. Next day he went out again. He had not gone far when we met an automobile. This scared the horse, and it tore down the road until my wheels spun like tops.

On and on he went. Then all of a sudden he struck a large rock and smashed all of me but the wheels. My master took all that was any good home and put me in a corner, and I was left to crumble away.

GEORGE HOWELL.

(Age 14, 1st Form High School.)
Jerseyville, Ont.

Dear Puck and Beavers,—I am a boy of 13 years of age, and live on a farm. I go to the station every morning with the milk, for we ship it to Montreal. On Saturdays I play with my lambs or drive my small steer. I drive him and I do not have lines but a long stick to steer him by. In winter I get on my sledge and he will draw me for a long distance without stopping. Then I bring him to the barn and tie him up with his halter and clean him off; then I get a pail of water and feed him his hay and grain. After supper I come out and bed him for the night.

In the morning I take care of him, then I go and get ready for church. When I come home I read my favorite paper, which is "The Farmer's Advocate." It takes me all afternoon to read it, for it is so full of nice reading.

WELDON TAYLOR.

Waterloo, Que., Box 72.

Dear Puck and Beavers,—This is my first letter to your charming Circle. I have about two miles to go to school, but I love the winter months, so I enjoy going to school. I have a dandy sled called "Red Wing," and I take it along with me to coast down the hills for there are many big long ones. My teacher's name is Miss Robertson, and she is just lovely. We had lots of snow around here. I have a little black curly dog called Hunter; he is a dandy partridge dog. My home is a summer resort in the Lake of Bays District. In the good old summer-time I have jolly fine fun swimming and paddling the canoe. I think this a very cruel war. I shall be glad when the Allies win and it is all over. I know so many boys who have gone to France and I wish I was big enough to go too. I wish some of the Beavers would write to me. I will close wishing the Beavers much success.

JOE B. COOKSON.

(Age 11, Bk. IV.)
Huntsville, Ont.

Honor Roll.

Honor Roll.—Larmour Noblet, Freda Schause, May Trevor, Gertrude Smith, Harry Farley.

Beaver Circle Notes.

Frances Mercer, Lower Flodden, Que., wishes Helen Gard to write to her.

As so very few kept up their gardens in the Garden Competition last year, no competition will be held this year; but we hope the few Beavers who are interested in gardening will go on with their gardens as usual.

Letters written by Edith Smibert and some others had to be left out because written on both sides of the paper.

Paul Flynn (age 10, Sr. III.) R. R. 3, Colborne, Ont., wishes some of the Beavers to write to him. Also Joe B. Cookson, (age 11), Huntsville, Ont.

Our Junior Beavers.

Peekaboo Stories.

FARMER GROUCH AND THE BEES.

It was such a pretty orchard. All down one side of it were plum and cherry trees that put on the loveliest pure white dresses early in May, while a little later the apple trees, not to be outdone, blossomed forth in the daintiest pink and white. Robins loved to sing there, and orchard orioles trumpeted their clear wild notes from morning till night as they flashed, like bits of golden fire, through the branches.

From the time that the buds first began to show like little pink knobs, Farmer Grouch, who owned the orchard, used to walk out among the trees, looking eagerly at the rich promise of bloom, and counting up in his mind how many barrels of apples he would have to sell in the fall. Fairy Peepapeep was always afraid of him, because he looked so cross and glum, and whenever she saw him coming she would hide in the thickest branch of blossoms.

"Ha! Ha!" she heard him say, one day, "One hundred barrels! One hundred and fifty barrels! So many dollars for me!"

"Poor man!" she said to herself. "He thinks of nothing but dollars. He never seems to see this pretty pink and white, or these green leaves, or the beautiful blue sky."

So beautiful did Peepapeep think it all that she came next day, in spite of her fear of the farmer. The sun was shining very brightly, making pretty dapples of shadow on the grass beneath the trees, and the air was warm and balmy.

As she sat there on a pretty white pebble, she heard a low humming, and looking up saw a cloud of bees, all gold and brown, settling themselves among the blossoms.

"What are you doing, bees? Smelling the blossoms?"

"Oh no," said a brisk little dark-colored bee, "we are making our living.

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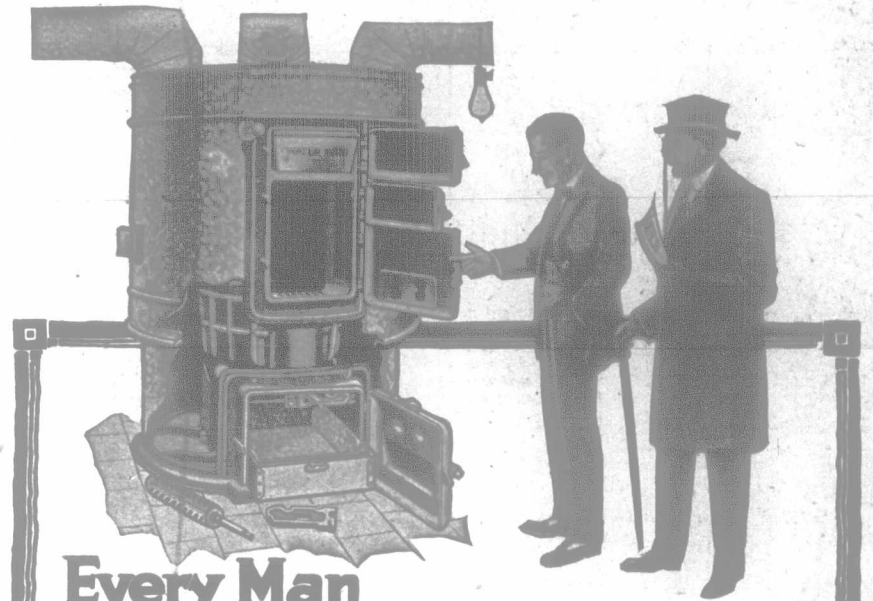
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We haven't time to smell blossoms, or sit on a pebble. We get honey out of the blossoms, and pollen."

"What is pollen?" asked Peepapeep. "Why, the yellow powder in the hearts of flowers," said the bee, "how very ignorant you are for a fairy."

"I'm tired of being called ignorant," said Peepapeep. "The green frog told me I was ignorant, too. But I am learning. May I ask you a question?"

"Ask away," said the bee, "but be quick about it."

"What do you do with the pollen?" "Kick it off our legs."

"Kick it off your legs!" exclaimed Peepapeep, in astonishment.

"Yes," replied the bee, quite in a matter-of-fact way, "we kick it off into lumps and mix it with honey to make bee-bread for food. As we are gathering it, too, we help the blossoms to set their fruit, by *pollenizing* them. You will know what that means after a while. If it were not for us not half the blossoms would come to fruit."

"Hi! Hi! Hi!—what's this?"—Peepapeep gave such a jump off the pebble as the rough voice shouted close to her, that she bumped her nose on a dandelion stem. Sure enough, it was Farmer Grouch, but he wasn't looking at Peepapeep; he was looking up into the pink and white blossoms.

"Farmer Hike's bees in my apple trees!" he went on, "I'll make them hike. Shoo! Shoo!"—but the bees went right on burrowing in the flowers and never heard him at all.

"I know what I'll do! I'll *smudge* 'em out," he said, and forthwith trudged off to the house in high dudgeon.

Presently out he came with a number of pans containing black, ugly stuff. He put the pans down on the green grass and set them alight, and soon great clouds of black smoke were rolling upward into the pretty blossoms. "That'll fix 'em," he said gleefully, and soon the poor little bees, smothered by the ill-smelling stuff, were either tumbling stupefied to the grass, or trying to make haste to be off.

All this time Peepapeep, who had run away from her pebble in fright, stood hidden under a clump of big burdock leaves, hearing and seeing all that went on.

She watched Farmer Grouch as he strode off in triumph to the house.

"Oh, you silly, silly man," she said to herself, "you don't know that you have perhaps hindered half your fruit from forming."

"Serve him right," said a little half-choked voice in the grass beside her, and looking down she saw the little dark-colored bee, trying to move its wings and legs.

"Oof! Oof! I'm nearly smothered! Selfish man! He cut off his own nose that time!"

"That's the way with most selfish people," said Peepapeep, "oh you poor bee!"

"Never mind," said the bee, "we'll all go right back to Farmer Hike's orchard, although we thought we had gone pretty well over it."

"Then he'll have plenty of fruit, won't he?" asked Peepapeep.

"Hope so. Come on brothers. —Hum-m-m!" And the bees were off.

Junior Beavers' Letter Box.

Dear Puck and Beavers.—My grandpa takes the Farmer's Advocate, and likes it very much. I was seven years old the 26th of April. I have two miles to go to school. My teacher's name is Miss Meikle. I am in the Primer Class. I would like to be a teacher some day. I have one little kitty, and I call our dog "Bob."

MILDRED P. BROWN.
R. R. No. 5, Peterboro, Ont.

Dear Puck and Beavers.—As I did not see my last letter in print, I thought I would try again. My father has taken "The Farmer's Advocate" for the last twenty years. I like reading the letters. I go to school every day. But I haven't been going this week, as I have had the grippe. We have not far to go to school, as it is at the end of our lane. Our teacher's name is Miss Johnston, we like her fine. I will close with a riddle.

What goes over the road, and over the road, and always has its head down. Ans.—A nail in a horse's shoe. (No name signed.)

Dear Puck and Beavers.—I have been a silent reader for some time, but now I thought I would like to write to you. I live on a farm along the lake front seven miles from Kingsville, and three-quarters of a mile, from school. In the summer I enjoy walking very much, but in the winter it is almost too cold. My teacher's name is Miss J. Baker. In summer, during noons, etc., we spend our time in playing games such as "Run for your supper," "Drop the handkerchief." As my letter is getting long I will close, hoping to see that the w.-p. b. is away visiting when my letter arrives.

VERDA LULA ADAMS.
Arner, R. R. No. 1, Ont.

Dear Puck and Beavers.—This is my first letter to your charming Circle. I have for pets two cats and a dog, but Tabby, one of my cats, runs away quite often and does not come back for a long time. I go to school every day. The school is a mile away. I hope the w.-p. b. is not hungry when this arrives. I will close with a riddle.

Why is a leaf like a human being?
Ans.—Because it has veins.

Ayr, Ont. GEORGE COWAN.
(Age 9 years.)

P. S.—I would like some of the Beavers to write to me.

Dear Beaver Circle.—This is my third letter to the Beaver Circle, and I have had success with every one. I guess that the w.-p. b. does not like my letters, and puts them in the paper. We have no dog, but we have a cat. I had a little kitten but it died. I am taking music lessons, and I am in the junior third class. I will close with a riddle.

What relation is a doormat to the scraper? Ans.—Its stepfather (farther).

Wishing the Beaver Circle every success I remain your little Beaver.

FRANCES EDMOND.
Silver Water, Ont. (Age 10.)

P. S.—I wish some Beavers would write to me.

Dear Puck and Beavers.—This is my second letter to your charming Circle. We have taken "The Farmer's Advocate" for quite a while and like it very much. I enjoy reading the letters in the Beaver Circle. I go to school every day I can, and like it fine. There are about thirty or thirty-five pupils go to school. Our teacher's name is Miss Bushnell; we like her fine. We didn't have a Christmas tree this year. For pets I have a dog named Carlo. I have just got two kittens now; Queenie and Bouncer. One got killed; it was Prince, and one went away; it was Peter. I like reading books. Here are a few I have read: "Brave and Bold," "Bound to Rise," "Making His Way," "Light of the Morning," and several others. I wish some of the Beavers would write to me. I hope the w.-p. b. is not hungry for my letter. I will close with some riddles.

What goes all the way from Boston to Milwaukee without moving? Ans.—Railroad tracks.

What is that which nobody wishes for, but if he has it he wants to gain it, and if he gains it he has it no more? Ans.—A lawsuit.

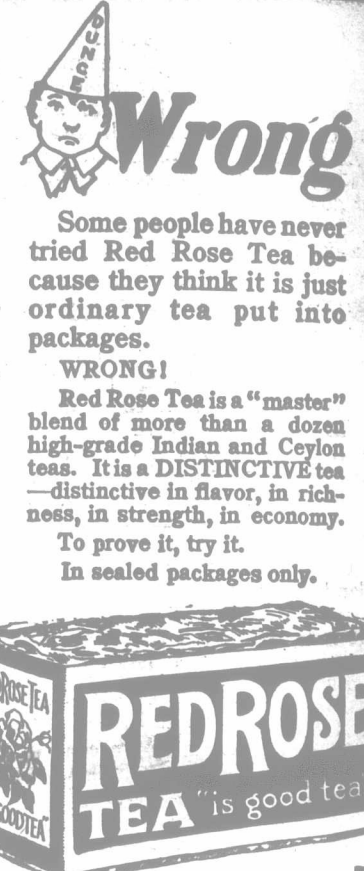
Why is a clock at fifty-nine minutes to one like an angry man? Ans.—Because it is ready to strike one.

VERA GERTRUDE TARR.
(Age 10, Sr. II Class.)
Stouffville, R. R. No. 1, Ont.

Dear Puck and Beavers.—This is my first letter to your Circle. I like to read your letters very much. My father has taken "The Farmer's Advocate" for a number of years. For pets I have two cats and a kitten. I had a pigeon but one of my cats killed it. I will close hoping this will escape the w.-p. b.

GEORGIE MCLEAN.
Maitland, Ont. (Age 7.)

Dear Puck and Beavers.—I thought I would write as I saw so many of the other Beavers' letters in print. My father has taken "The Farmer's Advocate" for twenty years. I have two sisters and one brother. This war is certainly a terrible thing. They still



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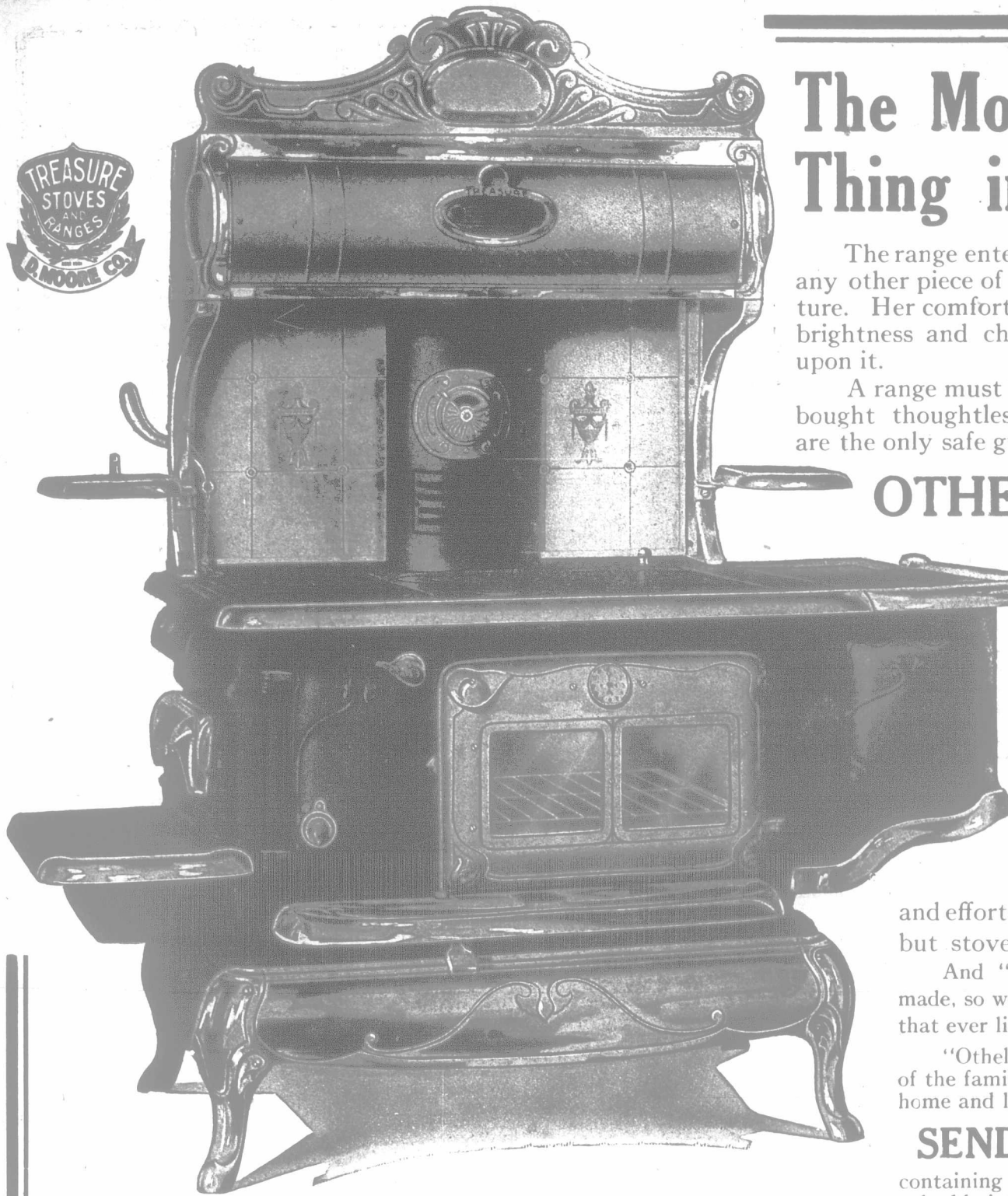
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THE HYLO feely air-ti or spoiled enail walls. Conven fitting doors, ad hammer or wye Guaranteed Le Pise. Built to Stand rigid wh Write for price AGENTS Gibson Mfg. Co. L (4)

MUTUAL the sa legal a have the grea to boot.

Holstein I a Record of Merit R. R. 2 R.



The Most Important Thing in the House

The range enters more into a woman's life than any other piece of household equipment or furniture. Her comfort and convenience, and often the brightness and cheerfulness of the home depend upon it.

