

# The CANADIAN THRESHERMAN AND FARMER

WINNIPEG CANADA  
JULY  
NINETEEN EIGHTEEN



MD

# The Ideal Three Plow Tractor Burns Kerosene

Immediate Shipment  
Guaranteed

## Read What These Farmers say:

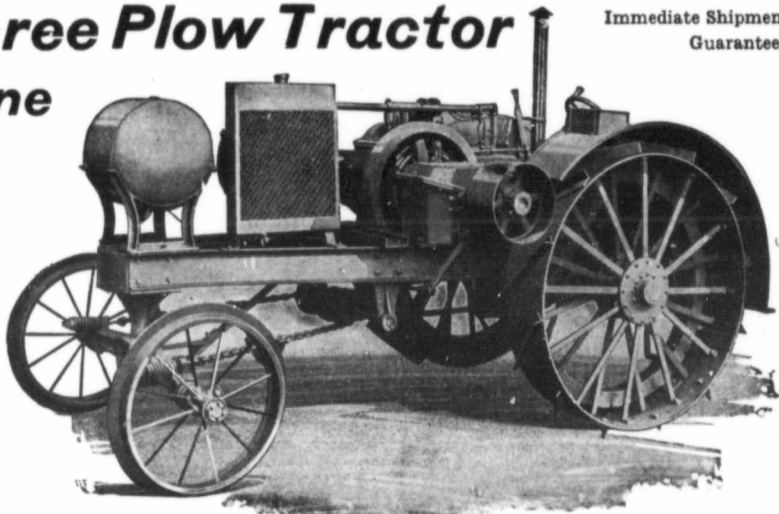
Hague, Sask., May 31, 1917  
In regard to the Model "R" Tractor which we bought from you this spring, I herewith wish to express my satisfaction in regard to the work that the tractor is doing. We have already plowed about 225 acres with the tractor, and have experienced no trouble with it at all. The tractor has all kinds of power. We used a three-furrow 14-inch plow with a 4 ft. harrow behind the plow, and she pulled same quite easily in ploughing between five and six inches deep. With regard to fuel she is very economical. We have used about 1 1/2 gallons of kerosene per acre on an average and cylinder oil—we have used about 17 gallons in all so far. I think we made a good choice when we bought the Model "R" Waterloo Boy. Our next tractor will be one of them too.  
(Sgd.) A. H. KLASSEN & J. B. PENNER.

Extract taken from a letter written by Archie Taylor, of Gilbert Plains, Man.

I am going to give you a small record as regards the work done with my Waterloo Boy Tractor, which has been run by a boy of 16 years old. This spring I plowed 30 acres on a short piece of ground, about 9 acres a day, with a 4—plow 14-inch with about two gallons of coal oil, half-gallon cylinder oil, on my own land. I also plowed 25 acres in 20 hours on a neighbor's land at a half-mile stretch 4—plows with 44 gallons of coal oil.  
(Sgd.) ARCHIE TAYLOR.

Starbuck, Man., Nov. 12, 1916  
As I have now completed my first season's work with my "Waterloo Boy" Model "R" Kerosene Tractor, I can say that I am very well pleased with it.

The Waterloo Boy Model "R" Tractor is all you claim it is. I plowed 142 a—summer-fallow and 220 acres of fall plowing, pulling three 14-inch plows at an average depth of six inches, using two gallons of kerosene per acre, and one-half gallon of gas engine oil. I also have done some disking this summer, pulling a 10-ft. double disk, which is a good ten-horse load. It sure has the power for farming.  
(Sgd.) JACOB RASMUSSEN.



## Waterloo Boy One-Man Kerosene Tractor

There is no doubt about the satisfaction given by the Waterloo Boy Tractor at both belt and draw-bar. It has been proven time and again to be the greatest power plant of them all.

Built for all-around farm work in any season of the year. Powerful for heavy work. Strong to endure continual strain. Reliable because of its perfect scientific construction, and economical because it does more work in less time, at less expense, and with less hired help.

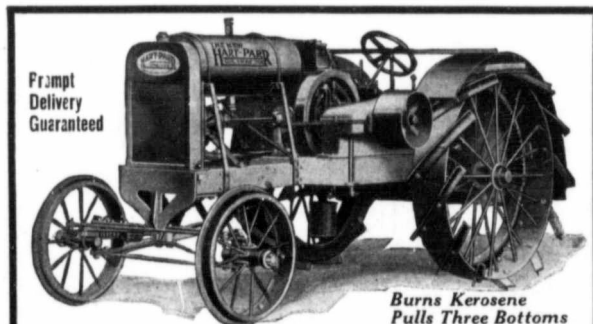
Write for Full Particulars of Construction

## Waterloo Boy Kerosene Tractor of Canada, Limited, Winnipeg

Manitoba Agents for Aultman & Taylor Tractors and Threshing Machines. Repairs carried in stock.

# Horses Cost You Extra Money and Labor! Where a HART-PARR TRACTOR Will Save Both!

If you use horses for all your work you must keep some for only the very busy season—but they eat every day whether they work or not. On an eight-horse farm there are four horses that work only 53 days, yet they have to be fed 365 days! Can you afford to feed eight horses 365 days when four of them work but 53 days? Is it worth it at the present cost of feed? A tractor will do more than the work of eight horses and costs you nothing when it is not working.



Prompt  
Delivery  
Guaranteed

Burns Kerosene  
Pulls Three Bottoms

## The New HART-PARR TRACTOR

is very simple in construction, easy for boys or "green hands" to operate. Twin cylinder, water-cooled engine is mounted on one-piece cast steel frame. Automatic lubricating system, S.K.F. and Hyatt roller bearings. New Dray Kerosene Shunt enables you to get more power from Kerosene.

Let us send you details of construction,  
and tell you about its giant strength.

## Hart-Parr of Canada, Limited

WINNIPEG SASKATOON REGINA CALGARY

It takes 40 acres to feed eight horses. A tractor enables you to sell the produce of these 40 acres because it operates on Kerosene—the cheapest fuel. Fifteen million acres are required to feed the horses that tractors should replace. Fifteen million acres should produce three hundred million bushels of grain that the fighting Allies need, and are ready to buy at a price that means handsome profits for you.

The New Hart-Parr Tractor will do even more than take the place of eight horses. It will do their work in less than half the time it takes eight horses; it will cost less to operate, and it will continue to work when the horses' day is ended, because it is tireless—this enables you to do more work. Also the Hart-Parr Tractor will do your stationary work—threshing, sawing, pumping, grinding, etc.

By doing your work more quickly, the Hart-Parr Tractor insures more timely planting and bigger yields. It will plow deeper—you don't have to favor the Hart-Parr Tractor like you do horses, and it works as well in sweltering hot weather as in cold—and deeper plowing means better crops, because it conserves moisture. It cuts down labor costs when it cuts the time required to do the work. You probably spend three or four hours a day feeding, watering, and caring for horses and their harness. This time might be spent doing deeper plowing with a Hart-Parr Tractor—it saves you time, labor and feed.

Be Sure to See the NEW HART-PARR  
TRACTOR at the BRANDON FAIR!

## SAVE THE GRAIN

### Uncle Sam Now Says You Must!

**Y**OU are going to run a threshing outfit the coming season. If you get what is coming to you out of the season's run you have got some hustling job on your hands.

You cannot get the results out of your run that you are entitled to by sitting down and dreaming about it. You have got to be up and doing.

Get the route of your run all mapped out and get the right help and everything arranged so that you can get an early start and then keep it going so you can be sure of having a long profitable run.

This is just as necessary if you intend to thresh only for yourself as it is if you intend to do custom threshing.

Now, you have got to equip yourself with an outfit that has to take second place to no other. You want an outfit that is in demand by the farmers,—one that they will wait for when they see the kind of work it does. It doesn't cost any more than any other good machinery.

You are going to get a Red River Special outfit some day. You will have to, because your customers will demand it. Then why not get it now? Get it now, while you can.

If you wait until the last minute it will be hard to get the machinery and it will be harder to get cars to ship it to you.

You want a popular machine so that you will have the longest and the best run. You want the one that saves the grain and is practically free from break-downs, because that is the one most profitable for you.

The Red River Special has the only true principle of beating the grain out of the straw. It is the only machine with the "Man Behind the Gun."

### *It Saves the Farmers' Thresh Bill*

## NICHOLS & SHEPARD CO.

In Continuous Business Since 1848

Builders EXCLUSIVELY of THRESHING MACHINERY

Red River Special Threshers, Feeders, Wind Stackers, Steam and Oil-Gas Traction Engines

BATTLE CREEK, MICH.

BRANCH HOUSES and Agencies: (with Full Stock of Repairs) at

REGINA, Saskatchewan

H. P. NORTON COMPANY, CALGARY, Alberta

WINNIPEG, Manitoba



**REPAIR PARTS**  
 Full stock of repair parts kept at principal agricultural centres. Prompt shipment—your time and money saved. Remember this when buying a separator.

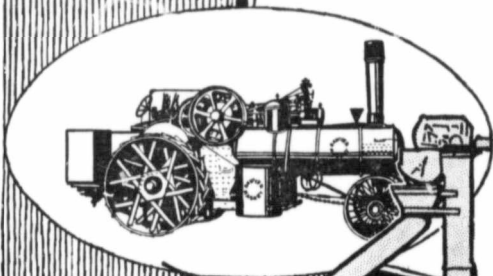
## 100% SEPARATION CLOSELY APPROACHED

**100% SEPARATION** is our aim in Sawyer-Massey Threshers, and is closely approached. Sawyer-Massey Threshers are built on scientifically correct mechanical principles. Their construction is based on the knowledge that the Sawyer-Massey Company has gained in more than eighty years of building farm machines for Canadian farmers.

The 12 and 16-bar cylinders of these separators and ample grate surface insure perfect separation and to take care of the heaviest capacity load. The teeth strip the grain from the head without cracking it. Concaves can be adjusted easily, *while the machine is working*, to suit the kind and condition of grain being threshed. Once set they stay put.

Simplicity of operation, inbuilt strength, and freedom from vibration to insure long life, round out the high efficiency of Sawyer-Massey Separators.

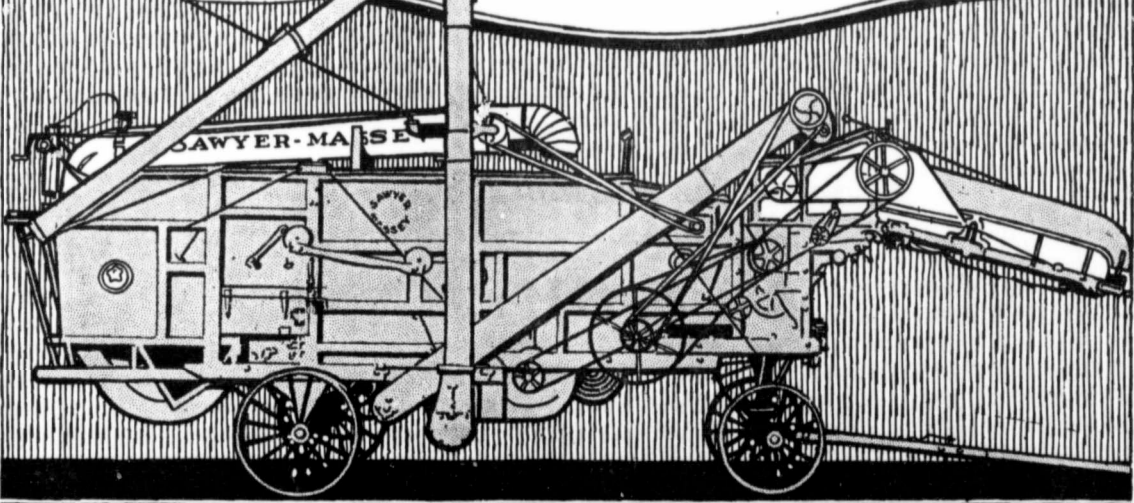
You will quickly see the advantages of Sawyer-Massey Separators by reading our Bulletins describing them. Send for them before you buy a separator—specifying whether interested in large or small capacity.



### SAWYER-MASSEY COMPANY LIMITED

Head Office and Factory: HAMILTON, ONTARIO  
 Branches and Warehouses:  
 WINNIPEG REGINA SASKATOON CALGARY  
 H. S. BOWDEN, Distributor, Edmonton

*Sawyer-Massey Gas-Oil Tractors (11-22 to 27-30 H.P.) and Steam Tractors (51-76 H.P.) are fully described in Bulletins sent on request.*



# Sawyer-Massey Threshers

A  
MAGAZINE  
FOR

# The CANADIAN THRESHERMAN AND FARMER

THE  
FARM  
AND  
HOME

Vol. XXIII

WINNIPEG, CANADA, JULY, 1918

No. 7

## THE "BANTAMS" OF THE LAND ARMY

By THE EDITOR

**T**HIS is the day of shattered precedents. Within the past four years, more moth-eaten idols and hoary precedents have been buried or cremated than have been disposed of in any century of the world's history prior to August of 1914.

The ancient ultra-conservative mummies of "use and wont" "established precedent" have suffered a rude awakening from the crash of the cannon. By a slight exercise of fancy one can see them sitting up in their stone coffins, these gibbering relics of a dead past, agape in stark amazement at the sights they see around them.

"By what precedent?" is the demand of these soul-less hulks from the graveyard. By no precedent, but by the stern law of necessity are those women you see in millions doing the work of the men folks, and those light-hearted children of the school playground performing miracles in human service. Precedent by the carload gone up in smoke and not a cinder left to embalm its memory!

Few, if any, of those exploded precedents will have such tremendous influence in the future as that which has made completely obsolete the notion that the "common or garden" boy is anything of more serious value than that of the household pup—to be toyed with, tolerated, and "trained" into some sort of usefulness by cuffs or kindness according to the humor of the "trainer."

If the war has done nothing greater than discover, so to speak, the boy, and place him just where he naturally and by right belongs, it has done a very great thing indeed. One might almost say it was worth while holding a war if for no other reason than to bring home to the wisecracks of the world the fact that there was no greater asset, no more po-

tential element in the state than that squirming, slippery, sliding creature of limbs and laughter—**The Boy.**

But the world has not been wholly blind all the time to the value of this asset. Quite a few men and women of the present generation (ourselves among them) have been keenly alive to the importance of the boy, and

the old fellow who provided the pence to pay for his boy's literature did so often with a grudge, for he held the belief that this was the merest piffle coming into the house; that there was nothing "to it!"

We lose all patience in the presence of a man who "owns a boy" and who so far belittles his "property" in the lad with the re-

tre of this page. This is Clarence Yuill, of Portage la Prairie, who in the most natural and easy fashion took third place among all comers at the recent great tractor plowing contest on the Portage Plains. His competitors were all full-grown, husky "men" of considerable weight "on the hoof." Clarence is only 13 years of age, and stands something like four-foot-nothing in his socks.

Reckoned in flesh and bones, he was not worth weighing, but in other and far more important respects he would have turned the scale easily against many of the fat, well-preserved seniors who were there in hundreds, "taking in" this great annual contest for plowing supremacy.

We have said he took third place. This was quite good, and having regard to the actual quality of his plowing it was excellent. But for his score-card record of "finishing" he might easily have taken second, if not first, but the finish of his allotment floored him, and for this his father chivalrously takes (as he deserves) the blame, as the boy depended upon his measurements.

The matter of fact details of the great two-day's match have been dealt with elsewhere. Here it is intended to give something of a living appreciation of what we conceived to be the living sermon of the whole show. Taken as a whole, as good plowing has been seen before on the Portage Plains, but finer work was never seen anywhere the world over than that wonderful picture of perfect plowing which the horsemen finished on the first day of the match.

Briefly, these are the facts of this boy's performance. He was operating a "Heider" tractor, pulling a two-furrow 14-inch "Rock-Island" plow. The men in front of him who took 1st and 2nd respectively were also handling the "Heider" and "Rock-Island"



**A "BANTAM" OF THIRTEEN SUMMERS**  
Clarence Yuill, of Portage la Prairie, who took third place in the Tractor Plowing Contest (two-bottom plow section) held on the Portage Plains on 18th June.

have never been altogether out of sympathetic touch with him. Indeed, for quite a while, the periodical literature of the day has given up much space to the special treatment of his case, and with rare judgment in certain quarters have courted his intimate acquaintance and favor by publishing books and magazine literature wholly devoted to his interest.

There is "The Boy's Own"—this, that, and the other thing, but

responsibility hanging thereto, as to think of him only when he needs his services or wants to punish him. But that type of old pirate is fast dying out, and even before the war is over will be found nowhere, except in the junk heaps and garbage piles far in the rear of its red, tortuous track.

Now we turn the light on one of many pleasant pictures we have lately seen of the boy really "enjoying his own"—that of the keen young face in the cen-

combination, and the following are their score-card records:

	Possible Score	Smith (First)	Wilson (Second)	Yuill (Third)
Straightness.....	15	14	12	14
Feeding.....	15	14	12	11
In and out of ends.....	5	4	4	3
Depth and width of furrow.....	15	13	12½	13½
Evenness of surface.....	10	8	7	8
Finish.....	15	11	12	7
Covering weeds and stubble.....	25	20	20	20
Total.....	100	84	79½	76½

Now even if Clarence had been one of the old stalwarts of this community of plowing champions, that score-card of his is not by any means a poor record. Apart from the landslide in his points for finish, it is a very good record; and when you recall the fact that he was probably the smallest of the small boys on the field, and that he was not to blame for it, it is an amazing record, and one of which he and his kin may feel justly proud.

In passing, let it be said that Clarence is of the very essence of good plowing "blood." He is the son of Mr. David Yuill and nephew of the late "Tom" Yuill, who figured prominently while he lived among the champion plowmen of Manitoba. In this way, the farming instinct was born in Jim, but the flame of enthusiasm has been fanned by the wise encouragement of one of those (alas! too few) farmers who know how to "chum it" with their boys and realize that in them they have the making or the breaking of one of the greatest privileges ever entrusted to a man.

Take a look at the young fellow on his engine at the bottom of this page, note the expressions on the faces of this corner of the crowd the camera has been able to take in and read into them your own impressions as they gaze on the young shaver just as he digs in for the next furrow.

In placing the awards in this contest, it was points in plowing only which counted without any reference to the performance of the tractors. But the combined result was fraught with the most valuable experience apart from the features which alone interested the judges.

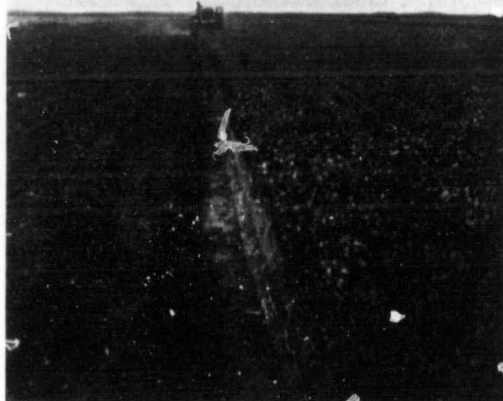
There were 20 tractors altogether in the contest, and it was interesting to note the relative positions of the farmer plowmen operating their own outfits and that of the experts sent out by the various tractor companies. We noted one kindly specialist in gas traction plowing proffering some fatherly advice to a young contestant shown on another page, but to his amazement the young man was "there before him." He took in all the "tips"

and said nothing, but left the engine expert to watch him.

Among the leading winners were the farmers who operated

had all the experience and physical grit of the other young men of thirty. All the same, he did no less well than the young man of thirty a job that cannot be satisfactorily done unless by a person possessing a fair knowledge of mechanics and more than the average skill in applying his knowledge to the business in hand.

Of course, one must not overlook the point of the fine combination of machinery that made it not only possible but easy for him to turn out the work he did, which for all practical purposes in agriculture was perfect. Just look at the top picture on this



THEY SAID "IT CAN'T BE DONE!"

But this boy did it, covered the stink weed to the last "stink," and made a job that would do the highest credit to an expert plowman of long experience.

their own outfits, while the engine experts had to take places well down the list when good workmanship in plowing was alone considered. But the result of the two day's match disclosed a big case for the tractor—at all events for the tractors taking part in this contest.

It is not alleged that this young man of thirteen summers

page and note the line of his furrow and then turn to his score-card and see his points for covering weeds and stubble.

We like to see high art employed in the service, even of the most prosaic subjects; and it is perfectly in keeping with the general fitness of things when it is used with effect in any department of the practice of agri-

culture. But, after all, art in straight furrows, in "feering," "in and out at ends," etc., must play second fiddle to the essentials of thorough cultivation, viz., correct plowing depth and complete covering of weeds and stubble. In these, nothing remained to be done in any part of the work this boy did; for all practical purposes he delivered a parcel of land to the man who wanted a perfect feed bed in as perfect condition as human hands and finely adapted machinery could deliver it.

A valuable four-horse team, of highly nervous "heavy drafts" is not every boy's job; properly speaking, it is not any lad's job. Sometimes they out-general even the old hand who thinks he has the complete mastery of anything in horse flesh. While hundreds of the brave little chaps can handle them all right, not many fathers would have the heart to send his fourteen or even nineteen-year-old son far ahead under certain conditions with a responsibility of the kind.

Have you ever encountered the business end of a real western electric storm out on the open shelterless prairie, having the custody of four extremely restive animals? What happens sometimes if you delay too long in disengaging them from the set of implements and they bolt to the tune of the thunder clap just as you are in the act of unhitching?

The most regardless ancient sinner does not relish this predicament. What does it present to an innocent timorous boy, however kindly the relationship and perfect the understanding between him and the animals in his keeping? But seated on and having perfect command of his tractor, the worst rain and thunderstorm that might descend will have no terrors for Clarence.

Horses are sometimes compelled to perform work that is enough to lacerate the heart strings of the most case-hardened reprobate; but this does not come within the experience of the boy who, like Clarence, can handle his engine as he can turn the cream separator. His thoughts of the sagacious animals (who are his friends) are all associated with them in work they may accomplish in, at least, comparative comfort.

And there are thousands like him. He would be the last "man" to lay any claim to the unique, or the precocious, or the unusual. He is just one common Canadian boy who has been given a chance, and who has been born with the brains and common sense necessary to make use of it.



STARTING ON HIS LAST LAP

The crowd could not do justice to their feelings of admiration. The modest little man was the least self-conscious party on the field that day.

# SEASONABLE HINTS FROM MEN WHO HAVE SUCCEEDED

ONCE more the hoeing, haying, and harvesting months are with us, and the rush of work is great. Unfortunately the supply of skilled farm labor is not as plentiful as crop production opportunities and requirements would lead us to employ. An organized effort is being made, however, in every town and city in Canada to send out to the farm every capable helper that persuasion, if not coercion, can induce to offer for the great task of keeping in shape and harvesting the extensive areas a most favorable spring has enabled us to put under crop.

Labor such as may be expected to come from our urban centres, while admittedly not as effective as that which devotes its whole time to agriculture, will, nevertheless, if properly handled, do the work of saving the crop we and our Allies so much need in this, the probably decisive, year of the great war, and a crop that, even though grown and harvested under more trying conditions and at much greater cost per unit than usual, will yet prove amongst the most profitable, if not the most profitable, ever grown in this country.

Trusting that the following hints and suggestions may prove timely and helpful to you, under present strenuous conditions, I remain, sincerely yours,

J. H. Grisdale,  
Director,

Dominion Experimental Farms.

## METHODS OF CURING HAY

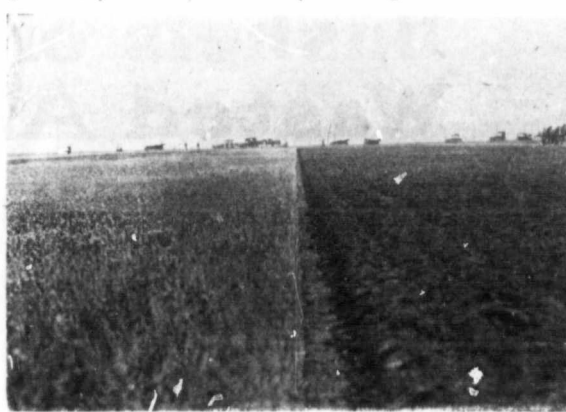
**H**AY making, or the curing of the hay crop, is an important process in farm work. This year extra help will be required and the hay-field will be the parade ground where many of the "S.O.S." boys and other recruits for Canada's second line of defence will "fall in." Making hay has always been hard work. Improved methods cannot do away with some of the heavy features of the work, though modern machinery enables a man to save more hay during the short period that hay is at its best than when the scythe, hand rake, fork, and truck comprised his haymaking equipment.

The man in charge of hay making operations should have experience, plenty of common sense, and a knowledge of the fundamental principles of weather forecasting if he would conserve all the food value in the hay crop. All methods have to be adapted to the weather and the maturity of the crop. If the old adage was

followed, "Make hay while the sun shines," with the present supply of labor much of the crop would be injured by over-maturity.

Some curing methods suggested are:

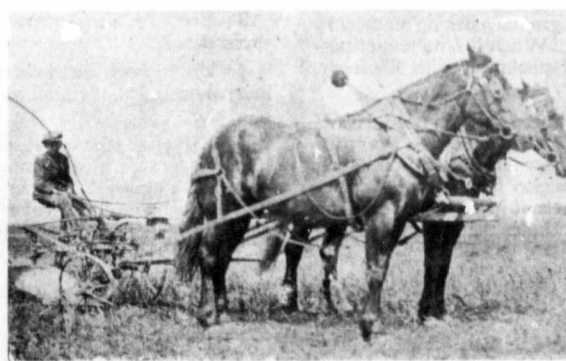
(a) Mature timothy and other grasses may be cut in the morn-



Furrow of A. M. Brownridge (sulky gang) at Portage Plowing Match.

ing of a bright day after the dew is off, tedded, raked in the afternoon, and loaded from the windrows. This hay is stored in a tight mow and salted saves in good shape for horses.

(b) Timothy and mixed hay, cut after the dew is off, at the best stage (when in bloom) should be turned, or tedded, raked in the afternoon, and built into large, carefully-made coils.



"Eddie" Smith, 13 years old, at Portage Plowing Match. The youngest horse-plowman on the field.

Such hay will make rapidly in coil. Caps are used during threatening weather. Shake out coils to sun and wind, and haul in as soon as the hay rustles nicely. Store same as (a).

There is no advantage in cut-

ting before the second growth is started; on the other hand, however, there are grave objections to delaying cutting any length of time after the second growth begins to appear. If cutting is delayed too long, the second growth may be cut off by the mower, the result being that the second crop

is therefore not the appearance of the blossoms, but the appearance of the new growth coming from the crown of the roots. **Alfalfa should be cut when the new growth is anywhere from half an inch to one inch long.**

Making the Alfalfa Hay.—Alfalfa hay may be cured either in the windrow or in coils.

There are some objections to windrow curing, the principal one being that losses are likely to be incurred through shattering of the leaves. On the other hand the windrow curing is preferred by many, as it involves less hand labor than curing in coils.

The best hay is obtained through curing in coils. Coil-cured alfalfa hay has generally a better color and aroma than hay cured in the windrow. It is also likely to become less dusty and to be of a greater feeding value, because there are fewer chances of losing the leaves through shattering. Coil curing can be recommended whenever labor is available. How soon after cutting the hay should be coiled, depends largely on weather conditions.

In hot weather and bright sunshine, hay cut in the morning may be raked and coiled in the afternoon of the same day. If the weather is cloudy and somewhat cool, it may be fit to coil the day after it is cut. **It should be coiled when well wilted and before the leaves are so dry as to break off easily.** Most satisfactory curing is obtained when the coils are made comparatively small so that the air can circulate freely. If the weather is favorable, the hay may be cured to perfection in the coils, but often it may be advisable, three to four days after cutting, if the weather is warm and sunny, to shake the coils out in the morning and draw to the barn in the afternoon.

The hay may be considered cured when no moisture can be squeezed out of the stems.

M. O. Malte,  
Dominion Agrostologist.

## HANDLING HAY CROPS ON THE PRAIRIE

**P**RAIRIE farmers, generally speaking, depend largely on the native prairie hay and green sheaf oats as the main roughage for the winter feeding of live stock. The native hay is allowed to become quite ripe before cutting, which, in large measure, reduces the handling operations. On the other hand, however, where live stock are kept

Continued on page 14



# Threshermen of Canada You are Asked to Help Save the 5,250,000 Bushels of Wheat Wasted Annually

A CANADIAN authority estimates that 5,250,000 bushels of an average year's Canadian wheat harvest is wasted — more than 1,000,000 barrels of flour—enough to feed twice that many people in war torn Europe for a year.

At no time in the history of the world has grain been so sorely needed for human consumption. The fate of nations—the outcome of the war—hinges on the food production of North America. We must not only produce *more*, we must *save all*.

On the firing line in France every move, every shot, every life is made to count. Every sacrifice brings its price. Efficiency ranks first. Waste is not tolerated.

We must be equally thrifty, equally efficient. We must back the men abroad with a closer figuring of our food supplies.

## How the Grain Can Be Saved

Canada appeals to every thresherman and farmer to make the following efforts to save grain:

1—See that your grain separating machinery is in perfect order. When it is no longer possible to operate old machinery with efficiency, buy new machinery.

2—Find out what repairs you need NOW and order them AT ONCE, so that you may have your machinery in efficient operating order before the season for threshing opens. Thousands of bushels of grain are wasted annually by *delay*. Under the present stress of

war shipments over our railroads—early ordering is essential to prompt delivery and conservation.

3—Provide ample power to run your thresher.

4—Use extreme care in keeping your machinery adjusted to meet all varying conditions of grain.

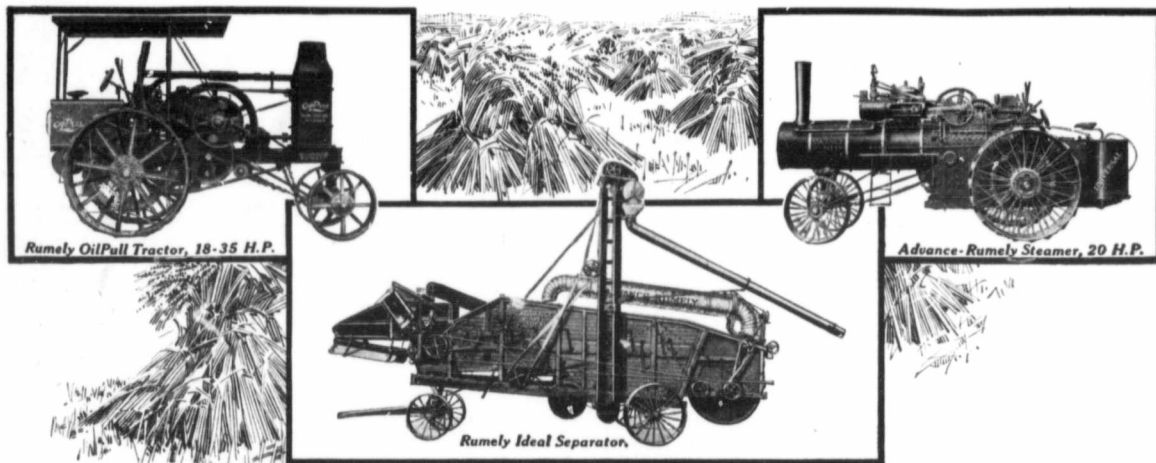
5—Exercise precaution and efficiency in handling grain—in gathering it—in carrying it only in wagons that do not leak—in feeding it to the machine without over-crowding. And clean up after the machine has made its run.

It is the patriotic duty of every man who operates a grain separator, as well as every farmer, to see that no preventable waste occurs in the harvesting and threshing of the Nation's grain. Remember—waste bushels mean human lives. Save to the last grain.

ADVANCE-RUMELY THRESHER COMPANY, (INCORPORATED)







## True to its name "Save all the grain" Ideal

OVER 20,000 farmers and threshermen own Rumely Ideal Separators. In the hands of these owners the Ideal has gone up against every condition a thresherman will meet in a lifetime—threshing every sort of grain—and won its name "Save all the grain Ideal" by actually doing it. Here are a few of the reasons why.

**Large Capacity**—The threshing capacity of the Ideal is the result of keeping the straw moving. There's absolutely no chance for slugging, winding or bunching. You can't choke the Ideal—and that means capacity.

**Close Separation**—With its large cylinder, big grate surface, travelling slatted chain rake, extra long straw rack with its six sets of lifting fingers—the Ideal threshes without waste in any kind of grain—headed, bundled or loose rakings—dry, wet or frozen.

**Clean Work**—More chaffer area than any other separator built—7 feet of extra chaffer length in the grain pan alone—an additional chaffer in the cleaning shoe. The Ideal does the kind of cleaning that gets no "dockage" at the elevator.

**Easy to Operate**—Everything on the outside—shaker hanger bearings, concave adjustments, wind blast, oil and grease cups—right where you can take care of them while the machine is running.

**Strongly Built**—One piece construction—sills, posts, deck rails, straw rack sides, no spliced or bolted timbers to rot, sag or pull apart.

**No Vibration**—All moving parts are counter balanced—steady operation that adds years to the life of your machine.

Six Sizes—Ideal Junior 20x36, 24x44—Ideal 28x48, 32x52, 36x60 and 40x64.

### For the Other End of the Belt

**Rumely OilPull Tractors**—You know the reputation of the Rumely OilPull for belt work—the closest regulation of any tractor made. Governor controlled, the speed of the engine is automatically and instantaneously regulated to meet every change in the load. The Rumely OilPull automatically holds a separator at its correct speed all day and every day—no speeding up or slowing down as the load varies. That is positive insurance of smooth, steady economical power every minute.

Three Sizes—14-28, 18-35 and 30-60 H.P.

**Advance-Rumely Steamers**—These steamers need no introduction to the thresherman and farmer of Canada. They have been standard for generations—the first choice of thousands of users in every part of the grain-growing world. Advance-Rumely steam engines are built throughout in Advance-Rumely shops—built to the high Advance-Rumely standards of manufacture. The materials and workmanship are the best obtainable—the tests are the most rigid.

16, 20 and 25 H.P., single and double cylinder

### ADVANCE-RUMELY THRESHER COMPANY

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INDIANA

Winnipeg, Man.

# ADVANCE-RUMELY

# THE CANADIAN THRESHERMAN AND FARMER

## CANADA'S LEADING AGRICULTURAL MONTHLY



PUBLISHED MONTHLY BY  
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AUTHORIZED BY THE POSTMASTER GENERAL, OTTAWA, CANADA, FOR TRANSMISSION AS SECOND CLASS MATTER

July

The Warning of the Wind!

1918

### OUR GUARANTEE

No advertisement is allowed in our Columns until we are satisfied that the advertiser is absolutely reliable and that any subscriber can safely do business with him. If any subscriber is defrauded E. H. Heath Co., Ltd., will make good the loss resulting therefrom, if the event takes place within 30 days of date advertisement appeared, and complaint be made to us in writing with proofs, not later than ten days after its occurring, and provided, also, the subscriber in writing to the advertiser, stated that his advertisement was seen in "The Canadian Thresherman and Farmer." Be careful when writing an advertiser to say that you saw the advertisement in "The Canadian Thresherman and Farmer."

ONCE upon a time, in a class of youngsters, the word "intangible" came up. They were a bright little lot of boys and girls, and if their vocabulary of big words was somewhat restricted, it was evident from the answers some of them gave, or tried to give, that they "knew" all right if they couldn't express it. "It's something you can't feel or take hold of," one little maid suggested, and then the teacher, very nearly to his own discomfiture, asked: "Is the wind intangible?" The question brought things to a deadlock, which at last was forced by the ubiquitous Billy Jones answering bravely: "No, Sir!" "Why, Billy?" "Well, Sir, you know them oats that father sowed on last year's summerfallow? Well, there ain't none left—the wind took hold of them."

Very few people who have lived in or travelled over Western Canada this year will fail to grasp the significance of this boy's observation on the oat crop that *wasn't*. Wind-storms and soil drifting have been among the commonest experiences of prairie life, but this year, as it happens, they have been abnormally severe in particular districts. And those particular districts are localities in which the soil is unusually light, sandy, or of so fine a texture that it seems to have no "binding" quality. What the actual damage will mean in the aggregate we cannot say, but to many individuals it will spell a clean sweep of the season's crop. Mere comments are useless, and we are not in a position to give advice because we make it a rule never to advise on a subject about which we are hopelessly ignorant.

There is a mass of material on soil drifting on file in every collection of "clippings," but the spring of 1918 has demonstrated in the most depressing manner how valueless all this must be if the information or advice it contains has been carried out in practice. If it has (which is doubtful), then something more has got to be found out. Is the annual recurrence of soil-blowing at seeding time and before the blade has got a sufficient start something that can be overcome, or is the soil of the affected districts like the wind itself—something that is utterly beyond the control of human effort? From observation and the statements of men who have suffered, who have experimented and won out, we dare to say that at least the greater part of the mischief can be arrested.

