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THE FARMER'S ADVOCATE
AND HOME MAGAZINE

Director General Exp Farm
dec 31, 18

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

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VOL. LIII.

LONDON, ONTARIO, JULY 11, 1918.

No. 1346

SERVE BY SAVING WHEAT

To Fight, our armies must have plenty of food. We can all help by using substitutes for wheat flour.

CANADA FOOD BOARD
LICENSE NOS.
Flour 15, 16, 17, 18
Cereal 2-009

SUBSTITUTE

PURITY OATS

IN BREAD, ROLLS AND
CAKE

WHEAT-SAVING RECIPES MAILED FREE
ON REQUEST

Western Canada Flour Mills Co. Limited

HEAD OFFICE: TORONTO

Do You Need Farm Help?

Farm help is scarce, but one way to overcome the scarcity is to make your own time count for more.

The Self-Starting Remington Typewriter

will save from one-third to two-thirds of the time you now spend in pen-writing letters.



The typewriter is becoming as necessary on the farm as any other time and labor-saving machine, and the longer the war lasts the more necessary it will become.

The Remington Typewriter

is easy to learn to operate, and the whole family can use it.

Let us send you our latest booklet, "How the Typewriter Captured the Family." It will place you under no obligation and a postcard with your name and address will bring it to you.

Remington Typewriter Company

(INCORPORATED)

374 Broadway, New York City

Greatest Labor-Saving Invention of the Age

For the Farm and Private Home

Time is money. Save it by using the Automatic Churn. Once used, no other churn will appeal to you.



ONE MINUTE

This Wonderful Automatic Churn makes perfect butter in from one to three minutes. Most sanitary churn in the world. Nothing but glass touches the cream. No dashers, paddle-wheels, etc. Self-cleaning in ten seconds. No corners, cracks or crevices to scrub. Operates with a slight pressure of finger. No strength or power required—vibration of steel springs does the work. A child can operate this churn successfully.

FREE: You should investigate this marvellous time, trouble and labor-saving churn. Write to-day for free, descriptive literature. Don't wait—get posted NOW.

The Hamilton Automatic Churn Company
41 King William Street, Hamilton, Ontario

"GOES LIKE SIXTY" We Want to Demonstrate on Your Farm



We will send a Gilson Engine, any size, without charge, to any responsible farmer in Canada to try out on his own farm, at his own work. Write for further particulars of free trial offer, catalogue, and special introductory prices.

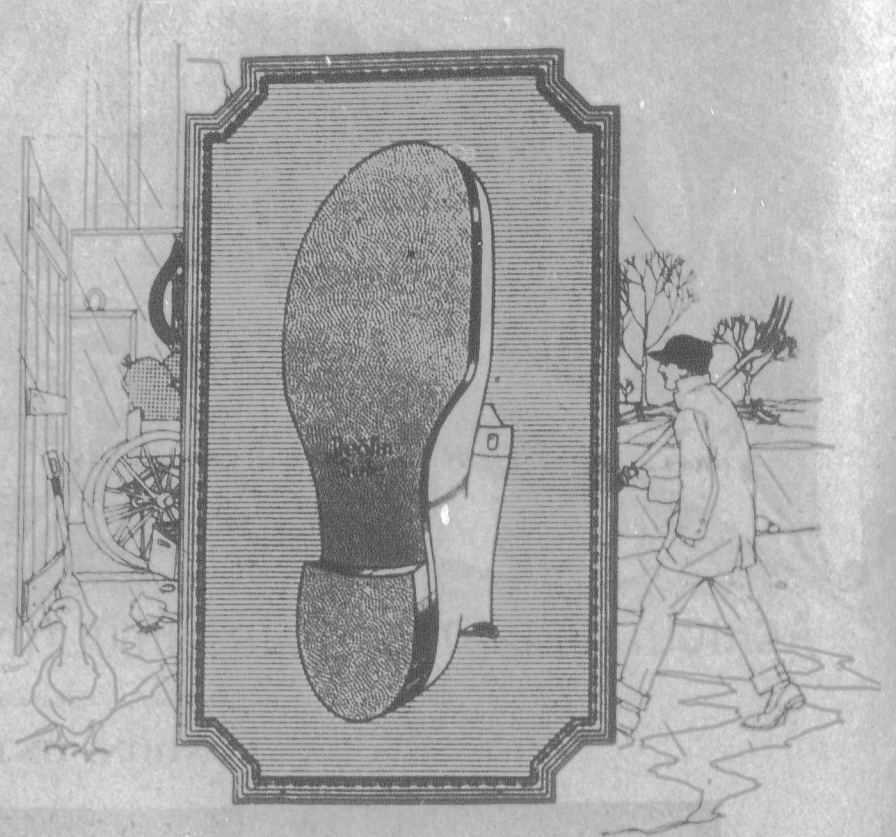
Gilson Mfg. Co. Limited
269 York Street, Guelph, Ont.

NORTHERN ONTARIO

Millions of acres of virgin soil, obtainable at 50c. an acre in some districts—in others free—are calling for cultivation.

Thousands of farmers have responded to the call of this fertile country, and are being made comfortable and rich. Here, right at the door of Old Ontario, a home awaits you. For full particulars as to terms, regulations and settlers' rates, write to:

H. A. MACDONELL, Director of Colonization, Parliament Buildings, Toronto, Ont.
G. H. FERGUSON, Minister of Lands, Forests and Mines.



Dry Feet—Easy Feet and longer wear

Neolin Soles make work-boots as comfortable as old Sunday Shoes.

Neolin is springy, pliable. It "gives" with the step. What a treat to the farmer who is so much on his feet!

Neolin is waterproof, keeps the feet dry. How fine for people who must walk in the wet almost every day! And Neolin won't harden and curl with the wet.

Neolin Soles certainly make farm work less tiring.

Yet Neolin makes work-boots wear longer. For Neolin is better than leather.

It outwears most leather soles considerably. Millions have proved it.

If you wear Neolin, you know it.

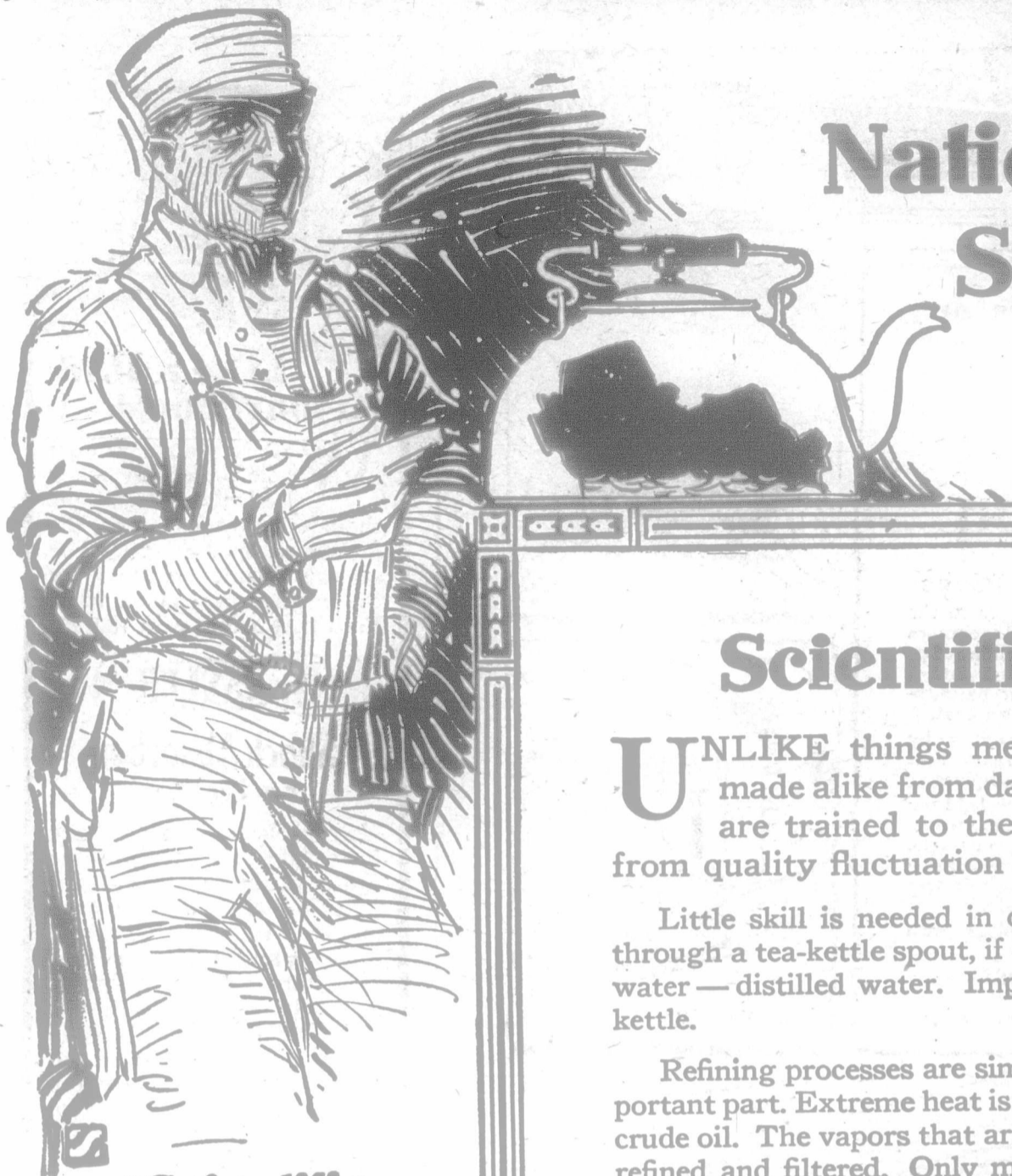
New Neolin-soled work-boots are made with soles nailed or sewn. There are several thicknesses of Neolin Soles. Try them. Save your pocket-book and your feet.

Neolin Half-Soles—will add months to an old pair of boots. Make them more pliable. Keep out the wet.

Look closely for the name "Neolin" stamped on the sole. See the name so you are sure you get what you ask for.

The Goodyear Tire & Rubber Company
of Canada, Limited

Neolin Soles



"Scientific Refining"

Why En-ar-co National Motor Oil Should Be Your Preference

Scientific Refining

UNLIKE things mechanical, lubricants cannot be made alike from day to day except as the workmen are trained to their tasks. But oils *must* be free from quality fluctuation if they are to give satisfaction.

Little skill is needed in distilling water. Steam that escapes through a tea-kettle spout, if caught and condensed, would be pure water — distilled water. Impurities would remain as scale in the kettle.

Refining processes are similar. But here, skill plays a most important part. Extreme heat is applied to huge, 25,000 gallon stills of crude oil. The vapors that arise are condensed, re-distilled, further refined and filtered. Only men of proved ability are assigned to this work.

En-ar-co National Motor Oil Made By Graduate Workmen

En-ar-co workmen must pass the rigid tests of scientific instructors and efficiency engineers. Processing and purification standards have been set. Well defined grades of instruction have been provided. And every workman strives for perfection, for thus he attains his master degree.

These methods produce a lubricant of unvaried quality. It is always clean and pure and will perform its function properly every day. Regardless of the motor you use, your investment demands that you lubricate with oil made by "men who know" — graduate workmen. That oil bears the En-ar-co label.

Tractors, Automobiles, Aeroplanes, Trucks and Motor Boats give better service and last longer when lubricated with En-ar-co National Motor Oil.

Send for FREE Handy Oil Can

Get this long-spouted can that enables you to oil the hard-to-reach places.



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Dept. W5 707 Excelsior Life Bldg., Toronto, Ont.

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I own..... (Give name above).....
..... automobile or tractor and enclose two 3-cent stamps. Send me Handy Oil Can FREE. Please give nearest shipping point in this province and quote prices on the items I have marked. I will be in the market about..... (Give date above).....

I use..... gals. gasoline per year
I use..... gals. motor oil per year
I use..... lbs. axle grease per year

I use..... auto grease per year
I use..... gals. kerosene per year
I use..... gals. tractor oil per year

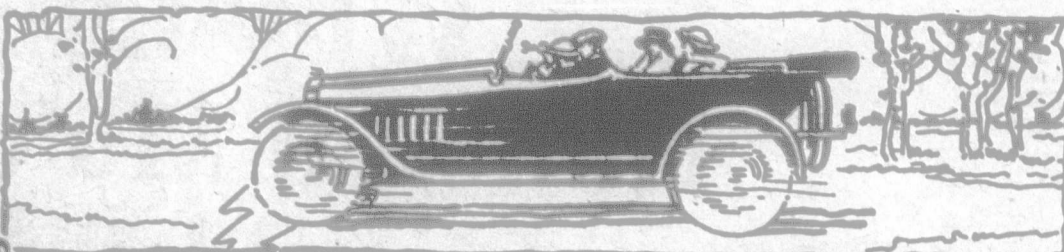
My Name is.....
Address.....
Postoffice..... Province.....

Tear or Cut Out — Mail Today

NOTE: This can will not be sent unless you give make of your auto or tractor.

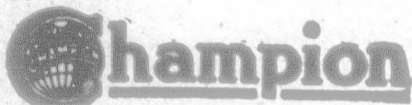


Champion "Heavy Duty"
for Medium Powered Cars
Price, \$1.40



**4 out of 5 Motors are
Champion Equipped**

Every Ford, Maxwell, Overland, Studebaker and over one hundred other makes of gasoline motors, representing an overwhelming majority of the motors in use, are factory equipped with



Dependable Spark Plugs

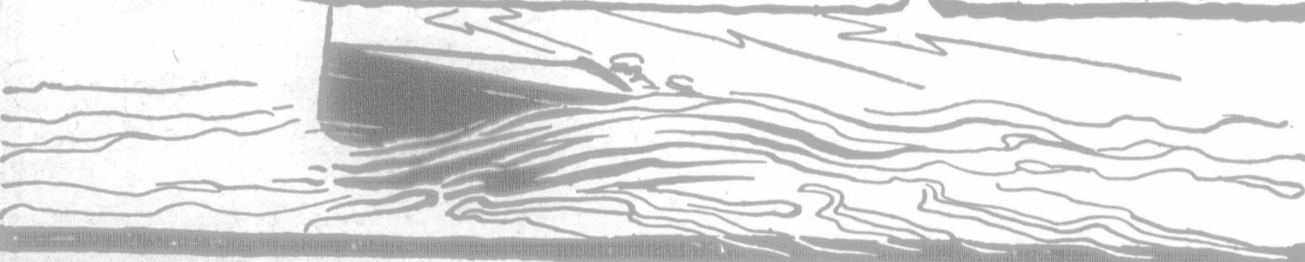
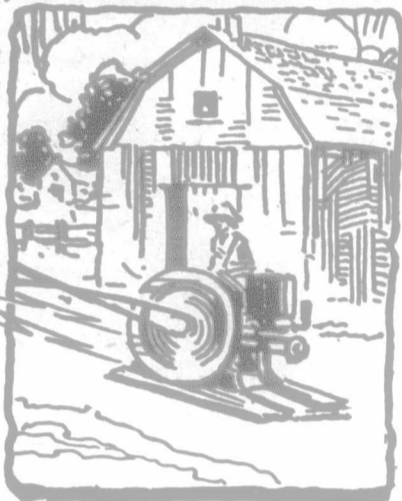
There could be no greater tribute to the dependable service and efficiency that comes from making ONLY spark plugs and developing a type for the individual requirements of each motor or engine, whether it be automobile, tractor, farm engine or motor boat.

Engineers know their dependability by analysis—you will know by experience that your replacements should be Champions.

Each Champion porcelain is protected from breakage through cylindershock or expansion by its patented, asbestos-lined, copper gaskets, and each plug is backed by the guarantee—"Absolute satisfaction to the user or free repair or replacement will be made."

Ask any dealer for spark plugs with "CHAMPION" on the porcelains.

**Champion Spark Plug Co.
of Canada, Limited
Windsor, Ontario**



Make Work Easy

You work your best when you feel your best. Help your feet by wearing

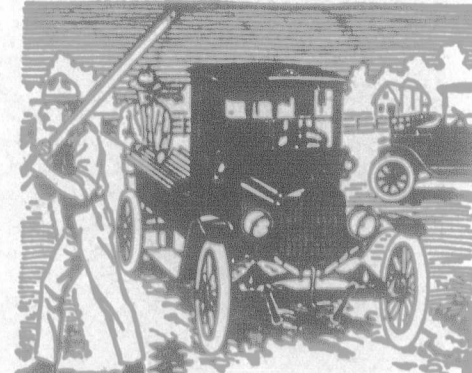


You will enjoy the foot comfort, foot ease, lightness and the springy step that come with the sturdy FLEET FOOT shoes.

Our "WORKMAN" style is a staunch, serviceable shoe for farm work—easy and restful for the feet. The cost is so little that you can have several pairs of FLEET FOOT for the price of one pair of leather shoes.

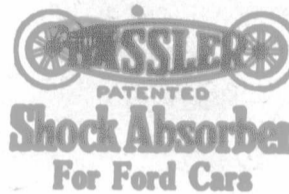
The leading shoe stores carry FLEET FOOT SHOES for every member of the family.

None genuine without the name FLEET FOOT stamped on the sole—your guarantee of style, comfort, service and value.



**Like a Pad
on Your Shoulder!**

WHEN you step into a hole while carrying a load, the pad on your shoulder compresses and the jar never reaches you. The same principle accounts for the marvelous change in a Ford that comes with the



Hassler Shock Absorbers take the weight of the body off the tires. At the slightest irregularity in the road they compress and absorb the jolt. Prevent sidesway and upthrow, making your Ford ride as easily and smoothly as a \$2,000 car. Hassler Shock Absorbers save gasoline and tires, lower upkeep costs, and increase the resale value of your car. 300,000 Ford Owners recognize their economic necessity.

10-Day Free Trial Offer

Phone, write or call for FREE TRIAL BLANK and we will have a set of Hasslers put on your Ford without a cent of expense to you. Try them 10 days. Then, if you are willing to do without them, they will be taken off without charge. Don't ride without Hasslers simply because someone discourages you from trying them. Accept this offer and see for yourself. Over 300,000 sets in use. Do it now.

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Lock Drawer H.C.27 HAMILTON, ONT., CAN.

**DOES BETTER WORK
COSTS YOU LESS**

MADE of the finest grades of iron and tool steel in the largest separator factory in the world. Costs you less, gives more.

**VIKING
CREAM
SEPARATOR**

Easy running, has greater capacity, close skimming, easy to clean, strong and durable. Write us now for the Free Viking Separator Book and learn why the Viking is used all over the world.

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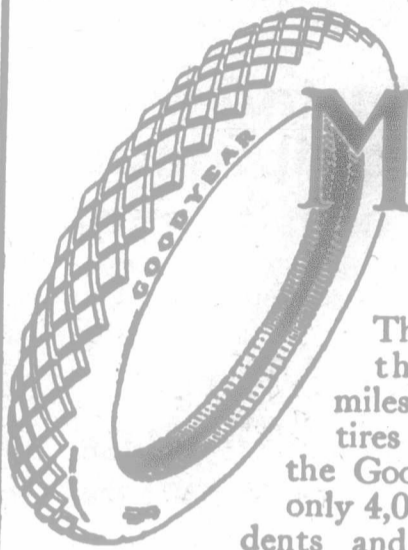
STAMMERING

or stuttering overcome positively. Our natural methods permanently restore natural speech. Graduates pupils everywhere. Free advice and literature.

THE ARNOTT INSTITUTE
KITCHENER, CANADA

FREE Mileage Book

(FOR AUTOMOBILE OWNERS)



MOST Tires are good for many more miles of travel than they actually give.

The Goodyear Tires that run 10,000 miles are not better tires at the start than the Goodyears that run only 4,000. Barring accidents and overloading all should give the same mileage.

The extra 6,000 miles that some give are the reward of using the proper size of tire for load carried, sensible driving, of studied attention and care.

Car owners lose thousands of miles of Tire service—they use up two Tires where one would do—they waste valuable rubber, cotton and precious labor. And why?

Because they do not observe or perhaps do not understand the few rules for looking after Tires.

To-day it is every car owner's duty to save his Tires. To get from them every mile the factory builds into them.

It is nothing short of a duty to understand Tires and to watch them closely.

And because we also consider it our duty to help conserve the valuable materials and labor that go into Tires, we have printed a book on the care of Tires.

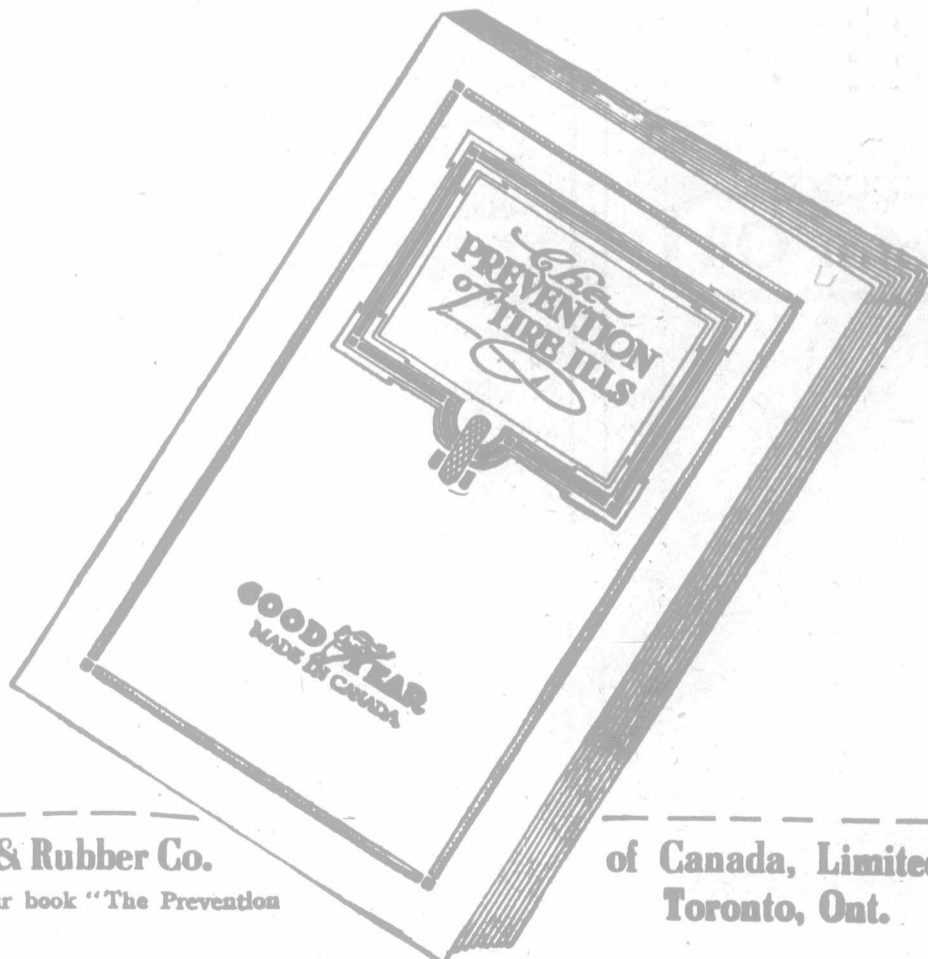
To many men this book will be worth hundreds of dollars for it will double the life of their Tires.

Copies of the Book are now ready for mailing. They will be sent Free of all charge to any Car Owner. We earnestly urge every Tire user to read and study this book. Write for a copy.

Tear off the Coupon *NOW* as a reminder.

GOOD YEAR

MADE IN CANADA



The Goodyear Tire & Rubber Co.

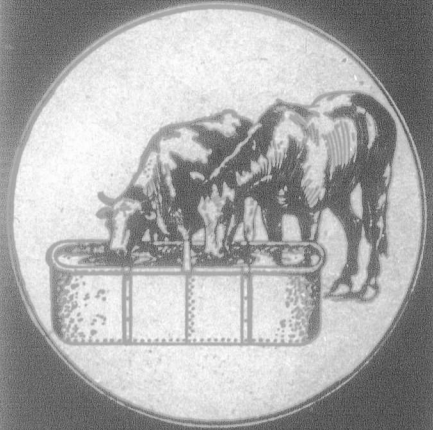
Send me free of charge your book "The Prevention of Tire Ills"

Name.....

of Canada, Limited
Toronto, Ont. F

Address.....

"EASTLAKE" TANKS



Cheapest because they're the Best

THE "Eastlake" Round End Stock Tank is very popular. Made of highest quality, heavy galvanized iron; the heavy tubing is firmly locked on and the strong angle iron braces are formed around the tubing. Side seams have double row of rivets. Bottom is turned up inside—the strongest construction known.

"Eastlake" Tanks are right in every rivet. All styles including Hog Troughs, Gasoline and Coal Oil Tanks, Wagon Tanks, Feed Cookers, Sheep Dipping Tanks, etc., Silo Roofs, Garages, Corrugated Iron, etc.

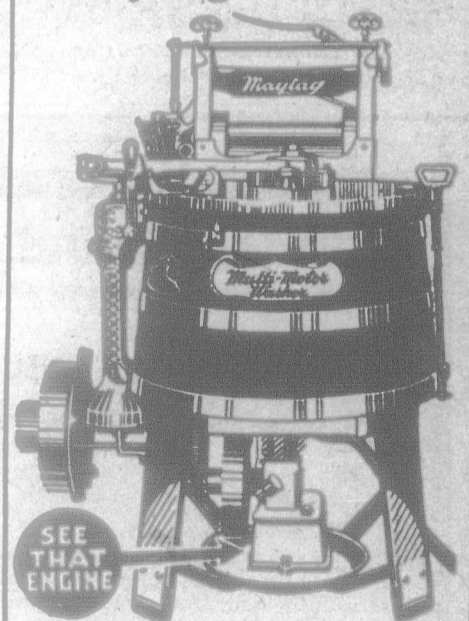
Ask for folder on the Tank you want.

The **Metallic Roofing Co.** Manufacturers Limited
King & Dufferin Sts. Toronto.

A NEW! MAYTAG DAY! MONDAY

The old MONDAY with its washday worries becomes a NEW DAY of pleasant work for the woman who uses a

Maytag Washer



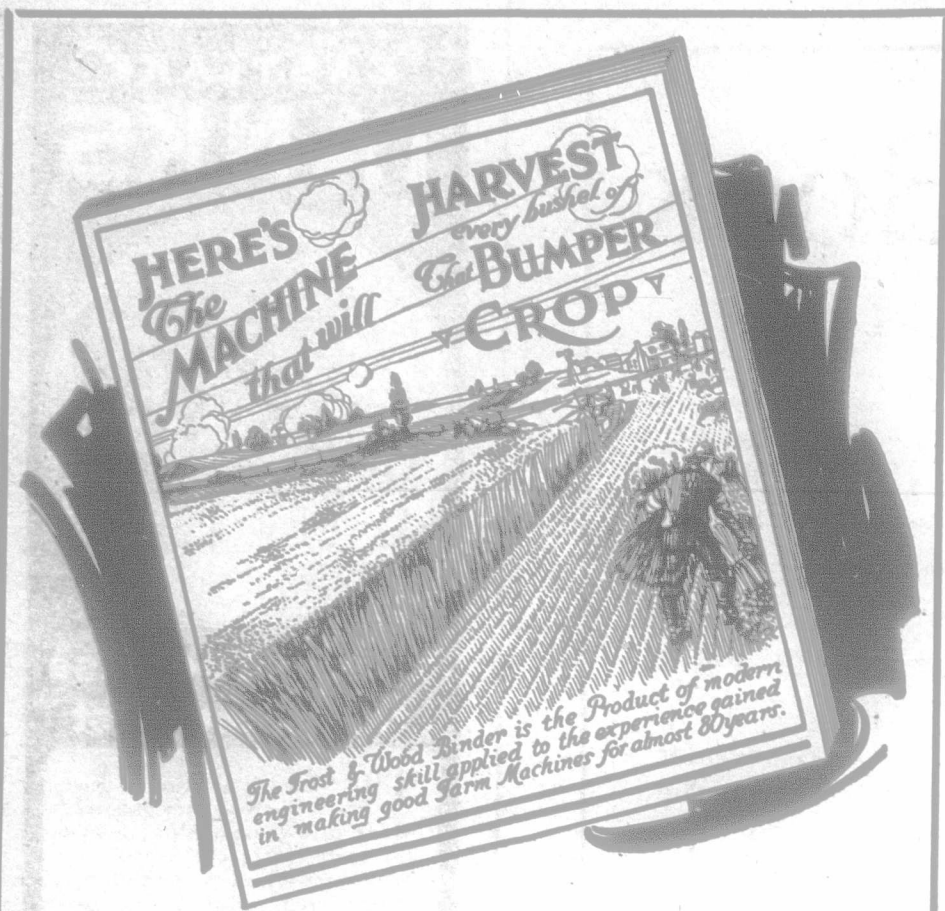
For particulars, drop a card to:

WHITES LIMITED
Collingwood, Ont.

HAY

SHIPPER! Consign your carloads to **The E. L. RICHMOND CO. DETROIT**
The Old Reliable Firm. In business a quarter of a century. References—Any Bank.

Please mention this paper



It really describes—

You know how important it is to your success as a farmer that you select the right Binder. You can't do it from the brief description in any one advertisement, but you can go a long way towards it from reading the above up-to-date, fully illustrated pamphlet.

It tells you all about the Frost & Wood Binder—why it is built to give better service and harder service—why our 80 years' experience ensures that it has the strength and ability to get your crops in without fail.

FROST & WOOD BINDER

- | | | |
|----------------------|----------------------|-----------------------|
| Powerful Drive Wheel | Different Cutter Bar | Special Relief Roller |
| Roller Bearings | Flexible Grain Wheel | Sure Knotter |
| Special Power Frame | Positive Elevation | Fine Sheaf Carrier |

Be sure to get a copy of the above Binder Booklet from your nearest Agent or write to-day to our nearest Branch.

The Frost & Wood Co. LIMITED	SOLD IN WESTERN ONTARIO AND WESTERN CANADA BY	Cockshutt Plow Co. LIMITED
Montreal, Smith's Falls, St. John		Brantford, Ontario

Standard Hand Separator Oil

MAKE IT SKIM CLEAN

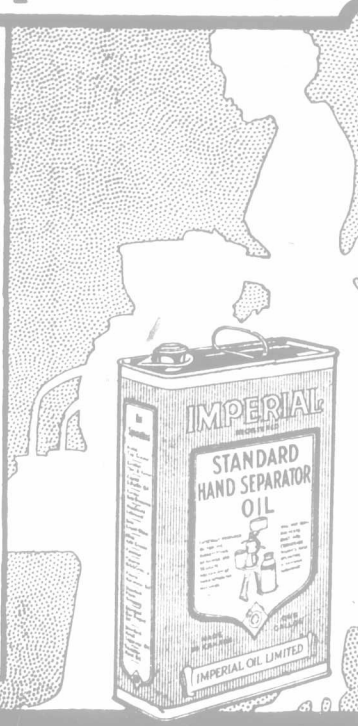
DOES your cream separator skim clean? You can help to maintain its reliability with correct lubrication. But be sure to use the right oil.

Standard Hand Separator Oil is specially made to insure smooth running and uniform high-speed—conditions that largely govern thorough separation.

It is pure, highly fluid, lubricates all wearing parts, prevents seam rust and corrosion.

Sold in pint, quart, half-gallon, gallon and 4-gallon cans; also barrels and half-barrels. By reliable dealers everywhere.

IMPERIAL OIL LIMITED
BRANCHES THROUGHOUT CANADA



Install this Equipment on your Farm

Water, light and power are the three essentials to maximum results—whether in the house, the stables or the dairy.

Fairbanks-Morse Water and Light Systems operated by the Type "Z" Engine

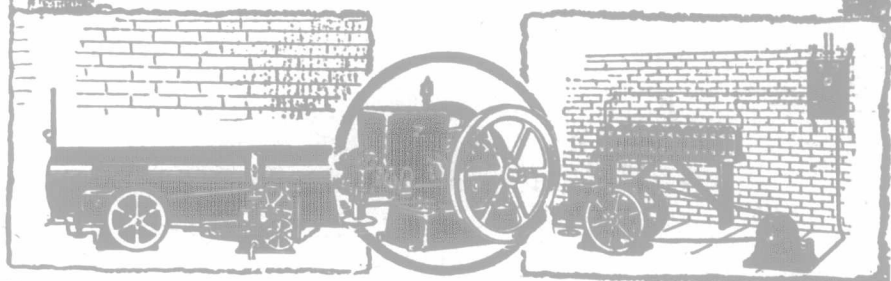
give a combination of power farm equipment that embodies economy, convenience and efficiency.

Bring your farm up to date—get better results—take the drudgery out of the farm work by installing this combination of units.

They mean light anywhere at any time—running water on any part of the farm and power for driving farm machinery. Fairbanks-Morse Water and Light Systems lessen the housewife's labors. The ironing, the washing, the cleaning, the pumping and the great problem of farm labor are all solved.

Write today to our nearest branch for full particulars.

The Canadian Fairbanks-Morse Co., Limited
St. John Quebec Montreal Ottawa Toronto
Hamilton Windsor Winnipeg Saskatoon
Calgary Vancouver Victoria 79



THE HISTORY OF THE INTRODUCTION OF Sydney Basic Slag

INTO ONTARIO READS LIKE A ROMANCE

In 1912 it was unknown. In 1913 we started our campaign and sold 230 tons. The consumption has gone on increasing until, in 1917, the sales were 6,242 tons. This year they will probably reach 10,000 tons. It was hard work introducing our goods. Oftentimes to get going in a district we picked out a progressive farmer and gave him a ton for nothing. With very few exceptions this proved the best of advertising. In two cases, for instance, the experimental tons we gave away in 1913 resulted in sales during the past season of 160 tons and 181 tons.

Sydney Basic Slag is the Ideal Fertilizer for Fall Wheat

We want agents in districts where we are not already represented. If you think you could place a carload of 20 tons, drop us a line, and our representative will call on you right away.

The Cross Fertilizer Co., Limited
Sydney, Nova Scotia

To Spend the Best Years—

of one's life in acquiring property, and leave it all in jeopardy when it might be secured by Life Insurance, is, to say the least, unbusinesslike.

A sufficient Life Policy has kept intact many an estate which would otherwise have gone to ruin for want of ready cash at the right time.

The Great-West Life issues insurance on most attractive terms. Rates on request.

THE GREAT-WEST LIFE ASSURANCE COMPANY
Dept. "Z" HEAD OFFICE, WINNIPEG

The Farmer's Advocate and Home Magazine

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AND
SUCCEED

ESTABLISHED
1866

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LIII.

LONDON, ONTARIO, JULY 11, 1918.

1346

EDITORIAL.

Turn the sod down now for the fall wheat.

Mites in the hen-house mean fewer eggs. A tortured hen will not lay.

A pasture without water is a poor place for live stock. Grass is not the only consideration.

Do not allow the late blight to reduce the potato crop. Spray with Bordeaux mixture.

Farmers should organize, but any movement favoring of clique rule or partizanship is doomed in the beginning.

The United States celebrated the fourth of July in a very practical and significant manner when they let 90 new ships slide down the ways into the water.

We should have a registration of the dogs in this country and dispose of the useless ones in some humane manner. They consume good food and too frequently destroy good sheep.

The apple crop in the Annapolis Valley, N.S., may not amount to over 400,000 barrels, which is not one-quarter the production which the growers there could put out in a normal year.

The small fly which causes grub in the head of sheep is common throughout the warm weather this month. Provide a cool shelter for the flock to which they may retire during the heat of the day, and keep their nostrils smeared with tar.

Agriculture in England and Scotland has suffered another draft of men, and the prospect for harvesting the large crops now promised are none too bright. Britain will take chances with the food supply before she will with the enemy on the West front.

In spite of the reluctance of the Government to issue war-saving stamps the practice would be a good one. The small investor could purchase them when a War-Saving Certificate would be beyond his means. Thrift means more than the saving of dollars; we must squeeze the penny harder and put it also where it will help us to win.

The severe winter of 1917-18 dealt the fruit industry a hard blow, and the results are only now becoming fully apparent. Regrettable, indeed, is the havoc wrought in the old Fameuse orchards of Eastern Ontario and Quebec, in which those districts took no small amount of pride. Consumers will not appreciate the extent of the loss until they try to purchase a barrel of "snows," one of the most popular varieties in the dessert class.

At a recent convention of bankers in the United States, says a Canada Food Board circular, the question was asked, "How many of you grew up on a farm?" The count showed 90 per cent. Everyone present agreed to leave his bank and work on the farm for periods from ten days to two weeks. No doubt registration will show that a large percentage of our Canadian bankers were farm boys at one time who still have a pair of overalls and a smock hid away in the attic of their ancestral home. Now is a good time for them to renew old acquaintances.

The Scrub Bull Still at Large.

While travelling through one of the best dairy districts in Ontario recently, we observed a scrub bull running in the pasture with a herd of milk cows which, according to their color markings and conformation were well bred, if not pure-bred. The bull was apparently a mixture of several breeds which blended so well that one could discern no dominant color or breed characteristic. The fact that it was a bull was the only point concerning this animal that did not permit of doubt. We know full well that too large a percentage of the sires used are grades and scrubs, but to have the truth brought home under such circumstances was discouraging in the extreme. Last spring at the sales, pure-bred bulls of fair individuality and with good backing in regard to production sold, in some cases, little above beef prices, so no dairyman can rightfully complain that a pure-bred sire is beyond his means. The satisfaction derived from dairying comes not only from the size of the monthly milk and cream cheque, but quite as much through the appearance of the herd and the improvement which the young stuff show over their sires and dams. Where there is no growth or no improvement the business is stagnant, the interest wanes, and sooner or later an auction sale marks the close of an unsuccessful career on the farm. The use of a pure-bred sire is one of the cheapest and speediest ways of bringing about improvement in the herd and larger milk cheques. If the size of the herd does not permit the use of a good bull, the owner should cooperate with a neighbor and purchase one that is substantially better in quality and breeding than the females with which he is to be mated.

Keep Photographic Records of the Live Stock.

Over one hundred and fifty years ago Robert Bakewell, of Dishley Grange, England, began a systematic improvement of horses, cattle and sheep. He was really the pioneer breeder of England, and to him is much credit due for the remarkable excellence now found in the live stock of the British Isles. Others took up the work where he laid it down and adapted his methods to the tasks they had in hand. Bakewell kept more than written records of his work and results achieved. He was neither artist nor photographer, but he assembled a collection of bones and meat in pickle to show the improvement made in animals of his own breeding. Then came the painter, who too often idealized the subject he sketched, but who, nevertheless, contributed greatly to the annals of live-stock history. Invention has in modern times made it possible, through the use of the camera, for the average breeder to photograph his own live stock and keep a complete record of individuality and character along with his memoranda concerning production, color markings, etc., which may be interesting and valuable in later years. Any progressive breeder is interested in the history and development of his herds and flocks, and there is no better way of keeping in mind the characteristics of the sires used, the females which made up the breeding list, and the progeny of both, than with small photographs or snapshots. Still more interesting is a collection of these likenesses, showing several generations of the same breeding, and making it possible to compare animals still in the herd with their progenitors which have been disposed of through sales or on account of age or sickness. A camera in the hands of some junior member of the family can be used to advantage in this regard, and after a few years the collection of prints will be cherished almost as much as the family album.

Many experiments in breeding at public institutions would have been made more valuable if photography had been practiced in connection with the record-keeping. Happily experimenters are now awake to the importance

of this line of work and photographic records are being kept.

Live-stock photography is more than a hobby or fad. It is now a business proposition, the importance of which many breeders have grasped, and these have converted the practice into a means of conveying information and a description of what they have for sale. Many good breeders are poor salesmen and cannot reduce the enquiries received to a satisfactory percentage of actual transactions. The weakness often lies in their inaptitude for letter-writing, and their inability to give an adequate description of the animal in question. A concise and definite statement concerning production, where such is involved, with the desired information with regard to the breeding, will usually satisfy the enquirer when a good photograph or snapshot is enclosed. Buyers usually concern themselves about the individuality of anything they purchase, and a small print will often make a mail-order sale when otherwise the business would be lost.

Fitting For the Fall Fairs.

The act of loading show animals with a surplus of fat is hard to justify at any time, and under present conditions exhibitors should be content to bring their entries out in more moderate fleshing than is customary at the large exhibitions. Many breeders will not show because the competition they are obliged to meet forces them to fit extensively and perhaps injure the breeding qualities of some of their best stuff. Nothing is more harmful to the impression left with an onlooker than to see a breed represented by poorly-fitted, untrained animals just brought up from the bush. This extreme, too, should be avoided. Thrifty, well-conditioned animals thoroughly broken to the halter and in good bloom should be given the consideration they deserve by the judge. Surfeiting with fat does not bring out breed characteristics, neither does it reveal the actual conformation of the entry. On the other hand, a bad conformation is often concealed with flesh and camouflaged with deftly-combed hair. There should be a compromise somewhere between the way live stock is shown at the township fair and the condition to which they are brought before they have a chance in a fat-stock show. When this is accomplished breeders can work their show cows and show their work cows.

Keep the Corn Field Clean.