A range must last for years. It should not be bought thoughtlessly. Merit and proven worth are the only safe guides.

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is made by people who have made a life-long study of stoves. It is made in the largest factory in Canada devoted exclusively to stoves. If we made furnaces and radiators and other things, we could not make such good stoves. All our brains, energy and efforts go into making stoves, nothing but stoves.

And "Othello" is the best stove we ever made, so we called it after the greatest Moor that ever lived.

"Othello" is a big, cheery, faithful friend of the family. Will you let him brighten your home and lighten your labor?

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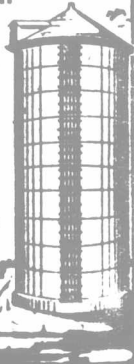
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THE HYLO SILO is perfectly air-tight. No frozen or spoiled ensilage around the walls. Convenient and perfect fitting doors, adjustable without hammer or wrench. Made of Guaranteed Long Leaf Yellow Pine. Built to last a life-time. Stands rigid when empty.



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MUTUAL Life Companies are on the same sound basis as other legal reserve companies, and have the great feature of mutuality to boot.

Holstein Bull fit for service, sired by a 34-lb. bull and out of a Record of Merit cow.
R. R. 2 R. FLATT & SON Hamilton, Ont.

want more men and more money. We have fifty-four soldiers in this little village of Thedford training now. I have not been to school much since Christmas, as I have been sick. I have one sister going to school besides myself. Well, I will close now with a riddle.

Why is a stick of candy like a horse?
Ans.—The more you lick it the faster it goes.

Thedford, Ont. BERTHA ELLIOTT.
(Age 10, Sr. II. Class.)

Dear Puck and Beavers,—This is the first year my father has taken "The Farmer's Advocate," although we have had several copies from our neighbor. I am getting interested in your Circle, and thought I would like to write a little letter too. We live on a one-hundred-acre farm near Eastwood. I have a pet cow named Orpha, and a pony which I call Babe, also a little kitten. I go to school every day. I am in the second book. My teacher's name is Miss King. As my letter is getting rather long I will close, hoping the Beavers every success.

R. No. 5, Woodstock, Ont.
Your little Beaver,
CECIL KELLY.
(Age 8.)

Dear Puck and Beavers,—This is my

first letter to your Circle. My father has taken "The Farmer's Advocate" for twelve years, and we would not like to be without it. I like to read the letters very much. For pets I have a dog called Tory, and a cat I call Snowball. Our teacher's name is Miss Clark; we all like her fine. We live five miles from the city of Stratford. I will close with a riddle.

Why is a hen not a hen at night?
Ans.—She's a rooster.

ALFRED EHGOETZ.
R. R. No. 1, Sebringville, Ont.
(Age 9, II Class.)

The Beaver Circle.—This is my first letter to your charming Circle. My father has taken "The Farmer's Advocate" for five years. I have three pet cats and one dog called Nig. We have one little colt called Queen. I have six brothers and one sister. Two of my brothers are married, and my biggest brother has a boy eight months old. He is beginning to walk; he has four teeth. I think my letter is getting quite long; I will close with a riddle.

What is the difference between a sewing machine and a kiss? Ans.—One sews seams nice and the other seems so nice.

I hope this will escape the w.-p. b. Komoka, Ont. ALLAN CAMPBELL.

Pan Lougin

A gray thoroughbred Stallion, 15 hands 3, by Faraday, dam Katy Did. This is a particularly well balanced and compact horse. Beautiful shoulders, loins and quarters—good bone. Sweet disposition, kind and very intelligent.

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Wanted—Good homes for children. Write the Secretary.

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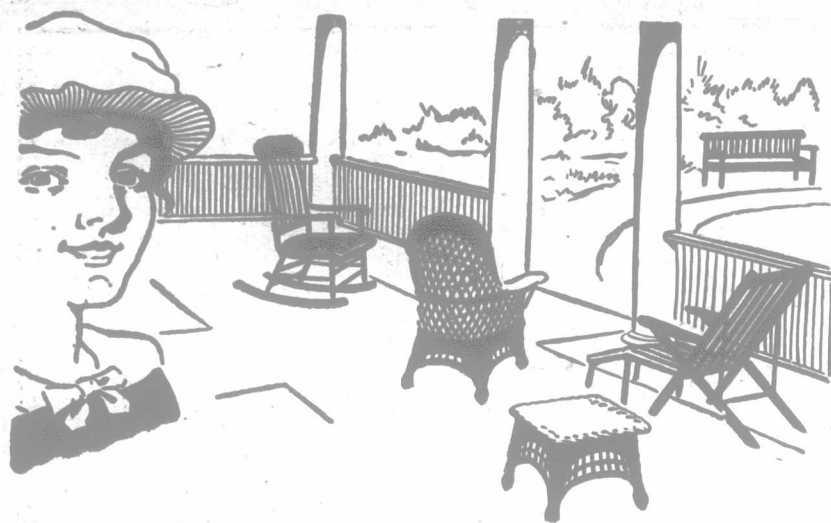


2,000 lbs. capacity—especially adapted for farm use. Write us for particulars. No. 66

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C. Wilson & Son 45 Esplanade St. E. Toronto



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GEO. KEITH & SONS SEEDS 124 KING ST. E. TORONTO

Dear Puck and Beavers.—This is my first letter to your Circle. My father has taken "The Farmer's Advocate" for about ten years. I like reading the little letters very much. So I thought I would write too. For pets I have one dog; his name is Spottie. I go to school every day. My teacher's name is Miss Devereux; I like her very much. We live on a farm. I must close now as my letter is getting long. I hope my letter will escape the w.-p. b.
Elmira, Ont. MIRIAM MAURER.

The Ingle Nook.

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

An Opportunity.

Early last fall, and speaking of Canada at that, a well-known writer said: "One hates to count over the cases, widespread and persistent, of greed and graft. They involve nearly every branch of service, civil and military. They tarnish the good name of Parliament. They record the gigantic greed of great corporations that boast their million-dollar profits on an expenditure of two months. They are foul with the petty bribes of merchants and of military officials. And the worst of all this, the most damaging to Canada's moral life, is not that one here and there are guilty, but that their guilt has not been visited by that swift and impartial punishment which would relieve the whole nation from complicity, and make the law against dishonesty and dishonor in Canada as sacred as we all say it ought to be in Germany."

On the very face of it, doesn't it seem ridiculous—lamentably, pathetically, tragically ridiculous—that grown men should ever need "punishment?"—That in a single instance any grown man, come to years of maturity of mind and body, should ever have to be whipped into line to save either his brother or his nation's credit? And a thousand times the worse when the man is one who holds a position of responsibility, trusted by the people, placed where he is by their nomination and their votes. A contemptible creature indeed who will not only drag down his own honor and trample it in the mud under his feet, but who will stab those who trusted him in the back.—For what is betrayal of one's trust better than that? And all for what?—For the gaining of a million dollars or so, blood-money that can at best secure but a few luxuries that one can do without very well, for a few short years. Honor sold for a few luxuries! A name that might have been fair, held up to the hisses of future history! Can even the most successful rogue ever feel, once, in the one little honest spot that he must still preserve in the depths of his heart, that it has been worth while? Would he ever have taken the steps he has taken if he had not felt that they would never come to light?—he, dyed all the blacker because he has felt that he could carry out his contemptible work in darkness.

And yet at all times, and over and over since the beginning of the war, this thing has happened—either has happened or has been said to happen, in which case is a culpability scarcely the less; for the man who will, for political reasons, trump up a charge against another, absolutely without reason, is as bad as the one who will consent to avail himself of graft.

The war, it appears, has given a grand chance to boodlers everywhere, and to calumniators. In Canada have arisen stories, in the United States, in England, in Russia, in Germany. There is rottenness everywhere—as well as—thank heaven!—much that is big, and honest, and good. It is sweet, and inspiring and reassuring to look at the thousands of instances of high honor, and noble self-sacrifice, and utter unselfishness that have come to the top every week since the beginning of Europe's horror, but it is also necessary to look at the rottenness, and so the peoples are fearlessly ready to probe. Rotten spots must be cut out to preserve the sanity of the whole.

It has often been said, sneeringly and condemnatorily enough, that a politician can scarcely keep honest. Yet this is ridiculous. Pity that there should have been so continuous opportunity for it to be said. Government, despite the lurking suspicion in the subconsciousness of many people, does not and cannot create dishonesty. It may, it is true, afford opportunity for the development of a latent dishonesty. After all it has to deal with a finished product. As the members elected so must the whole machine be made or marred. When men with latent inherent streaks of dishonesty get into government, as into big corporations, the dishonesty has a peculiarly favorable chance to ooze through to the top. It recognizes its opportunity to have the blame distributed over a whole body—to stand back personally, as it were, and let the mischief work as an impersonal thing. Occasionally, it is true, is committed a breach so gross that names are mentioned, but all too often, perhaps, the genial "first-rate sort of fellow" is screened, when he should not be, because of the otherwise entirely laudable spirit of good fellowship that is likely to obtain among a body of men thrown together in common and daily interests.

And yet Government itself is a high and holy thing. At its best it offers the highest opportunity for the best type of men, and when the world reaches its climax of development, should Government, indeed, then be necessary, men will not shrink from assuming its responsibilities, but will gladly accept them as a sacred opportunity for service to the race.

Yes, the trouble is, not with Government, but farther down. And now, why give place for all this in a women's column? Simply because here seems a field for women. There has never been a great educator who has not dwelt, with all the emphasis he could command, upon the necessity of giving the right bent to children—in consideration of their future work as men. "The child is father of the man." True, heredity means much, but there is endless power in early training. May not the fault be then, when men do not "measure up," that, in many cases, early training has not been given. And does it not appear plausible that, realizing their responsibility in giving early training, the women of the world may hold the future of the nations, to a great extent, in their hands?—the mothers and sisters in the homes, the teachers in the schools.

It is not wrong training, but lack of training, that may be at fault. In how many homes are children just left, for the most part, to grow up anyhow in regard to certain matters. They are fed well, they are clothed, they are strapped if they "say swear words" or caught telling a lie, they are made to do their home-work, and, perhaps, given definite training in manners. The matter ends there. Nobody has time to bother further. And yet how much it might mean to these boys and girls if pains were taken, by suggestion, chiefly, as opportunity offers, to inculcate in them a spirit of high honor? Were it only made clear to them that a sharp business trick, by which the other fellow is "done," is a contemptible trick; that, while a certain amount of money is necessary, it is not the best thing in life, nor the pursuit of it the highest endeavor; that every human being is under the responsibility of making the very best and highest of his life; that we are put here to grow, and to make friends, and to be of use—not to become mere lumps of selfishness. These are among the things that should be made clear to children, but are very seldom, generally speaking, touched upon in any way. Were such training carried out, quietly and unobtrusively and insistently, there might still be plenty of blunderers in the world, but there would be fewer knaves.—And there is all the difference in the world between a dreaming blunderer and a calculating knave.

Votes will come to woman, after the war; but in using the ballot she has not said her last word in Government. In helping to raise clean men she has even greater opportunity. It is hers to be, and to teach—and urge that her husband help to teach—the future makers of Government, the greatest science in the world, the one that holds the happiness of the peoples in its hand. What think you? JUNIA.

One of our elaborate "ju" is to be at no girl at home, greater part thinks a co- visable.

Of course advisable, an as can be, t to note that that will not b more vulgar t ate proceeding used to either at any other is vulgar.

For the lun cold meats, sli ly served; c wiches and th cake with st fancy vice-crea nice to serve of doors if the In June ther flowers for c Marguerites, every requir their fresh ap made into lo looping about pyramid of th people are gla lovely flowers bushel for th ing.

J. B. writes coming dark, to do to kee sixty, is not permanently. using may ha it. Try anot the green so Jewelry, unles when one is i

J. V. F., E will remove " the soil of a plant is gro be driven or with lime-wa evidently larv the whole, th be to repot roots very in soil bake is, as a rule, b water over th become so co the life in it.

Season

Amber Ma large grapef wash and wip cut the quart into very thi Add 3 quarts and let stan the peel is v several hours night. Add 1 stirring occas thickens sli in jelly mugs, melted paraff

Asparagus asparagus, so 4 hard-boiled 1 tablespoonf spoon choppe paragus in sa At serving tim a platter with thin, around i placing a ha Add the crea over the aspar over the top.

Rhubarb G stale bread-c milk for 1 hor adding the be 1/4 cup of flour pinch of salt, ing powder ar whites, togeth stewed rhubar a hot griddle sugar and gro Rhubarb 2 spoons tapioc let soak 3 ho saucepan, add 1/4 grated nu orange juice.

June Wedding.

One of our girls asks for suggestions for a simple menu for a "nice but not elaborate" June wedding. The wedding is to be at noon, and, as she is the only girl at home, and will have to do the greater part of the work herself, she thinks a cold luncheon might be advisable.

Of course a cold luncheon will be advisable, and may be just as dainty as can be, too. It is delightful, also, to note that this girl wants a wedding that will not be elaborate; there is nothing more vulgar than a pompous and elaborate proceeding in a home that is not used to either pomposity or elaboration at any other time. All "showing off" is vulgar.

For the luncheon one might suggest: cold meats, sliced thin; salads very daintily served; olives and pickles; sandwiches and thin slices of buttered bread; cake with strawberries and cream, or fancy ice-cream. Coffee. It would be nice to serve these on small tables, out of doors if the day should be fine enough. In June there will be no scarcity of flowers for decoration.—June roses or Marguerites, (ox-eye daisies) will answer every requirement. The daisies keep their fresh appearance well, and may be made into lovely ropes and chains for looping about the tables from a central pyramid of the same flowers. As most people are glad to get rid of these really lovely flowers, they may be got by the bushel for the mere trouble of gathering.

Hair Query.

J. B. writes that her gray hair is becoming dark, and wishes to know what to do to keep it gray. Gray hair, at sixty, is not likely to turn dark again permanently. The shampoo you are using may have something to do with it. Try another, for instance one of the green soap solutions. Jewelry, unless of dull jet, is out of place when one is in mourning.

"Worms" in Soil.

J. V. F., Elgin Co., Ont., asks what will remove "worms" and "skippers" in the soil of a pot in which a leopard plant is growing. Earthworms may be driven out by saturating the soil with lime-water. The "skippers" are evidently larvae of some fly. Upon the whole, the best thing to do will be to replot the plant, washing the roots very carefully and replanting in soil baked in the oven. Baking is, as a rule, better than pouring scalding water over the soil, as the water may become so cooled as to fail to destroy the life in it.

Seasonable Cookery.

Amber Marmalade.—Take one each, large grapefruit, orange and lemon, wash and wipe dry and cut in quarters; cut the quarters through, peel and pulp into very thin slices, discarding seeds. Add 3 quarts and 1 pint of cold water and let stand over night. Cook until the peel is very tender. It will take several hours. Again set aside over night. Add 10 cups sugar and let cook, stirring occasionally, until the syrup thickens slightly on a cold dish. Put in jelly mugs, and when cold cover with melted paraffin.

Asparagus Salad.—Take a bunch of asparagus, some sliced ham or tongue, 4 hard-boiled eggs, ½ cup salad dressing, 1 tablespoonful whipped cream, 1 teaspoon chopped parsley. Boil the asparagus in salted water, drain and cool. At serving time arrange it in the center of a platter with the ham or tongue, sliced thin, around it. Cut the eggs in halves, placing a half on each slice of meat. Add the cream to the dressing and pour over the asparagus, sprinkling the parsley over the top.

Rhubarb Griddle Cakes.—Soak 1 pint stale bread-crumbs in a pint of hot milk for 1 hour, and then beat smoothly adding the beaten yolks of 2 eggs, about ¼ cup of flour, 1 tablespoon melted butter, pinch of salt, and lastly, 2 teaspoons baking powder and the stiffly whipped egg whites, together with a cupful of drained stewed rhubarb (sweetened). Bake on a hot griddle and serve with butter, sugar and ground cinnamon.

Rhubarb Tapioca.—Cover 4 table-spoons tapioca with a pint of water and let soak 3 hours. Turn into a granite saucepan, adding 1 cup cooked rhubarb, ¼ grated nutmeg and a teaspoon of orange juice. Cook over a slow fire

Production and Thrift

"GAIN or no gain the cause before the farmers of Canada is as clear as it was last year—they must produce abundantly in order to meet the demands that may be made, and I believe this to be especially true in regard to live stock, the world's supply of which must be particularly affected in this vast struggle."—HON. MARTIN BURRELL, Minister of Agriculture.

THE FOLLOWING STATEMENTS ARE BASED ON REPORTS CONTAINED IN "THE AGRICULTURAL WAR BOOK, 1916," PUBLISHED BY THE DEPARTMENT OF AGRICULTURE, OTTAWA, ONT.

LIVE STOCK—The herds and flocks of Europe have been greatly reduced. When the war is over there will be a great demand for breeding stock. Canadian farmers should keep this in mind.

MEATS—In 1915 Great Britain imported 664,508 tons of beef, mutton and lamb, of which 364,245 tons came from without the Empire. Out of 430,420 tons of beef only 104,967 tons came from within the Empire.

The demands of the Allies for frozen beef, canned beef, bacon and hams will increase rather than diminish. Orders are coming to Canada. The decreasing tonnage space available will give Canada an advantage if we have the supplies.

DAIRYING—Home consumption of milk, butter and cheese has increased of late years. The war demands for cheese have been unlimited. The Canadian cheese exports from Montreal in 1915 were nearly \$6,500,000 over 1914. Prices at Montreal—Cheese: January 1915, 15¼ to 17 cents; January 1916, 18¼ to 18½ cents. Butter: January 1915, 24 to 28¼ cents; January 1916, 32 to 33 cents.

EGGS—Canada produced \$30,000,000 worth of eggs in 1915 and helped out Great Britain in the shortage. Shippers as well as producers have a duty and an opportunity in holding a place in that market.