We submit this, however, with extreme deference, because the little we know is comparatively so very little, we dare not

say that it can be the general experience. It is a matter on which experience and counsel is earnestly sought, and there is "good money" and far more in human gratitude coming to the man who can give some reasonable solution of this most serious problem. We get complaints from friends who have successfully met the case, so they had hoped, on their own farms, but the next-door neighbor hadn't tried. He left the gate open, so to speak, and when the wind came, it blew his soil on top of "next door and a bit beyond." Some co-operative effort surely can do something towards pinning the soil down to its own section.

But the warning of the wind is many-sided, and one phase of it points distinctly to the necessity on the part of the affected districts of raising more live stock. It was our lot this season to spend a few days in the very heart of the light soil portion of Manitoba, when the wind was doing its very worst. The day of the plowing match at Beresford, for example, would give a fair idea of what a free conference of wind and soil could accomplish, and one could well imagine "the devil was in the wind that day." And it wasn't the first day, nor was it the worst day of the season.

And yet, in the midst of all the tornado, and within close range of its worst effects, there were men who had suffered—in many years—but who looked on calmly and undismayed; who did not whine about their own losses, but had a "tear in the eye and a sob in the throat" as they referred to what it must mean to some of their neighbors. But then, you see, those men had learned in time that in farming anywhere, but especially in Western Canada, it is an extremely risky thing to carry all one's eggs in one basket. They had a fine herd of pure-bred cattle, and in one case a choice flock of prolific "Shropshires," who are by no means over-dainty or expensive boarders. It is a benediction of satisfaction and new hope to spend a day on the farms of these men—to spend one hour in their inspiring presence.

We are seeking for information—from any one who has really made an effort, abortive or otherwise, to "fix" the soil at blowing-time. Whatever means you have employed, let the country have your experience. Write in the crudest form if you can't write in any other way. It isn't fine epistles we ask for or expect, but plain facts from actual experience, set out in that language you can most effectively use—short of swearing.

### SUBSCRIPTION RATES

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 \$1.00 per Year.  
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Coca-Cola  
TRADE MARK REGISTERED



### In Sterilized Bottles

A feature of Coca-Cola's goodness for you to remember. Itself pure and delicious, all its purity and delicacy of flavor preserved for your health and enjoyment by clean and sanitary bottling.

### Order a Case for Your Home

from your General Store and you'll be sure of serving a pure, wholesome and delicious beverage.

*The Coca-Cola Company.* Winnipeg, Man.

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## SMALL VERSUS LARGE TRACTORS

By ROBERT WHITEMAN

IN going over this western country one gets the views of many men relative to tractors. Some are all for the big, heavy type. Others again would only tolerate small machines. As a rule, when questioned, each has a perfectly right view because of such varying soil conditions. But at the same time what applies to one particular individual certainly does not to another. Each has his own particular problem to work out, and only by a careful study can we arrive at a definite conclusion regarding the type to buy.

These articles are not written by an expert, merely one who has passed over this country numbers of times, and being considerably interested in tractor problems has received the views of many men regarding things pertaining to gas engines. One thing outstanding to-day, regarding tractor sales, is that the small farmer makes up the majority of buyers and therefore a large type of engine would not be suited to his purposes. This has made the manufacturer turn his thoughts and engines to the small, compact and simple type of machine.

### Plowing Demonstrations

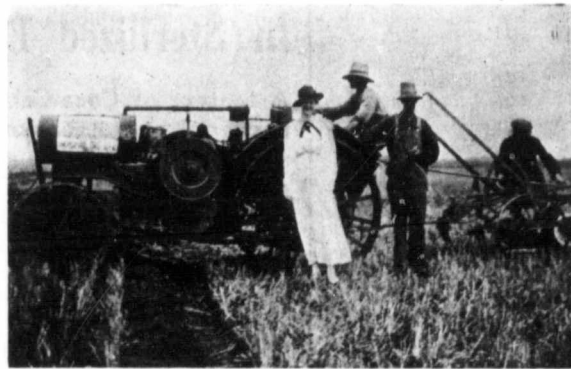
For some years now Western Canada has held plowing demonstrations at the various big centres. The purpose of these demonstrations is to show producers what the various machines can accomplish as regards speed of plowing, consumption of fuel and ease of handling. A number of years ago Winnipeg put on the first competition held in Western Canada, and since that time they have always been very popular. The intending purchaser should attend one of these demonstrations. Then he will have a clearer idea regarding type suitable to his needs.

All tractors are made to work else they would not be on the market. Each has various attachments making them different in type, some probably being nearer the ideal one than others, so that a man has merely to choose that which suits him best. All men are inclined along certain lines. If it be live stock his preference will be some certain breed or color in the breed. Even in the matter of clothes a man inclines towards certain shades and colors, and I feel sure this also applies to tractors as well. If one could see all the different makes arrayed before him then he is able to choose his own particular type and so will always be much better suited.

It is a glorious sight to see the big array of engines at a demonstration. There one will find the great big giant pulling twelve plows as though it were nothing, also the little pigmy drawing two plows, then all types and sizes in between. Surely one can choose the kind he needs from such a huge array. These demonstrations are one of the best advertisements any company can have because it brings hundreds of possible buyers, together and the machine is being sold solely on its merits. It is a comparatively easy matter to sell some men a tractor out on their own farms where the man has no opportunity of putting one make

of over thirty horse-power and on up to the largest size. These big machines were the first type turned out, and were originally intended to replace the big steam rigs in use at that time. Probably the lack of water in many districts caused many threshermen to hail the gas engine as a real saving of time and money. The first engines were nearly all built along one line, viz., large, massive frame, very heavy balance wheels and single cylinders. The fly wheels, of course, were made heavy to carry the engine over centre and cause sufficient momentum to make it even running.

These machines were simple



They look like "Down-South Niggahs," but they're not. These are two habitual prize winners in plowing on the Portage Plains—George and Angus McVicar, at the recent plowing contest at Portage. The "Lady in White" is their sister, and Angus is driving his "Titan."

up against another and a good salesman can make him believe that his tractor is the only real one in existence.

It is a different thing, however, at one of these demonstrations and no amount of talking will cause a man to purchase one after seeing it unable to do the work in comparison to other makes in the same field. There are numerous types on the market to-day: two-wheeled, three-wheeled and four-wheeled, caterpillar type, others using a drum for their tractive power. Each is built for certain conditions of soil and at a demonstration by trying to fit conditions on our own farms to the one before us we are able to arrive at a fairly definite conclusion regarding which type to buy for our own particular needs.

### The Large Tractor

By this term is meant the en-

with the models of to-day. What a difference! The old one looks so ridiculous and from a speed of ten to twenty miles per hour we have almost no speed limit to-day. So with our gas engines. Weight has been cut down fuel cost reduced and a great deal more efficient operation of work performed. Some time ago a man wrote regarding the lack of invention along agricultural lines. When we look back a few years and view the early types we feel that inventive genius has not been wanting.

The large tractor will always have a place for heavy duty work, and as a general rule we see it used more particularly for custom threshing, plowing or road grading. The large farms will always have use for these machines because this small type would require too many men to handle the area to be covered.

In these times of shortage of help for farms the problem of paramount importance is the utilization of heavy power with as little man power as possible. On large farms so arranged that one man can plow as high as twenty acres per day and over, it is apparent that efficiency is being practised to the highest degree. Think what it would mean if this area had to be covered by horse teams and men to drive them. The cost of equipment and feed alone would pay for the big engine leaving the saving of man labor for profit.

A few years ago the state of Illinois had a field survey made regarding tractors in the state. These tractors were in operation on farms and the farmers were requested to answer a number of questions regarding cost of operation, length of life of machine, etc. This report is embodied in bulletin No. 719, published by the United States Department of Agriculture. Any intending purchaser should have this bulletin, and would do well to peruse it carefully. From the large number of engine owners in the state of Illinois some two hundred farmers were selected and their views throws considerable light on the subject.

From reports received the fuel consumption per acre is practically the same whether the engine be a two or a ten plow size. But when the big rig is not running properly a greater loss occurs. In other words when two plows are idle a certain amount is knocked off that day's work and when ten plows are idle for the same per-

(Continued on Page 20.)

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



**"Scientific Refining"**

## Scientific Refining

**U**NLIKE 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.



**Sent FREE**

Canadian Oil Companies, Limited, Dept. 55, 707 Excelsior Life Bldg., Toronto, Ont.

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  
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 I use..... lbs. axle grease per year  
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 I use..... gals. kerosene per year  
 I use..... gals. tractor oil per year

My Name is.....  
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**Tear or Cut Out — Mail Today**

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

**Canadian Oil Companies, Limited**  
 Branch Offices in 36 Cities  
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## Better Feeders

Better threshing can be accomplished by better feeding. Better and more uniform feeding results in saving the maximum quantity of grain which is of vital importance to every machine owner and every grain raiser.

Better feeding is made possible by using the BETTER FEEDERS, the LANGDON IDEAL or the LANGDON JUNIOR.

For sale by the various thresher companies with new separators, also sold by Cushman Motor Works of Canada, Ltd., Winnipeg, Man., for use on your separator, old or new.



LANGDON SELF FEEDER



HART WING FEEDER

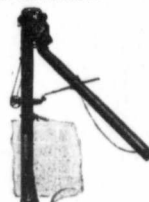
## Reliable Registers

Reliability should be the deciding factor in selecting a register of your profits, which is what an Automatic Register really is. This reliability can only be insured by purchasing Machines with known and time-tested records, such as the PEORIA, HART BELT AND BUCKET, PERFECTION, SIMPLEX and HART JUNIOR.

For sale by the various threshing machine manufacturers.



HART JUNIOR REGISTER



PERFECTION REGISTER

# HART GRAIN WEIGHER CO.

PEORIA, ILLINOIS.

### SEASONABLE HINTS

*Continued from page 7*

and mixed farming practised, together with the growing of cultivated varieties of grasses, the method of handling the hay crop is therefore not the appearance of is most important. Where alfalfa is grown alone and in large quantities, it should be handled quite differently from western rye and brome grass.

**To be successful with alfalfa as a hay, it should be cut when quite young,** generally when one-tenth of the field is in bloom or when secondary young shoots appear at the crown of the roots. Cut when perfectly dry and free from dew. Ted and rake into windrows for convenience in cocking. Alfalfa should be cured in small cocks because it contains a large percentage of moisture which would cause it to spoil if immediately stacked or stored in the barn. In this way the green color and the leaves will be retained making

the alfalfa hay more palatable and nutritious.

The cultivated grasses such as western rye, brome and timothy, etc., should be cut when in bloom, a little prior to full bloom for cattle and, for horses, a little later than the full bloom stage. When large areas are to be harvested it may not be possible to cut the entire crop at the proper stage of maturity, in which case it will be found more advantageous to cut early.

*Continued on page 18*

### A BUNCH OF MANHOOD, SKILL AND FIGHTING QUALITY

**I**F all the "Yanks" who are "over there" or will go over, are anything like these men of the 37th Engineers, there would be little doubt of an early and complete licking of Kaiser Bill. The picture at bottom of this page was taken at the South Works of the J. I. Case T.M. Co.,

at Racine, Wisconsin, where the soldiers were detailed for a two week's course in tractor construction and operation.

The men of the company were enlisted from nearly every branch of the engineering or construction industry, so of course many of them have had some experience in the care and operation of motor.

The school was divided into lecture periods where instructions were given by Prof. G. B. Gunglson of the Research Department, and his assistants, on shop work, repair work and actual field work. Most of the men have never plowed by means of a tractor before, but they picked it up in a remarkable fashion. Each man in the company plowed every day and also with a different size tractor or style of plow.

A rather unique method of tractor repairing was resorted to. One of the instructors would "queer" a tractor, and the student

was instructed to get it running—and they always did.

The students ate, slept and worked all in the same plant. Barracks were furnished at the Motor Department, and real cots were a luxury that the soldiers greatly appreciated. Meals were served to the men in the large South Works dining room. The Case Company entertained its soldier guests to many social affairs, such as dinner parties, automobile trips and theater parties at Milwaukee.

Taken man for man, this bunch was as gentlemanly a crowd of young soldiers as one could ask to meet. They applied themselves strictly to business, and learned a great deal about tractors in a comparatively short time. It is probably the purpose of the government to send these men overseas to instruct the farmers there on the care and operation of the modern iron horse.



# Farmers Now Want

**LIGHT WEIGHT**

**HIGH SPEED**

**MANY JOBS**

**ONE FARMER WRITES:**

"Some engines take a team of horses and a crowbar to get them on the job. A Cushman of the same horse power will do the same work and a 14-year-old boy will move it."

**ANOTHER FARMER WRITES:**

"This winter am using the 4 H.P. Cushman to pull a 32-inch circular wood saw. Have sawed logs 16 to 18 inches in diameter and it cuts better than a regular 10 H.P. big engine because of its speed."

**ANOTHER FARMER WRITES:**

"It does everything on my farm—runs an 8-inch feed mill, pumps water, runs washer, churn, etc. Last harvest I cut 235 acres of grain with it on the binder. It's the best investment any farmer can make."

## Cushman Combination Thresher

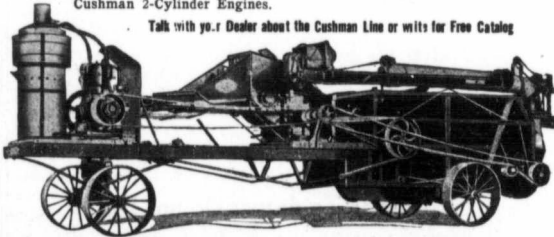
Don't Wait until your grain is damaged in the shock—until hundreds of bushels are shelled out and lost—until the rain and snow cuts down the grade. Your grain is worth too much money to waste.

**JUST WHAT YOU NEED**

Here is a Threshing Outfit that you and your neighbor can afford to own—that will do your threshing with from four to seven men—just when you want it. No Waiting—No Worry—No Loss.

It carries its own engine on the frame, requiring no horses except for pulling it to position. 8 H.P. with Straw Carrier and Hand Feed; 20 H.P. with Wind Stacker and Self Feed; 15 H.P. with Wind Stacker and Hand Feed. Equipped with the famous Cushman 2-Cylinder Engines.

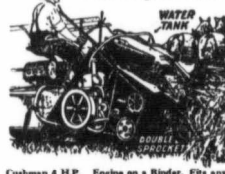
Talk with your Dealer about the Cushman Line or write for Free Catalog



## Cushman Light Weight Engine Saves a Team on the Binder

**THE ORIGINAL AND ONLY SUCCESSFUL ENGINE FOR BINDER WORK**

**Fits any Binder**



Cushman 4 H.P. Engine on a Binder. Fits any Binder. Same Engine does all other work.

Attachments for any binder. With a Cushman you can cut from 8 to 10 acres more and with less horses. If the sickle chokes, in heavy or tangled grain, simply stop or slow down the horses and engine clears the sickle. Binder runs the same, whether horses go fast or slow, and will last several years longer. In a wet harvest, Cushman saves the crop, as slipping of the bull wheel does not stop sickle. Engine on rear of binder is balanced by water tank on front. Direct driven water circulating pump keeps engine cool on all-day run.

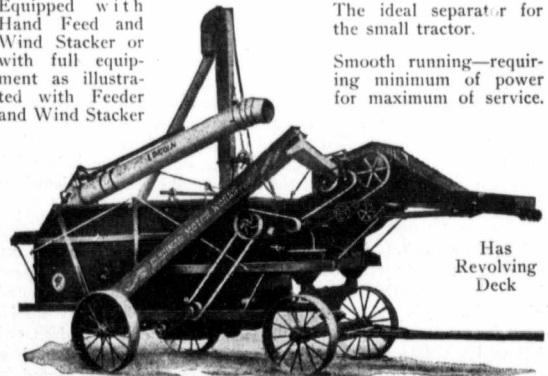
Cushman Engines are so light and so reliable that they do so many jobs other engines cannot do. 4 H.P. weighs only 190 lbs.; 8 H.P., only 320 lbs.; 15 H.P., only 780 lbs.; 20 H.P., only 1,200 lbs. Throttle governed and equipped with Schebler Carburetor and Friction Clutch Pulley.

## LINCOLN 24-46 Separator

Equipped with Hand Feed and Wind Stacker or with full equipment as illustrated with Feeder and Wind Stacker

The ideal separator for the small tractor.

Smooth running—requiring minimum of power for maximum of service.



Has Revolving Deck

Get in touch with us to-night—ask for full particulars of either of these Threshers.

**If Your Home or Barn Stood There** Nothing could save it. It would simply add one more to the thousands and thousands of buildings that are destroyed every year by Lightning. 1918 Lightning losses will be the greatest ever known, because of the increased value of the buildings, grain and live stock destroyed.

This country cannot afford to lose your grain and live stock this year. It is your duty to your country, as well as to your family and yourself, to see that every building on your farm is protected before Lightning strikes.

### Shinn-Flat

**Protects Property from Lightning**

The Shinn-Flat Conductor is made of pure copper wires, woven in the form of flat ribbon-like cables, 1 inch in width. It is the most modern Lightning Rod ever devised.

**Bonded to Protect**

Every Shinn-Flat installation is covered by a Cash Bond that Lightning will not strike, paid for by us and issued direct to you by a large Bonding Company. The W. C. Shinn Mfg. Company is the only manufacturer of Lightning Conductors that ever backed up its goods and its work in this practical way.

**Proper Installation Guaranteed**

Any Lightning Conductor is dangerous unless properly installed. Shinn-Flat Conductors are installed by one of our representatives, who has been thoroughly instructed and whose work we are willing to bond. Shinn-Flat Conductors may be applied to any building at reasonable expense. Write for Book on Lightning Cause and Control, and full information.

## Cushman Motor Works of Canada, Limited

Dept. C.T. WINNIPEG  
WHYTE AVENUE  
and VINE STREET, MAN.

**BUILDERS OF HIGH GRADE, LIGHT WEIGHT, HIGH POWER ENGINES FOR GENERAL PURPOSE FARM WORK**  
Exclusive Selling Agents for: Combination Threshing Outfits—Langdon Ideal Self-Feeders—Fanning Mills—Smut and Pickling Machines—Vacuum Washing Machines—Lincoln Grinders—Lincoln Saws—Incubators—Portable Grain Elevators—Wagner Hardware Specialties—Shinn-Flat Lightning Rod.



## Uncle Hiram ON CONSERVATION

LAST month I promised to tell you what five young people in Saskatchewan "made" out of a straw-pile in five years. They undertook to move it bit by bit nearer to the barn, but the greater portion went directly into the barn, and as payment for their labor they were to have all the grain they found in that pile and all the land they required to experiment with it.

How much straw there was in that pile I don't know, but in the end and when the "floor" had been carefully swept there was exactly 68½ pounds of wheat: that is a shade over a bushel of what turned out to be a very fine sample of fat "Red Fife." The celebrated "Marquis" had not then come into fashion, although it was being talked about.

The kiddies carefully cleaned the seed, and, in fact, hand-picked it during the winter, and in the spring of 1907 it was sown in a plot which every one got to know as "the children's own." It came along in splendid shape, and, indeed, I understand when things were looking somewhat dry, the young people in their zeal did a bit of "irrigation" on a plan of their own.

At threshing time you may "bet your boots" five pairs of eager eyes watched for threshing results, and their owners went to some pains with the gang to get them to "tighten things up a bit" when it came to putting their little bit through the separator. The gang stood severely on their honor and saw that not a sheaf went on the feeder that had no business there.

The net result was 38½ bushels of grain—slightly reduced after it had been put through a fanning mill. This grain was all used for seed on a field where it followed a potato crop, with the result that in 1908 the children on that Saskatchewan farm were the sole owners of over 800 bushels of a perfect sample of No. 1 Northern when the market price stood in the neighborhood of 98c. for that grade.

They sold 700 bushels of this, bought a piano and sent mother

and baby sister on a trip to the Coast to visit father's sister. The remaining 100 bushels were used for seed, returning 1,800 bushels in 1910. A portion of this (not exactly sure how much) was set aside for seed and remainder sold for seed at an average of \$1.35 per bushel.

In 1911 the entire crop grown was sold for \$1,365. A small but choice herd of the great milking "Holsteins" was on the farm, which had not even a "foundation" when the children started out to sift the straw-pile, and, replacing the pioneer "shack" in which all the five had been born was erected a new "home," than which there is nothing better in comfort and beauty in the province.

And so we could continue, but are at a loss for details which we can identify as directly the "product" of the children, as we can the foregoing facts. The young people have been so busy and so wrapped up in pooling their interests that they have "lost count" in a measure. But as between themselves and "the old man" there is not and never can be disagreement.

Now I have still on tap a great stock of my own and other people's platitudes on the subject of conservation, of thrift, of never despising the day of small things, and particularly on what there is in buried treasure in most of the straw piles. But this true story of five children of Saskatchewan beats all my armchair wisdom and all the other "ancients" have got to say.

There's a moral in this as in every story. There's a moral in every straw pile, easily found if looked for. Not every thresherman or farmer has children, or has children of an age and spirit who could reproduce this record from Saskatchewan. But every man who will build a straw pile this next harvest can see that he builds it of straw only—not "reinforced" with grain that is now worth \$2.21 a bushel. He can, single-handed, do all the five children did by using a Grain Saving Wind Stacker.

## A Crime

will be committed if you raise a crop and fail to provide means to thresh it in the shortest time, and at the least possible expense

## A Garden City Feeder

attached to your separator will feed it so evenly there will be no break-downs nor frequent stops, no matter how the grain is piled into the feeder. Every bushel will be saved and put in the bin; not in the straw pile or scattered on the ground.

Even and regular feeding **must** be done to save the grain. The **Garden City Feeder** is the **only** Band-Cutter and Self-Feeder on the market that overcomes the evil results of irregular and spasmodic pitching. It corrects the **errors** of the pitchers, and makes threshing a pleasure, and at the same time saves the grain and makes money for you.

All orders subject to cancellation in case of crop failure.

Order To-day Do not Delay  
Satisfaction Guaranteed

REMEMBER we are sole agents  
for the CASWELL BELT GUIDE

Garden City Feeder Co.  
Limited

REGINA - SASK.

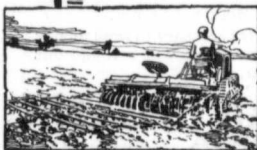
W. S. MUNROE CO., Calgary, Alta.  
BRUCE DAVISON CO., Brandon, Man.  
MART McMAHON, Lethbridge, Alta.  
A. E. GARDINER, Saskatoon, Sask.



## The Answer to the Farm Labor Shortage



Plowing



Harrowing



Planting



Reaping

**T**HE farm labor situation is serious. And little relief is in sight. The new draft will take more men. More horses and mules must go.

But, in the face of these handicaps *production must be increased*—and it can be if you adopt the right means.

The Cleveland Tractor has shown the way on thousands of farms. It has successfully replaced muscle with machinery. It has proved itself the modern "Man-of-all-Work."

The Cleveland Tractor plows as much ground as *three good 3-horse teams* and *three men*—eight to ten acres a day.

It actually does the work *better*. And it harrows. It plants. It reaps. It cuts ensilage, fills silos, turns saws, hauls manure spreaders and road machinery, drags logs, and does the hundred and one chores that mechanical power can do about the farm. It delivers 12 horsepower at the drawbar and 20 horsepower at the pulley. But it weighs less than 3200 pounds. The

## Cleveland Tractor

*travels on its own tracks, like the giant "tanks" on the battlefields of Europe, and will go practically anywhere.* With 600 square inches of traction surface constantly on the ground, it goes through mud, sand, clay and gumbo without miring, floundering or packing the soil.

It steers easily—by the power of its own engine,—and will turn in a twelve-foot circle. It is so small that it can readily be operated under and among small fruit trees. It requires less housing space than a horse.

Rollin H. White, the well-known engineer, designed the Cleveland Tractor. It is built under his supervision—from the best materials. Gears and tracks are protected from dirt and mud, and are specially built for long service.

Let this modern "Man-of-all-Work" fill the gaps on *your* farm. Let it help you produce larger crops, with less help—and incidentally make greater profits for you. Write us now for detailed information and the name of the nearest Cleveland dealer.

Western Distributors: GUILBAULT'S LIMITED, Winnipeg, Manitoba  
FOUNDRY PRODUCTS LIMITED, Calgary, Alberta  
NORMAN COX LIMITED, Saskatoon, Saskatchewan

**THE CLEVELAND TRACTOR CO.**  
19103 EUCLID AVE. CLEVELAND, O., U. S. A.

[The largest producer of crawler type tractors in the world



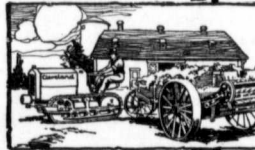
Sawing



Grading



Orchard Work



Hauling

# The ATLAS TRACTOR

**Powerful                      Economical                      Durable**

## THE SENSATION OF THE YEAR

The Atlas Tractor is very simple in construction and operation and its performance is unequalled by any other tractor in its price class.

### SOME SPECIFICATIONS

26 H.P. at belt.  
16 H.P. at draw bar.  
2800 lbs. draw bar pull at plowing speed of 2½ to 2¾ miles per hour.  
Pulls three 14-inch bottoms.  
Waukesha motor.  
4 cylinders, L head.  
Bore 4¼ in. Stroke 5¾ in.  
Engine Runs 1000 R.P.M.  
Fuel—Kerosene, gasoline or distillate.



Taken from Actual photograph of the ATLAS TRACTOR pulling three 14-inch bottoms from six to eight inches deep through the toughest kind of virgin soil at the demonstration on Crescent Heights, Calgary, May 29th, 1918.

### SEE THIS WONDERFUL TRACTOR AT THE CALGARY, BRANDON AND REGINA FAIRS

IMMEDIATE DELIVERY CAN BE GUARANTEED, as a large number of these tractors are being shipped from the factory direct to Calgary every week. For further information write or wire to

208 Dominion Bank  
Building

## The Western Tractor Sales Company

CALGARY,  
ALTA.

### SEASONABLE STUFF

(Continued from page 14.)

Curing has an important bearing on the quality and palatability of the hay. The hay should be cut when perfectly dry and aim to expose to the sun no more than necessary as prolonged exposure decreases weight and palatability. When the crop has wilted run the tedder over the hay to allow the air to circulate more freely, thereby hastening curing. When the hay is sufficiently dry it should be raked into windrows and either piled into small cocks or hauled direct to the barn. Undoubtedly the best quality hay is made by piling in small cocks which allows it to sweat or ferment, eliminating the danger of excessive fermentation when stacked or stored in the mow. The quality of the hay may be further improved by stacking in the field. However, this method entails considerable handling, labor and waste. Hauling direct to the barn and storing in the mow is the most economical way.

When you visit

REGINA FAIR

don't fail to find your way to the exhibit of the

LAWSON SHOE STORE.

You are cordially invited to come in and ease your feet.

### A BRAND NEW FARM MACHINERY HOUSE

Among the most recent companies to be formed in Winnipeg handling Farm Light Plants, Cream Separators, Milking Machines, etc., is Robinson-Alamo Limited.

This firm has opened at 140 Princess Street as exclusive Canadian distributors for the Alamo Farm Light Plant and exclusive Western distributors from the Great Lakes to the Coast for the Empire Cream Separators, Empire Milking Machines and Alamo Gasoline Engines.

The managing director of the new firm, Mr. W. N. Robinson, is an active member of the firm, and is thoroughly well known to the trade of both Western and Eastern Canada.

He came from Sussex, N.B., and was formerly connected with the R. D. Robinson Publishing Co. there who print the "Maritime Farmer," an agricultural paper.

From that position Mr. Robinson became manager of the Sussex Manufacturing Co., who manufactured farm implements, and then he took the position of sales manager of the Empire Cream Separator for the Canadian West. Mr. D. M. Bailey is secretary-treasurer of the new company.

This new development will mean much to western trade.

## Sending Money to Soldiers

Those who have friends or relatives at the front, may wish to send money, but possibly do not know the best way to do so.

If time permits, the safest and most convenient method of making remittances abroad is the Bank Money Order or Draft, as issued by The Merchants Bank.

If, however, it is necessary to send money without delay, the Bank will arrange this by Cable Transfer.



## THE MERCHANTS BANK

Head Office: Montreal, OF CANADA Established 1864.  
with its 19 Branches in Manitoba, 21 Branches in Saskatchewan, 53 Branches in Alberta, 8 Branches in British Columbia, 102 Branches in Ontario and 23 Branches in Quebec serves Rural Canada most effectively.

WRITE OR CALL AT NEAREST BRANCH

## CLEAN, PURE WATER

IS ESSENTIAL TO THE GOOD HEALTH OF MEN AND BEASTS

## MAX Screw Joint Well Casing

Is made of Best Quality Galvanized Steel. Easy to instal. Gives Long Service. Write 10-day for Full Particulars and Prices. ::

## Winnipeg Ceiling & Roofing Co. Limited

MAKERS OF GRANARIES, STOCK TROUGHS, Etc.  
P.O. Box 3006 C.T. 41B WINNIPEG, Man.

# Harvest Bigger Crops from Tractor Plowed Ground



## Early and Deep Plowing Makes Better Seed Bed for Next Year's Crop

Ground, plowed immediately after harvest, is worth more than the same ground plowed later on. Why? It conserves the moisture in the soil. This is one of the biggest advantages of owning an Avery kerosene tractor. It gives you power to plow deep and quick; power to plow at the right time when the work should be done to produce the best results; power that is not stopped by hard ground, flies or hot weather; power that will run day and night if necessary.

### Farm with Kerosene

It is cheaper than feeding horses and mules. It means more acres handled by one man and every acre means bigger crops. An Avery Kerosene Tractor and an Avery Motor Planter-Cultivator makes a 100 acre farm a one-man job. This combination saves labor—increases crops—saves food.

Avery Tractors are real kerosene burners, they are the only make with the Duplex gasifier fuel system which burns all the kerosene—it turns kerosene into gas.

### Averyize Your Whole Farm

You can do all your farm work with Avery power—you can plow, prepare your seed bed, plant and harvest your grain crops with an Avery Kerosene Tractor and Plow. You can plant and cultivate your corn, cotton, beans or other row crops with an Avery Motor Planter-Cultivator. You can save your grain with an "Avery Champion" Grain Saver Separator.

There is a size Avery Kerosene Tractor for every farm and every kind of work—six sizes from a little 5-10 to a big 40-80 H.P. And there is a size Avery Plow and Thresher to fit every size thresher run.

#### WRITE FOR AVERY MOTOR FARMING CATALOG

Don't fail to get this catalog, it shows all Avery machines in their natural color and explains their many features. Tells all about Avery motor farming machinery. Address

## CANADIAN AVERY CO., LIMITED,

Western Canadian Distributors

MAIN OFFICE, WINNIPEG

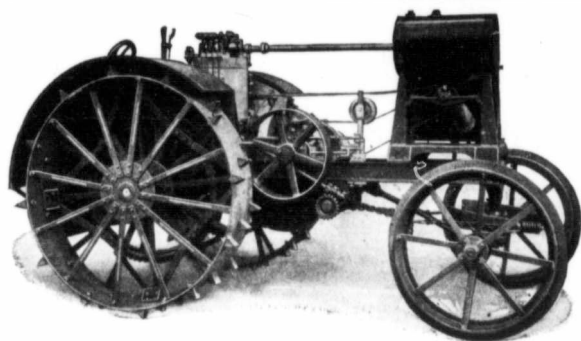
Branches at REGINA, CALCARY, SASKATOON

Sub-Branches at LETHBRIDGE and CAMROSE



# AVERY

Avery Tractors  
Burn! ALL the Kero-  
sene or Distillate—  
the Duplex Gasifier  
does the trick.



## Steam Traction Engines

Our Steam Tractors are well and favorably known almost everywhere. On account of difficulty procuring material, we have only a limited supply. Early action is essential in order to secure one.

**THRESHING MACHINES.**—Standard Imperial in sizes 28-42, 32-54 and 36-60. The Imperial Junior, in a new size, 24-40, specially built for use with our, and similar Tractors. Enquire about it.

**REBUILT MACHINERY.**—We have on hand a number of rebuilt engines and threshers of our own and other makes, in condition and at a price that will be found very attractive.

SEND FOR OUR LIST

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

WINNIPEG

MANITOBA

## Kerosene Tractors

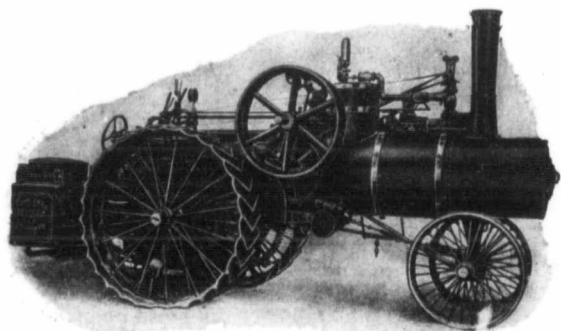
12 -- 24 H. P.

*Two Speeds Forward and Reverse*

**SIMPLICITY**—Every working part easy to get at. Only about one-half the number of gears used as compared with others. Transmission runs in oil, in dustproof case. Hyatt Roller and Ball Thrust bearings on transmission shafts.

**STRENGTH**—Shafting, Gears and all other working parts unusually heavy and strong.

Send for further particulars of this Tractor before placing your order for one.



### SMALL VERSUS LARGE TRACTORS

(Continued from Page 12.)

iod five times as much work has to be deducted. But against all this the big engine being slow speeded, according to farmers' estimates, will give nearly double the time of service. This, of course, should be the case when we take into consideration the difference in cost between the large and small engine.

#### The Smaller Type Tractor

The man on the smaller farm has just as great a problem to face as has the large farmer. In fact, his labor difficulties are even more acute, because it is only necessary to hire one or two men. On the big farms where a number of men are employed we find there is little difficulty in procuring help. The reason must be that men, as a rule, like to be together and have a more companionable time than does one hired man alone. This means that the small farmer is only able to hire floating help or those who are in the vicinity, and work spasmodically. Also it is a big expense keeping a number of horses on a small area. Even keeping a four-horse team at the present time with feed so high in price, means considerable expense. How then to get the

acreage in crop at as small a cost as possible is the question.

The small tractor has developed more recently than the big one and was made to meet the demand of farmers on smaller farms. Its development has been rapid and by no means stable. In other words, a tractor made by one firm last year, and as a rule, does not much resemble one made this year, showing that the manufacturers are constantly searching for some set type still far ahead. This causes some purchasers a great deal of trouble when the matter of repairs comes up.

A few years ago small tractors were being turned out by hundreds of firms, but each year sees the elimination of the undesirable types until to-day practically all on the market do efficient work and live up to the standard set by the manufacturer. There is a far wider variation of types among these small engines than among the larger ones, as stated before, from two wheels to four, from one to four cylinders.

It is only during the last couple of years that these machines have been made to use coarser fuel, such as coal oil, instead of gasoline, and it has been a remarkable evolution both in point of accomplishment and economy of operating cost. To burn coal

oil has been a big problem. All would burn it and develop power but to do so economically has been the big obstacle. There was no use in using fuel other than gasoline unless it cost less.

However, tractor owners with kerosene burners attached declare that fuel consumption is very little, if any, greater than when gasoline is used, and that they have no more trouble with their engine on one fuel than on the other. This being so then, it would appear that coal oil was the fuel from an economic point of view. With the large type of engine running comparatively slow, coal oil has been used for a number of years with perfect success. But when we get the smaller tractor with its much higher speeded motor then it is a more difficult problem and necessitates a much greater change of adjustment.

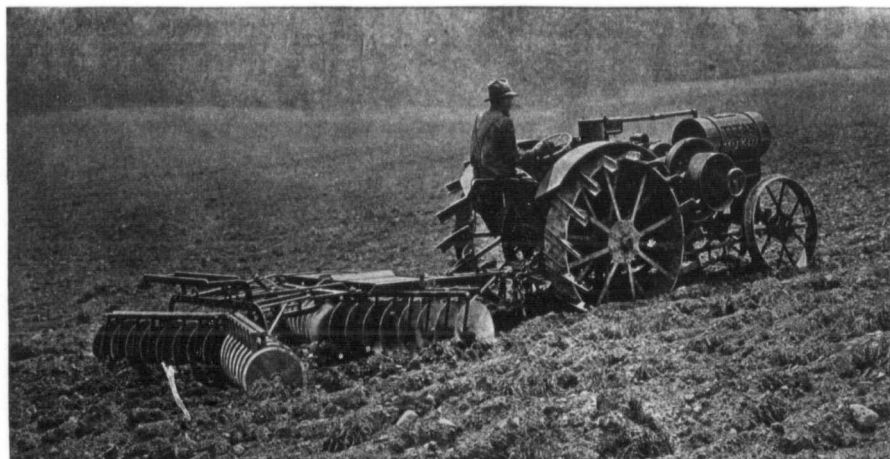
There can be no question regarding the popularity of the small tractor. In going over the country one sees them at work on many fields, and in talking to owners operating these machines one finds that in most cases they feel that it has been a good investment, more especially since help has become so scarce and one man must try to do what two did a few years ago. Many uses develop other than plowing when

one has a tractor, and it can be used very economically on belt work for smaller jobs where the big one would be wasting fuel in its over power.