A general survey of the country reveals fewer dirty and grassy corn fields than existed last year at this time, but there is still plenty of work for the hand hoe and the cultivator. The season of 1917 was particularly favorable to weeds and detrimental to corn, so the task of keeping a field clean was more difficult than usual. This has not been an especially good corn year so far but the stand is fairly uniform, and with an even break in luck in regard to weather conditions we should, in Ontario, still have a satisfactory crop of silage quality. During the latter part of June and early in the present month the cool weather retarded the growth of late-planted corn and allowed the weeds in a good many fields to gain ground. Early corn did not suffer so much, but throughout the country there are many fields that require the immediate attention of a man or men with a sharp hoe. In Oxford County, Ontario, not long since, we noticed a woman and a boy doing their bit in a grassy corn field, but the task appeared too big for them. Corn, more than any other farm crop, requires a great deal of cultivation, and if weeds are allowed to grow up in it and go to seed, the hoed crop, as a part of the rotation, does not function as it should. Corn is grown primarily for fodder, but in a four-year rotation it affords practically the only opportunity to rid the land of weeds. Some of the inexperienced help which

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

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

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may be available might be used to advantage in just such circumstances as we have mentioned. So long as this class of help are instructed not to cut too close to the corn plants, especially with a sharp hoe, they can do a good service in cleaning a field of corn and making it suitable for future cropping. This appears like one place where inexperienced help could be utilized. In the meantime keep the cultivator going.

Co-operation Amongst Experimenters.

It has long been plain that too little co-operation exists between agricultural experimenters in this country, and that while working with the same ends in view they are not able to pull together. This apparently is not characteristic of Canadian institutions only for Scotland Yet, in his letter published elsewhere in this issue, complains of similar conditions in Britain, where he says: "Unhappily all such research work in Scotland has hitherto been crippled by a lack of funds, and another unhappy feature is a disposition to petty jealousy on the part of those engaged in physiological research. In place of an honorable striving to see who can do most to minimize loss and enhance the value of live stock through the discovery of the causes of and the remedy for such plagues there is a disposition to act the censor on each other. Such manifestations leave an unpleasant impression on the lay mind."

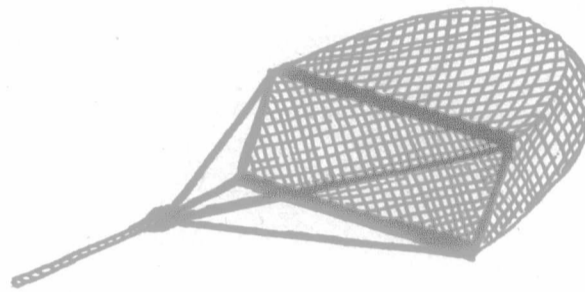
This lack of unity amongst the authorities in this country leads often to confusion through the publication of conflicting statements and advice. There should be a co-ordinating department where all the information could be assembled and prepared for public consumption. And there should be harmony amongst those to whom we look for guidance in things agricultural.

Nature's Diary.

A. B. KLUGE, M. A.

In our last article we gave a general sketch of the work in marine biology which is being done by the Biological Board of Canada, and gave a description of the manner in which samples of water were obtained from various depths. Now when these samples have been secured they are placed in bottles, hermetically sealed and are later examined chemically to determine the amount of salt present. This is a very important thing to ascertain, as many species are regulated in their distribution chiefly by the salinity of the water. Attached to the deep sea water bottle, with which the samples of water are obtained, is a minimum thermometer, in which the thread of mercury is broken when the thermometer is reversed by the reversing of the water-bottle. Thus the temperature at the bottom, or at any intermediate point, can be ascertained. At the same time the temperature of the surface water is taken.

This work of securing data of the salinity and temperature of the water is done at certain definite stations, whose position is marked on a chart, and at these same stations different kinds of gear are used to obtain specimens of all the kinds of animals and plants which occur at that place. The kinds of gear employed are the plankton net, dredge, shrimp trawl, crow-foot dredge, otter-trawl, line-trawl, and seine.



Dredge.

Plankton nets are conical nets made of very fine bolting-cloth, with a bottle tied into the small end. They are of various sizes, and are arranged and weighted in different ways so that they may tow at different depths. As the plankton net is towed through the water it retains all the minute forms of life which pass into it, and when the net is hauled in these are all washed into the bottle. These extremely small forms of life, the great majority of them so minute that they are imperceptible to the naked eye, are very important economically. Many of them are the food of commercial fishes and others constitute the food of various organisms which in turn are the food of fishes. Thus the distribution of these minute organisms, which are collectively known as plankton, very frequently determines either directly or indirectly, the distribution of important commercial fishes.

A dredge consists of an iron frame with a net suspended from it and with iron arms to which a rope is attached at the point at which they come together as shown in our figure. The dredge is dragged slowly over the bottom of the sea, the bar on the bottom scrapes off and gathers into the net all the forms of life which are lying on, or attached to, the bottom. In this way a great variety of animals, unobtainable in any other way are brought to the surface.—Starfishes, Sea-urchins, Brittle-stars, deep-water Crabs, Sea-anemones, Sand-dollars, Sea Cucumbers, deep-water species of shell-fish and hosts of other forms.

The crow-foot dredge consists of an iron bar from which hang numerous chains, each chain carrying a series of iron hooks. These hooks gather up material on the bottom.

An otter-trawl is a long, cone-shaped net with a very wide mouth. The mouth is kept open, as the trawl is dragged along the bottom, by wings with boards, known as otter-boards, fastened vertically. These boards each have a line attached to them, and these lines are attached to the long line by which the trawl is dragged. The result of this arrangement is that the boards tend to diverge as far as possible and thus keep the mouth of the trawl open. The otter-trawl is a very efficient form of gear for securing all kinds of bottom-feeding fish, and is used extensively in the fisheries.

The line-trawl consists of a long line to which short and lighter lines are attached at intervals of about two feet, these lighter lines each carrying a hook. One "shot", that is one long line, as a rule carries some three hundred hooks and three "shots" are joined to make the complete trawl. The hooks are baited and the trawl is coiled down into a tub, and when it is to be set first a buoy is put out with a line from this to the trawl anchor, then the anchor, then the trawl is paid out, then another anchor and buoy. The trawl is left out for about an hour, usually at slack water, that is the period at the turn of the tide when it is neither flowing nor ebbing, in places where there is much of a run of tide, and it is then hauled, the fish removed and the trawl coiled down into the tub.

A seine is such a widely known piece of gear that no description of it is necessary.

The afore-mentioned are the chief kinds of apparatus and the methods which are used in collecting material, but the collection of material is not all the work by any means. It is rather the beginning of the work, for when the material has been obtained then comes the determination, classification, recording, microscopic study of scales to determine ages, study of stomach-contents, and finally the bringing together of facts and the interpretation of facts.

Sandy's Corn Field.

BY SANDY FRASER.

I wis oot at church last Sunday as the day wis fine and I couldn't think up ony excuse but what the auld wumman would turn into anither reason why I should go. When an auld chap like mysel' has to wark hard all week he's apt to get balky on movin' oot on Sundays sometimes. But na doot ye feel a' the better for it afterwards. Puttin' on yer guid clothes an' a clean collar has a restin' effect on ye some way.

Onyway I did as the auld wumman said, as usual, an' I'm glad to say that I made oot to stay awake frae the beginnin' tae the end o' the service. Na doot it wis because o' the text that the minister took to build up his sermon on. It was this: "That which the palmer-worm hath left hath the locust eaten; and that which the locust hath left hath the cankerworm eaten; and that which the canker worm hath left hath the caterpillar eaten." I gave Jean a nudge an' says I, "That's my corn-field he's takin' for a text the day. He must hae been around an' seen what little there wis left o' it. It's no' muckle to get material for a sermon oot o'."

But I wis mistaken, for the auld preacher went off on to anither subject a'thegither and as I didna find it vera easy tae follow him I got tae thinkin' about the ups an' doons o' farm life, especially the doons, for the corn-field wis still on my mind. I'll hae tae tell ye about it sae that ye'll understand my feelins and ken how I cam' to be lettin' my mind rin on such things on the Sawbath, an' me in church at that.

About a year ago I took it intae my heid to clean up a piece o' stony land that I had at the back o' the place. It will raise a great crop o' corn, thinks I, for it's been pastured since my grandfather wis a yearling and it ought to be in shape to mak' up tae me for all the taxes I've paid on it. They say that ye shouldn't count yer chickens until they've been hatched oot for about two weeks but I thought I wis pretty safe in buildin' on gettin' a pretty fair crop frae that field.

Weel, ye never saw so many stanes for what little ground there wis on that three-acre field. But by thinkin' o' the fine crops we wad see on it some day, we made oot to stick to the job until we had the last stane in the wall. That is, all but the wee ones, of course. That wis last fall.

This spring the first thing to do wis to plow the field an' harrow it. Then there wis mair stanes to be taken off, an' after that we rolled it sae that we could see the squares made by the corn-marker an' ken where tae plant the corn. When we had the last o' the seed in I says, "Weel, that's one guid job done onyway; we shouldna hae muckle mair wark wi' that. It's new land and won't be hard tae keep clean." And it wasn't. The crows an' the black-birds hae looked after that. In the first place the seed wasn't overly guid, although I had been promised the best that wis tae be had. We had to go over the ground an' plant a lot o' it the second time. Then after the birds that I spoke aboot had taken their toll we went over it again an' tried tae fill up the blanks. The next thing I noticed wis that something was workin' at the roots o' what wis left o' my corn and it wis withering up an' dyin'. "Weel," says I tae mysel' "the grubs an' the wire-worms hae to be fed, I suppose; let them tak' their share."

A couple o' days after I made this discovery: a bunch o' my heifers managed to get intae the field at a spot where the wire fence was a wee bit too high frae the ground and what they didna do to what wis left o' my corn wasna worth talking aboot. Aboot quarter o' the field they clipped off at the roots an' some they pulled oot a'thegither. We had to get the corn planters an' go at it again. This last we put in is just noo comin' up an' I am waitin' wi' some interest tae see what kind o' a beast is gaen tae get it.

I mind o' plantin' a field, one year, first wi' carrots, then wi' beets an' finally wi' turnips, before I got onything to grow. One o' my neebors wha had been watchin' me says, "Weel Sandy, ye'll hae the ground fertilized wi' seed if wi' naething else." And I'm thinkin' he might say the same thing aboot my corn-field. Oor minister took for his text one Sunday that verse where it says, "While the earth remaineth seedtime and harvest shall not cease," and the first part o' it is true enough onyway sae far as my this year's experience goes. Maybe what's left o' my corn will tak' advantage o' its opportunities an' the room it has, and amount tae something yet. I ken it's a great crop to pick up after a bad start.

"And what did the meenister get oot o' his locusts an' canker-worms an' sae on," says I tae Jean on oor way hame that day, "I wis sae busy thinkin' that I couldn't tak' all in he wis sayin'." "Oh, he wis makin' oot that all these things are for oor benefit," she replied. "If we didn't hae ony difficulties an' discouragements to overcome in the shape o' ruined crops an' things o' that kind we would never amount to a hill o' beans." "Or corn," says I; "which is likely to be even less yet." "And he said," Jean went on, "that he thought that this auld earth had been pretty weel planned as a school for the education o' mankind, because things were fixed so that if a man was willin' tae wark an' dae his best he could mak' a decent an' honest livin', but that if he tried tae get oot o' daein' his share o' the world's wark he'd soon find oot what kind o' a scrape he'd get himsel' into. If conditions were much harder on this earth than they are, na doot man would, in a short time, become extinct. He'd give up the fight. But bein' what they are he gets enough encouragement to induce him to keep on in the hope that the finish-up will pay him for all his trouble an' hardship. And, said he, comin' to a close, 'I've noticed it generally does.'"

"That's right," I said, "The auld chap said something that time. I'm goin' to put the cultivator through that corn-field first thing in the morning, if there's enough o' it left so that I can see the rows ahead o' me," says I.

THE HORSE.

Joint-Ill, Navel-Ill or Septic Arthritis.

Many theories have been advanced re the cause and nature of navel or joint-ill in foals. Some claim that it is simply another name for what is commonly called "leaking navel." Those who have had experience know that this is not the case. They are two distinct pathological conditions. In some cases they co-exist, but in most cases either condition is noticed without being accompanied by the other; hence there is not necessarily a connection. Some claim that "joint-ill" is a disease of weakly foals; others that it affects only foals that receive too much milk; others that it is caused by the nature of the dam's milk; others that it is due to exposure to cold or dampness. Some claim that it is congenital, being contracted during foetal life. All these theories have been proved false by the light of modern veterinary science.

That the disease is due to a specific germ or virus that gains entrance to the blood has been proved beyond reasonable doubt. The germ gains entrance through a raw surface, generally, if not always, the navel opening. It has an affinity for the joints, lodges in them, multiplies very rapidly, causing severe irritation, heat, swelling, and often suppuration—hence the name "joint-ill." While scientists now generally admit that the disease is due to a germ, some claim that it enters the circulation during foetal life, hence the disease is congenital. This view is not supported by evidence and is held by few.

The germ exists in the soil, in dust, in stable floors, and doubtless, in some cases, on the hair of pregnant mares that are stabled or grazed in quarters where it exists. The last fact accounts for the occasional very early symptoms of the disease that are sometimes noticed in foals, the germ having entered the circulation during birth. The trouble is much more frequently seen in foals that are born in the stable than in those that are born in a pasture field. In some seasons the disease is much more prevalent than in others; and more frequently seen in some localities than in others. Owing to these facts we must admit that certain climatic and certain geographical conditions favor the presence of the germ, but just what these conditions are has not been definitely determined.

Symptoms.—The symptoms may become apparent soon after the infection enters the system. From a few hours to a few days, and in rare cases a few weeks after birth, the foal is noticed to be dull, lies a great deal, and manifests lameness or stiffness in one or more limbs. An examination usually reveals a swelling, heat and tenderness of one or more joints, often in the hocks or knees, but it may be the stifle, hip, elbow, shoulder, fetlock or pastern. Any joint or joints may be affected. The trouble is often thought to have been caused by the dam treading upon the foal, or by injury in other ways. The symptoms increase in intensity, sometimes quickly, in others more slowly. The swellings increase in size and soreness, the patient becomes weaker, less able to move, and lies most of the time. If helped to his feet he goes lame and sore, but in some cases will nurse fairly well, but soon lies down again. As the symptoms increase in intensity the general debility also increases, and the desire for or the ability to take nourishment diminishes. The joint or joints involved become puffy, and if they burst or are lanced a muddy-colored liquid escapes. In many cases the articular cartilages of the joint become destroyed. In these cases manipulation of the joint reveals a grating sound, caused by the ends of the bones rubbing against each other. When this stage has been reached it is a humane act to destroy the patient, as, though it is possible in some cases to preserve life by careful nursing and attention, the animal will always be a cripple.

Curative Treatment is often effective when given early. The use of serums and anti-toxins especially prepared for the purpose, and which can be administered only by a veterinarian, has been reasonably successful both as a preventive and cure, hence it is wise for a breeder to employ a veterinarian as soon as possible after the first symptoms are noticed. Even amateur treatment may occasionally be successful. It consists in bathing the joints long and often with hot water, and after bathing rubbing well with a camphorated liniment as one made of ½ oz. tincture of iodine, 2 drams gum camphor, 4 oz. extract of witch hazel and alcohol to make a pint. The foal should be given 5 to 10 grains (according to class and size) of iodide of potassium in a little of the dam's milk three times daily, and it should be helped to nurse at least every hour if not able to nurse without help. The mare should be well fed on milk-producing food, as bran, rolled oats, good hay, raw roots or grass if procurable, and should be given 1 to 1½ drams iodide of potassium 3 times daily. Such treatment may be successful in arresting the ravages of the germ and destroying those present. When the disease has reached that stage where abscesses are formed they should be lanced, and cavities flushed out well three times daily with a 5-per-cent. solution of carbolic acid. When the articular cartilages have been destroyed and the bones can be heard or felt grating against each other, the patient should be destroyed.

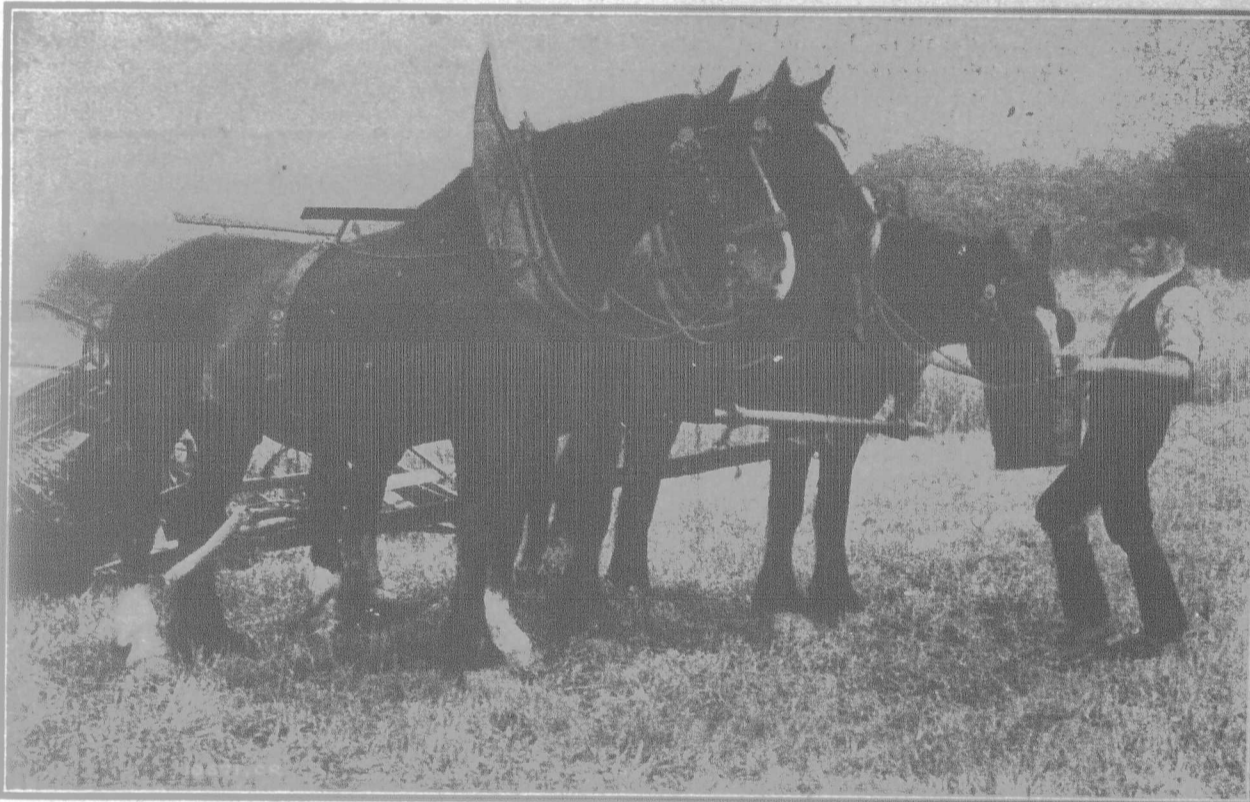
Preventive Treatment.—If we admit the theory advanced as to the cause of the disease it can plainly be seen that prevention consists in preventing the entrance of the germ into the system. This can be done (where the germ exists) only by cleanliness and antiseptic measures. All dust, cobwebs, etc., should be swept out of the stable, and the stall in which the prospective foal is to

be born, should be thoroughly and regularly cleaned, and it is good practice to scatter slaked lime on the floor each morning before providing fresh bedding. It is good practice to give the stall a thorough coat of hot lime wash with about 5 per cent. carbolic acid, or, if whitewash be objectionable, give it a thorough scrubbing with hot water containing 5 per cent. of the acid. It is also good practice to wash the external genital organs, tail and hind quarters of the mare occasionally with an antiseptic and germicide, as a 5-per-cent. solution of one of the coal-tar antiseptics or carbolic acid. When the mare is to foal on grass, of course, all these precautions cannot be taken, but there is little danger of the germ existing on grass, but it may be found in sand or clay devoid of grass. The most essential preventive measures that can be observed in all cases is local attention to the navel as soon as possible after birth, and several times daily afterwards until it dries up and is thoroughly healed. The breeder should have on hand a supply of a strong antiseptic and germicide when his mare is about to foal. This may be a 10-per-cent. solution of carbolic acid or one of the coal-tar antiseptics, tincture of iodine, or a solution of corrosive sublimate 30 to 40 grains to a pint of water. Whatever is used should be applied as soon as possible after birth and every few hours until the navel opening has healed. WHIP.

Percherons Come to Canada.

The Secretary of the Percheron Society of America, Wayne Dinsmore, sends us the following information concerning the movement of Percherons from the United States into Canada.

"During the last 19 months the Percheron breeders of the United States have sold more than 1,000 Percherons to Canadian buyers; 611 of these were purchased during the last 7 months by 91 different Canadian buyers. Thirty-two purchasers were located in Alberta; 4 in British Columbia; 12 in Manitoba; 1 in New Brun-



A Hot Weather Suggestion.

wick; 7 in Ontario; and 35 in Saskatchewan. Two hundred and thirty-nine out of the 611 sold this past season were mares. It is believed that this constitutes a record for the exportation of any kind of pure-bred live stock to Canada. These very heavy exportations are significant of the growing popularity of Percherons in all parts of the Dominion, and of Canadians' firm belief in the prosperity in store for breeders of good draft horses."

The Secretary also writes that Percherons in America are reared by average farmers who use the mares in regular farm work. Most of the colts recorded are registered by men who raise only one or two foals per year. This fact is revealed in the registrations which amounted to 10,508 in the last fiscal year, and these were made by 5,198 separate breeders.

What the Horse Would Say in July.

If a horse could talk he would have many things to say when summer comes.

He would tell his driver that he feels the heat on a very warm day quite as much as if he could read a thermometer.

He would say,—“Give me a little water many times a day, when the heat is intense, but not much at a time if I am warm; if you want me to keep well don't water me too soon after I have eaten.”

He would say,—“When the sun is hot and I am working let me breathe once in a while in the shade of some house or tree; if you have to leave me on the street leave me in the shade if possible. Anything upon my head, between my ears, to keep off the sun is bad for me if the air cannot circulate freely underneath it.”

He would talk of slippery streets, and the sensations of falling on cruel city cobblestones—the pressure of

the load pushing him to the fall, the bruised knees and wrenched joints, and the feel of the driver's lash.

He would tell of the luxury of a fly net when at work and of a fly blanket when standing still in fly season, and of the boon to him of screens in the stable to keep out the insects that bite and sting.

He would plead for as cool and comfortable a stable as possible in which to rest at night after a day's work under the hot sun.

He would suggest that living through a warm night in a narrow stall neither properly cleaned nor bedded is suffering for him and poor economy for the owner.

He would say that turning the hose on him is altogether too risky a thing to do unless you are looking for a sick horse. Spraying the legs and feet when he is not too warm on a hot day he would find agreeable.

He would say,—“Please sponge out my eyes and nose and dock when I come in tired and dusty at night, and also sponge me with clean cool water under the collar and saddle of the harness.”—Our Dumb Animals.

LIVE STOCK.

It will not be long before the fall exhibitions will be in full swing. Are you getting your stock in condition to win in keen competition?

It is a good plan to stable the calves and even the mature stock during the heat of the day when flies are most bothersome. A little attention along this line usually brings returns.

Even with grain at the present high price it may pay well to use it to supplement the pasture when it becomes short and dry in midsummer. It is less expensive to hold the flesh on the animals than to put it on after it has been lost, due to shortage of feed.

A number of Shorthorn auction sales were held in Chicago the second last week in June, and 288 head changed hands at an average price of \$1,290. Kennedy Shorthorns averaged \$1,121, the top figure being \$2,600, which was paid for Beauty Lassie, a five-year-old cow. Sixty-seven Shorthorns sold by F. R. Edwards averaged \$945.

At the Carpenter & Ross Shorthorn sale 122 head went under the hammer in less than five hours. Record prices were received; 16 bulls averaging \$2,800, and 106 females \$1,386. The top price was \$20,000 for the bull calf Imp. Rodney. Several head from this offering were purchased by W. C. Sutherland, of Saskatchewan, among which was the two-year-old bull Imp. Edgecote Broadhocks at \$4,000.

In response to representations made by the various agricultural and breed societies, the War Trade Department of England has intimated that it has decided to abandon the proposal of restricting the export of pure-bred stock to the average of the past three years. While it is deemed advisable to place some restriction on the export of pedigreed stock, applications from exporters will be considered on their merits and without regard to average exports, by an individual and to a particular country.

In talking about the present price of pork, a Perth County farmer remarked that twenty-four years ago he teamed hogs 13 miles to market for 3¼ cents a pound. There is a big difference between 3¼ and 17 or 18 cents a pound, but we doubt if the higher price of this spring netted the feeder any more than the price of 24 years ago. At that time oats were 15 cents a bushel, and barley less than half a cent a pound. The profit a

farmer gets out of a load of hogs cannot always be judged by the price. The feed cost must be taken into consideration.

In some localities there is considerable complaint about cattle having sore feet. This trouble may be brought on by broken hoofs, stone bruise, stepping on edge of a hard substance and breaking the flesh between the toes, standing in liquid manure, walking through muddy places, or it may be due to infection. Treatment of some kind should promptly be applied. Bathing with hot water, applying a poultice of hot linseed meal and dressing the raw surface with one part carbolic acid to 30 parts sweet oil should give relief. The patient should be kept in a clean, dry place.

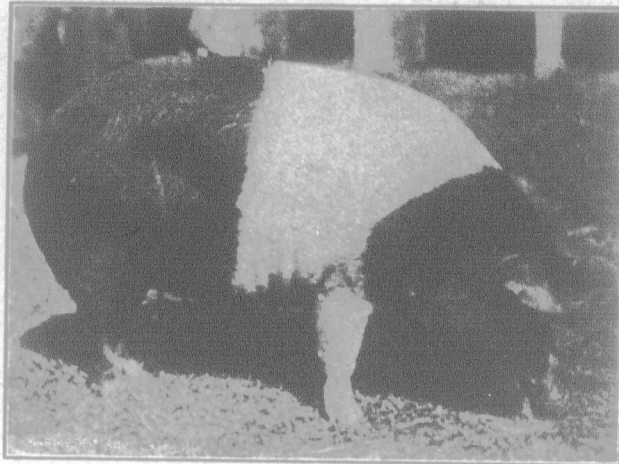
Compensation For Sheep Killed by Dogs.

Although dogs are taxed in practically every community, and that tax was doubled at the recent sitting of Parliament, it has by no means stopped the destruction of sheep by canines. From different sections of the country come reports of numbers of valuable sheep being killed, or so worried by dogs running at large that the owner was forced to kill them. This is a serious loss not only to the individual but to the country in this time of shortage of meat and wool. While the owner may receive compensation either from the township or from the owner of the dog; it does not entirely make up for the loss. A number of queries have come to this office regarding the compensation which the owner of the sheep will receive, and also concerning how to go about to secure same. An Act passed in March, 1918, reads "where the owner of any dog killing, injuring, terrifying, or worrying sheep is not known the municipality in which such sheep were so killed, injured, terrified or worried shall be liable to compensation to the full amount of the damage sustained, but no municipality shall be so liable unless application has been made for damages as herein provided within three months after such sheep have been so killed, injured, terrified or worried. The amount of damage sustained shall be determined in the following manner: The council of every local municipality shall appoint one or more competent persons to be known as sheep valuers. Within forty-eight hours after the discovery of any damage the owner of the sheep or the clerk of the municipality shall notify the sheep valuer who shall immediately make full investigations and determine the extent of the damage. The sheep valuer shall make his report in writing, giving in detail the extent of the injury and the amount of damage done, to the clerk of the municipality and shall at the same time forward a copy of such report to the owner of the sheep damaged. Where the owner of such sheep considers the award inadequate to cover the loss of same, he may appeal to the Minister of Agriculture who may name a competent arbitrator to make a further investigation and the award of the arbitrator so named shall be final, provided the appeal to the Minister shall be made within one week after the award of the local valuer has been received, and shall be accompanied by a deposit of \$25 which shall be forfeited if the award of the local valuer is sustained. If no sheep valuers are appointed by the municipal council, or the clerk or the sheep valuers do not perform the duties provided for by this section, or any of them within a time specified, the person who has sustained the damage shall have a right of action against the municipal corporation for the amount of damage recoverable in any court of competent jurisdiction. The owner of any sheep killed or injured while running at large upon any highway or on unenclosed land shall have no right to compensation from a municipal corporation." According to the wording of this Act compensation shall be made to the full amount of the damage sustained, and the extent of the damage shall be determined by sheep valuers. It is not made very clear as to whether or not the owner of sheep killed by dogs shall be compensated according to the value of the sheep for mutton or for breeding purposes. This is the point about which a number of sheep owners are in doubt. It is a well known fact that pedigree and certain qualities as to type and conformation enhance the value of an animal for breeding purposes above that of an ordinary sheep which is being raised for meat alone. The Act can well be interpreted to cover the value of the sheep for breeding purposes as it plainly reads "to the full amount of the damage sustained."

It is believed that the dog nuisance is responsible for so few sheep being kept in certain sections of the Province. Farmers have had their flocks greatly decimated in a single night and this has so disheartened them that they preferred investing their money in other breeds of stock. Some would go so far as to destroy practically all the dogs in the country; however, this would be rather a radical step as the good dog has a place on every farm. Not only does he guard the property but he lends considerable assistance in bringing the flocks and herds from the field to stable. True, a dog may damage the stock but this is the result of poor breeding or poor training, or both combined. The well-fed dog that is brought up with cattle and sheep is not likely to molest the flocks at night. It is the canine that is half starved or that is not used to mingling with stock that usually does the damage. The increased tax on dogs will undoubtedly get rid of a number of useless ones. Then, too, the Act provides that if the owner of the dog that destroys sheep is known he shall be obliged to pay the damages to the owner of the sheep killed or injured. If a dog is restless or prone to wander away at night the owner would do well to tie him up and so avoid the risk of him doing damage to other men's property. It is better to guard the dog than to be called upon to pay for damages he may cause.

Prolific Sows.

When newly weaned pigs find ready sale at nine and ten dollars apiece it is important that the sow kept be prolific and a good mother. One quite frequently hears of litters varying from fourteen up to twenty in number but these too frequently dwindle down to six or eight by weaning time. On the other hand there are sows which fail to produce more than a half dozen pigs twice a year. A dozen pigs make a profitable litter and most sows have teats and milk enough to feed this number if properly rationed. There are some feeders who are perfectly satisfied if they raise eight to ten in a litter and who prefer that number to a larger litter, claiming that there is less likelihood of there being any runts and the entire bunch is usually more thrifty than where a greater number are raised. Some breeders contend that the time of service influences the size of the litter. For instance they claim that service early



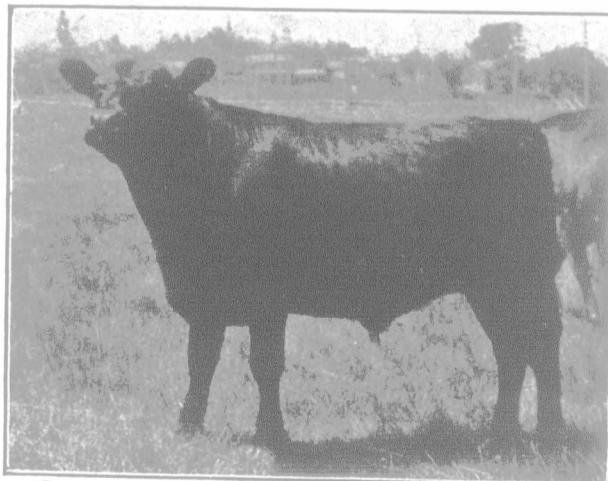
A Typey Hampshire Sow.

in the period of oestrus and then turning the sow in the pen or paddock with other pigs has in many instances resulted in small litters, while service near the end of the period of oestrus and the sow kept by herself for a few days has given large numbers of pigs. If the sow is commencing to flesh up at the time of service she is likely to be more prolific than if she is very thin in condition.

It should be possible to select and breed a strain of sows for the production of large litters and a good milk flow to feed the progeny, as it is to increase the milk flow of a strain of cattle by selection and breeding. With young pigs at present prices the prolific sow that feeds her litter properly is a valuable animal to have in the herd. Securing breeding stock from sows which are regular breeders and which produce and raise large litters is advisable. The law of "like tends to produce like" works in all classes of stock.

Cost of Raising and Finishing Two-Year-Old Steers.

That there is a good profit in raising and finishing beef cattle at the present prices is a foregone conclusion with many people, but there are few feeders who are in a position to give the exact gains, cost of gains and net profits for certain feeding materials. It is unfortunate that more do not keep accurate records so as to be in a position to know the most profitable age at which to feed the animals the heaviest or to finish them for the block. J. G. Rutherford, who is Superintendent



About Ready for the Block.

of Agriculture and Animal Industry of the Department of Natural Resources, Canadian Pacific Railway Company, gives the following account of a bunch of steers fed at Strathmore Farm, in Alberta, and sold through the Alberta stock yards at \$16.80 per cwt. The report is to the effect that the thirty head of steers marketed at the above-mentioned price were of Shorthorn and Hereford breeding, which were picked from a lot of sixty-one calves which were got together the latter part of November, 1916. Some of them were range stock and others were bred by the Animal Industry Branch. As regards quality, there was no special or extraordinary feeding merit attached to the steers. The remaining thirty-one calves were quartered in box stalls in a warm, well-ventilated, comfortable barn,

and in May, 1917, brought 11 1/4 cents per pound. They made a daily gain of 1.81 lbs. The thirty steers which were marketed this year spent their first winter in an open shed on practically the same ration as those above mentioned, except that no alfalfa hay was fed and only a small quantity of silage during the months of April and May. The daily gain per head was 1.06 lbs. at a cost of 12.1 cents per pound. The calves in the barn rounded out, laid on flesh, accumulated fat, and came out in the spring with an attractive finish and bloom. Those in the shed grew and developed size, and although as thrifty, did not compare with the others in point of flesh or finish, thus showing the importance of warmth and comfort in the finishing of yearling steers. On the other hand, wintering young stuff in open sheds tends to develop strength, constitution and size, which are desirable as a foundation for the subsequent heavy feeding required to finish cattle the second year. The first feeding period was from December 1, 1916, to June 1, 1917, and the following table shows the ration fed, the weight of the steers at commencement of feeding, the daily gain per head, and the cost per pound of gain.

Thirty steers weighing 15,587 lbs. Dec. 1, 1916, cost \$1,178.95.	
Amount and value of feed consumed from Dec. 1, 1916, to June 1, 1917:	
17,194 lbs. oats at 43c. per bushel.....	\$217.45
8,597 " " barley at 60c. per bushel.....	107.48
6,643 " " bran at \$28.00 per ton.....	93.00
5,078 " " silage at \$3.50 per ton.....	8.89
19,361 " " oat sheaves at \$7.50 per ton.....	72.60
32,494 " " hay at \$10.00 per ton.....	162.47
1,543 " " cut hay, sheaves and straw at \$7.00 per ton.....	5.40
514 " " salt at 1 1/2c. per lb.....	7.71
Grinding 25,791 lbs. grain at 10c. cwt.....	25.79
	\$700.79

Weight of steers at June 1, 1917, 21,377 lbs.
Daily gain per head, 1.06 lbs.
Cost per lb. gain, 12.1 cents.

The second feeding period commenced on June 1 and extended to October 16, during which time the steers were on grass. The pasture was supplemented by 8 pounds of concentrates per day to each animal, made up as follows: 3 1/4 pounds oat chop; 3 1/4 pounds barley chop, and 1 1/4 pounds of bran. No doubt many would consider this extravagant feeding, but according to the following table the steers made a daily gain of 2.07 pounds per head in the time above mentioned at a cost of 6.24 cents per pound:

Feed consumed from June 1, 1917, to October 16, 1917:	
13,891 lbs. oats at 43c. per bushel.....	\$175.68
13,891 " " barley at 51c. per bushel.....	147.59
5,091 " " bran at \$28.00 per ton.....	71.27
4 1/2 months' pasturage at 80c. per head per month.....	108.00
450 lbs. salt at 1 1/2c. per lb.....	6.75
Grinding 27,782 lbs. grain at 10c. per cwt.....	27.78
	\$537.07

Weight of steers October 16, 1917, 29,982 lbs.
Daily gain per head, 2.07 lbs.
Cost per lb. gain, 6.24 cents.

On October 16, 1917, the third feeding period commenced, and the thirty steers were placed in loose boxes in a well-ventilated, comfortable barn. No outside exercise was allowed, and water was provided at all times. The grain ration was composed of oats, barley and bran, with linseed cake added in February at the rate of half a pound per day per head. This was gradually increased until each animal was getting about three pounds per day. This period of feeding was the most expensive of the lot. While they gained 1.78 pounds daily, it was done at a cost of 16.77 cents per pound. This was practically what the animals sold for. While there was considerable profit made on this lot of steers, it was due largely to the increase in value per pound of the animals as they stood before the last winter's feeding started than from the weight gained during the last feeding period. The following table gives in detail the ration for the last feeding period from October 16, 1917, to May 20, 1918.

Amount and value of feed consumed from October 16, 1917, to May 20, 1918:	
30,184 lbs. oats at 52 1/2c. per bushel.....	\$466.08
28,080 " " barley at \$1.06 1/2 per bushel.....	623.02
6,680 " " bran at \$31.00 per ton.....	103.54
5,892 " " linseed cake at \$60.00 per ton.....	176.76
18,060 " " silage at \$4.00 per ton.....	36.12
6,772 " " turnips at \$4.00 per ton.....	13.54
26,460 " " oat sheaves at \$7.00 per ton.....	92.61
44,226 " " hay at \$10.00 per ton.....	221.13
8,361 " " alfalfa at \$16.00 per ton.....	66.89
4,819 " " blue joint hay at \$16.00 per ton.....	38.55
15,030 " " cut feed at \$5.00 per ton.....	37.57
700 " " salt at 1 1/2c. per lb.....	10.50
Grinding 58,264 lbs. grain at 10c. per cwt.....	58.26
	\$1,944.57

Weight of steers May 20 at farm, 41,580 lbs.
Weight of steers May 22, less shrinkage, 41,090 lbs. at \$16.80 cwt.

Daily gain per head, 1.78 lbs.
Cost per lb. gain, 16.77 cents.
This lot of cattle made a profit of \$81.74 per head. At the time of selling they weighed 4,190 pounds and dressed out 60.10 per cent.

While the above figures were obtained from feeding steers in Alberta the ration was much the same as what is fed on an Eastern farm, and the cattle were of the same breeding as are to be found in the average stable.

The accompanying table gives an idea of the amount of concentrates steers of a given weight will consume and of the gains made on that ration. It also shows that grain can be fed at a profit to cattle on grass. In the pasturing sections of Old Ontario the pastures are seldom supplemented by grain. Some do grain their cattle, but figures or statements have not been obtained to show what advantage accrued from so doing. In certain parts of Western Ontario large numbers of cattle are finished on grass every summer. In many cases the pasture consists of blue grass, which certainly gives good results. It appears to have the substance and body for making large gains with the right quality of cattle. The gains depend on the quality of cattle as well as on the ration. Some cattle do much better than others in the feed lot, due to a difference in breeding, build, conformation and quality. The experienced stockman can pick the stocker that will make good use of the feed given, whether on grass or in the stable. Feeding qualities are usually depicted in the head of an animal. To make profitable gains the animal must have capacity, rugged constitution and the right type and conformation.

Growing and Finishing Hogs on Shorts and Skim-Milk.

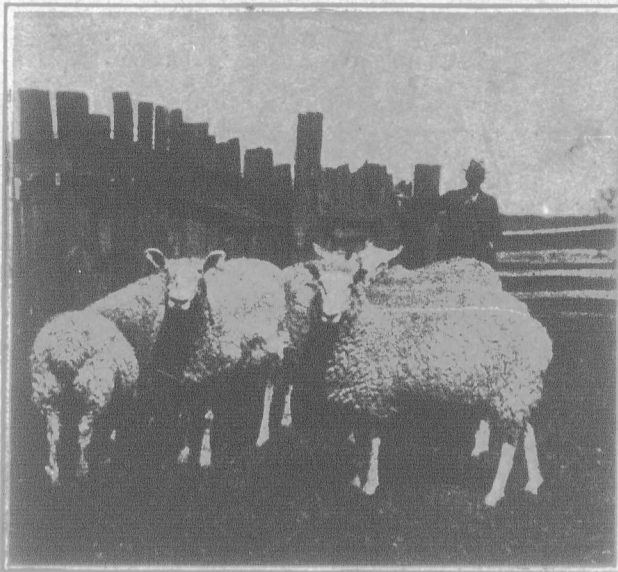
Can pigs two months old, purchased at from eight to ten dollars apiece, be fed and marketed at a profit when all the feed, outside of the milk, has to be purchased on the market, with shorts around forty dollars a ton and hogs selling at from seventeen to nineteen cents per pound? Some claim that a man would about break even on the proposition; others say that he would be paid a fair wage for his labor but Seegmiller Bros., of Waterloo County, know that it can be done at a substantial profit because they have done it. In the fall of 1917 they purchased one hundred young pigs and fed them entirely on shorts and skim-milk. These pigs were disposed of when between six and seven months of age, and when the feed bill was paid there was left a trifle over \$1,500 to pay for labor and skim-milk. Some of these pigs averaged well over the 200-lb. mark at five and a half months of age. The system of feeding was as follows: The shorts were fed dry in the trough and then a little water was poured over them; after this was partly consumed skim-milk was placed in the trough. The pigs had a fair supply of skim-milk as the dairy herd owned by Seegmiller Bros. consists of sixty Jersey cows. The pigs had what milk was left after the calves were fed. In this case it is rather difficult to put a value on the skim-milk, but undoubtedly it had considerable value and tended to make economical gains on the rations given.

The pigs were housed in an elaborate pen, 130 feet long and 34 feet wide, with a ceiling 9 feet high. Two-thirds of the top four feet of each side of the pen is glass which furnishes abundance of light for the piggery. The bottom five feet of the wall is of cement and the top part, other than the windows, is of single-ply lumber. The pen has a tight-board ceiling with a loft above of sufficient size to hold seventy-five loads of straw. Ventilators run up from the floor to the roof of the building. This gives fair ventilation but the owners contemplate covering part of the space now occupied by glass with cotton, as they believe this will furnish ideal conditions in their piggery. There are fourteen pens on each side with a wide passageway down the centre. The piggery is sufficiently large to accommodate over two hundred feeding pigs. Seegmiller Bros. prefer the York-Tamworth cross for feeding purposes. They are planning on keeping twenty-five brood sows and having two hundred pigs on pasture next summer.