WRITE TO THE DOMINION DEPARTMENT OF AGRICULTURE AND TO YOUR PROVINCIAL DEPARTMENT FOR BULLETINS ON THESE SUBJECTS

Tens of thousands of Canada's food producers have enlisted and gone to the front. It is only fair to them that their home work shall be kept up as far as possible. The Empire needs all the food that we can produce in 1916.

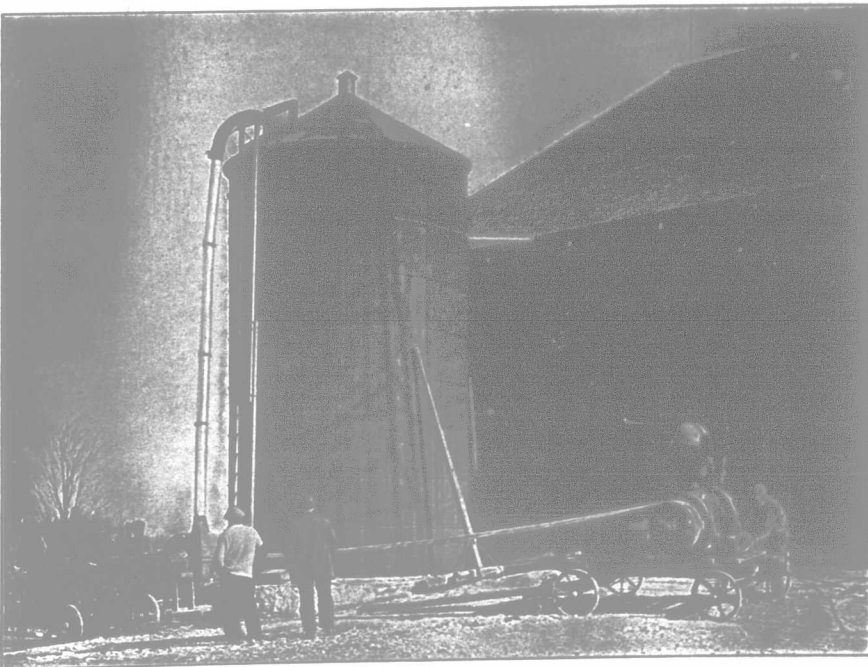
PRODUCE MORE AND SAVE MORE SAVE MATERIALS FROM WASTE
MAKE LABOUR EFFICIENT SPEND MONEY WISELY

THE GOVERNMENT OF CANADA

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The Complete Outfit

Mr. R. McEnery, of Erin, not only filled his own silo as above, but also filled a considerable number of silos for his neighbors. Write and ask him what he thinks of his outfit.

Write for Catalogues to Dept. G.

R. A. LISTER & COMPANY, LIMITED, TORONTO
Winnipeg Quebec St. John, N.B.

for 25 minutes, stirring frequently, then remove, and after sweetening to taste turn into a pudding dish. When cold cover the top with a meringue made from the whites of 2 eggs beaten stiff and flavored with minced candied orange peel and a very little confectioner's sugar.

Canned Rhubarb.—Take rhubarb when it is young and tender, wash and cut in short pieces. Pack in thoroughly sterilized jars and fill to overflowing with cold water. Let stand 10 minutes then drain off and fill again to overflowing with fresh cold water. Seal with sterilized rings and covers. When required for use treat the same as fresh rhubarb.

Rhubarb Jelly.—Use the old tough stalks. Cut up without peeling and cook in a very little water until tender. When cold drain and press out the juice and bring to boiling point, then add as much sugar as there is juice and boil hard for 22 minutes. Pour into jelly glasses and when cold cover with melted paraffin.

Economy Hint.—It is a good idea to can plenty of rhubarb, as it combines readily with any other kind of fruit, and so lessens the expense of other kinds. It may be added to oranges, pineapple, strawberries, currants, etc. When stewing rhubarb that is very sour it is well to remove some of the acidity first, so less sugar will be required. To do this cover the cut-up rhubarb with boiling water, let stand until cool then drain off, add more water and stew as usual.

The Scrap Bag.

Ammonia.

Ammonia would be more generally used if housekeepers understood its



What does a bevel gear cost? The Ford owner saves \$12 that the other fellow has to pay for one

- \$16.00—Average cost of the bevel gear of cars priced around \$1000 and less.
- \$ 4.00—Cost of Ford bevel gear.
- \$12.00—This stays in the Ford owner's pocket book.

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And less than a dollar a year as a total expense for spare parts is not at all an uncommon experience of Ford owners.

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Ford Runabout \$400
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Ford Coupelet - 750
Ford Sedan - 850
Ford Town Car 700
F. o. b. Ford, Ontario

FORD, ONTARIO

All cars completely equipped, including electric headlights. Equipment does not include speedometer.

14

POULTRY AND EGGS.

ARE YOU INTERESTED?—EGGS FROM winners at Panama Pacific Exposition, Madison Square Garden, Guelph, Ottawa, Bahamas, Spanish, Partridge Rocks, Partridge Wyandottes, White Leghorns, Barred Rocks Ontario Agricultural College strain, Indian Runners, Pekin ducks. War prices. John Anneser, Tilbury, Ont.

A BARGAIN. S.-C. WHITE LEGHORN EGGS, dollar per setting; chicks fifteen cents each, heavy winter layers: safe delivery. Walter Darison, Brantford, Ont.

BRONZE TURKEY EGGS, 4.00 PER DOZ. Order early. Hedge Row Farm. H. W. Thur, Elora, R.R. No. 1.

BROWN'S SICILIAN BUTTERCUPS AND D. W. Young's S.-C. W. Leghorns. The best strains of these breeds in Canada. \$2.00 and \$3.00 per setting of 15 eggs. J. Victor Hews, Webbwood, Ontario.

CLARK'S ORPINGTONS. BUFF AND WHITE exhibition and laying strains. Hatching eggs \$5 per 15, others \$1 and \$2 per 15. 9 chicks guaranteed; \$6 per 100. A few good cockerels at \$2 and \$3 each. Catalogue free. J. W. Clark, Cedar Row Farm, Cainsville, Ont.

CHOICE S.-C. BROWN LEGHORNS (BECKER strain), eggs \$1.00 per 15. Wm. Bunn, Denfield, Ont.

CHOICE FAWN AND WHITE INDIAN RUN- ner Duck, duck eggs, 75c. per eleven. Robt. Campbell, Cookstown, Ont.

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FAWN INDIAN RUNNER DUCK EGGS, \$1 per 15 eggs. Hastings Bros., Crosshill, Ont.

FAWN AND WHITE INDIAN RUNNERS Select matings, wonderful winter layers; also Rouens. Fertile eggs \$1.00 per 12. Ernest Howell, St. George, Ont.

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FOR SALE—MALLARD WILD DUCK EGGS, 11 for \$2.00, also S. C. R. I. Reds, 15 eggs \$2.00. Sam Holmes, Box 2, Chatham, Ont.

MAMMOTH BRONZE TURKEYS, LARGE hens, good shape and color, seventeen to twenty-three pounds each. Free range; 1915 Guelph winners, five prizes on six entries, mated to (not akin) first prize young tom, Guelph, 1915. Weight 30 pounds, eggs \$4 per 10. Correspondence solicited. George Neil, Tara, Ont.

PEKIN, ROUEN, INDIAN RUNNER DUCKS Wyandottes, R. I. Reds, and Black Minorcas one-fifty per setting. Prize stock. S. R. Copeland, R. I. Harriston, Ont.

RHODE ISLAND REDS (SINGLE COMB); thoroughbred; heavy winter layers. Fifteen eggs, \$1.50. Dr. Hendry, Delhi, Ont.

ROSE-COMB RHODE ISLAND REDS, O.A.C. bred-to-lay. Eggs from select pen \$1.25 for fifteen. B. Armstrong, Codrington, Ont.

RINGLET BARRED ROCKS—HEAVY winter layers. Send for photos of flock and further particulars. Settings \$1.50, \$1.00, guaranteed. Baby chicks, 15 cts. Coldham, Barriefield, Ont.

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SINGLE-COMB RHODE ISLAND REDS Heavy laying strain. \$1.25 setting 15. Earle Wilson, Aurora, Ont.

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WHITE WYANDOTTES I have a very choice lot bred from high-class stock. The kind that produces both eggs and meat. Eggs one dollar per setting. Herbert German, Box 141, St. George, Ont.

The British battleship, Russel, was sunk in the Mediterranean on April 27th, as the result of striking a mine, 24 officers and 676 men being saved, and 124 officers and men missing.

Roumania appears to have concluded a commercial agreement with the Central Powers and is shipping in foodstuffs. When the Allies did not go through the Dardanelles she was left with no other market.

The revolt against the rule of Yuan Shi Kai is continually spreading throughout China, nine out of the eighteen provinces having already declared their independence and come under control of the revolutionists. Dr. Sun Yat Sen is said to be directing the movement from Japan. The Chinese in the United States, especially the students in the Universities, are actively supporting the revolution.

A German submarine was sunk off the East Coast of England on April 27th.

3,493 munitions plants are now going at full speed in Great Britain.

The most unexpected event of the week has been the rising of the Sinn Fein society in Ireland. On April 21st a German cruiser, flying the Norwegian flag and attempting to land arms in Ireland was sunk in the Channel, and among those taken prisoners was the traitorous or monomaniac Sir Roger Casement, who was sent to The Tower. Immediately afterwards, evidently under German instigation, riots broke out in Dublin, centering about "Liberty Hall," the headquarters of the Sinn Fein Association. So serious was the rising that British troops had to be called out and British warships requisitioned, the rebels being finally driven from St. Stephen's Green with considerable loss of life. Almost simultaneously, trouble broke out in various parts of Ireland, centering about Killarney, Enniscorthy, Clonmel and in County Galway, and the situation was met by the prompt establishment of martial law throughout the country. Sir John Redmond, leader of the Nationalists, and Sir Edward Carson, leader of the Unionists, stood stoutly together in denouncing the rising, and lending their influence to quell it. The situation is now believed to be well under control. On the western war-front artillery action has proceeded incessantly about Verdun, where, however, the Germans must now acknowledge themselves decidedly worsted. General Petain is receiving great praise for his handling of that most difficult situation. One striking feature of the last fortnight has been the continuous harassing of the German lines by night by French aviators. At Verdun the British have taken no part, evidently in accordance with the request of General Joffre, but during the last few days there have been signs of increasing activity all along the British front. Several engagements have taken place, at St. Eloi, Hill 60 and Frelingheim, all in favor of the Allies, but it is believed that these may be preliminary to a great attack of the Germans in Flanders and Northern France, for which 800,000 German troops have been massed. It is interesting, and significant, that a third Russian contingent, from some unknown port, has arrived at Marseilles. In Armenia the Russians have been again successful, having captured the hill fortress of Sasun. From the Tigris less favorable news has come. A vessel trying to take provisions to Kut-el-Amara was grounded and taken by the Turks. General Townshend's forces have been obliged to capitulate. The Italians, whose field of operations in the mountains is one of particular difficulty, have again had some sharp clashes with the Austrians, and have taken the Sentinella Pass; while British troops have been successful in an engagement at Quatia near the Suez Canal, and in East Africa, where the forces under General Smuts defeated the enemy at Kondoa Irangi. Two raids on England are reported, a raid by 3 zeppelins on April 24th, and a bombardment of Yarmouth and Lowestoft by sea, by 20 German cruisers, which sailed off after killing 4 people, injuring 12, and damaging a few hundred houses and public buildings.

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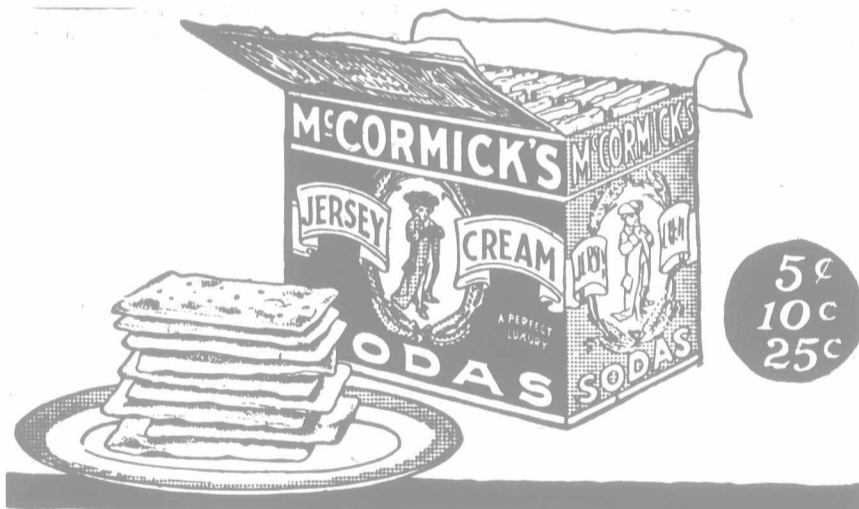
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The smell of dawn was in the air. Our boat was made fast at the foot of a native street. A narrow wedge of the city was crowded against the cliff; junks were thick along the bank. In one of these nearby, an ignited wick swam in a saucer of grease—the only light in this quarter of river-bank life. A native woman sat beside it, in the shelter of bamboo-matting, nursing a child which raised its head often from her breast to moan low and piercingly.

All other objects were misshapen—varying shades and densities of black but the smells were real indeed—fish, decay, stale black smoke; and the sounds had begun before our boat crept into the torpor of the shallows—wakening fowls from all manner of incredible places, their squawks and crows thrown back from the cliffs with sharp accentuation.

There was something like death in the stupor of the natives behind the hutch-doors. A dog, invisible but seemingly at the very gunwale of our boat, jerked at his chain as Yuan stepped ashore, and gave way to low muffled barking, as if he expected to be beaten but could not resist. The street's width was barely a man's span. The stone blocks of the pavement were worn thin like sounding shells; the air was fetid with the filth and sewage that clogged the gutters. A beggar (again it was as though we could touch him from the gunwale) stirred in some passageway, and we heard his mewing whine.

This was the China that a friend of Yuan Kang Su would little see. From this China, the yellow foam arose like a poison, to rid the Celestial garment of its white parasites. I saw Mary Romany's eyes in the light of



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the guttering wick. They were as countries that stir and call to a man.

"The child is sick," she whispered. A long time afterward, I looked at my watch, which recorded a minute or two after four-thirty. There was a hush between us. How many times in the months that followed, did I think of those silent moments. I could not be sure in the deep-tinged illusion of the hour, that I had actually told the woman I loved her. It seemed I had fallen into some spell of the yellow rose and dreamed that the words were spoken.

Far back we heard the Germans and the Mission folk coming down to the boats. The line of sky above the cliffs was now marked off with gray. The clouds were like smoky mountains, and sheet lightning played behind them. I watched for the lantern—intent for the signal from Yuan.

Interminable minutes, while the dawn sank into the dripping mists of the gorge. The day began with a shot I shall always think of that rifle-shot, the end of the night. It was a "pr-ding" of glassy hardness, and from the cavernous throat of the gorge came a deep round twanging, the repetition in bass. A woman screamed. I saw no lantern, but through the mists came the voice of Yuan Kang Su:

"By the rivers of Babylon—" We put off toward the centre, holding against the stream for a chance to assist the others. A six-shooter crashed—the whole cylinder—and rifles again. And now a bellowing voice was raised. There was a vast rough effectiveness about it—as you would think of an eagle screaming above other birds—and against it, distinct from all other voices, was a nasal intonation—a white man in prayer.

"That's my father," Mary Romany whispered, hearing only the one.

"You mean the big war-eagle?" "Yes—" I had somehow wanted her father like that. The contrast of the puny voice—the Reverend Goethe Benson in untimely supplication—and that vital infusion of strength, pulled a laugh from me. There was now besides, a certain hard-held excited monotone from the German. The three junks emerged more plainly into the light. The cliff of the opposite gorge was visible. How different the story had we foreigners cleared from Liu chuan in darkness—even ten minutes earlier.

Our boat was deepest in the stream. Infuriated natives were putting off after the other two and the Germans and Romany fired at them. And now my fate called—a particular business

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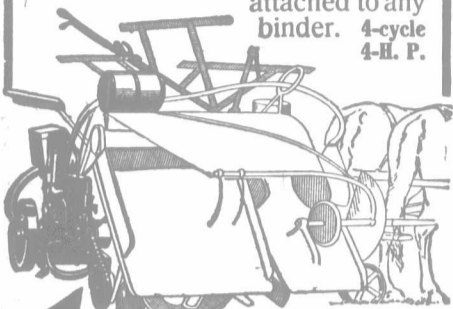
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for Thomas Ryerson at Yuan's landing. It was that empty metallic voice I had heard in anger at Hsi tin lin. My name was not uttered, nor any name. The outcry was that of a herd-creature, alone and being put to death. The woman glanced at me. I yelled to the Chinese to put the boat across. I have often wondered since, if a certain disordering shadow had not already fallen on my mind.

Santell was running along the wooded sludgy bank—his knees lifting high like an old man's. His head looked small to me—small and round like an effigy. His voice was broken with exhaustion. Natives were at his heels, striking with knives, but he would not fall. . . . Some fierce power of mine held our punters toward the shore. I would have drawn a pistol had they hesitated. The voice and figure that drew me seemed to have no meaning for the other boats. We were withdrawing from them. . . . From Mary Romany not one word had come.

"Stick to it, old gamester!" I yelled, as we darted into shore. . . . I saw the gleam of a pallid arm from the foliage when Santell leaped. He cried out again as the knife sank into his thigh. The Chinese followed him to the river, and I began (with a sense of thawing vileness in my body) to fire at the heads in the water behind the white man. . . . Santell's face turned up to the morning sky—drained, spectral, weak beyond pity, the eyes open and dull like those of a corpse. There was bubbling red behind him in the water, and the words came mysteriously out of the welter, as I bent forward to grasp him:

"I've spilled my blood for thirty miles. . . . Oh, God, take them off—"

The Chinese were like hungry reptiles about the boat—five of them (the same party, I believe, that we had evaded in the night). An arm knifed Santell again as I dragged his body over the gunwale, shipping half a boat-full of water. Queerly the details fitted into mind. Mary Romany, at my left, was firing her pistols. Our two boat-men took no part, but waited for me to command. The air was thick with bestial voices. . . . Now I heard the Germans and Yuan and the big eagle behind—the last, loudest and nearest. We were sinking. Santell lay half-covered in reddened water, his throat choked with gutturals of hideous memory.