The small tractor is usually purchased for work on one's own farm alone, and therefore the number of days it is used per year is usually greater than where the large engine is used. This has probably given rise to the idea that the life of these two types is vastly different, the larger one having the longer life. We have no definite proof as to the longevity of small machines. Their origin is too recent, but large ones purchased ten and twelve years ago are still running efficiently.

When one considers that the large machines have, in the majority of cases, been used for heavy custom work, such as breaking and giving these years of service, it would appear reasonable that a small machine worked only on one's own farm and getting good care should last equally as long. Our high speeded autos with a number of cylinders have long life. The vibration is less, and the shock and jar occasioned by a single cylinder engine is absent. The majority of our small tractors are multiple cylinder, high speeded machines, with very little

# International, Mogul and Titan Kerosene Tractors



**T**HESE are tractors developed through twelve years active field work in every civilized country in the world. A size and type for every farm.

All of them operate successfully on kerosene and other low grade fuels down to 39 degrees Baume.

All of them are fully equipped to do both field and belt work.

They are sold by a company that knows farmers' needs and that also sells implements and machines to be operated by the tractor, assuring proper combinations of tractor and tractor power machines.

These are tractors that have long been successfully filling the need for power on thousands of farms. One of our Canadian branch houses is near you to help the dealer take care of your service needs. Write the address of the branch nearest you, named below, for full information about **Mogul, Titan** and **International** kerosene tractors. This is the proper time, of all times, to be supplied with real power.

## International Harvester Company of Canada, Limited

### BRANCH HOUSES

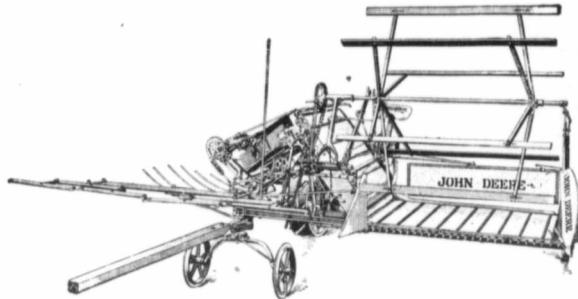
**WEST:** Brandon, Man.; Calgary, Alta.; Edmonton, Alta.; Estevan, Sask.; Lethbridge, Alta.; North Battleford, Sask.; Regina, Sask. Saskatoon, Sask.; Winnipeg, Man.; Yorkton, Sask.

**EAST:** Hamilton, Ont.; London, Ont.; Montreal, Que.; Ottawa, Ont.; Quebec, Que.; St. John, N.E.

JOHN DEERE PLOW

COMPANY LIMITED

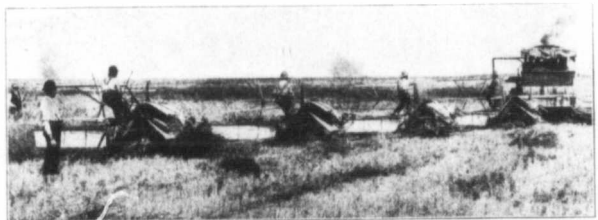
# The John Deere—The Better Binder



## WHAT YOU GET IN THE JOHN DEERE BINDER

- Main Frame**—Riveted, rigid and enduring.
- Platform**—All steel, riveted with extra strength.
- Binder Deck**—All steel, everlastingly good.
- Knotter**—All wearing parts specially hardened and finished.
- Reel**—Outside support on all sizes.
- Sizes**—Six, seven and eight-foot cut.
- Draft**—It is THE light draft binder.

- Trucks**—All sizes regularly equipped with quick turn tongue trucks (all steel).
- Eveners**—All-steel eveners only are supplied on our binders—they last longer.
- Canvas**—Extra heavy with concave slats to prevent catching straw.
- Bearings**—Roller with self-aligning boxes.
- Packers**—Three packers and three discharge arms.
- Wheels**—Large drive and grain wheels with extra wide tires.



Hansmann Binder Hitches for Tractors, will handle one or more John Deere Binders.

**JOHN DEERE PLOW CO. LIMITED**

Winnipeg Regina Calgary  
Saskatoon Edmonton

vibration. This should mean long life when given good care.

### Standardization

The buyer's chief trouble is to decide upon any one type among the many on the market. Each manufacturer has a distinct type of engine and frame. Then one season's model is so vastly different from the next in many ways that when one goes to buy a machine he has no idea as to how long he will be able to get repairs. This not only applies to tractors but to all types of machinery. One farmer remarked that it was a good business proposition on the part of machine companies because every few years a man would have to discard a perfectly good machine.

This, however, is not really the reason, but merely goes to show that our farm machinery is constantly undergoing an evolution, and as yet the final goal has not been reached—that of the absolutely perfect machine. What the ultimate type will be no one can guess. Also our manufacturers with their constantly widening markets have to face such change of conditions entirely different from those where the machine was tried out and find it necessary very often to change the type of their machines from year to year. New improve-

ments are constantly being added, so that in a very short time the machine loses its original design.

The farmer's standpoint, however, is worth considering. He does not feel like spending hard earned money on a machine that will not give years of faithful service, and at the present time one is never really sure as to how long his purchase is going to do so if repairs are not readily available he does not feel like buying a high-priced machine. This

has caused several very efficient tractors to have very poor sale. **What is the Most Popular Size?**

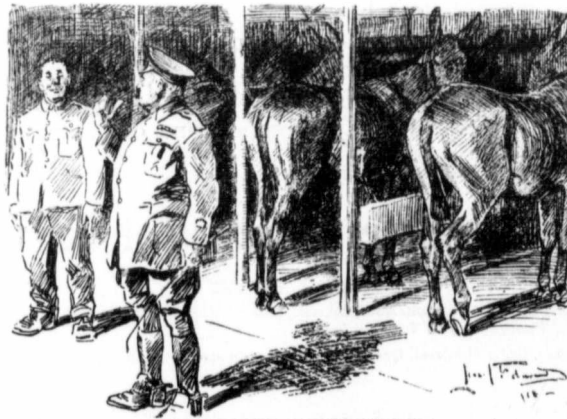
With tractors having such a wide range of power it is rather a difficult problem to determine the most economical size to buy. Each individual farmer has certain power requirements, and so must carefully figure before buying. It is a common saying that there is a size for every farm, yet there seems to be certain limits in this regard. For instance:

Will it pay a man on comparatively small areas to use a three-plow rig instead of two?

There are two sides to this question (1) that the larger rig will allow of more ground being covered in a shorter space of time enabling a man to turn his attention to other things. This is an important thing, because on most farms seeding and harvesting takes up a long time leaving very few leisure hours which are necessary at times to everyone who expects to do efficient work. Also the crop should be sown at the proper time, as even one week makes considerable difference on the crop in the fall; in fact, that week may mean insurance of a crop.

Probably where a man is trying to clean up a dirty farm the larger machine may mean a good deal. Weeds have a habit of growing where nothing else will. If it be a dry season the grain may be wilting day by day, but the weeds seem to grow right along. With the larger outfit it would be possible to get more work done on the area under cultivation, and many many more weeds could be destroyed.

(2) The other side is one which usually causes purchasers to buy the smaller outfit, viz., the initial cost. There is very much added



"MIXED" RATIONS FOR THE MULES  
Irish "Feed" Orderly. "Please, Sor, it's two feeds short I am. Which of the horses will I give them to?"  
S.S.M. (also Irish). "The mules, av course."

FARM IMPLEMENT NEWS—CHICAGO

## Mobilizing Threshermen to Prevent Waste of Grain



**Editor's Note**—We have already told you the U. S. Food Administration, with the cooperation of the National Threshing and Vehicle Association, tractor and threshing department, is making efforts to secure threshing to prevent waste of grain. Additional particulars are given in the following story received from the food administration. Some amendments have been made since the first issue. Every farmer who is in contact with threshermen should read this article so he will be in the movement.

A project to mobilize American threshermen to save millions of pounds of wheat now lost by inefficient threshing practices is announced by the U. S. Food Administration.

To do this a special grain threshing division has been created as a part of the Food Administration. It is headed by Capt. Kenneth D. Hageman, U. S. R., at its head. Capt. Hageman has been in the field for some years and has had firsthand experience in threshing operations. He was recently promoted to the equipment department of the commandant division of the army and of the construction division of the office of the U. S. Food Administration. The grain threshing division will have national headquarters at the office of the U. S. Food Administration, Grain Corporation at 41 Broadway, New York City.

More than a **Five per cent** of the wheat harvested and threshed in the United States is lost in the process of threshing.

Each of these committees will open county headquarters at all times in farmers and threshermen. One of the first duties of each committee will be to locate owners of threshing and combine and to have them inspected. The county threshing committees will pay for the inspection of threshing machines.

men for certain duties. Men who pitch the bundles of grain into the threshing, for instance, can assist in close threshing by discharging the material in the usual manner of overloading the machine rather than the usual practice of overloading the machine in the effort to hasten the work. This is one cause of serious loss, especially when the bundles are large and damp.

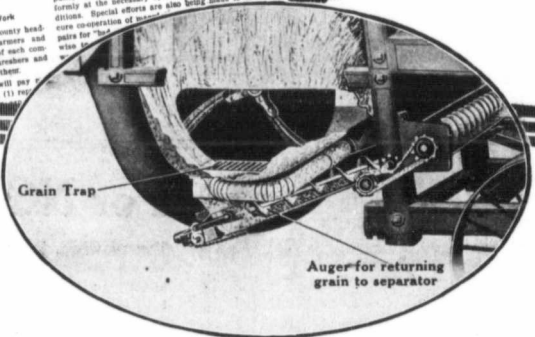
Every effort will be made to watch and stop these losses. Sometimes farmers attempt to justify such waste on the ground that the work will be benefited when stored in. This year, however, wheat is so greatly needed for human consumption that every grain possible must be saved.

A strong effort will be made to have all machines in the country inspected and a close plan of cooperation between the threshermen and the county committees agreed upon. Owing to the large number of machines and the short time before the busy threshing season it is expected that most of the work of inspection will be done through the cooperation of the threshing machine manufacturers.

Every machine should be given over to men that the owner has sufficient resources power with proper maintenance and setting so as to keep the cylinders and rollers at the necessary speed under average conditions. Special efforts are also being made to secure cooperation of the

# You Can Help

## By Having Your Separator Equipped With the Grain Saving Wind Stacker



Last year reports show that 5,250,000 bushels of wheat were wasted in Canada.

This year Victory hangs not only upon our production record—we must SAVE ALL the grain produced.

Every thresherman can help—**Must** help. The country calls upon each thresherman individually to put his threshing machine in perfect repair—and to buy new machinery if necessary, and be ready when the season opens.

The Grain Saving Wind Stacker costs no more than the ordinary stacker—yet tests have proven it superior to any other stacker on the market. It saves the grain the separator wastes—stacks the straw—prevents backlashing—runs with less power and saves fuel.

The gravity of the situation calls for **YOUR** full co-operation—calls for you to do your part and do it to the limit. Your patriotic duty is to get 100% results. Demand the Grain Saving Wind Stacker on the Separator you purchase or hire, for in no other way can you get ALL the grain.

Obtain a catalogue from any thresher manufacturer in the United States or Canada, illustrating and explaining how the Grain Saving Wind Stacker puts the grain in the sack instead of in the stack.

### Here's Proof

Carson City, Mich.  
January 18th, 1918.

**The Indiana Manufacturing Co.**  
Indianapolis, Indiana

Dear Sirs:

The Blower that I bought of you last year for my 33x36 separator handled all the straw that I put through the separator and did not clog once. It saves most all the loose grain that is thrown over.

I threshed 14,000 bu. of wheat and I figure this saved 140 bu.

27,886 bu. of oats and I figure this saved . . . . . 697 bu.

1,894 bu. of barley and I figured this saved . . . . . 28 bu.

1,557 bu. of rye and I figure this saved . . . . . 7 bu.

On 45,337 bu. of grain I figure I saved . . . . . 872 bu.

A man who buys this blower will never be sorry, as it does all you claim.

Yours,  
Signed  
B. P. KEPNER.

"The man who prevents waste is fighting for the cause of Freedom"

**The Indiana Manufacturing Company**  
Indianapolis, Indiana, U. S. A.



expense in buying the big outfit, often as much as \$1,000 for increased power to draw an extra plow. It would require a long period of work to make the outfit pay. As far as fuel is concerned the increase in operating cost would be very small. From data at hand it has been found that there is practically no difference in fuel cost per acre whether it be a two or a ten-plow rig.

Out of 99 reports received the United States Department of Agriculture found the following percentages of sizes used on farms:

- Two-plow tractor .... 70%
- Three-plow tractor ... 73%
- Four-plow tractor .... 86%
- Five-plow tractor .... 76%
- Six-plow tractor ..... 82%
- Eight-plow tractor .... 82%
- Ten-plow tractor ..... 60%

As this statement was prepared in 1915, there would likely be a vast change regarding popular sizes to-day. This table shows the four-plow engine one of 12-25 horse-power, or 15-30 horse-power to be the popular size. At that time fuel was about half what it is now, and a four-plow tractor could be purchased at the present price of a three-plow. This would mean that first cost being so much less than to-day would be an incentive to use more power and thus cover more ground, even though the engine were lying idle many days extra.

Each year of war has meant more costly machinery to the farmer. In three years tractors have increased over one-third in price, and plows in many cases double. Owing to so much raw material being converted into war material manufacturers have a hard time getting enough to keep up their output. With the ending of the war it looks feasible to expect high prices for a few years until things once more become normal throughout the industrial world. From the standpoint of the farmer in these strenuous times it is necessary, even though he must pay this high price, to buy machinery to take the place of laborers, and never in tractor history have sales been so numerous as in the season past.

The farmers must produce more to-day than ever before for two reasons: (1) From the patriotic standpoint, and no one can doubt for one moment that the farmer is not doing so. The figures for Saskatchewan, Manitoba, and Alberta, show that the area under wheat has been tremendously increased, Saskatchewan having one million more acres of wheat in than ever before. Figures from the other two provinces are not at hand, but that the acreage is greatly increased is a fact. (2) From necessity. There are many who

## Watson's Excelsior Jr. Straw Cutter

—a paying investment whether you own five head or a whole ranch. Will cut up to 1/2 ton per hour, on hand, horse, windmill, or engine power. Specially tempered steel knives. Simple lever, handily placed for start, stop, or reverse. With power blowers, will elevate up to 20 feet.

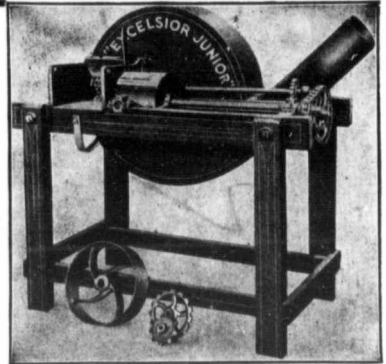
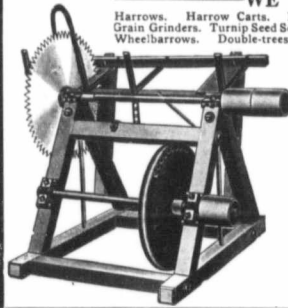
### WATSON'S POLE SAWS

Strong braced frame of hardwood—easily repaired in case of damage—rigid, and sits firmly and evenly. Heavy steel shafts and boxes, solid fly-wheel and 3 pulleys. Blades of best steel with lasting temper and free of flaws.

### WE SELL

Harrows. Harrow Carts. Root Pulpers. Straw Cutters. Grain Grinders. Turnip Seed Sowers. Pole and Cordwood Saws. Wheelbarrows. Double-trees and Neckyokes. Heider Everters. Bevel Jacks and Repairs for Moline Plows. Monitor Drills. Mandr Wagons. Sleighs. Washing Machines, Viking Cream Separators, etc.

JANESVILLE PLOWS



*John Watson Mfg. Co.*  
311 Chambers St. WINNIPEG

## For NOW and LATER

For plowing, harvesting, hauling or doing any work for which you use 4 horses. You will find this attachment save you time and money and give you the full 24 hours a day for work if necessary. The

# "FORD CAR. 20 MINUTES" Ford-a-Tractor

costs only \$240.00 and is built for heavy service. All gears are enclosed and run in oil. Every part is strong and of good material. The W.D.C. Pump changes the water in the cylinders six times a minute and is the only system that prevents overheating under all Tractor conditions. Get all the facts—use the coupon.

K.M.C. TRANSFORMER — Burns Kerosene in Fords. Gives 20 per cent more power—50 per cent increase in mileage—100 per cent saving in fuel cost. Ask for particulars.

Dealers and Distributors—Some good territory still open. Write for profitable proposition.

**J. D. Adshead Company**  
WINNIPEG AND CALGARY



argue that never in the history of this country has the farmer been so prosperous. Look at it any way you like, and you see that for every cent grain and stock prices have advanced the commodities he has to buy have also risen, and to-day a bushel of wheat costing the farmer nearly double to produce does not go any farther when he goes to buy than before the war. How can it be said then that the producer

is reaping a golden harvest at the present time?

With increased cost of production the producer is faced with the problem of lessening the cost of producing a bushel of grain in order that some profit be his. Therefore we see the farmer turning toward the motor, some engines being operated night and day during the rush season. Others again use horses for so many hours, and then when the

day's work is over mount the tractor and turn over a few more acres.

All this goes to show that the tractor is here to stay, and is now just as much a part of modern farm equipment as is the binder, drill or plow. Let us hope that when things resume their normal condition prices on machinery will soon be less, enabling men to purchase machinery to help out the farm work.

### COUPON

J. D. Adshead Co.,  
Winnipeg or Calgary.

Please send me full particulars of "Ford-a-Tractor."

Name .....

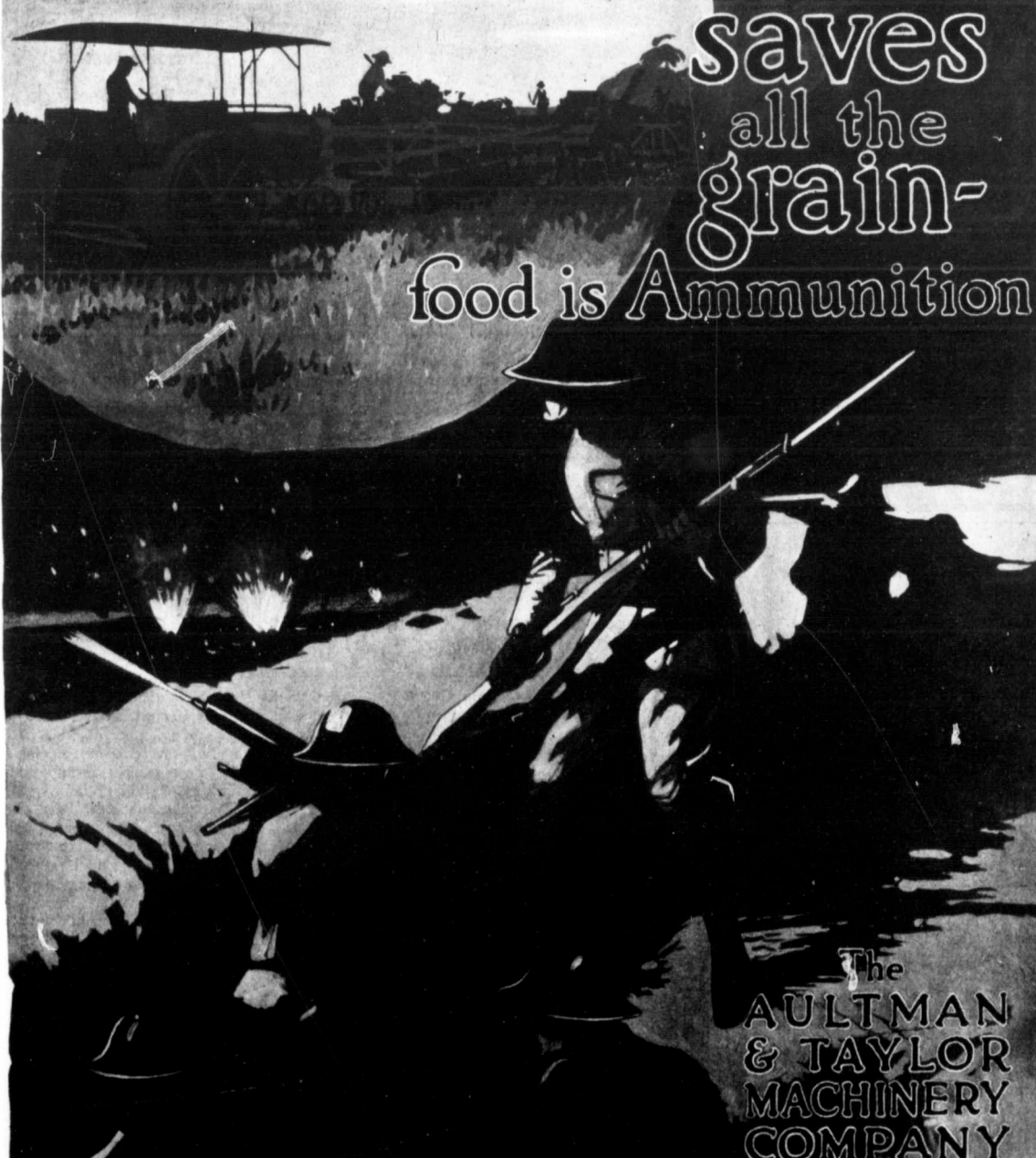
Address .....



# AULTMAN-TAYLOR

THRESHING  
MACHINERY

saves  
all the  
grain-  
food is Ammunition



The  
**AULTMAN  
& TAYLOR  
MACHINERY  
COMPANY**

MANFIELD, OHIO, U.S.A.

BRANCHES AT  
CALGARY AND REGINA

MANUFACTURED BY THE TAYLOR STEEL WORKS  
LONDON, ENGLAND

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# The Stinson Kerosene Tractor

Built for the Man Who Knows

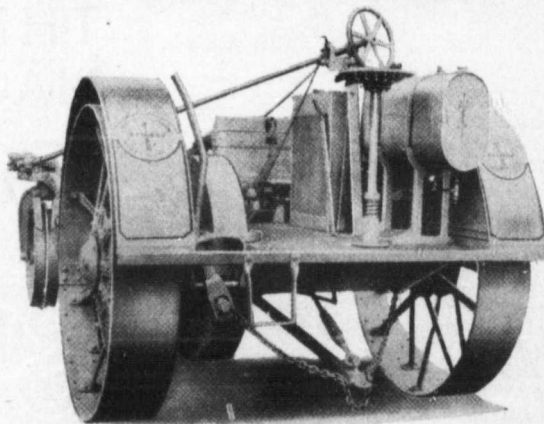


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All Air going  
to the  
Carburetor  
is passed through  
Water

This means perfect  
protection for motor

© ©



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Every Working Part  
protected  
from Dust

Hyatt Roller Bearings  
throughout

Burns kerosene at  
all loads

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**ALL** gears in dust-proof case, running in oil. Only two gear reductions. **No bevel gears.** Belt drive is direct. No gears in motion. Motor 4 cylinder, valve-in-head, with dust cap. **Sold at Factory price, plus actual freight only.**

**Separators** We can supply you with a 28 x 44 fully equipped, for above tractor, or a 22 x 36 for smaller engines.

See our exhibit at Regina Fair, July 29th to August 3rd, or write for full particulars to

**SASKATCHEWAN GRAIN GROWERS' ASSOCIATION**

234 Farmers' Building - REGINA, SASK.

SOME years ago, I think we can all remember, we used to have a flouring mill in every community. In some places the old water wheels were used with sheds for the accommodation of the teams belonging to the farmers when they came to town with their wheat. It was the congregating place of the community. It was here the farmers from the west met and exchanged news items with the farmers from the east. It was here, they ate their lunches that the frugal housewives had prepared for the journey. It was here they had their wheat ground into flour. It was here they got their bran, shorts and middlings. It was at this old mill that they met for the purpose of converting the products from their own soil into food for their families as well as for their stock.

#### Where Has the Old Mill Gone?

What is the reason the old mill is no longer with us? It has been because of a commercial evolution in the milling business.

The long-system mill came into being and commercialized the flour industry to the point where it was not possible for the old mill to compete with the big mills; the long system was so complicated that it was beyond the skill of the average stone

## Home Industry

### The Self-Supporting Community

By E. H. SHERWOOD

millers to fathom its different complicated processes. The consequence was that we have been shipping our wheat hundreds of miles to the big mills and in turn importing our flour and by-products.

One of the greatest problems that our government has before it is the transportation problem. This problem is at its worst during the late summer and fall.

About the first of August our grain crops start moving; millions of bushels of wheat being thrown upon the railroads. Then practically simultaneous with this big grain movement is the winter's supply of coal—millions of tons of coal are put in transit; the consequence is that the roads are swamped, there is a shortage of rolling stock—a congestion; it is a fight between the mines and the farming districts for cars.

This has deprived our community of one of its leading and most important industries, and for years it has seemed there has been no remedy whereby we

could bring the old mill back to its own; but in late years there has been a new process of milling developed—in fact, a new mill has been invented that has eliminated the complicated features of the old long system process.

It is a self-contained, single unit mill that performs all the milling functions within itself; it is so complete in construction that any layman can operate it successfully and produce a very high grade quality of flour—a flour that retains all the nutriment of the oil of the old long system process product.

With this mill, a man, with very little assistance, can produce a yield as high as 100 barrels per day; but with the old long system mill it would require the attention of at least six men, and one skilled miller. This new process does not require but one-fourth the power that the long system does.

There are hundreds of these mills in successful operation throughout the United States

and Canada, ranging in capacity from 15 to 100 barrels per day.

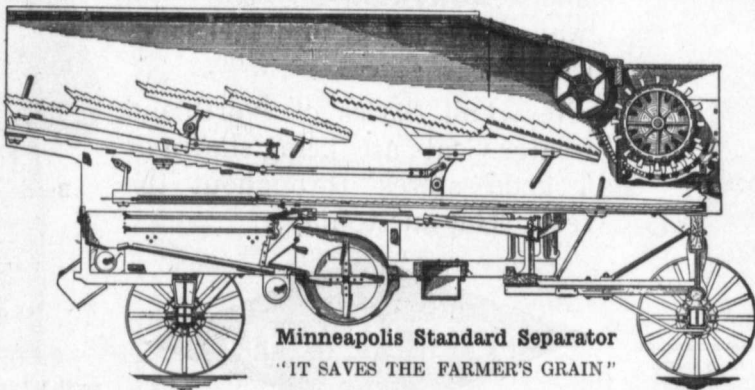
The first short system process mill was installed in this country about eight years ago. Since that time the milling business has been going back to the local communities in leaps and bounds until to-day the daily output of these mills amounts to over 75,000 barrels of flour per day.

So now, citizens, in the face of these facts it is up to us to bring the milling industry back to our community. Here is an opportunity for some public-spirited individuals, or group of men, to net splendid returns for themselves by milling their community's wheat. There is a splendid investment involved. Our farmers would receive more for their product; our people would be enabled to get a better barrel of flour cheaper. Not only would we be serving our community, but we would be serving our country at this critical time by helping to relieve the railroad traffic, making it unnecessary to ship our wheat hundreds of miles to have it milled and in turn import our flour.

Why should we ship our wheat away for the sole purpose of having the profit milled out of it? Let's have a mill in our town. What say you?

# SAVE WHEAT SAVE

- 16 Bar Cylinder
- Tool Steel Teeth
- 2 1/2 in. Cylinder Shaft
- 3 Self-Oiling Cylinder Shaft Boxes
- Reinforced Concaves
- Concaves adjustable in front and back
- Double Chaffer Chaffer on grain pan can be elevated at back end
- Upper and lower blast boards to regulate blast from fan to sieves



- Heavy frame bolted and rodded at joints
- Steel axles and wheels
- Straw racks have the proper kick to separate the grain from the straw
- Less vibration
- Fewer belts
- Belt Guides and Tighteners on main belts
- Heavy Shafting
- Large Bearings

**Minneapolis Standard Separator**  
"IT SAVES THE FARMER'S GRAIN"

**An increase of 50% in Separator Production for 1918 furnishes further proof of Superiority**

They are well built, giving exceptional durability and a minimum of upkeep expense  
They have large capacity as well as great saving and cleaning qualities

They run smooth and steady day in and day out through the threshing season. No vexatious delays  
They do more work and better work with less trouble and in less time

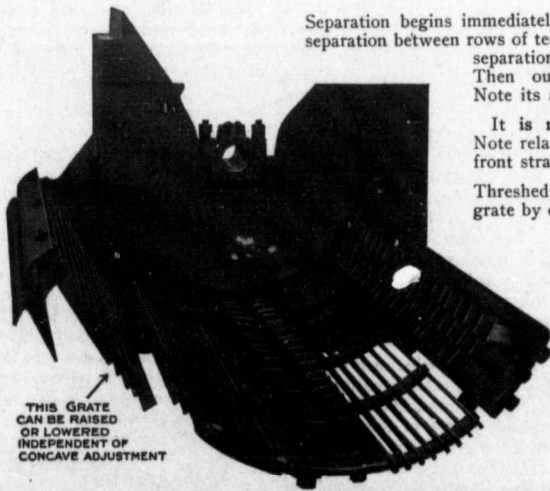
**Ask the Owner**

**Ask the Farmer**

*Some achieve in days what it takes others months to accomplish.*

The Minneapolis Reputation has been made in a comparative short period of time and is being maintained by merit

**THE GREATEST  
SEPARATING  
GRATE  
TO BE FOUND IN  
ANY THRESHER**



Separation begins immediately back of front concave. More separation between rows of teeth in second concave. Still more separation just back of second concave. Then our wonderful Separating Grate. Note its adjustment to straw conditions.

It is not built stationary in machine. Note relative positions of grate, beater and front straw rack.

Threshed grain thrown against and through grate by cylinder is deflected to grain pan.

**Kerosene Tractors**

15                      15  
                            20  
40                      40

Tractor plows in sizes suitable for above tractors

- Disc Plows
- Tractor Tandem Disc Harrows

**Grain Saving Threshers**

- 24 x 36 Junior
- 28 x 46 Standard
- 32 x 52 "
- 32 x 56 "
- 36 x 56 "
- 36 x 62 "
- 40 x 62 "
- 40 x 72 "

**Labor Saving Attachments Supplies**

**The Minneapolis Threshing Machine Co.**

HOPKINS (WEST MINNEAPOLIS) MINN.

**Winnipeg Regina Calgary Edmonton**



No. 704 is made from famous English "Beehive" worsted in fancy colors.

## Meet Me at the Fair

And bring a sweater coat with you. We may go motoring and, rain or shine, a **NORTHLAND** Sweater will always look stylish and feel comfortable.

New Fall Styles of Northland Sweater Coats are being shown at all good stores throughout the West. Get one to-day.



No. 411 is a popular stripe sweater coat made of solid worsted yarn, shown in various combinations of colors.

# Northland Knitting Co. Limited, Winnipeg

MANUFACTURERS OF SWEATERS, MITTS, GLOVES AND MOCCASINS

### AN UNQUALIFIED SUCCESS

Craigmyle, Alta., Jan. 28, 1918.

I HAVE one 15-30 kerosene farm tractor, also one 8-16, and the farmers on a whole are wanting to get in as large an acreage as possible, and, best of all, as big a yield as ever, or more than ever before.

I will try to give my experience with same, with the one object in view to get all the land under cultivation possible, and help any one who is looking forward this spring to buying a farm tractor.

In the spring of 1916 I saw an advertisement in our home paper of a tractor demonstration in Hanna. I went to same and saw an 8-16 International Mogul at work hauling two plows in very heavy land, breaking sod. Nothing could have made me believe such an engine could have done the work as this engine was doing; two of us big fellows got on the plow beams and she was then plowing eight inches deep and hauling it very easy.

I bought one of the same at once and began to plow and seed. I found I had made no mistake, and had in enough extra crop, so that the cost per acre to plow was never taken into the matter. I still have the same tractor and have used it to grind feed and thresh grain; also have

used same on a 16-16 tandem disc on plowed land. This is a heavy load on rolling land, but on level or down grade the 8-16 will haul the two disc inthrow and outthrow very easily.

The question may now arise in some readers mind: What if you should get in the mud? This is one place this small tractor can go. I had two cars of wheat to load last spring, and after seeding wheat I started to haul it to the car five miles. I used two common wagons with 28-inch box and loaded both full, trailing one with a short tongue in the first wagon and long tongue run way up close for the trail wagon.

I made two trips each day and in some places the mud was over the wagon hubs. We also have the soft places in the field and when we get in and can not get out, if the load is taken off we just hitch a team to the front and put on power and it will roll out of most any old soap hole.

This 8-16 can haul three 14-inch plows. We have the Oliver power-lift light tractor gang, in common everyday plowing in stubble, and one can very easily figure the acreage plowed in a day as it travels faster than any horses will travel in the field, and keep it up day and night if you want it to.

We find the small tractor for all kinds of work on the drawbar far better than horses and much easier to drive, and when supper is called turn off the gas and your chores are done, if the nights are cold you have the chore of taking out the water. Then the following morning one can get out and spend the time feeding a few pigs instead of feeding some horses.

Now the 15-30 has all the merits of the 8-16, only has double the power and can do just double the amount of work, and on a large farm is much to be preferred, as one man can operate either. Then we can use the 15-30 for road grading and operating a 28-48 separator, which I did this last fall and put through nearly forty-one thousand bushels of grain this fall in four weeks' run.

Yours truly,  
Harry Stevenson.

### A GOOD THRESHING EXPERIENCE

Dropmore, Man., Feb. 4, 1918.

Dear Sir:

FOR several years we operated a steam threshing outfit, commencing with an 18 h.p. Case engine and a 32-in. Case separator. The farmers objected to port-

able, so we exchanged for traction (also steam.) After using this three years we again changed our engine for a 25-45 Rumely oil pull, which we used two seasons.

We found that the kerosene engine had many advantages over the steam, both in safety from fire and in handiness of operation. I might say that in driving a 32-in. separator with all attachments, the above-mentioned engine used an average of 42 gallons of kerosene and a gallon and a half of lubricating oil per ten hour day. We used this outfit for threshing when there was about a foot of snow on the ground, and the weather pretty cold too and had very little trouble.

Owing to the shortage of labor and other reasons we found that we couldn't run a threshing outfit without neglecting fall work on the farm, so we sold our large outfit and purchased a Rumely Ideal Junior, 24 x 44 separator, with attachments, and a 15-30 oil pull engine. The engine is a little larger than necessary, but I would rather have it that way, as for that reason the separator never "lags," and consequently does a cleaner job.

I don't think this separator can be beat for doing a clean job and a fast one, too. I am also well pleased with this make of engine,

as I think it has the most of them beat for burning kerosene. I wouldn't buy a smaller size separator as I think the extra separating room is worth the extra cost. With only four of a gang we put through about 1100 bushels of oats and wheat and moved a portable granary in about eight hours' run.

We have a six-furrow plow for our engine, but have not used it yet, so cannot say anything about that part.

In conclusion, I might say that we are of the opinion that this outfit is ideal for farms of about a section, though I believe the new 14-28 double cylinder engine made by the same company will be an improvement, inasmuch as it will give a steadier power, but the tractor is certainly handy for moving and for moving portable granaries, even if it cannot be used satisfactorily for plowing.

Yours truly,  
W. G. L.

**A GOOD ALL-ROUND STORY**  
Feb. 19th, 1918.

Dear Sir:  
**T**HE tractor we purchased is a Heider sold by the Waterloo Co., and is rated a 12-20, being a 4-cylinder 4-cycle type, gears and all working part enclosed in dust proof oil tight cases, having a bore of 4 1/2 inches and a stroke of 6 3/4 and speed 600. By this we can see it is under rated considerably.

We have used our tractor to thresh, using a Waterloo 24-36 separator with all attachments. The engine seemed to have plenty of power when the straw was fairly dry, to feed from both sides. Upwards of 1,000 bus. of wheat can be thrashed in a day and 2,000 to 2,500 of oats.