Hogs and dairy cows is the combination which has put Seegmiller Bros. on their feet. Nine years ago they had \$1,000 and a whole lot of energy and ambition. They started with a hundred acres heavily mortgaged. This has been added to until at the present time the farm consists of 342 acres with a herd of over a hundred Jersey cattle and implements and equipment of every description necessary on an up-to-date farm. At each end of the barn is a large concrete silo, and sufficient corn is grown to supply feed for the cows practically the year around. Hydro lights the house and barn and furnishes power for driving machinery. Milking is done by machine and the cream is pasteurized and shipped to Toronto. Machinery for doing this work cost a considerable penny, but the extra price which they obtain for the cream above that for unpasteurized cream paid for the equipment in a short time.

Undoubtedly others have had the opportunity which has come to these men but they have failed to take the risk which was involved in putting up buildings, stocking heavily and putting in expensive equipment. There is an old saying "Never venture, never win," and there is a good deal of truth in it. Of course, success depends to a large degree on venturing at the right time. The Seegmiller Bros. claim that with a supply of skim-milk, hogs can be fed at a profit. They have also proven

that shorts, even of the quality now procurable, will grow and finish pigs when fed along with milk. Success in getting economical and profitable gains depends a good deal on the start given the young pigs. Care must be exercised to neither overfeed nor under-feed. This necessitates keeping a close watch on the pig trough to see that you are always feeding within the pig's appetite. Failure to observe this point has in more than one case resulted in impairing the pig's digestion and thus making him unthrifty and a doubtful proposition so far as profitable gains are concerned.



Some Leicesters which May be Seen at the Fairs this Fall.

THE FARM.

Topping Tobacco.

The object of topping is to prevent the formation of flowers and seed, and to direct all growing energy of the plant into the remaining leaves.

The work may be done as soon as the terminal bud is clearly formed and the best results are obtained by topping before the bud has opened. Care must be taken not to bruise the leaves left on the plant.

The time to top varies with the kind of tobacco grown. With some early varieties, planted during the first half of June, the topping may be done from July 25 to Aug. 10, that is, from five to six weeks after planting out. For the larger varieties of slower growth, one may wait a week longer. In all cases the topping should be done as soon as possible.

Experience will tell the grower how many leaves he should let remain on the plant. Its vigor and development at time of topping are generally good guides.

For cigar tobacco, top leaves of less than 12 inches should be avoided; for pipe tobaccos (such as the Big Connecticut and Burley) the larger the leaf the more valuable it is. With the yellow, flue-cured tobaccos, the



A Few Promising Baby Beeves.

importance of early topping is still greater, the main object being to have all the leaves ripen at almost the same time. Early topping ensures upper leaves of a maximum size.

The time of topping controls, in large measure, the time of harvest. The earlier the topping the sooner will the upper leaves reach full development and commence to ripen.

The best method is first to top all plants which have reached the desired degree of development. Eight or ten days later, go over the plantation again and complete the operation by topping all remaining plants whatever their stage of development. One is often obliged to reduce considerably the number of leaves left on late developing plants, but it is better to get fewer leaves of fair size than a greater number but too small to be used to advantage.—Experimental Farms Note.

Our Scottish Letter.

At the moment, perhaps, the question chiefly agitating the agricultural world is the labor problem. In obedience to the country's call an immense advance has been made in arable farming. Briefly expressed, it stands thus: before the War this country imported 40 weeks' supply of its foodstuffs and grew 12 weeks' supply. The position to-day is, that given a reasonably good harvest we are growing 40 weeks' supply and will need only to import supply for 12 weeks. The enormous addition to the potato area in 1917 has been still further augmented this year, and yet the economic condition is such that while the potato subsidy was estimated to cost the country £5,000,000, Mr. Clynes, M.P., was able to inform the House of Commons this week that £1,500,000 will meet the bill. It was well worth giving the guarantee. Farmers responded gallantly; the demand for the big crop grown and garnered has recouped them within the controlled limits, and the issue is gratifying to all. But the military situation at the moment is grave. The National Service authorities have called upon Scottish agriculture, before 11th June, to supply 5,500 men under 31 years of age and in Medical Grade 1, to the army, and the "comb-out" is being rigorously applied—so rigorously that on one farm in Perthshire seven pairs of horses were this week standing idle, and in Kintyre, on four days' notice, a batch of men, some of whom cannot be replaced, had to report themselves at Stirling for military service. These typical illustrations show how grave the situation is. Farmers and stock-breeders say—we have done our best to increase cultivation and there is prospect of a great harvest, but crops have to be cleaned before being harvested, and if the men are to be taken who are most fit, how is the work to be done? The food that is being grown cannot be garnered unless we are supplied with labor. Meetings have been held this week in Glasgow and Edinburgh, and at Dundee and Campbelltown, at which the agricultural situation was discussed. Everyone desires to win the War, and no one desires to handicap those who have the national defences to consider, but the problem of labor is acute, and unless a great land army of women can be organized it is difficult to see what is to be the upshot.

All crops with the exception of roots and oats on old lea, are looking remarkably well. In fact, the universal opinion is that, taking the country all round, we never had more favorable crop prospects. In May moisture came abundantly, followed by almost tropical heat. Grass came away rapidly, and potatoes could not possibly have had weather that suited them better. While I write (June 7) in many districts roots, that is Swedes and turnips, have had to be sown and re-sown. Since June opened there has been rather a lack of moisture, and in consequence the braird has not come away. During April the wire-worm or grub did damage in destroying the seeds of the oat crop on old lea. The rains of May brought away the hay crop, and indeed were it not for the unpleasant situation as regards labor, the agricultural outlook would be re-assuring to a degree.

Lambing has given very good results, and the question now agitating the minds of many is what arrangements are contemplated in connection with the marketing of lambs. Sales begin in the third week of July and go on almost weekly until the end of August. Many are concerned to know the intentions of the Ministry of Food which must take the long view, and at the moment no hint has been given as to probabilities.

It is one indication of the quickened state of agriculture that widespread attention is being given to the question of diseases in farm stock. In the sheep world the great difficulty is a disease known as Brasy or Louping-ill. The problem as to the identity of the diseases so named has not been solved. Whether they are one disease or two is one of the first points to be settled. The term "Brasy" is applied to the disorder in the West and Northwest of Scotland, and the term "Louping-ill" to the disease as it appears in the Southeast of the country. The Glasgow Veterinary College is boldly attacking the problem, and under the guidance of Professor Gaiger, who has been recently appointed to the chair of Bacteriology, something substantial may be effected. Unhappily all such research work in Scotland has hitherto been crippled through lack of funds, and another unhappy feature is a disposition to petty jealousy on the part of those engaged in physiological research. In place of an honorable striving to see who can do most to minimize loss and enhance the value of live stock through the discovery of the causes of and the remedy for such plagues, there is a disposition to act the part of censors on each other. Such manifestations leave an unpleasant impression on the lay mind.

The two great menaces to the cattle world are epizootic abortion and tuberculosis. Something undoubtedly has been done to lessen the ravages of the former, and for this our Veterinary Department of the Board of Agriculture and Fisheries deserve every credit. In Sir Stewart Stockman we have a first-rate head of this Department. He has had wide experience and understands his problems well. The war against tuberculosis has, in a measure, been slackened on account of the preoccupations of this other more tremendous war, but the indications are that when something like normal conditions return the battle against this decimating disease will be resumed with vigor and with a better application than heretofore of the conditions which will ensure victory. In the equine world the investigation into the disease known as joint-(navel) ill proceeds quietly and with considerable hope of success. Not much is being said on the subject, but those who have the matter in hand are not slackening

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their interest. On the contrary, there is every likelihood that whether success attends their efforts or not they will not have labored in vain.

Research into plant life and experimental work in connection with the production of new and improved varieties of seeds are receiving attention. Mr. James Elder, Athelstanford Mains, Drun, East Lothian, has summoned the Highland and Agricultural Society, of which he is a director, to undertake a crusade in favor of the establishment of a National Experimental Station where, under the control of the Board of Agriculture, the production of new varieties of plants and seeds would be prosecuted. Meanwhile pending this large scheme the Board has instituted a seed-testing and plant-testing station. The object of this establishment is to regulate the placing of new and improved varieties of farm plants and seeds upon the market. The feeling is widespread that at present there are many more names than varieties in the market; in other words, that many so-called "new" varieties are not at all new, but in the absence of any central authority to regulate such things there has been no possibility of preventing the multiplication of names. The evil is specially seen in the case of potatoes. Experts are agreed that many varieties so-called are not varieties at all, that the only new thing about many of them is their names. The station that has been opened will both test all such and regulate the placing of genuine new varieties upon the market. It will at once protect the man who is doing genuine work and hinder, if not eclipse, the spurious efforts of the charlatan who trades upon the credulity and ignorance of the unthinking. The scheme which Mr. Elder has inaugurated is much more ambitious than this. Hitherto the production of new varieties of cereals and roots has been left to private enterprise. Splendid work has been done by seedsmen in this line, but it has long been felt that the risks attending such work should be undertaken by the Govern-

ment. The loss attending all such experimental work is considerable, while the resultant benefit has seldom gone in any appreciable degree to the man or firm to whom the credit of producing the new variety belongs. That there is abundant room for such work is evident from the success which has attended Professor Biffin's experimental work in producing new varieties at Cambridge. Scotland possesses peculiar advantages for producing new and hardy varieties of seeds and roots. A very large proportion of the seed potatoes used in England are raised in Scotland. The world knows about Scot's Shorthorns, and Aberdeen-Angus, and Ayrshire and Galloway cattle—all breeds possessing distinct characteristics in the direction of hardiness and constitution, which have created a demand for them throughout the world. The same remark applies to Clydesdale horses and other breeds of horses and ponies. There is, therefore, every inducement for the Board of Agriculture to take this matter in hand, and they are quite keen to do so.

Reference to horses leads me to offer a few observations on the recrudescence of the battle of the breeds. Recently there came into my hands an extraordinary illustration of the enterprise of Americans in pushing the Percheron breed in the Northwest. Apparently the promoters believe that elaborate and audacious advertising can make a breed popular. I am old-fashioned enough to believe that what makes either a race of horses or a race of men popular is reliability and utility. Scotsmen, as a race, have made their way in the world with a minimum of advertising but with a maximum of the qualities which ensure respect and stability to the commonwealth. The declaration through a dozen pages of a newspaper that the Percheron is the greatest draft horse on earth will never make him so—and if he were so, there would be no necessity for proclaiming the fact at such expense. Here we are having the same breed boomed for all it is worth by the Earl of Lonsdale in Cumberland, and Mr. Overman

in Norfolk. Somehow I do not feel impressed. I never heard that Lord Lonsdale knew much about a draft horse, and I am not sure that he would ever have earned his living in horse-breeding and horse-dealing if he had not been born an Earl. His criticisms of the native British draft breeds, the Clydesdale, the Shire, and the Suffolk suggest that he has been most unfortunate in his acquaintance with them. No one who knows the A. B. C. about Clydesdales would ever write down "greasy legs" as one of their worst faults. The Clydesdale is not perfect. I do not happen to have run across any breed which is, but a good Clydesdale has the best feet and legs—by which I mean the feet and legs which wear best and longest—of any draft horse. It is rather strange in all this talk about the relative merits of breeds that somebody who has cash to spare does not take the trouble to organize a fair trial of the wearing qualities of each breed as represented by the selected champions of each. The best draft horse is the draft horse which wears best and for the longest period in the most trying conditions. He is the horse which will last longest on the streets of great cities under the keenest tests as to endurance and service. The horse most likely to do that is the Clydesdale, because he has been bred and selected for the longest period with that end in view. As the late Andrew Montgomery once tersely expressed it, "A horse's back will never break, but his feet will;" and we may add, bones, unless they are flat, thin and clean to begin with will become gross. Recently there was published in the *Scottish Farmer* the photograph, in his 28th year, of the Clydesdale stallion, Montrave Mac 9958. One would like to see alongside that photograph a corresponding photograph of a representative Shire, Suffolk, Percheron and Belgian draft horse of the same age. I make no prophecy, but I dare affirm that not one of these others could be found which in respect of sweetness of limbs and soundness of feet, would compare with the Clydesdale. But

varieties, simply because in that way they can render a service in rationing the armies and the civilian peoples of our Allies. In former years there appeared to be time after haying and early in September to put in a field of wheat, and this lessened the rush in the spring. More than that, the straw produced helped out wonderfully. Even under present conditions, when there appears to be no slack time, many will endeavor to put in a substantial acreage of fall wheat and these should now be losing no opportunity of getting the land into condition. Where a summer-fallow is being cared for a loose mulch should be maintained on top and all weeds destroyed with frequent harrowing. The summer-fallow makes a splendid seed bed for wheat if it is not neglected. Excellent crops of wheat are also grown following factory peas, but nothing in that regard can be done just at this time.

Cleared sod fields should now be plowed, rolled and harrowed. The roller can be of great service if used properly, but it likewise can be the means of causing a great loss of moisture if it is not used judiciously. The best way to employ the roller is to plow no more in one day than can be rolled and harrowed before quitting at night. Sod for wheat should be plowed no less than five inches deep, and then rolled down so as to establish if possible the little water channels which lead from the reservoir in the soil up to the surface. However, if these channels, established by rolling, are not broken at the top serious loss of moisture will result, and in this way the roller may do an irreparable amount of harm. Follow the roller immediately with the disks and establish a soil mulch to prevent evaporation. Some then go on with the harrows and break down the lumps and clods which are likely to be thrown up by the disks. This certainly leaves the surface in splendid condition and permits of a minimum of evaporation. Allow the weed seeds to germinate and then use the harrows again before the surface becomes hard or baked.

A twelve-acre field at Weldwood was treated in this way last autumn. A top dressing of about 7 loads of manure to the acre was applied shortly before seeding and cultivated in. The wheat sent up a reasonably good top growth last fall and the crop survived the winter excellently. At time of writing the prospects on this particular field are for a good crop, and this we attribute to the attention the land received prior to seeding, and the top growth made last fall. Generally, there was little growth made on wheat fields last autumn and the severe weather killed the roots. A thoroughly prepared seed bed with a top dressing of manure, and perhaps some commercial fertilizer, should bring the growth on satisfactorily this fall and ensure, to a degree, its survival throughout the winter and spring.



Use the Roller Judiciously and Follow Immediately with Disks or Harrows.

ment. The loss attending all such experimental work is considerable, while the resultant benefit has seldom gone in any appreciable degree to the man or firm to whom the credit of producing the new variety belongs. That there is abundant room for such work is evident from the success which has attended Professor Biffin's experimental work in producing new varieties at Cambridge. Scotland possesses peculiar advantages for producing new and hardy varieties of seeds and roots. A very large proportion of the seed potatoes used in England are raised in Scotland. The world knows about Scot's Shorthorns, and Aberdeen-Angus, and Ayrshire and Galloway cattle—all breeds possessing distinct characteristics in the direction of hardiness and constitution, which have created a demand for them throughout the world. The same remark applies to Clydesdale horses and other breeds of horses and ponies. There is, therefore, every inducement for the Board of Agriculture to take this matter in hand, and they are quite keen to do so.

Reference to horses leads me to offer a few observations on the recrudescence of the battle of the breeds. Recently there came into my hands an extraordinary illustration of the enterprise of Americans in pushing the Percheron breed in the Northwest. Apparently the promoters believe that elaborate and audacious advertising can make a breed popular. I am old-fashioned enough to believe that what makes either a race of horses or a race of men popular is reliability and utility. Scotsmen, as a race, have made their way in the world with a minimum of advertising but with a maximum of the qualities which ensure respect and stability to the commonwealth. The declaration through a dozen pages of a newspaper that the Percheron is the greatest draft horse on earth will never make him so—and if he were so, there would be no necessity for proclaiming the fact at such expense. Here we are having the same breed boomed for all it is worth by the Earl of Lonsdale in Cumberland, and Mr. Overman

on this subject enough has first and last been written. Let the same class of Clydesdales be placed alongside the equal grade of other draft breeds, and no one who knows anything about what constitutes real wearing quality in a draft horse need have any fear as to the result.

Meantime we are more concerned about the War between the nations than about the War between the horse breeds. Let us earnestly labor and pray that we are within sight of the end.

SCOTLAND YET.

Preparing Land For Fall Wheat.

In spite of the injury to wheat fields planted last autumn at the cost of considerable labor and expensive seed, the farmers of Ontario will again respond no doubt to the appeals made for still more wheat, and take another chance on this crop which is so badly needed. Those fields which came through the winter and spring in anything like reasonable condition will yield a fair return to the grower, and at the same time help to relieve the situation which will become acute before the main wheat harvest begins. Seed is none too plentiful and in many cases in this Province we shall have to take grain from the machine and prepare it for the land almost at once. There should be a spirit of co-operation throughout the country in regard to the seed question, for many will have bushels to spare while others will have to purchase their entire supply.

The important thing, however, at the moment is to prepare the land or start the cultivation so a suitable seed bed will be ready at the proper time. Much of the success which attends all wheat growing depends on the character of the soil and the preparation of the seed bed. Some farms seem particularly adapted to the crop, while others will not respond to even the most diligent and scientific attention. Wheat, in the Province of Ontario, is not the most popular crop by any means, and many are growing it now, both fall and spring

Government's Action Questioned.

The right of the Ottawa Government to cancel, by Order-in-Council, exemptions from military service previously granted under the Military Service Act, has recently been called in question at Calgary, where eight applications for Habeas Corpus have been received from soldiers affected by the Order-in-Council of April 20, respecting young men 20 to 22 years of age. R. B. Bennett, formerly Director-General of National Service and member of Parliament for Calgary, introduced the first case into the appellate division of the supreme court of Alberta, late in June, and the matter has been given wide publicity since. Objection to the enforcement of the Order-in-Council is based upon the fact that the writ of Habeas Corpus, established by the Imperial statute of 1767 as part of the British law in Canada, cannot be suspended nor abolished by the Canadian Parliament and, further, that certain procedures established as law by act of Parliament cannot be amended by an Order-in-Council: action by Parliament and not the Governor-in-Council is necessary.

It appears that this point was raised by the opposition at the time when approval of the Order-in-Council was asked of the House by resolution. The Government, however, claimed to be acting by virtue of the War Measures Act passed by the Dominion Parliament in 1914, an Act which, it is claimed, provides sufficient authority for the action taken because of a specific provision in the Military Service Act, providing that nothing in the latter Act shall detract from the powers of the Governor-in-Council granted under the War Measures Act. The position of the Government seems to be less assured because the Order-in-Council was prepared and enforced while Parliament was in session, a monarchic rather than a democratic procedure, justified, according to the statements of the Government, however, by reason of the very great need for men. Had the Military Service Act required to be amended according to strict constitutional procedure, fully a month would have been required, and this, it is maintained, would have occupied more time than was justified under the conditions surrounding the reinforcement of the Canadian Expeditionary Force.

The Government will, of course, appeal the decision of the majority of judges in the Alberta Court of Appeal, and will take the case to the Supreme Court of Canada, but will in the meantime, according to statements from Ottawa, proceed as usual with the enforcement of the Order-in-Council. Should the Supreme Court decide against them, the Government will have no recourse but to rectify the mistakes by special session of Parliament or drop the carrying out of their avowed intentions. This latter, it is stated, they have no intention of doing and the administration of the Act will be continued, whatever may happen. In any case, the decision of the Alberta Court can affect no young men outside of the Province of Alberta. It would be regrettable indeed if the country were forced to bear the expense of a special Parliament.

Canada's Young Farmers and Future Leaders.

Estimating the Farmer's Business.

A few days ago we were on our way to a pure-bred stock sale and overheard four farmers discussing the farm surveys which are being conducted by the Ontario Department of Agriculture. One man said, "I haven't seen those government fellows around our part of the country lately; I guess they must have given it up for a bad job." The next man said, "perhaps there were too many like myself, couldn't give them a very good idea about a lot of things they wanted to know. I heard that they had moved to Quebec some place, when they didn't make it go very well here in Ontario."

"John Smith's boy was home the other day, I guess he's got a pretty soft job. He's on this farm survey work too, and draws big wages. From what I hear, they get out about 9 o'clock in the morning and quit about four o'clock in the afternoon with a couple of hours off for dinner."

"Oh well," the third man said, "I suppose they have to stop early and figure out what they have done during the day. I heard the man in charge, from the College at Guelph, talking about the results from the survey in Peel County last fall, and about all they had found out was that it paid better to run a big farm than a small one. We knew that before, but I suppose the Government has to find some way to spend money and I guess that is as good a way as any other."

Last fall when the Caledon township survey was being conducted in Peel County, it was our privilege to spend a day with those who were taking the records, in order to see how it was done. Some men didn't see the good of the survey any more than the men quoted above and one man said "Well, I'm pretty busy digging potatoes and, anyway, I don't see why I should take two hours or more of my time to tell somebody else all about my business. I don't see how I'm going to get anything out of it; I just wish I could use all the education I've got. If you want my opinion of the whole business, I think it's just a scheme of the council to raise our taxes. They may not do it next year but they will do it just the same."

Fortunately, most of the farmers appreciate the purpose of the surveys that are being undertaken even though they have not taken the time to study out the many ways whereby they themselves may be benefited by a careful analysis of the information secured regarding the agriculture of their own community. It is not the purpose of this article to discuss the importance of these surveys, although it does appear to us that there

are two very great benefits to be derived from them, either one of which would of itself warrant the expenditure of time and money entailed. In the first place, the advantage of direct value to the farmer lies in the fact that he can, after the results are published and he has received a report on his own farm, check up his farming methods with the average for the community. He can tell whether he has farmed as good as, or better than the average and if he has failed any place, it should not be difficult to find out just where he fell down. The advantage of knowing this pretty accurately and of knowing also what crops or types of farming have proven most profitable in his own township or section, can scarcely be measured in dollars and cents, but anyone who is progressive cannot fail to appreciate the value of the survey, especially after sufficient data has accumulated to make the figures absolutely reliable. In the second place many wrong impressions prevail among those who are not farming regarding the profits that farmers make. Like sin and the devil, these impressions are always operating against us. Only figures can combat them. "Figures can't lie but liars can figure" is an old saying and to prevent liars from figuring wrongly and to secure figures that really will not tell a lie, they must be gathered from the farms. No good would come from publishing profits from John Brown's farm, but if his profits are averaged with hundreds of others, the evidence cannot be disputed and critics must be silenced or made to appear ridiculous. Not long ago a man, who should have known better, said to us that farmers were getting rich out of the war and that they were the greatest "cold storage" manipulators in the country. This was a little too much for us so we quoted a few yards of figures from the Caledon Survey. The figures were correct and could not be disputed, so this gentleman was obliged to acknowledge a wrong impression.

It is more justifiable to wonder how estimates of crop yields and cash returns can afford a safe guide to the actual profits in farming. Certainly the estimates of a few men would not prove reliable, but the estimates of a few are not depended upon in these surveys. It has been found that where sufficient numbers of estimates are taken, the law of averages comes into operation and the figures of farmers who overestimate are nearly balanced by those who underestimate; so that the result is correct for all practical purposes, provided that those who take the records, check up a man's statements so far as possible and discard those records where inaccuracy is detected. Perhaps the following

extract from a bulletin by Spillman of the U. S. Department of Agriculture, referring to a survey in which the reliability of farmers' estimates was checked up, may be of interest:

"Among the several hundred farms included in the survey were 135 that sold milk to creameries. Each of these farmers was asked to give as accurate an estimate as possible of the amount of money he had received for this milk. After the survey was partially finished it occurred to the investigator that it would be possible to secure a check upon the accuracy of these estimates by obtaining the actual figures from the creameries themselves. It was decided also to test in a similar manner the farmers' estimates of the quantity of milk each had sold to the creamery. The estimates as to quantity of milk sold were then obtained from the 79 farms visited after the decision had been reached to make this test. The farmers did not as a rule weigh their own milk and were not as accustomed to dealing with weights as they were with money; it was to be expected, therefore, that the estimates of quantity of milk sold would be less accurate than those of money received, and this was the case, as will be shown below. After obtaining the estimates from the farmers, the actual figures, both for weights of milk sold and for money received, were secured from the creameries that had purchased the milk.

Estimated pounds of milk sold (79 farms).....	3,518,816
Actual pounds of milk sold (79 farms).....	3,487,320
Difference.....	\$1,496
Estimated value of milk sold (135 farms).....	\$106,163.00
Actual value of milk sold (135 farms).....	106,155.60
Difference.....	\$7.50

"It is seen that the error in the quantity of milk sold is a little less than 1 per cent. of the whole. At the same time the individual estimates of pounds of milk sold were in error by amounts ranging from 40 per cent. above to 36 per cent. below the correct figures. In the total these errors tended to counterbalance each other so that the sum of the estimates was quite accurate. In the estimates of money, in terms of which the farmer is accustomed to reckon, the error in the total is less than one-hundredth of one per cent. These instances will serve to show something of the measure of accuracy attainable in the results of the farm management surveys."

Automobiles, Farm Machinery and Farm Motors.

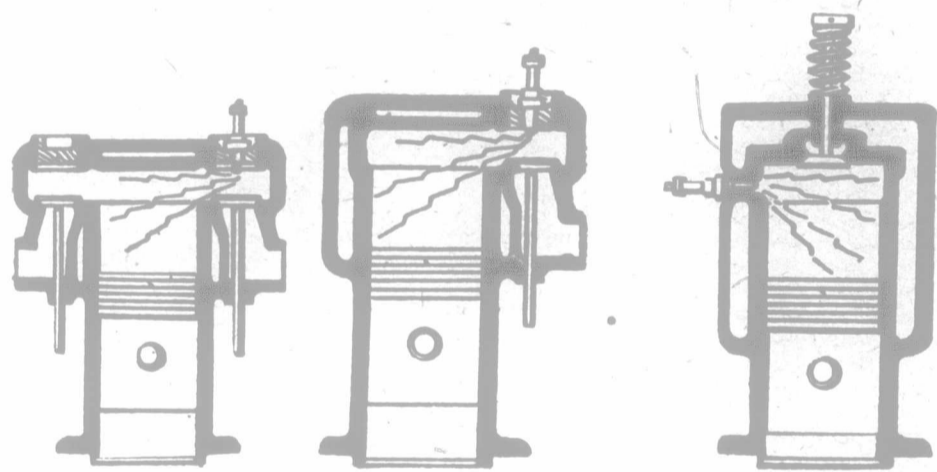


Fig. 1—T-head Engine. Fig. 2—L-head Engine. Fig. 3—Valve-in-head Engine.

Valve Action.

BY PROF. W. H. DAY.

In the four-cycle engine let us study the cycle, or rather its production, a little more closely. Some intake valves open by suction, as has already been mentioned. It is evident that in such cases the valve cannot open until the piston moving outward has created sufficient suction to overcome the spring that holds the valve shut—the stronger the spring the later the valve will open, and the weaker the spring, the earlier. The in-rushing mixture restores the pressure in the cylinder thus reducing the suction, consequently, the valve closes before outer dead centre, just as soon indeed as the suction again drops down to equal the strength of the spring, but the action is the reverse of the former, i. e., the stronger the spring the earlier the valve closes, and the weaker the spring the later. In engines of large bore and low speed, especially of the hit-and-miss type, the automatic intake has been found to give fairly good results, but for high speed engines it is not so satisfactory, because the valve action is sluggish and besides the strength of the spring lessens with age, thus deranging the timing of the valve. Moreover it is found that better results are obtained if the intake valve is held open until after the piston passes outer dead centre. Consequently in high speed engines the intake valve is operated by a cam. So also is the exhaust valve in all cases, whether the engine be of low or high speed.

The method of operating the valves depends upon the type of head used. If it be a T-head, as shown in figure 1, the intake valve is on one side of the cylinder, and the exhaust valve on the opposite, and it requires two cam shafts, one for each. Also note the valves open upward being operated by push-rods as the cams come round. In the L-head, figure 2, both cams are placed on the same side of the cylinder, and both valves open upward. But in the valve-in-head type, figure 3, the valves must of necessity open downward, hence the push rod must be attached to a "rocking arm" which presses downward on the valve stem when the cam moves the push rod upward.

Valve Timing.

When the valves are mechanically operated the mechanism may be so adjusted as to open and close them at such times as will give greatest efficiency. Since the fuel is taken in by suction there would be no advantage in opening the intake before the beginning of the suction stroke. As a matter of fact it is usually opened from 7 to 10 degrees after inner dead centre, the exact amount depending upon the design of the particular engine in question. In a few cases, however, the intake valve really opens before the suction stroke begins, and as already intimated, best results are ob-

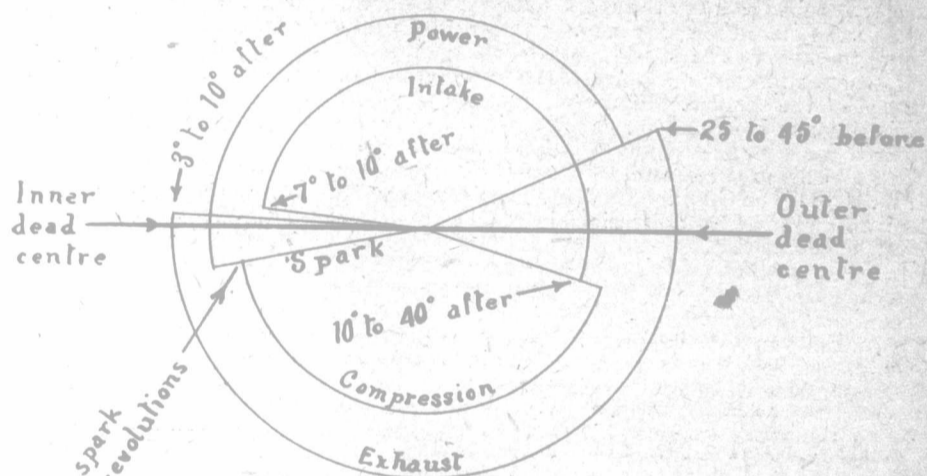


Fig. 4—Diagram Illustrating Valve-timing and Spark-timing.

Follow the circles to the right, beginning with the smallest, thus: Intake, compression, power, exhaust.

tained when the intake valve is held open after the end of the suction stroke—as much as 20 degrees and sometimes 30 degrees past outer dead centre. Why better results? An automobile is going at high speed. The power is shut off and the car is carried forward a considerable distance by its own momentum, i. e., the force arising from its weight and speed. The same applies to the fuel mixture. The suction sets the air moving rapidly through the carburetor carrying fuel with it, and when the suction is shut off the momentum of the mixture keeps it still flowing into the cylinder. The result is that each charge of fuel mixture is larger than it otherwise would have been, hence the engine develops more horse-power, simply because the intake valve is held open by the cam and push rod.

Let us turn now to the exhaust valve. As already stated, it is opened before the end of the power stroke, thus allowing most of the burned gases to escape by their own expansive power, consequently there is little back pressure during the exhaust stroke—only a small portion of the gases remain to be driven out and the exhaust valve is wide open to permit their easy escape. And this valve also is held open a few degrees after dead centre, the momentum of the gases continuing to scavenge the cylinder for a short time after the piston starts downward. Of course the exhaust valve must close before the intake again opens, except in a very few specially constructed engines.

The lag and lead of the valves is not the same for all engines. The slower the speed the later the valves may open and the earlier they should close, and vice versa. For mechanical intakes, the valve opens from 7 to 10 degrees after inner dead centre and closes from 10 degrees to 40 degrees after outer dead centre, while for automatic intakes the valve opens about 20 degrees after and closes 10 degrees before the corresponding centres. The exhaust valve opens 25 to 45 degrees before outer dead centre and closes from 3 to 10 degrees after inner dead centre. The diagram in figure 4 should aid in remembering the positions at which the valves should open and close.

The timing of the valves is effected first by putting the gears in mesh at the proper point. If, for example, the particular engine that is being timed should have its intake valves open 10 degrees after inner centre, then the crank shaft is turned 10 degrees past centre and held in that position while the cam shaft with its gear is rotated till the long side of one intake cam is just beginning to bear on the intake push rod of that cylinder, and then the gears are slipped in mesh. Before proceeding further, the timing of this one valve should be checked over to make sure that the gears are meshed exactly right, and not one cog too far either way. When the gears are right for one valve they will be right for all other valves operated from that cam shaft. In the T-head engine there are, of course, two cam shafts, each of which must be timed separately.

After the gears are properly meshed, the push rod must be inspected, and adjusted if necessary. Its length should be such that it begins to push up on the valve stem almost immediately the cam begins to raise the push rod. If the push rod is made too long, it will hold the valve slightly open even when the short side of the cam is in contact, thus causing loss of power. If it is too short a "noisy tappet" will result. To avoid these troubles it is customary in adjusting the push-rod to leave about the thickness of a thin sheet of paper between it and the valve stem when the short side of the cam is in contact. With the gears in proper mesh and the push rods all the right length the timing of the valves will be as intended for that engine.

Need of Ignition Timing.

But the valves are not the only part of the engine that needs timing. The spark timing is equally important. To get best results from the fuel used the expansion of the power stroke must become effective just as the piston passes inner dead centre. If the fuel mixture burned with an instantaneous explosion the spark would need to occur just as the piston reaches the centre—but it does not, indeed it burns rather slowly compared with explosives such as gunpowder, dynamite, etc., consequently the spark must occur before inner center in order to allow time for the fuel to be completely burned just as the piston rounds the centre. The time required for a charge to burn is the same whether the engine be running fast or slow, consequently there must be provision made for changing the timing of the spark with the speed of the engine—the faster it runs the more the spark must be advanced, the slower the more the spark must be retarded. Speaking in a general way the spark must be changed about 5 to 7 degrees for each change of 100 revolutions in the speed of the engine. Figure 4 shows the spark occurring before inner centre. Spark timing will be considered more in detail under Ignition Systems.

NOTE.—This is the second of a series of articles by Prof. W. H. Day, on Gasoline Engines. The first appeared in the issue of June 13 and described internal combustion engines. These articles should prove intensely interesting and beneficial to many of our readers. The use of gas engines in various forms is becoming quite common and these articles should aid the owner of an engine to better understand his machine and thus place him in a position to prevent or to overcome difficulties which occasionally arise with power machines.—EDITOR.

Width and Length of Belting.

EDITOR "THE FARMER'S ADVOCATE":

What width and length of rubber belting will be necessary to use with a six-horse-power kerosene engine to run a 30-inch circular saw? Is a 4-inch, 4-ply belt liable to slip or run off the pulleys? R. P.

Ans.—The correspondent has not given enough data to permit of a definite solution. We should know the diameter of the pulley on the saw. For single belting a common formula for width is:

$$W = \frac{900 \times H}{S}, \text{ where}$$

W = width of belt in inches.
H = horse-power to be transmitted.
S = Speed of belt in feet per minute.

Let us apply this formula. A 30-inch saw should run 1,200 r. p. m. Suppose the pulley is 7 inches in diameter, then the speed in feet per minute is:

$$\frac{7 \times 22 \times 1,200}{2} = 2,200$$

For any other size of pulley, calculate the belt speed in a similar way.

And the engine is 6 h.-p.

Therefore width = $\frac{900 \times 6}{2,200} = 2\frac{1}{2}$ inches, nearly, for single belting.

For double belt the formula is:

$$W = \frac{630 \times H}{S}$$

Hence in this case:

$W = \frac{630 \times 6}{2,200} = 1\frac{3}{4}$ inches, nearly, for double belting.

From this the correspondent will thus see that a 4-inch 4-ply belt should be quite ample.

Now as to length, in theory this is immaterial, provided the belt is tightened according to its length, i. e., the shorter the belt the tighter it must be, and vice versa. But in practice it is found that a very short belt puts undue strain on the bearings and shafting, while on the other hand a long belt is liable to be unsteady because of flapping. About 20 to 25 feet between the shafts is good practice. W. H. D.

Boiling Water.

All motorists, and particularly those who are not thoroughly experienced, become somewhat alarmed when the water in their radiator begins to boil. Sometimes the water over-heats because of a mistake made by the driver. For instance, he might forget to advance the spark. Just as soon as he remedies his error, the water will reach a normal temperature again. Water boiling occasionally does not do any harm. There is an over-flow pipe coming up within a close distance of the radiator cap, and by means of this the expanded water can be drained to the ground, and should steam be developed it also is capable of exhaustion without danger.

If the boiling water continues for sometime, however, the supply of water in the radiator must be replenished. If all the indications point to the boiling mark, you should be careful about removing the radiator cap, because there is real danger from scalding, for the water may burst forth like a young geyser. It is the better plan to stop the motor and allow the water to cool down if you think the over-heating has been excessive and that the water, upon the cap being released, may rush into the air. Should you notice that the over-heating seems to be chronic, it would be well to search out the cause of the trouble. Perhaps in the first instance there may be a lack of water, and if so, such a condition can be easily cared for. It is just possible that the fan belt is damaged or loose or broken, and so does not work effectively. Common sense will tell you how to remedy this difficulty. If the spark lever has been retarded too far and you have run your machine any distance, make it a point in the future before getting well under way to see that the spark is properly advanced. Sometimes the circulation of the water is almost stopped by a collection of foreign matter or sediment. Under such circumstances drain the radiator and wash it out properly until all dirt has been thoroughly removed. You will understand that if the water cannot circulate, then the jackets around the combustion chambers cannot perform their mission by reducing to a minimum the heat caused by the constant explosions.

A lack of lubrication will induce over-heating. If you do not drain the oil from your crank case at regular intervals you will soon subject your power plant to unnecessary friction. The oil in the crank case has a tendency to wear out and, just like any other mineralized substance, loses its life and becomes inactive. You should remove all the old oil periodically. Clean out the crank case with kerosene and put in a complete new supply of oil. Putting in fresh oil with old oil does not maintain a proper standard. You must remove the worn-out lubricant and replace it with fresh stock. New oil keeps the engine from over-heating, because it has sufficient body in it to reduce friction. If the cylinders in your car become heavily carbonized there is going to be a tendency to boil the water. We have mentioned, in a number of previous articles, the system by which this carbon can be removed, either in your own garage by means of tools, or at any public garage with the oxy-acetylene system. It may not be necessary to give as a further cause of boiling water, the use of too rich a mixture. Even novices at the motoring game know that when you are turning out a combination of gasoline and air that is out of proportion, the consumption of the extra gasoline is going to over-heat the motor, and hence the water that flows through the

jackets. It is also a matter of every-day information that dirty spark plugs tend toward rising temperatures. You can easily remove your spark plugs for inspection. If you find they are fouled, gasoline will in most instances take away the foreign matter.

We know of one motorist who was greatly annoyed at the constant over-heating of the water in his radiator. Having had considerable experience with automobiles, his pride was hurt when he realized that he had exhausted all his knowledge in endeavoring to locate the trouble. Upon taking the car to an expert, it was some little time before the latter secured a correct diagnosis. And what do you think he found was the difficulty? Nothing more nor less than that the fan belt blades had in some unaccountable manner become so bent that they were not creating an adequate circulation of air through the radiator. We have not heard of many similar instances. We think that should your power plant develop the habit of over-heating, you will find the cause of the trouble behind some of the usual symptoms that we have outlined. Sometimes, however, peculiar situations will arise. You cannot set down exact rules for the handling of a motor car. This means that each driver should always be on the alert. Keep every moving part of your car under inspection at all times. Should any part become bent, torn or out of alignment, remedy it without delay, or it may eventually cause a considerable amount of trouble. AUTO.

THE DAIRY.

Butter-fat is 100 per cent. digestible; no wonder it is good for children.

A scrub bull allowed to run in the field with the cows will never do his owner any good.

It has been proven possible to produce clean milk having a low bacterial count without expensive barns or equipment.

Daughters of King Segis Pontiac Count have broken 100 different world's records for various combinations of milk and butter production.

Some move for accredited herds free from tuberculosis is in order in Canada. Dairymen generally must awaken to the peril of this disease.

About 50,000 cattle are tested each year for tuberculosis in New York State. The percentage of reactors has dropped from 22 per cent. a few years ago to 11 per cent.

A dairy council has been organized in Minnesota for purposes of education and publicity. So far, farmers who sell butter-fat have agreed upon an assessment of $\frac{1}{8}$ cent per pound of butter-fat.

Low Banks Queen Pontiac Korndyke, with 535.0 lbs. milk in seven days, ties the American champion for world's championship honors as a junior two-year-old. She freshened under 24 months of age.

A 14-year-old Kansas Holstein has recently completed a 21-lb. record in 7 days, the fat average being 5.92 per cent. Some of her fat reports show percentages of 8.6, 9 and 8.9 per cent.

Milk is important as a food, because it is the most complete and well-balanced of any single food. Moreover, it contains certain principles or substances which make it vitally necessary for babies and children.

Rose De Kol Wayne Butter Boy has recently com-



Shade in the Pasture Means Comfort for the Herd.

pleted a yearly record of 20,830.4 lbs. milk, 1,142.32 lbs. butter as a junior two-year-old. She averaged just under 22 lbs. for every one of the 52 weeks in the year.

British Friesian Sale.