The planking quivered and gave beneath my feet. Water was sucked over-side—then a deluge against our knees. I caught the woman's arm as we sprang clear. . . . I remember her look at that moment of sinking. Awed, frightened, adoring, a glance from her eyes to mine that became a part of reality, a link to the future. I tell it because it is marvellously true. It was the sustaining of life—that look from her eyes.

Santell uncovered an added coil of energy from God knows where—to keep afloat. . . . Mary Romany swam easily, I at her side, my gun raised above her head—to keep off the striking reptiles, three of whom seemed unkillably intent upon our lives.

I heard her father's shout. The pistol was shot from my hand. . . . I reached to take hers—and a second bullet struck my shoulder.

And now I saw the marksman—the giant Romany standing up in the dawn, a repeating-rifle whipped to his shoulder—and turned upon me again.

"Don't—" I called, but he fired, and there was ice and flame in my lungs.

I was helpless, my legs shuddering. They seemed to reach for, and find, great rocks in the river bottom, but my eyes were held to her father—murdering me. I looked into his gun again.

Mary Romany screamed. "Don't—" I called, but he fired, and there was ice and flame close to my heart.

And now much became clear to me: that I must not impede the woman's swimming—must keep my hands from touching her—that Nicholas Romany had recognized his daughter, but that my disguise had been my death—that to the eyes of her father, I was one of the Chinese assailants, and nearest the woman—that I was shot, and must drown besides. It was well with her. . . . I held myself rigid, and entered the green cold silence. . . . And then rebellion burst through me like red fire—for I had forgotten to kiss the seam at her shoulder.

To be continued.



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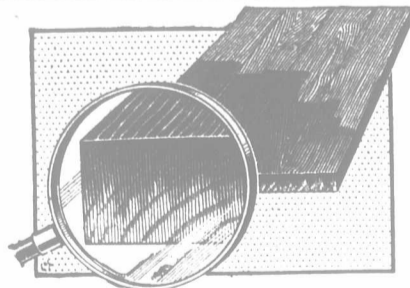
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WATER-PROOF WEAR-PROOF

FLOORS, woodwork and furniture treated with Campbell's Varnish Stain have a surface permanent in color, water-proof, wear-proof. The stain is dragged deep into every crevice of the wood as shown in the illustration. It dries smooth and hard and gives a beautiful, transparent finish, easily cleaned with dry mop or cloth.

CAMPBELL'S VARNISH STAIN

DISSOLVES GREASE SPOTS

Campbell's Stain and Varnish are so perfectly unified there can never be a sediment. No stirring necessary, you are sure to have an even, satisfying job.

There are 13 colors: Natural wood color, light oak, dark oak, walnut, cherry, mahogany, green, rosewood, white enamel, flat black, gloss black, piazza green and piazza red. Sold by reliable dealers everywhere. If your dealer cannot supply you

LET US SEND YOU THIS BOOK

Mr. Ekin Wallick, contributor to the Ladies' Home Journal, and a national authority on home decoration, has written a charming and instructive book, "The Attractive Home." He tells all about rugs, lighting, pictures, furniture and how to make an attractive home at small expense. Regular price, \$1.00. For forty-five (45) cents in stamps we will send you this book postpaid, and a half-pint can of Campbell's Varnish Stain, price 30 cents. \$1.30 worth for 45 cents. Write today and give name of nearest paint dealer or decorator.

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CARPENTER-MORTON CO.
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Montreal, Can.



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.

Periodic Ophthalmia.

Have a three-year-old mare that was taken sick a year ago last fall. Her legs were badly swollen and her eyes discharged very freely. The veterinarian pronounced it pink eye. He treated her for two weeks and apparently cured her. Since then she had several attacks of sore eyes at intervals of about six months. Her eyes get dim and a whiteness appears in the bottom of the eye. There is a discharge, and then in about a week's time they clear up and look all right. Is she likely to go blind from this trouble? What is the cause and treatment?
G. S.

Ans.—The symptoms given are those of specific or periodic ophthalmia. This is a constitutional disease, and appears periodically without apparent cause. After several attacks cataracts frequently form, which result in blindness. Treatment consists in administering a laxative, as 1½ pints of raw linseed oil. Keep the mare in a stall excluded from drafts or direct sunlight. Bathe the eyes three times daily with hot water, and after bathing put a few drops of a lotion, made of 10 grains sulphate of zinc, 20 drops fluid extract of belladonna, and two ounces of distilled water, into each eye.

Ayrshire Breeders at Hemmingford.

The Secretary of the Canadian Ayrshire Breeders' Association, W. F. Stephen of Huntingdon, Que., met the Ayrshire breeders in the east end of the County of Huntingdon, at Hemmingford, and organized the Hemmingford Ayrshire Breeders' Club.

Quite a large number of breeders were present to whom the Secretary explained that the object of organizing breeders' clubs was to promote good fellowship among the breeders and to increase the general interest in the Ayrshire breed of cattle, by holding meetings to discuss the best methods of breeding, rearing, exhibiting and raising the standard of excellence of the breed, also to encourage the entry of cows and heifers in the Record of Performance test, to hold sales and to bring before the public the good qualities and exceptional merits of the Ayrshires. Those present decided to organize, and a Constitution was adopted. There are a number of fine Ayrshire herds in this section of the country. It is expected that this Club will shortly have about fifty members from the east end of the County of Huntingdon and the adjoining counties of St. Johns and Napierville.

The following officers were elected: Hon. President—Arch. Cleland, Hemmingford, Que.; Hon. Vice-President—Geo. Bustard, Sr., Hemmingford, Que.; Vice-President—Geo. W. Bustard, Franklin Centre, Que.; Secretary-Treasurer—Fred Sweet, Hemmingford, Que.; Auditor—R. W. Blair, Hemmingford, Que.; Directors—R. T. Brownlee, Hemmingford, Que.; J. C. McKay, Hemmingford, Que.; Thos. A. Stewart, Hemmingford, Que.; W. B. Stewart, Hemmingford, Que.; Donald Watt, Lacolle, Que. This is the third Club organized by Secretary Stephen within the past two months.

Peter Smith, Stratford, Ont., writes that he has just completed some very satisfactory official tests. One individual in particular, a three-year-old heifer, made 26.87 pounds butter and 545 pounds milk in 7 days.

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With a Martin Ditcher & Grader

Does the work in one day—Easily made one—Paid by its first day's work.

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RIDER AG

1916 Model
astonished able term for Bicycle BUY until you know us-day. HYSLOP DEPT.

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Ship your cream to at all seasons of the We pay all express We supply cans. We remit weekly. We guarantee high

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We are prepared to at all seasons of the We pay express Write for particu WESTERN ST. THOM

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With a **Martin DITCHER & Grader** ONLY \$47.50




Does the work of 50 men in one day—Every farmer needs one—Pays for itself by its first day's work.

Send to-day for particulars.

Preston Car & Coach Co. Limited
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In every community to ride and exhibit a sample 1916 Hyslop Bicycle.

10 DAYS TRIAL. If owner is not entirely satisfied after riding any Hyslop Bicycle 10 days it can be returned and money will be promptly refunded.

TWO CENTS is all it will cost to write us a postal and we will mail free, postpaid, catalogue and colored art folder showing complete line of bicycles, tires and supplies and particulars of most marvelous offer ever made on a bicycle. You will be astonished at our low prices and remarkable terms. **MAKE MONEY** taking orders for Bicycles, Tires and Sundries. **DO NOT BUY** until you know what we can do for you. Write to-day. **HYSLOP BROTHERS, LIMITED** DEPT. 2 TORONTO, ONT.

CREAM

Where are you shipping now? And what are you getting for your cream? We want more individual shippers and more men to gather cream for us. Write for our proposition.

Silverwoods Limited
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CREAM WANTED

We think we have the longest experience. We try to give the best service. We need your cream and will make it "worth your while" to ship to us. A card brings particulars.

Toronto Creamery Co., Ltd.
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Ship your cream to us. We pay all express charges. We supply cans. We remit weekly. We guarantee highest market price.

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We are prepared to pay best price for cream at all seasons of the year. We pay express charges and furnish cans. Write for particulars.

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Pays express, furnishes cans, and remits weekly. Pays Highest Price.

Write for particulars. **Sarnia Creamery Co., Limited**
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Brant Creamery

Brantford, Ontario. Guarantees to you a high-priced market for cream every day of the year. Write for our book.

Reference: Bank of Nova Scotia

Questions and Answers.
Miscellaneous.

Automobile License.

Does a license have to be secured for the auto and also for the chauffeur? If my son and daughter learn to drive car, are they required to have a license as well as myself? Can anyone get a license to drive a car or must they first pass an examination? E. T.

Ans.—The owner of the car must secure a license and this will permit any member of his family driving the car as well as himself. Only chauffeurs who drive a car for hire or gain are required to pass an examination in order to secure a permit.

Blind Stagers.

1. What is the trouble with my horse? He has taken staggering fits three times in the past two weeks. The last time he threw himself against his mate and fell, and rolled over on his back, but jumped up again, apparently none the worse. He is a horse weighing about 1,500 pounds, and a very good animal, either on the road or farm. He is not fat, but is in good condition.

2. I would also like to get a cure for the bird louse on the horse. It is giving a lot of trouble in the stable. I have tried different remedies, but cannot get rid of it. E. F.

Ans.—1. This is apparently what is known as "blind staggers" or "stomach staggers." It is an affection of the brain, caused by a diseased condition of the stomach. Draw 6 or 8 quarts of blood from the jugular vein, and give a purgative of 8 drams aloes and 2 drams ginger. Feed bran until purgation commences. All feed should be of first-class quality and given in medium quantities. Avoid overloading the stomach.

2. The proprietary sheep and cattle dips have been used successfully for destroying lice. A mixture of 4 parts cement to one part hellebore dusted along the back and sides of the animal has proved effective. The lice are suffocated by the dust. Care must be taken not to allow the horse to get wet for a short time after the mixture is applied.

Sewage System in the Country.

I would like to know the best method of making a cess-pool for bath and closet in a country home. C. N.

Ans.—Land with open subsoil is required in order to have a cess-pool give satisfaction. A hole possibly five or six feet square and about the same depth could be dug and a wall built to prevent the earth falling in. The tank should be covered. Pipes from the house connect with the tank, and the liquids filter through the open subsoil. A septic tank is preferred to a cess-pool for disposing of farm sewage. Two important features of a septic tank are the two compartments. The sewage from the house flows into one where the solid matter is acted upon by bacteria and is transformed into liquid. An overflow pipe carries it over into the second compartment. In this division of the tank a valve is installed which trips when the liquid in that section reaches a certain height and allows it to flow out through a system of tile laid between a foot and eighteen inches below ground surface. These tile are laid on the level to prevent an accumulation of liquid at one end. The liquid percolates out between the tile into the soil where bacteria again transforms the constituents of the out-flow into plant food. In figuring out the size of tank to use, three cubic feet of space in each compartment is usually allowed for each occupant of a private house. The valve compartment should not be more than three feet deep nor less than two-and-one-half feet deep. For every cubic foot in one compartment lay thirteen feet of four-inch tile at right-angles to a main six-inch tile leading from the tank. A ventilating flue should be put in the roof of the tank. A concrete tank proves very satisfactory and is not difficult to build.

CALDWELL'S

Avoid heavy losses by feeding.

Caldwell's Chick Feed

Much more depends upon the feed than upon the care or housing. The "staff of life" must be right or the digestive systems of your birds will soon go out of order. Drooping wings, diarrhoea and frequent losses quickly follow the feeding of improper foods. Caldwell's Chick Feed on the other hand is pure, palatable and perfectly balanced. It is sweet and easily digested. What they eat—all of it—does them good. Here is the reason.

Caldwell's Chick Feed is free from bitter weed seeds such as Worm Seed Mustard. It contains no Pig-weed, Buckwheat, Sow Thistle or other weed seeds as are commonly found in many other feeds. Compare these other feeds with Caldwell's. You will readily note the difference.

Caldwell's Chick Feed is prepared from clean cracked Wheat, Corn, Millet, Kaffir Corn, and Pin-head Oatmeal. Its analysis shows the following content—protein 19%, fat 3%, fibre 3.2%, carbohydrates 65%.

Note the small amount of fibre, and the richness of this feed in protein and carbohydrates. Feed Caldwell's Chick Feed daily and you will have fewer losses and a healthier, larger flock.

Other Leading Feeds

- Caldwell's Laying Meal.
- Caldwell's Growing Mash.
- Caldwell's Scratch Feed.
- Caldwell's Developing Feed.
- Beef Scrap, Grit, Shell, Charcoal.

Sold in 100 lb. Sacks only.

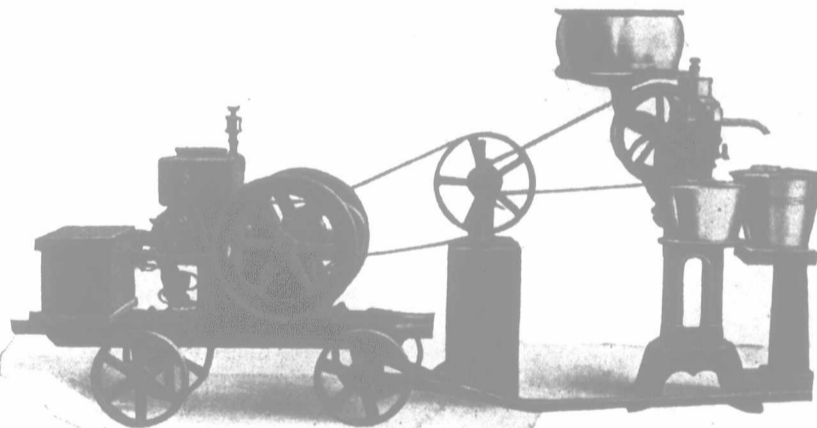
Send for Egg Record Booklet and free folder on any of the above

The CALDWELL FEED & CEREAL CO., LTD., Dundas, Ont.

Largest Feed Mills in Canada

Molasses Meal, Cream Substitute, Calf Meal, Mollasses Horse Feed, Dairy Meals, Poultry Feeds.

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This MONARCH 1 1/2 h.-p. Engine attached to our Intermediate Friction Clutch Pulley solves one of the problems for hired help. No counter shaft needed with this attachment. The machine driven is always given its speed automatically, and needs no special attention from the operator. We also make special pulleys to fit separator. Get our catalogue. It's free for asking. We make all sizes of engines, from 1 1/2 to 35 h.-p. Ensilage Cutters, Grain Grinders, Pump Jacks, Saw Frames, Friction Clutch Pulleys.

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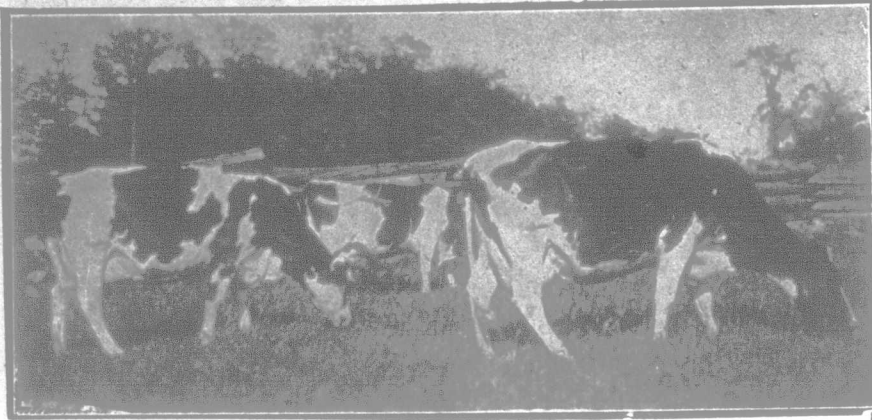
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Dispersion Sale of Holsteins

Local conditions have compelled me to sell by auction at my **Lake Marie Farm, 1 1/4 miles north of King Sta., G.T.R., on**

Thursday, May 11th, 1916

My entire herd of

75 Head of Holsteins

selected from the leading herds of Ontario, regardless of cost, on individual merit and high official backing. Many of them are prize winners at the big shows and carry the best producing blood in Canada. Many will have calves at foot or be about due to calve to the stock bull, Segis De Kol, a G. son of the great King Segis, who will also be sold as well as his assistant in service, Sir Colantha Abbekirk, and about a dozen other young bulls of breeding age.

Terms:—Cash unless otherwise arranged.

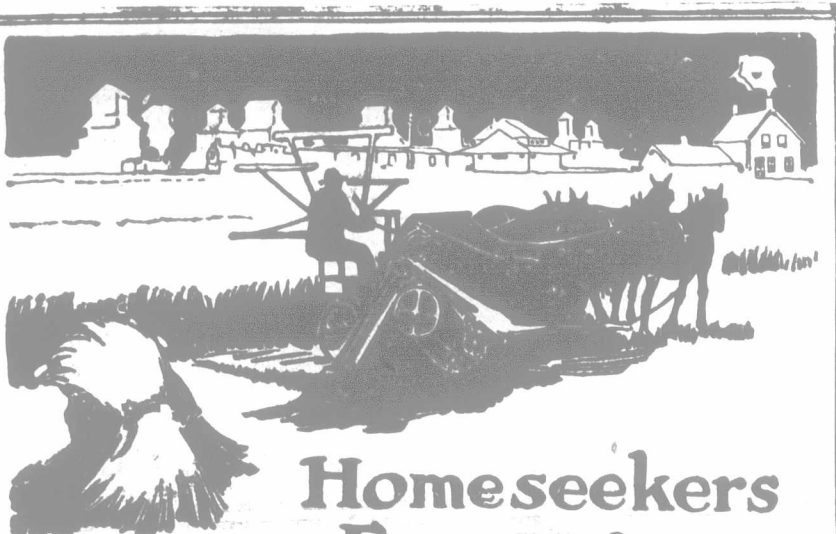
For catalogues write, R. S. Starr, Manager, King P.O. Ont.