Also we used our tractor for plowing, using a John Deere 3-bottom power lift plow, and



**IMPERIAL SERVICE**

If you are in doubt about the proper lubricant, ask the Imperial Oil man. He will give you courteous attention and sound advice on your lubrication problems. That is part of Imperial Service.

**CALL AT HEADQUARTERS**

**W**HEN you add a new machine to your farm equipment—a tractor, a stationary engine, a drill, a thresher—no matter what the machine, you need dependable lubrication advice. You want to be sure the oils you use will maintain your machine in constant service and give it long life. Look to us for the answer to your problem. We know the oil you need for each particular purpose. We know the lubrication requirements of every farm machine. Our chief interest is to do away with lubrication troubles, to make sure that you are using the correct lubricants.

All our oils are supplied in steel barrels and half-barrels—convenient, economical. No waste. You use every drop you pay for and you know every drop is uniform and clean.

**A Correct Lubricant for every Farm Machine**

 <p>For Gasoline Engines, Tractor, Auto or Stationary <b>POLARINE OIL</b> STANDARD GAS ENGINE OIL For Kerosene Engines, Tractor or Stationary <b>POLARINE OIL</b> HEAVY IMPERIAL KEROSENE TRACTOR OIL (Recommended by International Harvester Co.)</p>	 <p>For Open Bearings of Farm Machinery <b>PRAIRIE HARVESTER OIL</b> —very heavy body, resists cold, won't thin out with moisture <b>ELDORADO CASTOR OIL</b> —a thick oil for worn and loose bearings</p>	 <p>For Steam Cylinder Lubrication, whether Tractor or Stationary Type <b>CAPTOL CYLINDER OIL</b> —the standard product for steam cylinder lubrication</p>	 <p><b>THRESHER HARD OIL</b> For Grease Cap Lubrication of Bearings a clean solidified oil high melting point</p>
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**IMPERIAL OIL LIMITED**  
BRANCHES THROUGHOUT CANADA

**Do you need HELP?**

Renew your Subscription to the "Canadian Thresherman and Farmer."

**Genuine Prices for Guaranteed Implements**



**Eclipse Gang Plow**

The celebrated Eclipse guaranteed plow is perfect in construction and material. Will clean where any other plow will clean, and where most others fail.  
12 in. Gang.....\$115.00  
14 in. Gang.....\$118.00

**Washing Machine**

Reversible wringer. All gears are covered. Has safety release on wringer. Pure rubber rolls. Easy control. Will not injure the finest fabric. Guaranteed to be the best on market.  
Special Price \$25.00

**Full line of Plow Shares**

Guaranteed  
12 in. .... each \$2.25  
13 & 14 in. .... each 3.65  
15 & 16 in. .... each 3.95  
18 in. .... each 4.50  
Get numbers and letters stamped on share and name of plow.



**1 1/2 H.P. Engine**

Make life easy by using our 1 1/2 h.p. engine for all chore work. Uses less fuel, develops more horsepower than others of same rating.

Price, with Webster Magneto .....\$65.00



**THE LABOR "SUPPLY"**

Employer:—"Look here, Thompson, it isn't that you can't do the work; you simply won't."

Thompson (well over military age):—"You ain't got nothing to grumble at. Anybody around the place would tell you you're dashed lucky to get me."

**THE CANADIAN STOVER GASOLINE ENGINE CO. LTD., BRANDON, MAN.**

two sections of harrows. The tractor handled this load with ease, mostly on high speed. This, we consider, is another big feature of the Heider tractor, it having a friction drive, thus doing away with a lot of useless gears and gives a greater range of speed.

We only had this tractor in time to fall plow, so plowed about 5 to 6 inches deep. The soil is a clay sub soil, with black loam soil, which was fairly moist. We hardly used our outfit long enough to know how much we plowed a day, or what it burned in plowing an acre, but we know in threshing 5,200 bus. of wheat we burned about 120 gallons of kerosene, 20 gallons of gasoline and 6 gallons of lubricating oil.

We believe that a tractor this size is as good as eight horses and two men, as it never tires, and could be run day and night if need be.

Yours truly,  
Gordon G. Lintott.

**"TRACTOR THEIR ONLY HOPE"**

Bannerman, Manitoba,  
Jan. 22nd, 1918

Dear Sir:

I OWN a 30-60 Rumely Oil Pull, a 40-64 thrasher, and a 10-furrow Rumely breaker bottom.

I pull nine bottoms with my tractor, and it drives the heavy thrasher with ease.

Seventeen and a half acres per ten hour day is a good day's plowing for any tractor of this size. This can be done on eight gallons of kerosene, sixty of water and about five of standard gas engine oil, and about one gallon of heavy black and four pounds of cup grease. I use the heavy black oil for use on the gears. It costs about 88c. per acre in breaking and 80c. in stubble. I plow from three and a half to four inches deep, and break about the same in a heavy soil.

I have had no trouble at all to get the engine to burn kerosene, but cannot run more than half an hour without water. I have never had any trouble with over-heating, which is a fault found in almost every make of tractor that is put through a long run in threshing or hauling.

I have run as long as fourteen hours in threshing and twelve in plowing. I average about 1800 bushels of wheat per day and about 2200 to 3000 of oats. This I have done on an average crop of fifteen bushels of wheat per acre and twenty-six of oats.

I have not done any discing, seeding or harrowing, but I know it would be no trouble at all if I had the extra machinery which is needed.

I am no writer and a very poor scholar. I am taking up a lot of

room in a valuable paper; but let me say, on the whole, the oil tractor is the thing for big farms of say from one to two sections of land or more, because the labor question is getting the better of the big western farmers. I cannot urge the farmer and thrasher enough in the tractor line. It is their only hope of supplying the Canadian people and our Allies in Europe.

Yours truly,  
G. A. Ireland.

**A DEMONSTRATION IN SAVING OF LABOR AND FEED**

Feb. 3rd, 1918.

Dear Sir:

WE own and operate an 18-36 Avery tractor which we used for plowing and threshing.

In plowing, we used a four-furrow Avery self-lift plow, which makes a good one-man outfit. Our land is very hilly, stony, and the soil fairly heavy. That is to say it takes four good horses to draw a plow. It was very dry last summer.

Expense per acre for breaking prairie is as follows: Kerosene, 3 gallons at 22c., 66c.; lubricating oil and grease, 20c.; depth plowed from 5 to 6 inches. Acres plowed from 10 to 11 per day, according to time put in.

As I run this outfit myself, I am not giving any other items than fuel and lubricant.

As to belt work, we used a 28-inch Avery separator, with all attachments—Gasoline for fuel—gasoline for 12 hours, run 30 gallons, at 38c., \$11.40; lubricating oil and grease, \$1.50.

With one man running it, this outfit threshed from 1200 to 1800 bushels per day, according to conditions.

We used to own a steam outfit which in plowing employed six men, eight horses, and three tons of coal, and the best we could do was 25 acres. When you compare this with our gas outfit, it shows quite a difference.

The tractor is a great labor and feed saver, and is the means to bring large acreage under cultivation.

Yours truly,  
Snyder Bros.

**SURE IT WOULD BE EQUAL TO ANYTHING**

Rosebud Creek, Alta.,  
Jan. 29, 1918.

Dear Sir:

I AM very pleased to tell you about my tractor. I own a 10-20 Titan, which I purchased on Sept. 10, 1917. I did 90 acres of fall plowing with it, depth six inches. I find my engine will pull two 14in. plows; this depth through any kind of ground in fall plowing. The soil on my



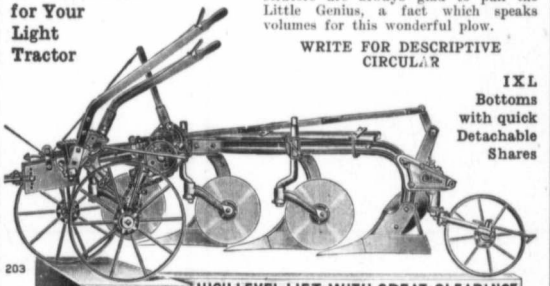
**Little Genius Tractor Plows**

There comes a time in the history of any first class article when its name is sufficient guarantee of its quality. The name, "P&O Little Genius" stands for the very highest attainment in the art of tractor plow building. Its reputation is based upon three years of perfect performance in the field. It turns the soil perfectly, it stands up under the hardest kind of work. Its simplicity and the ease with which it is handled enables the tractor owner to devote his whole attention to the tractor, except for one instant, at each end of the field, to pull the trip rope. Simple adjustments make it easy for anyone to adjust the plow.

It is a plow which demands a minimum amount of power in proportion to the kind of plowing that is being done. Tractor builders and tractor demonstrators are always glad to pull the Little Genius, a fact which speaks volumes for this wonderful plow.

**The Ideal Plow for Your Light Tractor**

**WRITE FOR DESCRIPTIVE CIRCULAR**



Made by **PARLIN & ORENDORFF CO.**, Canton, Ill., U.S.A.

**International Harvester Co. of Canada, Limited**

SALES AGENTS FOR CANADA  
Winnipeg Brandon Regina Saskatoon North Battleford  
Yorkton Estevan Calgary Edmonton Lethbridge

**EASTERN CANADA**

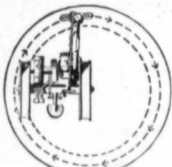
VIA  
**ALL RAIL**  
OR **LAKE AND RAIL**  
(GREAT LAKES ROUTE)

**BEST IN EQUIPMENT**

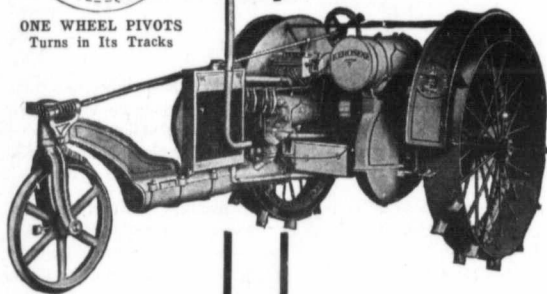
Full Information as to Train Service, Days of Sailing, Fares, Etc., From Any Canadian Northern Agent, or Write to  
**R. CREELMAN**, Gen. Pass. Agt., WINNIPEG  
**J. MADILL, D.P.A.** W. **STAPLETON, D.P.A.**  
Edmonton, Alta. Saskatoon, Sask.

**DON'T SCRAP YOUR BREAKAGES**

Send us all your broken or cracked Cylinders, Crank Cases, Gear Wheels, Gear Housings or Machine Parts. We will deliver perfect results and save you money.  
**HUB WELDING COMPANY**  
253 SHERBROOKE STREET, WINNIPEG  
Lowest Prices consistent with Best Workmanship.



**ONE WHEEL PIVOTS**  
Turns in its Tracks



**DEALERS AND AGENTS**

The demand for this engine is increasing rapidly. It's a money-maker for you, Mr. Dealer, as well as the farmer. Get our agency proposition quick.

# Here's Help that Never Tires!

Farm help is scarce enough this year, but when you do get it, twelve hours a day is practically the limit of working time. Why not work shifts and get the full twenty-four? Ease up on the horses, do away with most of the men in the field—replace them with a

## HAPPY FARMER TRACTOR

A 4000-lb. Medium Tractor, burning Kerosene perfectly at all loads. Very reasonably priced.

Gives 12 horsepower—2,000 lbs.—on the draw-bar for plowing, harvesting, road work, hauling, etc.—24 horsepower on the belt furnishing power for threshing, grinding, elevating or running a line shaft connecting all the smaller farm machinery.

**SEE THIS HAPPY FARMER TRACTOR WORKING IN THE DEMONSTRATIONS AT THE BRANDON FAIR, JULY 22-27**

GET IN TOUCH WITH US NOW FOR FULL PARTICULARS AND PRICES

# Happy Farmer Co. Limited,

**HEAD OFFICE - - WINNIPEG**  
BRANCHES AND SERVICE STATIONS:  
REGINA, Cor. Halifax and 7th Avenue.  
SASKATOON: The Tractor Co.

land is very heavy, else I would be able to pull three plows.

I plowed 6 acres in an 8-hour day. I did all my fall plowing on high gear, which I find is the best, for if one gets into a tough bit of land you have the low gear for to fall back on. They are fine. You do not need to crowd the engine.

I did 10 acres of breaking in the very toughest gumbo, 4 inches deep, but had to plow in low gear in it. The cost of my work, for kerosene and lubricating oil was 75 cents per acre on the fall plowing, which was very tough, being only the second plowing. Cost of kerosene and oil on breaking was \$1.10 per acre.

My plow is a P. & O. 2-bottom engine gang. My land is very heavy. I have to use the rod bottoms for the second plowing, and they did very good work.

I double disc 117 acres with my engine, pulling a 10-foot double engine Emerson disc. I find I can pull this easily, with disc set at full depth. It cost me about 20 cents per acre for double discing for kerosene and lubricating oil.

I have not done any other work with my tractor, but I feel sure it would be equal to anything. I have seen men hauling grain with them. I think the small tractor is indispensable in this country,

where the seasons are so short. We have to do our work in such a rush. They save the expense of so many hired men, also the care and keep of horses. Horses would never do the work on this land here that the tractor did. It has been tried and found they couldn't. So I turned out my horses and replaced them with a 10-20 Titan, and am more than satisfied with the result.

I may add I never operated one before, or even sat on the seat of one. My tractor arrived here, and I got it unloaded the next morning. I had to get it out at once, so went to the station and set it going and pulled out with it. The expert was in bed and he told me afterwards he heard an engine snorting outside and popped out of bed to see. He saw me on it, and everything seemed to be all right, so he left me to it and I arrived home without a bit of trouble.

It burns 2 gallons kerosene per hour with full load, and 1 gallon lubricating oil for 10 hours. It hasn't cost a cent for repairs so far.

I believe a man who has a tractor and gives it as much care as he would his horses, will find it satisfactory. I mean any good make of engine.

Yours truly,  
A. E. Vigar.

## THE CANADIAN LIGHTNING ARRESTER AND ELECTRICAL COMPANY LIMITED

### The Greatest Asset

of most farmers is in their buildings and in the stock they contain

Why, Mr. Farmer, risk the loss of many thousands of dollars, when at small cost, we offer you absolute protection?

Do you know that the largest percentage of all fire losses in the West last year was caused by lightning?

You owe it to yourself and your family to inquire into the Townsley System of Lightning Protection to-day.

Beware of the agent selling "Un-branded" Rods. See your dealer Now.

Insist on the well-known

### TOWNSLEY SYSTEM!

which is sold with a guarantee. If your dealer does not carry our goods, write direct—

The  
**Canadian Lightning Arrester & Electrical Co., Limited**  
BRANDON MANITOBA

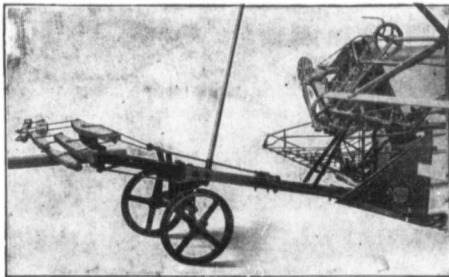


OFFICES & FACTORY  
BRANDON - MANITOBA  
**TOWNSLEY** LIGHTNING SYSTEM  
SYSTEM OF VENTILATION

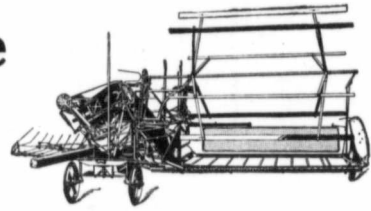
## Invest in Whole-Crop Insurance

**T**HERE is one kind of insurance you may not know about, which requires no premiums, on which you realize every year, and which this year is fully as important as any other insurance you carry. When your crops are ready for cutting, McCormick binders and twine insure the harvesting of the whole crop. No matter whether the grain be heavy or light, tall or short, standing or down, lodged and tangled, a McCormick binder cuts and binds it all without waste. That is what we mean by whole-crop insurance.

McCormick harvesting machines and binder twine, always efficient, are better than ever this year, when every bushel of grain is needed. Remember this when you come to buy your



The McCormick tongue truck keeps the McCormick binder running steadily and makes it easy to turn corners. It is furnished regularly with all 8-foot machines. It can be supplied for 5, 6, and 7-foot machines on special order at additional cost.



binder and twine for the season's work. Remember, too, that the larger sizes conserve labor. Buy the largest binder you can use, and buy a new machine if there is any question at all about the efficiency of the old one. A new McCormick binder is absolutely reliable.

You can be sure of having your new machine on time by placing your order with the local dealer as soon as possible, or writing the nearest branch now for catalogues. The dealer will appreciate having your order early so that he can give some service to your neighbors who delay. And the world will appreciate it!

## 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.

**M**ORE than eleven years have passed since the Motor Union of England, prior to its amalgamation with the Automobile Association, decided to constitute a Fuel Committee in view of the prospect of material increases in the price of petrol. The committee went into the subject very thoroughly and issued a report which has never received as much practical consideration as it deserved.

The committee came to the conclusion that a petrol famine in the near future was inevitable, or, in other words, that the demand for petrol would far outstrip the supply, unless alternative motor fuels were brought into existence. The possible alternatives, as then recognized, were subsequently examined with great care. It was observed that they fell naturally into two groups, namely, those which when exhausted could not be replaced by any known process, and those which could be regarded as inexhaustible, because the supplies could be removed and increased at will.

The only fuel to come into the latter category was alcohol. This was the main consideration which led the committee to the conclusion that the chief efforts should be in the direction of encouraging in every way the use and development of a substance such as alco-

## Alcohol as a Fuel

From English "Country Life"

hol, produced from vegetation. The main difficulty standing in the way was, and still is, the extent of the restrictions due to the fact that potable alcohol is a source of considerable revenue. We thus come early against the question of whether the majority of these restrictions could be removed without leaving the revenue open to fraud. Evidently the Motor Union Committee considered that much could be done without any serious risk of this kind, since they advised the inauguration of a movement with the specific object of bringing about a reduction in the restrictions. This was the first, and was obviously regarded as the most important of all the recommendations made by the committee.

The trouble was that, having reached these conclusions the committee had not the power to put theory into practice, and the government gave no signs of taking the initiative and clearing up the position by a voluntary removal or alteration of those regulations which still make the production of industrial alcohol so unnecessarily expensive. This

attitude of *laissez faire* was encouraged by the very lukewarm report of the Departmental Committee on Alcohol of 1904. This committee "considered that for a long time to come there would be no demand for more than about a half million<sup>9</sup> gallons of industrial spirit per annum, and that the utmost expansion that can be regarded as attainable within a measurable distance of time would double that quantity."

Meanwhile, Germany was already in 1903 consuming annually 33 million gallons of denatured alcohol for domestic use, and some fifteen million gallons for industrial purposes and for engine fuel. In Germany the policy of the agrarian party favored a big production of alcohol crops. It was desired to re-populate the agricultural districts, the whole scheme being closely connected with the propaganda of militarists. Subventions were paid by the government, which made the growth of alcohol crops a profitable business. At the same time, the production of alcohol engines was very definitely encouraged.

Germany got her reward during the early stages of the war when what might well have been a fatal shortage of petrol supplies was successfully countered by the very general use of a petrol substitute consisting of 80 per cent alcohol and 20 per cent benzol, with a little naphthalene. It has been stated that this mixture gave five-sixths the power of petrol in a petrol engine. This is probably about correct, and the great point is that all the ingredients were produced in Germany. It is questionable whether our enemies would have been able to continue to use large quantities of a mixture of this kind, since their difficulties in regard to food involved new claims upon alcohol crops. However, the shortage was made good until such time as the oil wells in Eastern Europe came again into the possession of the Central Powers.

France also has encouraged the growth of alcohol crops and has taken steps to make certain that her military motor vehicles should not be solely dependent on imported fuel. In the annual trials of subvention lorries, which took place regularly before the war, all the competing machines were obliged on certain days to run on a 50 per cent mixture of carbureted alcohol with benzol. The general opinion of experts was



then that it was undesirable to increase the proportion of alcohol, but that with the proportions named the only difficulty involved was a slight amount of trouble in starting up the engine from the cold in the early morning.

As regards the power developed, it was impossible, without taking exact quantitative measurements to notice any difference between the results given by petrol and by the mixture of alcohol and benzol. The cars seemed to run just as well on the mixture as upon the spirit for which they were originally designed. In the matter of mileage, benzol alone gave upon the average better results than petrol alone. The difference was, however, only three or four per cent. The 50 per cent alcohol-benzol mixture gave on the average of all the competing cars mileage results which were just about equal to those obtained with petrol. Some cars did distinctly better with the mixture, while others did distinctly better with the original spirit.

Just before the outbreak of war quite an interesting test was made with a Charron car on Brooklands. This car was tested at certain fixed speeds when running on petrol, benzol and methylated spirits. The only adjustments made were in the carburetor jets. Four tests were made at twenty miles an hour. At this speed the car covered forty miles on one gallon of petrol. The mileage covered on a gallon of a 50 per cent mixture of benzol and methylated spirit was thirty-two and a half, while a gallon of methylated spirit alone sufficed for twenty-three miles.

At the higher speed of thirty-five miles an hour, the comparison was slightly more unfavorable to the methylated spirits, probably because the fuel was less suited for use when the piston speed was high. The engine, however, ran quite regularly and gave no trouble. Moreover, when the car was tried all out, there was no appreciable loss of speed when the methylated spirit was used instead of petrol. The tests were conducted in the summer, and no difficulty was experienced in starting up.

At about the same time, various alcohol fuels were invented in which alcohol was mixed with ether in the proportion of about 65 per cent of 35 per cent. Out of these fuels was tested by the Royal Automobile Club and gave very satisfactory results. It was certainly impossible when driving in a car using this fuel to detect any inferiority in the running in comparison with the results given by petrol. In fact, one had an impression of slightly better pulling power on hills. As regards engine starting, the fuel was par-

# See That Hitch!

THE NILSON PATENTED LEVER HITCH is the feature which gives the Nilson the qualities Canadian farmers want—BIG TRACTION, LIGHT WEIGHT, FUEL ECONOMY.

By carrying the line of pull-up over the drive wheels it converts the pull of the plows into downward pressure, thus giving the drive wheels "grip" or traction, without a pound of useless weight.

See the Nilson Lever Hitch in the photograph below. Here the Nilson Junior is plowing stubble with four 14-inch bottoms, and handling the job as easily as a heavyweight. You don't need to spend money propelling dead weight if you have the Nilson Lever Hitch!



The Lever Hitch carries the pull of the plows up over the drive wheel. The harder the pull, the better the wheel grips the ground. Note great width of driving wheel surface.

Found Only on

## The Nilson

Because of the Lever Hitch, the Nilson Junior, weighing only 5000 pounds, has 3000 pounds draw-bar pull at plowing speed, while the Nilson Senior, weighing only 6200 pounds, has 4,000 pounds draw-bar pull at plowing speed. The Lever Hitch actually does insure big traction with fuel economy. It guarantees dependable traction and speed, in wet or dry soil, without packing or miring.

Never have the farmers of Canada so quickly recognized superior tractor

merit as in the Nilson. Every man who sees the Nilson Lever Hitch Tractor at work wants one.

The Nilson uses Kerosene or Gasoline for fuel.

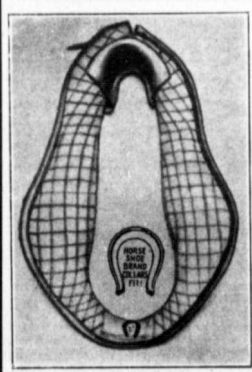
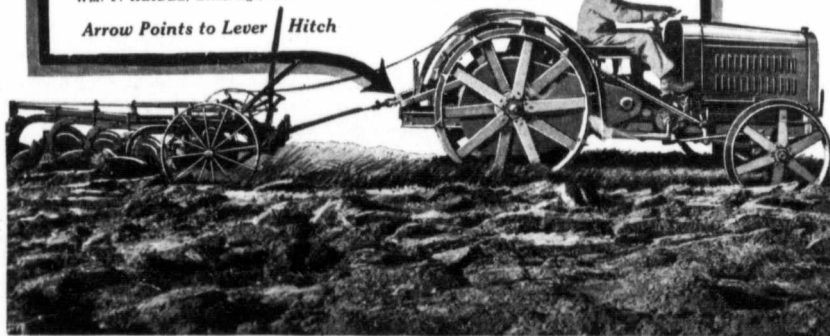
See the Nilson at the Light Tractor Plowing Demonstration at Brandon, July 23rd to 25th. See that Hitch! It means more to you than any other one thing in the tractor world.

Get in touch with us. Write or wire.

**HAPPY FARMER CO. LIMITED**  
225 CURRY BLOCK, WINNIPEG, Man.

DISTRIBUTORS FOR CANADIAN NILSON TRACTOR CO. LTD.  
FOR MANITOBA AND SASKATCHEWAN  
ALBERTA DISTRIBUTORS  
WM. F. HEIDEL, Lethbridge, Alta. M. A. PEACOCK, Calgary, Alta.

Arrow Points to Lever Hitch



**Your Horse Will Do More Work**  
With a genuine **LONG STRAW COLLAR** on

This collar is specially designed for a horse with a projecting shoulder blade. Note the heavy draft and wide top, which prevents the collar from bearing on this part of the shoulder.

ASK YOUR DEALER FOR

Collar No. 30 **Horse Shoe Brand** No. 32  
STRAIGHT Leather or Cloth Faced SWEENEY

MANUFACTURED BY

**The Great West Saddlery Company, Limited**

WINNIPEG CALGARY EDMONTON REGINA SASKATOON

ticularly good, being, of course, helped by the presence of ether.

Had it not been for the war, 1914 might very well have seen the start of a really solid movement in favor of alcohol fuel. Early in the year, the Alcohol Motor Fuel Committee had been formed. This had obtained very influential support from the Government Departments concerned with the welfare of India and of the colonies. An appeal was just about to be made to the public for funds with which to conduct various necessary researches when the war broke out, and the committee, composed as it was of scientists, had to suspend its activities in view of yet more urgent calls upon the services of its members and advisors.

When, a little later, the Committee of the Privy Council for Scientific and Industrial Research was formed, there seemed to be some hope of a new start being made, but the committee in question did not consider the matter sufficiently urgent to justify expenditure during the war. Consequently, nothing further has been done here, if we except the collection of a certain amount of statistical information.

During the present year two new moves have been made, either or both of which may lead to the production of alcohol fuel in some quantity. Of these, the more concrete is the appointment of a Committee on Alcohol Fuel and Engines by the Advisory Council of Science and Industry of the Commonwealth of Australia. This committee has already done a great deal of useful preliminary work, and is setting about the task of familiarizing the Australian public with the possibilities of alcohol fuel for use either alone in specially designed stationary engines, such as are required in great numbers on farms, or as part of a mixture in motor car engines.

Of these two propositions, the first is given in precedence, because the general use of alcohol as a motor fuel is so far dependent upon the existence of adequate facilities for the retail distribution of the fuel to all points. In the early stages, this difficulty must be a very great one. It is evidently easier, other things being equal, to get the fuel used in a stationary engine which will only require its supplies to be delivered regularly to one point. On the other hand, the stationary engine can, and does, generally use a cheaper fuel than petrol, so that the competition that alcohol has to face is, as regards price, most severe in this sphere.

It seems likely that the next move on the part of the Australian committee will be the purchase of a stationary alcohol en-

gine, with which to demonstrate at agricultural and other shows the practical character of the whole proposition. In the matter of supplies of the fuel itself, Australia can start with molasses. The Commonwealth produces a sufficient supply of molasses to yield some four million gallons of alcohol per annum, and at present about 75 per cent of this supply runs to waste.

When the movement has made some progress, new sources of supply will have to be developed, and no doubt alcohol crops, perhaps taking the form of maize, barley, beet, or potatoes, will be grown in large quantities. The price at which we can get our fuel depends primarily on the relation between the supply of, and demand for, light liquid fuels the world over. If Australia can, by becoming her own producer, drop out of the market so far as petrol is concerned, then there is so much the more petrol left for use elsewhere, a fact which is likely to be reflected in quality and also in price.

The last move to be recorded up to date in connection with alcohol has as yet not passed the stage of propaganda. It really amounts to an attempt to encourage the growth of alcohol crops. The idea is that ultimately the farmers, operating in groups, will become their own distillers of industrial alcohol. They will thereby fill their own fuel needs, and also, it is hoped, a very appreciable percentage of the needs of motorists. The whole thing depends upon the cost of production. The question is whether it will ever be possible to produce alcohol crops at a price which will make the spirit obtained from them capable of competing in the open market with similar spirit imported from other parts of the empire where crops can be grown with greater ease and cheaper labor, upon less valuable land.

#### FOOD DEALERS LICENSED

Canada's new system of license control of dealers in foodstuffs involves over 80,000 retail establishments and about 23,500 wholesalers. Of the total number of retailers there are 30,000 grocers, 16,000 butchers, 50,000 public eating places, 5,000 bakers, 2,000 fish dealers, 4,500 fruit and vegetable dealers and 4,000 produce dealers.

#### GET OUT ON THE FARM

Every man is wanted on the farm this year who ever handled a hoe, or drove a team. Get in touch with the situation. Find out who is handling the employment agency in your town. Sign up for service where you will count most during this harvest.

## No Worry About Harvest



**H**AVE 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.

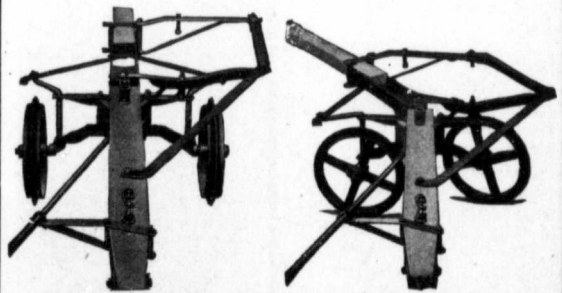
We furnish promptly either new Deering binders or repairs for old ones. Do not hesitate to call on our organization for any help we can give in the harvesting of this year's grain crop—the most important crop ever raised. See the local dealer or write to the nearest branch direct—early.

### 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.



Pivot axle tongue truck on the Deering binder, showing pole straight. Note the all-steel construction and flanged wheels.

Showing how easy it is to make square turns on account of the wheels coming around faster than the pole.

## CERTAINTY IN Thresher Belts

Both Dunlop "Prairie" and Dunlop "Reliance" Thresher Belts are made of a special high-grade duck. A superior rubber friction welds the plies firmly together, and a very tough, wear-resisting rubber face ensures a ready pulley grip. Because of this latter feature, the tendency to slip when wet, or to burn or run off when tangled sheaves are drawn swiftly into the cylinders, it is minimized.

### "PRAIRIE" and "RELIANCE" (Rubber-covered and Stitched)

To lend double security these brands are stitched very closely with vulcanized thread, by an improved method, which sinks the stitches to avoid a lumpy surface. This is the reason they are noted for such smooth, evenly-balanced faces. Practically all stretch is removed during the manufacturing process, so that the constant adjustment of the engine to ensure the proper tension is not necessary as in the case of leather belts.

If your preference is for a Frictioned-Surface belt you will find our high-grade "Gibraltar RedSpecial" to be unexcelled.

Dunlop Canvas Thresher Belts and Dunlop Agricultural Hose are conspicuously upholding the reputation of the "Two Hands" line of Rubber Products.

### Dunlop Tire & Rubber Goods Company, Limited

Head Office and Factories: TORONTO

Branches:—Victoria, Vancouver, Edmonton, Calgary, Saskatoon, Regina, Winnipeg, London, Hamilton, Toronto, Ottawa, Montreal, St. John, Halifax.

Makers of Tires for all Purposes, Mechanical Rubber Products of all kinds and General Rubber Specialties.



## The Art of Soldering, Sweating and Brazing

(Concluded from June issue)

### Hard Soldering or Brazing

Hard soldering, or, as it is more usually called, brazing, is a process similar to soft soldering, but differing from it in that the solder requires a far higher temperature to fuse it—varying from a low red to a bright yellow heat. It is hardly possible to get this heat in an ordinary fire. It can, of course, be reached easily in a smith's forge; but the most general and convenient sources of heat are the acetylene blow-pipe, the gas blow-pipe and the kerosene or benzine blow-lamps.

Oxy-acetylene and gas blow-pipes are not to be found in the ordinary motor house; and the man whose workshop runs to even a good-sized gas forge is not likely to stand in need of elementary instruction for using it; so we will leave the blow-pipes and confine ourselves to the possibilities of the blow-lamps.

The smallest size of blow-lamp in general use is the one used by painters for burning off paint. This holds about a pint of fuel, and burns for an hour and more on one charge. One may do all sorts of small brazing jobs with a lamp of this size, and it is extremely handy for heating soldering irons, or any other purpose where a sharp, clean heat is necessary. If the work is properly supported by suitably arranged fire brick one could probably, as a stunt, braze a scarfed point on a shaft  $\frac{7}{8}$  in. in diameter. On a light car a job so big is a large job, and the majority of the work would be of  $\frac{1}{2}$  in. or less in diameter, and consequently well within the range of the lamp.

The next size is the  $2\frac{1}{2}$  pint size. The flame is very little hotter, but as there is more of it one can braze larger stuff. The five

pint size is the one in general use in garages.

For general handiness in all small work the present writer has come round to the opinion that the smallest size is the most useful. After sternly refusing to have anything in his workshop smaller than the  $2\frac{1}{2}$  pint size for the last eight years, a little pint lamp sneaked in six months ago, and gets used five or six times as often as the larger lamps.

The principle of these lamps is that kerosene is forced under pressure through a heated coil of tube, and issues at a fine jet or nozzle in a spray of grayish vapor, which, mixing with air, burns in a nearly invisible blue flame.

Motorists will recognize this as being similar in idea to the carburetor adapted for kerosene. There is the same heating of the fuel and mixing it with air in the choke tube, only in the carburetor the fuel is sucked out of the jet instead of being forced out. Also, the fuel is heated more in the blow-lamp; it can be properly vaporized in the heater and supplied at a steady pressure as the lamp works always on practically full throttle, so to speak.

A little gasoline or methylated spirit is poured into the cup beneath the burner and lighted. By the time it is nearly burnt out the burner is hot enough to vaporize the kerosene, and a few strokes of the pump may be given. The kerosene will hiss out of the jet in vapor, which will be ignited by the burning gasoline below. When fairly warmed up—say, after two or three minutes—the lamp can be pumped till it gives a steady roar.

The  $2\frac{1}{2}$  pint and larger sizes are furnished with a screw-down valve to the jet, so that the lamp



THE OBSERVATION SAUSAGES

Old Hand (supplying desired information to new draft)—“Those things up there? Oh, they're canteens for the Flying Corps.”

# TORONTO WINDMILLS

ONTARIO WIND ENGINE & PUMP CO. LIMITED



## Double Geared

Double Gears have put windmills back on the farm! The free power of the wind for pumping purposes was given up because frequent repairs and oiling and the loud rattling of the old style wind engine drove farmers to gas power, or to tiresome hand pumping. To-day Toronto Windmills fitted with double gears insure noiseless pumping power in the lightest breeze, and long life with little oiling. There are still some farmers who haven't received the Toronto Windmill Book. If you are one of them, send your name and address to 142W

Ontario Wind Engine & Pump Co.,  
(Western Branch) Limited  
HEAD OFFICE: REGINA  
Branches: Winnipeg, Calgary  
Also Makers of  
TORONTO Engines



## DEPOSIT YOUR SAVINGS

with the ALBERTA GOVERNMENT

Your funds are absolutely safe.  
Interest compounded semi-annually.  
May be withdrawn at any time.

5%

THE Government of the Province of Alberta issues Saving Certificates for amounts from \$5.00 upwards upon which 5% interest is paid. Your Savings, therefore, are as safe as the Government itself. Your money may be withdrawn without notice at any time.

Begin an account—now. Send for folder fully explaining the Savings Certificate plan or, better still, mail your first deposit. Savings Certificates for the amount will be forwarded to you same day as received.

W.V. NEWSON, Deputy Provincial Treasurer,  
Parliament Buildings, EDMONTON, Alberta.

can be pumped up fully before starting and the supply of fuel regulated by means of this valve.

After the lamp, the next consideration is the hearth or fire-brick backing to support the work and to confine and concentrate the heat upon the joint to be brazed. With a small lamp this is more important than with a large one.