That British breeders of Holstein cattle (or Friesians as they are now called in Britain) are coming forward with some very respectable milk records has been increasingly evident recently, although yearly milk records of over 20,000 pounds are, as yet, conspicuously absent. In fact the first and only Holstein cow to give 20,000 pounds or over, in a year, was sold at the auction sale of F. B. May, Essex, June 6. Her name is Eske Hetty and her record was 24,130 pounds in 365 days in 1917 as a 7 year old. Eske Hetty is reported to be "a great cow in every way, with immense size, depth, constitution, bag, veins and milking appearance." She sold for 3,500 guineas to the Olympia Agricultural Company. The same buyers also purchased Routh Blossom III, a four-year-old with a record of 13,420 pounds milk in 308 days, for 1,700 guineas. Two other heifers sold for 650 and 600 guineas, respectively and several more for sums ranging from 200 to 400 guineas.

There were 33 lots offered in this sale and the total was 12,626 pounds, five shillings, an average of 382 pounds, 12 shillings. Of these 33 lots, 29 were females averaging 418 pounds, 14 shillings and 8 pence. Only four males were offered, the oldest being a two year old. The four averaged 120 pounds, 15 shillings.

Butter Price Not Set.

On the market pages of our issue of July 4 there appeared a report from our Toronto correspondent to the effect that it had been believed that the Dairy Produce Commission had fixed the price of creamery butter, a step which has been anticipated for some time. We immediately got in touch with J. A. Ruddick, Dairy Commissioner at Ottawa, and a member of the Commission, in order to find out whether the report were correct. The report was to the effect that the Commission had fixed the price of creamery solids at 43½ cents per pound, delivered at Montreal, and because such a price seems plenty low enough to us in comparison with the price fixed for cheese we are glad to give publicity to the following letter from Mr. Ruddick, which effectually contradicts any statement that the price of creamery butter has been fixed by the Commission. "I do not know how the report first came in circulation that the Commission had fixed the price of butter. You may be assured that if the Ministry of Food decides on a set price for Canadian creamery butter the Commission will make a proper announcement, and it will not be left for the news to filter out in any haphazard way. Any announcements which do not come direct from the Commission may be disregarded.

"While no set price has been agreed upon, the Commission did buy a few packages of butter some time ago on the open market at current rates, and 43½ cents was paid for some of it because that was the prevailing price."

Testing Ice Cream For Fat.

Professor H. H. Dean, of the Ontario Agricultural College, states that his department has been in receipt of many enquiries regarding the new regulations laid down by the Canada Food Board with reference to the manufacture of ice cream, and the methods of testing ice cream for fat. Order No. 34, section 8, of the Canada Food Board, reads: "On and after May 1, 1918, no person in Canada shall use in the manufacture of ice cream more than ten per centum of fat, whether of animal or of vegetable origin, or more than six pounds of cane sugar to eight gallons of ice cream." Prof. Dean states that his department has been conducting some investigations and these investigations have resulted in the establishment of a formula or recipe for a batch of ice cream which will produce about eight gallons of good quality material and which will come within the regulations as laid down by the Food Board.

The cost of the ingredients in this formula will range from 53 to 57 cents if bought in small quantities; wholesale buying would, of course, reduce the cost. The recipe follows: "4½ pounds or 4½ gallons of cream testing 13 per cent. fat; 1½ pounds skim-milk powder; 6 pounds cane sugar, (1½ pounds sugar may be replaced with 2 pounds corn syrup); 4 ounces vanilla extract; 8 ounces gelatine dissolved in 6 pounds or one-half gallon skim-milk. If whole milk and cream are used, mixing equal quantities of these will produce an ice cream testing not over ten per cent. fat, assuming that the milk and cream are of average fat content—3.5 and 18 to 20 per cent. fat respectively." It will be noticed in this formula that 1½ pounds of cane sugar may be replaced by 2 pounds of corn syrup. The sugar supply being under certain restrictions, it is necessary to conserve cane sugar as much as possible, and while there is no ban placed upon the manufacture of ice cream, the United States Food Administration have gone so far as to urge the people of their country to patronize only those firms using corn syrup in the manufacture of ice cream, instead of cane sugar. Ice cream is a wholesome and healthful food, but on account of the fact that it requires so much sugar in its manufacture, other foods are much more saving of sugar, unless a substitute for cane sugar is used.

Prof. Dean gives three methods of testing ice cream for fat, and these are given herewith in his own words. It is particularly necessary, in view of the standard which has been laid down for ice cream, that the material be tested occasionally in order to avoid and guard against

error in standardizing methods. Ice cream cannot be tested for fat in the same way as the ordinary cream, on account of the large percentage of sugar which it contains. Professor Dean's methods follow:

"1. *Glacial Acetic and Hydrochloric Acid Test*—A representative sample of the ice cream is taken and melted and thoroughly mixed; a 9-gram sample is weighed into an 18-gram Babcock cream test bottle. A mixture is prepared using equal parts of glacial acetic acid and concentrated hydrochloric acid. Twenty cubic centimeters of this acid mixture is added to the 9-gram sample of ice cream in the test bottle and is then all well shaken. The bottle is placed in a water bath of 120 degrees F. to 130 degrees F., and shaken at intervals until a brown color appears. It is then placed in the Babcock centrifuge and the test completed in the same way as for testing cream and the reading multiplied by two.

"2. *Sulphuric Acid Test*—To make the test with sulphuric acid, a 9-gram sample is weighed into an 18-gram test bottle. About 9 cubic centimeters of lukewarm water is then added to dilute the sample in order to have about 18 cubic centimeters of mixture in the bottle. The sulphuric acid is then added slowly, a little at a time, at minute intervals, shaking well after each addition until a chocolate brown color appears in the bottle. No definite amount of acid can be stated as the quantity will vary with different ice creams. As soon as the chocolate brown color appears in the ice cream a little cold water may be added to check the action of the acid. The bottle is then placed in the centrifuge and the test completed in the usual way. The reading is multiplied by two.

"3. *Acetic and Sulphuric Acids*.—Weigh a 9-gram sample of ice cream that has been thoroughly mixed. About 9 cubic centimeters of water is then added to dilute the sample. Add 5 cubic centimeters of acetic acid, then add carefully 6 to 8 cubic centimeters, sulphuric acid. Centrifuge, and then add water the same as in other tests. If using an 18-gram bottle, multiply the reading by two, to obtain the per cent. fat in the ice cream. A nine-gram bottle which is graduated to give the percentage of fat directly, needs no correction when reading."

HORTICULTURE.

Watch for cutworms in the garden.

Be sure and keep the weeds down in the young strawberry patch.

If any trees are so heavily laden that they need thinning, now is the time to do it.

A good application of tankage or other good manure on the asparagus bed just now will pay for itself and more.

It is not wise to cultivate raspberries during the picking season. Give one or two stirrings after picking is over, and then stop for the season.

The cover crop should be sown in the apple orchard by now to avoid winter-killing of trees next winter. Rape, buckwheat or red clover are in general use.

Watch the orchard for twig or fire blight. Cutting out of infected parts and disinfecting all tools and wounds with corrosive sublimate 1 to 1,000 is the only method of combating this rapid spreader.

The United States Fruit Crop.

An estimate of the apple crop of the United States, made by the Bureau of Crop Estimates on June 1, gives the condition as 69.8 per cent. as compared with a ten-year average on June 1, of 68.2 per cent. New York State, as a whole, will have a much heavier crop than last year, with quality prospects much in advance. The Hudson Valley crop will be somewhat less than last year. The New England Baldwin belt, comprising the States of Maine, New Hampshire and Massachusetts shows a lighter condition percentage of 62 as compared with a ten-year average of 89, 65 and 85, respectively. Cold weather damaged the Baldwins in Maine and the Gipsy moth, together with a light bloom, hit the New Hampshire crop. In the heavy-producing counties of Virginia, West Virginia, Maryland and Pennsylvania, a condition of 65 per cent. was indicated as compared with 62 per cent. last year. Southern Ohio reports 72 per cent. as compared with 25 per cent.; Michigan, 82 per cent. as compared with 70 per cent.; Illinois equal to last year, and Indiana is similar to Illinois.

A very large boxed apple crop is indicated in the Western States. Hood River, Oregon, reports 100 per cent.; Southern Oregon 50 per cent.; Willamette Valley, fall varieties 75 per cent., winter varieties 50 per cent. Yakima, Washington, has a crop estimated at from 9,000 to 11,000 cars. Wenatchee will have about the same sized crop as last year or 6,250,000 boxes, with Jonathan and Delicious good. A record crop is reported from Spokane County, sufficient to overcome the light production in Walla Walla: Washington State normally produces over one-half of the Western boxed apples. A light crop in Idaho is one of the outstanding factors in the West. Last year's production was estimated at 3,500 cars, this year it will not exceed twenty per cent. of a normal production. California stands second to Washington in importance among the Western States, and the 1918 crop promises to be lighter. Generally speaking, the peach crop of the United

States from sections from which we have reports will run from thirty-five to forty per cent., cherries fifty per cent., pears seventy-five to ninety per cent. in the Western States. In Wayne County, New York, about fifty per cent. of the peach trees are practically dead from winter injury and the balance badly injured. Conditions with respect to small fruits are relatively the same as in Canada.

July Fruit Crop Report.

So far there has been no improvement over the June reports received from the Annapolis Valley in Nova Scotia. The crop was very variable but will be less than that of last year; probably only thirty to forty per cent. of a normal crop, and a total yield of not more than 400,000 barrels. The weather during the blossoming period, which was about three weeks earlier than usual, was cool and not generally favorable for pollination. Apple scab, however, is almost completely absent and the fruit is reported to be of a remarkably fine quality. Varieties giving the best promise are: Gravensteins, Fallwater, Ribston, Blenheim and Stark. A fair crop is expected in Prince Edward Island, while in the Fredericton section of New Brunswick early varieties are about seventy-five per cent. of a normal crop. Winter varieties are for the most part light.

The weather in Ontario and Quebec for the past month has been cool with considerable rainfall and the ripening of small fruits has been delayed; in fact, the temperature has been below the average for this time of the year and rapid growth has been prevented. The best prospects for apples in Ontario are in Prince Edward County, Georgian Bay district, and in the Western Counties, where the yield will be much greater than last year. Spies and Baldwins are very light in all districts, with winter injury very strongly emphasized in Eastern Ontario and Quebec, particularly in young orchards and a large number of the old Fameuse orchards.

In British Columbia the crop will be about equal to that of last year and would probably have been much greater had not severe frost injury been experienced on May 24. Vancouver Island reports apples only about fifty per cent. of last year, with a very heavy drop. The inland Valleys show very irregular crops, with conditions particularly favorable in the Kootenay Valley. In this section cherries and plums are sixty per cent., apples eighty-five per cent., and raspberries seventy-five per cent.

Generally speaking, the cherry crop is not heavy, no material change being recorded since our survey of the Niagara district a short time ago. In British Columbia there is a good average crop, although there has been some frost injury and a heavy drop. The Niagara pear crop shows about forty to fifty per cent. of normal, with Keiffer and Bartlett showing best. The pear crop is a failure in most of the other parts of Ontario, Quebec and Eastern Canada, although a heavy crop is reported from British Columbia. Winter injury has reduced the peach crop to about forty per cent. of normal in Ontario. In British Columbia the yield will not exceed sixty per cent. of normal, a loss of about twenty-five per cent. having been due to the May frosts. The plum crop in British Columbia was reduced twenty-five per cent. by frost. Japanese varieties are light, with Reine Claud, Bradshaw and Gueli giving the best promise. Throughout Ontario and Quebec the crop is light to fair, with about fifty per cent. of the trees winter-killed in Quebec, except varieties of the American species.

Grapes generally will be a good crop and raspberries from sixty-five to seventy-five per cent., but strawberries are light in acreage and both strawberries and blackberries suffered very heavily from winter-killing.

By approval of the War Trade Board the entry of fruit and vegetables into Canada may be permitted without license until otherwise ordered, except the following: Blackberries, gooseberries, currants, cucumbers, watermelons, artichokes, shallots, green peas, romane, parsnips, salsify, pomegranates, quinces, nectarines, mangolds, egg plants, green peppers, Brussels sprouts, asparagus, mushrooms, parsley, endive, beets and turnips.

POULTRY.

Great Britain is about to issue grain cards to Biddy and her family.

An English correspondent states that the demand for Indian Runner ducklings is about twenty times the supply.

The New England States are watching Canada's experiment in regulating the grading of eggs. We in Canada need some regulations regarding the grading of eggs locally, or within each province.

The Advisory Council of the National War Emergency Poultry Federation of the U. S., met in Chicago, June 10 and 11, to complete and adopt by-laws. The objects of the federation are to further the war for the Allies and "to promote and protect the poultry industry during these trying war times and in the reconstruction period after the war, when it will be necessary to restock Europe and practically all the balance of the civilized world with poultry for commercial and breeding purposes."

Preparing Green Ducks For Market.

EDITOR "THE FARMER'S ADVOCATE":

Owing to high feed prices it is more important than ever that green ducks should be marketed at the earliest possible opportunity. Before the war, when feed prices were normal, we found it most profitable to get the ducks off our hands just as soon as they reached a marketable age. When disposing of them as early as possible one should keep in mind, however, the necessity of having as large a proportion as possible of flesh on the frame. Not only must the ducks be well fattened, but care must be exercised in killing and plucking them for market.

Before being killed, ducks should be starved for twenty-four hours. This is necessary to clean out the intestines of food, which makes the ducks keep longer. The best way to kill a duck is to place it between the knees and then with a killing knife, having a blade 8 inches long and 1 inch wide, sever the blood vessels at the juncture of the head and neck. As soon as the duck is bled, it should be hit hard on the top of the head with a fairly heavy stick. This stuns the duck and makes it easier to pluck.

Immediately after the duck is stunned it should be plucked. The plucking should be done dry as both the duck and the feathers are better than when the duck is scalded. First pluck a few feathers from the breast as the duck is held on the lap with its back down. These feathers are plucked in the opposite direction to which they lie. The rest of the feathers on the body are plucked by wetting the right hand and grasping the feathers close to the body and then pulling in the same direction they lie. By plucking in this way the down is taken off with the feathers. Plucking is often done with the aid of a sharp knife, which assists in grasping the down and feathers.

Where the ducks are to be marketed locally or are intended for immediate consumption, they may be scalded or steamed. The dense plumage of the ducks makes it more difficult to scald properly than a chicken. Moreover, the fatty nature of the duck flesh also makes it more liable to injury, and consequently great care must be exercised if the ducks are not plucked dry. The best practice, if you want to pluck the ducks easily, is to wrap them in burlap or old grain sacks after scalding them. Have the water quite hot and dip them in, moving them up and down in the water two or three times, this in order to have the water work into the feathers. As soon as the ducks are withdrawn from the hot water, wrap them in the old grain sacks and allow them to steam for a few minutes. This steaming process seems to loosen the feathers and makes plucking easier than when dry plucked. When proper care is used ducks may be plucked quite rapidly in this way and at the same time present a good appearance. When the ducks are scalded, picking is usually done with the duck on a bench or table. Usually the soft feathers of the body are removed first and the stiff wing and tail feathers later.

Macdonald College, Quebec.

M. A. JULL.

FARM BULLETIN.

A Good Summer Show at Calgary.

The annual summer show at Calgary was held last week, June 28 to July 6, and met with a fair measure of success, particularly in the live-stock department where there was a splendid display. The Clydesdales were strong with 133 entries which made keen competition. D. Thorburn, De Winton, Alta., carried off the Clydesdale male championship on Scotland's Splendor, while J. W. Durno, Calgary, Alta., won like honors in the female sections with Princess of Mount Pleasant.

Sixty-two Percherons of good quality were forward and made a noteworthy exhibit. E. A. Davenport, Acme, Alta., had the male champion in Keota Jalap, and Geo. Lane's Norabelle won a similar standing among the females.

The leading Shorthorn exhibitors who contributed to a grand display in this breed were Chas. Yule, Carstairs, Alta.; J. G. Barron, Carberry, Man.; J. J. Elliott, Guelph, Ont.; L. A. Bowes, Calgary, Alta.; T. B. Ralphs, Calgary, and R. A. Wright, Drinkwater, Sask. Yule won the male championship with Craven Knight, and Bowes had the best female in Collynie's Best. Elliott of Guelph had a very good senior herd and won first with it on account of uniformity, but Barron was a close second.

Four well-known Hereford herds were represented at the Calgary Show, namely those of Frank Collicut, Calgary; the Curtice Cattle Co., Shepherd; G. E. Fuller, Girvin and L. O. Clifford, Oshawa, Ont. Collicut won both championships on Gay Lad 16th and Sally. Clifford was strongest in young stuff and had the junior female champion in Perfection Lass 5th.

In Aberdeen Angus, which put up a splendid showing, the major portion of the prize money went to J. D. MacGregor, Brandon, Man., though Jas. Bowman, Guelph, Ont., and E. A. Noad, Olds, Alta., gave keen competition. Bowman was strongest on the younger stock. The male and female championships went to MacGregor, on Black Cap Glencarnock and Majesty's Queen.

The horse and cattle judges were: Clydesdales, Wm. Graham, Claremont, Ont.; Percherons and Belgians, A. Robinson, Pekin, Ill.; Shorthorns, Lawrence Ogden, Maryville, Mo.; Herefords, Frank Brown, Carlton, Oregon; Dairy Cattle, Prof. H. H. Dean, Guelph, Ont.

If smut appears in the corn crop destroy the affected plants. That treatment is usually effective in keeping this disease in check.

Food Board Regulations of Interest in Farm Homes.

Persistent reports have been going around that clever crooks are operating in the country and imposing fines on farmers for having too much flour, sugar, or other provisions, that are being regulated by the Canada Food Board. These imposters, it is claimed, steal the fine and are not representatives of the Canada Food Board or any branch of the Government. It is reported that many farmers have been victimized in this regard simply because they are not acquainted with the regulations and do not take the trouble to ascertain whether the stranger is a bona fide inspector or not. Inspectors of the Canada Food Board "invariably carry credentials," writes the Secretary. Anyone questioned by a stranger in regard to food on hand or anything of this nature should first ask for the credentials of the inspector or questioner. There is no need of being stampeded by strangers going throughout the country. First be sure that the parties interviewing you are bona fide servants of the Government and then give them the information they seek.

A few of the important regulations governing the purchase, storage, and consumption of food in farm homes are given herewith.

Order No. 30 deals with cane sugar and reads as follows:

1. No person shall hold or have in his possession, or under his control at any one time, cane sugar more than is sufficient for his ordinary requirements for a period not exceeding fifteen days, except as hereinafter provided:

(a) A person living at a greater distance than two miles, and less than five miles from a dealer licensed by the Canada Food Board, may have in his possession, or under his control, cane sugar not more than is sufficient for his ordinary requirements for a period not exceeding thirty days; a person living at a greater distance than five miles, and less than ten miles from a dealer licensed by the Canada Food Board, may have



Prof. J. H. Grisdale.

in his possession, or under his control, cane sugar not more than is sufficient for his ordinary requirements for a period not exceeding sixty days; and a person living at a distance of ten miles or more from such dealer, may have in his possession, or under his control, cane sugar not more than is sufficient for his ordinary requirements for a period not exceeding one hundred and twenty days.

Order No. 31 says in part: "No person shall hold or have in his possession, or under his control at any one time, flour made wholly or in part from wheat more than is sufficient for his ordinary requirements for a period not exceeding fifteen days, except as hereinafter provided:

(a) A person living at a greater distance than two miles and less than five miles from a dealer licensed by the Canada Food Board may have in his possession, or under his control, flour made wholly or in part from wheat, not more than is sufficient for his ordinary requirements for a period not exceeding thirty days; a person living at a greater distance than five miles, and less than ten miles from a dealer licensed by the Canada Food Board, may have in his possession, or under his control, flour made wholly or in part from wheat, not more than is sufficient for his ordinary requirements for a period not exceeding sixty days; and a person living at a distance of ten miles or more from such dealer may have in his possession, or under his control, flour made wholly or in part from wheat, not more than is sufficient for his ordinary requirements for a period not exceeding one hundred and twenty days.

Section 1 of Order No. 31 of the Canada Food Board has been amended by adding the following subsections:

(c) "A bona fide farmer shall be permitted to hold, subject to the order of the Canada Food Board, the amount of flour, made wholly or in part from wheat, he may have in his possession in excess of the amount prescribed by the above Order if, on or before the 15th day of June, 1918, he reports to the miller or dealer

from whom it was purchased or by whom it was manufactured, the excess amount held by him. It shall then be the duty of such miller or dealer to report all such holdings to the Canada Food Board on forms to be supplied, and at such times as he is directed.

(d) "Any person holding or having in his possession not more than 25 pounds of flour made wholly or in part from wheat, or who holds or has in his possession at the date hereof part only of one original package in which such flour was purchased, though the amount exceed 25 pounds, shall be permitted to hold the same."

The order previously referred to also prohibits the feeding of milling wheat to poultry or live stock, and the sale of same for these purposes. A mixture of wheat and other grain which does not contain more than twenty-five per cent. of wheat may be sold or purchased or used for the feeding of poultry, this Order says.

Order No. 35 states as follows:

1. No person shall make in Canada for private consumption French pastries, iced cakes, or cakes with icing of cane sugar between the layers, or added to the exterior; and no person shall use in Canada cane sugar for making for private consumption, what is commonly called candy.

Order No. 46 has to do with public eating places, but one part deals with private and semi-private luncheons, dinners, parties and picnics, where food or refreshment is served to fifteen or more persons, other than members of the family or household of the proprietor. Anyone having to do with public festivals, or events coming under this Order, should communicate with the Canada Food Board and get a copy of the regulations covering same.

Order No. 50 is of recent date and concerns the baking of bread and use of substitutes for flour. Instructions regarding this may be found in the Home Department of this issue.

There is also an Order-in-Council prohibiting waste of food fit for human use. This regulation covers a large field, and we believe that in the farm homes, at least, there is little chance of any food being wasted. The same Order-in-Council controls the holding of products until they deteriorate or go bad.

Public eating-places are under strict regulation in regard to meatless days, but it has been left to public support to carry out these rulings and wishes in regard to the private home.

The Harvest of the World.

The conditions under which shipping has been carried on have made the North American Continent the chief storehouse of food for Britain and France. However food crops in other countries have considerable bearing on the situation and as the enemy submarine becomes less menacing and shipbuilding is speeded up, no doubt, the other grain producing nations will have a chance to contribute more to the rationing of our Allies. At any rate it is interesting to know when the world's crops are taken off. A small booklet issued by the Grain Growers Grain Company gives the harvest time as follows:

January—Australia, New Zealand and Chili.

February and March—East India and Upper Egypt.

April—Lower Egypt, Syria, Cyprus, India, Mexico, Cuba and Persia.

May—Central Asia, China, Japan Southern United States and Morocco.

June—Turkey, Greece, Italy, Spain, Portugal, South France, and Central United States.

July—Roumania, Austria-Hungary, South Russia Germany, France, South England and North Central United States.

August—Belgium, Holland, Denmark, Great Britain, Canada and Northern United States.

September and October—Norway, Sweden and North Russia.

November—South Africa, Argentina and Peru.

December—Burmah and Argentina.

The war cloud which now hangs over most all the countries of the world has induced them to make an effort for increased national production. What the harvest will be in 1918 is hard to determine as yet, but the May Bulletin of Agricultural and Commercial Statistics, published by the International Institute of Agriculture in Rome, supplies interesting data in this connection. With regard to the areas sown for the season 1917-18 in the northern hemisphere, it states that in all the countries where definite figures are available, Denmark, France, Great Britain, Luxemburg, United States, British India, Japan, Tunis, areas sown with wheat this year are decidedly larger than those of the previous agricultural season. For the United States and for British India, in particular, the increase of winter sowings is about 5 per cent.

Only in Spain and Canada were the sowings decreased, but very slightly (less than 2%) in Spain, though 13% in Canada. It must be remembered that the figures deal for Canada with winter wheat only.

Summing up the Bulletin says: "We are enabled to state that, both on account of the increase in areas sown, and of the decidedly favorable condition of the crops on May 1, we have the right to expect, in the coming summer, a better crop of food grain than that in 1917.

J. H. Grisdale Now Acting Deputy.

Prof. J. H. Grisdale who since 1911 has been Director of the Experimental Farms' system has been appointed Acting Deputy Minister of Agriculture. In this position he succeeds Geo. F. O'Halloran. The change has been brought about as a result of removing from the Department of Agriculture the Patents and Copyrights Branches.

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending July 4.

Receipts and Market Tops.

Dominion Department of Agriculture, Live Stock Branch, Markets Intelligence Division

	CATTLE						CALVES					
	Week Ending	Same Week	Week Ending	Week Ending	(1,000-1,200) Same Week	Week Ending	Receipts	Same Week	Week Ending	Week Ending	Same Week	Week Ending
Toronto (Union Stock Yards)	4,442	4,825	5,133	15.50	11.80	16.00	1,449	1,024	1,451	17.25	15.00	17.00
Montreal (Pt. St. Charles)	376	892	1,155	14.50	12.00	15.25	1,449	1,024	1,451	17.25	15.00	17.00
Montreal (East End)	705	885	1,101	14.50	12.00	15.25	2,157	1,390	2,388	15.00	12.50	15.00
Winnipeg	2,339	2,153	2,728	16.50	10.50	15.00	1,316	784	1,241	15.00	12.50	15.00
Calgary	987	636	991	13.00	8.50	13.00	204	207	256	16.00	13.00	16.00
Edmonton	585	438	441	13.50	8.00		59	8	31	14.50	12.00	14.00

Market Comments.

Toronto (Union Stock Yards).

Trading at the Stock Yards was inclined to be quiet at little change in prices from the close of the previous week. The tendency, however, was for prices to go lower. The market for choice cattle held fairly steady, but common cattle were in slow demand, and in order to dispose of this latter class of stock sacrifices had to be made in many cases. The quality of the run was, on the whole, very good. A large percentage of the cattle coming off the grass is lacking in finish, and last week's receipts showed many cattle of very inferior breeding, suitable only for "boned meat" purposes, also there is a limited demand for common classes of cattle at present. The total receipts for the week amounted to forty-seven hundred head, of which number, thirty-three hundred head were on the Monday market. Owing partly to the holiday and partly to the weaker feeling in the beef trade, business was inclined to be slow and several hundred head had to be carried well into the week for disposal. The top price paid was \$15.75 per hundred for a load of heavy steers from Dutton, Ontario. Other sales of heavy steers of good quality were made at from \$14.50 to \$15.25, while those of medium quality sold from \$13.50 to \$14. Of steers weighing from ten hundred to twelve hundred pounds, six head weighing eleven hundred and twenty pounds sold at \$15.50, eighteen head averaging eleven hundred and eighty at \$15.10, and twenty-two head at \$15, while most of the sales within these weights were made from \$13.75 to \$14.50. Of the steers and heifers under ten hundred pounds offered, six head of nine hundred and twenty pounds sold at \$14.55, one load of nine hundred and ninety pounds average were weighed up at \$14.50, and the majority of the good loads from \$13 to \$13.75. Light cattle of medium quality sold from \$11.50 to \$12.50, and common eastern cattle from \$8 to \$10 per hundred. Choice cows sold mostly from \$11 to \$12, although a few sales were made as high as \$12.50. Medium cows sold from \$10 to \$10.75 and common cows from \$8 to \$9.50 per hundred. Bulls were about steady at from \$11 to \$12 for those of choice quality, \$9.75 to \$10.50 for those of medium quality, and for common bulls from \$8 to \$9 per hundred. The demand for stockers and feeders is rather quiet at present; feeders were selling from \$11 to \$11.75, and good stockers from \$10 to \$10.50. A good demand prevailed for calves, and prices were a trifle stronger, \$17.25 per hundred being paid for choice veal calves, while those of good quality moved from \$15 to \$17; medium from \$13 to \$14.50, and common from \$9 to \$11.

Sheep and lamb receipts were lighter than during the previous week, and a stronger tone prevailed in this department. Light sheep sold from \$13 to \$14.75, and heavy from \$11 to \$13. Spring lambs met with a good demand at prices ranging from \$20 to \$22 per hundred. Hog prices again advanced, \$18 per hundred was paid for selects, fed and watered, on Monday and Tuesday. On Wednesday and Thursday prices ranged from \$18.25 to \$18.50, at least one deck being sold at the latter price and several

RECEIPTS						HOGS				SHEEP			
Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Receipts	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending
Toronto (Union Stock Yards)	7,195	7,884	6,244	18.50	16.75	18.00	1,045	928	1,236	22.00	16.00	22.00	22.00
Montreal (Pt. St. Charles)	1,349	1,127	987	19.00	17.00	19.25	704	306	746	21.00	10.00	22.00	22.00
Montreal (East End)	866	850	927	19.00	17.00	19.25	542	331	605	21.00	10.00	22.00	22.00
Winnipeg	6,861	6,097	6,286	18.25	15.50	18.50	327	233	137	18.50	12.00	18.50	18.50
Calgary	2,908	2,841	2,990	17.35	15.35	17.35	223	8	552	14.25	13.00		
Edmonton	889	588	658	17.25	15.00	17.00	445		50	14.50			

decks at \$18.40. The outlook appears to be for a trifle higher market. Of the disposition from the Yards for the week ending June 27, Canadian packing houses purchased 808 calves, 3,959 butcher cattle, 6,534 hogs and 920 sheep. Local butchers bought 428 calves 448 butcher cattle, 307 hogs and 396 sheep. Canadian shipments consisted of 47 calves, 49 milch cows, 710 stockers and 144 feeders. Shipments to United States points consisted of 105 calves, 63 butcher cattle, 75 stockers and 21 feeders. The total receipts from January 1 to June 27, inclusive, were: 125,532 cattle, 34,483 calves, 187,632 hogs, and 16,659 sheep; compared to 112,772 cattle, 27,968 calves, 247,934 hogs and 15,550 sheep, received during the corresponding period of 1917.

Montreal. Following the comparatively heavy run of the previous week the receipts of cattle were very light, shipments being fewer by about twelve hundred and fifty head. There were, however, about one hundred and fifty head held over from the previous week and both buyers and sellers seemed to welcome the opportunity to get the markets cleared up. Prices are rapidly approaching a basis for summer trading and while buyers are predicting

a further adjustment on all grades of light steers, the market closed in a much better condition than at the end of the previous week. There seems to be prospects of a good outlet for canners and for cattle for boning at from \$5.50 to \$7.50 per hundred, and also for good steers that will dress six hundred pounds or over; these were selling around \$14.50. There was also a demand for fat cows at \$9.50 to \$11 for the local butcher trade. The supply of light unfinished steers, however, seemed out of proportion to the requirements and the marketing of these animals in too great numbers is likely to have a depressing effect on prices of other stock. One load of steers weighing between eleven hundred and twelve hundred sold for \$14.50 and one load weighing about ten hundred and fifty sold for \$13.75. The balance of the steers sold from \$8.50 to \$13. Fairly fat two-year-old steers weighing ten hundred to ten hundred and fifty pounds sold from \$12.40 to \$13. Steers weighing eight hundred and fifty to nine hundred pounds from \$10.50 to \$11, and a few head of still lighter steers sold at \$8.50. Good cows sold from \$10 to \$11. Cows weighing about ten hundred pounds and showing some fat sold at \$9 and the average price for cows of lower grade was \$6. One bull weighing fourteen hundred

and fifty pounds, held from the previous week, brought \$11. Fairly fat bulls weighing eleven hundred to thirteen hundred pounds sold at \$10. The majority of the bulls offered were just good strong animals of dairy breeds and sold at \$8. One lot of nice little Holstein heifers sold at \$8.50. The number of heifers offered, however, would not warrant any attempt to select them for breeding purposes. Receipts of calves have been fairly even for some time and prices are being well maintained. No calves were shipped to the United States during the week.

Hogs remained at \$19 to \$19.25 off cars, with a slightly firmer feeling at the close of the week. If hogs continue to remain firm at these prices it is likely to have a steadying effect on business generally. The high and low levels are inclined to create a feeling of uncertainty which is not an advantage to either the producer or to the trade.

Pt. St. Charles.—Of the disposition from the Yards for the week ending June 27, Canadian packing houses and local butchers purchased 1,248 calves, 36 canners and cutters, 95 bulls, 889 butcher cattle, 987 hogs and 672 lambs. Canadian shipments consisted of 2 calves, 39 milkers and 86 butcher cattle. Shipments

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to United States points consisted of 1,138 calves.

The total receipts from January 1 to June 27, inclusive, were: 16,805 cattle, 39,070 calves, 30,369 hogs and 7,132 sheep; compared to 17,448 cattle, 37,018 calves, 43,898 hogs and 6,159 sheep, received during the corresponding period of 1917.

EAST END.—Of the disposition from the Yards for the week ending June 27, Canadian packing houses and local butchers purchased 1,130 calves, 1,065 butcher cattle, 927 hogs and 493 lambs. Canadian shipments consisted of 36 milch cows and 112 lambs. Shipments to the United States were made up of 111 calves.

The total receipts from January 1 to June 27, inclusive, were: 14,996 cattle, 31,492 calves, 19,308 hogs and 7,134 sheep; compared to 18,446 cattle, 30,128 calves, 23,766 hogs and 7,667 sheep, received during the corresponding period of 1917.

Buffalo.

Cattle.—Cattle trade was slow, draggy and weak at Buffalo all of last week. The depression occasioned by the Food Administration's order, limiting beef eating continued to have its adverse effect, as a result of which retail butchers bought lightly, and the coolers were not freed of beef as well as the killers would have liked. The restriction has penetrated every kind of beef, and while the Food Administration has amended its order somewhat, allowing consumption for two weeks freely, in order to clean up ripe beef that could not be carried along much longer in the coolers, still there is a weak undercurrent to the general beef situation, and authorities here are not predicting any improvement for the near future at least. Offerings were light here last week but notwithstanding, the cattle trade was not good, generally steady prices prevailing, and anything in the cow line sold very slowly. Best steers ranged from \$17.50 to \$17.85, with best handys running from \$15 to \$16 generally, some real fancy ones on the yearling order up to \$17. Best in the fat cow line was a part of a load of heavy Canadians, which had been on grain and grass, at \$12.25. Stocker and feeder trade slow and barely steady. Bulls strong, milk cows and springers about steady. Immediate outlook is none too encouraging. Offerings for the week totaled around 3,000, as against 5,975 head last week, and as compared with 5,775 head for the corresponding week a year ago. Quotations:

Shipping Steers.—Natives, choice to prime, \$17.25 to \$18; fair to good, \$16.50 to \$16.75; plain and medium, \$13.50 to \$15; coarse and common, \$11.50 to \$12.50.

Shipping Steers.—Canadians, best, \$15.50 to \$16.25; fair to good, \$14.25 to \$15.25; common and plain, \$12.50 to \$13.25.

Butchering Steers.—Choice heavy, \$16.75 to \$17.50; fair to good, \$15.25 to \$16.50; best handy, \$15 to \$15.50; fair to good, \$14 to \$14.50; light and common, \$9.50 to \$10.50; yearlings, choice to prime, \$16 to \$17; fair to good, \$13 to \$15.

Cows and Heifers.—Best heavy heifers, \$13 to \$13.25; fair to good, \$12 to \$12.50; good butchering heifers, \$11 to \$11.75; fair butchering heifers, \$9 to \$10; common, \$8 to \$8.50; very fancy fat cows, \$11 to \$12.25; best heavy fat cows, \$9.50 to \$10.50; good butchering cows, \$9 to

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\$9.25; medium to fair, \$8.50 to \$8.75; cutters, \$7.25 to \$7.50; canners, \$6.75 to \$7.25.

Bulls.—Best heavy, \$11.50 to \$12; good butchering, \$10.50 to \$11; sausage, \$9.50 to \$10.50; light bulls, \$7.50 to \$8.50; oxen, \$10 to \$12.

Stockers and Feeders.—Best feeders, \$10 to \$10.50; common to fair, \$9 to \$9.75; best stockers, \$9.50 to \$10; fair to good, \$8.75 to \$9.25; common, \$7.50 to \$8.

Milchers and Springers.—Good to best, small lots, \$100 to \$140; in carloads, \$80 to \$100; medium to fair, small lots, \$75 to \$85; in carloads, \$65 to \$80; common, \$45 to \$50.

Hogs.—Buffalo had a light run and a good market on the opening day of last week. Receipts totaled only 35 loads, and while Western markets were lower, values here ruled steady to fifteen cents higher, the advance being on light grades. Yorkers, lights and pigs sold generally at \$18, and while several decks of handy mixed hogs were placed at this price, local packers got the bulk of the better weight grades at \$17.85. Tuesday values, as a result of the Monday market being too high compared with other points, ruled from 25 to 40 cents lower. Pigs were on top, selling up to \$17.75, and the better weight grades landed mostly at \$17.60. Wednesday's market was the same as Tuesday, and Friday the bulk of all grades moved at \$17.60. General price for roughs was \$15.25, and stags ranged from \$10 to \$12. The past week's receipts totaled 15,600 head, as against 17,828 head for the week before, and 16,200 head for the same week a year ago.

Sheep and Lambs.—Supply was exceedingly light last week, and as a result prices were stronger. Monday spring lambs sold at \$18.75, top for yearling lambs was \$16, deck of dry-fed wethers brought \$14.25, and ewes went from \$12 down. Before the week was out spring lambs sold up to \$19.25, yearling lambs reached \$16.75, and while no wether sheep were marketed after Monday, Friday ewes were placed as high as \$13. Receipts for the entire week numbered only 2,000 head, as compared with 3,295 head for the week previous, and 3,000 head for the same week a year ago.

Calves.—Last week started with top veals selling at \$18.25; Tuesday the bulk of the tops moved at \$18; Wednesday the majority landed at \$18.50, with a few \$18.75, and Friday the market was active, bulk going at \$18.75. Good handy cull grades were placed as high as \$17 and \$17.50, and inferior grades went from \$16.50 down, according to quality. For the past week receipts were 3,200 head, as against 4,293 head for the week before, and 2,800 head for the same week a year ago.

Toronto Produce.

Live stock receipts at the Union Stock Yards, West Toronto, Monday, July 8 consisted of 181 cars, 3,235 cattle, 514 calves, 1,356 hogs, 538 sheep and lambs. Cattle tradewas at a standstill, with buyers bidding \$1 to \$1.50 lower. Sheep were steady. Lambs were 25 to 50 cents lower. Calves 25 to 50 cents lower. Hogs, \$18.25, fed and watered.

Breadstuffs.

Wheat.—Ontario (basis in store Montreal). No. 2 winter, per car lot, \$2.22. Manitoba wheat (in store, Fort William, including 2½c. tax)—No. 1 northern,

\$2.23½; No. 2 northern, \$2.20½; No. 3 northern, \$2.17½; No. 4 wheat, \$2.10½. Oats.—Manitoba (in store, Fort William) No. 2 C. W., 86½c.; No. 3 C. W., 83¼c.; extra No. 1 feed, 83¼c.; No. 1 feed 80¼c.

Oats.—Ontario, No. 2 white, 80 to 81c., nominal; No. 3 white, 79c. to 80c., nominal (according to freights outside). Rye (according to freights outside)—No. 2, \$1.80, nominal.

American corn (track, Toronto)—No. 3 yellow, kiln dried, nominal; No. 4 yellow, kiln dried, nominal.

Peas (according to freights outside)—No. 2, nominal.

Barley (according to freights outside)—malting, \$1.24 to \$1.26.

Buckwheat (according to freights outside)—\$1.80.

Flour.—Ontario (prompt shipment). War quality, \$10.65, Montreal; \$10.65, Toronto. Manitoba flour, (Toronto, new bags) war quality, \$10.95.

Hay and Millfeed.
Hay.—No. 1, per ton, car lots, \$13 to \$14; mixed, \$11 to \$12.

Straw.—Car lots, per ton, \$8 to \$8.50.
Bran.—Per ton, \$35; shorts, per ton, \$40.

Hides and Wool.

Prices delivered, Toronto:
City Hides.—City butcher hides, green, flat, 13½c.; calf skins, green, flat, 30c.; veal kip, 22c.; horse hides, city take off, \$6 to \$7; sheep, \$3.50 to \$5.50.

Country Markets.—Beef hides, flat, cured, 15c. to 17c.; green, 12c. to 13c.; deacon or bob calf, \$2.25 to \$2.75; horse hides, country take-off, No. 1, \$6 to \$7; No. 2, \$5 to \$6; No. 1 sheep skins, \$2.50 to \$5. Horse hair, farmers' stock, \$25.

Tallow.—City rendered, solids, in barrels, 16c. to 17c.; country solid, in barrels, No. 1, 15c. to 16c.; cakes, No. 1, 18c. to 19c.

Wool.—Unwashed fleece wool, as to quality, fine, 60c. to 65c.; washed wool, fine, 80c. to 90c.

Country Produce.

Butter.—The butter market kept practically stationary in price, selling as follows on the wholesales: Creamery, fresh-made pound squares, 46c. to 47c. per lb.; creamery solids, 45c. to 46c. per lb.; dairy, 40c. to 42c. per lb.

Oleomargarine. 32c. to 33c. per lb.
Eggs.—New laid eggs again firm—selling as follows, wholesale: New laid No. 1, 46c. to 47c. per doz.; selects, 50c. per dozen.

Cheese.—Old, 24c. to 25c. per lb.; new, 24c. to 25c. per lb.

Poultry.—Spring chicken receipts were heavier and prices declined slightly. Spring chickens, 45c. per lb.; roosters, 20c. per lb.; fowl, 3½ lbs. and under 24c. per lb.; fowl 3½ lbs. to 5 lbs., 26c. per lb.; fowl, 5 lbs. and over, 28c. per lb.; ducklings, 30c. per lb.; turkeys, young, 30c. per lb.; turkeys, old, 25c. per lb. These quotations are for live weight, now being paid to the producer.

Wholesale Vegetables and Fruits.

Potatoes.—Old potatoes are practically off the market; a few Ontarios received selling at \$2.25 per bag. New potatoes kept quite firm. No. 1's selling at \$3 per bbl.; No. 2's at \$6.50 per bbl.