J. T. Salegon, Maple; J. D. Readman, Newmarket, Auctioneers

Sale at 12 o'clock sharp

R. S. Starr, King, Ont.
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Homeseekers Excursions

Every Tuesday, March to October "All Rail"

Every Wednesday During Season Navigation "Great Lakes Route"

Somewhere out on the prairies where last year Canada's Greatest Wheat Crop was produced there is a home waiting for you. The

CANADIAN PACIFIC

will take you there, give you all the information about the best places, and help you to success. :: :: :: :: ::

Particulars from any Canadian Pacific Ticket Agent, or write W. B. Howard, District Passenger Agent, Toronto.

Yellow-Eye Seed Beans

A limited amount of choice for sale. Also some White Seed Beans for sale at the Dutton Elevator. Send for sample and prices.

WM. McLANDRESS
Dutton, Ontario

Seed Potatoes

New Brunswick Grown

Irish Cobbler \$2.25 per bag, Delaware, \$2.40 per bag, F. O. B., Toronto.

Crampsey & Kelly, Dovercourt Road, Toronto

Questions and Answers.

Miscellaneous.

Erecting a Silo.

1. How deep in the ground is it advisable to build a silo?
2. Should a silo be floored?
3. Is a drain from the bottom of the silo necessary?
4. Would heavy galvanized wire imbedded in the cement prove satisfactory for fastening the rafters to the silo?
5. Is there anything that can be put on corn before planting to prevent crows from eating it?

Ans.—1. If a silo is started too deep in the ground it increases the labor of getting the silage out of the bottom. About three feet would be deep enough.

2. It is advisable to put in a concrete floor.

3. A drain should be put in around the outside of the foundation, but it is not considered necessary to connect the drain with the bottom of the silo, although some do, and have the floor slope to the centre. A screen is put over the drain to prevent silage from filling it, and still permit any liquid to escape.

4. Wire arranged as you suggest would no doubt hold the rafters firmly, but we believe it would not prove as satisfactory as imbedding bolts in the cement, to which the rafters could be securely fastened.

5. If coal-tar is put on the corn before it is sown it is claimed that the crows will not bother the field. Care must be taken not to get too much tar on the seed, or there may be difficulty in sowing.

Feed for Pigs.

I have been in the habit of selling most of my young pigs when they are old enough to wean, but this year I purpose keeping them as I have plenty of feed. What quantity of grain would it take to fatten 15 pigs? Grain is a mixture of oats, barley and rye. I intend running them in the orchard as soon as they are big enough. What pasture mixture would you suggest?

H. S. B.

Ans.—It is rather difficult to say what quantity of grain would be required to fatten pigs, owing to a number of influencing factors. The amount of skim-milk available for feeding, and the kind of pasture, would also have to be considered. Equal parts shorts and finely-ground oats make a splendid grain ration to start young pigs. The heavier grains could be fed for finishing the hogs. Up to 170 lbs. in weight, 100 lbs. gain has been made with 280 lbs. meal, using tankage in place of skim-milk, but considerably more grain is required as a rule. Prof. Day, of the Ontario Agricultural College, Guelph, in experimental work found that pigs weighing from 54 to 82 lbs. required 310 lbs. meal; 82 to 115 lbs., 375 lbs. meal; 115 to 140 lbs., 438 lbs. meal, and from 140 to 170 lbs., 458 lbs. meal to make 100 lbs. gain. These results show the increase in amount of feed as the pigs gain in weight. Pigs on pasture will possibly require less grain than the amount mentioned. Alfalfa or red clover is considered the best pasture crop for hogs. Vetch or rape also proves satisfactory. About 2 1/2 tons of grain along with pasture should be sufficient to grow and fatten 15 hogs. Pasturing hogs is fully discussed in another column of this issue.

Attractive Dining Car Service.

Probably nothing helps more to make a railway journey really enjoyable than a visit to the "Dining Car" especially if it be a Canadian Pacific Dining Car, where the passenger is assured of the highest form of efficiency in the culinary art, the choicest provisions the market affords, prepared on the scientific principle known as "Dietetic Blending."

Your favorite dish, as you like it, may be enjoyed at reasonable cost, amidst ideal surroundings, while travelling on the Canadian Pacific.

Selected Seed Potatoes

	Bag of 90 lbs.
Irish Cobblers.....	\$2.50
Extra Early Eureka.....	2.75
Early Harvest.....	2.50
Davies' Warrior (late).....	3.00
(Limited quantity)	
Early Ohio.....	2.75
White Star (late).....	2.50
Green Mountain.....	2.50
Delawares.....	2.50

These prices are for immediate delivery. Sacks included. Ex-warehouse. Terms cash.

Seed Corn

Selected in bulk, 56 lbs. to bushel. Delivery in May.

	Bush.
Early Leaming.....	\$1.50
White Cap Yellow Dent.....	1.50
Mammoth Cuban.....	1.50
M. S. Sweet.....	1.50
Compton's Early.....	1.75
Longfellow.....	1.75

These prices are ex-warehouse. Cotton bags extra, 25c. Home-grown mangels, grown under Government supervision in Waterloo County. It is selling fast, and stock limited. Send in your order early, so as not to be disappointed. Price, 45c. lb. by mail, postpaid.

HEWER SEED CO.

Guelph Ontario

CLOVER SEEDS

(Government Standard)

	Per bus.
No. 1 Red Clover.....	\$16.00
No. 2 Red Clover.....	15.50
No. 1 Alsike.....	12.50
No. 2 Alsike.....	11.00
No. 1 Alfalfa.....	16.00
(Northern Grown)	
No. 2 Timothy.....	5.50
(This seed grades No. 1 Purity)	
No. 3 Timothy.....	5.00
White Blossom Sweet Clover.....	13.00
O. A. C. No. 72 Oats.....	.85
Marquis Spring Wheat.....	1.60
O. A. C. No. 21 Barley.....	1.25

Terms, cash with order. Bags extra at 25c. each. On all orders east of Manitoba of \$25 or over we pay the freight.

We guarantee seeds to satisfy or ship back at our expense. Ask for samples if necessary.

TODD & COOK

Seed Merchants
Stouffville, Ontario

Mallory's Strawberry Plants for Satisfaction and Profit.

Leading varieties \$4.00 per 1,000. Fifty plants each of four choice varieties, early and late for \$1.00. Send for price list.

N.E. Mallory, Blenheim, Ont.

Strawberry and Raspberry Plants

We are the most extensive growers of strawberries on the north shore of Lake Erie. This season we have a large stock of the best standard and ever-bearing varieties, also red and black raspberry plants. All nursery stock offered for sale is grown on our farm. Write for catalogue.

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SEED GRAIN

O.A.C. 21 Barley and 72 Oats our specialty. Our supply is clean, pure and true to name. Price—Barley, 90c., Oats, 80c. per bush. 16 oz. cotton bags, 25c.

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Adirondack Sturdy Stave Silos

25% Cheaper—100% More Durable
THE ADIRONDACK SILO CO.
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The on horses every ad

Buy steel fore up a six kind the

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Branch Hami

Question

V

Disse

A few days acted dumpish work jaws, mo frightened, go and fall on cr butcher. Since shown similar reported that wrong except colored and co were fed very winter.

Ans.—The s report of the b of the liver wh feeding on feed sugar. Too lit causes it, so a is probably th No treatment All that you c ing silage. Th ing symptoms r If possible it v veterinarian to feed given, an if any die, as be correct.

Mi

Mang

Would you a paper, what to the mange? O I sent a team they came ho So I bought washed them, a grass. They s until last winte them again. pears to relieve

Ans.—Unless at the time t for the diseas of it remaining summer, and fected when the fall. The fected with ho one ounce of cr



Deering Light Draft Hay Tools

All-Steel Side Delivery Rakes and Hay Loaders

Don't miss seeing the line of All-Steel Side Delivery Rakes and Hay Loaders the DEERING local agent can show you. These strong, light-weight, light-draft, all-steel machines do such good work and last so long that they are the cheapest haying machines you can buy.

The All-Steel Side Delivery Rakes, while light in weight and easy on horses, are strong enough to handle the heaviest crops. They have every adjustment needed for good work in-the field.

Buy a Hay Loader with a light draft, all-steel frame; with a steel fore carriage; with no gears or drive chains; one that gathers up a six-foot windrow and piles the load ten feet high—that's the kind the DEERING local agent sells.

Buy DEERING Hay Machines, Mowers, Dump Rakes, Side Delivery Rakes and Hay Loaders. They take the hard work out of haying and put the profit in. Get catalogue from the DEERING local dealer, or write for them to our nearest branch house.

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Dollars in Ditches for You

Every undrained farm in your county means possible profit for you. You can make \$10 to \$15 a day without more effort than ordinary farm work requires.

You can cut tile ditches at an average cost of 5c to 7c a rod, including liberal wages for yourself. Your neighbor will pay more than this, giving you a big profit. The

"A Perfect Trench at One Cut" BUCKEYE Traction Ditcher

Works perfectly and economically in any soil, leaving the trench ready for the tile. The trench will be absolutely to grade with smooth, true, vertical sides and the finely pulverized excavated dirt deposited to one side convenient for backfilling. Hundreds of these machines are in actual operation today, all giving satisfaction. You, too, can make big money easily with the Buckeye.

Read What These Men Have Done in Their Own Counties

Macksburg, Iowa.
Am enclosing photo of machine at work digging 3-ft. deep at the rate of 16 rods per hour. We average about 100 rods a day, 3-ft. deep, for which we receive 25c per rod, at the expense of about \$5.00 per day, or 5c per rod, which would leave us \$20.00, which is pretty good interest on amount invested.
DAVIS & MACUMBER.

Riga, Mich.
I am sending you a record my ditcher made in 116 days. My total expenses—gas, repairs and labor were \$436.35 with my time figured nothing. I dug 13,312 rods of ditch and the work came to \$2,045.26 so that left me for my work \$2,508.91 and my machine was just as good when I got through as when I got it.
JOHN GOLL, Jr.

Write for Special FREE Book of Facts

It tells all about the Buckeye Traction Ditcher and contains letters from men who have made money with this machine. Describe your soil conditions and size ditches you wish to cut. We will gladly outline the machine and equipment best adapted and most profitable. Our Service Department will help you build up a steady paying, healthful contract tile drainage business. This advice and assistance free. Write us today.

The Buckeye Traction Ditcher Co., 202 Crystal Ave., Findlay, Ohio

Questions and Answers. Veterinary.

Disease in Sheep.

A few days ago one of my sheep acted dumpish, would grit her teeth, work jaws, move ears and head as if frightened, go backwards a few feet and fall on croup. I sold her to a butcher. Since then three others have shown similar symptoms. The butcher reported that he could find nothing wrong except that the liver was light colored and contained no blood. They were fed very liberally on silage all winter. G. W. M.

Ans.—The symptoms given and the report of the butcher, indicate a disease of the liver which is caused by liberal feeding on feed that contains too much sugar. Too liberal feeding on turnips causes it, so also might silage, which is probably the cause in your sheep. No treatment is effective as a cure. All that you can do is to cease feeding silage. Those that are not showing symptoms now will probably escape. If possible it would be wise to get a veterinarian to examine the flock and feed given, and hold a post mortem if any die, as our diagnosis may not be correct. V.

Miscellaneous.

Mange in Horses.

Would you advise me, through your paper, what to do with horses that have the mange? One year ago last winter I sent a team to a lumber camp, and they came home very bad with it. So I bought some disinfectant and washed them, and turned them out on grass. They seemed to be all right until last winter, when it broke out on them again. The washing only appears to relieve them for a few days.

A SUBSCRIBER.

Ans.—Unless the stable was disinfected at the time the horses were treated for the disease there is a possibility of it remaining in the stable during the summer, and the horses become infected when they are stabled in the fall. The stalls should be disinfected with hot lime wash containing one ounce of crude carbolic to the gal-

CREAM SEPARATOR MANUFACTURERS SAY

that two-thirds of all complaints about cream separator are due to faulty lubrication. That is because the close-fitting, fast-running mechanism of the separator demands a special oil—and most people use "just any old oil."

Standard Hand Separator Oil

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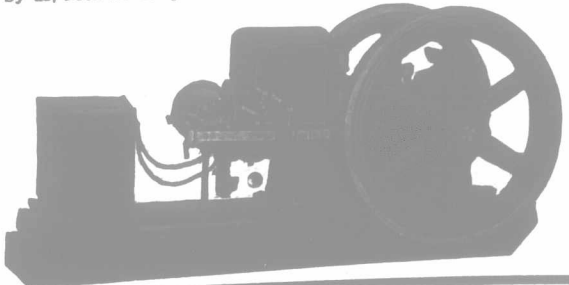
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Among the recent sales reported by Robert Miller, of Stouffville, Ont., are included a Lavender bull and a select Languish heifer to E. A. Agnew, Cookstown, Ont. The heifer is in calf to the young bull Butterfly Sultan, which is out of the same dam as Butterfly King, reputed, when living, to be the greatest sire of milking Shorthorns in Canada. The Lavender bull and Languish heifer sold to Mr. Agnew are both descended from big milkers. Mr. Miller also reports selling a Miss Ramsden bull, nearly a year old, to F. W. Lampman, Bickford, Ont. He is a beautiful bull himself, and is bred on both sides from splendid milking Shorthorns that have been used for both purposes.

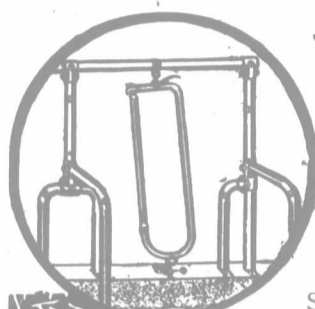
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Thursday, May 11, is a date to be remembered by farmers and breeders looking for high-class and richly-bred Holsteins, for on that day at Lake Marie Farm, 1 1/4 miles north of King Station on the North Bay line of the G. T. R., Sir H. M. Pellat will hold his dispersion sale. Among the 75 head to be sold are several daughters of the Canadian champion sire Brookbank Butter Baron, which numbers among his daughters cows up to 33 pounds. Others again are daughters of Francy Bonerges Korndyke and therefore granddaughters of the noted Francy Bonerges Ormsby, and carrying the same blood as Jenny Bonerges Ormsby, the only cow in the world to make a 30 pound record five years in succession. Others are daughters of the famous champion Prince Abbekerk Mercena. Many other sires of equal note are represented in the herd. Rich official backing is characteristic of the breeding of the entire lot and a number of the mature cows have official records themselves. Individually, the herd is one of the best in the country, having been purchased by Mr. Pellat at long prices, according to the three-point standard of type excellence, producing ability, and high official backing. Many of them have won high honors at the recent shows. They have strong constitutions, and they are at the same time smooth with quality. All will positively be sold as conditions make it necessary to stock the farm with beef cattle. There are many one, two and three-year old heifers, heifer calves, and about a dozen bulls, so that no matter what is required by breeders this sale will be the place to supply that want. Conveyances will meet all morning trains at King Station on day of sale. The Metropolitan electric cars, leaving North Toronto at 9.30 A. M., will connect at Bonds Lake with the Schomberg electric



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line which stops at Edgley Station at the corner of the farm. For a catalogue and full information address the manager of the farm, R. S. Starr, King, Ontario.

Questions and Answers. Miscellaneous.

Mare Loses Her Colts.

I have a ten-year-old mare that lost her last three colts. She is in foal again, and I would like to get information regarding how to treat her to save the foal this year. The mare is worked in the woods every winter. L. S.

Ans.—The nature of work and treatment given the mare through the winter may tend to produce a weak foal. The question of lessening the loss in foals is fully discussed in April 29 issue, and the information given in that article may assist you in caring for your mare this spring.

Turnip and Mangel Seed Per Acre.

1. What is the best way of sowing turnips and mangels?
2. How many pounds of seed per acre should be sown?
3. Will it kill red clover to cut it in the fall, or will it kill out if not cut? L. H.

Ans.—1. The usual custom and possibly the best method is to drill the land for turnips, and use the regular turnip seeder for sowing the seed. Mangels are frequently grown the same way, but many prefer sowing the seed on the flat. When the seed bed is prepared the seeding may be done with the ordinary grain drill, but care should be taken not to sow the seed too deeply.
2. From 1 1/2 to 2 pounds of turnip seed per acre, or five or six pounds of mangel seed.
3. No.

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Percheron Stallion Napoleon Britain [4457], foaled April 10, 1913. Black with star, weight 1,800, height 16/1. Also 3 black stallions rising 2 years old at farmers' prices. NORMAN ATKIN, Amherstburg Station, Ont. North Malden P.O.

Questions and Answers. Miscellaneous.

Applying Manure in the Spring.

What is the best way to apply manure on land that was plowed last fall and is to be sown to oats or wheat this spring? What good does the manure do?

R. R. W.

Ans.—It may be spread and thoroughly cultivated into the soil before the grain is sown, although some prefer giving the soil a light top-dressing of manure after the seeding is finished. The latter method is especially beneficial on light soil. Manure adds plant food and humus to the soil, which are essential to keeping the land in good heart. When applied as a top-dressing it also acts as a mulch and checks evaporation of moisture.

Feed for Young Lambs.

1. Will it be safe to sow grain that is treated for smut near a barn where hens scratch? The grain is treated with formalin.

2. What is the best feed for young lambs? I am having trouble with my ewes. They have no milk.

W. J. F.

Ans.—1. Yes.