**A Brazing Hearth**

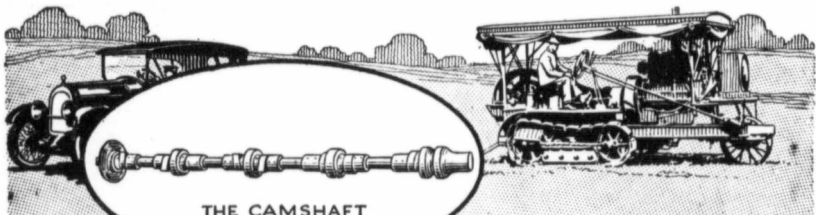
Any iron tray will serve to hold the fire bricks—an old teatray at a pinch; but there must be an ample fire brick for the bottom and another for the back. Fire bricks can be bought in many sizes at the builders or ironmongers. For a small hearth, such as would be used by an amateur, the bottom brick may be 1 ft. square and 1 in. thick, and the back of the same size. This is stood on its edge toward the further side of the bottom brick. To these should be added two pieces to form movable sides, as shown last month. Pieces of an ordinary brick broken in half are about right. When the full intensity of the flame is required to beat upon a job another piece of fire brick can be laid across the tops of the side pieces to make a chamber that is practically a small furnace. A few broken pieces of fire brick should be bought also, as they are useful for piling round a long or oddly shaped job to confine the heat to the part required.

In making up the hearth for brazing, the work should rest in the angle formed by the floor and back, and if the two large pieces cannot be used for the sides the broken fire brick must be built up as neatly as possible round the work, leaving only the joint exposed for the flame to play on.

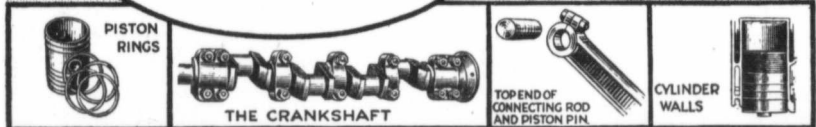
The solder is sold in the form of wire—usually square—and may be had of two sorts, hard and soft. The hard quality requires a higher temperature, approaching a yellow heat, and is employed for iron and steel. This is the sort used by cycle agents for brazing up frames, and can be easily obtained of them or any large ironmongers.

**Soft Brazing Solder**

The soft quality melts at a lower temperature, not much more than a low red, and is used for joints in copper and brass, where the work itself would be melted if the hard kind were used. It is, however, not so generally stocked, and has often to be specially ordered by one's retailer from his wholesale house. On account of this little difficulty in getting it it is advisable to have a little always at hand. In a good-sized provincial town the writer had to hunt all one morning to get some, finally running it



THE CAMSHAFT



**THESE PARTS MUST HAVE THE RIGHT OIL**

**The Right Oil Lets Your Engine Breathe**

**I**F your tractor or automobile engine can't breathe perfectly it won't run smoothly. Every time a charge of gas is drawn into the cylinders the engine literally takes a breath. And after the charge has been fired the remaining gases must be expelled.

every other motor part. Piston rings, cylinder walls, crankshaft bearings and piston pin are all perfectly lubricated by these oils which hold their lubricating qualities and do not wear out even under intense engine heat.



That's why your engine has intake and exhaust valves. A camshaft opens and closes them at the proper time. To accomplish this, valve tappet rods are raised by cams or shoulders on the camshaft. The action is a sliding one occurring twice for each cylinder for every explosion. If these cams are not lubricated perfectly, the sliding action soon causes friction, wear and in time results in a variation of the valve openings which prevents full power.

**Expert "Imperial Service" Free**

When you decide to use Polarine or Polarine Heavy we are vitally interested in seeing that you get the grade best suited to your engine's lubricating requirements. Put it up to us. Send a full description of your engine. You'll be glad that you got our expert assistance.

Polarine or Polarine Heavy, whichever grade your engine needs, will insure uniform action by the camshaft as well as by

Polarine and Polarine Heavy are sold in steel barrels and half-barrels, and in one-half, one and four gallon cans. Buy in the larger sizes for economy but always keep a four gallon can on your tractor.

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Head Office: Winnipeg  
Total Assets over \$140,000,000  
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to earth in a little shop kept by a practical brazier and tinsmith of the old-fashioned kind.

This soft quality is very useful also on iron and steel work that does not really require the strongest kind of joint. The parts do not get so much burnt, and it makes a useful cross between the usual brazed joint and an ordinary soft soldering. The soft quality is made of equal parts copper and zinc; the hard, two of copper to one of zinc.

The flux for hard soldering is almost invariably borax, or some compound of which borax forms the base. The old-fashioned braziers always used borax, and borax is frequently found in the domestic stores, which saves buying.

After so much precluding about materials there is little left to say concerning the actual technique of brazing. The lamp is started, and while it is getting warm the work may be set up on the hearth. The joint, as for soft soldering, must have its surfaces where the brass is to run filed clean and bright, and where possible the joint should be pinned to fix the parts in position. French nails make excellent pins for this work.

The lamp is now pumped up fully and turned on the work, the borax and brazing wire being conveniently handy. The brazing wire is held in the flame, and when warmed stuck into the borax tin, and some borax picked up on it and wiped about on the joint. The borax swells up and bubbles, then settles down, fusing into borax glass. Enough should be put on to glaze over the joint, with a little surplus. By this time the work will be at a red heat, and the end of the brazing wire should be kept on the joint, and pressed on it a little. Pretty soon the brazing wire breaks off at the tip, leaving a lump on the joint. A little time after this, this piece runs suddenly to a globule and down into the joint. More brass can be added as required, and a little additional borax. The beginner should err on the side of too much rather than too little brass, as just at first one is rather apt to mistake the molten borax for the molten brass. The brass has a molten silvery look not easily mistaken when once realized as characteristic, and it runs like water, whereas the borax seems more viscous.

**Brazing Brass or Copper**

Brazing brass or copper with the soft kind of brass is quite as simple as brazing steel with the hard kind, the only precaution being that the heat must not be kept indefinitely on the work, especially with a large lamp. As soon as the brass runs the lamp should be drawn back a few

inches, still keeping the flame on the work, and the job kept just hot enough to keep the brass molten, but no hotter. This in order to prevent the work itself being melted, and no more than a little care is required.

Given the necessary outfit and a very little practice, the ordinary amateur is quite man enough to do pretty well all the brazing repairs needed on his car that are within the reach of the lamp he uses.

**KEEPING THE BOY ON THE FARM**

(Concluded from June issue.)

The child's first impressions are gotten at home and from those with whom he moves and lives. These impressions are fixed on the impressionable mind and will determine, in a large measure, the future of that child. The home and the home environment, then, are partly responsible for keeping the boy on the farm or sending him to town. In too many cases the father is so busy making money on the farm that he forgets everything else, even his little son, whom he expects will become a farmer. The only instruction the boy receives at the hands of his father is how to work. A valuable lesson to learn, to be sure, and a lesson that helps to make the farm boy so successful when he pursues professional or other vocations—but work alone will not interest the boy sufficiently to keep him on the farm. The small boy should be given a direct interest in the farm. A calf or a pig that he could call his very own would be a great incentive to this interest. Instructions from the father on feeding and caring for the same would add to the boy's knowledge. Interest coupled with knowledge of farming is the strongest force of operating to keep the boy on the farm. The boy whose interest is centered around farm life will not leave for the city as soon as an opportunity affords itself.

But we find too many fathers intent on developing the boy's muscles and not his interest. The boy soon learns that his muscular development will afford him more pleasure if expended along lines in which he is interested. Rural folks have been slow in accepting new ideas and conveniences. This is particularly true of the farm homes. These conveniences are more significant to the boys and girls than to many of the older folks. They hear about these conveniences from their city cousins whose fathers are not better able financially to procure them than the country boys' father.

**Who Takes the Chances?**

Who runs the risk when the breadwinner neglects to secure the protection of Life Insurance for those dependent upon him?

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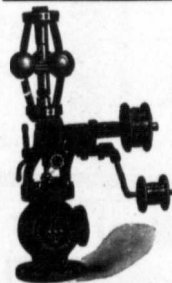
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**BROKEN CASTINGS**  
SEND YOUR  
Scored Cylinders or any kind of Repairs. We Re-bore Cylinders, True Up Crank Shafts, Re-tip Boiler Flues and are in a position to handle any repair job promptly.

Nothing too large or too small.

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The Whitney Tractor, Kipp-Equipt, Built by The Ohio Manufacturing Co.

## They Help Your Tractor Stand Up Under Overwork

**T**HE informed tractor owner never knowingly overworks his tractor but overtaxing is bound to take place at times.

If at such times lubrication is insufficient or if the lubricant used is full of grinding sediment, it is even more dangerous than usual.

Bearings and other parts are very seriously worn down and breakdowns and costly repairs are the certain consequence.

One of the many savings effected for you by manufacturers equipping with Madison-Kipp Lubricators is a maximum protection against the effects of such unconscious abuses.

### In Kerosene and Gasoline Tractors Both

Kerosene and present-day gasoline both condense on the cylinder walls.

This condensation wipes the polished metal clean of oil just as kerosene anywhere cleans off oil.

Unless the oil film is properly and regularly renewed by means of "live" oil the uncoiled surfaces grind and wear each other down.

Under conditions of overwork this evil becomes especially serious because the resulting wear is greater.

With Madison-Kipp Lubricators the oil film is unfailingly renewed because they are built on the positive Kipp Valveless Principle.

### They Reduce Repair Costs

Two out of every three tractors now in use are equipped with these lubricators to guard against the costly repairs and replacements due to improper lubrication.

The manufacturers of good lubricating oils have told you for years how the sediment gathering in oil,

used over and over again, grinds the piston rings, cylinder walls and bearings.

The Madison-Kipp Lubricator, because it uses oil but once, does away with this cause of costly delays and repairs.

As a reducer of repair costs due to unusual as well as normal conditions, this lubricator constitutes a strong recommendation for the tractors equipped with them.

It should be on the tractor you buy.

It costs you no more and is worth much more.

The worth and reputation of Madison-Kipp Lubricators are so well established that the factory making them is now the largest in the world devoted to the manufacture of lubricators.

**The Madison-Kipp Lubricator Co.**  
Madison, Wisconsin

## The Products of These Tractor Builders Are Kipp-Equipt

### On All Sizes of Tractors

Advance Rumely Thresher Co. Hart-Parr Company  
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Nichols & Shepard Co.  
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Whitney Tractors  
Southern Corn Belt Tractor Co.  
Western Tractor Co.  
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### On Some Sizes of Tractors

J. I. Case Threshing Mach. Co. Monarch Tractor Co.  
Case Tractors—13-25, 26-40 Neverslip Tractors—20-12  
Holt Mfg. Co., Peoria The Russell & Co.  
Caterpillar Tractors Russell Tractors—30-60  
25-45, 50-75, 60-120

**Madison-Kipp Lubricators**  
VALVELESS FORCE-FEED

Very few rural residents can not afford to have water works in their homes and lighting systems. A farmer will not hesitate to invest a similar amount in a piece of machinery, which is probably used only once a year. It isn't the expense of these conveniences that has kept the farmer from installing them, but the idea that they are not needed. I have been in any number of homes where they had a piano and in others where there was a piano and a phonograph. Music is a splendid thing to have in the homes, but I have seen mothers in these same homes walk a block for every pail of water they used, and the average home uses a ton of water per week. A water system in a home does not only lighten the work of the mother, but it furnishes water for other purposes.

Too much work and not enough leisure time is the one outstanding cause for the boys leaving the farm. They know that a boy who works in the city begins his work at seven or eight o'clock in the morning and quits at five or six o'clock. The city boy puts in eight to ten hours—the boy on the farm twelve to sixteen hours. The long hours to the country boy are a factor that looms up like a mountain. He knows that the boy in the city is spending his leisure hours reading or attending some form of amusement after his day's work, while he, the country boy, is trudging away on the farm. But the farmers say, "If the boy is kept at work he won't get into mischief." That is quite true, but the farm boy could stand more leisure and yet not get into mischief. He could spend his leisure hours on the farm very profitably if the proper reading material and environment were furnished.

Next to the home, the school is the pre-eminent force in determining the destinies of the boys and girls. What are our rural schools doing to interest and in-

struct the boys and girls in the work which they are going to do if they stay on the farm? They have just begun to teach these boys and girls more about what they ought to know about farm work and rural life.

The present rural school work does not differ materially from the city school work. One is made up of farm boys and girls who ought to be instructed for more complete living on the farm, the other for living in urban districts. They are both put through the same process and from the one we expect farmers and the other business and professional men. It is obvious that such a single system of education will not fit the two needs. I do not think for an instant, that the three R's should be taught less, but taught in the light of rural life. It is just as good practice in arithmetic to solve problems pertaining to farm work as to city work. It is just as easy to read about some noted man in agriculture as to read about some successful business man. The other day, while testing milk in one of the rural schools, I asked the class who invented the tester. No one knew. I asked them who was the father of our country. All hands went up. Who is Rockefeller? "Oh, he's that big oil man." "Who is Andrew Carnegie?" Again all hands went up. Then I asked, "Who is Dr. Babcock?" One hand went up. On hearing the name, the boy associated the name with the tester.

Who has done more for the farmers, Dr. Babcock or Mr. Rockefeller? One has given his best thought and energy in the interest of farmers and the good of science; the other, equally able has directed his energy in accumulating millions. But that isn't the most significant phase of it. The fact that we are immortalizing, exalting, and holding up before the rural boys and girls as examples to emulate, successful business men, is not conducive to keeping the boy on the



"SOMEWHERE IN FRANCE"

The New Draft (weary of making hurdles)—"I thought we'd come out 'ere to do a bit o' fighting; not to—to learn to bloomin' well do Knittin'."

### Indispensable on the Farm

The "Z" is an efficient power unit that saves money and in these days of labor shortage enables you to keep your farm work up to the minute.

#### A Fairbanks-Morse "Z" Engine

is the every purpose farm power plant and the work it performs is practically unlimited. It produces maximum power at minimum cost. 150,000 farmers are daily demonstrating that the "Z" is the greatest engine ever produced. The 3 and 6 h. p. "Z" Engines burn coal oil, distillate or any of the cheaper fuels and develop more than rated horse power.

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## Harvest Expectations vs. Harvest Realizations

Very often the crop does not come up to earlier expectations, which not only causes the farmer and his family, who have worked so assiduously, considerable disappointment, but, as a consequence, the planning of months and years goes for naught. Just so through life. Every man with responsibilities hopes to leave his dependents in an independent position, but as a result of unforeseen events, is frequently unable to do so, regardless of his good intentions.

This is why the progressive farmer carries adequate Life Insurance. He knows that if anything happens, it will provide funds to complete his unfinished work. On the other hand, if he lives until the maturity of the policy, the systematic accumulations will provide a competence for his declining years.

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I would like to save \$.....yearly through the medium of Life Insurance.

I am.....years of age, and am (married single). Kindly forward particulars of plan of policy you recommend.

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# The Hub of the Harvest

is the threshing outfit. Nature, without fuss or the haste of excitement, keeps her promise all the time. Worry and waste is always at the man's end, and there's no greater wastage in the harvesting of the grain than is usually found around the *intermittent thresher*. See in time that your outfit is in perfect order, and above all things that its power transmission is beyond suspicion. That means you must link up your drive wheel and pulley with a



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Belts that are unbeaten in the field of grain production.

Sold by all thresher companies doing business in Canada. They may cost a trifle more than some fabrics that are always a big risk but that is forgotten in the added years of service, and we guarantee our goods against all disappointment from slippage or breaking. It is not possible to make better belting by any scientific method known at this day.

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farm. We are imitators by nature, and every boy on the farm and city wants to become a great man some day. And the farm boy would naturally feel that he must leave the farm to reach his ideal.

What are the boys and girls who complete the rural schools to do if they desire to continue their education? It is their just right and privilege to receive just as good an education as their cousins in the city. One reason why parents leave the farm is, that they desire to give their boys and girls a better education—implying that this can only be done by having them attend city schools. It is a common practice for rural folks to send their boys and girls to the city high school. They spend four years of the best of their lives in completing the high school course. They are not only being taught subjects that bear no relation to rural life but live in a city environment and associate with city folks. We have no right to expect these boys and girls to return to the farm and be contented because they will not. We need the rural high school. Such institutions would not only teach the boy the scientific side of farming and the girl the art of home making, but would teach them in the environment in which they expect to live

if they become farmers and farmers' wives. These boys and girls are needed in the rural communities to be leaders in the social and recreational activities which we find are lacking in rural communities. If they go to the city high school the rural community is deprived of this leadership.

There is still another institution that has not been as potent a factor in rural development as it could be, and, I think, will be. The rural church holds a unique position and with the proper pastor in charge will be a force immeasurably great. When the rural communities will pool their efforts in maintaining a resident pastor—a man who will live among his parishioners and study their problems with them—we will have taken a step in the right direction. A rural pastor will not only be a spiritual leader but a social leader as well. An organizer of the young people in the community into groups for play and sociability under his direction. It is high time we were considering all of our legitimate interests as a part of our religion. Indeed, there is no good reason why the young people should not meet together at the rural church and on the same evening have a prayer meeting and an oyster supper.

## Saskatoon Business College

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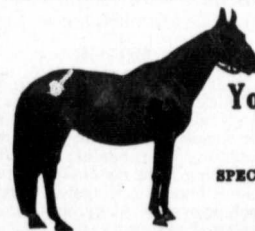
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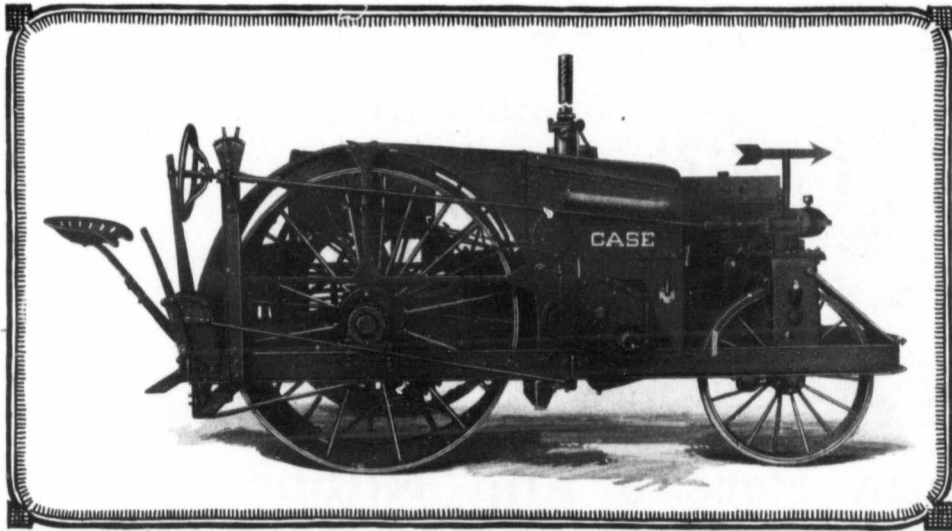


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## Case 10-20 Kerosene Tractor



### GREAT FOR THRESHING

When we say that this Case 10-20 kerosene tractor is "Great for Threshing," we are merely expressing the opinions of thousands of satisfied users - folks who know, because they have put the Case Tractor thru the most trying tests. Dependability was built into it at the factory. It represents the best in material, proportions, performance and capacity for its weight.

#### STRONG, UNIFORM BELT POWER

It is the ideal tractor to operate a 20x36 Case Thresher fully equipped with self feeder, grain saving windstacker and grain handler. It is a matter of the strictest economy, particularly at this time in our national crisis when farm labor is so scarce. This Case 10-20 kerosene tractor requires no engineer or water boy to devote their time to the tractor. Every one can be busy helping at the thresher.

#### FOUR CYLINDER MOTOR

The motor is of four cylinders valve-in-head type, which insures maximum efficiency. The cylinder head is easily removable for regrinding valves and scraping carbon. The valves, governor, transmission, etc., are fully enclosed thus protecting them against dust and dirt while plowing or threshing. The motor is equipped with high tension Kingston Magneto, Kingston Carburetor and an efficient cooling system, pump circulation, fan and truck type of Case Radiator.

#### THERMOSTATIC CONTROL

The Slyphon Thermostat is an exclusive Case feature. No other tractor we know of, offers you this. Control of cooling system assures complete combustion and also prevents diluting oil in crank case and prevents "Choking" or "Missing" as the load varies. An Air Washer thoroughly cleanses all the air admitted to the carburetor. No dust can enter Motor Cylinders.

#### ACCESSIBILITY

One of the most outstanding features of this Case 10-20 kerosene tractor is its accessibility. Every part of the tractor is easily reached when readjustment or repairs are necessary.

#### REPUTATION

When investing in a tractor consider well the company who built it, and their reputation with the farmers. It is useless trying to get "something for nothing." In the end "Quality" is the cheapest. Deal with an old established firm with years of experience in the tractor line. We know that if you consider well these points, you will purchase a Case.

Let us send you detailed information on this Case 10-20 kerosene tractor or any of our other three sizes. It is sent free upon request. Write today.

J. I. Case Threshing Machine Co., Inc.

918 Liberty St.

Racine, Wisconsin

## Case 20x36 Thresher



### A REAL GRAIN SAVER

For years farmers have been looking for a small thresher with more capacity to do their threshing. This Case 20x36 steel thresher was built to meet just this demand. But it was not built in a hurry or without due trial and experimenting in the field and laboratory. It has included in its design and construction all those worth while features that seventy-six year's of successful thresher building has proved to be most practical.

A Case 10-20 kerosene tractor will operate it successfully. If you have a tractor, complete your outfit and operate a Case thresher. Why take chances of losing a part of your crop? Thresh when you are ready. If you have the time thresh for some of your neighbors.

For years Case threshing machines have been famous for doing a good clean job of threshing - they are known the world over as real grain savers. So with this Case 20x36. It is built to uphold the reputation of larger Case machines - and does it.

#### LIGHT BUT NOT FRAIL

Altho this Case 20x36 thresher is built light, it is by no means built frail. The frame is of structural steel to which are securely riveted the sides and deck of rust resisting sheet steel. This form of construction prevents total loss by fire, dry rot of wooden sills or distortion of frame from the pull of heavy main drive belts.

The all steel cylinder has a length of 20 inches and a diameter of 22 inches. The 12 double bars are filled with 57 Sandow steel teeth with (2½ inch) tempered blades and annealed shanks. These teeth are interchangeable with the concave teeth.

The 20x36 Case threshers can be furnished with self feeders, grain saving windstacker and several styles of grain handlers. All of these attachments are built in Case shops and must measure up to the high standard of the machine itself before they can pass our inspection. We can also supply hand feed or a 16 foot or 22 foot slat stacker.

While this thresher is regularly equipped with an 8½ inch diameter main drive pulley, we can supply several other sizes to meet the requirements of any engine speed and size fly wheel you have.

Should you at any time care to use your Case machine to thresh clover, peas or beans, we can supply you with the necessary attachments at a slight extra price.

Besides this machine, Case also builds threshers in six other sizes, namely: 20x28; 26x46; 32x54; 36x58 and 40x62. We will gladly send you large catalog describing all sizes, free upon request. Write today.

J. I. Case Threshing Machine Co., Inc.

918 Liberty St.

Racine, Wisconsin



**MAINTAINING DAIRY HERDS**

Following are extracts from the address of Herbert Hoover, U.S. Food Administrator, at the National Milk and Dairy Farm Exposition, Grand Central Palace, New York City, Thursday, May 23, 1918:

NO one knows how long the war will last. If we are to win we will with four collateral weapons—men, munitions, ships and food. It may require years to win it and we intend to fight it out on this line—not if it takes all summer, but if it takes all of your lifetime and mine. We cannot anticipate that the animal situation in Europe will improve during the war. The enormous destruction must go on until the end. Throughout the whole of the course of the war there will be continued destruction of cattle and diminishing dairy products. There will be steady creeping of jeopardy towards the children of the Allies. North America stands unique in one great particular in this situation. We are independent of sea transport for feeding stuffs for our animals; we grow them side by side. Here lies the great economic difference in these foods between ourselves and Europe and here also the one reason why we can and must be the great final reservoir of supplies.

"There falls, therefore, upon us an increasing duty in the provision of food. To provide supplies we must build up reserves. The first reserve in meat and dairy products is the maintenance of our herd. The second is to build up stocks in our warehouses in seasons of surplus production. If we can maintain our herds and our production, we can, in any emergency reduce the consumption of our own people without damaging our health by margins of such an amount as will provide for the Allies.

"In maintaining our dairy herds that they may be ready for any demand, you face one paramount difficulty—that is, labor. More men will be drafted to war, more will be required to furnish them munitions. There is only one ultimate solution in this industry.

That is, by the increased efforts of our men and the additional efforts of our women. Our women are ready and willing to stand with our men in this struggle.

"Far beyond our domestic difficulties, however, is our world duty. Parallel with this enormous and continuing destruction in Europe we must build our food resources so as to stand ready for any demands upon us by our Allies. It is of no purpose to us to send millions of our best to France if we fail to maintain the strength of their men, women and children on our lines of communication. After the war the time will come when we will need to replenish their herds from our own cattle. This United States is the last reservoir of men, the last reservoir of ships, the last reservoir of munitions and the last reservoir of food upon which the Allied world must depend if Germany is to be defeated and if we are to be free men.

"It therefore devolves upon us to maintain our present great potential strength in herds, for they cannot be re-established for many years if once lost. Not only must they be maintained as a guarantee to our Allies but they will be vital in the world's regeneration. The day may yet come when the child life of the world will be in your hands. I place this before you on the high plane of service to the world. It is the duty of the government, just so far as we are able, to maintain economic equilibrium in the industry so that it can go on without hardship to those who engage in it, but should the impact of war so dislocate the industry as to cause temporary periods when loss faces you, it is the duty of every dairyman to stand by with that courage that comes from the knowledge that he is a part of the world's reserve army that may, at any moment, be called into battle for our existence and the existence of the next generation."

**Powerful Language**

Caller—I suppose you can spell all the short words, Bobbie.

Bobbie—I can spell a lot of big ones, too. I can even spell words of four cylinders.



**The Dairy Cow**

is playing a vital part in the winning of the war for civilization. Her product cannot be replaced by any human system of "substituted labor." There's no greater sin than the waste of Nature's provision, for the sustenance of living things. To-day it is the unpardonable sin—the crime that cannot be condoned to waste anything in food product. Save every ounce of butter fat you can save for human food. You can do it by using a

**"MAGNET" Cream Separator**

The greatest labor-saving and food-conserving machine ever introduced into Dairy Farming.

After nearly 18 years' constant use on Canadian farms the "Magnet" has established beyond the shadow of a doubt that its square gear drive and ball-bearing adjustments is unequalled as an effective piece of dairy mechanics and has nothing in front of it in lasting quality.

DAIRY WOMEN know that the "MAGNET" bowl and one-piece skimmer is easily washed sweet and clean in less than five minutes—a saving of from 10 to 15 days' labor each year over the time required to properly wash the disc kind.

**MAGNET ALWAYS SKIMS CLEAN**

because its bowl is supported at both ends, cannot wobble and therefore will do perfect skimming for a life-time. Dairy men and women can avoid all "misery" by buying the up-to-date "Magnet" Cream Separator.

"Facts are chiefs that winna ding, and canna be disputed."

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**Stifel's Indigo Cloth**  
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Are every inch thoroughbred. Firm, strongly woven cloth, that resists wear and weather. Color that lasts as long as the cloth.

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- Baltimore ..... Coca-Cola Bldg.
- St. Louis ..... 328 Victoria Bldg.
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- Toronto ..... 14 Manchester Bldg.
- Winnipeg ..... 400 Hammond Bldg.
- Montreal ..... Room 509, 439 St. Paul St.

**THE VITALITY OF BURIED WEED SEEDS**

**Remarkable Experiments on Old Lands**

(From "Country Life")

SINCE the days when Adam first tilled the earth the cultivator has always met with opposition from weeds or plants native to the soil. In spite of every effort, the competition is as keen to-day as ever it was, and if the husbandman relaxes his vigilance in any area, the weeds gain the upper hand in an incredibly short space of time. If a well tilled arable field be left to its own devices even for a single year, the invasion proceeds so rapidly that, unless prompt action be taken, many years will be necessary to effect a clearance. But where do all the weeds come from? Do they spring from seeds buried in the soil, or are they transported by such external agents as wind, animals and birds?

If a field has been under the plow for some time the problem does not present much difficulty, as it is natural to assume that, as weeds seed very freely, sufficient of their seeds are present in the soil to colonise the area at the first opportunity. The difficulty arises when one considers the case of grass land which is plowed up and which becomes covered with great crops of arable weeds, especially charlock or poppy. These plants are rarely seen in grass fields, and yet many farmers take it for granted that they will appear in battalions when grass is put under the plow, even though the land be "real old pasture."

Careful enquiry, however, often discloses the fact that the term "old pasture" is very elastic, and that usually the land has been under arable cultivation at no great distance of time. When this is the case, it is quite probable that the seeds have been buried in the soil and have retained their vitality until, by the plowing they have been placed in circumstances favorable to germination. It is impossible to believe that the great quantities of charlock or poppy seeds are carried by birds or wind. For one thing both plants ripen their fruit and shed their seed during the summer.

If the plowing up of the grassland takes place in the autumn it is obviously impossible that any number of seeds should be transported to the freshly turned soil, as they would have been shed and scattered at an earlier date. The only natural solution of the difficulty is that of buried weed seeds, and the question at once arises as to how long such seeds can retain their power of germination under such conditions. Many of the older records of the longevity of

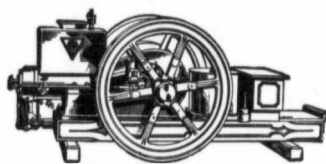
seeds are unreliable, as it has been proved that fraud was practised for sake of gain, but some scientific writers have obtained proof that many seeds can live longer when buried in soil than when kept in dry storage.

Recently experiments have been carried out at Rothamsted, whereby some definite proof has been obtained of the length of time that seeds can remain buried in the soil without losing their vitality. Samples of successive inches of the top foot of soil in several fields of known history have been obtained by means of a steel box open at both ends. This was sunk in the ground at the selected spots, and the enclosed soil was removed inch by inch to a depth of 12 inches, and placed in separate pans or boxes. The greatest care was taken that no crumbs of outside soil fell into the samples; and every other source of contamination was guarded against.

Several holes were tested in each field for the sake of accuracy, and the pans were placed in a greenhouse and kept moist for about eighteen months. After a very short interval seedlings began to appear, and as soon as they were large enough to be recognized they were removed to make way for later comers. Most of the soil was obtained from old arable fields which had been laid down to grass for periods varying from ten to fifty-eight years. True old grassland was represented by Harpenden Common, and by some park grass that is known to have been under grass for at least 300 years, and a check for comparison was provided by samples from land that is under the plow at the present time.

The flora that arose in the pans showed most striking variations, which were closely correlated with the varying history of the fields from which the samples were taken. The soil under present day tillage produced great crops of typical arable weeds, representative of the numerous species that colonise the open field. In this case not a single weed was observed that is associated with grassland and not with tilled soil. The old grassland samples, on the other hand, were populated exclusively by grassland plants, and arable weeds were conspicuous by their absence.

The common is largely grazed by sheep and cattle, and comparatively few plants have any opportunity of ripening their seeds, whereas the park grass is mown every year and more seed production is thus possible. The difference was reflected in the experimental results as far fewer seeds were found buried in the common soil than in that from the park grass.



**Alpha Gas Engines  
SAVE**

**Work  
Time  
and  
Money  
Fuel**

No more operating your pump, turning your cream separator, running your churn or washing machine by hand.

No more hauling your feed to the mill to be cut or ground, or hiring someone to come to your place and grind it for you. A small cutter or grinder and your Alpha would always be ready.

The Alpha uses gasoline or kerosene, and much less of either than any other make of engine.

**An Alpha Gas Engine will soon pay for itself on your farm**

Write to-day for our catalogue which describes in detail all the twelve sizes of Alpha Gas Engines and shows why the farmer who buys the Alpha gets the most for his money.

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GREATEST  
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TO

**Vancouver, Victoria,** And Other  
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THE ROUTE OF  
GREATEST  
COMFORT

FROM ALL STATIONS IN

## Manitoba, Saskatchewan and Alberta



JOURNEY over the Canadian Northern is over new rails and through wonderful lands to a country abounding in big things—majestic mountains, great lakes, deep canyons and mighty rivers—in addition to rest, recreation and education.

Between Winnipeg and Edmonton the tourist traverses a picturesque prairie route which is of continuous interest. West of Edmonton the traveller leaves behind the wheat fields of the Prairie Provinces and the country becomes rougher, until finally the haze-clothed mountains loom up in the distance. For miles the line ascends the Athabaska River Valley through Jasper Park to Yellowhead Pass, where it crosses the Great Divide, or main ridge. Beyond, the Fraser River is followed to Mount Robson, the highest peak of the entire Canadian chain, yielding place to the Canoe River and the Albrede, which are in turn succeeded by the North and Main Thompson Rivers. The Fraser then gains right of way and leads to New Westminster and Vancouver through canyons matchless in their rugged grandeur. Nowhere in this journey of over seven hundred miles is there a moment that hangs heavily, so insistent is the attraction of each new vista or panorama that flashes past the windows of the comfortable observation car.

### Compartment Observation Cars TORONTO, WINNIPEG, EDMONTON AND VANCOUVER

Several new features have been introduced in these cars which cannot fail to meet with the approval of the tourist, notably the entire privacy which they afford.

### R. CREELMAN

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### Standard and Tourist Cars

The Canadian Northern luxurious steel sleeping cars have many new features that conduce to the comfort of a long journey. Both upper and lower berths are noticeably wider and longer than usual, and each standard is equipped with electric lights and a patent wardrobe which keeps the clothes creaseless and out of the way.

The most interesting results, however, were obtained from the sown-down grassland of various ages. In every case, even when the land has been grassed over for fifty-eight years, typical arable weed seeds occurred in such numbers and at such depths as to preclude any possibility of carriage by accidental means, as by birds, animals or machinery. The Laboratory House Meadow was laid down to grass in 1859, and even yet living seeds of orache, knot-grass and field speedwell were present in quantity, and the conclusion cannot be resisted that the seeds had remained buried and dormant ever since the field passed out of arable cultivation.

Geescroft had been grassed over for thirty-two years, and the arable seeds were much more plentiful than in the previous case described. Knot-grass was most abundant, as fifty-two seedlings appeared in the soil from holes measuring only one square foot in area, and orache, thyme-leaved sandwort, poor man's weather-glass, poppy, black bindweed and wild pansy were all represented. The old records for 1867 show that every one of these weeds was present among the arable crops on the field at that date.

It is noticeable that most of the arable seedlings appeared from lower inches of soil, from the fifth

to the twelfth inch, perhaps because the conditions at these depths are so unfavorable to growth that the seeds simply remain dormant, waiting for more propitious circumstances. The seeds that were in the upper inches of soil probably started into growth and were promptly smothered out by the herbage without having any chance of developing.

Another field had only been under grass for ten years, and it was truly amazing to see the multitude of seedlings that appeared from the samples. From an area of two square feet 791 arable plants were obtained in addition to those that belong indifferently to grass and tilled land. Orache, dwarf spurge, knot-grass, sow-thistle, field speedwell, ivy-leaved speedwell, charlock and poppy appeared in quantity, besides a number of parsley, thyme-leaved sandwort, lady's mantle and nipplewort; so that even ten years' burial had done comparatively little to reduce the number of arable weed seeds. Soon after the samples were taken the field was plowed up, and within a very short time it was thickly covered with seedlings of the same species that were observed in the pans, and at the present time the problem still is how to clear this field of arable weeds, in spite of the ten

years that it has been under grass.

These results lead irresistibly to the conclusion that when arable land is grassed over a certain number of the weed seeds are able to retain their vitality for very many years. Many of the seeds die within a comparatively short time after burial, and as time goes on the number of living seeds becomes gradually less, though proof has been obtained that some will survive for at least fifty-eight years. Usually most of the older arable seeds that are capable of growth occur in the lower depths of soil where the condition are less variable, whereas in land that has only been under grass for a comparatively short time a greater proportion are found nearer the surface. While the stock of arable seeds is diminishing with the lapse of time, the supply of grassland seeds is being augmented by the fresh seeds that are ripened by the surface vegetation and carried down into the soil.

Taking all things into consideration it must be concluded that there is no definite evidence that large crops of poppy, charlock or other weeds will appear true if old grassland is plowed up, although this may well happen if the fields have at any time been under arable cultivation. It is evident that under suitable condi-

tions the seeds of some weeds are liable to lie dormant at various depths in the soil for long periods and start into activity if and when the method of cultivation is so changed that they are brought nearer to the surface into the presence of the necessary light, warmth and air. Consequently the large crops of weeds that appear when temporary pasture is plowed up must be regarded as being derived from seeds buried in soil, and not from seeds transported from other areas by external agencies, whereas the case for arable weeds appearing at once when old pasture is broken up must be regarded as not proven.