Onions.—California onions of choice quality were received selling at \$5 per 100 lb. sack, and \$2.75 to \$3 per 50-lb. crate.

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Beans.—Green and wax beans declined, selling at 90c. to \$1.25 per 11-qt. basket.

Cabbage.—Canadian cabbage shipments increased materially, selling at \$4.50 to \$5 per crate, and \$2 per hamper.

Carrots.—The bulk of the carrots received so far were very small, selling at 20c. to 40c. per dozen bunches.

Cucumbers.—Cucumbers continued to command high prices selling at \$3 to \$3.25 per 11-qt basket for No. 1's and \$2.50 per 11-qt. basket for No. 2's.

Strawberries.—Strawberries were slightly easier at the beginning of the week selling at 18c. to 23c. per box firming toward the close and selling at 23c. to 27c. per box.

Raspberries are now coming in, selling at 33c. to 35c. per box.

Cherries.—Black cherries of choice quality touched a new high water mark when 11-qt baskets brought as high as \$4 per 11-qt. basket, ranging from that down to \$2.50 per 11-qt. basket, and \$1.25 to \$2 per six-quart basket. Sour cherries have mostly been quite small, selling at 40c. to 75c. per six-quart basket and 75c. to \$1.50 per 11-qt. basket.

Currants.—Both black and Red currants were received, the former selling at \$1.75 per six-quart basket and 23c. per box, and the red at 12½c. to 15c. per box and 75c. to \$1 per 6-quart basket.

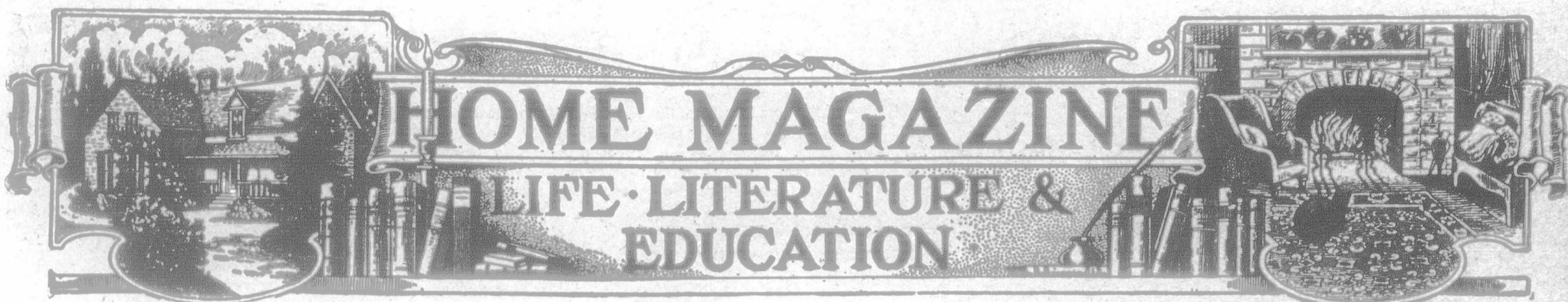
Gooseberries.—Large fruit brought from 90c. to \$1 per 6-qt. basket, and \$1.75 per 11-qt. basket. Small fruit at 60c. to 65c. per 6-qt. and \$1 to \$1.25 per 11-qt.

Tomatoes.—Outside grown tomatoes sold at \$2.75 to \$3.25 per 11-qt. basket for No. 1 grade, and \$2.50 per 11-qt. basket for No. 2's; No. 1 hot-house at 25c. per lb. and No. 2's at 18c. to 20c. per lb.

Cheese Markets.

Montreal, finest Easterns, 22½c. to 23c.; New York, specials 24¼c. to 24½c. average run, 24c.; St. Hyacinthe, Que., 22c.; Belleville, 22¼c.; Cornwall, 22¼c.

Continued on page 1186.



The Answer.

BY L. D. MILNER.

I prayed, "God keep him safe". He was so young.
 That fair-haired boy of mine;
 So eager in the cause—filled with desire
 To join the fighting line,
 And every morn' I prayed, and every eve
 I said, "Keep safe my boy;"
 And, never doubting Him who answers prayer,
 I sang of faith and joy.

A message came that burned upon my brain
 In words of living fire;
 I prayed, "God keep him safe"—"Killed while in action,"
 Came the answering wire.
 But while my heart cried out there came a voice,
 So gentle it brought rest,
 "Thou prayed 'God keep him safe'—I've kept him safe,
 He is with Me.—'t is best."

Letters From Europe.

(FROM HELEN'S DIARY.)

Berne, Switz., May 7, 1918.

Berne crammed with people, and full of dust, and rumors! Berne so crowded that it is almost impossible to get a room. Guests in hotels have been obliged to sleep in the public parlors, and even in the bathrooms. It is still more difficult to procure accommodation in the pensions as the rates are lower and the guests more or less permanent. One must apply weeks and even months in advance in order to get a room in a pension and then be satisfied with anything. These are not days of selection; they are days of take-what-you-can-get and be thankful for it. Many of the foreign diplomats are put to great inconvenience in finding homes for their families owing to the lack of suitable apartments and houses in Berne, and the exorbitant rents demanded. Many people have been obliged to find accommodation out of town in the villages roundabout,—some have even gone as far away as Thun—an hour's ride by train, so that their children could attend the schools there.

The price of living in Berne has enormously increased in the last year. At a rough guess I should say it had almost doubled, and prices are still soaring, like kites on a windy day. Clothing is very expensive and materials shoddy. Ready-made clothing is especially unsatisfactory; at the first wearing the buttons pop off, the seams burst, and the wearer, naturally, flies into a righteous wrath. Shoes! even now they are a luxury. New ones suggest untold wealth on the part of the possessor; old ones are treated with great tenderness and respect, and everything possible is done to prolong their days of usefulness. Owing to the fabulous prices demanded for new shoes the war-sandal has made its appearance and is almost exclusively worn now by the children of the poorer classes. It has a wooden sole, leather straps, and is jointed under the instep. Five active children in sandals clattering about on a stone pavement make more noise than a regiment of Swiss soldiers. One almost needs cotton in the ears when prowling about the streets in the poorer districts, so nerve-racking is the noise.

Stockings—thin, cotton, cobwebby things cost about a dollar, and lead a brief and troubled existence. They are darned and darned with needles and with tongues.

In spite of the high price of foodstuffs, the tea-rooms of Berne are crowded every afternoon—except one day in the week when they are all closed. A "portion" of tea now costs one franc (it used to be

just half that amount), and cakes the size of a postage stamp, and not much thicker, cost 25 centimes.

Apart from the crowded condition of the city, the high cost of living, the noise, the dust and the racket, there is a new feature of life in Berne which adds to the general unpleasantness, and that is the vigilance of the police. Now that they have full control of all the foreigners in Switzerland, new rules and regulations are cropping up all the time. Berne being the capital the rules are particularly rigid.

All strangers arriving in Berné from a foreign country must report at the police station within 24 hours. Those coming from other parts of Switzerland are allowed eight days grace. At the police station they must show their identity papers and give any information required, including their reasons for being in Berne.

The police station is a most unpleasant place. It is always full of people, one has to wait an interminable time, and there isn't a chair on which to flop.

The day I reported I was the only lady in the line. There were twenty or thirty men, of all sorts and conditions from shabby workmen to natty parlor ornaments. The man immediately behind me looked like a Russian Bolshevik and had the unpleasant odor of the unwashed. But that he had aspirations in the line of cleanliness was evident for he spent the waiting time manicuring his nails, an operation that seemed to necessitate keeping his mouth open and breathing hard. The man ahead of me was a florid-faced German.

"Where are you from?" asked the police official.
 "Stuttgart."
 "Where are you going?"
 "To Locarno."
 "What are you here for?"
 "My health."
 "How long do you expect to remain?"
 "Five days."

One is apt to meet anybody in Berne.

RUMORS are as thick in Berne as flies around a honey-pot in July. There are so many disquieting reports that one feels as if he were living on top of a volcano that might at any moment begin to belch revolutions there is one consoling feature—the rumors are so contradictory that one begins to doubt them all. Still, they make one very uneasy. The last and most sensational is that all foreigners who are not in Switzerland for some special purpose must leave the country. Whether this rumor is true or not I cannot say, but this I do know that the expulsion process has already started in Berne, that the police are sending people out of the city every day, not only undesirables and *refractaires*, but also nice, respectable people who have lived here many years. Various reasons are advanced to account for these stringent measures on the part of the Swiss police. It is said they want to rid Berne of the idle population and make room for the people who are obliged to live in the city; it is said it is on account of the food problem; it is said it is just a scheme to drive the floating population out of Berne and fill up the empty hotels in other towns. Whatever the real reason may be there is certainly an exodus, and everybody is asking, what next?

May 27th.

If any person thinks it is easy to get a Bread Card in Berne I would like to undeceive him.

I got one to-day and I know all about it. I feel as if I had been in a street riot. It is the first time I have applied personally for a B. C. as it is customary in hotels for the Concierge to attend to the renewal of the Cards for all the guests. This is usually done a few days before the expiration of the month, as new Cards are issued each month.

To-day the hotel manager called for the cards.



Scene on the Principal Street of Berne.

Notice the old woman sawing wood.

Near the top of the line I caught occasional glimpses of the back of a head that seemed to have an old familiar look.

Where had I seen it before?
 I couldn't remember. But somehow the sight of it seemed to stir things up in my mind—pictures, architecture, music, the crashing of thunder—Ah, Fribourg! Could it be the man of the Fribourg episode?

I craned my neck to get a better view—unsuccessfully. But in a few minutes he passed out of the room and I saw him quite distinctly.

It was the same man.
 Fortunately (or unfortunately, I don't know yet which) he did not see me.

I wonder if I will run across him again while I am here!

When I presented mine—he demanded my ticket.

"What ticket?" I asked.
 "The Police Control-card", he said.

"I haven't any."
 "You haven't any", he repeated, gazing at me in amazement.

"No. I never had anything except this."

"Most extraordinary!" he said, "Didn't you have one in Vevey?"

"Not that I know of. Perhaps the hotel manager there has it."

"Well—you can't get a new B. C. in Berne without a Control-card."

"What shall I do then?"

He looked perplexed. "Either send your B. C. to Vevey to be renewed or take your identity papers to the police

station here and get an order from the re As the time is short I advise you to go to the police station."

So, I went, armed with my *Permis de Sejour*. Although I got there early, the corner of the room reserved for applicants was packed. This corner is fenced off from the rest of the room by a high wooden railing. As there isn't a place to sit down one has to stand around with a watchful eye and wedge into the first promising opening near the railing. This achieved you cling desperately to your position, advancing little by little till near enough to reach out and clutch the railing to which you anchor yourself with both hands. There you remain till the Mighty-Personage on the other side deigns to notice you. This he does, apparently, quite at random.

It took me half an hour to get to the "front", and another half hour to catch his eye.

When I explained my predicament, he looked at me critically, examined my *Permis de Sejour*, asked me some questions yawned, strolled across the room, consulted a big book, yawned again, called over a few questions to me, conferred with a man at a desk, wrote something in German on my *Permis de Sejour*, gave it back to me and charged me fifty centimes—for what, I don't know. The ways of Swiss officials are most mysterious.

Then I went in search of the Bread Bureau which was a couple of blocks away on the third floor of a school building. It was a hot, dusty, windy day, and the air was full of fluffy stuff from the trees that brought on sneezing fits. The doors on both sides of the building were open, so that every few minutes whirlwinds of dust and fluff would fill the hall to suffocation. I looked at the crowd on the stairs, then at my watch, and decided to postpone the struggle till after luncheon.

I returned before the opening hour and found the stairs just the same as when I left, so there was nothing to do but join the procession. Each step accommodated six people. It took nearly an hour to get to the third story. There, a police guard was stationed to keep the crowd in check. Every twenty minutes or so a bunch of people would be let into the hall where the cards were being distributed. As soon as the door was opened all was confusion and rush and riot. I seemed to be punched by twenty-five sharp elbows at the same time. My feet were trampled on, I was jostled and pushed till I gasped for breath. Inside the room it was not much better. Every person dashed frantically towards the tables where the tickets were given out. No sooner did I get a place than I was roughly shouldered out of it. I began to despair of ever getting a B. C. Visions of a breadless June rose before me. Then I plucked up courage for another attempt, and was just endeavoring to wedge myself in beside a large, fat woman, when she moved away and I slid into the opening.

That was luck.

I came away from that table with a Bread Card, a Fat Card, a Cheese Card, and a burning desire to punch somebody.

When I emerged from the building I bore the marks of conflict. My hair was stringing over my face, my hat on one ear, my sleeve ripped at the shoulder, and my jacket pocket half off (it caught on a man's cane). One such experience is enough for me. Hereafter the Concierge may take my cards.

THE warm weather of the last few weeks has brought out summer toilettes in great profusion. The Bernese belles are parading the streets in the gauziest of neckless, almost-sleeve-less robes, whose brevity leaves nothing to the imagination regarding ankles. To make up for this scantiness of attire, hats are large and floppy and vivid. I have

never been any place where the natives revealed so much of their anatomy to the public gaze, as in Berne. At the various sport grounds scattered over the town the boys and men take their exercises in the open air, wearing nothing but trunks. This exposure of the skin to the sun and air is an absolute craze here. Under the Kirchenfeld Bridge there is an athletic park, and I often watch the men exercising from the bridge. One day I ventured down to the river road and took a snap-shot. A Berne gentleman told me that in some of the Swiss cities they are not allowed to exercise in public places in this unclad state—which he considered very narrow-minded and prudish.

THE Bread Bureau in Berne (British Red Cross) is now sending bread to eighty thousand prisoners in Germany. So much is needed now that it has to be made in several other cities besides Berne. For the summer months French biscuits are being substituted as they keep better in warm weather. An expert from England has been here teaching the bakers how to make them. But that the prisoners do not all like them as well as bread, is evident from some of the reply-cards received.

One chap said "Don't send me any more biscuits. I haven't any teeth. Send bread."

Another fellow, who evidently had teeth said: "Kiss the packer", thinking, I suppose, that she was young and pretty. But as she happened to be somewhere near sixty the kiss was not delivered.

A Historical Possession.

BY ELSPETH WILSON.

AN interesting letter from one of Lambton's soldier boys, Pte. R. J. Leach, written while on furlough in Scotland, tells of having traced in the National Museum of Antiquities in Edinburgh, the valuable heirloom for so many generations the possession of the Dewar family and which they brought with them to this new land.

In 1876 the late Alexander Dewar, Plympton township, then the possessor, was approached by a representative of that historical society who prevailed upon Mr. Dewar to assign the antiquity for a handsome remuneration to the society for safe keeping, "there to remain for all time to come for the use, benefit and enjoyment of the Scottish nation." This relic called the "Quigrich or Crozier of St. Fillan" has remained in the Dewar family since the days of Robert Bruce, descending from father to son.

Only one other Scottish Crozier is known to exist. This Quigrich is the head of a pastoral staff, nine inches high and consists of an external casing of silver enclosing an earlier crozier head of bronze or copper, and is distinctive of the Celtic church. The original Quigrich or Coygerach was given to a progenitor of one Finlay Jore (Dewar) of the parish of Glendochart. A common term in those early days being (Dewar) "Jore Cogerach"—keeper of the Crozier of St. Fillan. This office gave the keeper great power while within the bounds of Scotland, so long as he bore the Quigrich which stood for "obedience to the law both civil and religious, authority and justice."

It is interesting to note how with changing years and generations, the family name "Jore" has become changed—more in spelling than pronunciation—to the Dewar (pronounced Jewar) of the present day.

Mr. John Dewar resides still on the family homestead, Plympton, and had the relic not been transferred to the Scottish society by his father would now be "keeper of the Crozier" which in due time would descend to his son George. It, however, remains in the Dewar name in the antiquarium with other historical treasures, and during present conditions is securely packed as a precaution against possible damage from air raids. Pte. Leach urges the present generation of Dewar to a greater realization of the value and significance of the quigrich or Crozier of St. Fillan.

Tommy.—'Ow far is it to the camp, mate?

Native.—About foive miles, as the crow flies.

Tommy.—Well, 'ow far is it supposin' the crow 'as to walk and carry a blooming rifle and kit-bag?

Hope's Quiet Hour.

The Nearest of Kin.

He stretched forth His hand toward His disciples, and said, Behold My mother and My brethren! For whosoever shall do the will of My Father which is in heaven, the same is My brother, and sister, and mother.—S. Matt. 12:49,50.

This is the gospel of labor,—
Ring it, ye bells of the kirk!
The Lord of Love came down from above
To live with the men who work.
HENRY VAN DYKE.

and "blessed among women." Yet a higher Authority than even an archangel throws open that door of blessedness and invites every woman to enter into that most sacred relation with Him. He has said—who shall dare to doubt His word?—that one who does the will of God is His "mother". The way is made plain. It is our own fault if we remain outside the holy family.

It is an inspiring thought that the Lord of Love has chosen us to be in constant association with Himself. We are often told to "choose Christ",—and of course we should choose Him as our Master,—but those first disciples were chosen by Him. "Ye have not chosen Me, but I have chosen you", He said. "He calleth unto Him whom He would; and they came unto Him. And He ordained twelve,

what He said when He called Judas "friend" when Judas was proving himself the blackest of enemies. The friendship of God for men is too often one-sided.

But we were talking of His nearest earthly relations—where can we find them? Read the text for to-day. One who does the will of the Father is inevitably drawn into the family of Christ.

One who had been at the front wrote: "I have seen men risk their lives, and forfeit them, in an effort to rescue a comrade. I have seen them give place to one another when wounded, both in matters of dressing and of stretcher to bear them back to safety. I have seen comrade cling to comrade through the moments of supreme peril, each refusing to save himself unless he might win safety for the other. And, in seeing these things, what indeed is it I have seen? I have seen Christ."

He easily recognized the family likeness in these soldiers, many of them rough men who made no profession of religion. Our Lord does not say that the people who talk about their religion are near of kin to Him—it is those who "do" the will of God. In the day of judgment there will be a separation made between those who have made use of their many opportunities of showing kindness and those who have let them slip. The other day a patient sufferer—a blind woman—said to me: "A visitor was talking religion to me one day, and all the time she was eating an orange. I was very thirsty and I couldn't help thinking, all the time she was talking, 'I was thirsty, and ye gave me no drink.'"

It is not any formula of religious profession that can bring us into the Holy Family. The Judge is our Friend, and yet He has said: "Not every one that saith unto Me, Lord, Lord, shall enter into the kingdom of heaven; but he that doeth the will of My Father which is in heaven. Many will say to Me in that day, Lord, Lord, have we not prophesied in Thy name? and in Thy name have cast out devils? and in Thy name done many wonderful works? And then I will profess unto them, I never knew you: depart from Me, ye that work iniquity."

St. James defines religion in this summary fashion: "Pure religion and undefiled before God and the Father is this, to visit the fatherless and widows in their affliction, and to keep himself unspotted from the world"—kindness, and purity of thought and life. Note the family likeness to Him Who "went about doing good", and who was without spot in the sight of God.

In these days many barriers have been broken down. Men of all ranks, and of every kind of religion (or of no religion) meet as close comrades in the trenches. Women drop their exclusiveness and work together, in city and in country, in Patriotic Societies. Too often it seems as if those who profess to belong to the family of Christ are less ready for self-denying service than others who make no religious profession.

It is a terrible thing to find that some, who reverence the Lord of the Church as Divine, are moved to send out in print such a condemnation of His church as this, which was written by "an amateur officer". These are his words: "Again in our days the Church of Christ has buried the only God with power in the human heart beneath a vast structure of sonorous, empty ceremonial, and a paralyzing mass of sterile, useless dogma."

The Church is the Bride of Christ, the family and household of God. It is her business in the world to bear joyful witness to His living presence in our midst. If we are not serving our Master by showing kindness to the least of His brethren, then it is time we began to do something for others. Can we be near of kin to our Elder Brother if there is no family likeness? He came to minister.

"He deigned forget His own Eternal Being

He loved and served and toiled, the end

foreseeing—

Say, were such lot too low for such as I?"

DORA FARNCOMB,

6 West Ave., Toronto.

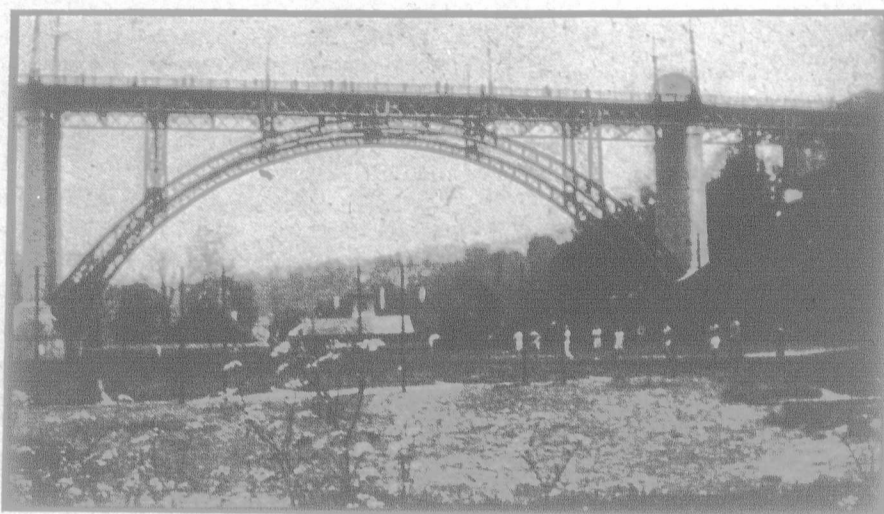
A Fifty-fifty Irishman.—In his book "From Gallipoli to Bagdad," "Padre" William Ewing tells the story of a burly Irishman brought into the field-hospital suffering from many wounds.

"What are you?" asked the doctor.

"Sure, I'm half an Irishman."

"And what's the other half?"

"Holes, and bandages."—Pittsburg Chronicle-Telegraph.



Athletes Exercising Under the Kirchenfeld Bridge.

This bridge has three arches. The central arch spans the river, and is about 125 feet high.

The only Man who was able to choose His own relatives was Jesus of Nazareth. The rest of us have to fit in, as best we can, with the brothers, sisters and other relatives God has seen fit to give us. In some cases this must be a very difficult business; but perhaps—even when the people who are near of kin to you are hard to get on with—it might make things easier if you remembered that God Himself linked your life with theirs.

It is His intention that you should accept them as His gift to you, giving them brotherly affection even if their attitude towards you is anything but brotherly. Love is bound to be victorious in the end, and it is always possible to overcome evil with good—though the victory may not be visible to human eyes.

But our Lord chose His family and

that they should be with Him." What kind of people did He choose? Were they only good people? Listen to His sad declaration: "Have not I chosen you twelve, and one of you is a devil?"

He chose many kinds of men, and one of them was a man who sank down to the depths of infamy, even though he was living in daily companionship with the Holy Son of God. The Divine friendship was offered freely. Even when that loathsome kiss revealed the horrible degradation of the soul of Judas, the Master said gently: "Friend, wherefore art thou come?"

A dying robber turned to the King in his dying hour and received the amazing promise that the King Himself would be His companion in the royal park of Paradise. But another robber was also



A Street Corner on Market Day.

The patches on the old man's back seem to indicate hard times.

the country of His birth, as no one else could do—(when you are speaking scornfully of the German race, remember that you deserve no praise for being British. You were given no choice, and neither were the Germans you condemn for being German.)

Besides the brothers, sisters and mother, whoshared that humble home in Nazareth, He reached out welcoming arms to a great multitude of relatives. Down through the centuries ring those wonderful words of our text: "Whosoever shall do the will of My Father which is in heaven, the same is My brother, and sister, and mother."

The mother of Christ was declared by the angel Gabriel to be "highly favored,"

dying beside the King of Love, and he received no promise of companionship after death.

We are apt to be proud of exclusions. We keep all but a few kindred spirits at a distance. "We keep ourselves to ourselves," we say, as if that were a virtue. It certainly was not the way our Lord acted. He was as ready to give His companionship to a poor degraded woman of Samaria as to the rich and high-minded Nicodemus. He readily accepted the invitation of a rich Pharisee and He offered to be the Guest of the despised publican, Zaccheus.

Christ has always been the Friend of sinners, but sinners are not always His friends. He, who is "The Truth", meant

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.]

HAVE you ever thought of our responsibility in using Words?

So-and-so is "ungenerous", we say carelessly, or "conceited", or "a stick," and so on. Afterwards we find, perhaps, that the one of whom we spoke is really most liberal, not conceited at all, or very interesting. So far as we are concerned the wrong has been righted, but what of those to whom we spoke? Have they gone on thinking ill of this misunderstood person who now bids fair to be our friend?—thinking ill of him or her because of *our* hasty words.

It is so hard to judge superficially, and yet the words we speak from such evidence may go on and on until they work real harm or hindrance, to our mortification and sorrow, if not worse.

I thought of this, the other day, when reading Philip Gibbs' words about the American soldiers. You know as well as I that we in Canada have been given to thinking the Americans boastful. "Oh they are blow-hards", we say with an air that dismisses the whole matter.

Well, perhaps they are given to extolling the "United States of America", when they are out of their own country, but might we not also be given a little to talking overmuch of Canada if we were out of it, and especially if we were a bit homesick?

At any rate here is what Philip Gibbs says of the United States soldiers whom he met overseas. He is speaking of the

and perhaps by many of them for us,—all because our country and theirs happened to be at war a hundred years ago.

Does it not seem strange that it took another war to put us side by side and make us love one another?—Yet what a very great thing that is—that we two peoples, living side by side on this continent, should love one another! Don't you see how much it means, and how much easier it is going to be to smooth over difficulties in the future? For how comparatively easily complications are stirred up between two peoples filled with prejudice towards each other, no matter how foolish and baseless that prejudice may be.—And so very often prejudices are based on nothing stronger than just sentimentality. Ah, but we should look well to our sentimentalities!

Now, to return to our responsibility in the using of words:

You know as well as I the slighting suggestiveness with which the words "Chink" and "Dago" are used on this continent. But let me tell you this,—if you hear anyone using either of these epithets—in a contemptuous way, you may safely put that person down as being, on the point of nations at least, hugely ignorant. Of the Orientals enough has been said in previous issues of this department to render further comment here superfluous. The Italians, by their recent prowess in the field and still more by their great feats in engineering and airplane construction have sufficiently vindicated themselves. Never forget that the better class of Italians are a cultured, musical, delightful people, and that few countries in the world have done more for the sciences pertaining to "the soil". It is in Rome that has been founded the great International Institute of Agriculture.

shelter at the back of the house? One of the most attractive extensions of the kind that I have ever seen was built by a woman, with her two hands, a saw, hammer, nails and spade for digging the post-holes. The openwork walls were made of cedar branches with the bark left on, and formed a splendid support for the morning-glories and scarlet runner beans that clambered over.

With such a porch part of the family may choose even to sleep out of doors, which will be exceedingly good for them, although they may need a tent of mosquito netting to put about the bed.

Or are the mosquitoes over for this year?—Apropos of them I read a skit the other day, which I must pass on to you. I think it came from *Judge*.

"The Skeeter is a bird of prey
Which flies about at night.
About three-eighths of it is beak,
And five-eighths appetite,
And fifteen-eighths or so is buzz
And nineteen-eighths is bite."

JUST one more word,—some of you will not need it at all.

If any inexperienced city folk or young students have gone out to you to help with the farm work, have patience with them at first. Do not expect that, before they have been taught how and before their muscles are hardened, they will be able to do as much and as well as professional farmers. Just as reasonably you might expect to come into a city office and do the work there proficiently right off the bat. Most of these young people are really anxious to "do their bit", although, of course, a few of them may not come up to the mark, but they need both instruction and practice.

I am sure, however, that the most of you will look at the matter in a reasonable

of standard flour. West of Port Arthur the proportion is kept at one pound substitute to four pounds wheat flour. The brand "Victory Bread" is to be affixed to every loaf (baker's) as a guarantee that the prescribed amounts of substitutes for standard wheat flour are being included therein. Bread not bearing this label may be seized, and any person violating the regulation is liable on conviction to a penalty not exceeding \$1,000 and not less than \$100, or imprisonment for a period not exceeding three months, or both fine and imprisonment. Fines are to be paid to the municipality if the municipal officer secures the conviction, or to the Provincial Treasurer, where a Provincial Officer secures the conviction.

A Merry Jingle.

Just as I finished writing the last words about farm helpers, someone came in with the following, the joint effort of a group of farmerettes who are evidently going at their work in the right spirit and getting some fun out of it too. We judge "Tom Carpenter" is a prime favorite.

It chanced to be on Thursday, in the merry month of May,
That a wagon full of farmerettes came down Winona way.
They quickly donned their overalls and yelled out blithe and gay,
"We've come to help Tom Carpenter for a dollar ten a day."

At eight o'clock next morning, 'twas seven by the sun,
They started tying grape vines and at first they thought it fun,
But long before the noonday sun was shining overhead



The Funeral of Nursing Sister Margaret Lowe Who Died of Wounds Received During an Air Raid by the Germans. Canadian War Records.

anxiety with which both British and French looked for the arrival of "Les Americans":

"Then at last we heard that some of them were with the French, actually in the line and doing well, and then we saw with our own eyes some men in khaki, with stiff collars unlike ours, and canvas gaiters and slouch hats, and we said, 'By Jove, those are Americans!' Presently we met quiet fellows in United States uniforms who sat listening to casual conversations of British officers, and asking penetrating questions, as men wanting to know things. They were the outposts of the American army. I met some of these advance guards and found them enormously modest, as men face-to-face with local technique to which they were strange, among our men who had learnt it by painful lessons. I found them keen and alert and businesslike, quick to see the essential truth of things, taking it all seriously, making mental notes at great speed, yet with an easy way that made them good comrades at the mess table, and with a sense of humor refreshing in its incisiveness".

The higher officers, he continues, impressed him by their "fine simplicity of thought and speech", and he concludes the words of praise by saying that the Americans, on the whole, are "like the Canadians",—which does not "go down" badly with us, does it?

So much for the summing up of that great-souled Englishman, Philip Gibbs, and don't you think his words are worth listening to? Don't they make you just like the American soldiers?

And that is exactly as it should be. One of the most deplorable and ridiculous things on this continent has been the petty prejudice entertained by many of us for the people of the United States,

SO let us be careful with our words. They spread far and wide, and go down the centuries. You have heard, have you not, of the woman who went to a priest to confess that she had spoken slander? "Go", said he, "and scatter thistle seed to the four winds of heaven, then return to me." She did as she was bidden. "Now", said the priest, "go and gather up all the seed you have scattered." "But I cannot, I cannot", she said. "Then", he said, "No better can you recall the words you have spoken."

SO far we have had but little warm weather this year, but we may have plenty of it during August and September, so it is well to prepare to some extent for out-of-door living; at least we will do so if we follow the very good example of many people in the cities and of our cousins everywhere "across the border". "We eat, sleep, lounge, read, write, knit, cook, receive calls, give teas and auction parties, and even get married on the porch", says Mary Northend in *The Independent*, "Once a porch party was a rare and exciting event; now life in the country is a Perpetual Porch Party with three capital P's."

All this presupposes a good wide porch or verandah (not a mere shelf) upon which may be grouped chairs, tables and a hammock or two. I daresay that by this time Miss Northend is giving knitting parties instead of teas and auctions.

At all events scientists have proved that constant out-of-doors living night and day, is best for the health, therefore why live indoors in summer? If you haven't a porch big enough, and can't afford to build a "good" one at the front, why not put up some sort of temporary

light, and need no jogging in regard to it. —JUNIA.

The New Food Regulations

All bread made from standard wheat flour must now be mixed with a percentage of substitutes for wheat flour. This is the effect of a recent order issued by the Canada Food Board in a vigorous effort to save the existing wheat supplies so as to make them last out until the wheat of the coming harvest reaches the flour mills and the new flour is distributed for consumption.

The new Order defines substitutes for wheat as corn, oats, barley, rice, rye, buckwheat, tapioca and any mixture of same; potato flour, bran shorts, oatmeal, rolled oats, corn meal, corn starch, hominy, corn grits, rice meal and potato meal.

Up to July 15th, from July 1st, one pound of wheat substitute must be used by all bakers, confectioners and public eating-places with every nine pounds of standard wheat flour in making any bakers' products, and the same rule shall apply to every person in Canada who bakes bread, rolls or pastry for private consumption. On and after July 15th, in all Canada east of Port Arthur the proportion is to be increased to one pound with every four. In Port Arthur, and the West this increase is still in abeyance, preceding the report on the quantities of substitutes available.

It is provided in this Order that on and after July 15th no licensed dealer shall sell for private consumption east of, but not including Port Arthur, white flour to any person who does not purchase from him substitutes in the proportion of not less than one pound to two pounds

Our merry bunch of farmerettes would fain have been in bed.

One day good Mr. Carpenter said, "Girls, you're nearly through, I'll have to get the hoes and set you something else to do, There are rows and rows of strawberries that need attending to; So take your hoes and bend your backs, I'll leave the rest to you."

They pulled and tugged and struggled and hoed for many a day;
At last the job was finished and they heard the farmer say,
"You're doing splendid work, girls, You've surely earned your pay,"
And our maidens were made happy with a dollar ten a day,

Next came tomato planting, they were fifty thousand strong,
The egg plants and the peppers were coming right along;
And still they're working, working, no idling or shirking;
And often at the close of day you'll hear this song:

Keep the home soil turning, while the sun is burning;
Heed the call for food and till the mellow loam.
There's a silver lining, through the dark clouds shining;
Turn the dark clods o'er and o'er till the boys come home.

Salmon Loaf.

For E. R., Dufferin Co., Ont.
Baked Salmon Loaf.—One can salmon, 1 pint mashed potatoes, 1 cup browned cracker crumbs (bread crumbs will do),

Silver Gloss Starch

for Table Cloths, Napkins
and other Linens

For more than 60 years, "Silver Gloss" has
been the favorite home laundry starch.

Manufactured by
THE CANADA STARCH CO.
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over the loved ones. Let us all pray and hope for the best, hoping the war will soon end. "Let not your hearts be troubled." Surely the Master careth for each and all, bless each one.

Only just tell Jesus thy greatest grief,
And whisper to Him thy care,
May you find just to tell Him does bring relief,
When the load is so hard to bear.

Well now for a reply to my queries. Please can you tell me what to do for nasturtiums that seem to have lice on them? They come on in bunches real black, tiny at first but the flowers do not do well when they are on the stem. What are they and the cure for them? What good ideas the Advocate gives us all. I have not been able to write you for so long. I feel this letter will be a failure. Kindly forgive all this time. I wonder have any of you trouble with scissors being dull. Well just try cutting through a piece of sandpaper and they will be sharp. Just keep a strip of it handy and cut through it and find scissors greatly improved. Take a soft cloth and put a few drops of kerosene on a rag and rub your patent leather shoes and see the fine shine after it. Wishing one and all a pleasant summer. Dear Hope, many thanks for your useful Easter gift and to all who so kindly write to me and help me in so many ways. As I cannot write to the kind friends, especially those at Bolton, please accept my sincere thanks for all kindness to the Lass.

I could almost write a book there is so much help and cheer given me through the yellow-covered book which weekly comes to cheer and instruct us all. How much, dear Junia, we appreciate your help too. My flowers are pretty now. God is still showering us with many blessings, I know He cares for me, may my life show to the world around what a dear Jesus I have found.

With best wishes to all, gratefully,
Your shut in friend,
LANKSHIRE LASS.

Wellington Co.

Thank you for your kind words. Any of the nicotine mixtures, made for the purpose, will soon rout the lice from your nasturtiums. Forcible spraying with clear or soapy water will help until you can get the nicotine.

War Time Cookery.

Rice Pudding.—Four cups milk, 5 tablespoons rice, 5 tablespoons honey or corn syrup, ½ teaspoon salt, grated rind of half a lemon or flavoring of nutmeg. Wash the rice, put in the milk, etc., and bake 3 hours or more in a slow oven, stirring occasionally at first.

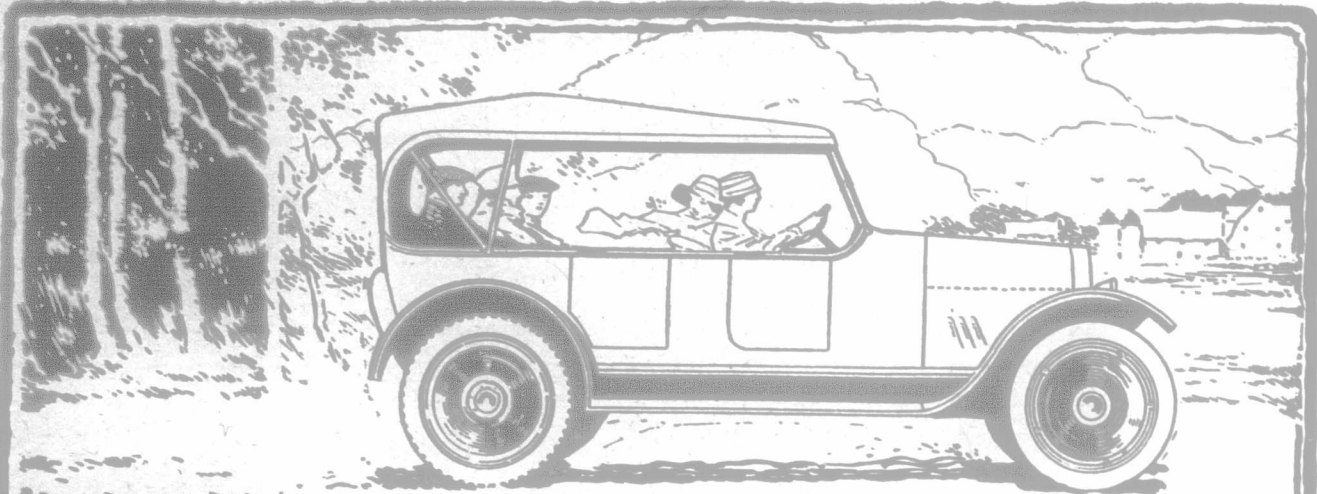
Indian Pudding.—Twelve tablespoons cornmeal, 4 cups milk, 1 teaspoon or more of salt, 5 tablespoons molasses. Heat the milk and sift in the cornmeal, add salt and molasses. Put into buttered baking cups, set in a pan of water and bake slowly about 2 hours.

Boiled Custard.—Four cups milk, yolks of 6 eggs, ½ cup honey or corn syrup, ½ teaspoon salt, flavoring. Heat the milk in a double boiler. Beat the eggs and sweetening a little and pour the milk over them. Heat in double boiler until it thickens, stirring all the time. Cool and flavor. If it curdles remove from the stove and beat with a Dover egg-beater. If the whites of eggs are beaten stiff, sweetened slightly and covered in a covered dish of water which is hot but not boiling, then placed on top of the custard, the resulting dish will be *Floating Island*. Decorate with dots of jelly.

Tapioca Custard.—Half cup pearl tapioca, 2 cups milk, 2 egg yolks, ½ cup honey or corn syrup, pinch salt, flavoring. Soak the tapioca for 1 or 2 hours then drain and cook in the milk until transparent, using a double boiler. Cool and flavor. Serve with cream.

Quick Buckwheat Griddle Cakes.—Sift together 1 cup buckwheat flour, ½ teaspoon salt, 1 tablespoon sugar, 3 level teaspoons baking powder. Add 1 cup cold water and 3 tablespoons sweet milk, mixed together, and stir to a smooth batter. Bake at once on a hot, greased griddle.

Jellied Left-Over Chicken.—Half fill a mould with bits of chicken, adding hard-boiled egg or anything else that may be liked. Heat the broth in which the chicken was boiled, and to it add one-third package plain gelatine softened in one-third cup of the broth. As soon as



BRISCOE EQUIPMENT

THIS utility car includes, as regular equipment, electric lights and electric starter; besides other accessories that automobile manufacturers usually call "extras." Compare it with any car selling at \$200 higher. The Briscoe price is \$1,205 f.o.b. Brockville (Briscoe pays the tax).

Factory—BROCKVILLE

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Republic Motor Car Co., of Canada, Ltd.

518 Yonge Street

TORONTO

2 cups cream sauce. Grease a good-sized mould with butter, sprinkle with the cracker crumbs and line with mashed potatoes. Drain the oil from the salmon and remove bones, season with pepper and salt and pack in the mould. Cover with potatoes—and then with buttered cracker crumbs. Bake half an hour in a fairly hot oven and serve with the cream sauce to which has been added chopped parsley. For another recipe see elsewhere in this issue. Thank you for your complimentary words.

From a Shut in Friend.

To all the Dear Ingle Nook Friends—
No the lass is not lost or gone astray so will write you again to bid you good day. Have tried to write you so often, but failed time and again, but have been enjoying reading some very old Advocates and what splendid pieces were in them then in the Nook as well as now, only few of the old friends write to Nook now. Faithful Junia and Hope never forsake us. How they cheer and help us all like the cheery flowers, good old stand-bys. This has been fine spring so far. We have been blessed with useful showers of rain as well as glorious sunshine. It is sweet to know He careth for us still. There is not so much to write about now. The world is full of trouble and what anxious ones are left now so many loved ones are gone to the war. How I wish to be able to go and cheer those left behind, but dears we all can tell it to Jesus and feel He will watch

Ride a C.C.M. Bicycle

Keep the Boy on the Farm

GIVE him a Bicycle. He will get a lot of good, healthy fun out of it, and make himself mighty useful as well. You'll find it the



best investment you ever made. Saves gasoline. Costs nothing for upkeep.

Always ready for instant use.

Write to-day for Catalogue E

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This Mark Is Your Protection

Every "C.C.M." Bicycle bears this design on the rear upright bar.



Look for these Nameplates when choosing a Bicycle. All of these well-known lines are "C.C.M." Bicycles.