2. A lamb may be raised on cow's milk. Milk from a fresh cow is preferable to that from one which has been long calved. Heat the milk to blood heat, and sweeten it a little with brown sugar. A lamb can soon be taught to drink the milk from a pail, or a bottle may be used. Care should be taken not to over-feed. Give a little at a time, but feed five or six times a day. Lambs will soon commence to pick at oats and bran. Sweetened skim-milk may substitute whole milk when the lamb is six weeks old, if it is eating other feeds readily.

Silo—Corn for Silage.

1. I intend building a silo this summer. Which is preferred, a silo made of ordinary lumber, or one made from prepared lumber? There is a difference of \$50 in the cost. An agent informs me that the silage in the home-made silo only tests about 60 per cent. feed value, while the silage in a silo built of treated wood tests 90 per cent.

2. When treated with creosote, is the color of the wood black or white?

3. Why is creosote used on the wood for silo-building? Is it to preserve the wood, or to make better silage by filling the pores?

4. Would the pores in the wood allow air enough to enter to lower the value of the silage?

5. Has anyone been known to discard an ordinary wood or cement silo and replace it with a prepared-wood silo, because of loss in the former of feed value?

6. When is the proper time to have silage analyzed? Where can it be done, and what is the expense?

7. What variety of corn should be planted in order to secure well-eared corn for silage?

W. W. R.

Ans.—1. It is usually conceded that a silo built of prepared lumber will last considerably longer than one built of untreated lumber, but we were not aware that there was such a difference in the quality of the silage. For the difference in cost we would prefer the silo built from treated lumber.

2. It is usually a very dark brown.

3. Creosote is used as a wood preservative, and by its use a tighter silo is insured.

4. We think not for all practical purposes.

5. We do not know of anyone.

6. There is no particular time to have it done, but a representative sample of the silage being fed should be secured in order that the results of the analysis would be useful in determining its feeding value. No doubt, but that the analysis could be secured without cost if a sample of the silage were sent to the Chemical Department, Ontario Agricultural College, Guelph, or to Dr. Frank T. Shutt, Experimental Farm, Ottawa.

7. There are several varieties of corn that prove satisfactory for silage purposes. Of the Flint varieties are the Longfellow, Salzer's North Dakota, and Compton's Early. Among the Dents are the Wisconsin No. 7, Golden Glow, White Cap, Bailey and Leaming, all of which are used for silage purposes.

No More Sore Shoulders



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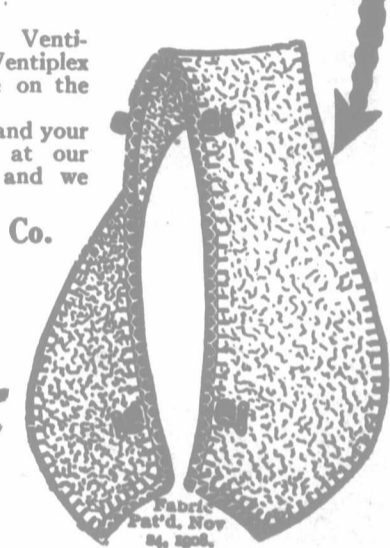
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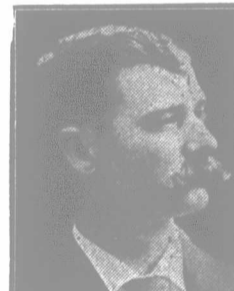
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1915 Grain on Hand.

The Census and Statistics Office on April 19, issued in the form of a press bulletin a summary of the results of inquiries into the merchantable quality of the field crops of 1915; the stocks of grain and other agricultural produce of 1915 remaining in farmers' hands on March 31, and the stocks of wheat in Canada on the same date.

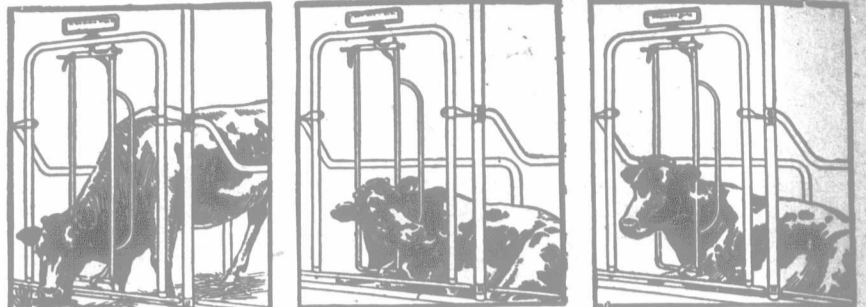
The returns received from crop-reporting correspondents show that of the total estimated wheat crop in 1915 of 376,303,600 bushels over 95 per cent., or 358,281,000 bushels, proved to be of merchantable quality. This proportion compares well with the previous year, being superior to last year by about 2 per cent., and somewhat above the average of the past seven years. The proportions of other crops of 1915 which proved to be of merchantable quality are as follows: Oats, 92 per cent. (480,208,000 bushels out of 520,103,000 bushels); barley, 88 per cent. (47,082,000 bushels out of 53,331,300 bushels); rye, 88.5 per cent. (2,118,500 bushels out of 2,394,100 bushels); buckwheat, 83 per cent. (6,512,000 bushels out of 7,865,900 bushels); corn for husking 77.5 per cent. (11,142,000 bushels out of 14,368,000 bushels); flaxseed, 95.5 per cent. (10,144,000 bushels out of 10,628,000 bushels); potatoes, 73 per cent. (45,630,000 bushels out of 62,604,000 bushels); turnips, etc., 86 per cent. (55,266,000 bushels out of 64,281,000 bushels), and hay and clover 86 per cent. (9,400,000 tons out of 10,953,000 tons.

Out of the total estimated yield of wheat in 1915, 23 per cent., or 86,854,000 bushels remained in farmers' hands at the end of March. This proportion compares with 12 1/2 per cent. last year, 16 1/2 per cent. in 1914, 22 per cent. in 1913, and 27 per cent. in 1912; so that this year the proportion in hand is larger than in any year since 1912, which related to the crop of 1914. Last year the proportion remaining over was the smallest on record since these inquiries were instituted in 1909. Not only, however, is the proportion this year a high one; but owing to last year's excellent yields, the quantity on hand at March 31 is larger than in any previous year, 1912, (the crop of 1911) coming nearest with 62,188,000 bushels.

Of the remaining field crops the proportions and quantities estimated to be in farmers' hands at March 31 are as follows: Oats, 45 per cent. or 235,530,000 bushels; barley, 34 per cent. or 18,514,500 bushels; rye, 30 per cent. or 732,700 bushels; buckwheat, 22 per cent. or 1,747,000 bushels; corn for husking, 24 per cent. or 3,453,000 bushels; flax, 25 per cent. or 2,700,300 bushels; potatoes, 20 per cent. or 12,960,800 bushels; turnips, etc., 15 1/2 per cent. or 9,952,000 bushels; hay and clover, 23 per cent. or 2,524,000 tons. For oats, barley and rye, the quantities on hand at the end of March are larger than in any previous year on record.

The Census and Statistics Office also reports the completion of an inquiry into the total stocks of wheat and wheat flour in Canada on March 31, the results of which are available for comparison with the special inquiry of the same kind which was carried out last year as for the date of February 8, 1915. This year the total quantity of wheat, and wheat flour expressed in terms of wheat estimated as in stock in Canada on March 31, is, subject to slight revision, about 196 million bushels, as compared with about 80 million bushels on February 8, 1915. The total for 1915 includes in round figures 86 1/2 million bushels in the elevators, flour mills, and in winter storage in vessels; 87 million bushels in farmers' hands, and 22 1/2 million bushels in course of transit by rail.

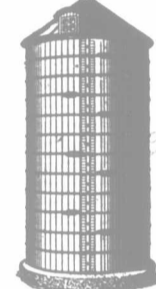
Spice.
Ardent young man—"Dearest Mabel, will you share my lot?"
Practical Mabel—"How many acres are in your lot?"—N. Y. Times.



**More Beef
More Milk
More Butter
More Money**

There are certain essentials in the care of stock that the up-to-date dairyman will not overlook. Stock must be comfortable, contented, and kept in sanitary surroundings to have them do their best. Positive increases in production are invariably noted where plenty of water, sanitary stable fittings, silage, ground grain feed, etc., are supplied.

Windmills. You cannot keep cattle plentifully watered by the old hand pump process, and if you try, you are sure to tire out before they have enough. WINDMILLS furnish the cheapest POWER and, with a wood or steel tank as a reservoir, will keep your cattle abundantly supplied in all weathers and enable you to care for a larger number. The TORONTO Windmills run easily in light airs, and are regulated for high winds. Quality of material and exclusive principles of construction make TORONTO Windmills decidedly superior. Prices on application.



Stable Fittings. We have one fixed idea in our TORONTO Stable Equipment, i.e., to make it GOOD without making it COSTLY. We can compete with any in price, but we do not resort to certain "make-believe" methods in finishing which reduce the cost and reduce the real value. We charge low prices for high quality. Simplicity is one advantage, strength and endurance are others, found in our line. Sold in genuine Galvanized (not merely aluminum slushed) or in black paint finish. Get our prices and specifications.

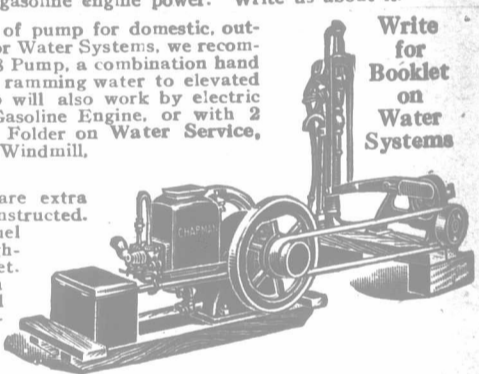
Litter Carriers. A good litter carrier, like the "TORONTO," with its easy hoist, smooth running track and trouble-free switches, is not only a manure saver, but a work saver and a money maker. Made of steel and galvanized iron, substantial and durable. Tested by time and proved "just right." Ask for catalogue and prices.

Silos. Wood is the best material. We make ours out of selected 2-inch spruce, creosoted to preserve from decay. Staves double-tongued and grooved, with steel splines at ends, hoops of steel bent to fit; frost-proof malleable lugs; panamod roof. The Toronto Economy Silo is air-tight. Shipped ready to put up. Our price will interest you; write us.

Water Systems. To properly water cattle on a stock or dairy farm, there should be a well-piped system leading from tank in barn loft or attic, with water basin in every stall. The acknowledged BEST in Water Basins is the TORONTO Water Basin; always full, but never overflows, cannot clog with chaff or dirt. We will gladly suggest plans and prices for installing complete water system for house and barn, with gravity or air pressure tanks and windmill or gasoline engine power. Write us about it.

Pumps. We make every variety of pump for domestic, outdoor and indoor use. For Water Systems, we recommend our popular Fig. 19, or our No. 648 Pump, a combination hand and power pump, with air chamber for ramming water to elevated tank or for hose pressure. This pump will also work by electric motor, with TORONTO Jr. 1 1/2 h.p. Gasoline Engine, or with 2 h.p. Chapman Engine. Write for our Folder on Water Service, and state whether you wish to use Windmill, Gasoline Engine or Electric Power.

Engines. Chapman Engines are extra strong and heavily constructed. They generate great power on light fuel consumption. The Chapman is the highest type engine of its kind on the market. Our TORONTO Engine, slightly lighter in build, is a very capable and economical engine at a lower price. Get full particulars.



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Ontario Wind Engine & Pump Co., Ltd.
93 Atlantic Ave., TORONTO
Branches: Montreal, Winnipeg, Regina, Calgary

ABERDEEN - ANGUS HEIFERS IN CALF

We are offering at reasonable prices a few two-year-old heifers that are in calf to our choice herd bulls. These heifers are by imported sires and dams.

Correspondence solicited, or come and make your own selection.

Clydesdale Teams **LARKIN FARMS** **QUEENSTON, ONTARIO**
Prices Reasonable

Oak Lodge Stock Farm
Shorthorn bull, 20 months old, bred from dam of milking strain. Two bulls, twelve months old. Will be sold at a price that will please customers.
J. E. BRETHOUR & NEPHEWS, Burford, Ont.

Spring Valley Shorthorns
Herd headed by the two great breeding bulls Newton Ringleader (imp.) 73783, and Nonpareil Ramsden 83422. Can supply a few of either sex.
KYLE BROS., Drumbo, Ont. Phone and telegraph via Ayr

Females SHORTHORNS Females
I can supply females of the most popular Scotch families, Crimson Flowers, Minas, Lady Fanny, Nonpareil, Butterflies, Amines, Athas, Miss Ramsdens, Marr Emmas, Marr Missies and Clarets. A few bulls. **A. J. HOWDEN, COLUMBUS, ONT. Myrtle, C.P.R. & G.T.R. Oshawa, C.N.R.**

SHORTHORNS AND SHIRES
For Sale—A few choice young bulls, cows and heifers, of high-class quality, choice breeding and from splendid milking dams. Also two young stallions and a few mares and fillies. Prices reasonable. **JOHN GARDHOUSE & SONS, Weston, Ont. C.P.R., G.T.R. & Electric Railway L-D Phone**

Woodholme Shorthorns For Sale—Four bulls sired by Imp. Lord Gordon, fit to head good herds and a number of cheap bulls for graded herds. Also a few good heifers in nice condition that I can sell worth the money. Mail orders filled with greatest care. Write your wants.
G. M. FORSYTH, Claremont, Ontario

Quality Scotch Shorthorns
—High-class breeding—We have fitted for immediate sale several extra choice young bulls of serviceable age at a price, quality and breeding considered that cannot be duplicated in the country; also high-class heifers.
RICHARDSON BROS., Columbus, Ont.

Maple Shade Farm Shorthorns—The products of this herd have been in very strong demand. There's a reason. Can always supply a good young bull at a price which will make him well worth the money. Not many females for sale, but can show a few which should interest you.
Brooklin, G.T.R., C.N.R.; Myrtle, C.P.R. W. A. DRYDEN, Maple Shade Farm, Brooklin, Ont.

The Outl...

The following agricultural advice is contained by the Ontario culture, based on the under date of...

Fall wheat promise. The usual, as much late owing to fields were welling the winter, and vigorous been but little "heaving," and complaints of...

The clover come through tion, except on poorly-drained but little injur present the pr best hay season also promising

The winter trees, the great resulting from trees by mice hunger by the In instances g canes have been less owing to late fall growth likely affect th berries and oth normal. The complained of where it has orchards, but being combate and is being The general o classes of fruit giving better

The winteri comparatively there being a on hand which sprouted by th and straw w although not more recent ye average of roo and high in pr

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On the whic well. No seri plained of, bu cases of aborti complaint of said to be res grain, straw, cattle are said flesh owing to their milking pastures of th of last year. J ful as usual, a been most en also rather sc average in qu complaints th dairy type care for than

Sheep have are said to b with other liv upon the hand

A correspon the farm "mo prices. The h hogs has made on hand. Th plains than swine.

Owing to th of fodder corn and also a c sprouted grain have held out been fed mor Live stock wil to the grass.

The enlistme the farms, and by factories m military suppli age of labor th districts. Seve that in many c on each 100-ac on such farms out of five th

The Outlook for Ontario Crops.

The following information regarding agricultural conditions in this Province is contained in a bulletin prepared by the Ontario Department of Agriculture, based upon information furnished by a large staff of correspondents under date of April 12th:

Fall wheat so far gives excellent promise. The top is not so heavy as usual, as much of the crop was sown late owing to wet ground; but the fields were well protected by snow during the winter, and now have a healthy and vigorous appearance. There has been but little injury from spring "heaving," and there are very few complaints of injury from insects.

The clover crop, like fall wheat, has come through the winter in good condition, except on very low places, or on poorly-drained land. There has been but little injury from heaving, and at present the promise is for one of the best hay seasons for years. Alfalfa is also promising well.

The winter was not trying to fruit trees, the greatest damage to orchards resulting from the girdling of young trees by mice and rabbits, driven to hunger by the deep snow lying so long. In instances grape vines and raspberry canes have been frozen back more or less owing to tenderness from the late fall growth, but the injury will not likely affect the general yield. Strawberries and other small fruits are about normal. The San Jose scale is still complained of in the Lake Erie counties, where it has got a hold in many old orchards, but elsewhere this pest is being combated in its earlier stages, and is being kept more under check. The general outlook at present for all classes of fruit is favorable, apple buds giving better promise than for years.

The wintering of live stock was a comparatively easy matter, owing to there being a large quantity of grain on hand which had been more or less sprouted by the wet harvesting. Corn and straw were also in abundance, although not of such good quality as in more recent years, and there was a good average of roots, but hay was scarce and high in price.

The demand for horses, notwithstanding war conditions, has not been encouraging. The animals as a rule are in good working condition, although many have suffered from a mild form of distemper.

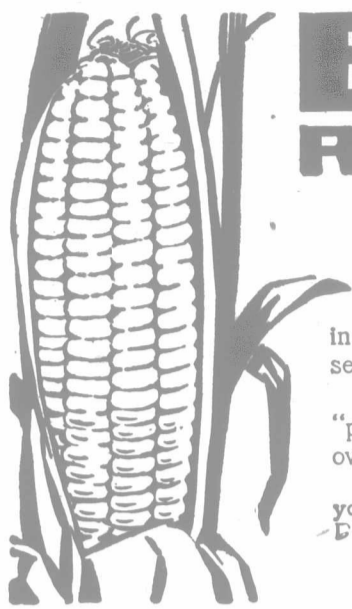
On the whole cattle have wintered well. No serious disease has been complained of, but there have been a few cases of abortion, and a more frequent complaint of a form of indigestion, said to be resulting from eating musty grain, straw, or other fodder. Dairy cattle are said to be rather thin in flesh owing to the heavy drain upon their milking powers during the rich pastures of the mid-summer and fall of last year. Beef cattle are not plentiful as usual, as prices of fat stock have been most enticing. Store cattle are also rather scarce, but are up to the average in quality, although there are complaints that some are rather of the dairy type. Calves are being better cared for than formerly.