W. E. Brenchley.

### Step to the Head!

The teacher of natural geography directed all her pupils to write a definition of the word "geyser." Willie evolved this definition:

"A kaiser is a disturbance of the earth's surface."

Dennis—"Good mornin', Mrs. Murphy, an' is Pat at home, sure?"

Mrs. Murphy—"Sure, where are your eyes, Dennis Dinny?" "Isn't that his shirt fornenst ye hangin' on the loine!"

**ALFALFA IN CANADA**

M. O. Malte, Ph.D., Dominion Agrostologist

It is gratifying to learn, from reports received from the Superintendents of the branch farms and stations of the Experimental Farms systems, that the alfalfa outlook for the season is in general very good. The reports do not only predict a crop of high value to the dairy men and "mixed farmers" in general, but also indicate that alfalfa has conquered a position in Canadian agriculture entitling it to the most sincere consideration of every farmer in the country.

Indeed, alfalfa has conquered Canada. Only a few years ago it was considered a crop out of the ordinary reach of the ordinary farmer in most parts of the Dominion, a crop that had to be nursed most carefully along to return the yields heralded by enthusiasts. To-day, alfalfa is grown successfully in almost all the provinces of the Dominion. It is grown to the greatest advantage in the valleys of British Columbia, on the plains of the Prairie Provinces, and on the farms of Ontario and Western Quebec. In the East it must be confessed success has not been met with universally. Certain conditions of the soil, especially in Eastern Quebec and New Brunswick, have so far seemed to be adverse to successful alfalfa growing. It should be remembered, however, that alfalfa growing in the Maritime Provinces is still in its infancy and, consequently, the lack of success, so far experienced, must not be considered a definite proof of the impossibility of growing alfalfa successfully there.

**Varieties**

Since the introduction of alfalfa into Canada a great number of varieties have been tested. During the course of the experiments it was learned that the value of a

**Repair Men Gone to War**

*What repair men say about cutting down tractor repair bills*

**THIS** year every tractor must work constantly. Meanwhile repair men are constantly leaving for the front.

Experience shows that over 50% of all internal combustion engine troubles are due to incorrect lubrication.

The most common troubles caused prematurely by incorrect lubrication are burned bearings, worn piston pins, scored cylinders, and pitted valves.

These troubles are not remedied by ten minutes tinkering. They call for the help of a service man.

Repair men say that if every tractor operator would make sure he was securing Correct Lubrication there would be fewer interruptions during the busy season.

Gargoyle Mabiloils are approved by practically every tractor manufacturer. Many of these distinctly recommend their use.

Owners of tractors report savings of from 10% to 30% in fuel consumption and from 30% to 80% saved in oil as a result of the use of the grade of Gargoyle Mabiloils specified for their tractors by the Gargoyle Mabiloils Chart of Recommendations.

Scarcity of farm help was probably one reason why you bought a tractor. Don't wait until a scarcity of repair men leads you to provide that tractor with scientific lubrication. There is a grade of Gargoyle Mabiloils exactly suited to the lubricating requirements of your tractor. It will protect you against premature repairs.

That oil is specified in the Chart of Recommendations on the right. If your tractor is not listed, write for booklet containing complete Chart of Recommendations and other valuable data.



**Mabiloils**  
A grade for each type of motor

**To Correctly Lubricate Your Automobile**

There's a grade of Gargoyle Mabiloils that exactly meets the lubricating requirements of your automobile. It is specified in the Gargoyle Mabiloils Chart of Recommendations for automobiles. Write for 64 page booklet, "Correct Lubrication," containing complete discussion of your automobile problems and troubles. And complete Gargoyle Mabiloils Charts of Recommendations for automobiles, tractors, motorcycles and motor boat engines.

**IMPERIAL OIL LIMITED**

Manufacturers and Marketers of Polarine Motor Oils and Greases  
Marketers of Gargoyle Mabiloils in Canada  
BRANCHES THROUGHOUT CANADA

**Correct TRACTOR LUBRICATION**

Explanation:—The four grades of Gargoyle Mabiloils for tractor lubrication, purified to remove free carbon, are:

- Gargoyle Mabiloil "A"
- Gargoyle Mabiloil "B"
- Gargoyle Mabiloil "BB"
- Gargoyle Mabiloil "Arctic"

In the Chart below, the letter opposite the tractor indicates the grade of Gargoyle Mabiloil that should be used. For example, "A" means Gargoyle Mabiloil "A," "Arc" means Gargoyle Mabiloil "Arctic," etc.

TRACTORS	1916		1917		1918		1919	
	Gasoline	Water	Gasoline	Water	Gasoline	Water	Gasoline	Water
Albion-Dover (Square Turn)	BB	BB	A	BB	A	BB	A	A
Allis-Chalmers	BB	BB	A	BB	A	BB	A	A
All Work	BB	BB	A	BB	A	BB	A	A
Andrews	BB	BB	A	BB	A	BB	A	A
Appleton	BB	BB	A	BB	A	BB	A	A
Autumn-Taylor	BB	BB	A	BB	A	BB	A	A
Avery (18-30)	BB	BB	A	BB	A	BB	A	A
Avery (10-15 HP)	BB	BB	A	BB	A	BB	A	A
Avery (15-20 HP)	BB	BB	A	BB	A	BB	A	A
Bates Seed Mill	BB	BB	A	BB	A	BB	A	A
Bean Track Pull	BB	BB	A	BB	A	BB	A	A
Big Bull	BB	BB	A	BB	A	BB	A	A
Big Boy	BB	BB	A	BB	A	BB	A	A
Bower City	BB	BB	A	BB	A	BB	A	A
Burbage	BB	BB	A	BB	A	BB	A	A
Burbage (Indian/GiantBaby)	BB	BB	A	BB	A	BB	A	A
Case (10-15)	BB	BB	A	BB	A	BB	A	A
Case (15-20)	BB	BB	A	BB	A	BB	A	A
Case (20-40)	BB	BB	A	BB	A	BB	A	A
Case (40-60)	BB	BB	A	BB	A	BB	A	A
Case (60-80)	BB	BB	A	BB	A	BB	A	A
Case (80-100)	BB	BB	A	BB	A	BB	A	A
Case (100-120)	BB	BB	A	BB	A	BB	A	A
Case (120-150)	BB	BB	A	BB	A	BB	A	A
Case (150-200)	BB	BB	A	BB	A	BB	A	A
Case (200-300)	BB	BB	A	BB	A	BB	A	A
Case (300-400)	BB	BB	A	BB	A	BB	A	A
Case (400-500)	BB	BB	A	BB	A	BB	A	A
Case (500-600)	BB	BB	A	BB	A	BB	A	A
Case (600-800)	BB	BB	A	BB	A	BB	A	A
Case (800-1000)	BB	BB	A	BB	A	BB	A	A
Case (1000-1200)	BB	BB	A	BB	A	BB	A	A
Case (1200-1500)	BB	BB	A	BB	A	BB	A	A
Case (1500-2000)	BB	BB	A	BB	A	BB	A	A
Case (2000-3000)	BB	BB	A	BB	A	BB	A	A
Case (3000-4000)	BB	BB	A	BB	A	BB	A	A
Case (4000-5000)	BB	BB	A	BB	A	BB	A	A
Case (5000-6000)	BB	BB	A	BB	A	BB	A	A
Case (6000-8000)	BB	BB	A	BB	A	BB	A	A
Case (8000-10000)	BB	BB	A	BB	A	BB	A	A
Case (10000-12000)	BB	BB	A	BB	A	BB	A	A
Case (12000-15000)	BB	BB	A	BB	A	BB	A	A
Case (15000-20000)	BB	BB	A	BB	A	BB	A	A
Case (20000-30000)	BB	BB	A	BB	A	BB	A	A
Case (30000-40000)	BB	BB	A	BB	A	BB	A	A
Case (40000-50000)	BB	BB	A	BB	A	BB	A	A
Case (50000-60000)	BB	BB	A	BB	A	BB	A	A
Case (60000-80000)	BB	BB	A	BB	A	BB	A	A
Case (80000-100000)	BB	BB	A	BB	A	BB	A	A
Case (100000-120000)	BB	BB	A	BB	A	BB	A	A
Case (120000-150000)	BB	BB	A	BB	A	BB	A	A
Case (150000-200000)	BB	BB	A	BB	A	BB	A	A
Case (200000-300000)	BB	BB	A	BB	A	BB	A	A
Case (300000-400000)	BB	BB	A	BB	A	BB	A	A
Case (400000-500000)	BB	BB	A	BB	A	BB	A	A
Case (500000-600000)	BB	BB	A	BB	A	BB	A	A
Case (600000-800000)	BB	BB	A	BB	A	BB	A	A
Case (800000-1000000)	BB	BB	A	BB	A	BB	A	A
Case (1000000-1200000)	BB	BB	A	BB	A	BB	A	A
Case (1200000-1500000)	BB	BB	A	BB	A	BB	A	A
Case (1500000-2000000)	BB	BB	A	BB	A	BB	A	A
Case (2000000-3000000)	BB	BB	A	BB	A	BB	A	A
Case (3000000-4000000)	BB	BB	A	BB	A	BB	A	A
Case (4000000-5000000)	BB	BB	A	BB	A	BB	A	A
Case (5000000-6000000)	BB	BB	A	BB	A	BB	A	A
Case (6000000-8000000)	BB	BB	A	BB	A	BB	A	A
Case (8000000-10000000)	BB	BB	A	BB	A	BB	A	A
Case (10000000-12000000)	BB	BB	A	BB	A	BB	A	A
Case (12000000-15000000)	BB	BB	A	BB	A	BB	A	A
Case (15000000-20000000)	BB	BB	A	BB	A	BB	A	A
Case (20000000-30000000)	BB	BB	A	BB	A	BB	A	A
Case (30000000-40000000)	BB	BB	A	BB	A	BB	A	A
Case (40000000-50000000)	BB	BB	A	BB	A	BB	A	A
Case (50000000-60000000)	BB	BB	A	BB	A	BB	A	A
Case (60000000-80000000)	BB	BB	A	BB	A	BB	A	A
Case (80000000-100000000)	BB	BB	A	BB	A	BB	A	A
Case (100000000-120000000)	BB	BB	A	BB	A	BB	A	A
Case (120000000-150000000)	BB	BB	A	BB	A	BB	A	A
Case (150000000-200000000)	BB	BB	A	BB	A	BB	A	A
Case (200000000-300000000)	BB	BB	A	BB	A	BB	A	A
Case (300000000-400000000)	BB	BB	A	BB	A	BB	A	A
Case (400000000-500000000)	BB	BB	A	BB	A	BB	A	A
Case (500000000-600000000)	BB	BB	A	BB	A	BB	A	A
Case (600000000-800000000)	BB	BB	A	BB	A	BB	A	A
Case (800000000-1000000000)	BB	BB	A	BB	A	BB	A	A
Case (1000000000-1200000000)	BB	BB	A	BB	A	BB	A	A
Case (1200000000-1500000000)	BB	BB	A	BB	A	BB	A	A
Case (1500000000-2000000000)	BB	BB	A	BB	A	BB	A	A
Case (2000000000-3000000000)	BB	BB	A	BB	A	BB	A	A
Case (3000000000-4000000000)	BB	BB	A	BB	A	BB	A	A
Case (4000000000-5000000000)	BB	BB	A	BB	A	BB	A	A
Case (5000000000-6000000000)	BB	BB	A	BB	A	BB	A	A
Case (6000000000-8000000000)	BB	BB	A	BB	A	BB	A	A
Case (8000000000-10000000000)	BB	BB	A	BB	A	BB	A	A
Case (10000000000-12000000000)	BB	BB	A	BB	A	BB	A	A
Case (12000000000-15000000000)	BB	BB	A	BB	A	BB	A	A
Case (15000000000-20000000000)	BB	BB	A	BB	A	BB	A	A
Case (20000000000-30000000000)	BB	BB	A	BB	A	BB	A	A
Case (30000000000-40000000000)	BB	BB	A	BB	A	BB	A	A
Case (40000000000-50000000000)	BB	BB	A	BB	A	BB	A	A
Case (50000000000-60000000000)	BB	BB	A	BB	A	BB	A	A
Case (60000000000-80000000000)	BB	BB	A	BB	A	BB	A	A
Case (80000000000-100000000000)	BB	BB	A	BB	A	BB	A	A
Case (100000000000-120000000000)	BB	BB	A	BB	A	BB	A	A
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Case (400000000000-500000000000)	BB	BB	A	BB	A	BB	A	A
Case (500000000000-600000000000)	BB	BB	A	BB	A	BB	A	A
Case (600000000000-800000000000)	BB	BB	A	BB	A	BB	A	A
Case (800000000000-1000000000000)	BB	BB	A	BB	A	BB	A	A
Case (1000000000000-1200000000000)	BB	BB	A	BB	A	BB	A	A
Case (1200000000000-1500000000000)	BB	BB	A	BB	A	BB	A	A
Case (1500000000000-2000000000000)	BB	BB	A	BB	A	BB	A	A
Case (2000000000000-3000000000000)	BB	BB	A	BB	A	BB	A	A
Case (3000000000000-4000000000000)	BB	BB	A	BB	A	BB	A	A
Case (4000000000000-5000000000000)	BB	BB	A	BB	A	BB	A	A
Case (5000000000000-6000000000000)	BB	BB	A	BB	A	BB	A	A
Case (6000000000000-8000000000000)	BB	BB	A	BB	A	BB	A	A
Case (8000000000000-10000000000000)	BB	BB	A	BB	A	BB	A	A
Case (10000000000000-12000000000000)	BB	BB	A	BB	A	BB	A	A
Case (12000000000000-15000000000000)	BB	BB	A	BB	A	BB	A	A
Case (15000000000000-20000000000000)	BB	BB	A	BB	A	BB	A	A
Case (20000000000000-30000000000000)	BB	BB	A	BB	A	BB	A	A
Case (30000000000000-40000000000000)	BB	BB	A	BB	A	BB	A	A
Case (40000000000000-50000000000000)	BB	BB	A	BB	A	BB	A	A
Case (50000000000000-60000000000000)	BB	BB	A	BB	A	BB	A	A
Case (60000000000000-80000000000000)	BB	BB	A	BB	A	BB	A	A
Case (80000000000000-100000000000000)	BB	BB	A	BB	A	BB	A	A
Case (100000000000000-120000000000000)	BB	BB	A	BB	A	BB	A	A
Case (120000000000000-150000000000000)	BB	BB	A	BB	A	BB	A	A
Case (150000000000000-200000000000000)	BB	BB	A	BB	A	BB	A	A
Case (200000000000000-300000000000000)	BB	BB	A	BB	A	BB	A	A
Case (300000000000000-400000000000000)	BB	BB	A	BB	A	BB	A	A
Case (400000000000000-500000000000000)	BB	BB	A	BB	A	BB	A	A
Case (500000000000000-600000000000000)	BB	BB	A	BB	A	BB	A	A
Case (600000000000000-800000000000000)	BB	BB	A	BB	A	BB	A	A
Case (800000000000000-1000000000000000)	BB	BB	A	BB				

variety depends in the first place on its ability to withstand the rigours of the Canadian winter, i.e., to come through without being winter-killed. A great many "varieties," particularly those originated in southern countries with mild winters, have proven unreliable, and experiments with them, have therefore, been dropped. The only variety of true alfalfa that has proven suitable to Canada in general is Turkestan alfalfa. It is grown at present at the Experimental Farm, Brandon, Man., the Experimental Station, Scott, Sask., the Experimental Station, Lacombe, Alta., and the Experimental Station, Summerland, B.C. On all these stations it came through last winter very satisfactorily.

Perhaps the most widely known alfalfa varieties in Canada are those which can be termed "Variegated Alfalfa," so called on account of the variation in the color of the flowers. Whereas a variety of true alfalfa has purple flowers, a variety of the variegated type has them variously colored, from yellow to purple with all kinds of intermediates. The variegated alfalfas are all crosses between true Alfalfa (*Medicago sativa* L.) and Yellow Lucern (*Medicago falcata* L.), and are of particular interest because of their high degree of hardiness. Among the variegated alfalfas the following are best known in Canada, viz.: Grimm's, Ontario Variegated, Baltic and Liscomb. They are all much alike in general appearance and may be equally well recommended for Canada in general.

#### Cultural Conditions Affecting Alfalfa Growing

**Preparation of the soil previous to seeding.**—A number of observations made this spring on some of the Experimental Farms and Stations indicate that best results in alfalfa growing depend to quite an extent on the preparation of the soil previous to seeding.

The Experimental Station, Scott, Sask., reports: "Last season a nine-acre field of alfalfa was sown in May. A part of this field had grown potatoes in 1915, a part field roots, another part fodder corn and the balance field peas. The alfalfa is more vigorous on the potato and corn land, and less vigorous after peas." Similar results have been obtained by the Experimental Station, Kentville, N.S., and the Experimental Farm, Agassiz, B.C., which report that best results of alfalfa are realized on land previously in hoed crops. That a hoed crop is apt to have a beneficial effect on the conditions of the soil for alfalfa is obvious. Not only is the land after a hoed crop cleaner than after other crops, but the subsoil is also apt to be more loosened up. That

the opening up of the subsoil is of importance for a good start of alfalfa is emphasized in the report given by the Experimental Station, Sidney, B.C. This report states that blasting of the subsoil previous to seeding to alfalfa has a most favorable effect on the ensuing crop.

Fall plowing of the land intended for alfalfa is universally to be recommended, whether the previous crop is a hoed crop or grain. It is also essential to work the land well in the spring. At the Experimental Station, Lacombe, Alta., "thorough spring cultivation has been given on fall-plowed stubble, with the result that by the middle of May land was in first-class condition for seeding, both as to the condition of the soil and because of the fact that several crops of weeds had germinated and been destroyed." The Experimental Station at Charlottetown, P.E.I., also reports that "the land should be cleaned of weeds, and given thorough cultivation until it is worked into good tilth for seeding."

**Treatment late in the autumn.**—Alfalfa sown in the spring should be given every chance to establish itself firmly before the frost. It should be clipped frequently during the summer with the last clipping so timed as to allow the plants to reach a height of about 8 or 10 inches at the end of the growing season. This growth should be left untouched for winter protection. Never should live stock of any kind be allowed to graze on an alfalfa field the season it is sown.

In case of old and well-established fields it is generally advisable not to graze or cut too late in the fall, but leave a certain amount of growth standing. Thus the Experimental Station at Sidney, B.C., where four growths of alfalfa generally are obtained in a season, recommends that the fourth growth to be left standing for winter protection. The Experimental Farm, Agassiz, B.C., and the Experimental Station, Charlottetown, P.E.I., also recommend that grazing or cutting too late in the fall be avoided. On the other hand, the Experimental Station, Invermere, B.C., reports that "In some cases alfalfa in this district has been allowed to stand after the second cutting, but more generally has been pastured until late in the autumn with no apparent injury to the plant."

**The relationship of inoculation to the establishment of satisfactory stand and vigor of crop.**—It is a very common misapprehension that alfalfa cannot be grown satisfactorily without inoculation on land that has not grown alfalfa or sweet clover before. Numerous data have been collected during the past few

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years showing that the value of inoculation has been greatly over-estimated. A few extracts may be quoted from reports obtained this spring.

The Experimental Station, Summerland, B.C., reports: "The alfalfa that was seeded on newly-broke sage-brush land for testing inoculated seed and seed that had not been treated, showed that the plants grown from the inoculated seed were a better color the first crop after seeding, but at the second cutting no difference could be observed. Nodules were formed on both stands at the same time." The Experimental Station at Sidney, B.C., says that "Inoculated plots are quickly established and greater vigor of growth is obtained during the first two years." That the difference which might be observed between inoculated and non-inoculated alfalfa fields will disappear after some time has been especially noticed at the Experimental Station, Scott, Sask., where "At the time of writing no difference can be noted in the inoculation experiments, although both the soil and culture methods of inoculation are being tested."

From the above extracts, as well as from numerous other observations it may be gathered that it is by no means necessary to inoculate alfalfa. However, inoculation is beneficial inasmuch as it helps to give the young crop a good start. This is of special importance in those parts of Canada where the winters are trying and where it for this reason is essential that a healthy, vigorous growth be established at the end of the first growing season. The more vigorous the growth is and the healthier the young crop is at the end of the first year, the greater are its chances for successful wintering. In this way "inoculation for alfalfa," as the Experimental Station, Lacombe, Alta., states, "is necessary not so much as a guarantee of securing a satisfactory stand but as a guarantee of vigor and permanence of the crop."

**It Might Happen Again**

In a certain provincial town where everything is up-to-date and the people are always planning some new schemes, a shocking thing happened.

One of the popular society women announced a "white elephant party."

Every guest was to bring something that she could not find use for and yet too good to throw away.

The party, however, would have been a great success but for the unlooked-for development which broke it up.

Eleven of the nineteen women brought their husbands.

**HELP FOR HARVEST**

(Canada Food Board's Educational Division)

**T**HE farmers of Canada will very shortly have to undertake the harvest work with the help of green labor. In this connection they should remember that we are at war. They should adjust the work throughout the farm to suit the new conditions, and they should begin right in their own minds.

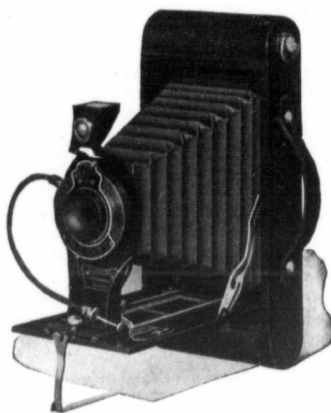
The first adjustment necessary is to change the point of view from one of criticism, discouragement and fault-finding with labor conditions, to that of the soldier and war worker, and realize that we are going through a crisis, the most serious the world has ever witnessed without any exaggeration whatsoever.

There used to be talk among farmers derogatory to the city man and other inexperienced laborers who sometimes sought employment temporarily on the farm. Such talk is out of place now, with the Germans sixty miles from Paris and every available man in Britain and France fighting to save not only his own country but this country as well. Such Canadian farmers forget that they themselves have been farmers all their lives, and in war time they can't expect to secure men volunteering from the cities with an experience in farm work equal to their own. That is an impossibility. But it is not impossible that farm production of this country be increased, despite the shortage of experienced labor. That this is true is proven by the experience of this country in the manufacture of munitions.

When the war started Canada was absolutely inexperienced, unskilled in, and without the machinery for the manufacture of munitions. But the manufacturers got to work. They studied the problem and they solved it.

To-day Canada is turning out millions of dollars' worth of shells every month from the largest to the smallest, and the most minute mechanical contrivances in connection with fuses and time charges. Canada's record in the manufacture of munitions is one of the surprises of the war. It was not made by Canada saying, "Canada Can't," but by adopting the motto, "Canada Can." Canada did not refuse to try because of the scarcity of labor, but set to work to organize and employed men and girls who had never been inside a factory before. They accomplished the impossible! These inexperienced helpers were speedily taught their parts, and the result is shown in the products of munitions from Canadian

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tom; practically new; manufactured by Deere Plow Co. Also 15-20 Gasport Tractor, two-cycle engine; good powerful machine. \$600.00 cash for lot; F.O.B. Burlington Junction, Ont. Bethanbreck Orchards, 508 Lumsden Building, Toronto, Ontario.

factories now known all over the world—not excepting Germany.

The result of organization and the willing wartime spirit in Great Britain is equally convincing. Great Britain last year, largely with inexperienced labor on the land, increased her cereal production by 850,000 tons, its potato production by 5,000,000 tons. The cultivated area was increased altogether by 1,000,000 acres. When in 1917, 820,645 men were taken from industrial organizations and placed in the army the War Office replaced them with 804,000 women, and yet the production of guns was increased 30 per cent, air craft 250 per cent, while the shipping tonnage amounted to 1,165,000 tons additional.

The best recent illustration of what can be done in an emergency when only inexperienced men are available is that of the battle of Picardy, when the fifth army, under General Gough, was overwhelmed and outnumbered. It looked inevitable that the Huns would break through and capture the city of Amiens, which would have meant the interruption of railway communication between Channel ports and Paris, cutting off the British from one of their chief bases of supplies. General Carey, however, saved the situation. He called upon all classes of men behind the lines, whether they were soldiers, cooks, camp followers, railway construction men, Chinese laborers, medical service men, transport men, or whatever they were and organized them to fill the breach. With these men he succeeded in doing what the fifth army failed to do—he held the line! With no training in trench warfare, and no fighting organization before that time, General Carey gathered them together, and this nondescript gathering of troops kept the Huns

back for six days and nights until reinforcements arrived. General Carey did not say, "I can't use this untrained class of men," but he set to work without a moment's hesitation to make the best of them, and he succeeded in saving the British army and its Allies from a desperate crisis.

Similarly, if the Canadian farmer makes up his mind that these are war times and war measures are necessary there is absolutely no doubt he can utilize to a tremendous advantage the man power and the woman power of the towns, where people are only too willing to go to his assistance, if they are organized to do so. He must not expect them to be experienced and to know as much about the details of farm work as he does. It has taken him a lifetime to acquire his information. Townspeople have spent their lives at different work, but with his knowledge of farming and his intimate acquaintance with his farm and all its needs he should have ability to organize inexperienced help and show each helper his or her particular job and how best to accomplish it. A few hours patient teaching in any one particular line of work will very soon enable a greenhorn to "carry on," as they say in the army. By patience and consideration the farmers of Canada can, without question, effect an organization from green but willing help from town that will not only surprise themselves, but will also be of tremendous benefit to the Empire by the increased results of their harvest.

**THE CALL OF THE SPIRIT OF THE FARM**

By John S. Charles, in "Hoard's Dairyman."

EVER since I left the home acres, The Spirit of the Farm has been with me. I did not realize it, particularly those first few years of young manhood. I had no dislike for farming, although I have a very tender memory for the prevailing prices of the early 'nineties when I sold my eggs for 7 and 8 cents a dozen, when barley was so cheap we fed it to the hogs and made the best pork we ever had. I milked my ten cows night and morning while I was attending high school, but I was not over-worked or abused. I merely had other ambitions and gave no thought to adopting farming as my business in life.

After completing the high school course I worked for a time in a factory drilling cutter shoes at 75 cents a day, doing this in preference to the job offered me of teaching country school for \$25 per month. When the superin-



Bill—"I dessay some wimmen can do men's work. But they'll never git men's wages."

Joe (much married)—"Wotcher mean—never? They always 'ave!'"



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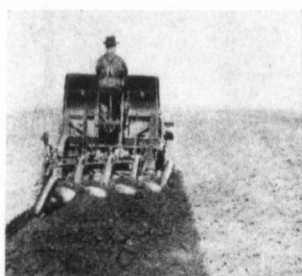
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tendent of the factory refused to raise my wages, he said: "John, you will never be content to stay at this work long and we can't afford to pay you more, unless you do." I thought then he was only a "penny pincher," but now I know he was a wiser judge of human nature than I then gave him credit. I quit my job for a "higher education," and the four years of college were filled with the enthusiasm of youth and The Spirit of the Farm remained quiescent.

Then came the first year of professional life, the high aspirations, the hopes and fears that are the usual lot of a live American young man. Faintly, distinctly, the voice of The Spirit of the Farm called to me, but I would not listen, I would not hear what it had to say. Gradually, almost imperceptibly and without appreciation on my part, the call grew louder and more insistent. Finally it reached my inner consciousness, and in irritation I answered back, "What's the use? I am not sure I would like it, and, anyhow, I haven't the money or the inclination."

For a time I thought The Spirit of the Farm was answered, but persistently and insistently it stayed by, awaiting its time and opportunity. At last it took me one side and said:

"You were born and raised with the Jersey calves. You helped put 'churn' 7-day records on Jersey cows before the Babcock test was known. You helped fill the old square silo that the neighbors said was a splendid place to waste the good corn. You got covered with tar painting the interior of that old silo, you helped re-line it and cut off the square corners so there wouldn't be as much spoiled silage. You saw the Jersey steer killed and you could not stay by when your sheep were slaughtered, but when pork was put up you were there to eat the cracklings with barn salt. You went rabbit hunting and when the boy friends came out you got your brother to carve juicy steaks for you to take down to the skating pond with its "limb brakes" that roused the daring spirit and made you forget the home results when you got back with water-soaked clothes.

"Despite these things you had no ambition to be a farmer. Life was pleasant on the farm, but you had other aspirations. You were educated on and by the farm, left it for college and later worked for that attractive and seductive, yet deceptive professional term, a salary. You said it was only temporary, that you were going to the top and were confident you were to have a large success



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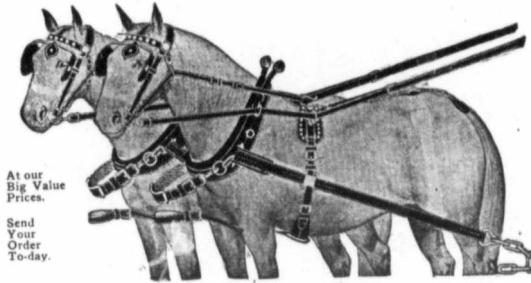
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**Hames**—Heavy steel, Japanned, ball top, with black strap and line rings.  
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in any one of a number of things. The prospect then looked enticing and you 'hitched your wagon to a star.'

"Despite discouragements I have stayed with you, confident that my time would come. Ten years ago I noted the faint, first stirrings, for I knew you better than you did yourself. I saw that those golden, youthful dreams of preferment and advancement in professional life were not materializing. Although you sometimes expressed impatience and half realized the treadmill in which your daily life was going, going, and never getting anywhere, you kept on, stuck to your 'job,' and saved a little. You lived in comfortable circumstances, built your home and improved it, enjoyed with your wife and children the social pleasures and advantages of your little community, and yet you came to realize that you were really one of the small fry in a big kettle of fish."

"Hold on," I replied to The Spirit of the Farm. "Don't forget that I have lived comfortably. I am better off than many other young fellows with whom I started out. The future may not be as rosy as I once pictured it, but I am happy and content. Of course, I would like to have a piece of land. What man doesn't have that aspiration? Yet, some

of my friends in professional life have dreamed the same dreams, and, while sitting close up to a warm fire, have demonstrated the profits and pleasures of farming. Some of them have gone just a bit further, and have sought to realize their hopes. Some have succeeded, but others are disappointed and have lost their ideals when they had to meet the inconveniences and lack of comforts they had in their city homes. Somehow, their hens didn't hatch and raise quite as large broods as they thought, it is more work to keep the barn clean, it rained for a week just as they got their hay in the cock, the weeds got ahead of them in the corn, the alfalfa killed out, the corn got cut by the frost, they couldn't meet the interest; but what's the use? They came back to town."

"Yes," The Spirit of the Farm replied, "I know all that. But how about the fellows that stuck it out? How much money will the bank loan them as compared to you? Bill is back on the job. He is not so noisy, but did you notice on that last visit that things are looking better round about his barns. He seems to be getting on and has made enough this year to build a new barn."

So we talked it out, The Spirit of the Farm and I. I am not old,

only approaching middle life, but it seems something of a venture. I am conservative, perhaps too much so, and it took me five years to plunge myself heavily in debt to buy the old home farm. It is in part sentiment, in part the desire to be of service in these stressful times, in part the hope of self-improvement and bettering my condition. More than all else, however, I have acquired the farm to satisfy my longing for the soil and that it may be insurance that my living will no longer be dependent on the caprice of another man. I want to be free and independent, to take my chance with other men, win or lose.

I had enough of practical farming in early life not to be over-enthusiastic and then suffer in the depths of despondency. I know enough about the job to exercise some judgment on the application of the theories of famine which I have studied in later years. I do not look for remarkable results or the enormous crops of the sentimental "back-to-the-lander." I just expect to apply common sense, and the experience of my neighbors to what the scientists tell me.

I realize that of the principles of success the first is work, the second is more work, and the third still more work. Yet I also

know that work without spirit is death. I know that when I stand still I go backward, and I have adopted as my motto "Prove all things, hold fast to that which is true."

I am not one who earns money in the city to spend in the country. I have a conviction, as well as being confronted by a necessity, that the farm should pay its way and pay for itself; that everything I hope to have the farm become must come out of the farm. Besides paying its way, it must provide a living for the farm family, it must gradually rebuild the old fences, it must repair and repaint the farm buildings, it must make conservative improvements according to their relative importance and as the money becomes available, and it must become a better farm with better buildings, more fertile fields, and larger productive possibilities. This is a large order, but I know the old farm, I have faith that it will respond to the proper application of intelligence and real labor.

Yes, after a few years I want The Spirit of the Farm to say to me and to those who have inspired me and helped me with the homely daily tasks of getting the work out of the way:

"We have joined hands and done this together. This is a better looking place, it is more pro-

ductive, and it is more satisfactory living here. The buildings are in good repair and bright with paint, the yard looks neat and clean from the road, the fences are straight and there are no weeds or brush along the fence rows, the fields are well laid out and convenient. Do you remember the big field of quack grass in the ten acres across the road, and the smaller pieces on the two hill fields? They are gone now, with no one to mourn their passing. Do you remember how our alfalfa looked that first spring? It was mighty discouraging, but we have overcome the difficulty and now know that the cows will not lack for hay and the surplus, if the market proves favorable, will pay for purchased feed, phosphate, and lime."

"Go down to the barn. The old herd looked pretty good that first year. It had a good foundation and, thank God, was healthy, but poor feeding and poor selection had played havoc and we found several that did not pay their way. That herd was gradually replaced by the increase of our first purchases of pure-breds, and we not only are making more milk but we get good prices for all our surplus cattle, for the herd is healthy and we can tell what each cow has done in the years she has been with us. The old barn was a good one, and the only change we have made is to clean it up, put in new equipment, and rearrange it.

"The first few years we repaired the old house, installed electricity and put in waterworks. Next year we will build the new home. It will be more convenient, but it will never hold more happiness than it did during the first few years when the going was hard and we worked from dawn to dark. Now that we have won out, we appreciate the happiness and satisfaction that the day of hard work brought, satisfaction that each little accomplishment left with us.

"Through these years we have kept our self-respect. We have not begged or whined. We have worked together, we have paid as we went along, and we are now rejoicing that though the usual discouragements came we looked up, not down; looked forward, not backwards; we fought the good fight, kept our faith and courage, and we have won."

Much more, I hope, The Spirit of the Farm will say to me. It won't all be pleasant. I will have made failures. I will have shown conceit and ignorance in equal measure, but I hope and believe I will be able to say that never have I feared to try something new, or that in trying the new thing I neglected to have judgment rule enthusiasm.

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## The Year-Round Silo

With Corn, Alfalfa or Clover to Supplement the Summer Pasture

By WILBER J. FRASER in "The Country Gentleman"

THE present high price of feed and the necessity of shipping a large amount of grain to our allies have brought about a critical situation and force new problems upon the stockman for solution. To devote less grain and acreage to livestock and yet at the same time to keep the same amount of stock growing and producing is the situation that confronts the stockman today.

It is a well-known fact that the silo is a great help in keeping much stock on a relatively small area of land, but little consideration has been given to the crops best suited to put into the silo under different conditions in the northern part of the United States.

Generally speaking, corn is by far the best crop for the silo, because no crop raised under ordinary farm conditions produces more digestible nutrients to the acre, unless it is alfalfa, and because it not only keeps much better than any other crop but makes a better quality of silage.

Pasture is usually the chief if not the only source of feed for livestock during the summer months on most farms. On practically all farms where cattle are kept they should be pastured for at least six to eight weeks during the year.

A pasture experiment conducted for four years by the writer at the University of Illinois showed that bluegrass pasture produced three times as much feed during May and June as it did during July and August, and that again in the autumn, because of fall rains, it produced for a few weeks

nearly as much as in May and June. This means that when a pasture is stocked to anything like its capacity during May and June, the feed is cut short during midsummer. This is the most trying time of the year for livestock, because of the excessive heat and flies.

It is more difficult to keep up the milk flow or to keep young stock growing during midsummer than at any other time of the year, even on a well-equipped farm. This lack of feed in midsummer, caused by short pasture, comes at the most critical time of the year, because cows will shrink at best during the excessive heat and fly time, and if in addition their feed is cut short, the shrinkage is sure to be large; and the worst of it is that normal production cannot be regained again when grass comes on in the fall.

To obtain the largest yield cows must experience no adverse conditions, and for this reason there is no season in the year when an abundance of feed is so important as in midsummer.

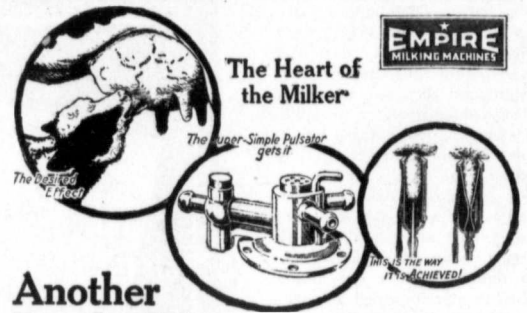
In fact, a certain dairyman in Illinois, who gets the highest yield of milk from each cow, so far as known by the writer, has but one silo, and uses this every year for summer feeding only, because he considers silage for summer of more importance than for winter.