Twice as easy as walking—Three times as fast

PINEHURST STOCK FARM

Young Shorthorn bull for sale, rising 2 years, of good dual-purpose type and out of a record cow; large size, good handler and sure getter. Will sell right to quick purchaser.

G. W. CARTER, PROPRIETOR,

R. R. No. 4, ILBERTON, ONTARIO

all pray and the war will hearts be er careh for one.

reatest grief, care, m does bring bear.

my queries, at to do for have lice on bunches real powers do not stem. What them? What gives us all. e you for so e a failure. I wonder with scissors ting through they will be t handy and sors greatly th and put rag and rub and see the one and all Hôpe, many ter gift and me and help cannot write lly those at cere thanks

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words. Any ade for the e from your ying with until you

ery. s milk, 5 s honey or grated rind of nutmeg. k, etc., and slow oven,

tablespoons eason or s molasses. e cornmeal, to buttered water and

milk, yolks n syrup, 1/2 at the milk e eggs and r the milk boiler until ime. Cool move from Dover egg- are beaten vered in a is hot but top of the be Floating elly.

cup pearl lks, 1/2 cup , flavoring. hours then until trans- Cool and

Cakes.—Sift ur, 1/2 tea- ar, 3 level Add 1 cup ons sweet o a smooth ot, greased

Half fill a dding hard- at may be hich the e add one- oftened in As soon as

dissolved pour into the mould and let stiffen on ice or in cold water. Serve with lettuce and salad dressing, or with garden cress. The egg looks pretty if put in first around the mould.

Potato Flour and Honey Cake.—Boil 1/2 cup each of honey and granulated sugar to the soft ball stage—that is to form a soft ball when dropped in cold water. Have ready the yolks of 5 eggs and also the whites, beaten well separately. Gradually beat the syrup into the yolks; add the grated rind and juice of 1/2 lemon, then fold in 1/2 cup potato flour and the egg whites. Bake in a sponge cake pan about 50 minutes.

Honey Frosting.—Boil 1/2 cup honey and 1 tablespoon corn syrup together until almost candying point, then pour in a fine stream on the white of an egg beaten light. Use when cold. May add melted chocolate and flavoring of vanilla after beating in the honey.

War Pastry.—Sift together 3 cups barley or rye flour, 3/4 cup wheat flour, 1 teaspoon salt, 2 teaspoons baking powder. Add 3/4 cup shortening, then water a little at a time, to mix to a dough. Use for a pastry for deep fruit pies.

Mock Pumpkin Pie.—Mix 1 cup cornmeal with 2 cups water and boil until very thick. Add a pinch of salt and cup of milk and let cool. Grease 2 pie plates well and dust with flour until completely covered, repeating in a few minutes. To the corn meal add 2 eggs, brown sugar to sweeten, 1 1/2 teaspoons ground cinnamon, 1/4 teaspoon ground cloves, one-third teaspoon ginger, and another cup of milk. Put in the pans, pour a little cream over the top and bake in a quick oven. Neither pumpkin nor crust is needed, yet the pie is very good.

Celery and Onions.—Cook separately, then combine and cover with cream sauce.

Potatoes With Cheese Sauce.—Mash potatoes, seasoning nicely and adding a little cream. Arrange on a hot platter in a mound with a hollow in the center, then pour over all a sauce made as follows: Melt 6 tablespoons butter, and stir in 4 tablespoons grated cheese. Pour over yolks of 2 eggs, beating all the time. Season, cover with fine crumbs and brown in the oven until the sauce thickens in the center, from 20 to 30 minutes.

A Meat Substitute.—Beat up an egg to each cup of rich milk, season well, add chopped greens or any other vegetable and bake like an ordinary custard. Serve with potatoes for Sunday dinner.

Inexpensive Chocolate Cake.—One egg-yolk, 1 cup sugar, 2 tablespoons melted butter, 1/2 cup water, 1 rounding teaspoon baking powder and 1 scant teaspoon soda stirred in 1 1/2 cups flour. Melt 2 squares unsweetened chocolate in 1/2 cup hot water until thick, and add to the cake mixture. Then add 1/2 teaspoon vanilla. Bake in a loaf or in layers using whipped cream on top and between. Or a custard may be made for between of 1/4 cup sugar, 1/4 cup water, 1/4 cup milk, 1 square melted chocolate, 1 1/2 tablespoons flour, all cooked over hot water.

Nut Ginger Cake.—Three and one-half cups sifted flour, 1 cup black molasses, 1/2 cup sugar, 1 cup butter, 1 cup buttermilk, 1/2 cup chopped figs, 1/2 cup nut meats, 3 eggs, 1 teaspoon soda, 1 teaspoon baking powder. Sift baking powder with the flour and dissolve the soda in the buttermilk. Cream butter and sugar together, add eggs, one at a time, (not previously beaten), then add by degrees half the flour. Next add the molasses, heated, and the rest of the flour, gradually, beating all the time. Stir in nuts and figs, flavor with almond extract and bake in shallow, square pans.

Patriotic Ice Cream.—Scald rich milk, thicken very slightly with corn starch and sweeten with honey. When cool add crushed raspberries and a little lemon extract. Freeze as usual.

Fish Loaf.—Melt 2 or 3 tablespoons pork drippings and brown in it 1 finely chopped onion. Pour this over bread or cracker crumbs and add enough hot water to make a moist dressing, seasoning well. In a well greased tin put layers of salmon or any kind of cooked fish, and dressing, alternately, having the dressing on top and bottom. Bake in the oven 1/2 hour or in the fireless cooker, between 2 radiators, for an hour or longer. Serve hot with tomato sauce or cream sauce beaten with left-over greens.

Tartare Sauce (To serve with fish).—To a cup of mayonnaise dressing beat 2 tablespoons each of finely chopped pickles, onions and 1 tablespoon finely chopped parsley.

Made of Bran.

Bran Cookies.—One-half teaspoon soda, 1 teaspoon ginger, 1 teaspoon cinnamon, 1/2 teaspoon cloves, 3 cups bran, 1/2 cup sugar, 1/2 cup molasses, 1/2 cup milk, 1/2 cup shortening. Sift spices into the bran and mix well. Add the other ingredients (the shortening melted) and mix well. Drop from a spoon on a buttered pan and bake about 15 minutes.

Bran Biscuits.—One cup bran, 2 cups sifted flour, 5 level teaspoons baking powder, 1/2 teaspoon salt, 2 to 4 tablespoons shortening, 1 cup milk. Put bran in a mixing bowl, sift in the other dry ingredients, and work in the shortening. Gradually add the milk and mix with a knife to a soft dough. A little more liquid may be added if necessary. Turn on a floured board, roll over with a knife to coat with flour then knead slightly. Roll out about 1/4 inch thick, cut in rounds, brush over with melted butter and bake 15 minutes.

Bran Bread.—One cup whole wheat flour, 1 quart bran (loose), 1 cup barley flour, 1 pint buttermilk, 1/2 cup molasses, 1 teaspoon soda, 1 teaspoon salt. Dissolve soda in buttermilk. Stir all together, make into a shallow loaf and bake about an hour.

Another Bran Bread.—One cake compressed yeast, 1/4 cup lukewarm water, 1 cup scalded milk, 1 teaspoon shortening, 1/2 teaspoon salt, 1 teaspoon molasses or sugar, 3 cups whole wheat flour or white flour, bran, about 3 cups. Blend yeast in the water; dissolve the shortening in the warm milk; mix all the liquids, etc., then stir in the flour and bran mixed. Knead until smooth, cover and let stand until doubled in bulk, then cut down and shape into a loaf. When again light bake 1 hour.

The Scrap Bag.

To Keep Refrigerator Sweet.

Keep a lump of charcoal on the refrigerator shelves to keep down odors. Wash the shelves whenever needed and dry thoroughly.

Keeping Dried Products.

Glass sealers are good for keeping dried fruit and vegetables in, as it is easy to inspect them for the development of insects, which will necessitate reheating in the oven at once. Always keep dried products in a very dry place as they absorb moisture readily.

For Green Peas in Fall.

Peas and beans planted now will ensure a crop of green peas and beans in the fall. If the soil is dry soak it when planting, and if lice appear on the young plants spray with nicotine. Spinach and beets may be planted also.

Care of Enamel Pans.

Place new enamel pans in a large dish of water and let come to a boil, then set aside to cool, and the pans will last much longer without chipping.

Making Stockings Last.

If you want to save wear on your stockings glue a scrap of velvet very smoothly on the inside of each heel.

Making Shoes Last.

Dip the soles of new shoes several times in hot tallow and they will wear longer and help to keep out the wet.

Cleaning Silver (Excellent).

Dissolve 1 tablespoon soda and 1 tablespoon salt in 5 quarts boiling water in a vessel of galvanized iron or aluminum. Place the forks, spoons, etc., in and leave 3 to 5 minutes, then remove and wash the silver in hot soap suds. The pan must be either of the above mentioned, as it is some chemical action that does the work. If you have only tin or agate ware, put a piece of zinc in the bottom of the pan.

Using Up Lettuce.

Do not waste lettuce that is becoming slightly bitter. Cook it as "greens" and serve on hot buttered toast. Just enough water to prevent burning should be used, adding a little more if necessary. To it add a pinch of soda, and when half done add salt, a pinch of sugar and a little butter. If any liquid remains when the lettuce is cooked add it to milk and make a white sauce, which is poured over the toast and greens.

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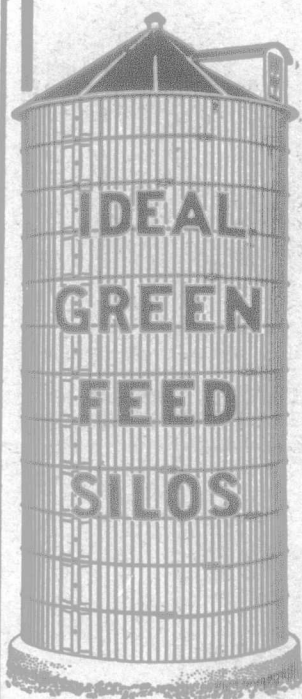
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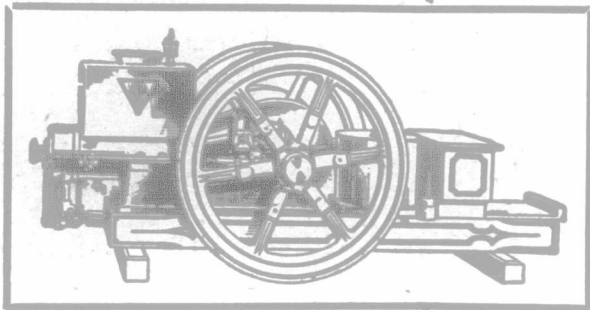


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MONTREAL PETERBORO WINNIPEG VANCOUVER
 50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

Keeping Stockings and Socks in Order

Darning socks and stockings has lost half its terrors when one uses wooden lasts or shoe trees to stretch the articles on when darning. When not in use in this way the lasts should be kept in fine shoes to preserve their shape. Silk stocking with "runs" may be mended by using a crochet hook to catch up the dropped stitches, fastening well at the ends. Remnants of cotton legs that are of no use for anything else may be used as working sleevelets, or they may be cut into strips and used in braided rugs.

Milk for Children.

Clean pure milk from a healthy cow is one of the very best foods for children. The "bowl of bread and milk" forms an almost perfect supper, but the bread should be at least a day old, and, if liked, toasted. If skim-milk is used the bread should be spread with butter. Rich milk may also be given to the children with rice or Indian pudding, made up into junket, or with custard, tapioca or sago.

Sharpening Food Chopper Knives.

It is said that food chopper knives may be sharpened at home by grinding through the chopper a piece of any scouring soap.

Carrying Dresses or Waists.

To prevent dresses or waists from crumpling when carrying them in a suit case, put them between two large pieces of pasteboard and tie together at each side with bits of string put through holes punched in the pasteboard. This will keep the articles from falling down in a heap.

Old Curtains Like New.

Curtains that have rotted from the sun or other causes at the lower window-sash can be made to look very presentable. Have the curtains done up, taking care not to stretch them quite as long or as wide as usual, then place a curtain on a table, and cut off the bottom up to where the holes begin; then cut off the piece that has the holes in. Take the other curtain and do the same. Next turn the second curtain upside down, so that the top and best part will hang down and the weaker part up. Sew the piece cut from the bottom of the first curtain on to this. Do not make a seam; just lay one on top of the other and stitch twice across on the machine. Do the other curtain the same way, and when this is done you will be surprised to find how very nice the curtains look. The stitched part in the curtain comes just at, or a little below, the window-sill and is scarcely noticeable at all.—Sel.

How to Know Adenoids.

If a child breathes constantly through his mouth, snores and snuffles in his sleep, is very subject to colds and sore throat with occasional earache, does not hear well and seems dull at school, the chances are that he has adenoids, or, perhaps, both adenoids and diseased tonsils. Adenoids are spongy growths that form far back in the nose. Unless they are removed they are likely to make the child duller, mentally, than he would otherwise be, spoil his good looks by giving him an overshot upper jaw and hollow chest and render him more liable to many diseases, including tuberculosis.

Current Events

Lord Rhondda, former Food Controller in Great Britain, died on July 3rd, at his home in Wales, of pleurisy.

British mine-layers have laid a great mine field between the Orkney and Shetland Islands and the Norwegian coast, to restrict the operation of enemy submarines from the Baltic.

Baron Chelmsford, Viceroy and Governor-General of India and Edwin S. Montagu, Secretary for India recommended a limited home rule for that country.

The American transport "Covington," homeward bound from Europe, has been torpedoed and sunk. Three of the crew are missing.

Premier Botha states that enemy

agencies are at work trying to stir up a rebellion in South Africa.

Young German flyers are said to be deserting wholesale into Holland, where they are being interned.

The Finns have notified British subjects to leave the country and have permitted an increase in the number of German troops in the country.

Thorough search of the waters in the vicinity of the spot where the Canadian Hospital ship, Llandoverly Castle went down has found no survivors. It is believed that only 24 out of the 258 on board were saved. There were 89 members of the Canadian Army Medical Corps, including 14 nurses, on board.

Fifty new vessels were launched in the United States on "Independence Day," the 4th of July.

During the week the West front has seen several successes upon the side of the Allies. On July 4th the Australians, with the co-operation of British troops, took the village of Hamel, an important point south of the Somme. The French, too, made some gains upon the German lines between the Oise and the Aisne. In Italy the troops of General Diaz have been putting the finishing touches to the great Italian victory of the Piave, while French and British troops have been making raids against the enemy on the Asiago plateau. The successes in Italy, it has been said, "have brought cheer to every soldier of civilization. In Russia conditions become daily worse, so far as the Russians are concerned, and the country may yet be goaded into striking back a blow against Germany that will count. In the Ukraine, it is said, thousands of the peasants have been made prisoners on various pretexts and sent to the Western front to be used as manual laborers. The Don Cossacks, meanwhile, are organizing against the Bolsheviks, a movement which is spread far into Siberia. Russia, however, is too disorganized yet, and too much impoverished, to leave any hope of early united effort. Farther to the East the Germans have occupied Tiflis and are now heading for Baku.

The Dollar Chain

For the soldiers and all who are suffering because of the war.
 Contributions from June 28 to July 5:
 Jas. L. Watson, Walter's Falls, Ont., 50 cents, "Toronto", \$2.
 Previously acknowledged.....\$5,559.50
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 Kindly address contributions to The Farmer's Advocate and Home Magazine, London, Ont.

The Beaver Circle

Lost in the Woods.
 [Written for the Beavers by M. C. Hayward, Corinth, Ont.]
 A True Story.

May, beautiful May everywhere! Soft green tender grass carpeting roadside and meadow, upland and valley; bursting buds on every tree, and happy birds caroling from every bough; but dearer still, and more delightful to the two little girls in my story, was the fact that the wild flowers in the woods were blooming in great abundance, and a long promised treat was near at hand. Mabel Dennis and Allie Martin, little girls of ten and eleven years, were schoolmates and bosom friends, and lived just across the road from each other, in one of the pretty, picturesque villages in Western Ontario. Mabel's uncle, Mr. Hadley, was section foreman on one of our great railway lines, and lived in the "section house" about a mile and a half from the village. At that time these houses were built at certain distance apart, irrespective of situation, and sometimes the situation was somewhat lonely. The house in which Mr. Hadley lived was about a half mile from the main road, and faced the south. Away to the north stretched well-tilled fields, and verdant pasture lands, but to the south lay a large tract of then

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unbroken forest. To spend a day with Mrs. Hadley, to have a romp with her roguish, good-natured baby boy, and to gather wild flowers to their hearts' content; this was the treat to which the little girls had been looking forward for some time. And now the day had come, the glorious twenty-fourth of May, warm, bright, and sunny, and two very happy little girls set out for their walk.

As the greater part of this walk lay along the railway track, they were cautioned over and over again, by their mothers to look out for trains, and over and over again promised to be watchful. It was still early in the day when they arrived at Mrs. Hadley's home. Baby Frank was delighted to see them and showed his appreciation by clapping his tiny hands, and giving vent to such expressions as his limited vocabulary of eighteen months could command. They romped and played with him out in the warm sunshine, rolling about on the soft grass, and laughing at his baby tumbles. His little black dog, Trip, completed the party, joining in all their sports, and apparently enjoying them as much as did the children. Presently Mrs. Hadley called them to dinner, and you may be quite sure they were all ready for that part of the day's enjoyment. After dinner, however, it was a rather unwilling little boy that mamma carried away for his mid-day nap. But wearied with play he was soon sound asleep, and Mrs. Hadley said, "Now is your time to gather flowers girls: Baby will sleep a couple of hours, you will be in by that time and all ready for another play."

"All right, Aunt Mary, and may we take Trip with us?" said Mabel.
"Oh yes!" replied Mrs. Hadley; "I don't suppose he will pick flowers, but he will enjoy going just the same; and now girls" she continued, "be careful not to go too far into the woods; you might get lost you know."

"Oh! we couldn't get lost, Mrs. Hadley", said Allie confidently; we could hear the trains passing, and see the smoke you know."

Mrs. Hadley smiled at the child's eagerness, but nevertheless repeated her caution, and giving them a basket in which to carry flowers, watched them climb the fence into the wood, and then returned to her domestic duties. The children were wild with delight. Every mossy bank was a mass of bloom. May-flowers and violets, lilies red and white, golden adder tongues, and to all of these "jack in the pulpit" was preaching on every side. Eagerly they ran from one to the other, Trip dancing about them in doggish glee, catching twigs in his mouth and racing out into the forest, then back again, barking in sheer delight. They went on and on, until the basket they carried was filled with flowers, and then sat down on a mossy bank to sort them over, and enjoying a rest before going back to the house. As they were arranging their treasures, the rumble of a passing train fell on their ears, and Mabel, for the first time, looked around to see where they were.

"That train sounds a long way off, and I can't see the smoke Allie," she said, a trifle anxiously. "I hope we haven't come too far into the woods."

"Oh no!" said Allie, "the trees are so thick here Mabel, that is the reason that we can't see the smoke, it can't be very far off, for we've only come a little way. It's right over there, listen!" said the little girl, pointing in the direction from which the sound seemed to come.

Mabel was easily convinced for the time, and went on contentedly arranging flowers, and gathering moss to put around them in the basket. A large pine log lay athwart the bank, and they amused themselves by cutting their initials with a sharp stick upon its decaying surface.

"Oh! I'd like to stay here all day, isn't it lovely Mabel?" said nature-loving Allie.

"Yes," answered Mabel, with a long-drawn breath, "but I think we'd better go now, Frank will be awake, and Aunt Mary may be anxious if we stay longer."

They picked up their basket, swinging it merrily between them, and started in the direction from which the sound of the train had seemed to come a short time before.

"Where's Trip?" said Allie, "why there he goes Mabel, in another direction, here Trip!" she called and he came bounding back, and stood for a moment looking into their faces, and wagging his tail, as if he were saying, "why do you go that way?"

Our little friends had reason to interpret his mute language later on, although it did not occur to them then. They trudged on through the forest, and for a little while chatted merrily, trying to imitate the birds' queer notes, and laughing at the antics of chipmunk and squirrel, when startled by Trip's sharp barking. Suddenly on rising on a little knoll, they found themselves on the edge of a deep ravine. Trees grew very thickly on its steep sides, so thickly that the sun's rays could not penetrate their branches, and to the two startled little girls looking down into its depths, it looked awesome and dark and lonely. They turned and looked at each other for a moment and then the fact dawned upon them that they were lost in the woods, and did not know which way to go. A look of terror crept into Allie's blue eyes. The wood had looked so lovely half an hour before, but now, to the frightened child, it seemed like a great, dark, gloomy prison, and she burst into tears. Those tears roused all the courage in Mabel's nature. She was a whole year older, and much the stronger physically of the two, and she felt instinctively, that getting out of the present trouble depended largely upon herself.

"Don't be frightened Allie, don't cry", she said, taking Allie's hand reassuringly, "I've heard Uncle Hadley speak of this gully and I think it is west of the house. We'll turn and go east, and we'll be sure to come out somewhere."

"But which is east?" said Allie, bravely trying to suppress her tears; "even the sun has turned around and it seems to be away in the north."

Mabel laughed in spite of her own fears, at the idea of the sun going to the north. The laugh did them both good. They turned their backs on the ravine and walked resolutely in the opposite direction. They were two very sober little girls now as they walked along; even Trip seemed to share their trouble, for he walked beside them very soberly, forgetting to chase the squirrels, or bark at flying birds. After walking for what seemed to them a long while, they came suddenly to a standstill, looking at each other again in astonishment, and again Mabel, who had the happy faculty of seeing the humorous side of things, burst into a merry laugh.

"Why Allie!" she said, "here we are back to our log again; here are the flowers we threw away, and here are our initials: we've just gone round in a circle."

"But how will we ever find the way out Mabel?" said timid Allie, who was too thoroughly frightened at the situation to see anything humorous in it. "I have heard my papa say that when anyone was lost in the woods they would just keep right on walking and walking, and come right back to where they started. And Mabel, what if we should do that, just keep on walking and coming back to this log again until it gets dark? Oh what would we do then?" and here the little girl's tears burst forth afresh.

"Oh don't cry, Allie dear!" said Mabel, again suppressing her own fears to comfort her friend; "it's a long while until dark, and someone who knows the woods would surely come for us before that. But hark! hear another train; let's see if the smoke doesn't come through the trees somewhere". But though they strained their eyes, no smoke could be seen, owing to the fact that the wind carried it in the opposite direction, a fact, however, which did not occur to them then. As for the sound it seemed to come from all over the wood at once.

As the train passed, a new hope dawned in Mabel's heart.

"Oh Allie", she said softly, "do you remember what our teacher said last Sunday? She told us whenever we were in trouble to go right to God, and tell Him all about it, just as we would to papa or mamma, and He would be sure to help us somehow. Let's tell Him now Allie."

"Let's do, Mabel," said little Allie, and together the children knelt on the mossy turf, and bowed their heads on the old pine log, and an earnest prayer went up from two anxious little hearts, straight to the heart of the great loving Father, whose watchful eye was over them all the while, and who, in His wisdom, was allowing them to meet this little experience, that their faith in Him might be strengthened to meet life's severer tests.

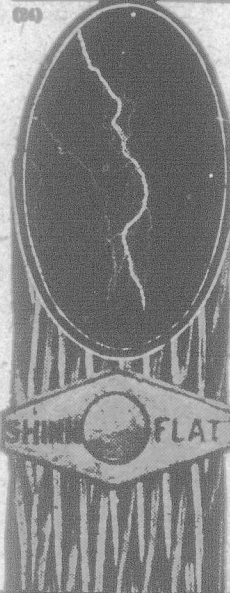
Mabel's clear, sweet voice prayed earnestly, "Dear God, Allie and I are lost in this big woods, and we don't know which way to go to get out. Please God

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Because of the greatly increased value of the buildings and contents destroyed. America cannot afford the loss this year, and it is your duty to your country as well as to your family and to yourself, to see that every building on your farm is absolutely safeguarded against danger from Lightning. Then you can read your paper in peace and security while the terrible summer storms rage outside.

Shinn-Flat Rods Are Bonded to Protect

Shinn-Flat is the only Lightning Rod in America that is covered by a Cash Bond that Lightning will not strike. It is paid for by us, and issued direct to you by a large Bonding Company. Shinn-Flat Conductors may be put on any building at reasonable expense. Write for Book on Lightning Cause and Control and full information. W. C. SHINN MFG. CO., 1664 Monadnock Building, Chicago, Illinois. Factory, Windsor, Ontario

Lightning Can't Strike IF Shinn Gets There First

help us to take the right direction out to the railroad track. Don't let us go wrong again for Jesus sake. Amen."

"And Allie's trembling voice responded, "Amen."

"Well," said Mabel hopefully, as they stood side by side again, "we'll take another direction, Allie. We went that way before; don't you remember going out under that old bent tree? But where's Trip? There he goes again towards that tall stub. Oh Allie!" she continued, a sudden thought striking her, "don't you remember his going in that direction when we started the other way before? That way doesn't seem a bit right to me, but dogs hardly ever get lost you know. Let's follow him anyhow." So they turned about and followed the dog, who barked with delight when he saw them coming, raced on at a pace that made it hard for them to keep up. In a very short time they could see a clearing before them, a few moments more and the telegraph poles came in view over an embankment and they knew they were nearing the railway, but they were much surprised on reaching the track to find themselves nearly a half mile east of the house, when they supposed they were west. As they climbed down the embankment to the track, Mabel said softly,

"Allie don't you think we ought to thank God for answering our prayer?"

"But", said Allie, half doubtfully, stooping to pat Trip's shining coat, "it was Trip who showed us the way out."

"Yes, I know!" answered Mabel, "but it was God who made Trip know the way, and made us think about following him, 'cause you know we didn't think of such a thing until after we asked Him to show us the way out."

"So we didn't," said Allie, "let's thank Him now." And again two little girls knelt reverently against the railway embankment, and thanked God for His guidance and care.

When they reached the house they found baby Frank had been awake for some time, and Mrs. Hadley was growing anxious indeed but could not leave Frank to go in search of them. They related their experiences to her, and Trip was fondled and petted, and called wise doggie to his heart's content.

"But Aunt Mary," said Mabel, "I don't believe we would ever have thought to follow Trip if we hadn't told God about it, and asked Him to show us the way out."

"God always takes care of those who trust Him Mabel," said Mrs. Hadley as she kissed the earnest little faces.

Mabel and Allie have grown to womanhood, and both have a little girl of their own, but they have never forgotten the day they were lost in the woods, nor how God came to their help so quickly in answer to prayer.

Some Prize Letters.

(Written in May last.)

To do even a little toward helping to win the war is every one's duty, whether by growing foodstuff, saving in the use of flour, meat, and sugar, or giving money to the Red Cross. In doing this children can help a little.

I am going to try this year to do my bit by raising a pig, which I am going to buy with the money I saved last year, because every extra pig raised this year means more meat for the brave boys fighting for us.

Then I am going to have a good-sized vegetable garden, in which I hope to successfully grow enough for use during the summer and perhaps a few to store for winter. The Irish Cobbler potatoes that I grow will be kept for seed, as I would like to plant a good many more next year.


Then I am going to buy a setting of eggs, which I hope to hatch under our next clucking hen. I do hope there will be more hens than roosters, because one can get eggs from them, and when they stop laying one can always have them for meat, whereas with roosters they are useful for meat only.

Last of all, I have quit taking sugar in my tea, and very little on my porridge, and also try hard to leave no scraps on my plate or in my dinner pail.

KENNETH WRIGHT.

Marter P.O., Englehart, New Ont.

I have two brothers fighting in France and am going to do my best this summer to help win the war by helping my mother to grow vegetables and look after the hens.



ALMA LADIES' COLLEGE
(Canada's National Residential School for Girls)

OPENS ITS THIRTY-EIGHTH YEAR ON SEPTEMBER SIXTEENTH, NINETEEN HUNDRED AND EIGHTEEN

Thorough courses in Music, Art, Oratory, High School, Business College, Domestic Science and Superior Physical Training

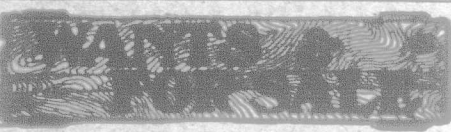
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Make harvesting easy, no costly delays or stoppages. Do not be persuaded that other twines are as good or better. You take no chances whatever. Every ball is fully guaranteed. Try it and you will be convinced. A strictly Canadian product.

Brantford Cordage Co., Ltd.
Brantford, Ont.

WESTERN OFFICE:
35 HOME STREET, WINNIPEG, MAN.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock.

TERMS.—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

WANTED—TO HEAR FROM THE OWNER of a good dairy farm, with stock and implements, who will let on shares to a reliable party. Apply Box V., Farmer's Advocate, London, Ont.

Patent Solicitors—Fetherstonhaugh & Co. The old-established firm. Patents everywhere. Head Office: Royal Bank Building, Toronto. Ottawa Office: 3 Elgin St. Offices throughout Canada. Booklet free.

FOR SALE

Second-hand Surrey, Top-buggy, Whips, Grain Bin, Odd Harness.

Apply 31 King St., London, Ontario

THRASHING MACHINERY FOR SALE
2 20-H.P. Geo. White Traction Engines.
1 Geo. White Separator, 36 x 56 Feeder & Blower.
1 Ernst Bros. Separator, 36 x 50 Feeder & Blower.
2 Water-tanks, 1 heavy wagon.
1 13" Jollette chopper, bagger and jack. In good working condition. Apply—
Albert S. Brown, R. R. No. 5, Mount Forest, Ontario

TAMWORTHS

Both sexes, two months old.
Gordon Culham, Smithdale R.R. No. 1, Ontario

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 50 cents.

BABY CHICKS AT REDUCED PRICES. 16% off in June, 33% off in July. Buy your chicks now for spring layers. Barred Rocks, Rhode Island Reds, White Wyandottes, White Leghorns. Satisfaction guaranteed. Tay Poultry Farm, Perth, Ont.

Choice Eggs for hatching, from free range flocks—S.-C. White Leghorns (Barron's 282-egg strain), Bred-to-lay S.-C. Brown Leghorns, (O. A. C. and Guild strains), Barred Rocks—\$2 per 15, \$10 per 100. Fawn I. R. Duck eggs, \$3 per 10; Mammoth Bronze Turkey eggs, \$5 per 9 (show stock). Also choice Yorkshire Hogs, all ages. T. A. KING, MILTON ONT.

Rose-Comb Rhode Island Reds and Barred Rock eggs for hatching, \$1.50 per 15 Rose-Comb Rhode Island Red cockerels \$3 each
ALEX. McKINNEY, R.R. 1, Erin, Ont.

WANTED

Live Fowl
WALLER'S, 702 Spadina Ave., Toronto
WRITE FOR PRICE LIST

I will have a garden of my own, too, and grow potatoes, carrots, cabbages, beets, turnips, parsnips, spinach, peas and lettuce. Will drive the horse to cultivate the potatoes, turnips and mangels.

We shall have two months' holidays from school, and I will spend my time helping on the farm. I will help my brothers with the hay and drive the hay-rake.

By doing this I shall help to grow food for our own use so that we shall not have to buy food that the soldiers need. The potatoes and cabbages that I grow in my own garden I shall give to the Red Cross Society, who will sell them to raise money for the benefit of the sick and wounded soldiers.

I can also knit socks for the Red Cross.
ELLA GRUNDY.
Charlton, New Ont.
(Age ten years, Jr. third.)

Dear Editor.—This is my second letter to your wide Circle. I saw my letter in print, so I thought I would write for the prize in this competition.

This war is getting to be a terrible thing, isn't it? We all need to help in every way we can, such as growing more food, knitting socks, making shirts and bandages, sending money through the Red Cross Society, the Victory Bonds, Belgian Relief Fund, making up parcels containing chocolate bars, cake, gum, two pair of socks, a wrist watch and some pictures. These would delight the soldiers who are fighting in the mud for us.

I am going to have a garden this year. In it I am going to put vegetables. In the fall I will take them up and perhaps take them to the fair. Then I may sell them and send the money to the Red Cross. I will also have a plot at school. I will have two kinds of flowers and four kinds of vegetables. I am sending you a plan of my home garden. Well, I will close with a riddle, wishing the Beaver Circle every success.

A fair little maid
In the garden was laid
As fair as the flowers of the morn,
She was made a wife
The first day of her life
And died before she was born.
Ans.—Eve.
Well, bye-bye.

ORAL J. FINNIGAN,
R. R. No. 1 Sheppardton, Ontario.
(Age 12.)

The Windrow

The name of Trocadero Avenue in Paris is to be changed to "President Wilson Avenue."

Brig.-Gen. Benjamin D. Foulois, head of the aviation service for the American Expeditionary Forces, has been appointed commander of the air service of the First Army of the Allies.

Since the war began France has lost over 1,300,000 dead as a direct result of it.

Recently 800 citizens of Revere, U. S., assembled in the City Hall to do honor to Miss Cassandra Barrows, 46 years a teacher in the city. In addition to tributes from citizens and former pupils who came from great distances to honor her on the occasion, the Mayor, in the name of her friends, presented Miss Barrows a purse of \$500 in gold.

"Wormy fruit advertises that we are short on birds."—Journal of Education.

The Presbytery of Sarnia, at its regular meeting this month, recommended the use of the appended lines as a second stanza of the National Anthem in lieu of the one commonly sung, "God save our splendid men", which is generally admitted to be deficient both in sentiment and diction:

God save our men at arms,
Shield them 'mid war's alarms;
God save our men!
Strong may they stand in Thee,
Valiant for liberty,
Crown them with victory;
God save our men!

The Bee's Reply.

An angry wasp and a busy bee
Met once on a clover head,
The bee at his work hummed merrily,
While the wasp with anger said:
"Why is it that mortals one and all,
Act kindlier far by you?
I use my sting if they trouble me,
But that is my rightful due.
You do the same but they use you well
While askance at me they look."
The wasp waxed wroth and waved his wings
Till the head of clover shook.
The bee worked on. When for flight prepared,
He hovered aloft on wing,
Then paused a moment and archly said,
"I give more honey than sting."
—S. Jean Walker, in Woman's Century.

Smiles.

Murphy Preferred Coasting.—An officer on board a war-ship was drilling his men. "I want every man to lie on his back, put his legs in the air, and move them as if he were riding a bicycle," he explained. "Now commence."
After a short effort, one of the men stopped.
"Why have you stopped, Murphy?" asked the officer.
"If ye please, sir," was the answer, "O'm coasting." —Pittsburg Chronicle-Telegraph.

A farmer came into town to make some purchases at the hardware store. "Can't I sell you a bicycle to ride around your farm on?" asked the clerk. "I can sell you a first-class one for \$40." "No, I guess not," replied the farmer. "I'd rather put my \$40 in a cow." "Well, that's all right," said the clerk, "but imagine how foolish you would look riding around town on a cow." "I s'pose so," said the farmer, slowly, "but how would I look milkin' a bicycle?"—Satire.

Have You Projectile Force?

It is through our work that we grow or deteriorate. Everything depends on the energy, the character, the soul we put into it. Every bit of work you do heartily, honestly, thoroughly, is developing your own ability, making you a bigger broader, more capable man. It is the determination to do one's full share of the world's work, the willingness to struggle for advancement—the pushing out, the struggling on, the striving upward—that makes the sort of man and the sort of woman the whole world is clamoring for now as never before.

Markets
Continued from page 1178.
Montreal.

Horses.—It is difficult to say how lumbering operations will be affected this season by the scarcity of labor, so that horse dealers are doubtful regarding the volume of trade which may develop between now and the winter, on account of this business. Meantime, prices continued steady, as follows: Heavy draft horses, weighing 1,500 to 1,700 lbs., \$250 to \$300 each; light draft, weighing 1,400 to 1,500 lbs., \$200 to \$250 each; light horses, \$125 to \$175 each; culls, \$50 to \$75 each; fine saddle and carriage horses, \$175 to \$250 each.

Dressed Hogs.—No particular change took place during the week in the market for dressed hogs. The tone was firm, and prices were 28 1/2c. to 29c. per lb.

Maple Syrup.—Supplies of maple syrup were quite equal to the demand, and prices held steady, with barrels of 15 to 20 gallons selling at \$1.80 per gallon; 5-gallon tins at \$1.85 per gallon; and gallon tins, \$2 to \$2.15. Sugar was steady at 23c. to 23 1/2c. per lb.

Potatoes.—Although old potatoes were not in active demand, the market for them was very firm, with Green Mountains quoted at \$2.75 per 90 lbs., in a wholesale way, and McIntyre's at \$2.25, and reds at \$2.75 per 90 lbs., ex-store. American new crop potatoes are meeting a better demand all the time, and were selling at \$9 per barrel for best, and \$7.50 for No. 2 stock, ex-store, the price being temporarily firm.

Eggs.—The quality of eggs being offered on the local market showed a falling off, and prices for selects showed an advance. Quotations were 2c. higher, at 48c. No. 1 stock were 2c. up, at 45c., and No. 2 stock 1c. up, at 40c. Supplies were none too large.

Cheese.—The market was unchanged,

IRON AGE
POTATO DIGGERS

Answer the farmer's big question: How can I get my potatoes out quickly with less help and fewer horses? How have my tubers ready for a high market and safely put away before freezing?


The IRON AGE Digger rolls the potatoes out in long rows ready to gather, clear of dirt, weeds and tops. It turns short into neat rows, or can be heaped.

Made in several styles there is an IRON AGE to suit your needs. The squanch, powerful, and dependable No. 155 shown here will take care of the heaviest conditions.

Made by specialists in potato machinery, in business over 31 years.

Send for catalog.

THE BATHMAN-WILKINSON COMPANY LIMITED
Box 41
Toronto, Can.



with dairy produce commission prices ruling at 23c. for No. 1; 22 1/2c. for No. 2, and 22c. for No. 3. The Peterboro Board was cleared at 22 1/2c.

Butter.—Little change was noticeable in the price of butter. The cool weather prevailing so far has been very favorable to the quality and quantity of the make. Prices for finest creamery were 43 1/4c. to 44c.; fine being 1/2c. under, and dairies, 37c. to 39c. The tone was, if anything, easy.

Grain.—The market for oats was slightly firmer, with No. 2 Canadian Western oats quoted at 96 1/2c. Tough No. 2 and extra No. 1 feed, 93 1/2c.; No. 1 feed, 90 1/2c.; and No. 2 feed, 87 1/2c. per bushel, ex-store. American corn was 2c. per bushel firmer, with sales of car lots of No. 3 yellow at \$1.92; and No. 4 yellow at \$1.82 per bushel.

Flour.—Owing to recent orders of the Food Board, demand for substitute flours was fairly good, and prices firm, with rye flour \$14.50; barley flour \$13; corn flour, \$12 per barrel, in bags. Manitoba spring wheat patents, Government standard, \$10.95, f.o.b. Montreal, and 10c. more delivered. Ontario winter wheat flour, \$11.40 per barrel, in new cotton bags.

Millfeed.—No change took place during the week. Bran was \$35 per ton; shorts, \$40; mixed mouille, \$51; pure barley feed, \$62; pure grain mouille, \$67; feed cornmeal, \$68, in bags, delivered.

Hay.—Prices were steady, and low, with inferior hay down to \$4 per ton, extract. Clover mixed, \$6 to \$10; No. 3 hay, \$13; No. 2 hay, \$14.50 to \$15.

Hides.—The market for hides was steady, at 18c. per lb. for cow hides; 16c. for bulls, and 23c. for steers, flat, or 20c., 19c. and 18c. per lb. for Montreal inspection. Veal skins, 52c. per lb.; spring lambs and clipped sheep skins, \$1.25 to \$1.30 each; horse hides, \$5 to \$6.50 each. Tallow was 3 1/2c. per lb. for scrap fat; 8c. for abattoir fat; and 16c. to 16 1/2c. for rendered.

Chicago.

Hogs.—Butchers, \$16.75 to \$17; packing, \$16.10 to \$16.75; light, \$16.75 to \$17.15; rough, \$15.60 to \$16; pigs \$16 to \$16.35.

Cattle.—Steers above \$16.50, steady; cattle lacking weight and quality, 25c. to 50c. lower; most butcher cattle 50c. to \$1 lower; stockers and feeders and veal calves 25c. to 50c. lower.

Sheep.—Lambs and light yearlings 25c. to 50c. lower. Sheep strong to higher and in improved demand.

Questions and Answers.
Miscellaneous

Formula for Stable Wash.
What is the formula for making a cheap wash for barns and walls?
E. F.

Ans.—Take half a bushel of unslaked lime, slake with warm water and cover to keep in the steam. Strain the liquid through a fine sieve or strainer, add a peck of salt previously dissolved in warm water, 3 lbs. of ground rice boiled to a thin paste and stirred in boiling hot, then add one-half pound of Spanish whiting and one pound of glue, which has also been previously dissolved by soaking in boiling water. Add 5 gallons of hot water to the mixture, stir well and allow to stand a few days protected from dirt. Whether applied with a brush or spray pump it gives best results when put on hot. About one pint properly applied will cover a square yard. This will give some idea of the amount of material required.

Give the Man a Chance.

BY H. B. THOMSON, CHAIRMAN, CANADA FOOD BOARD.