Sheep have wintered well, and lambs are said to be coming on nicely. As with other live stock, much depends upon the handling.

A correspondent describes the hog as the farm "mortgage lifter" at present prices. The heavy demand for bacon hogs has made a shortage in the number on hand. There are even fewer complaints than usual of sickness among swine.

Owing to there being a good supply of fodder corn and of straw on hand, and also a considerable quantity of sprouted grain for feed, other fodders have held out well, although hay has been fed more sparingly than usual. Live stock will be carried over nicely to the grass.

The enlistment of so many men from the farms, and the enticing prices paid by factories making munitions and other military supplies, have caused a shortage of labor that is much felt in rural districts. Several correspondents state that in many cases there is only one man on each 100-acre farm; others say that on such farms there is only about one out of five that has a hired man left



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Seed Merchants, McGill Street, Montreal.



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ZENOLEUM—the powerful Coal-Tar Disinfectant—is harmless to handle and is not greasy or inflammable. It kills lice, mites, fleas and germs. It not only PREVENTS disease, but is a recognized cure. Try it according to directions for diseases of live stock and poultry. Keep your Barns, Stables and Poultry Houses clean and sanitary by liberal use of diluted Zenoleum. If you want healthy birds and animals, free from lice, mites, ticks and fleas, use Zenoleum—only one-tenth the cost of coal oil, and twenty times as cheap as carbolic acid, and three times as effective. Ask your dealer or send to us 25c., 50c., 90c., and \$1.50 sizes. 1 gal. (\$1.50) makes 80 gals. dip.

ZENNER DISINFECTANT CO., Sandwich St., Windsor, Ont.

Escana Farm Shorthorns

FOR SALE: Two imported bulls, proven valuable sires; 12 bulls, 10 to 20 months old, all by imp. sires and from high-class dams; also for sale, 20 heifers and young cows, several with calves at foot, all of very choicest breeding, and especially suitable for foundation purposes.

Mail orders a specialty. Satisfaction guaranteed.
MITCHELL BROS., Burlington P. O., Ont.
Jos. McCrudden, Manager. Farm 1/4 mile from Burlington Jct.

Twenty Imported Bulls

These imported bulls, along with 10 home-bred bulls, may now be seen at our farms. There are some choice ones among them. We also imported four cows and a heifer, all of which are forward in calf. An invitation is extended to anyone interested in this class of stock to visit us at any time. Correspondence will receive our most careful attention.

Burlington Jct., G.T.R. J. A. & H. M. PETTIT
Burlington Phone or Telegraph. FREEMAN, ONT

Robert Miller Still Pays the Freight—And he is offering in Shorthorns some of the best young bulls and heifers that can be produced. Young bulls fit for service some younger still; heifers fit for service and younger, and some in calf. They are of the best Scotch families, and some of them from great milking families. They are in good condition and made right, just what you want to make a proper foundation for a good herd, and suitable to improve any herd in the land. They will be priced so that you can afford to buy, if you will tell me what you want. Our business has been established 79 years and still it grows. There is a reason for that.
ROBERT MILLER, Stouffville, Ontario

GLENGOW SHORTHORNS AND COTSWOLDS
Pure Scotch in breeding, we have an exceptionally choice lot of bulls for this season's trade, ranging in age from 8 to 15 months, big mellow fellows and bred in the purple. Also ram and ewe lambs of first quality.
Wm. Smith & Son, Columbus, Ont. Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.E.

Pleasant Valley Farm Shorthorns—For sale, 9 bulls of serviceable age. We can interest you in a real good bull at a right price, for herd headers or use on grade herds. Some sired by (Imp.) Loyal Scott; also females. Write us before buying.
GEO. AMOS & SONS, Moffat, Ont., Sta. C. P. R., 11 miles east of Guelph

OAKLAND—48 SHORTHORNS Present offering is one choice red bull, 20 months old, price \$175; also three about seven months old. A few cows with calves at foot and bred again and some fine heifers bred. All registered and priced to live and let live.
JNO. ELDER & SONS, HENSALL, ONT

The Salem Shorthorns are headed by "Gainford Marquis" (Imp.). Records prove that he is the greatest Shorthorn show and breeding bull in existence. Special offering: Eight bulls from 8 to 15 months.
J. A. WATT, ELOKA, ONT., G.T.R. & C.P.R.

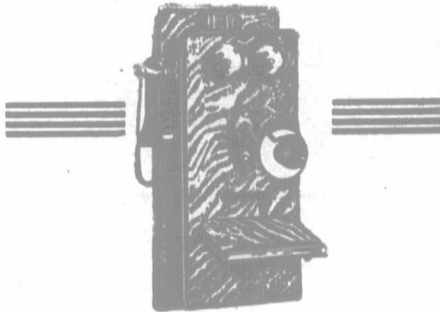
Shorthorns and Clydesdales Two bulls, serviceable age, both good ones, and are offering females of all ages. Have some choice heifers bred to Clansman =87809=; also two mares in foal, 3 and 4 years old, and one 2-year-old filly. All from imp. stock.
A. B. & T. W. DOUGLAS, Strathroy, Ont. L.-D. Phone.

Fletcher's Shorthorns Our herd of pure Scotch Shorthorns (imp.) and from imp. stock is headed by the show bull Victor Stanford =95959= a winner in Toronto in 1914 and 1915. Former sires, Royal Bruce (imp.) =55038=, Benachie (imp.) =69954= and Joy of Morning (imp.) =32070=. Present offering, 3 choice young Scotch bred bulls, an "Orange Blossom", a "Roan Lady" and a "Mysie"; 3 choice breeding cows and some yearling heifers.
L.-D. Phone, Erin Station, C.P.R. Geo. D. Fletcher, R. R. 1, Erin, Ont.

10 Shorthorn Bulls and 40 females. Shropshires and Cotswold ewes for sale at prices within the reach of all.
JOHN MILLER, Ashburn, Ont. Myrtle Sta., C.P.R. & G.T.R.

Spruce Glen Shorthorns When in want of Shorthorns visit our herd. We have 70 head to select from. Minas Fames, Miss Ramsdens, Florences, Emilys, etc. Many of them one and two-year-old heifers. Also several young bulls of breeding age—level, thick, mellow fellows, and bred just right.
JAMES McPHERSON & SONS, DUNDALK, ONT

Shorthorns and Shropshires—T. L. MERCER, Markdale, Ontario—With 125 head to select from, we can supply young cows in calf, heifers from calves up, and young bulls from 9 to 18 months of age, richly bred and well fleshed. In Shropshires we have a large number of ram and ewe lambs by a Toronto 1st-prize ram; high-class lot.



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There are several thousand farmers scattered throughout Canada who have decided to establish telephone connection with their neighbors and with the outside world—to get in close touch with buyers, commission agents, the doctor and the stores. To ensure their complete satisfaction, their installation MUST measure up to the efficiency of

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This book contains valuable information for you and will be sent free upon request. Do not hesitate to ask for estimates and assistance. Address—

Stromberg-Carlson Telephone Mfg. Co.
110-112 CHURCH ST., TORONTO

SHORTHORNS

Five high-class bulls, from 10 to 15 months, two sired by Real Sultan, others just as good. Am pricing them low, as it is getting late in the season. A few heifers and young cows to offer, some milking families. Freight paid.

Stewart M. Graham, Lindsay, Ont.

1854—Maple Lodge Stock Farm—1916 SHORTHORNS and LEICESTERS

Good quality and choice breeding. Come and see our herd and flock.

MISS C. SMITH, Clandeboye, R.R. 1, Ont.
Farm one mile west of Lucan Crossing—Telephone

For Sale—Five Shorthorn Bulls, 12 to 18 months old, from good milking dams Two red and 3 roans; prices right. Also one good roan bull, 8 mos. old, a Campbell Rosebud, a right good one. Write us, or better, come and see.
JOHN SENN & Son Caledonia, R. R. 3, Caledonia Stn., G.T.R.

Shorthorns bulls, females, reds, roans, size, quality. Breeding milkers over 40 years. Cows milking 50 lbs. a day. Big, fleshy cows that will nurse calves right. Prices easy, write:
Thomas Graham - R. R. 3, Port Perry, Ont.

SCOTCH SHORTHORNS

We are offering choice young bulls from 6 to 12 mos. of age. Cows in calf, heifers from 1 to 2 yrs. of age. Also our big, thick stock bull, Barrington Sailor, A. McKinnon, Erin, R.M.D. Hillsburg or Alton Stations. Long-Distance Phone.

Do not risk your favorite linens in the laundry, Mrs. Canada!

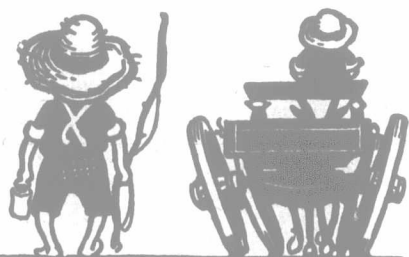
Have the work done at home under your personal supervision with an

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Better than zinc, glass or wood.

Write for pamphlet telling why.

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HULL CANADA



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SAVE Time—Save Labor—Save Expense

Our new catalogue describes every kind of device for money-making and labor-saving on farms. Write to:

Louden Machinery Company
Dept. 1 Guelph, Ont.

19 BULLS--HOLSTEINS

From 18 months down. Grandsons of "King Fayne Segis" King Segis Pontiac, "Rag Apple Korndyke 8th"—the best of the breed. Write us giving particulars as to your requirements.

R. M. Holtby, R.R. 4, Port Perry, Ont.

Lyndenwood Holsteins

Present Offering: 1 yearling bull from a 22 lb two-yr-old, sired by a son of a 29 lb four-yr-old; 3 bull calves from high-testing dams, also a few choice young cows and heifers.

W. J. BAILEY, Jarvis, Ont.

Mention The Advocate

on it. In many instances women have to assist in the field work. Much less fall wheat was sown in 1915, and a larger area than ever will be devoted to grass for hay and pasturing. About the usual acreage of spring grains will be grown; likely more oats. Corn and beans will also have a slightly increased area, prices for the latter having attracted attention. Canning crops will not be popular, as they usually require more attention. Wages are higher than ever, men asking and getting from \$30 to \$40 with board, and in some cases more. While some farmers are not optimistic over present conditions others are full of confidence, especially where they can interchange help work with their neighbors.

Canadian Store Cattle and England.

EDITOR "THE FARMER'S ADVOCATE":

At a recent conference of English meat traders, held at Leicester, a London delegate named Edwards raised the point and favored the importation of Canadian store cattle into Britain. He said the difficulty the scheme had to overcome was the opposition of the Conservative party which largely represented English breeders and the alliance of the Liberal party with the Irish who were the chief importers of store cattle to that country. Mr. Edwards was quite right in these statements, but he omitted to add that the English government are afraid to admit foreign cattle lest the native herds should be attacked with Foot and Mouth Disease, which is now as good as stamped out in the Old Land.

Alderman, R. E. W. Stephenson, Liverpool, speaking as one of the deputation to Sir Robert Borden and Lord Selborne, the English Minister of Agriculture, on the question of Canadian store cattle, said the British Government had determined to preserve the herds of the country from disease and those who dreamt of Canadian stores were up against a brick wall.

Another speaker declared that the graziers and feeders of cattle in Britain would welcome Canadian stores but breeders and rearers in Britain did not like them because they would not be able to make so much out of their stock.

The "conversation" came to nothing. The whole truth of the matter is that Canada, however clean her bill of health may be, is too near to the U. S. A., whose recent outbreaks of Foot and Mouth Disease have been watched with interest by British breeders. The English scheme of exterminating all stock attacked with the disease has led to the country being clear—at the time of writing. Minor and trivial outbreaks occur now and again but they are met with slaughter and burning and that scheme pays best in the long run.

ALBION.

Questions and Answers. Miscellaneous.

Railway Diverting Water Flow.

Two years ago one of the railways built a line through this section, and in so doing, did not touch our farm. But it did so change the natural course of the water on the two next adjoining farms, that the wash-off of about 50 acres, comes across our land where we already had a five-inch tile drain which was sufficient to carry the water and drain the land; but it would now take about a twelve-inch pipe, or drain to carry the water that the railroad has turned this way, and it is now washing out our five-inch drain by the extra flow over the surface.

1. Have I a legal claim for damages?
2. Can I compel the Railway Company to put in a pipe or drain sufficient in size to carry the extra water?
3. What would be the proper steps to take in this matter?

Ontario. R.
Ans.—1. We think so.
2. We think not.
3. It would be advisable for you to instruct a solicitor to take the matter up with the company and endeavour to effect a suitable arrangement, and then—in the event of failure of negotiations—to issue a writ against the company for damages.



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paint that gives satisfaction

Stands the test of Canada's trying weather as no other paint you have ever used. For barns and other buildings, for your implements and wagons, and for your home, both outside and in there is a Ramsay finish that is the best of its kind. To the man who does his own painting the convenience and economy of Ramsay's Paint is self evident. The man who hires painters to do his work for him will do well to specify Ramsay's paints—they wear so well and protect wood and metal so thoroughly from deterioration. The local Ramsay dealer will give you splendid service and suggestions. Or write direct to the factory.

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FOR SALE BY ALL DEALERS

RIVERSIDE HOLSTEINS

Herd headed by King Johanna Pontiac Korndyke, a grandson of Pontiac Korndyke, and a brother of Pontiac Lady Korndyke, 38.02 lbs. butter in seven days, 156.92 in 30 days—world's record when made.

J. W. Richardson, R. R. No. 2, Caledonia, Ontario

Lynden Farm Holsteins

The home of Plus Pontiac Artis, the champion 3-year-old in R.O.P. work with 21,000 lb. milk, 985 lbs. butter one year, 30.85 lbs. butter 7 days at 4 years old, the only cow in Canada to produce 20,000 lbs. milk in 1 year, and to make over 30 lbs. butter in one week at next freshening. We are offering Plus Inka Artis, champion bull at Guelph, from same dam as above cow. He is a brother to May Echo Sylvia, 36.33, on sire's side. Also King Korndyke Evergreen, sired by son of Plus Pontiac Artis. He has 7 dams in pedigree over 20,000 lbs. milk each in one year. Also a few well bred young females. Write for prices, or come and see them.

Bell Phone.

S. LEMON & SONS, Lynden, Ont.

HOLSTEIN CATTLE

The only herd in America that has two sires in service whose dams average 119 lbs. milk a day and over 35 lbs. butter a week. Cows that will give 100 lbs. milk a day are what we are trying to breed. At present we have more of them than any other herd in Canada. We can supply foundation stock of this breeding. Visitors always welcome. Long-distance Phone.

D. C. FLATT & SON, R. R. 2, Hamilton, Ont.

HOSPITAL FOR INSANE, Hamilton, Ont. For Sale—HOLSTEIN BULLS varying in age from 1 to 11 months, from Record of Performance or Record of Merit dams and the grand bulls Sir Korndyke Wayne Dekol, grandson of Pontiac Korndyke, or Lakeview Duchland Le Strange, a grandson of Count Hengerveld Fayne Dekol. Prices right. APPLY TO SUPERINTENDENT.

Lakeview Farm, Bronte, Ont. Offer for sale, sons and grandsons of 100-lb. cows; one is out of a 24.34 lb. 3-year-old daughter of Lakeview Rattlers 28.20 lbs., the latest Canadian champion 30-day butter cow 8 months after calving, and half brother to L. D. Artis, 34.66-lb Canadian champion senior 3-yr-old. Terms to suit purchaser. MAJOR E. F. OSLER, Prop. T. A. DAWSON, Mgr.

EVERGREEN STOCK FARM—REGISTERED HOLSTEINS

Present offering: Several bull and heifer calves; also a few yearling heifers bred and ready to breed. Write for prices and descriptions. Bell 'phone.

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30-lb. Bred Holsteins 30-lb. The home of Sir Sadie Korndyke Segis, also the 4-year-old 40-lb. cow, Dan. Sadie Cornucopia Mignone, 31.74 butter. We have some of his bull calves for sale out of cows with records up to 26 lbs. Write for extended pedigree, or come to see them. D. B. TRACY, Cobourg, Ont.

Cloverlea Dairy Farm offers for sale a choice 23-lb. bull ready for immediate service. Write us for price and particulars. We have also a limited number of choice young bulls from our herd sire, Pontiac Norine Korndyke, from R. O. M. dams which will be priced right. L.-D. Phone.

GRIESBACH BROS., Collingwood, Ontario

QUEEN CITY HOLSTEINS Present offering is 10 young bulls, from 6 to 14 months of age, the records of whose dams, sire's dam and her full sister, range from 28 to 32 lbs. They are sons of King Lyons Hengerveld Segis.

R. F. HICKS, Newtonbrook, Ont. On T. & Y. Railroad Line.

Dumfries Farm Holsteins—Think this over—we have 175 head of Holsteins, 50 cows milking, 25 heifers due to calve in the fall, and 60 heifers, from calves up to 2 years, as well as a dozen yearling bulls, and anything you may select is for sale. Breeding and individuality the very best.

S. G. & ERLE KITCHEN, St. George, Ontario

HOLSTEINS A splendid 14 mos. old son of Minnie Paladin Wayne, who has just completed a record of 26.87 lbs. butter, 545 lbs. milk in 7 days. Her 2-year-old record was 22.33 lbs. For type and color he is second to none. Also her 3-weeks-old bull calf, and a few others from good R. O. M. dams. PETER SMITH, R.R. No. 3, STRATFORD, ONT.

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Only three bull calves from our senior herd sire and a few from the junior herd sire left. In these is combined some of the richest testing blood of the breed. Also females of all ages, 75 or 80 head from which to choose.