If no extra feed is provided with which to supplement bluegrass pasture in midsummer, it must then be understocked in the spring and fall or the animals suffer from lack of feed during the most critical season of mid-



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squeeze") to occur with absolute regularity; and to make the change from suction to massage and back again instantaneous.

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The problem of our agriculture is the problem of supplying bread to the ever increasing millions of America and Europe, and while marvellous strides have been made in the facilities for transportation of agricultural products, yet the real solution of the problem is bringing the population to the food rather than the food to the population.

The vision that meets us here is one of ample land await-

ing man and of possibilities of agricultural production which can be realized only by augmented immigration. Before and above all of what transport has done, and may yet do to carry agriculture across the sea, the more reasonable prospect is the settlement of these wide areas by a population resting on the soil which this great province offers.

The increase in wheat production in Alberta in the last few years is but an index of the great development that is bound to follow in the next decade.

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## Crop Statement

	WHEAT				OATS				BARLEY			
	1915	1916	1917	Ten-year average 1907-16	1915	1916	1917	Ten-year average 1907-16	1915	1916	1917	Ten-year average 1907-16
All Canada .....	25.87	16.85	15.50	19.20	40.24	37.30	30.25	35.63	31.51	23.72	23.00	27.61
United States .....	18.34	8.8	12.6	14.7	37.8	30.1	36.4	29.9	32.0	23.5	23.7	25.2
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Minister of Agriculture

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summer. The pasture area can be greatly reduced, therefore, and the feed supply still kept uniform if some other feed is available for supplementing the pasture when it fails.

**When the Summer Silo Pays**

Pasture, then, to be efficient must be supplemented by at least a two-thirds ration for several weeks during midsummer. Attempts have been made to accomplish this by growing soiling crops, but this experiment shows that the great shortage of pasture in midsummer is caused by dry weather, and the time this dry period occurs will vary with different years and may occur at any time from the fore part of June until the middle of September.

Since it is impossible to tell in the spring the exact time the pasture will be short, it is impossible to grow soiling crops of green feed and have them in the best condition for feeding at the time they are most needed. For this reason a summer silo that may be opened at any time the pasture fails is the most economical and satisfactory way of supplying this need.

The summer silo also obviates much extra labor required in seeding and caring for small patches of different kinds of crops and harvesting and drawing these to the cows daily. It also prevents the waste occasioned by the feeding of crops before they are sufficiently mature to furnish the most feed, or after they are overripe and unpalatable.

As previously stated, corn has the most points in its favor for silage; but where the silo is empty and some other crop can be cut into it in June or the first of July, a saving is made by thus utilizing the same silo for both winter and summer feeding by filling it twice. Corn, alfalfa or some leguminous hay should be the main feeds for cattle and sheep. For winter silage, then, corn is best, as it keeps much better in the silo than legumes or small grains. In addition, legumes are much more palatable when fed in the form of hay, and corn is more palatable in the form of silage than in the form of dry stover. For this reason corn should be fed in the form of silage and legumes in the form of hay whenever possible.

There are, however, exceptions to this rule. The first cutting of alfalfa comes the fore part of June in the Northern States. It often happens that this period is a rainy one, which makes it almost if not quite impossible to cure alfalfa hay. Under these conditions it is well to put the first crop of alfalfa into the silo.

The best crops for putting into the silo in the summer for supple-

menting pasture are, therefore, the first cutting of alfalfa, which is usually coarse; the first crop of clover, oats, oats and Canada peas, barley, winter rye, or grass of any kind that is palatable, nutritious and gives a large yield.

Clover and alfalfa should be cut at about the same stage as for hay. The first crop of alfalfa in Central or Northern Illinois was ready to cut about June 1st. If small grain is to be used it should be harvested when the kernels are in the dough stage. This means that clover, early oats or rye would be ready for the silo for the region mentioned about July 1st, and late oats about July 10th. The exact time, of course, will vary according to the season.

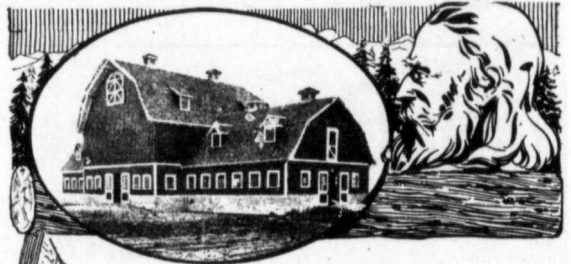
The foremost idea in silo construction is not so much the most cubic feet at the least expense, but rather keeping the diameter small enough so that the silage may be fed and kept in good condition. The diameter of a silo should, therefore, be determined by the size of the herd, and the silo's capacity by its height. When built of masonry the height may be three to four times the diameter.

Summer feeding of silage requires a silo of smaller diameter than winter feeding for the same size herd. There are two reasons for this: First, silage spoils more quickly in warm weather than in cold; second, many times the summer silo is needed to supplement the pasture when only a partial feed of silage is required. When feeding cows a full ration of corn silage in the summer, ten square feet of silage surface for each cow is the maximum that can be fed from and the silage remain in good condition.

When crops other than corn are used for summer silage it is necessary to have a still less area exposed for each cow. When such crops are used there should not be more than five or six square feet of silage surface for each cow. For herds of the following sizes the maximum size of silo that can be used successfully for summer feeding with legumes or small grain is:

Size of Herd	Diameter of Silo
14 cows	10 feet
20 cows	12 feet
27 cows	14 feet
35 cows	16 feet
45 cows	18 feet
57 cows	20 feet

For a good size herd a large silo for winter feeding and a small silo for summer feeding is best. The large silo should be fed out first, so that if any silage is left when the stock is turned to pasture it will be in the small silo for summer feeding; otherwise much might spoil on the surface in the large silo by being fed off too slowly.



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**Saving the Summer Silage**

If the summer silo has been fed from and there is still silage left when the stock is turned to pasture, it may be covered over with fine straw or chaff thoroughly wet to cause it to decay quickly and seal over the surface, thus excluding the air and preventing the silage below from spoiling. If the straw or chaff is not available the top of the silage will simply have to rot, but it should be thoroughly soaked with water two or three times at intervals of a week to prevent excessive loss from drying out and fire-fanging.

If there is but one silo this should be small enough in diameter to be fed from during the summer, and if sufficient silage is left when the stock is turned to pasture to feed during the summer, the silage problem is solved. If, however, there is no silage left, or only a small amount, the silo may be refilled with legumes or small grain.

The question of refilling the silo with small grain for summer feeding, or of having a separate silo to be filled with corn for this purpose, should be decided upon the following basis: A fifty-bushel yield of corn produces practically twice as much food value to the acre as does a fifty-bushel yield of oats when both are put into the silo so that the entire crop is consumed. On the other hand, when small grain is put into the silo and fed out during the summer so that the same silo may be refilled in the fall, a saving is made on the investment in silos, as the same structure is used twice during the season. The crop grown is fed immediately and not held practically a year, as with corn silage, resulting in saving interest on the investment in growing the crop.

For those who are able to make the larger investment, a silo small enough in diameter for summer feeding and filled with corn the year previous is to be desired. But where this is not available at the present time, putting some early maturing crops into the silo to supplement the pasture will mean a great saving in the feed bill and a large increase in the returns from the herd during the summer.

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Brantford, Portage La Prairie, Regina, Calgary

## Irrigationists will Discuss all Phases of Agriculture

THE approaching convention of the Western Canada Irrigation Association at Nelson, B.C., raises the question, "To what extent is the dry farmer interested in irrigation?" There has been a tendency in the past, even among farmers, to think of dry farming and irrigation as being, in a sense, rival modes of agriculture. It is of the utmost importance to the development of Western Canada, where both kinds of farming are practised on the largest scale in America, that their independence should be properly understood.

Had Western Canada been first settled by farmers from irrigation countries the history of agriculture in these provinces would have been very different. As it is, our first settlers, and even most of our settlers to the present day, were from Eastern Canada, the Eastern States, of those parts of Europe where irrigation is not employed. They came to Western Canada with no knowledge of irrigation. They have learned dry farming from the settlers in the semi-arid regions of the Western States, and they are now learning irrigation largely from the same source.

The Western Canada Irrigation Association recognizes that the relationship between dry farming and irrigation is a very close one indeed, and for that reason a considerable space on the program is devoted to dry farming. At the convention which is to be held at Nelson on July 24, 25 and 26 Hon. W. R. Motherwell, minister of agriculture in Saskatchewan, and a dry farmer of many years' ex-

perience, is to give an address on "The Principles of Dry Farming." Mr. Motherwell was president of the association a year ago, and was presiding officer at the convention held at Maple Creek, Saskatchewan, where his practical experience as a farmer contributed greatly to the interest of the meetings.

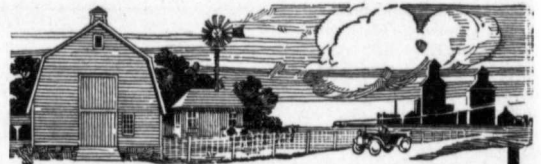
The officers of the association are also delighted to have a letter from Dr. Samuel Fortier, chief of the irrigation division of the United States department of agriculture, stating that he will probably be able to attend the convention at Nelson, and that if so he will be very glad to deliver an address. The agriculturists of Western Canada are under considerable debt to officials of the United States reclamation service who have always been most generous in bringing to Canada the benefit of the experience which they have gathered through many years in their country. With Dr. Fortier and Hon. W. R. Motherwell both on the program, irrigation and dry farming will be represented by worthy champions.

There is another phase of agriculture, however, to which both irrigation and dry farming are merely stepping stones. That is stock-raising and dairying. The exceptional demand for wheat due to conditions arising out of the war may temporarily overshadow the profits of the livestock business, but every agriculturist knows that in live stock lies the permanent safety of the whole industry. The extent to which irrigation fosters the live stock industry is not generally under-



IMPROVING

Officer (in charge of transport train). "He's not doing very well yet. Still eating his rug, too."  
Tommy. "Yes, Sir, 'e always did. But 'e's better nor 'e wus. 'E spits out the buckles now."



**Which do you prefer to save—the price of the Barn or the cost of the Paint?**

When the barn raising is over and your fine, new building stands complete—paint it right away! Every day's work that the weather man puts in on its unprotected walls is a day off the life of your barn. You'll pay for the paint whether you use it or not,—so wash better use it.

Your **Stephens** dealer will be glad to co-operate with you in your painting plans.

**Stephens'**

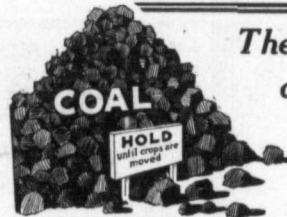
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are made by a Western firm for Western Barns, Granaries, Fences, Implement Sheds and all farm buildings. They are used by Railroads and Elevator Companies—a sufficient guarantee that you'll receive compound interest on every penny you invest in paint.



**G. F. STEPHENS & CO. LIMITED**  
Paint and Varnish Makers  
WINNIPEG - - CANADA

52



**The Railways cannot carry both Wheat and Coal at once!**

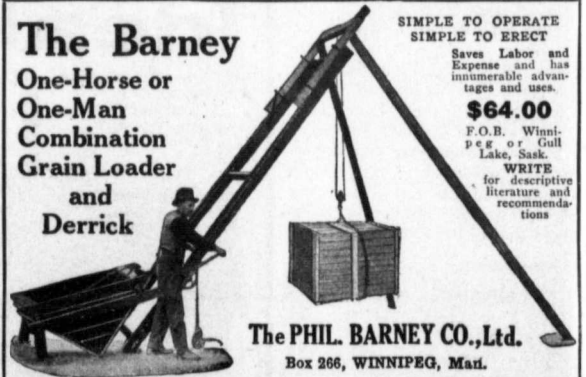
**GET YOUR "KING" COAL IN NOW!**

There's no time when the grain is moving to haul coal, nor will there be equipment. Conditions were never like this before—you are urged to place orders now.

Special prices quoted for carload orders now. Write or wire for special prices on 30 to 40 ton carloads of "King" Coal, Lump, Egg or Nut size—delivered to your station. "King" Coal does not clinker.

**THE CARDIFF COLLIERY'S LTD., Edmonton, Alberta**  
Mining capacity (with car supply) 2,000 tons daily

**The Barney**  
One-Horse or One-Man Combination Grain Loader and Derrick



**SIMPLE TO OPERATE SIMPLE TO ERRECT**

Saves Labor and Expense and has innumerable advantages and uses.

**\$64.00**

F.O.B. Winnipeg or Gull Lake, Sask.

WRITE for descriptive literature and recommendations

**The PHIL. BARNEY CO., Ltd.**

Box 266, WINNIPEG, Man.

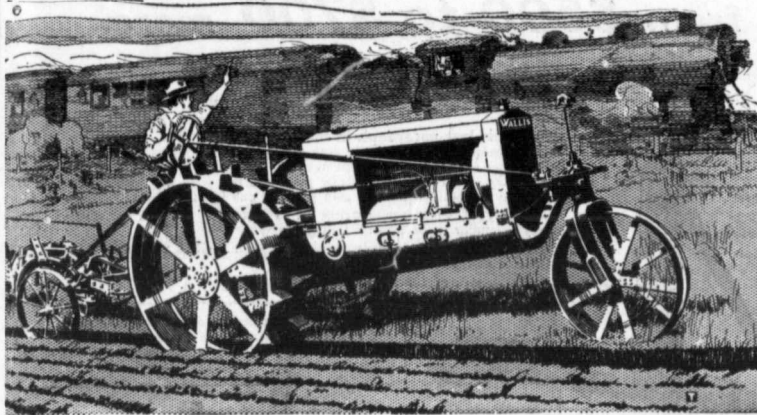
**Kirstin**  
One-Man Stump Puller

**Cheapest Way to Clear Land**

No horses needed—no extra help required—  
one man alone pulls all kinds of stumps quick and easy. The Kirstin holds record for lowest land clearing cost. New patented feature gives extra strength and power. Shipped on actual size—free. Write—3 Year Guarantee and 6 months to pay proposition. Get the Free Book and very Special Offer on One-Man and Horse Pullers—all kinds.

**A. J. KIRSTIN CANADIAN CO.**  
1204 Dennis Street, South St. Marie, Ont.

# The Mightiest of Light Tractors



comes to  
**Western Canada**

THE Canadian Fairbanks-Morse Co. have recently been appointed distributors for J. I. Case Plows and the Wallis Tractor. Case plows need no introduction to the Western Farmer, since they have been in service for almost half a century. In fact the J. I. Case Plow Works was the first company to build tractor plows.

The marvellous growth in sales of Case Plows has only been possible by building plows a little better than others thought it necessary to make them.

Better and easier plowing is possible with the J. I. Case Power Lift Three Bottom Enicar Gang Plow because it is light draft—easily controlled from the seat of the tractor—always plows at an even depth—can be easily backed—and is of strongest construction.

## WALLIS

The Tractor Years Ahead of Its Time is Here!

This tractor which experts acknowledge is years ahead of its time, combines for the first time those elements which farmers want—Light weight, Durability, Power, Speed and Economy.

Records of service in United States, England, France and Italy prove that in the Wallis, the farmer now has a farm power plant which will do his work dependably and at low cost.

Before you select any tractor you owe it to yourself to investigate thoroughly this remarkable small tractor.

### HOW POWER AND LIGHT WEIGHT ARE COMBINED

Power at the draw-bar is what does your work. The Wallis proves that power is not a matter of great weight.

The Wallis Tractor weighs little more than 3000 lbs. That is 1000 to 5000 lbs. lighter than other tractors designed to do the same work. This is due to the simplified and advanced design which eliminates a tremendous lot of useless weight.

For instance—the frame is made of boiler plate rolled into "U" sections. It eliminates all beams, braces and counter braces and with them a lot of weight. Further, this member serves a four-fold purpose as frame, base of crank case, transmission case, and rear axle housing.

This frame is the lightest yet strongest construction known to mechanics.

On account of this simplified, new type design the Wallis delivers at the draw bar 75 per cent of the power generated by the motor. Tests made by the Hyatt Roller Bearing Co. prove this statement.

This means that from each gallon of fuel the Wallis tractor gives you 50 per cent more power than other tractors which require 40 to 50 per cent of their power to propel their own weight.

This power that is usually required to propel heavy weights is in the Wallis turned into effective work and speed.

### SPEED—NECESSARY TO ECONOMY

A tractor should not be judged alone by the number of bottoms it pulls. This is easy to understand. The speed with which it pulls them is equally important.

This advanced type of tractor pulls three 14-inch bottoms 6 to 8 inches deep at the rate of 2½ miles per hour, or 103.5 acres per ten hour day.

The average tractor is designed to pull the same load at a rate of 1¼ miles per hour, or 72.5 acres per day.

On this basis alone the Wallis will save 50 per cent of your time plowing.

### JUDGING THE COST OF A TRACTOR

Cost is determined by service—not purchase price.

Of times the most inexpensive implement is the most costly in the end.

Economy must always be figured on a basis of work performed. To determine this, divide the purchase price by the number of years of service. By this measure the advanced type Wallis will give you the greatest returns for your money.

Buying a Tractor is a serious problem. What you get for the money you pay will be largely guided by the care with which you weigh the facts before you buy.

Get further details on this tractor which is conceded by all to mark the most remarkable achievement in tractor construction—the only tractor in the world with a draw bar pull equal to its weight and the miracle of the tractor industry to-day.

### Brandon Plowing Demonstration

See the Wallis in action at the Brandon Fair. Note the speed it travels and the number of bottoms it pulls. Match it point by point with other tractors. You will agree that the Wallis tractor offers the power farmer the most advanced type of design and construction.

**The Canadian Fairbanks-Morse Co.**  
LIMITED  
SASKATOON WINNIPEG CALGARY

### SPECIFICATIONS

Belt Horsepower—25.

Type of Engine—Vertical 4-cylinder, 4-cycle. Valve-in-head. Cast block, with removable cylinder sleeves.

Bore—4¼ inches—stroke 5¼ inches.

Normal—R.P.M.—850 to 900.

Oiling System—Positive pump and splash.

Ignition—K.W. high tension with impulse starter.

Clutch—Expanding shoe type, Wallis make.

Belt Pulley—18 inches diam., running 430 r.p.m.

Belt pulley located left-hand side chassis; running forward.

Transmission—Wallis special, enclosed, two speeds forward.

Gears—All drop forged, cut and hardened.

Bearings—Hyatt roller bearings throughout, including front and rear wheels.

Final Drive Gears—Drop forged, cut hardened enclosed in oil.

Drive Wheels—48 inches diam. by 12 inches face.

Two Rear Live Axles—3 inches diam., 40-50 carbons, double heat treated steel, mounted on roller bearings.

Front Wheel—30 inches diam. by 8 inches face.

Mounted on springs and Hyatt roller bearings.

Frame—Wallis patented, boiler plate "U" shape.

Wheel Base—100 inches.

Tread—49 inches.

Total Width—61 inches over-all.

Total Length—148 inches over-all.

Shipping Weight—3250 pounds.

stood. There is an opinion abroad that irrigation has to do mainly with the raising of fruits and vegetables. Nothing could be further from the truth. The great irrigated crop is hay, of which alfalfa is chief. Tables showing the irrigated crops raised in the United States reveal the fact that over sixty-one per cent of the entire irrigated crop area of the United States is devoted to raising hay, and of this area about half (30.6%) is in alfalfa. The area devoted to fruits of all kinds is only 4.7% of the whole; sugar beets, 2.5%, and potatoes 2.3%.

The overwhelming importance of hay in irrigated countries is evidenced by the foregoing figures. In the irrigated areas of Alberta and Saskatchewan the hay industry has perhaps not developed quite so fast, on account of the large amount of open range which has, until recently, been available, but with the settlement which is going on this condition is rapidly passing away.

Already the Lethbridge irrigation district is the principal alfalfa producing section of Western Canada. In British Columbia considerable areas which were originally intended for fruit production are now growing alfalfa. At Kelowna, for example, a district at one time devoted almost exclusively to fruit and vegetables, is now growing so much fodder crops that last year the local creamery produced fifty tons of butter.

In order that mixed farming may receive proper attention at the irrigation convention, Dr. J. G. Rutherford, C.M.G., superintendent of the agriculture and animal industry branch of the C.P.R. and president of the Western Canada Live Stock Union, will deliver an address on "Mixed Farming Under the Ditch." Dr. Rutherford is a recognized authority on his subject, and is a platform speaker of international reputation. Prof. G. E. Parham, superintendent of the Dominion Government experimental station at Invermere, B.C., will speak on "Mixed Farming and Alfalfa as an Aid to Orchard Development."

Don. H. Burk, chief of the irrigation investigation department of the C.P.R., and an expert on fodder crops, is also down for an address. Altogether it is assured that every phase, not only of irrigation, but of dry farming, stock raising and dairying, will come under discussion. No farmer or fruit raiser should remain away from the convention because he does not happen to be an irrigator; there will be much that is worth while to every man or woman engaged in facing the problem of greater food production.

## Fred Foster says his LISTER does more work than other makes that cost from \$500 to \$700 more.

Writing us from Speers, Sask., in February, he tells us that last year he threshed 700 bushels of wheat in 9 hours, and 1,500 bushels of oats in 8 hours, and was very much surprised in the fine way it cleaned the grain.

Read this last paragraph in his letter:

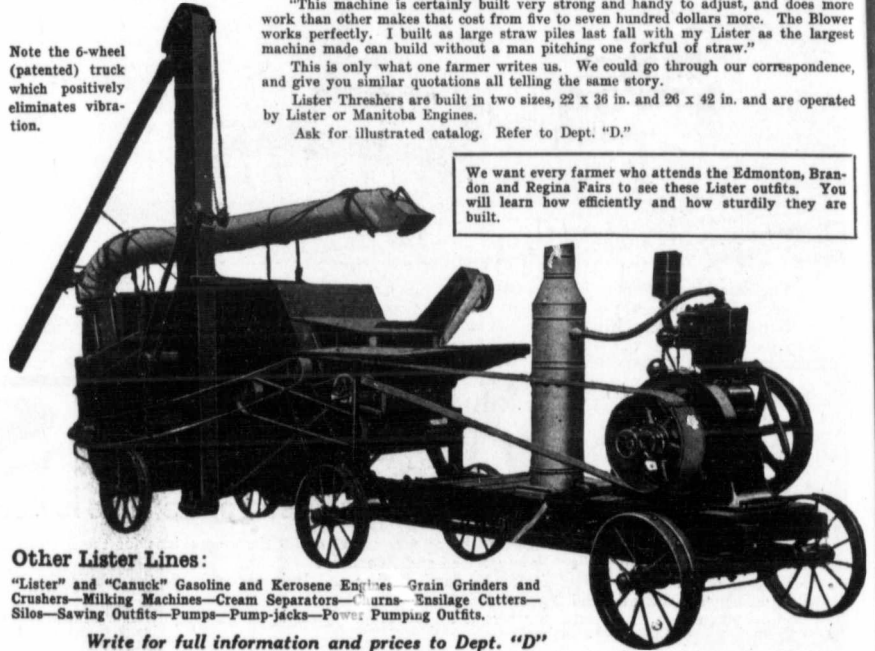
"This machine is certainly built very strong and handy to adjust, and does more work than other makes that cost from five to seven hundred dollars more. The Blower works perfectly. I built up large straw piles last fall with my Lister as the largest machine made can build without a man pitching one forkful of straw."

This is only what one farmer writes us. We could go through our correspondence, and give you similar quotations all telling the same story.

Lister Threshers are built in two sizes, 22 x 36 in. and 26 x 42 in. and are operated by Lister or Manitoba Engines.

Ask for illustrated catalog. Refer to Dept. "D."

Note the 6-wheel (patented) truck which positively eliminates vibration.



We want every farmer who attends the Edmonton, Brandon and Regina Fairs to see these Lister outfits. You will learn how efficiently and how sturdily they are built.

### Other Lister Lines:

"Lister" and "Canuck" Gasoline and Kerosene Engines—Grain Grinders and Crushers—Milking Machines—Cream Separators—Turns—Ensilage Cutters—Silos—Sawing Outfits—Pumps—Pump-jacks—Power Pumping Outfits.

Write for full information and prices to Dept. "D"

## R. A. LISTER & CO. (Canada) LIMITED

TORONTO

WINNIPEG

MONTREAL

### THE TRACTOR PLOW

JUST because the ground is mellow,  
Don't imagine that a fellow  
Doesn't wish to hurry plowing  
all he can.

Just to keep him off the breakers  
He would seed some extra acres,  
If he only saw a profit in the  
plan.

Fain would haste this soil upsetting,  
Gladly lay aside all fretting,  
Finish up in time to take a  
needed rest.

But the horses are so lazy,  
And the flies 'most drive them  
crazy,  
Waste their energy in fighting  
off the pest.

But the farmer soon enthuses  
As he rubs his hands and muses:

"Wonder if a tractor-plow  
would work in here?  
Am not sure that I would like it;  
If not, Shorty Frank can hike it,  
For he's comin' 'round here  
now almost a year."

Say, now, ain't she just a daisy?  
Never thinks of getting lazy,  
Doesn't stop and stamp and  
kick, thus wasting time.  
There's no flies upon the "critter,"  
Never saw the land plowed better—

And when you pull the lever,  
see her climb.

Hills and drouths no longer  
trouble,  
Handles sod as well as stubble,  
While she glides along as easy  
as a boat.

Plows as fast as you will let her,  
Does it quicker, cheaper, better,

Beg your pardon, but I cannot  
help but gloat.

Will I keep it? You can gamble,  
There will be an awful scramble,  
For these plows as soon as  
they are better known.

First to get them are in clover,  
For before the rush is over  
They will have a seed bed  
where the weeds had  
grown.

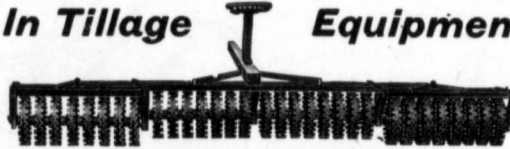
### MOTION PICTURE FISHING VOYAGE

The Canada Food Board is circularizing a film taken on board a Pacific trawler from Prince Rupert, showing how Pacific flat-fish are caught and handled, under the auspices of the Board, for distribution in the Western Provinces, as a reasonably priced substitute for meat.

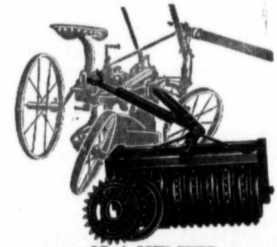
# THE LAST WORD In Tillage Equipment



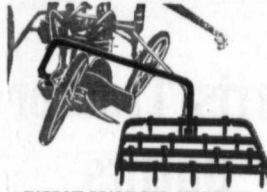
AS A SURFACE PACKER



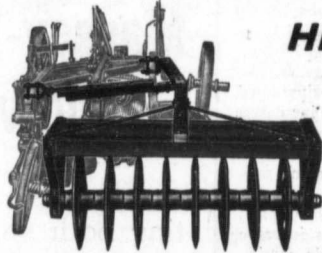
15 foot 4-Section Surface Packer. Sub-Surface Wheels can be supplied for same frame.



—OR A MULCHER



HARROW READY FOR OPERATION

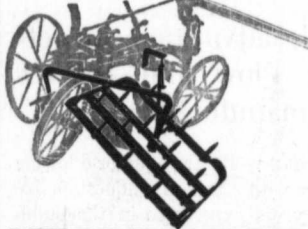


## Hitch Your Ford Tractor to a Star

This is our Sub-Surface Plow Packer for 3-furrow plow. The hitches are adjustable and will give perfect satisfaction with any make of plow.

**OUR PATENT AXLE** on all our land-packers reduces draft to the lowest possible minimum, and they are **LUBRICATED FOR THE WHOLE SEASON** before we ship them.

**WE ARE THE PIONEERS IN THE BUSINESS OF "ATTACHMENTS"**



HARROW TILTED FOR HANDLING ON ROAD

SEE OUR EXHIBIT AT ALL THE WESTERN FAIRS

**3 MACHINES IN 1**

A perfect seed bed is as important as to sow or plant. The Western Pulverizer, Packer and Mulcher makes a perfect seed bed and forms a loose mulch on top to retain the moisture in one operation. It will double profits on crops. Made in steel, 1 and 2 sections. Sold to you on one year's trial.

WE WANT every farmer, or land-owner to have our illustrated circular. It describes the machine, its principle and advantages over all others. It gives testimonials from many farmers' proofs. See what it will do on wheat, alfalfa and other crops. It contains valuable information on how to prepare the soil for better results. Send for this circular today, whether you want to buy or not.

**CHRISTIANSEN IMPLEMENTS LIMITED**  
Implement Manufacturers, Winnipeg

**Christiansen Implements Ltd.,** Owena Street, Winnipeg

## Facts from the Inside

By Wm. HAMAR GREENWOOD

AS a newspaper man I have been permitted to read certain authoritative documents dealing with the food supply of Canada, the United States and the Allied countries in order that I might comprehend the reality of a situation that has caused the late Lord Rhondda, a fellow Welshman, to say, "The whole world is up against the nasty thing, famine." The grey wings of famine do flutter over the earth. The balance of food supplies is kicking the beam, and gaunt hunger menaces millions.

Yet, grievous through the plight of half the world, is still there is hope that starvation will be staved off if Canada and the United States will in 1918 produce sufficient foodstuffs to make up for a 41 per cent shrinkage in many of the Allied countries. Canada and the United States are the countries to which Europe looks for food in 1918 because tonnage demands economic voyages.

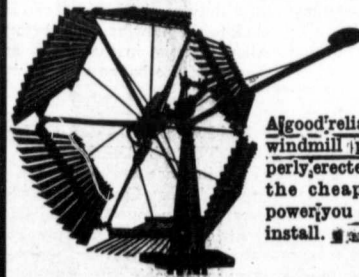
**115 Million Animals Less**  
Throughout the world, crops and food animals have decreased

gravely. From the latest data it is demonstrated that the gravity of the decrease cannot be over-emphasized. Compared with 1913, the total decrease in the world's meat-producing animals was 115,005,000 head, made up of 28,080,000 cattle, 54,500,000 sheep, 32,425,000 hogs. Slight increases are noted in the United States, but they are not expected to be maintained, while the demands of our Western Allies daily outstrip the falling production.

If the food requirements of the Allies could be found in Canada, the war would be over in six months with Germany begging for bread. **Canada and the United States are the logical countries from which Europe can expect her needed imports in this hour of her stress, while ship power is less than is needed.**

If their normal demands are met, the Allies need to import in 1918 525,000,000 bushels of wheat; 69,000,000 bushels of barley, 171,000,000 bushels of oats; 28,271,000 bushels of rye; 151,135,000 bushels of corn. With efficiency, Canada and United

## Pump Your Water for Nothing



**A good, reliable windmill properly erected is the cheapest power you can install.**

The illustration above shows 10 ft. vaneless direct stroke, improved type of windmill. Highly recommended by all users and is furnished with same towers as our steel mills.

Illustration at right is our 8 ft. and 10 ft. Back-gear Steel mills furnished with 3 or 4 post-towers braced and girted every 5 1/2 feet. Heights, 20 feet, 31 feet, 42 feet and 53 feet.

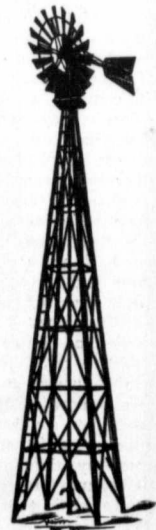
Save on labor and save on fuel by buying a windmill. You will need our 5 ft. mill on shallow wells. Where well is 60 to 100 ft. deep or less, you should buy our 8 ft. mill.

Well 100 ft. to 150 ft. deep requires the 10 ft. vaneless mill and then our 10 ft. steel mills are used on deeper wells.

See your local dealer to-day or write us direct for prices and full particulars.

**Manitoba Engines Limited**

BRANDON, MAN.



States are the only countries that can be drawn on.

**What Canada Can Do**

In 1917, of the requirements of the Allies, Canada supplied 42 per cent of wheat, 38 per cent of the oats. A splendid feat worthy of all praise, but Canada can do more in 1918. Canada has learned the trick of producing wheat and oats, let her more greatly produce and speed up the production of other cereals. It is only a matter of more acreage and greater labor, but the rewards are sure.

But when one views Canada's contribution to the Allied requirements of beef in 1917, one finds that Canada sent only 2.23 per cent; only 2.23 per cent of the beef needed by the Allies, but 42 per cent of the wheat! And worse and more of it, Canada sent not a pound of mutton and lamb to the Allies. Beef and mutton reached the Allies from South America and Australia, in spite of the long haul.

While of pork, the mainstay of the soldier on duty, Canada supplied only 8.55 per cent of the Allies' requirements. The hog is the greatest and most efficient animal to turn feed into food, and with all our boasted agricultural efficiency we have almost left him out of the calculation. It can't be that there is no money in hogs. There is more than money, there is salvation to the armies of the Allies in hogs.

Ordinary Canadians have been under the impression for years that vast quantities of butter and eggs were produced on Canadian farms. But Canada sent to the Allies only 1.4 per cent of their requirements of butter in 1917; and only 1.25 per cent of the needed number of eggs.

I have no doubt these figures will come as a surprise to my readers as they did to me. I take off my hat to the wheat and oat growers, but shades of my grandfather, who farmed 200 acres near the village of Brougham, township of Pickering, province of Ontario, the present generation has gone back on beef, mutton, pork, butter and eggs. What's the matter with the present generation of farmers? I wonder what has become of the farmers' sons I used to teach in Kinsale, Ontario? Surely I am to be blamed for not inspiring them with the ambition to emulate the example of their grandfathers. I console myself by thinking they went West, and are now growing wheat, and in that I take pride.

Yet there is one bright spot in old Ontario, and it is in the East. In 1917, Canada supplied 66.96 per cent of the Allied needs for cheese. This year the cheese-makers say it will be 85 per cent. Great!

**Will Use Up All Supplies**

From what has been said and from additional data recently received, the Allies to stave off starvation and keep in fighting trim need to import in 1918, from Canada and the United States, for human food 1,100,000 tons per month, plus 100,000 tons for the Belgian relief for the next three months, and from that time on plus the entire Argentina crop and 2,000,000 tons from India's wheat crop. This will wipe out the whole exportable surplus of North America except the barest carry over.

If Canada and the United States do not send to the Allies 250,000,000 bushels of bread grains more in 1918 than in 1917, the increased tonnage will have to be used to an unfortunate extent for carrying foodstuffs from distant production.

It is clear that unless Canada and the United States increase their acreage and herds famine will smite the Allies in 1918. Increased acreage and increased herds then should be the aim of Canada and the United States. How much more can Canada put into her share of the problem? It depends on the stimulation that will come from informing the people of the true state of affairs, and the intelligent direction of that aroused energy. Let the people know the facts and the response will be certain and satisfying. But the government must keep abreast of the movement to produce and be instant on the spot to render first aid in all emergencies.

Canada must in the light of a lofty duty to civilization bend its back to the plow as never before. All who assist in that effort are worthy of the badge of true citizenship.

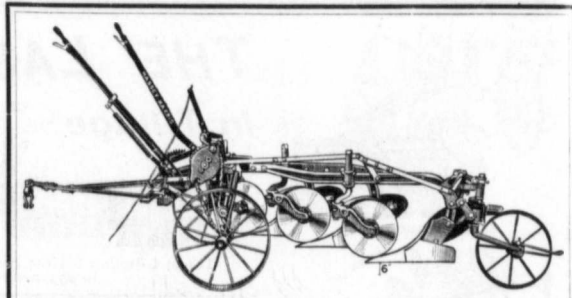
**INCREASE IN AGRICULTURAL EXPORTS**

The increase in staple products exported from Canada last year over the average annual shipments of the three years previous to the war are very striking. Here is the table as given out by Chairman H. B. Thomson, of the Canada Food Board:

	lbs. increase
Pork .....	122,000,000
Beef .....	74,000,000
Butter .....	12,000,000
Cheese .....	30,000,000
Wheat and flour ...	85,000,000
	doz. increase
Eggs .....	15,000,000

**KEEP HOEING**

War gardeners should not relax their efforts because it is too hot to be comfortable in the garden. It is too hot to be comfortable in the trenches, but the war goes on. Keep hoeing. The results will be worth it.



**Massey-Harris Tractor  
Plowing Outfits**

There is a big advantage in getting both your Plow and Tractor from the same manufacturer.