I want the farmers of Canada to give the city man, who comes out to work for him this harvest, a chance. He is a patriotic man. He is anxious to help out in this crisis about food. He is not used to the work and he doesn't know anything about farming to speak of in seventy-five cases out of a hundred. But he is willing. You can do anything with a man who is willing. It is all in the way a man thinks. If he is willing that is not only half the battle, it is 99 per cent. of it, because he will learn. He will try. He won't quit when he makes a mistake. He won't lie down when he is tired. He will realize that it is up to him to make good, and he will keep at it all the time. Of course, you have to make allowances. He is not a regular hired man. He is a war-time volunteer. He could not go to the front or he would have been in France before now. He wants to help out, and this is the best he can do. But I want to tell you that Great Britain is getting along with just such inexperienced farm help. Great Britain has most of her able-bodied men at the war. You know yourself that one out of every seven of the total population of Scotland is in the army—one out of every twelve in England as compared to one out of every twenty in Canada. You know yourself that in France out of the population of 39,000,000, about 7,000,000 were conscripted for the army, of which over one million have been killed, and more than another million have been incapacitated for further service. You have seen pictures of French women hitched up to a plow because there were no horses, the horses having been also conscripted for the army. There is nobody left at home to do farm work in France but women, old men and crippled soldiers. But France has not quit yet, nor has England quit—not by a good bit. England produced last year with the aid of her civilian non-combatant population 850,000 tons more cereals than the year before, and increased her potato crop by 5,000,000 tons! She increased the cultivated area of the Island by one million acres.

Why! Talk about "inexperienced" labor, at a time like this when the whole world is just shaking in the balance! You cannot stop to talk about how much experience a man has when he tackles a job. All that man has to do is to make up his mind that he is willing. All the farmer has to do is to have a little patience and consideration until he gets on to his job. Look at the munition business. When the war broke out Canada didn't know anything about making munitions. She had a rifle factory down in Quebec where she made a few rifles for target practice and militia purposes. But, pshaw! that was only a flea bite. In 1914 the Government got the manufacturers going. They didn't only learn how to make munitions; they learned how to make the steel to make the munitions with, and they have turned out hundreds of millions of dollars worth of shells in the four years which have followed, shipped them across to the firing line and put them to the only use for which they were intended, killing Germans—and they are just as good as the best at that.

Shells of all calibres from the biggest to the smallest and the finest intricate mechanical contrivances in connection with shells, like fuses and time charges, have been turned out. This is an absolutely new industry in this country, and who learned it? Were they experienced mechanics? A few of them were, but the bulk of the work was turned out by women and greenhorns. The same thing in England exactly. In 1917, they took 820,645 men from the industrial organizations and put them into the army, and they filled their places in the factories by women—804,000 women. You would think that the industry of the whole country would have been wrecked. But was it? You know perfectly well that the output of guns from the British factories increased 30 per cent., and in the case of aeroplanes 250 per cent. In spite of the shortage of skilled men for the shipyards, by the help of inexperienced labor, including women, they turned out 1,165,000 tons of British ships last year.

We have got to organize inexperienced help this year on Canadian farms—townsmen of all classes, women and boys. We have got to save the harvest. We are appealing to all classes of people to get



Keep in touch with the men who are fighting for you!

There's a hard campaign under way "over there"—the grimmest, deadliest yet—a campaign that will call for the last ounce of stamina and morale. Let them know you are thinking of them, and appreciate what they are doing!

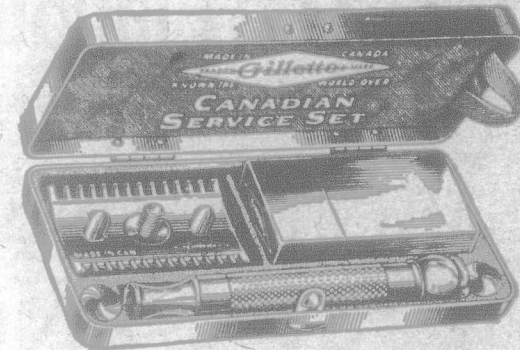
Nothing will help more than letters, cheery, hopeful and frequent. Reinforce them with sensible practical gifts, like the

GILLETTE SAFETY RAZOR

and once in a while, a few packages of Gillette Blades to replace those lost or given away.

Clean shaving has from the first been a matter of pride and discipline, as well as a comfort with our boys. You can imagine how it refreshes and braces them up after a long dusty march or a day of hot and desperate fighting. Now it's a matter of life or death as well, for on none but a clean-shaven face can a gas-mask fit close enough for safety in these days of intensive gas-attacks.

And the Gillette has proved itself by all odds the best razor for the job. It's always keen and ready for action, even under the most unlikely conditions. To that man whose life means so much to you a Gillette would be a welcome daily reminder of a home worth fighting for. Don't keep him waiting for it! Ask your dealer to show you the new Military Sets in metal and khaki, to-day.



GILLETTE SAFETY RAZOR CO.
OF CANADA, LIMITED

Office and Factory:
65-73 St. Alexander St., Montreal.

Canadian Service Set

344

out on the farm. Give them a chance. Be patient with them. Teach them and do the best you can. Go at it in the right spirit and they will do the same and you can bet your boots Canada will produce the goods in 1918 that they are starving for across the Atlantic.

Questions and Answers.

Miscellaneous.

Warble Fly.

When our cows are in the field they frequently give a jump and run as hard as they can to the barn or some shady place. This only happens on very warm days.—What is the cause and cure for this trouble, as our cows are failing in milk very rapidly?

Ans.—This trouble is due to attacks by a fly known as the warble fly, which is sometimes called the gad fly or heel

fly. These flies appear early in the summer and deposit their eggs on the skin of the cattle, fastening them to the hairs. The cattle seem to be much afraid of these flies and are sometimes stampeded by them. About the only treatment that can be applied is to use some fly repellent.

Terminating a Contract.

A rents a farm from B, but when the transaction was made B did not say anything about the barn being out of repair. A has rented the farm for a term of three years. The water runs into the stables in the spring and after every heavy rain. A had to dip water for three days and nights at a time to keep the stock from drowning. B has been informed about the condition. Can A be compelled to stay the full term, or can he vacate this fall provided he makes payment for the time he was on the place?

Ans.—It will depend a good deal on the

wording of the lease. It is altogether likely that B could demand one year's rent. The lease may be worded so that B could collect three years' rent whether A stayed on the farm or not.

Splint.

I have a young horse with a splint about one inch below the knee joint. Both legs are affected. What treatment should be applied?

Ans.—If the horse is not lame it is doubtful if it would be advisable to apply treatment. If lameness is present, given him a rest and bathe the parts frequently with cold water for three or four days, then rub well with a blister made of one dram each of biniodide of mercury and cantharides, mixed with one ounce of vaseline. The horse must be tied so he cannot bite the parts. In twenty-four hours rub well again, turn into a box stall, and apply sweet oil daily until the scale comes off.

WRIGLEYS

Six reasons

WHY it's a good friend:

- 1—Steadies nerves
- 2—Allays thirst
- 3—Aids appetite
- 4—Helps digestion
- 5—Keeps teeth clean
- 6—It's economical

Keep the soldiers and sailors supplied!

Sealed tight—Kept right



MADE IN CANADA



Chew it after every meal

The Flavour Lasts!

WILLIAMS New Scale PIANOS



THE example of the late Queen Victoria in selecting the Williams New Scale Piano has been followed by many of the world's most renowned musicians. This fact has caused it to be known as the Choice of the Great artists.

Louis XV Model, \$550.00

THE WILLIAMS PIANO CO., LIMITED, OSHAWA ONT.
Canada's Oldest and Largest Piano Makers

ONTARIO LADIES' COLLEGE

WHITBY - ONTARIO
Public School to Second Year University,
Household Science,
Music: Instrumental, Vocal, Commercial,
Elocution, Art.

School Re-opens Sept. 11, 1918

Civic and Parliamentary Studies, Gymnasium Work and Swimming.

For Calendar apply to Rev. F. L. Farewell, B. A. Principal.

Questions and Answers. Miscellaneous.

Citizenship.

I desire to know whether or not I am a British subject. I was born in Russia and came to this country when four years of age. Am 18 now. My father has become naturalized.

1. Does that do for me?
2. Or must I take the oath of allegiance?
3. Can I take it before I become 21 years old.

Ontario. L. R.
Ans.—1. No; but your father may apply to the Secretary of State in Canada to include your name in his certificate of naturalization. If so included you would thereafter become a British subject.

2. Yes.
3. Generally speaking, no. But there is provision in the Naturalization Act, 1914, for grant by the Secretary of State of certificates of naturalization to minors in special cases.

Yeast Treatment.

1. What treatment do you use for a cow that will not conceive?

2. One of my cows which freshened recently has a teat from which it is almost impossible to draw the milk. What can be done for the trouble? A. D.

Ans.—1. What is known as the yeast treatment may give the desired results if the cow is physically all right. Mix an ordinary yeast cake to a paste with a little warm water and allow to stand for 12 hours in a moderately warm place, then stir in one pint of freshly boiled, luke-warm water and allow to stand for another eight or ten hours. The entire quantity should be injected into the vagina of the animal to be bred. Use the mixture when period of heat is first noticed and breed when period is about ended.

2. A lump or an obstruction of some other nature may have formed in the teat. It is sometimes possible to remedy the trouble by performing an operation. This is best done when the cow is dry.

Dimensions of Farm.

1. I am about to purchase a 100-acre farm, on which there is a rail and stump fence. I wish to replace this with a wire fence. How many rods of fencing would it take to divide this farm into eight fields with a lane through the centre of the farm. How many posts 20 feet apart would be required?

2. Should I put up the line fence at my own expense or should my neighbor pay half?

3. There are a number of oak posts on the farm. Would they be satisfactory to use?

4. How many rods are there around a square hundred? A. J. F.

Ans.—1. It will require about 1,135 rods of fencing and 935 posts.

2. Your neighbor is supposed to bear the expense of labor and material for one-half the line fence.

3. Oak is commonly used for posts in localities where it is plentiful.

4. Approximately 506 rods.

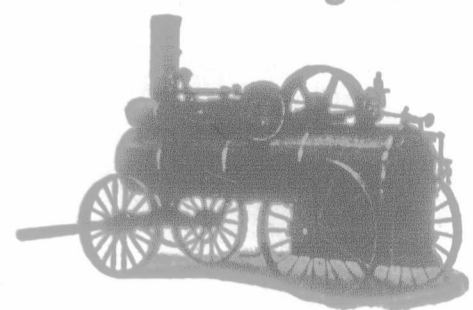
Concrete Cistern.

I purpose building a cement cistern for soft water supply for my house, to be used in connection with tank pressure system. I have plenty of room in the cellar. Would it be advisable to place the cistern in the cellar, or would there be danger of it causing dampness? What size of cistern would you recommend for the average size family? E. R.

Ans.—It is possible that there would be a certain amount of dampness from the cement cistern placed in the cellar. However, if there were adequate drainage from around the cistern we doubt if it would affect the cellar to any great extent. The size of cistern for soft water would depend on the frequency of rains in your locality, and also upon the amount of water used. A cistern 10 by 8 by 6 feet would hold approximately 3,000 gallons. It is advisable to build the cistern plenty large enough, especially if you are depending entirely upon it for your supply of water for bathroom and toilet.

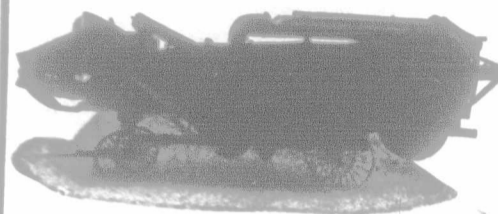
The management of the Toronto Fat Stock Show have decided to eliminate classes for female cattle at their show to be held this fall. At a time when beef is so badly needed by all the Allied countries it was thought it would not be right to offer prizes which would be an inducement to slaughter female cattle which should be utilized for breeding purposes.

Rebuilt Portable and Traction Engines



A number of good rebuilt engines from 14 H.P. up, suitable for Threshers' and Farmers' own use.

SEPARATORS



New and rebuilt Separators, all sizes from the individual Farmer's Thresher to the largest size.

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Offers you and all the family the outing of your life.

ALGONQUIN PARK
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Modern hotels afford city comforts, but many prefer to live in tent or log cabin—your choice at reasonable cost.

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20th CENTURY PIANO—known as

"Canada's Biggest Piano Value"

Write Dept. 18 for Catalogue "T"

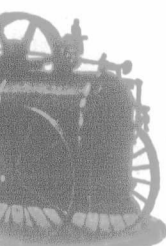
THE SHERLOCK-MANNING PIANO CO.

London (No street address necessary) Canada

If you want a gilt-edged investment, ask for a Mutual Life Endowment

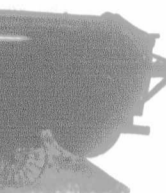
A choice lot of Poland China and Chester White swine, bred from winning stock. Pairs not akin. Prices easy. Geo. G. Gould, R.R. 4, Essex, Ont.

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es from 14 H.P. up, mers' own use.

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all sizes from the largest size. PARTICULARS

Ltd., Seaforth, Ont.

RAILWAY SYSTEM

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YOU WOULDN'T CUT HAY WITH A SCYTHE!

In the fields the work would never be done if it were not for modern machinery. In the house, the SEAFOAM Washer and Wringer saves just as much time, labor and money, as the mower does in the fields. It releases the housewife for work in the dairy, the garden, or with the poultry. It is a money-maker.



SEAFOAM

Power Washer and Wringer

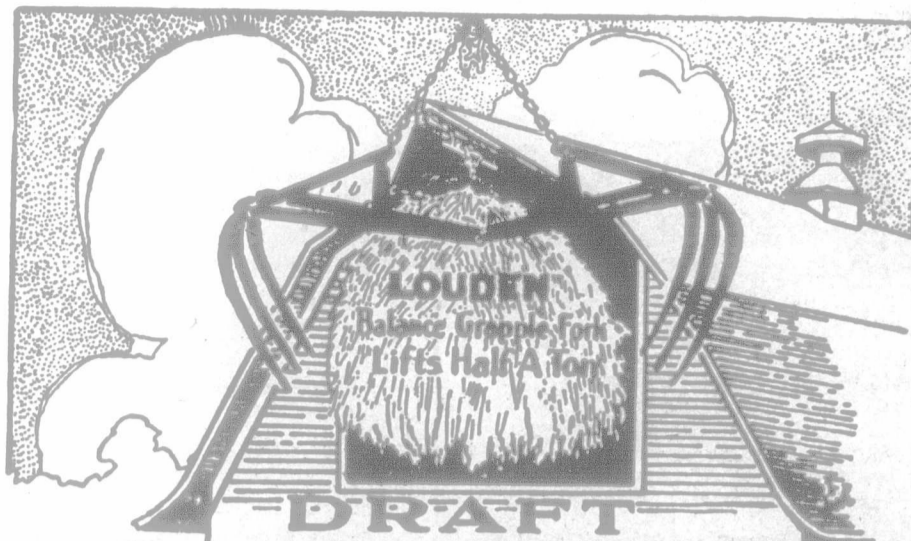
FOR GASOLINE, WIND OR ELECTRIC POWER

Made on honor, and will last longer than any other piece of machinery on the farm.

SEND FOR ILLUSTRATED PAMPHLET.

Dowswell, Lees & Co., Ltd.

Hamilton, Canada



LOUDEN HAY TOOLS INTO YOUR SERVICE THEY SAVE HALF THE LABOR



Louden Senior Hay Carrier Guaranteed to handle 1500 lbs. continuously and safely. No rope trouble, no binding on-track.



Louden Double Harpoon Fork Simple and yet strong in construction. It looks when the tines are open as well as when they are closed.

Minutes mean money in haying time. In the present emergency, when labour is more difficult to obtain than ever before, Louden Hay Tools are indispensable. It makes no difference what kind of feed you handle—long timothy, dry short clover, prairie wool, fine straw, alfalfa or bound grain, a Louden Equipment will handle it to your entire satisfaction. The Louden Senior Fork Carrier with a Giant Balance Grapple Fork or a Double Harpoon Fork, can be depended on to unload your feed quickly and easily. If your feed is long, use a Harpoon, if short and slippery a Giant Fork. For clean, quick work Louden Centre Trip Slings and Sling Carriers have always led the way. "A whole load in two lifts" shows the time you save with Louden Sling Carrier equipment. Write for our New Illustrated Catalogue showing full line of Louden barn equipment, sent postpaid—no charge, no obligation.

The Louden Line includes:
Stalls and Stanchions Hay Unloading Tools
Animal Pens of all kinds Barn and Garage Door
Litter and Feed Carriers Hangers
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"Everything for the Barn."

LOUDEN MACHINERY CO. OF CANADA LIMITED
Vancouver, B.C. St. John, N.B.
513 Martin Ave., Winnipeg, Man.
Alberta enquirers write:
ALBERTA DAIRY SUPPLIES Ltd., Edmonton, Alberta

Gossip.

The McGregor Doddies.

One of the largest sales of Aberdeen-Angus cattle to be held in Canada will be staged at the Brandon fair grounds on July 26, which is during the week of Brandon Fair. The proprietor, Jas. D. McGregor, is offering his entire 1918 show herd, including Majesty Queen, that famous Angus cow. She has a bull calf at foot by Edward of Glencarnock. Pride of Glencarnock 3rd, believed to be one of the best two-year-old heifers on the American continent to-day, is in the sale. Some idea of her growth and thriftiness can be ascertained when it is known that she weighs close to 1,500 lbs. The breeder who secures Pridista of Glencarnock, a senior yearling, will have something that will win in very keen competition. She is out of Pride of Cherokee 19th, first-prize yearling heifer at Chicago and champion female of Canada in 1910-11. In junior yearling heifers, Glencarnock's Pretty Rose 2nd will prove a winner. She is sired by Black Abbott Prince and is a real outstanding heifer and should be a great producer. In heifer calves, Karama of Glencarnock 2nd and Key of Glencarnock will be features of the sale; the former is regarded as the best female which Mr. McGregor has in the showing for this year. Breeders requiring something choice as a herd header will find in Pathfinder of Gwenmawr an outstanding individual that was a first prize junior yearling at all the Western fairs last year, and is in excellent form this year. He weighs around 1,800 lbs., and by the time he is a three-year-old he should make the ton. He is sired by Edward of Glencarnock. If a younger bull is wanted, Laird of Glencarnock 2nd, a junior yearling weighing around 1,300 lbs., will meet with the approval of the most exacting breeder of the Doddies. In the sale will be seventy-five breeding cows, half of which will have calves at foot and the remainder heavy in calf. A grand lot of two-year-old heifers which have been bred will also be offered, besides twenty yearling heifers, some of which are full sisters to the most noted show cattle which have gone on the circuit from the McGregor herd. The sale will

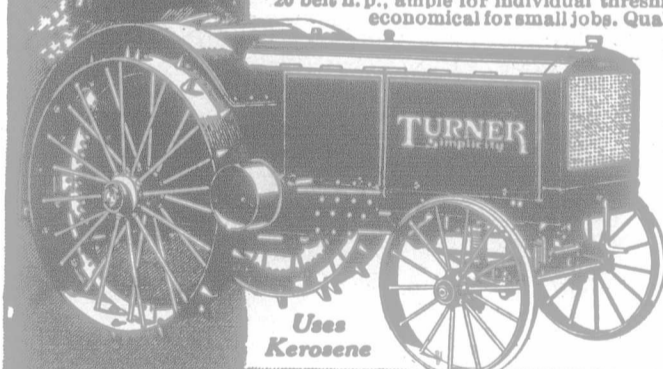
TURNER Simplicity

—the safe, sure TRACTOR "buy"

Why take any chances in buying a tractor? Farmers' actual experience has proved certain tractor principles to be right. Turner's 17 years engine experience has taken those practical tested features and standardized them in a tractor that

meets the needs of every farm

12 draw bar h.p., pulls 3, 12 inch plows under usual conditions. Over 20 belt h.p., ample for individual threshing, silo filling, etc., yet economical for small jobs. Quality built—great strength; light weight. Waukesha 4 cyl. motor, Hyatt roller bearings throughout, Perfex Radiator, Dixie Magneto, Foote-Strite transmission and other standard quality parts.



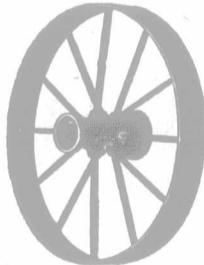
Uses Kerosene

Free Folder

Illustrates and describes our Tractor fully. Write:

Maxwells, Ltd.
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Save One-third on the Cost of Steel Wagon Wheels by Ordering Now!



Our prices will advance 33% on August 10th, next. Order received up to that date filled at present low prices.

Renew the life of your old wagon at small cost. "COOKE" wheels are giving satisfactory service all over Canada. Made to fit any size axle or skein, old or new. One of the greatest labor savers for the farm.

Write to-day for illustrated circular and price list, together with free chart, showing how to take measurements correctly, and booklet of testimonials from pleased customers. Remember we quote prices delivered to your nearest station, no matter where you live!

THE COOKE METAL WHEEL COMPANY
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BROOKDALE FARM HEREFORDS

Having purchased the old-established herd of Mr. Thos. Skippon, I can offer some good values in females, cows with calves by side and bred again. A few good open heifers left.

W. READHEAD MILTON, ONT

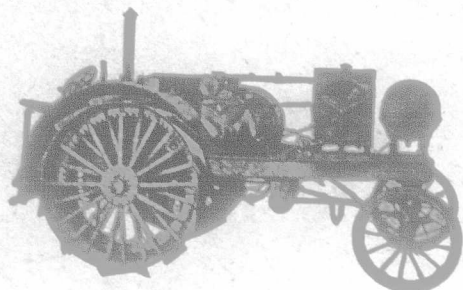
When writing advertisers will you kindly mention The Farmer's Advocate.

be held under cover, and commences at 12.30 sharp. Every animal in the sale is guaranteed a breeder, and every animal will be sold absolutely without reserve. Besides attending this big sale, buyers will have an opportunity of visiting the Brandon Fair. The son leaving for the war and the father's time being taken up with duties of a national character are reasons for holding this dispersion sale.

The exhibition buildings in Queen's Park, London, which have been used by the military authorities since last fair time, are now undergoing extensive repairs and changes in preparation for the big fair to be held September 6 to 14. An addition is being built to the sheep pens, and a new roof is being put on the cattle barn in order that it may be made dry and comfortable. Space in a number of the buildings is being rapidly taken up. The Government is sending a number of exhibits of unusual interest, and excellent pictures are being loaned by the National Art Gallery, Ottawa, which should prove of interest to all who visit the art gallery. For detailed information write the Secretary of the Western Fair, A. M. Hunt.

John Elder & Sons, of Hensall, write as follows: "As in past years, registered Shorthorns of high quality continue to go out far and near from the Elder herd at Hensall, thus showing that selections from this herd satisfy the purchasers. This herd was established twenty years ago by a selection of good, dual-purpose females, and during that time only four bulls have been at the head of the herd, all of which were well selected individuals and proved to be great sires worthy of being retained in the herd for a goodly number of years. We have recently sold a richly-bred bull to W. Hawkins, of Thedford, and one of a choice milking strain to Ivan Hairsrice, of Leamington, and to L. Morrison, of Shedden, six choice heifers and a bull, all under one year of age. It is doubtful if a finer lot ever left Hensall Station to form the foundation of a herd. They were all sired by the present stock bull, Crown Jewel 42nd."

The Waterloo Boy



The Three-Plow Tractor for Ontario.
The Tractor that makes good.
The Tractor that has stood the test
The Tractor that is guaranteed under all conditions.
Write for free catalogue, prices and any information wanted.

THE ROBERT BELL ENGINE & THRESHER CO., LIMITED
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THE MARTIN DITCHER AND GRADER
DIGS YOUR DITCHES
GRADES YOUR ROADS
EASILY QUICKLY CHEAPLY
REVERSIBLE ADJUSTABLE
PRESIDENTIAL IN ONE DAY
DOES THE WORK OF 50 MEN
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NOW is the TIME to PLANT Winter Cabbage Plants

Also Brussels Sprouts, Savoy Cabbage, Red Cabbage, Kale for Winter and Cauliflower for fall. 45c. per hundred, prepaid; \$2.50 per thousand, express collect.
We are shipping successfully to all parts of Canada.

HEROLD'S FARM
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Write for our large, photo-illustrated Catalogue No. 7—It's free to you.
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ITS CAUSES AND TREATMENT
Write for Free Booklet and particulars of the free trial offer of the Mears Ear Phone.
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of all descriptions. Speciality made of draft horses beef and dairy breeds of cattle, show and field sheep. Illustrated catalogues and testimonials on application. All enquiries answered with pleasure. Now is the time to import. Prospects were never better, and insurance against all war risks can be covered by payment of an extra 1% only.

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A FEW YOUNG BULLS READY TO WEAN
G. C. CHANNON
P. O. and Phone Oakwood, Ontario
Railway Connections—Lindsay, G.T.R. & C.P.R.

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Angus - Southdowns - Collies
SHOW FLOCKS
Rams and ewes. Heifers in calf to Queen's Edward 1st prize, Indiana State Fair.
Robt. McEwen, R. R. 4, London, Ont.

ABERDEEN-ANGUS MEADOWVALE FARM, Forest, Ont.
ALONZO MATTHEWS H. FRALEIGH
Manager Proprietor

Cornerstones of a Great Career.

Why are great men so few? In a hundred thousand population we have scarcely a hundred who have made a world place for themselves. And we are the nation of born leaders—in other lands the proportion of supremely great men will be found to be considerably less than 1 to 1,000,000. Russia, for example, has not more than five or six big men, China has not more than a dozen.

Of all the human beings now on earth, it is probable that not more than 300 will finally be classed among the immortals. Reckoning the population of the globe at a conservative estimate of 1,500,000,000 we conclude that only one person in 5,000,000, the world over, is likely to attain the eminence that marks the work or character of supreme excellence.

The secret of immortality is to do something greater or better for the world than was ever done before. Incidentally, fame and wealth follow. But when we have really earned fame and wealth, we do not care for them any more. Supreme endeavor has for its motive the joy of accomplishment, the pride and thrill of leadership, the responsibility of service, the ideal of improvement, the spur of a task impossibly hard, the hope of proving worthy of the one you love most, or the satisfaction of knowing that you have done your best. The beginning of greatness is to have an incentive that grips your mind and heart, and forces you to act without regard to public opinion, your own pocketbook, or any superficial consideration.

Who is the biggest man of your town, city, community or state? Why is he the biggest? Did he grow strong by leaning on his early advantages—or by climbing over his early disadvantages? Were his life opportunities showered upon him—or did he hunt them and create them? How many failures, disappointments and heartbreaks has he gone through? Do the people who live near him understand his motives? How far could his principles and methods be applied successfully to other branches of commercial, industrial or professional work? Has he met and surmounted problems or difficulties that you are facing at this moment? How could he be persuaded to teach, announce or demonstrate his rules for success to the young people of the neighborhood? Questions like these should be discussed fully and demonstrated practically wherever young people from ten to forty years of age meet regularly—in the home, the school, the church, the business organization. To be educated is not to memorize the facts of the past but to energize the possibilities of the present. There is more to be learned from one big man than from a dozen big books.

A good foundation for any vocation is a good foundation for any other. Your profession, trade or business merely forms the visible superstructure of your life building—the foundation consists of your personal habits, traits, principles and methods. You cannot build a lofty career without knowing what these foundation elements are, what they mean to your career, how to select the good and reject the bad, how to combine the best in the best way, how to dig into your character and lay the foundation deeply, how to cement the foundation to stand hard as a rock, how to judge it, prove it and build on it.

Every man is a builder by occupation. Whatever his work may be, every day he builds for himself his own life structure. How he builds to-day will be shown to all the world in the height and breadth of his career.

The average person starts to build a life with no more sense or system than a child uses in building a toy house of blocks on a nursery floor. It is only a question of time until a cruel circumstance hits the frail thing and it topples over. Ninety per cent. of the men past sixty-five years of age are industrial, social, financial and moral failures; they have no place in business or society, no established life work, no income adequate even to support themselves, no character sufficient to control their environment and influence the world for good. These men built haphazard, they used no moral principles in the foundation, no scientific methods in the construction of their life dwelling.

A man's career may be likened to a house

Extra Hours of Daylight

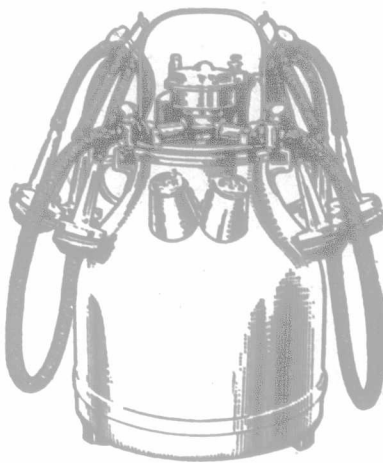
THINK what you could do with another extra working hour each morning and evening. How you could make the whole farm jump.

With hand-milking you have all hands at milking morning and evening.

With the Burrell Milkers you have one man doing the work of three men in the same time. That saving in labor means extra hours of daylight on your farm.

BURRELL (B-L-K) MILKER

Good for the Herd

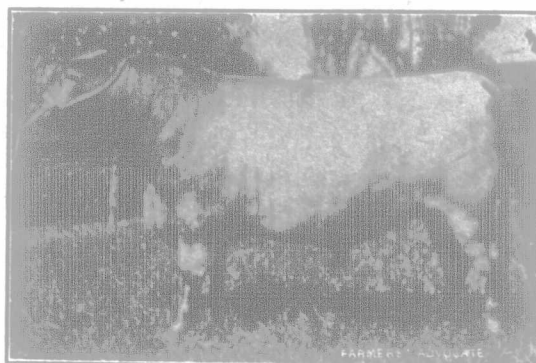


This saving in labor alone pays for the Burrell outfit in less than a year.

Many dairymen who found hand-milking unprofitable and intended selling the herd have used Burrell's and then increased the herd.

Send for free illustrated booklet explaining all the advantages and proving them by experiences of dairymen, big and little.

D. DERBYSHIRE CO., LTD., Brockville, Ont.



GAINFORD SUPREME, No. 115283

Harnelbel Shorthorns

Herd headed by Gainford Supreme, son of the great Gainford Marquis and Jealously the Fourth.

All my cows and heifers are bred to this young bull. Inspection invited.

SAM'L TRUESDALE, Farm Manager
Islington, Ont.

HARRY MCGEE, Proprietor
61 Forest Hill Road - - TORONTO



Milking Shorthorns

The herd is composed of individuals with high milk records and of splendid beef conformation. Several bulls of breeding age, sired by Dominator 10829, one of the best bred bulls for milk in Canada, are now being offered. They are out of cows with records ranging from 8,000 to 11,000 pounds of milk in one lactation. Prices right.

Weldwood Farm, Farmer's Advocate, London, Ontario

SHORTHORNS LANDED HOME

My new importation of 60 head will be at home to visitors June 20th, and includes representatives of the most popular families of the breed. There are 12 yearling bulls, 7 cows with calves at foot, 24 heifers in calf, of such noted strains as Princess Royal, Golden Drop, Broadhooks, Augusta, Miss Ramsden, Wimple, etc. Make your selection early. Geo. Isaac, (All Railroads, Bell Phone) Cobourg, Ont.

SHORTHORN BULLS Will. A. Dryden

of my own breeding, around a year old; best families and good colors, are for sale. Also a few young, imported bulls.

Brooklin, Ontario Co.
Myrtle, C.P.R., Brooklin, G.T.R.
Brooklin, C.N.R.

SALEM SHORTHORNS

Herd headed by Gainford Marquis (Imp.), undefeated in England and Canada. Sire of the winning group at Canadian National, 1914, 1915, 1916. Can supply cattle, both sexes, at all times.

J. A. WATT, ELORA, ONTARIO

Shorthorns

Herd headed by Pride of Escana, a great son of Right Sort. Several bulls and a few females with calves at foot for sale. Herd of over seventy head.

A. G. FARROW (between Toronto and Hamilton), Oakville, Ont.

PLEASANT VALLEY FARMS

Present offering—A number of good young Scotch cows with calves at foot and rebred to (Imp.) Newton Grand Champion; also a number of 2-year-old heifers bred to same sire. Suitable for good herd foundations; priced to move them. Inspection invited.

GEO. AMOS & SONS, Farm 11 miles east of Guelph, C.P.R. MOFFAT, ONTARIO

MAPLE HALL SHORTHORNS

Present offering, 7 yearling bulls; One Cruickshank Duchess of Gloster. Five Cruickshank Butterflies. One Shepherd Rosemary. All pure Scotch, and extra good; also a few young cows with calves, and yearling heifers.

D. BIRRELL & SON, CLAREMONT, ONTARIO

Dual-Purpose Shorthorns

—CROWN JEWEL still heads the herd. Present offering is 5 bulls, from 13 to 18 months. Prices from \$200 to \$250. Also some good breeding females, either bred or with calves at foot. All registered and priced to sell.

JNO. ELDER, HENSALL, ONTARIO

BURNFOOT STOCK FARM

Breeders of high record, dual-purpose Shorthorns with splendid conformation for beef. Have a number of bulls calved last fall and early in winter.

S. A. MOORE, PROP. (Farm one mile north of Caledonia) CALEDONIA, ONTARIO

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Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with FLEMING'S FISTULA AND POLL EVIL CURE—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest Pocket Veterinary Adviser. Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durably bound, indexed and illustrated. Fleming Bros., Chemists, 75 Church Street, Toronto, Ont.

FEEDS

Linseed Oil Cake Meal, Corn Oil Cake Meal, Gluten Feed Meal, Bran, Shorts, Feeding Corn Meal.

Also a full line of the reliable Good Luck Brands of Poultry Feeds.

Write or 'phone for prices.

CRAMPSEY & KELLY
Dovercourt Road, Toronto, Ontario

FLINTSTONE FARM

Breeders of—

Milking Shorthorn Cattle
Berkshire Swine
Belgian Draft Horses

Our heifer Lady of Meadowbrook has just completed an official record of 10,916.6 lbs. of milk and 426.352 lbs. of fat. This is the world's record for the breed of a junior 3-year-old.

Another heifer Lady Sale 15th has just completed an official record of 10,178.8 lbs. of milk and 389.287 lbs. of fat, as a two-year-old.

Dalton
Massachusetts

SHORTHORNS

FOR SALE

Good animals of both sexes. Burlington phone and G.T.R. Jct. Radial every hour from Hamilton.

C. N. Blanshard, R. R. 2, Freeman, Ont.

Mardella Shorthorns

Herd headed by The Duke, the great, massive, 4-year-old sire, whose dam has 13,599 lbs. of milk and 474 lbs. of butter-fat in the R.O.P. test. I have at present two exceptionally good young bulls ready for service, and others younger, as well as females all ages. Some are full of Scotch breeding, and all are priced to sell. Write or call.

Thos. Graham, R.R. No. 3, Port Perry, Ont.

Evergreen Hill R.O.P. Shorthorns

Herd headed by the R. O. P. bull, St. Clare. Nothing for sale at present.

S. W. Jackson, R. R. No. 4, Woodstock, Ont

PLASTER HILL HERD

Dual-Purpose Shorthorns
Six young bulls, from four to thirteen months. Size, quality and good milking strains.

F. Martindale & Son, R. R. 3, Caledonia, Ont

Spruce Lodge Shorthorns and Leicesters

Herd headed by the Butterfly-bred bull, Roan Chief Imp. -60865-. Young bulls, cows, and heifers of all ages, of good breeding and quality.

W. A. DOUGLAS, CALEDONIA, ONTARIO

GLENFOYLE SHORTHORNS
College Duke 4th in service—a high record son of Rothschild and Taylor's noted stock. Am offering young cows and heifers, bred to this great bull. Have a few bulls of breeding age on hand. Stewart M. Graham, Lindsay, Ontario

Dr. Bell's Veterinary Medical Wonder, 10 C90 \$1.00 bottles FREE to horsemen who give the Wonder a trial. Guaranteed for Colic, Inflammation of Lungs, Bowels, Kidneys, Fevers and Distempers, etc. Send 25c. for mailing, packing, etc. Agents wanted. Write address plainly.
DR. BELL, V.S. Kingston, Ontario

in ten or more points of similarity. The chief points are: plan, place, use, material, quality, size, occupancy, arrangement, construction, price. We will formulate a few questions on these points to help you analyze and organize the building of your career as you would the building of your house.

Plan. Have you a definite purpose in living? How far does each fact, word and thought every day carry out this purpose? How do you know the purpose is both desirable and attainable? Have you planned your life ahead as completely and scientifically as you would plan your house? Does your performance fail to measure up to the plan? Can you change minor details of the plan to accommodate yourself to circumstances, without destroying or hindering the final outcome? When it fails to work, do you hold yourself responsible?

Place. Are you in the right job? How do you know? Can you make a better place for yourself with your present concern, or must you go somewhere else? How far can you build future development on the basis of present knowledge and past experience? How many openings are there to a higher position? How many promotions have you had where you are? Why have they been so few? How would you get another job if you lost the one you have? How would you make sure it was a better one, before you took it? What are you doing now to improve your methods of work? Is everybody satisfied with results?

Use. What do you wish to be the main output of your life? A product of commerce, or of character, or of both together? Do you want more to sell things and make money—or to serve people and make friends? Which means more to you, recognition and appreciation by the public, or your own satisfaction with your own work? Are you happier when getting something—or giving something? Have you classified your talents, your physical, mental and moral possibilities, in relation to your work? How are you planning to enlarge their scope of expression? Are you working toward financial independence in order to be free, to do better and bigger things than money can pay for? If somebody gave you a million dollars, would you devote \$900,000 of it to the extension of your purposes and realization of your ideals in connection with your work? Do you love your work so much that nobody with any amount of money could pull you off the job?

Material. Do you know that every thought or emotion either tears down or builds up your mind and body? How many of your thoughts and emotions, regular and occasional, are constructive? Have you lined up all your daily habits to carry forward your life purpose? How many "small" vices have you? Are you informed as to the proven specific ways in which they shorten your life and impair your efficiency? Are your opinions always reasonable and impartial? Do you know more about your business than anybody else connected with it? Would you back up your life plan with all the money you possess?

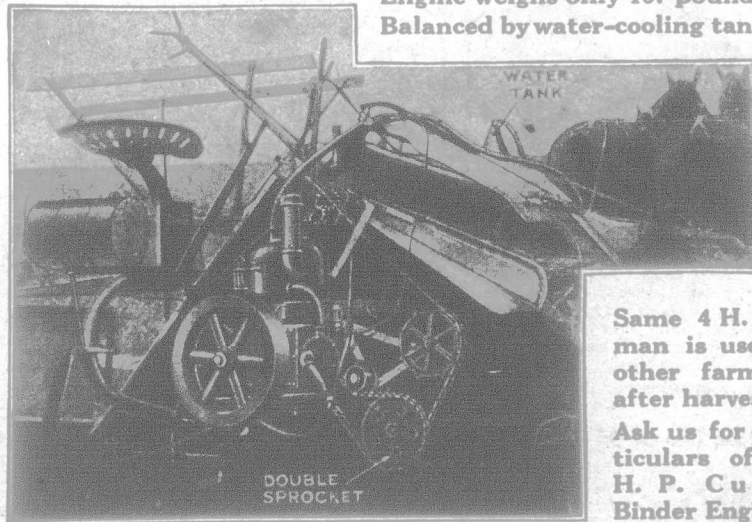
Quality. Is your word as good as your bond? Are you famous for good workmanship? When you make a mistake do you always rectify it promptly and fully? Do you never make the same mistake twice? Have you conducted a national investigation to learn whether anybody is making a better product of your kind than you are? What scientific tests of your product do you require to guarantee it the best possible? Are you employing business psychology to get the most and best work from your associates and subordinates? How do you know you are giving adequate pay, and sufficient other rewards better than pay? Do you thank everybody who brings a complaint or criticism about your work? Is quality of output more important to you than quantity, when a choice between the two is necessary? Do you consider your trade mark worth at least \$100,000 to you?

Size. How many people do you expect ultimately to reach with your sales and your services? Could you not by improved methods of production, advertising or distribution easily double, treble or quadruple your present number of patrons, so as to reduce overhead expenses, and the price of your goods, thus making every one better satisfied? Are you building up a professional or business organization that will live for generations after you are gone? Did you ever plan how to make each client or customer one

Cushman Binder Engines for All Farm Work

SAVE A TEAM ON THE BINDER

Engine weighs only 167 pounds
Balanced by water-cooling tank on front



Same 4 H. P. Cushman is used for all other farm work after harvest. Ask us for full particulars of the 4 H. P. Cushman Binder Engine.

The 4 H.P. Cushman is the original and only successful Binder Engine. Thousands are in use every harvest—saving horseflesh and saving grain. A binder is not complete without a Cushman Engine.

THE ONE BINDER ENGINE —that is used in the grain fields all over North America, from Texas to North Alberta. —that has ten years of successful field work behind it. —that has proper attachments to fit any make of binder in use.

The Cushman is water-cooled and cannot overheat on all-day run in hot harvest field like engines not properly cooled.

Save Horses—Save Grain—Save Time—Save the Binder
Investigate our 8-15-20 H.P. Two-Cylinder Engines

They are the lightest-weight farm engines in the world, yet they are more steady running, quiet and dependable than heavy engines, because of perfect balance and almost no friction or vibration. May be attached to all farm machines that require stationary power. Easy to move around. Moving parts enclosed and run in bath of oil. Throttle governor. Run at any speed—speed changed while running. Direct water-circulating pump prevents overheating.

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BUILDERS OF LIGHT - WEIGHT, HIGH - GRADE GASOLINE ENGINES FOR ALL FARM POWER WORK
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Whyte Ave. and Vine St., Winnipeg, Man.

Fanning Mills—"Hoiland" Wild Oats Separators—Smut and Pickling Machines— Vacuum Washing Machines—Lincoln Grinders—Lincoln Saws—Incubators— Universal Hoists—Langdon Ideal Self Feeders— Portable Grain Elevators— Wagner Hardware Specialties— Combination Threshing Outfits—Shinn-Flat Lightning Conductor.

GLENGOW SHORTHORNS

We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding, and are thick, mellow fellows, bred in the purple.
WM. SMITH, COLUMBUS, ONTARIO. Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.R.