M. L. HALEY & M. H. HALEY, Springford, Ont.

For Sale: Sons of King Segis Walker

From high-testing daughters of Pontiac Korndyke. Photo and pedigree sent on application.

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Jerseys for Sale—I am offering two very fine Jersey bulls, age 10 and 12 months, also heifer calves from imp. sire and high-testing dams. To prevent inbreeding will sell my stock bull, De La Roche Duke (imp.). Prices right.

CHAS. E. ROGERS, Ingersoll, Ont.

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A few young bulls for sale from Record of Performance dams, imported and Canadian-bred, sired by Auchinbrain Sea Foam (imp.) 35758, grand champion at both Quebec and Sherbrooke. Write for Catalogue.

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Dominion Express Bldg., Montreal, Que.
D. McArthur, Manager, Phillipsburg, Quebec

STOCKWOOD AYRSHIRES

Sired by my royally bred and prize-winning bull, Whitehall King of Hearts, Imp., for sale are in calf heifers and young bulls, out of Imp. and big producing cows.

D. M. Watt, St. Louis St. P. O., Quebec.

Alderley Edge Ayrshires

Two yearling bulls sired by Lakeside Day Star (Mortons Main Planet). Write for description.

J. R. KENNEDY, KNOWLTON, QUEBEC

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If you are wanting a rightly-bred young bull out of a 50-lb.-a-day and over cow, imported or Canadian-bred dam or sire, write me. Females all ages. Prices are easy.

D. A. MacFARLANE, KELSO, QUEBEC

The King's Gift Stallion, Anmer, Arrives.

The gracious and timely action of His Majesty, King George V., in presenting to Canada from his royal stud his Derby candidate of 1913, Anmer, has given to Canada a horse of superb blood lines and quality, and one likely to greatly improve the Thoroughbred stock of this country. Anmer was selected by Lord Marcus Beresford at the request of His Majesty, as a sire suitable to produce a remount type of horse. He has been handed over to the Canadian Thoroughbred Society, and has been sent by the Secretary, T. J. Macabe, to Ennisclare Farms, at Oakville, Ont., in charge of Hugh Wilson.

Anmer, it will be remembered, was the King's candidate for the Derby in 1913, and was running even when a suffragette ran out on the course, endeavored to snatch his bridle, throwing him, the fall narrowly escaping being fatal to his jockey, Herbert Jones. The suffragette died the following day from injuries sustained. He is beautifully bred, as the extended pedigree would indicate, being by Forizell II., winner of the Ascot Vase, Goodwood Cup, Jockey Club Cup, and Manchester Cup, among other races. Forizell II. is a full brother to Persimmon and Diamond Jubilee, both Derby winners, and St. Ledger, winners for King Edward. The latter was sold for \$150,000 as a sire, to the Argentine Republic, and has given splendid success. Guinea Hen, Anmer's dam, is the mother of several winners, including Brakespear and Pintadean. Her sire is Gallinule, the sire of the great Pretty Polly.

The Thoroughbred Society in their endeavors to encourage the use of the Thoroughbred sire have announced that the revenue from the stud fees, which are \$15 to approved half-breds, and \$50 to Thoroughbred mares, will be distributed as premiums at agricultural shows and exhibitions to classes of horses suitable to become remounts, sired by a Thoroughbred. This action should commend itself very strongly to farmers and breeders this year, as it is the opinion of many prominent horsemen that have returned from England and France that in the years succeeding this great war buyers from the European countries will seek to replenish their depleted stocks in Canada, and it may be expected that high prices will be bid for our light horses. Great precaution is already being taken to preserve the mares which are unfit for further service in France by returning them to England. Nearly every hunting stud, and they are not few in number, was left with only such number of horses as would be needed to keep their hounds in exercise, the balance being commandeered in the early stages of the war. Many of the best types of hunters shown in recent years at Madison Square Gardens, in New York, have come from Canada, and principally the Province of Ontario. The majority of these were sired by Thoroughbreds, and a good many were from half-bred mares of Thoroughbred parentage.

The Thoroughbred Society are to be congratulated upon their interest in this work, and Anmer should prove of material assistance in advancing their efforts.

Communications may be sent to the Secretary, T. J. Macabe, Toronto, or Hugh Wilson, Ennisclare Farms, Oakville, Ont.

- | | | |
|-------------|-------------|---------------|
| ANMER, 1910 | { | St. Simon. |
| | | Florizell II. |
| | { | Perdita II. |
| { | Gallinule. | |
| | Guinea Hen. | |
| | { | Nightmare. |

Questions and Answers.
Miscellaneous.

Heated Manure.
Manure when drawn from the barnyard or shed to a pile in the field gets very hot. Will it heat enough to destroy foul seeds or alsike seeds if there are any in manure?
E. J.
Ans.—It would likely be necessary to turn it two or three times to kill all the seeds. Turning is necessary that all the manure get heated. Where heated, seeds would not grow.

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Canada's Most Beautiful Jersey Herd—Half the herd imported from the Island of Jersey. Several cows in the Record of Merit and others now under official test. Some very choice stock for sale. When writing, state distinctly what you desire, or, better still, come and see them. Farm just outside city limits. We work on show cows and show our work cows.

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Forty head to choose from. No reserve on females over two years. Fourteen young heifers coming on for young herd. Four choice young bulls fit for service, from record sire and dams. Prices reasonable. Eggs for setting (R. C. and S. Rhode Island Reds), 27 prizes, 8 specials and 2 silver cups at 3 shows. Write or call.

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Write for prices.
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Morrison Tamworths and Shorthorns, bred from the prize-winning herds of England. Choice Tamworths both sexes, all ages. 150 head to choose from. Choice Shorthorns. 3 extra fine red roan bull calves, 8 months old, dandies, also cows and heifers of the deep-milking strain.
CHAS. CURRIE, Morrison, Ont.

INGLEWOOD CHESTER WHITES—We now have for sale a choice lot of young pigs, either sex, pairs not akin. Foundation stock from one of the best herds in Canada. Prices right and satisfaction guaranteed.
WILSON McPHERSON & SONS, St. Ann's, Ont.

TAMWORTHS

Young sows bred for August farrow and some nice young boars. Write—
JOHN W. TODD R.R. No. 1 CORINTH, ONT.

Pine Grove Berkshires

Sows bred and ready to breed. Boars fit for service. Young things, both sexes, from my prizewinning herd.
W. W. Brownridge, R.R. 3, Georgetown, Ont.

Prospect Hill Berkshires—Special offering for the trade: a fine lot of young sows that farrowed in June and July, being bred and ready to breed; also some boars same age. Terms and prices right.
JOHN WEIR & SON, R.R. No. 1, Paris, Ont.
AVONHURST YORKSHIRES—Are quality Yorkshires—Young pigs, either sex. Feb. farrowed from litter of 21 of which 19 were raised. Quality and breeding are of the best. Eggs for hatching—Rose-Combed Rhode Island Reds, O.A.C. bred-to-day, \$1.00 per 15. **B. Armstrong & Son, Codrington, Ont.**

Choice Poland-China and Chester White Swine to offer: bred from winners. Also extra good White Cap seed corn. Prices right.
GEORGE G. GOULD No. 4, ESSEX, ONT.

Questions and Answers. Miscellaneous.

Strength of Formalin For Treating Seed.

1. Is grain that has been treated with formalin or formaldehyde injurious to stock?

2. Which is the stronger, formalin or formaldehyde? My druggist says there is no difference, and he labels the bottle with whichever is asked for. He says he gets it all from the same place, and they are both the same thing. Is this correct?

3. I have a five-year-old mare in foal that has itchy legs. She is continuously stamping her hind feet. I treated her four or five times with corrosive sublimate, as has been recommended, but it appears to do no good. What treatment would you recommend?
A FARMER.

Ans.—1. It is not considered to be injurious.

2. Formalin and formaldehyde are derived from the same substance, and the druggist may be correct in saying that they are both the same thing. The substance sold as formalin is a 40 per cent. solution of the aldehyde in water. Formaldehyde may be the same or it may be stronger. The material used for treating seed grain for smut should be the 40 per cent. solution.

3. If the corrosive sublimate does not stop the itchiness when it is applied twice daily, try poulticing the legs for a couple of days, then dress three times daily with a lotion composed of one ounce each of sulphate of zinc and acetate of lead, and one dram of carbolic acid in a quart of water. Do not feed too heavily on grain, and add bran to the ration.

Difficulty in Churning.

We have two cows milking, one a farrow cow, and the other not coming in until late in August. They are fed on cornstalks and bran. When the weather is warm they are turned out to a straw stack which contains oat, wheat, rye and buckwheat straw. I have churned four different times and got no butter at all, it just comes to a froth. A short time before when we had trouble in churning the cows failed in their milk. We noticed this morning that the cow that is coming in gave milk which seemed to have yellow chunks in it. What is the trouble, and what would you advise doing?
A. W.

Ans.—This trouble with churning frequently occurs when cows are nearing the end of their lactation period, especially when not receiving succulent feed. If roots are not available try adding a little linseed meal to the ration. When the cows are well advanced in lactation the cream should be a little higher in temperature, for churning, than that from fresh cows. A cream which foams badly is usually low in percentage butter-fat, cold, and contains a gas-producing ferment. Try having a little richer cream and churning it at a higher temperature than is customary. If it foams add a little salt and water at 75 degrees F. Heating the cream up to 180 degrees F. and then cooling it to churning temperature will sometimes remedy the trouble. The thick milk may have been due to a little inflammation of the udder, caused by a bruise. Bathing with warm water would probably effect a cure.

Another Record Cow.

During the first half of April Lakeview Rattler, a Holstein cow owned at Lakeview Farm, Bronte, Ont., established a new Canadian record for a mature cow, giving 720 lbs milk carrying 30.03 lbs. butter fat or 37.54 lbs. butter on an 80 per cent basis.

Successful Queen, a Jersey, produced in a test started at four years five months of age, 16,389.3 lbs. milk, 852.72 lbs. fat, or 1,003 lbs. 3 oz. of 85% butter. This record not only exceeds the highest fat production in the class, but also becomes the highest milk record of any cow in the breed at four years of age. At the age of three years and three months, she entered the Register of Merit with a production of 13,088.4 lbs. milk, 682.4 lbs. fat, or 802.7 lbs. 85% butter.

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Duroc Jersey Swine, Jersey Cattle—In Duroc Jerseys we have either sex of any desired age, bred from winners and champions for generations back. In Jerseys we have young cows in calf, and young bulls, high in quality and high in producing blood.

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Cloverdale Large English Berkshires!

Sows bred, others ready to breed; boars ready for service; younger stock, both sexes, pairs not akin. All breeding stock imp. or from C. J. Lang, Burketon, Ont. R.R. 3 imp. stock. Prices reasonable.

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From our recent importation of sows, together with the stock boar, Suddon Torredon we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.
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Boars ready for service. Sows bred to farrow in May, June and July, others ready to breed; both sexes ready to wean. All descendants of Imp. and Championship stock. Several extra choice young bull and heifer calves, recently dropped, grand milking strain; 2 bulls, six and seven months old, several extra choice young cows with calves at foot, also heifers all ages. Prices reasonable.
A. A. COLWILL, Newcastle, Ont.

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My Berkshires for many years have won the leading prizes at Toronto, London and Guelph. Highcleres and Salya, the best strain of the breed, both sexes, any age.
ADAM THOMPSON R. R. No. 1, Stratford, Ontario
Shakespeare Station, G. T. R.

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Our present offering is young breeding Berkshires, both sexes and any desired age, sire and dams imported, high class in type and quality and priced right. Also one 2-year-old imported dairy-bred Shorthorn bull with official backing for generations back.

F. W. COCKSHUTT, Brantford, Ont.

Maplehurst Herd of Tamworth Swine, S.-C. W. Leghorns, and White Rocks—This herd has won about 90 per cent. of the prizes offered in the last ten years at the Canadian National, Toronto, Ottawa, London and the Guelph Winter Fair.

D. DOUGLAS & SONS, R.R. No. 4, Mitchell, Ont.

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WHEN it's used in the wrong place. You cannot expect a heavy oil designed for use on a low-speed, high-power tractor to lubricate efficiently the finely adapted bearings of a high-speed, low-power tractor.

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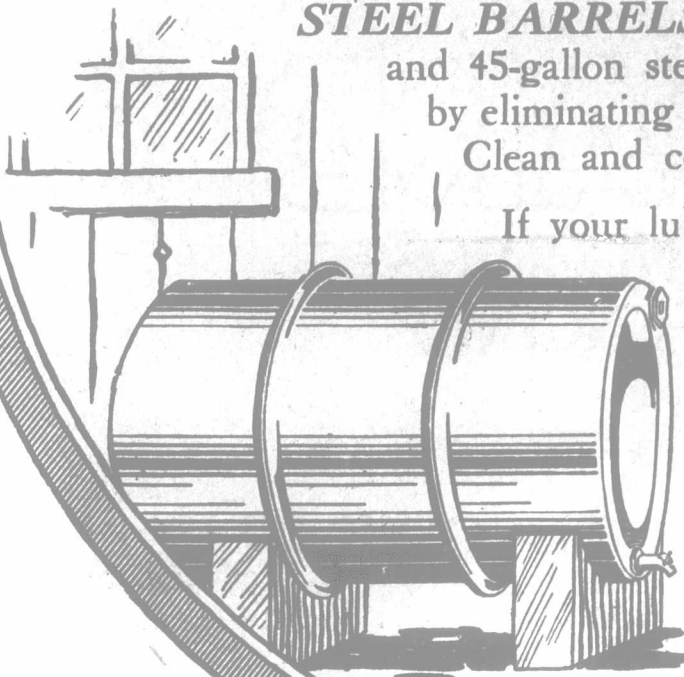
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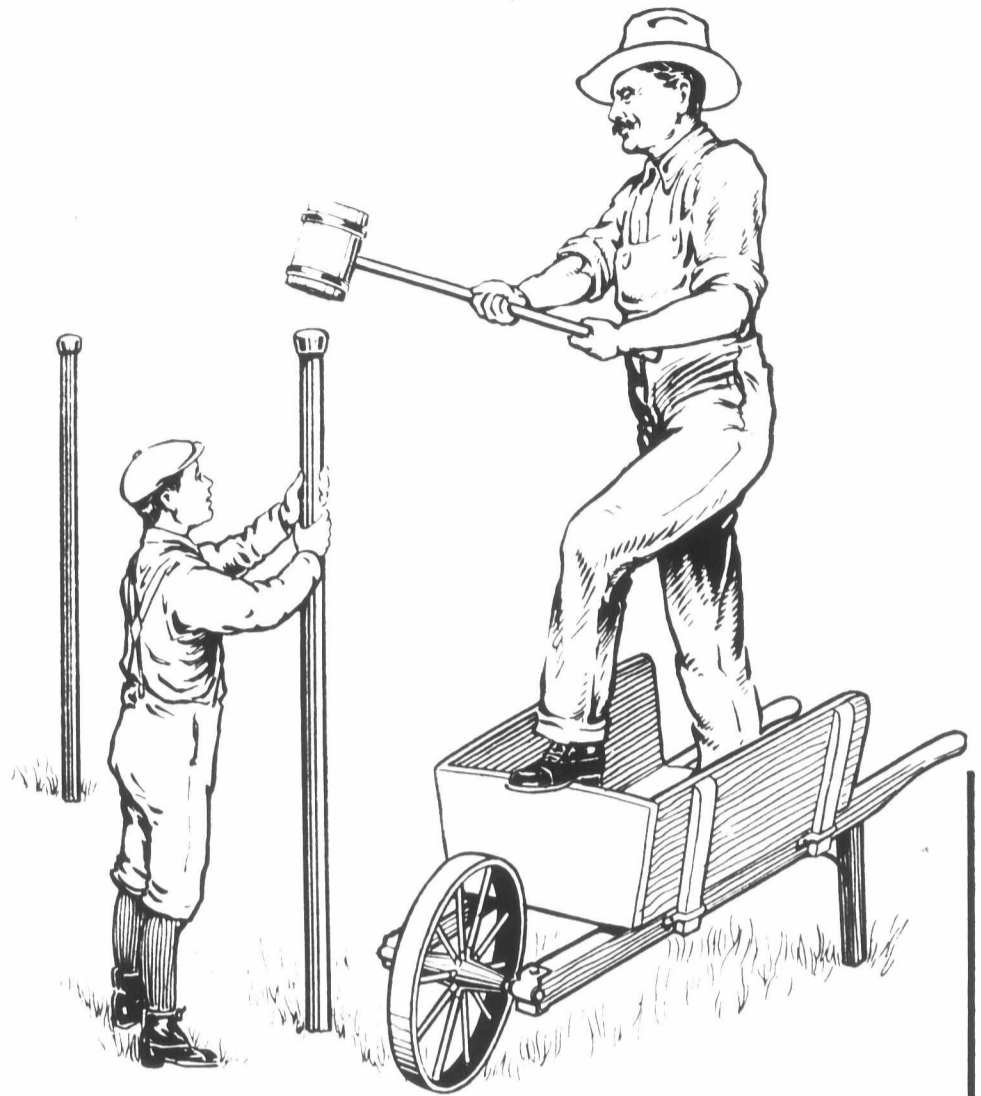
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And yet lots of farmers build fences in the expensive and inefficient **old** way—using wooden posts.

Farmers who have posted themselves on this fence question now use **STANDARD STEEL TUBE FENCE POSTS.**

Don't overlook the extra quality in **STANDARD WIRE FENCING.** This is guaranteed Govern-

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They know what a big job digging post holes is. But **STANDARD STEEL TUBE POSTS** need no holes. You drive them in as easily as you would a tent peg. Once in they are anchored for all time.

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They are firmer, stronger, lighter, and in every possible way better.

They cost you less per post to buy.

They cost you only one-third in labor to erect, for with a boy to help, you can set as many **STANDARD POSTS** as three men and a boy could set wooden posts.

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