Robert Miller, Stouffville, Ontario

still has a few Shorthorn bulls, fit for service, and some females that are as good as can be found for the man that wants to start right in Scotch Shorthorns. They will be sold for a low price, considering the quality, and the freight will be paid.
Write for anything in Shorthorns. One hour from Toronto.

IMPORTED SCOTCH SHORTHORNS

Our present offering includes 100 imported females and 12 young imported bulls, representing the most desirable lines of breeding. If interested come and see them. Burlington Jct., G.T.R., is only half mile from farm. J. A. & H. M. PETTIT, FREEMAN, ONTARIO

SPRING VALLEY SHORTHORNS

Herd of seventy head, straight Scotch, good individuals. Headed by the great show and breeding bull, Sea Gem's Pride 96365, and Nonpareil Ramsden 83422. We have for sale four as good young bulls as we ever had, and a few females. KYLE BROS., Drumbo, Ont. (Phone and telegraph via Ayr.)

BLAIRGOWRIE SHORTHORNS

I have females all ages and bulls of serviceable age. Worth while to come and see, or write.
JOHN MILLER Myrtle Station, C.P.R., G.T.R. ASHBURN, ONTARIO

ESCANA FARM SHORTHORNS

Five Bulls for Sale. One roan senior yearling; one choice twelve months white calf; by Right Sort (Imp.); one select, dark roan, ten months calf; one roan yearling, by Raphael (Imp.); one roan red yearling, for grade herd. Farm ¼ mile from Burlington Jct., G.T.R.
J. F. MITCHELL, Limited BURLINGTON, ONTARIO

SEVENTY-THREE HEAD OF SHORTHORNS.

Four good young bulls of serviceable age; Nonpareil Ramsden -101081- and Royal Red Blood, -77521-, at the head of the herd. These young bulls range in age from 8 to 15 months, and are for immediate sale. They are out of good dams, which will bear inspection. Our cows and heifers will please, and you'll like the bulls. Also three extra-good grade heifers, from heavy milk-producing dams. James McPherson & Sons, Dundalk, Ontario

GERRIE BROS.' SHORTHORNS

Herd headed by Gainford Matchless, one of the very best sons of the great Gainford Marquis. Our breeding cows are Missies, English Ladys, Duchess of Glosters, etc. Present offering of young bulls are by our former herd sire, Master Missie, Junior Champion at Brandon last summer.
GERRIE BROS., ELORA, ONT.

THE MANOR STOCK FARM---SHORTHORNS

Bulls all sold. Have Wimples, Rosemarys, Minas, Roan Ladys, etc., for inspection.
JOHN T. GIBSON DENFIELD, ONTARIO.

Sprucedale Dual-Purpose Shorthorns

I am offering my herd sire, Braebar Prince; dam, Bessie of Low Banks 2nd, 11,636 lbs. of milk in R.O.P. Good individual, sure and right. Also a few calves by him, as well as some nice young litters in Berkshires. FRANK TEASDALE, (Concord G.T.R. Station, 100 yards) CONCORD, ONTARIO

PALMER McLELLAN FARM BOOTS



Mailed to You Post Paid

Light in weight—wear like iron. More comfortable than those who don't wear them can imagine. Made in the general shape of a moccasin, they afford ease of movement that is delightful. Built on right and left lasts, with counters and soles they fit the foot, hold their shape, and give the greatest measure of neatness and support. All leather used is from selected hides tanned by the famous Palmer-McLellan Chrome-Oil Process which makes it soft and very durable and prevents it from shrivelling, hardening or cracking. The sole and heel are nailed on by a method which prevents ripping or parting with the uppers.

Will outwear and give greater comfort than any other farm boot on the market.

Men's 8-inch high, \$4.75 8-inch high, \$5.25.
 Boy's 8-inch high, \$3.75 8-inch high, \$4.50.
 Women's 8-inch high, \$4.25 8-inch high, \$4.85.
 Fitted with top soles, men's 70c. extra, boy's 60c. extra, women's, 60c. extra.

State size and height desired. Address your order to Dept. 2.

PALMER McLELLAN SHOEPACK CO. Limited, Fredericton, N.B.

Profits in Silage


A BISSELL SILO MEANS MONEY FOR YOU

A Bissell Silo will make your Corn go twice as far, you can feed twice as much stock. It means cheaper costs of producing Beef and Pork. It means increased production of Milk and Butter.

Why Waste Your Corn Crop?

You can preserve it in a Bissell Silo, in Succulent form and therefore more palatable, and relished by cattle than dry feed! The old methods of shocking corn are wasteful. 25 to 30 per cent. of its value is lost. The Silo is the greatest money and labor saver on the farm to-day.

Write us to-day for Catalogue, and full description of Bissell Silo.



T. E. BISSELL
 Co. Ltd., Elera, Ont.
 Dept. W

Steel Rails

for Reinforcing Bridges and Barn Driveways.

CUT ANY LENGTH

JNO. J. GARTSHORE
 58 Front Street West Toronto

HOLSTEINS

1 bull, 2 years old; 1 bull, 18 mos. old, from a 23½-lb. 3-year-old dam. One bull, 13 mos.; others younger.

R. M. HOLTBY, Port Perry, Ont.

KING SEGIS PONTIAC DUPLICATE

A ¼ brother to the \$50,000 bull is the sire of our young bulls offered at present. Two of these are ready for service. Write us also for females.

R. W. Walker & Sons, Manchester Station, G.T.R., Port Perry, Ontario

of an endless chain of new patrons? Is your number of business friends growing? Do people in large numbers come or send at least 100 miles for the product or service you offer? When you lose a patron do you always know why? What are you doing to make your business a profession, or your profession a business. When a poorly dressed person comes to your place of business, does he receive as much courtesy as a millionaire?

Occupancy. Do you realize there should be a place in your career for hundreds of helpers, each one of them as much interested in making the work its best as you are? How are you going to select, equip, sustain and reward these helpers? What branches or departments of your industrial or professional organization will finally be necessary? Have you laid these all out in your own mind, with every department conducted by an expert? Who among your present associates or employees is of the right stuff to make a leader out of, and will be competent later to shoulder a big responsibility? Has your organization studied and prepared all the new profit-sharing or stock-holding or insurance-giving plans now being worked by the largest corporations? Has the idea of a "boss" been cut out of your concern? Does everybody working under you feel that he is working with you, not for you? Is each member of your organization planning his or her life work ahead, as you are planning yours?

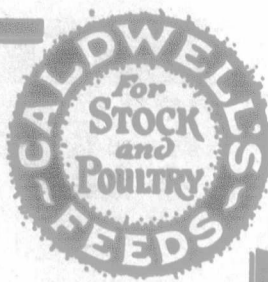
Arrangement. Are you doing today's work to-day, instead of wasting time dreaming about the future? Have you corrected departments and individuals, so that there is no friction or envy or lost motion or material or money? Are your tools, implements and machines arranged on the principles of scientific management? Have you ever counted the number of needless motions you regularly make in your day's work? Do you know the exact cost of every operation? Do you always make sure that the other fellow gets a square deal before you do? Are you getting all you earn and earning all you get? Have you trained yourself to look for new opportunities where you are, and to take advantage of them?

Construction. What proportion of your life plan has been accomplished? How long will it take to finish at the present rate of construction? Do you know all the reasons why the development of your work is slower than it should be? What supplies, materials, resources, facilities or helpers do you lack? Where and how can you secure these? Have you a complete set of principles, policies and methods worked out and written out for each department and each individual? What personal defects or deficiencies of your own have you to prevent your doing big things? Have you learned how to study and profit by each disappointment or failure? What are you reading and studying outside of work hours to advance yourself and your business? Why and how are the biggest men in your line doing things better than you are?

Price. Do you know how many and what kinds of sacrifice every great man has made to achieve an immortal purpose? Is your purpose the greatest thing in your life? Have you, under the force of it, swept away forever the trifling personal desires for ease, pleasure and self-indulgence that keep most men from doing anything worth while? Is your deepest joy the satisfaction of a hard job well done? Would you rather work than play? Do you regard your vocation the finest in the world? If you were offered the job of President of the United States on condition that you never went back to your present work, would you promptly, proudly and firmly refuse the offer? In carrying out your life plan are you willing to undergo any amount of pain, hardship, failure, grief, loneliness, misunderstanding, abuse? Will your life plan bring you large financial rewards in the end—but is the money the last thing you care about? Is personal happiness or even comfort immaterial to you so long as you get your work done? Have you studied the sorrows of the great men of all time? Could you wait twenty years for success to come and be as sure of it every minute as you are now? Would you rather fight to the death for a personal or professional ideal than live and work without it? Have you reached the point of supreme wisdom where nothing matters but doing the one thing you know to be right?


What is a great career? It is the utmost expression of one's physical, mental moral and spiritual power in the best ways known to advance the progress of humanity. How much you can do, how

A Bacon Producer Without an Equal



In this crisis of world food shortage—with its meatless and baconless days—it is important that stock be fed products that will produce most rapid gains at a reasonable cost. If you are fattening a batch of hogs, and want quick results, start feeding

CALDWELL'S HOG FEED



Dry Hog Feed is made from shorts, corn chop, oil cake, pea chop and 10% tankage. It contains 18% Protein, 21½% Fat and 10% Fibre. The question of feed for the winter months is serious, and by ordering early, farmers are assured of obtaining a high-grade feed at lowest prices.

Order from your feedman. If he cannot supply you, write us direct. Dept. 2.

The Caldwell Feed & Cereal Co., Limited
 Dundas, Ontario
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HET LOO PIETERTJE

THE \$12,750 HEIFER

Sold at the great Milwaukee Sale, was only one of the many daughters we have of our senior sire, Pontiac Korndyke of Het Loo. We also have sons—brothers to this world's champion heifer; and for the next few weeks, these, along with several other young bulls of serviceable age, are priced exceptionally low. Let us hear from you if interested—at once.

W. L. Shaw, Roycroft Farm Farm on Yonge St., Toronto & York Radial, 1½ hours from Toronto. New Market, Ont.

Manor Farm Holstein-Friesians

If it's a herd sire you want, write me. I have sons of both my senior and junior sires, King Segis Pontiac Posch and King Korndyke Sadie Keyes. All are from good record dams.

Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter in seven days. Correspondence solicited, visitors welcome.

Gordon S. Gooderham Stations: Clarkson and Oakville
 Farm on Toronto and Hamilton Highway Clarkson, Ont.

CHOICE BULLS—Ready for Service

No. 1—By a son of MAY ECHO SYLVIA His two nearest dams (both Canadian champions) average 35.62 lbs. butter in seven days. Price \$1,000.

No. 2—By a son of MAY ECHO SYLVIA. His two nearest dams (one a four-year-old) average 34.17 lbs. butter in seven days. Price \$600.

Some extra choice young bull calves, from \$200 to \$1,000. We have sold 37 bulls this winter.

HIGHLAND LAKE FARMS
 R. W. E. Burnaby - Farm at Stop 55, Yonge St. Radial - Jefferson, Ont.

Hospital for Insane, Hamilton

We offer bulls only for sale, but they are from some of the choicest cows to be seen in any herd, and bulls equal to the best.

—Apply to Superintendent

SUMMERHILL HOLSTEINS

Present offering:—Two bulls fit for service, both show animals, with excellent breeding, will be sold cheap if taken at once.

D. C. FLATT & SON Long-distance 'phone R.R. 2, HAMILTON, ONT.

Cloverlea Farm Holstein-Friesians

Offers for sale a choice young bull three months old, out of a 20.3-lb. dam. For price and extended pedigree write to

GRIESBACH BROS., COLLINGWOOD, ONTARIO

DUMFRIES FARM HOLSTEINS

Cows for sale, bred to Plus Evergreen, son of Evergreen March,

S. G. & ERLE KITCHEN Bell 'phone. ST. GEORGE, ONTARIO

SILVER STREAM HOLSTEINS

Present Offering—six extra well bred bull calves, sired by bulls with 34-lb. backing, and from tested dams, individually as good as their breeding. For fuller particulars and prices, write, or better come and see them.

J. MOGK & SON, R. R. 1, TAVISTOCK, ONTARIO

Choice Grandson of Queen Butter Baroness

I am offering a Choice 14-months bull from a 21-lb. junior two-year-old daughter of Lo is Prilly Rouble Hartog, and sired by Baron Colantha Fayne, a son of Queen Butter Baroness, he former 33-lb. Canadian champion cow. Also have others younger. **T. W. McQUEEN (Oxford Co.) TILLSONBURG, ONT.**

WALNUT GROVE HOLSTEINS

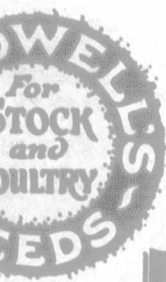
I am offering a choice lot of bull calves, all sired by May Echo Champion, who is a full brother to the world's champion, May Echo Sylvia. All are from R.O.M. dams and good individuals. Also have the usual offering in Tamworth swine.

C. R. JAMES, (Take Radial Cars from North Toronto) RICHMOND HILL, ONTARIO

SOVEREIGN STOCK FARM

The home of Baroness Madoline; 34.48 lbs. butter in 7 days, 1,043.75 lbs. in 35 days, over 87,200 lbs. milk in 47 months. We are offering a few of her grandsons up to 6 months old.

WM. STOCK & SON, Phone Innerkip 3, on line 25. R.R. No. 1, TAVISTOCK, ONTARIO



If you results, ED s, corn nkage. at and for the rdering ning a cannot 2. imited

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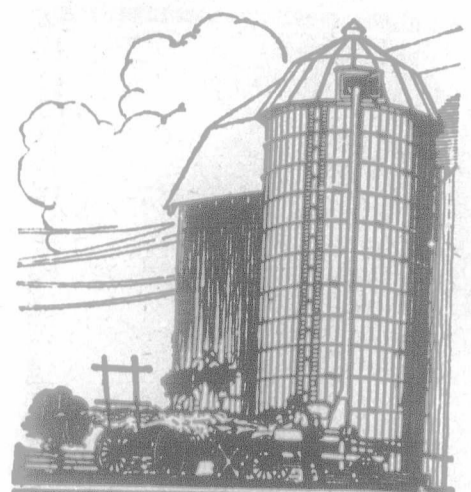
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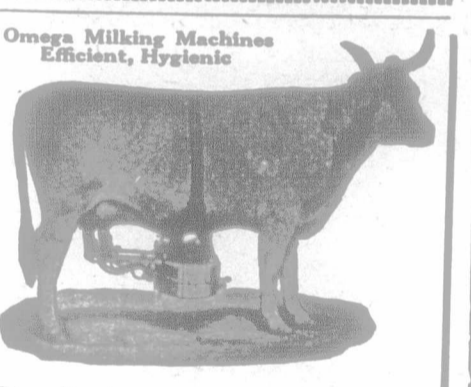
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TORONTO SILOS
EXTRA CAPACITY
 THE Toronto Hip Roof adds several tons capacity to this silo, because you can tramp the ensilage right up to the top of the walls.
 This is one of the many money making advantages of Toronto Silos. Write for the book to-day.—Address.
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Cream Wanted
 We supply cans. We pay express charges. We remit daily and guarantee highest market prices. For prompt service ship your cream to us.
Mutual Dairy & Creamery
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Omega Milking Machines
 Efficient, Hygienic
 The pail and teat cups are suspended from the cow's back. The teat cups cannot fall on the floor and suck up manure or straw. The Omega has no rubber tubes. The Omega milks as fast and as clean as is possible by hand. Leading dairymen in Canada, U.S.A., and Europe are using the Omega. It's a perfect milker.
 Write to-day for free booklet describing the special features of the Omega.
C. Richardson & Co., St. Mary's, Ontario

LAKESIDE AYRSHIRES
 A choice selection of young bulls for sale from Record of Performance dams, imported and Canadian bred.
SIRE: Auchenbrain Sea Foam (Imp) 35758 many times grand champion.
Fairfield Mains Triumph (Imp.) 51137 a son of the noted Hobeland Perfect Piece.
 Write for catalogue.
Geo. H. Montgomery, Proprietor, Dominion Express Building, Montreal. D. Macarthur, Manager, Phillipsburg, Que.

JAS. B. ROSS, MEADOWVALE, ONTARIO,
 for high-producing, show-yard AYRSHIRES. Herd headed by SNOW-KING 47374, first-prize two-year bull at Toronto, 1917. Write me also for anything in Yorkshires.
Meadowvale P.O., Streetsville Station

SUNNYSIDE AYRSHIRES
 Herd headed by Sunnyside Masterpiece. At the recent Ormstown Show we won 2nd for young herd, 2nd and 3rd for get of sire, and 2nd on four calves bred by exhibitor. We breed them right.
JNO. LOGAN, HOWICK STATION, QUE.

Twenty-five Years Breeding REGISTERED JERSEYS and BERKSHIRES
 We have bred over one half the world's Jersey champions for large yearly production at the pail. We bred, and have in service, the two grand champion Berkshire boars. If you need a sire for improvement, write us for literature, description and prices.
HOOD FARM, LOWELL, MASS.

well you can do it, how far you want to do it for the benefit of other people rather than yourself are the main points to consider. Wealth or fame or social position or some other material reward may come as the crown of your career, but will not come if you think of the crown when you should be utterly absorbed in constructing the base. A tribute is only the echo of an attribute. Before the world will look up to you, you must call the world to something higher. The only force to lift a man above the crowd is the force of an ideal. Put new ideals into your work, visualize them with practical methods, and watch your business boom. Every great industry was founded on a great personality and a great personality is but the human embodiment of great principles. The sign of real genius is not eccentricity but impersonality. When you can tell a man's business from the way he looks or acts or dresses or talks, he is not a great man. Rudyard Kipling doesn't wear his hair long as imitation poets do; Billy Sunday doesn't require a ministerial frock to label him a preacher. Luther Burbank resembles a student more than a farmer; General Pershing hates the idea of military badges on his coat; President Wilson easily throws away presidential dignity, runs off to the circus and eats peanuts with the rest of the boys. A man is great in proportion as he does not care to appear great.

If you were planning to build a home you would probably make a study of other homes, that you might include the good features and omit the bad when building. Why not do as much in planning a life? The first thing in a life, as in a house, must be the cornerstones. The cornerstones in the lives of most great men have been **Health, Knowledge, Character, Industry.** Health is largely physical, Knowledge is largely mental, Character is largely moral, Industry is physical, mental, emotional, moral, spiritual, a scientific blend of the powers of the whole man. Looking back thirty years from now, you will see that the quality and extent of these four cornerstones made the foundation of your career.

The first cornerstone is Health. In war, and in business, the successful fighters are the men who keep themselves fit. Recent investigations by Government officials, famous doctors, and experts of the life insurance companies go to prove that 80 per cent of the adult employees in the United States, whether manual or mental workers, are below normal health conditions to such an extent that their work materially suffers, in quantity, quality or both.

It is estimated on the other hand that 80 per cent. of the leaders in American life to-day have specialized in health study and practice for themselves. The few men at the top who, because of a powerful constitution, seem able to defy the laws of health and pay no penalty are likely to die suddenly and prematurely, just when they want to live most because they are beginning to achieve most.

The average man loses thirty years of his life by living wrong. You can't live long when you live wrong.

The second cornerstone is Knowledge. The man who grows is the man who knows. And the more he knows the faster he grows. Hundreds of corporation presidents and other high officials in the United States are now studying technical and general business courses even while managing vast enterprises—a phenomenon without parallel in any other country. A \$50,000 man still going to school is a typical American performance, combining Yankee wit and Yankee grit. The measure of what you can earn to-morrow is what you can learn to-day.

When the classics were in vogue young people tried to learn things just from books. Later it became fashionable to learn by doing, as in the trade schools. Now the combination method and the right one, is for a student of a business, trade or profession to get a job in it, study principles, theories and plans from authorities and recognized leaders, then apply such knowledge directly to the job. A man who works with head or hands alone is but a part of a man.

When I see a crowd of young fellows go wildly excited over a ball game, I think what a lot of better fun they are missing by failing to study their job. If your work doesn't take all your wit, you have no wit or you will have no work.

The strongest faculties and keenest sensibilities you possess will be taxed to the utmost in solving problems like these: How to improve the quality and quantity of your work together; how to increase the varieties of your product; how to ad-

\$40

placed in the bank at the first of each year, and allowed to accumulate at interest for twenty years, will amount to

\$1,107.04

Wealthy and successful people didn't save money in large amounts at the start, but they realized that to be successful in a financial way, they must first look after the small sums.

Small amounts systematically saved for a period of years amount to surprisingly large sums.

How are you going to make the \$40.00?

Beginning this fall, and going on through the winter, The Farmer's Advocate and Home Magazine will call the attention of the farmers of the country to its value and reliability as the foremost agricultural journal of the Dominion, urging them to subscribe to the paper.

We want boys and girls who are ambitious, and grown ups who could

use some extra money, to become our representatives in their own localities. With the assistance we shall give, you will find it easy to secure new subscribers to the Advocate, and in this way earn the \$40.00 a year—and a good deal more if you give the time to it.

Cut out the coupon at the bottom and send it to us and we will mail you full instructions at once

COUPON
 The FARMER'S ADVOCATE & HOME MAGAZINE
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 Gentlemen: I want to earn money by securing new subscribers to the Farmer's Advocate and Home Magazine. Please send me instructions at once.
 Name Age.....
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PEERLESS PERFECTION
 The Fence For Real Protection
 gives life time service. Is made of the best Open Hearth steel fence wire, all impurities burned out, all the strength and toughness left in. Makes the fence elastic and springy. Will not snap or break under sudden shocks or quick atmospheric changes. Galvanized to prevent rust and the coating will not flake, peel or chip off. Can be erected over the most hilly and uneven ground, without buckling, snapping or kinking. Every joint is locked together with the well-known "Peerless Lock." The heavy stay wires we use prevent sagging and require only about half as many posts as other fences. Send for catalog. It also describes our farm gates, poultry fencing and ornamental fencing. Agents nearly everywhere. Agents wanted in unassigned territory.
THE BANWELL-HOXIE WIRE FENCE CO., Ltd.
 Winnipeg, Manitoba Hamilton, Ontario

HILLHOUSE AYRSHIRES—F. H. Harris, Mt. Elgin, Ont.
 Headed by Burnside Lucky Master Swell, a combination of blood so hard to equal, being of the Masterpiece and Lucky Girl families, a combination which means quality, production and constitution. Ninety head to select from. Special offering—20 yearling heifers and 3 bulls. Inspection invited

GLADDEN HILL AYRSHIRES
 A choice bull calf two months old; sire, Fairvue Milkman, dam, a granddaughter of Primrose of Tanglewyld, for sale. Also a few females.
Laurie Bros., Agincourt, Ontario

BRAMPTON JERSEYS
 We bred and owned the dam, and imported the sire of the champion R.O.P. butter cow of Canada. We own the champion four-year-old R.O.P. butter cow of Canada. To make room for 1918 importation, expected to arrive in May, we are making special offerings of females and bulls, all ages.
B. H. BULL & SON BRAMPTON, ONTARIO

THE EDGELEY CHAMPION HERD OF JERSEYS
 Write us about your next herd sire. We now have sons of our present herd sire, Edgeley's Bright Prince, who is a son of Canada's champion butter cow, Sunbeam of Edgeley. Pay us a visit. Sunbeam of Edgeley is not the only high-record cow we have. We are pleased to show our herd at all times
JAMES BAGG & SONS (Woodbridge, C.P.R., Concord, G.T.R.) EDGELEY, ONTARIO

I HAVE FOR SALE JERSEY COWS and BULLS
 Six cows at \$200.00 each; bulls from \$50.00 to \$100 each. T. HETHERINGTON, c/o 481 from Island Blood sires. Strictly guaranteed as represented. Aylmer Street, PETERBORO, ONT.

THE WOODVIEW FARM JERSEYS
 LONDON, ONTARIO Jno. Pringle, Prop.
CANADA'S MOST BEAUTIFUL JERSEY HERD
 Imported Champion Rower at its head. This bull, with his get, won first prize on the island of Jersey, 1914, second in 1916, and again first in 1917. Present offering—A few yearling heifers in calf to our great young bull, Woodview Bright Prince, (7788), and bred from imported sires and dams. We show our work cows and work our show cows.

RECORD OF PERFORMANCE JERSEYS
 CHOICE BULLS AND FEMALES. We have six young bulls of serviceable age, all from R.O.P. dams. Three are by our senior sire, Brampton Dairy Farmer, and three are by our junior sire, Brampton Bright Togo. Write for records. We also have females.
R. & A. H. BAIRD (G.T.R. Stations—New Hamburg, Bright.) NEW HAMBURG, ONT.

Every Engine Owner should have this FREE BOOK

It shows the important part piston rings play in producing power, saving gasoline and oil. Tells how you can have a clean, dependable motor. It will enable you to judge for yourself the claims of all types of piston rings. For your own satisfaction, profit and protection—send for your copy today.

Manufactured by McQuay-Norris Mfg. Co., St. Louis, U. S. A. Canadian Factory: W. H. Banfield & Sons, Ltd., 374 Pappe Ave., Toronto.

WOOL

Farmers who ship their wool direct to us get better prices than farmers who sell to the general store.

ASK ANY FARMER! who has sold his wool both ways, and note what he says—or, better still, write us for our prices; they will show you how much you lose by selling to the General Store.

We pay the highest prices of any firm in the country and are the largest wool dealers in Canada. Payment is remitted the same day wool is received. Ship us your wool to-day—you will be more than pleased if you do, and are assured of a square deal from us.

H. V. ANDREWS
13 CHURCH ST., TORONTO

Shropshires and Clydesdales

Besides my regular offering of ram and ewe shearlings, I have the three-year Clydesdale stallion, Cairnbrogie Heir 18299. Write quick, don't wait.
W. H. PUGH, Myrtle Station, R. R., Ontario

Gloverdale Shropshires and Berkshires—40 shearing rams, 70 shearing ewes; an exceptionally choice lot, true to type and well grown, nearly all sired by the show ram, Nock 16 imp. In Berkshires, the usual strong offering, including sows just bred. **C. J. LANG, BURKETON, ONT.**

Newcastle Herd of Tamworths and Shorthorns Boars ready for service. Some bred and ready to breed; 2 splendid sows carrying their 2nd and 3rd litters. Boars and sows not akin ready to wean. Mostly descendants of Colwill's Choice, 3-year champion at Toronto Industrial, and Imp. Cholderston Golden Secret. A few nice Shorthorn heifers in calf, deep-milking strain. Young cows with calves at foot. Long-distance phone.
A. A. COLWILL, Proprietor, R.R. No. 2, Newcastle, Ont

Sunnyside Chester Whites and Dorsets. In Chester Whites we have both sexes, any age, bred from our champions of many years. In Dorsets we have ram and ewe lambs by our Toronto and Ottawa champion, and out of Toronto, London, and Guelph winners. **W. E. Wright & Son, Glanworth, Ont.**

BIG TYPE CHESTER WHITES

Three importations in 1918. From the leading prizewinning herds in the U. S. Over 100 April and May pigs, by imported sires.

JOHN G. ANNESSER, Tilbury, Ont.

TAMWORTHS

Young sows bred for Sept. farrow and a nice lot of young boars for sale. Write:
John W. Todd, R. R. No. 1, Corinth, Ontario

Morrison Tamworths and Shorthorns—Bred from the prizewinning herds of England. Tamworths, both sexes; boars from 2 to 12 months. Shorthorn bulls, from 5 to 10 months old, reds and roans—dandies.
CHAS. CURRIE, Morrison, Ontario

Meadowbrook Yorkshires

Six large litters of young pigs, about ready to wean; pairs supplied, not akin. Write your wants to
G. W. MINERS, EXETER, ONT., R. R. No. 3.

ROSE ISLE YORKSHIRES

Herd headed by the O. A. C. and Brethour's bred hog, Weldwood 93. Young pigs, either sex, 12 weeks old, for sale. Young sows, ready to breed, carrying the blood of the Toronto champion, Pine Grove Rover 4th.
MOSSIE BUNN, DENFIELD R. R. No. 4.

When writing please mention Advocate

advertise and sell them; how to serve your patrons better; how to put all competition far in the rear; how to set up a new record for yourself in twelve months; how to enjoy your work more than your play; how to find what your real work is; how to save time and energy for yourself and all your helpers; how to reduce overhead; how to stop complaints; how to build a professional library; how to develop a profit-sharing plan; how to increase wages and profits at the same time; how to make every worker proud of his work; how to eliminate the "boss" idea and substitute the partner idea; how to teach employees to think for themselves; how to turn every loss, disadvantage and failure to account; how to combine practical methods with ideal principles; how to insure healthful surroundings and mental conditions; how to incorporate social service. When you have mastered these points of the business game, we shall be glad to give you harder ones to sharpen your wits upon, so that you will not need billiards or poker to keep them properly active.

The way to reach the head of your business is to have your head reach all over the business. Don't work without thinking, or think without working, but think about your work when you are not working, then apply the result of your thinking when you are working. The world bestows the crown of leadership on the man whose head, heart and hands are united in his work. Failure is merely a habit of doing something with your hands while your head and heart are somewhere else. Failure is the willingness to be a fraction of a man.

The third cornerstone is Character. Character is the kind and quality of wood under the varnish. Character is a natural rose in a world of artificial roses. Character is the revelation and radiation of your inmost self. Character is what is the sum total of your convictions. Character is the triumph of your determination over your inclination.

In a recent contest to determine who is the best employer in America it developed that what the employees of a large concern trust, follow and obey is the character of their employer—not his wealth or his power or his shrewdness, but his plain old-fashioned character. The men who control 5,000 to 30,000 employees are men of supreme force of character. A beneficial exercise for any young man is to pick out ten most famous men he knows, whether teachers, doctors, bankers, merchants, manufacturers, inventors, scientists, warriors, philanthropists, or something else, and find what the character foundation of each man really is, what moral qualities have made each man great, and what ones they all have in common.

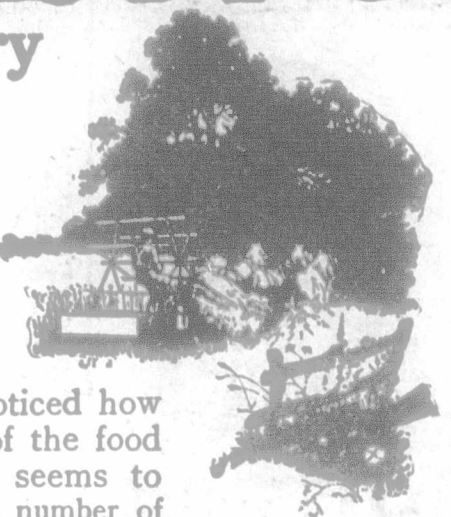
The fourth cornerstone is Industry. The higher a man gets the more he has to work but the more he likes to work. The habit of doing hard work and lots of it puts a man straight in line for leadership. The biggest men of this country work at their job ten to fourteen hours a day. And some of them, while they were getting their start, worked sixteen to eighteen hours a day. Their employees insist on an eight-hour day, which fact explains why they are still employees. No man ever got promoted while arguing for an eight-hour day.

A lazy man is always sick. And a tired man is generally foolish. It isn't hard work that wears you out, but the habit of taking your work hard.

When a man doesn't like his job there is something wrong with both the job and the man. If the man is an employer he should first find what is wrong with the job; if the man is an employee he should first find what is wrong with the man. The function of the new science of work is to make over jobs, employers and employees in such a way that everybody can do more work and better work with less fatigue, the profits of the owners and the wages of the workers are increased together, and all results and relationships are satisfactory.

The best work a man can do is what he came here for. Unless he finds it and does it he might as well not be living. Your job calls for everything in you that makes you a man. It is a fight, a game, a challenge, a problem, a puzzle, a gold mine, a school, a religion, a philosophy, a crusade, a service to humanity, and a measure of all the powers of your manhood. Look into your job. Learn its possibilities. Make the most of them. Life has no more fascinating and fruitful a study. The way to become great is to get the will and skill to do great work. —By Edward Earle Purinton, in "The Independent."

No Worry About Harvest



HAVE you noticed how discussion of the food supply situation seems to center around the number of acres it is possible to plant rather than around the harvesting of those planted acres?

It is an unconscious, but none the less wonderful, tribute to the genius of the inventors of the reaper and binder that the public takes the harvesting of the greatest grain crop ever planted as a matter of course. The sole question now is, "How many acres can we plant?" The power and help required by the planting will be amply sufficient for the harvest where Deering binders and binder twine are used.

And, where they are used, the harvest will be complete. No matter whether the grain be tall or short, heavy or light, standing or down, lodged and tangled, a Deering binder cuts and binds it all without waste.

It is an easy matter to be fully prepared for harvest. Buy the largest binder you can use. The larger sizes conserve labor. Buy a new machine if there is any question about the efficiency of the old one. A new Deering is absolutely reliable.

We furnish promptly either new Deering binders or repairs for old ones. Do not hesitate to call on our organization for any help we can give in the harvesting of this year's grain crop—the most important crop ever raised. See the local dealer or write to the nearest branch direct—early.

International Harvester Company of Canada, Limited

BRANCH HOUSES

WEST—Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask., Lethbridge, Alta., N. Battleford, Sask., Regina, Sask., Saskatoon, Sask., Winnipeg, Man., Yorkton, Sask.

EAST—Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N. B.

Save All The Hay

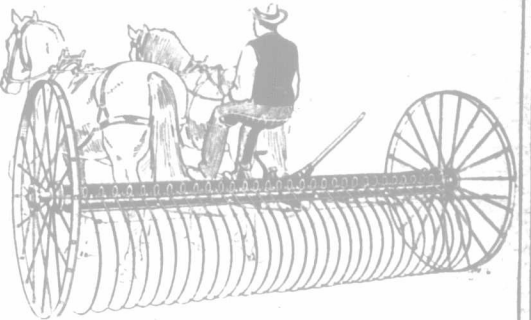
you cut by using a PETER HAMILTON No. 4 RAKE.

This machine has great capacity and will rake up all your hay, whether light or heavy, leaving a clean stubble. The teeth will pass smoothly over the ground without digging into it, and lift well over the windrow.

The automatic dump is very efficient and the extra guard teeth are provided to keep the hay from rolling or winding into the wheels.

No worry, no trouble, no loss of time when working with this efficient rake. Write us to-day.

The Peter Hamilton Company, Limited
Peterborough, Ontario (2)



Southdowns and Shropshires

We have an unusually choice lot of shearing rams of both breeds to offer as flock headers and for show purposes. Inspection and correspondence invited.

LARKIN FARMS (Please mention Farmer's Advocate) QUEENSTON, ONT.

OXFORD DOWN SHEEP

ONE OF THE OLDEST ESTABLISHED FIRMS IN AMERICA

Although we have sold our farm at Arkell we are still in the sheep business, stronger than ever, having secured other land expressly for sheep.

PRESENT OFFERING:—100 yearling rams and 50 yearling ewes. Orders taken for ram and ewe lambs for later delivery. All bred from our own importations. Prices reasonable. Communicate to—

Henry Arkell & Son, (Phone at present under name of T. Reg. Arkell) 70 Beatty Ave., Toronto, Ont

LINCOLNS

C. NICHOLSON
of Horkstow, Lincolnshire, England

has for sale Pedigreed Lincoln Long Wool Rams and Ewes from his world-famous flock of ALL DUDDING - BRED SHEEP. By winning the CHAMPION and "ALL" the prizes in the two-shear and shearing ram classes at the Royal Show of England, 1915, all previous records were broken. Coates Shorthorns and Lincoln Red Shorthorns also for sale.

STATION—BARNETBY

ELMHURST LARGE ENGLISH BERKSHIRES

From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.
H. M. VANDERLIP, Breeder and Importer, R. R. 1, BRANTFORD, ONTARIO
Langford Station on Brantford and Hamilton Radial

BOYS!

DO YOU WANT TO EARN MONEY?

There is something you want to buy, or some definite purpose for which you want to save money, and you don't know where you can get it.

OUR BOY AND GIRL AGENTS

All over Canada are making a lot of money by securing new subscribers to THE FARMER'S ADVOCATE AND HOME MAGAZINE.

One boy in his spare hours made \$30.00 in two months of this year.

Miss Edith Crockett, of Sandwick, British Columbia, made **eight dollars in eleven days.**

Miss Vera Costello has made a total of twenty-two dollars up to this time.

Another of our representatives in the Toronto District has made a total of \$49.00.

These are just a few instances.

WE CAN HELP YOU

To do as well, or better, than those we have mentioned, and your success will depend entirely on your own determination and ambition.

The Farmer's Advocate and Home Magazine

Is the most widely-read and reliable farm paper in Canada, and for fifty-two years it has been fighting for the best interests of its subscribers and Canadian farmers generally. It is well known that The Advocate is independent of outside political or moneyed interests, and that it has always been owned and edited by practical farmers.

These things will make it easy for you to succeed, and the work you will find very pleasant. Our instructions are easy to understand if you will read them through carefully, and will greatly aid you in interesting new subscribers.

A GENEROUS COMMISSION

Will be allowed for each new name sent in, and each time a list of ten new names is completed, we send a special bonus cheque from here.

Subscribers and members of their families, people of all ages, are helping The Advocate in this way, and at the same time earning money enough to get things they want, without feeling they are robbing their bank accounts.

ARE YOU INTERESTED?

If so, cut out the attached coupon and send it in to us without delay, and we will give you full instructions at once.

The Wm. Weld Co., Limited
London, Canada

Coupon THE FARMER'S ADVOCATE AND HOME MAGAZINE, LONDON, ONT.

Gentlemen: I want to earn money at once by securing subscribers to The Farmer's Advocate and Home Magazine. Please send me instructions and supplies.

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delivery guaranteed.

FORD, ONTARIO

Radial



REMINGTON
UMC

Keep up your Shooting--it pays!

The busier they are these strenuous days, sensible men always remember that a certain amount of relaxation is necessary in order to keep fit. And to four men out of five no sport or relaxation appeals so strongly as the "shooting game". To such men Remington UMC makes an irresistible appeal—it gets results for the man who hasn't time to experiment—it ensures good scores to the shooter of average ability.

Remington
UMC

MORE than 100 years of experience and progress in the making of high grade fire arms has built up for us the largest rifle, shot gun and ammunition business in the world. Yet no "demand" is ever great enough to tempt us to cheapen our output in any way. Anything stamped "Remington UMC" is right—from the humble little .22 short—on through our 450 different metallics—from the little .22 Rifles to our splendid Repeaters and Autoloaders and Shot Guns. Every user of Remington UMC is sure of himself, his weapon—his ammunition, and of us—always. Its that sureness that begets success



Teach your boy how to shoot—with a Remington UMC .22 and ammunition.

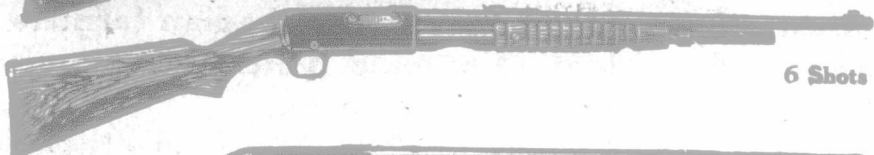


Autoloading Rifle



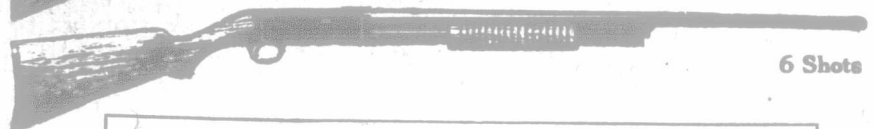
5 Shots

Repeating Rifle



6 Shots

"Pump" Shot Gun



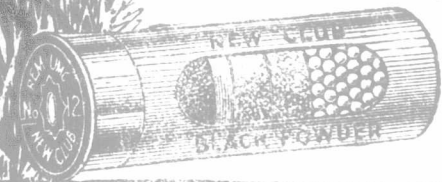
6 Shots

YOU'VE only to swing one of these slim, graceful, light yet rugged weapons to your shoulder to know you've got a master fire-arm. Three snappy little .22 rifles—Autoloading (16 shots) Repeating (15 shots) and the Single Shot, give keen, inexpensive sport too.

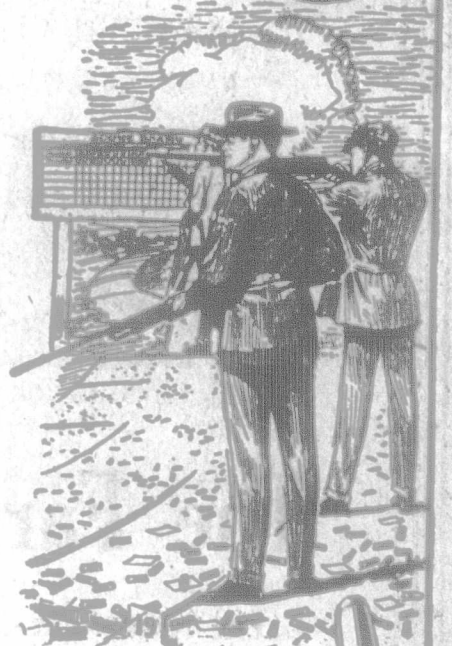
HAVE you seen the new Wetproof Remington UMC Shells—Arrow and Nitro Club, steel lined and smokeless. A new, patented process makes them absolutely impervious to any amount of wetting and exceptionally strong in the crimp, where most Shells are weakest. If you like black powder Shells just try the Remington UMC New Club once and you'll stick to them.

When you want real service, advice and equipment in fire-arms and ammunition look for the Remington UMC dealer. He's a good man to know.

REMINGTON U.M.C. OF CANADA, LIMITED
WINDSOR ONTARIO



REMINGTON
UMC



Trap shooting is clean, healthy sport. The Remington UMC "Pump" is the most widely used trap gun in the world.