When you buy a Massey-Harris Tractor Plowing Outfit your dealings are with a firm of unquestionable standing, with over 70 years' experience in the building of high-grade farm implements and machinery.

The Massey-Harris Guarantee is back of the whole outfit, and Massey-Harris Service is always available for tractor or plow—there is no divided responsibility.

Service is an important item to consider when buying an outfit, and satisfactory service can only be furnished by the manufacturers of the implements.

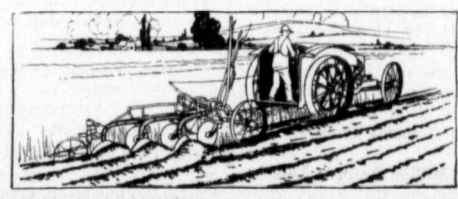
If interested in tractor plowing, get our descriptive matter from your local agent, or write nearest branch.

**These Implements will be shown  
at Brandon Demonstration  
July 23, 24 and 25**

**Massey-Harris Co., Ltd.**

Head Offices: TORONTO

BRANCHES			
MONTREAL	MONCTON	WINNIPEG	REGINA
SASKATOON	SWIFT CURRENT	YORKTON	
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TRANSFER HOUSES AT VANCOUVER AND KAMLOOPS			
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**THE HOLSTEIN DEMOCRACY**

By A. S. Thurston, in Farmer's Magazine

**T**HIRTY-FIVE years ago in very humble circumstances the Holstein Friesian Association of Canada was formed by a few enthusiasts, who could scarcely have pictured the growth which the association was to enjoy. The past year was the most prosperous of all the thirty-five in every particular, and finds the association with a reserve of over \$27,600, and with not a cent of debt. A regrettable feature of the report, however, was the decline in testing—testing, which is the foundation of the Holstein popularity.

"Pure-bred Holsteins are not bringing one dollar more on the market to-day than good grades, unless they are tested," said D. C. Flatt of Millgrove.

**"Borrowing" for the Fairs**

The practice of "borrowing" cattle for exhibition, or making temporary transfers in order to comply with the regulations, came under fire. It was declared by a number to be a prevalent practice not only at the smaller fairs, but more particularly at Toronto. R. R. Hicks pressed for a committee to stamp it out at the Canadian National, and Messrs. Hicks, Burnaby and Flatt were appointed to scrutinize and investigate all entries next year, and take action against misrepresentation.

L. J. Lipsett declared that he was either going to start borrowing stronger, or else the others would have to borrow less. He suggested a gentleman's agreement between Holstein exhibitors that they would show none but their own bona fide stock, but the convention felt that more stringent steps were necessary.

Dr. Farewell classed the exposure as a disgrace to the breed, and R. H. Hardy admitted that on at least one occasion it had been practised in his name, but by a herdsman in his absence.

**Change the R.O.P.**

Whether or not any change should be made in the Record of Performance regulations was debated from various angles, introduced by Mr. Dawson of Lakeview Farm. He proposed a 300-day and a 365-day division in the R.O.P., the former making room for the amateur who wants a calf every 12 or 13 months, and the latter for the professional who is out for records at the expense of the actual number of calves produced. In the 300-day test, it was suggested to only allow milking three times a day for the first 90 days, in order to make room for short tests, and after

Distributors and Dealers for Manitoba, Saskatchewan, Alberta, and British Columbia, wire or write for territory.

**Port Huron**  
**ASK THE USER**

So simple a child can drive it—so powerful that it always stands up to the work—that's the Port Huron 12-25 Tractor pictured here and on which prompt deliveries can be guaranteed.

Read the specifications carefully—note that there's nothing skimped or cheap—nothing experimental on the Port Huron. It's a real Tractor—not a toy.

Write for full information to-day.

**EASY CONTROL**

Two main levers—the reverse lever and speed adjusting lever—give the operator complete control of the tractor. Six notches in quadrant provide for six speeds—forward or reverse. Speed changed instantly—from low to high or high to low—while tractor is in motion. Friction drive avoids sudden jerks in starting, and prevents stripping of the gear teeth.

**DURABILITY**

The life of transmission gearing depends mainly upon three things; whether gear teeth are rough cast or machine cut; whether they are lubricated or run dry; whether they are protected from dust and grit or exposed. Lubricating exposed gears does almost, if not quite, as much harm as good, because the oil causes the grit to stick to the wearing surfaces and grind them out, whereas, if dry, the grit will fall off them.

With the exception of differential bevel gears and pinions on which the wear is slight, all transmission gears of the Port Huron tractor are machine cut—all are enclosed in dustproof casings—and all run in a bath of oil. This means long life and low up-keep expense for Port Huron transmission gears.

Trade Rating H.P.—12.25.  
Draw-bar H.P.—12.  
Belt H.P.—25.

Fuel—Kerosene or gasoline.  
Fuel Tank Capacity—Kerosene 25 gal.; gasoline 5 gal.

Motor—Erd kerosene burning, 4-cylinder, 4-cycle, valve-in-head, 4-in. bore, 9-in. stroke, throttle governed, normal speed, 900 r.p.m.

Lubrication—Double filtered splash with circulating pump.

Ignition—Kingston magneto, high tension, with impulse starter.

Cooling—Perfex radiator with forced circulation.

Carburetor—Kingston single bowl.

Air Cleaner—Bennett.

Traction Speeds—Variable, 1 1/4 to 4 miles per hour, ahead or reverse.

Belt Speeds—Variable, 2,380 to 3,900 feet per minute, over or under.

Transmission—Spur gear with variable reversible friction drive.

**SPECIFICATIONS:**

Gearing—Made of semi-steel and cast steel; machine cut teeth, enclosed in dustproof casings and run in oil.

Bearings—Babbit and S.K.F. self-aligning ball.

Steering Mechanism—Screw and nut type. Turning Radius—6 ft. inside of inner wheels.

Frame—Made of steel channels, spring mounted in front axle.

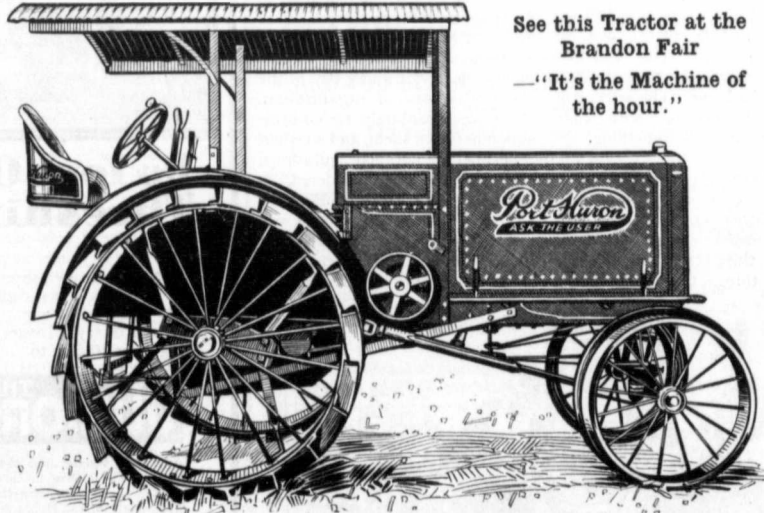
Belt Pulley—14-inch diam., 8-inch face, 650 to 1,065 r.p.m.

Plowing Capacity—Recommended for three 14-inch plows.

Wheel Tread—Front 52 in.; rear 56 in. Front Wheels—34-inch diam.; 6-inch face. Rear Wheels—56-inch diam.; 10-inch face. Total Length—13 feet.

Total Width—6 ft. 3 in. Total Height, including canopy top, 5 ft. 9 in. Wheel Base—7 ft. 9 in.

Weight—Without fuel and wheel lugs, but with canopy top, 5,700 lbs.



Showing Pulley side of Port Huron Farm Tractor

See this Tractor at the  
Brandon Fair  
—“It's the Machine of the hour.”

**Port Huron Engine and Thresher Co., Port Huron, Michigan**

Established 1861. Plant covers 20 acres of buildings

WESTERN CANADIAN DISTRIBUTORS:

GENERAL UTILITIES COMPANY,

102 INDUSTRIAL BUREAU, WINNIPEG

that only twice a day milkings would be allowed, in order to give the ordinary farmer, who cannot get much help, an even chance with the specialist, who considers only the results achieved, the cow to freshen within 12 months of the last calf.

G. A. Brethen asked why the R.O.P. was under fire, and nothing was said about the R.O.M., urging that all be put on the same basis. The best and truest test," said Mr. Brethen "is the official 1-year test, the next best is the official for a short time, followed by the semi-official for the balance of the year. The R.O.P. tells more truth about the capacity of a cow than any 7-day test can. The ordinary man is bamboozled by the R.O.M. What we want in an animal is the power to transmit her qualities, and you can't transmit the 7-day record, but you can the yearly record."

The upshot of the discussion was, that, while the members appeared to favor the change, nothing could be done independently, and so it was arranged to confer with the other dairy breeds, and bring the matter before the authorities for action.

**Problem of Dairying**

A combination of "reading, thinking, and working," was suggested by Prof. H. H. Dean at the Holstein banquet, as the key to solve the problems of dairy farming. We have many good books on agricultural matters, but it is a rare thing, he said, to find one of them in the average farm home in Ontario.

Ranged alongside this lack of reading, he placed the lack of money, saying "The lack of money on farms is the root of all evil," and adding, "The science of farming is making both ends meet, and having something left over."

But there is a deeper problem than that of money and insufficient returns on the capital and labor invested; a man should be paid for the worry and anxiety, and the things that go to make

a man old before his time. The rewards that go to make life worth living should be the part of farmers and their wives.

Chief among these things, Prof. Dean placed leisure for reading and thought, quoting: "My mind a kingdom is." Unfortunately leisure is not to be had on the average farm these years.

He made a plea for that attitude of mind which would lead a man to develop and improve, and lead him to larger service for his fellow men—and declared that he saw unmistakable signs that this change was in progress. Milk producers were showing themselves to be equal to any emergency, and developed men of broad outlook.

"Our aim," said Prof. Dean, "is to make money out of our farms, but it should also be to make men and women out of our farms."

Among the practical problems of the farm he placed the labor shortage, and predicted that the tractor would be more largely used, in conjunction with larger teams to cut down hand labor, the most expensive labor that we have. The milking machine, too, would be a necessity in a short time.

More care in designing and equipping dairy barns was another point for consideration, and the more extensive use of the milking machine.

In closing he referred to the proposed National Dairy Council for Canada, which will be started in a Provincial Council to be organized at the O.A.C. next April. Prof. Dean referred to the well-organized condition of the dairy industry, arguing that while there was lots of organization, there was absolutely no co-ordination between them, and so when it came to national questions, dairying was not considered.

**Women Will Work on Farms**

That we are going to need women to work on the farms of Canada this year—and that women are willing to go into this



HOPE FOR THE WEARY ONE

Blase Scot: "Come on, Jimmie, let's get out."  
Jimmie (dourly): "No, no, stick it, Willie. It'll soon be over—see, they're sending them on two at a time now!"



**The Gray Tractor**  
WITH THE  
**Wide Drive Drum**  
18-36

**GRAY TRACTOR DESIGN HAS PROVEN PRACTICAL AND EFFICIENT**

GRAY TRACTOR design gives you a high grade, efficient machine that will plow on solid land or on loose stubble land, harrow and disc over newly plowed fields without danger of packing the soil, that can be used to drill in your crop, and after the grain is up, to drag or harrow the young crop. At harvest time it furnishes an even, steady power that can work straight through the heat of the day in pulling binders. In addition to this, it is always ready to hitch on to belt work at any time of the year, and furnishes a steady power that can be started instantly without trouble or expense.

SEE IT IN THE TRACTOR DEMONSTRATION  
BRANDON, JULY 23, 24 and 25

Descriptive Reading Matter Sent on Request

**Gray Tractor Co. of Canada Limited**

307-9 Electric Railway Chambers

WINNIPEG

Alberta Distributor: M. D. PEEVER, CALGARY



**Do Your Own Threshing**

This Book FREE

Do your own threshing with your own help when the grain is just right. Save loss from sprouting if the season is wet. Save loss from shelling out if the season is dry. Insure your grain against loss by hitching your tractor to

**THE HUBER JUNIOR THRESHER**

Any 12-25 tractor runs the Huber Junior Thresher with all attachments. The saving in threshing bills will soon pay for it. Large enough to do your own threshing and your neighbors' if you like. The supply of the Huber Junior Threshers is limited and the output cannot be increased. This year the demand will be very great. To be sure of securing a thresher, investigate at once. Write for "The Farmer's Insurance Policy", describing the Huber Junior in detail.

We also handle the larger sizes of separators made by the Huber Mfg. Co., Marion, O., U.S.A. Write dealer nearest you

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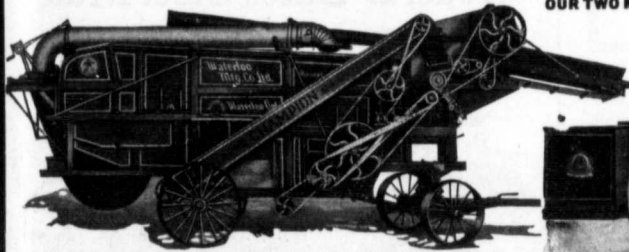
HUBER MANUFACTURING CO.  
Brandon, Man.



# Brandon Exhibition and Tractor Plowing Demonstration **JULY 22nd to 26th**

OUR TWO MODELS WILL BE THERE

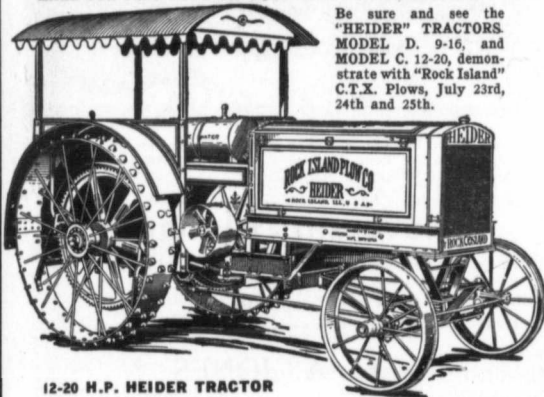
16, 18, 22 and 25 H.P.



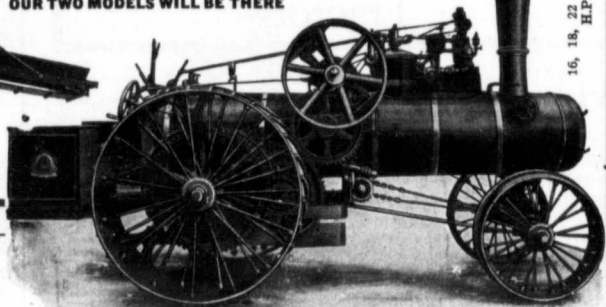
"CHAMPION" GRAIN SAVERS can be furnished in following sizes: 20 x 36, 24 x 36, 24 x 42, 28 x 42, 32 x 52, 36 x 56 and 40 x 62.

MAKE OUR TENT YOUR HEADQUARTERS AT BRANDON FAIR

Be sure and see the "HEIDER" TRACTORS. MODEL D. 9-16, and MODEL C. 12-20, demonstrate with "Rock Island" C.T.X. Plows, July 23rd, 24th and 25th.



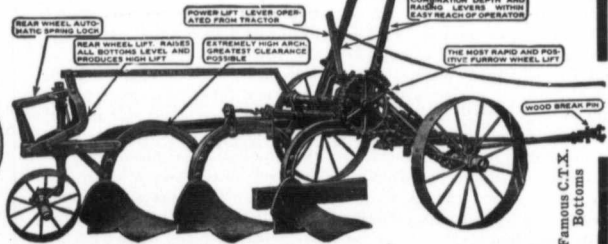
12-20 H.P. HEIDER TRACTOR



"WATERLOO" STEAM ENGINES with High Pressure Boilers will be on exhibit at Brandon. We invite inspection and appreciate comparison.

"ROCK ISLAND" PLOWS will work behind any Tractor. The only 2, 3 or 4-Bottom in the market.

"WATERLOO" SERVICE A PART OF EVERY TRANSACTION.



Famous C.T.X. Bottoms

Winnipeg Representatives:  
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Phone Garry 1388

**THE WATERLOO MANUFACTURING CO., LIMITED**  
REGINA and SASKATOON, SASKATCHEWAN PORTAGE LA PRAIRIE, MANITOBA

field of endeavor—was the statement of E. Cora Hind at the Holstein banquet. Miss Hind took sharp exception to the skepticism of R. W. E. Burnaby, who had expressed the belief that the city girls who are studying agriculture by brief visits to farms near Toronto on Saturday afternoons would be better employed if they would take up house work on the farms.

"There are thousands of women able to do a great deal of work on the farms," said Miss Hind, who had, as a girl, crawled into the root house and pulled out turnips, and who had even had considerable experience with pigs, "but we can't do it if the men sneer at us."

### URGENT NEED FOR HAY

THOSE parts of Manitoba that possess quantities of wild hay have just now before them a very exceptional opportunity. In many parts of Alberta and Saskatchewan there will be so serious a shortage of fodder this year that it will be necessary either to move the animals or to purchase feed for them.

With the urgent need for increased beef production for overseas shipment, it would be deplorable if large numbers of ani-

mals had to be sent to the butcher for killing in a half-starved condition.

In several districts of Manitoba there are large hay meadows that are only partially cut during the average season. In some cases these contain plants whose ripened seeds are undesirable in the hay and the earlier the cutting begins the better.

The Manitoba Department of Agriculture is sending out a poster advising farmers to cut all the hay possible. The poster also places emphasis upon the necessity of a proper fireguard for all hay stacks.

### VOLUNTEER RATIONING IN CANADA

Each province in the Dominion has been asked to form a scheme of rationing for its own people. Thus the Canada Food Board hopes to provide for each province's own particular conditions.

### Those Papers

Villain — Where are those papers?

First Assistant Villain—In the blacksmith shop.

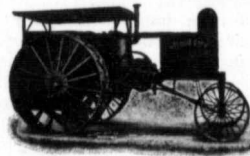
Villain—Ha, ha—I suppose being forged.

First Assistant — No, being filed!

## A Big Snap for Someone

ARE YOU IN THE MARKET FOR A TRACTOR?

Do you want to get one at a big reduction in Price?



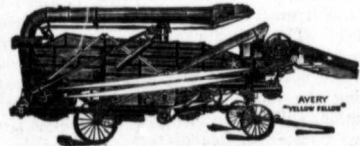
Having sold my farm, I have no further use for my

**40-H.P. FLOUR CITY TRACTOR**

which has been used only a part of two seasons, and which is practically as good as new.

I am prepared to sacrifice it for a quick sale. It is in excellent condition, equipped with Bosch Magneto, extension rims, mud guards and headlight.

There is also a 6 FURROW VERITY ENGINE GANG with the outfit. The outfit is all complete and ready to run.



**FIRST COME FIRST SERVED**

as it must be cleared out at once. The man who secures this rig can do enough work to more than pay for it this season, address

**E. H. HEATH CO.**

Box 3164

Winnipeg, Canada

## Adaptability of Various Tractors

**M**AKING hay on the average farm is not ordinarily considered to be a power proposition. Until the baler is reached none of the apparatus commonly in use is beyond the power of two fairly good horses, unless the hay loader be excepted, and even this can be handled successfully with a good team. It has seemed like a waste of power to use a tractor for mowing and raking, and under ordinary circumstances it may be doubted if tractor power in the hay field is economical.

However, where haying is extensively done, tractor power may be employed advantageously. With properly devised hitches two and three mowers may be pulled. The theory of hay curing has changed during recent years, and air curing instead of sun curing now is considered to be the proper method. This has opened the way for tractor employment in the hay field for the very same reasons that a tractor is advantageous for other farm operations. It can be put to work at any time, and it expedites the processes. With a battery of mowers it is possible to save time and labor, as well as to conserve quality by using the tractor.

This, however, does not prove that the use of the tractor in making hay is an economical procedure on the average farm. The allotment of land for hay on the average farm does not exceed 25 per cent of the area of the farm, and in a vast proportion of instances the percentage is less than this. At the same time the average farm may economically accommodate a tractor capable of pulling a three-furrow plow. To put a tractor of this capacity to pulling a single mower, or a hay rake or tedder, is very much the same, as someone said recently, as taking a sledge hammer to drive a tack.

Yet if the real function of the tractor is likely to be fulfilled on the farm it must be used in the hay field. The ultimate solution, in the opinion of men who have given the development of power farming the most careful consideration, will be the ownership of two tractors. One of these will be the tractor competent to take care of the plowing and the heavy belt work; the other will be a smaller and lighter machine which will be used for haying, harvesting, spreading manure and the like operations.

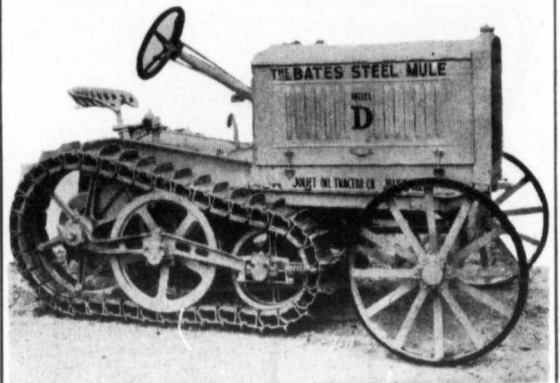
Why this is reasonable to ex-

pect is because on the average farm a multiplication of mowers, rakes, tedders and similar machines hardly is to be expected, and to haul the single machine with the large tractor, while entirely possible, of course, does not appear to be practical. Others who have gone into the tractor business seriously upon the theory that the future equipment for the farm lies almost entirely along power lines are convinced that the solution of the power problem on the average farm ultimately will be the plowing tractor, the motor cultivator and the motor truck. The novel idea here is the employment of the motor cultivator as an intermediate source of power between the tractor and the truck. From this point of view it is to be regarded as a small and versatile tractor. Motor cultivators are being manufactured now which are so constructed that the cultivator beams may be dropped easily and a draw bar attached. This leaves the frame of the motor cultivator, with the draw bar in place of the beams, to be used as a mobile machine for all kinds of work on the farm where light draw bar power is desirable. It is entirely competent to perform any of the work which hitherto a team of horses has been able to handle.

The advantage of this is that the farmer is given a mobile power which is as easily and readily handled as is a team of horses and which has just enough tractive power to handle a binder, a mower, a hay rake, a tedder, a hay loader, a manure spreader and all other implements which require about the same amount of pull at the draw bar. This machine is almost as versatile as is the big tractor, and it can be employed for the tasks enumerated without wasting power. Then the real farm hauling, on the road and otherwise, will be left to the motor truck, which already is finding its way on to the farm and which is destined to much more extensive farm employment. According to this theory, the big tractor, the motor cultivator, and the motor truck completely will motorise the farm and the day of the horseless farm will have come.

It is far more difficult to be simple than to be complicated; far more difficult to sacrifice skill and to cease exertion in the proper place than to expend both lavishly.

## Model D Bates Steel Mule



New Model D Bates Steel Mule—a strictly one-man three-plow tractor; weight 4,300 lbs; burns kerosene at all loads. Will drive a 26-inch separator and with power to spare.

## Neverslip Monarch

We are also distributors for this well known tractor as well as Woods Bros.' Separators and Vulean Tractor Plows.

See our complete line on exhibition at the fairs.

For full information, address—

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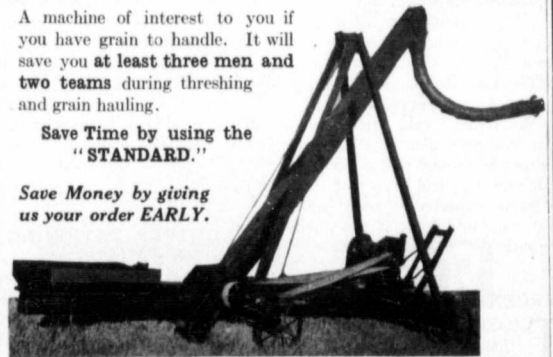


## Standard Portable Grain Elevator

A machine of interest to you if you have grain to handle. It will save you **at least three men and two teams** during threshing and grain hauling.

Save Time by using the  
"STANDARD."

Save Money by giving  
us your order EARLY.



The Cheapest Method is the Proper Method of handling grain.

**SEE OUR EXHIBIT AT REGINA  
FAIR, JULY 29th to August 3rd**

OR WRITE FOR FULL PARTICULARS TO

**Saskatchewan Grain Growers' Association**  
234 Farmers' Building, REGINA



## The Recommendation of Service

The best recommendation that a product can have is the complete satisfaction of its users. Their satisfaction denotes that the service rendered has been of high quality and unfailing worth.

When satisfied users have the pride and enthusiasm over their equipment, which causes them to be outspoken in their praise and recommendations, the product in question has "made good" without doubt.

TRADE **SAWYER** MARK  
Registered

### Endless Stitched Canvas Belts

have been the choice of successful power farmers and threshermen for over thirty years.

They have gained an unrivalled reputation for strength and quality of construction and for endurance despite unfavorable conditions.

YOUR farm must be at its best this season. Assure yourself **CERTAIN** power service by specifying the super-belt **SAWYER**.

# PLEWES LIMITED

*Distributors*

190 Princess St.

WINNIPEG

## Our Young Folks

### AN AWAKENING

Dear Boys and Girls—Have you noticed the great awakening in our department. Our boys and girls have rallied to its defense in a most praiseworthy manner till they have made it second to none. We are delighted with the response. The boy who won the prize this month, Gerald Furber, has written a splendid letter. We trust many boys will respond to his appeal. Cousin Doris is very much interested in the Boy Scout movement, so much interested that she takes the Boy Scout magazine for her little girl to read. It is a good thing for a girl to know about the brave and courageous deeds of boys.

The girls' prize was awarded to Grace Lathrop. Grace was persistent enough to try the second time for the prize and her letter this month is very interesting.

The letter and photo from Elizabeth Koelke nearly won the prize. Remember every month a prize of two dollars is awarded to the boy who writes the best letter, and a prize of two dollars is also awarded to the girl who writes the best letter. Let us tell one another all about our work and about our part in winning the war. Good luck to every boy and girl. Cousin Doris loves every boy and girl in this department. Sincerely, Cousin Doris.

### Boy's Prize Letter

(I trust every boy will read this letter—C. D.)

Holland, Man., June 25, 1918

Dear Cousin Doris:—When I saw your prize for letter writing I thought that if



## The Moody Attends the Fairs

Be sure to see the Moody line of separators, Parrett Tractors and Victor stationary and portable engines at the following fairs—Edmonton, Saskatoon, Brandon, Regina, North Battleford, Prince Albert. Call at our exhibit and ask for the special proposition granted to purchasers of the Moody line who place their orders at the fair. It saves you many dollars. You will also be able to compare the Moody small threshing outfits with the other so-called small threshing outfits and make your choice. There is not enough men in the country to run the big custom outfits this year. Your grain is valuable and must not be left in the stock when winter comes. Buy a Moody separator. Do your threshing when ready. Get your Fall plowing done early and be ready for next year's crop. The more crop the more money. If you have a good crop your threshing bill will pay for your Moody outfit. If you have only a fair crop, by threshing one or two of your neighbor's crops you can pay for your outfit and still get your work done in time. Write for the new Moody catalog, showing the four different sizes of Moody separators, also for full information regarding Parrett Tractors, Victor stationary and portable engines, to

FRANCOEUR BROS.

Camrose, Alta.

THE NEW HOME MACHINERY CO., Ltd.,  
Saskatoon, Sask.

MITCHELL & McGREGOR  
Brandon, Man.



I could win it it would help towards my Y.M.C.A. \$10. My subject this time is about a club, one that carries on its work by mail. Before I start I want to say this is not advertisement but just a chance for boys to prove their talent in writing.

First of all we are called the Lone Scouts. You will see by the name that we are a scout movement. We have tests just like the Boy Scouts but as I said before we take more interest in writing. There are 274,870 Lone Scouts now and there will likely be three or four thousand more by the time this is printed. About 60% live in the States, 25% live in Canada and 3% in Hawaii, 2% live in Porto Rico, 10% are in training camps and in France and the rest are in countries like Trinidad, Nicaragua, British Honduras, St. Thomas and Virgin Isles and other small countries in that region. So you see, boys you have all kinds of boys in different countries to write to. They can write English any of them, and those in Porto Rico will teach you Spanish if you want to learn it. And now about the other writing part.

Here is a sixteen-page magazine called "Lone Scout" published every week. This magazine contains nothing else but literature sent in by scouts. Even the continued story is written by a Lone Scout. The magazine contains a question page, a suggestion page, an athlete corner and all the other departments that boys like, because each department was suggested by a boy or boys. Just think how much it means to have an article of yours printed out of all the other scouts contributing each week and yet you have as much chance as the next one because everyone's articles must be short in order to get as much in as possible. I know one boy who is trying to beat another boy in seeing who can get the most articles in, in two months, writes 20 letters a week to Lone Scout. We get medals for the best contribution. In a town where there are six Lone Scouts a tribe can be formed and have meetings and hikes together. I suppose you would like to know a little bit about me; if you don't, then don't read this. I am thirteen and am trying my entrance at school. I have about 12 correspondents and have 650 different foreign stamps and 30 different coins. I run a small mail-order stamp business and trade stamps for coins, postcard views and other things collective.

I am a Lone Scout of third degree but I haven't a merit medal yet, although I have tried quite a lot.

Now, boys, if you think you would like to join this organization just write to me and I will send you a sample copy and a membership coupon. Please send two cents to cover cost of mailing.

Well, will close for this time hoping I may win the prize. Yours sincerely,  
Gerald D. Furber.

### Girl's Prize Letter

Farmingdale, Sask., June 5, 1918

Dear Cousin Doris:—Well here I am again. Last Wednesday when I was looking at the newspapers I came across The Canadian Thresherman and Farmer. I at once turned to the young folks' page for I was very anxious to see to whom the prize for that month had been given. When I saw that my letter nearly won the prize it gave me courage to write again and try and do better than before.

I am not going to school now because we have no teacher yet. But the secretary-treasurer got a letter last mail-day from a teacher saying she would come if we had no teacher yet. So he wrote to her asking her to come as he had heard from several teachers before but was not able to get any to come out to a school so far from town.

We live thirty-eight miles from a little town called Wadena.

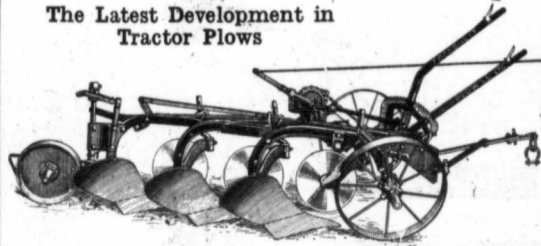
I am in the seventh grade now. I like all my studies excepting history and geography and these two I can not get interested in no matter how hard I try.

But best of all I like drawing. I like to draw funny pictures best. I should like to be a cartoonist some day but then I don't think I will ever be able to draw well enough for that.

I certainly enjoy reading the letters on the young folks' page. They are all so

# COCKSHUTT 2 and 3 Furrow Light Tractor Plows

The Latest Development in  
Tractor Plows



There are more Cockshutt Light Tractor Plows at work throughout Canada and the United Kingdom than any other make.

They have proved the most suitable for tractor work and have performed the service and filled the requirements of the users. Over 6,000 of these plows have been shipped to England alone.

### Controlled From the Tractor Seat—

A single pull of the rope raises or lowers the bottoms instantaneously. The levers are very convenient, and should any adjustment in depth be required, the change can be made without slowing up or stopping the tractor. The power for raising and lowering the bottoms is supplied by the land wheel, and operates by means of a simple, positive and reliable arrangement that works automatically when the tractor driver pulls the cord.

### You Can Hitch the Cockshutt to Any Make of Tractor

Adjustments up and down as well as sideways are provided. The flexible hitch allows the engine to go over dead furrows and uneven ground without altering the depth of plowing or affecting the work of the bottoms. The hitch is stiff and will permit the backing of the plow when necessary.

### Be Sure to See These Plows Demonstrated at SASKATOON, BRANDON and REGINA FAIRS

Mr. E. A. Mott,  
Western General Manager,  
Cockshutt Plow Co., Ltd.

Dear Sir—I purchased from you last fall, one of your 3-furrow Power Plows, which I used for stubble plowing with my Happy Farmer Tractor, and this spring used it in breaking. The plow has given entire satisfaction, and when I purchased a Fordson Tractor this spring, also purchased from you one of your 2-Furrow Junior Tractor Plows, and found it worked exceedingly satisfactorily, with the Fordson Tractor as well. Yours truly, W. L. Parrish.

Cockshutt Plow Co.,  
Regina,  
Sask.

Dear Sirs:—The two furrow fourteen inch bottom tractor plow that I purchased through Messrs. Armour & Campbell of Lockwood, has given the greatest satisfaction. It has the proper weight for perfect work, its adjustments are excellent, it is very easy to operate.

Yours truly,  
W. J. White,  
Lockwood, Sask.

Write our Nearest Branch for Descriptive Folder

## Cockshutt Plow Co., Limited

WINNIPEG REGINA CALGARY SASKATOON

interesting. I thought that little poem was very cute about Betty falling off her chair when she was at the party. I tried to teach it to my two little nieces. Pearl is five years old and Bessie will be three years old the twenty-eighth of this month. I have three little nephews. Their names are Harold Gordon, Fredrick Edward and Fredrick Marshall. I have four sisters and two brothers. My youngest brother enlisted in the navy. He is in Halifax on a ship called the Niobe. My sister Effie and I have our flower gardens planted. Some of my poppies and candytuft are up and pansies in blossom already. I planted fourteen different kinds of flower seeds. Effie and I each have a flower garden of our own and we are going to see which will have the prettiest garden.

Father has nearly all his crops in now. He had to plow nearly all the land before putting the grain in. On the twenty-fourth of May we got quite a bit of snow. It snowed and was cold all day. Lots of little birds died from hunger and cold. I put wheat out by the henhouse for them to eat and it seemed as if birds came from everywhere because there was such a crowd of them.

The window upstairs I left open and some little swallows came in to get warm. One little gray bird fell in a pail of milk that was for the pigs. I took him in the

house and washed the milk off and set him in the window to dry. His feathers dried and he hopped around real lively but after a while he died.

I take care of the chickens this summer. I made coops and set nine hens. Four of them have chickens now. They have forty little chickens. The eggs under two hens are to hatch to-morrow. I am the chore boy these days. I carry in all the wood and water. I go for the cattle every night and milk three cows and feed and take care of a little calf. I give the little calf milk, and water to drink and hay and oats to eat every day and tie her out on the grass so she can get plenty of grass to eat.

One day she broke her rope and ran away down in the field but after she had run around for awhile she came up to me and I caught her.

I have a cow of my own. My father gave her to me when she was a little calf.

Well I must stop for my letter is getting so long. Please forgive me Cousin Doris for writing so much but when I start writing I nearly forget to stop. I do hope you will think this letter better than the first one I wrote. I guess you will not think it is good enough for to get the prize but I have done the best I could. Well I will close, hoping I will have better success than before. Your loving friend,  
Grace Lathrop.

Daysland, Alta., June 1st, 1918  
 Dear Cousin Doris:—I am also a reader of the Boys' and Girls' Club. I am very interested in their letters. I did not join any other club so I thought I would write a letter to Cousin Doris.  
 We did not have any school since Christmas so papa bought a farm close to Daysland school and I like our school very much. They have a school down there now but I would rather go to this school.



"BIRDIE"—Our Colt

Last year we had a little colt and its mother died. Papa did not know what to do with it so he gave it to my brother and he fed her on cows milk until she was about four months old. The colt will still drink milk if we give it to her. The colt's name is Birdie. That was her mother's name too. We have four little colts now. We had five but one died last night. I am sending a photo of Birdie. It is not a very nice photo but that is all we have. We also have three little geese and twenty-four little chickens.

I must close because my letter is getting long. Hoping I'll have success. I am 12 years old and am in grade IV. Well bye-bye Cousin Doris,

Elizabeth M. Koetke.

Tisdale, Sask., May 26, 1918  
 Dear Cousin Doris:—I read your most interesting corner for the first time last week and decided to write. The little boy that got the prize must be a fine little man. It does seem wonderful to think how he can work at his age. His mother has set a grand example for more of us young girls to follow in this time of need.

We have at last got our school open. It has been closed for a long time. We needed it so badly. The most of the children were growing to an age that they could help at home.

We are milking seven cows now. There is two cows run with four calves. We are going to milk the rest of the cows that come fresh. I have a cow and two calves. My cow was born on my birthday. It was so near frozen we did not expect it to live but it has two calves now.

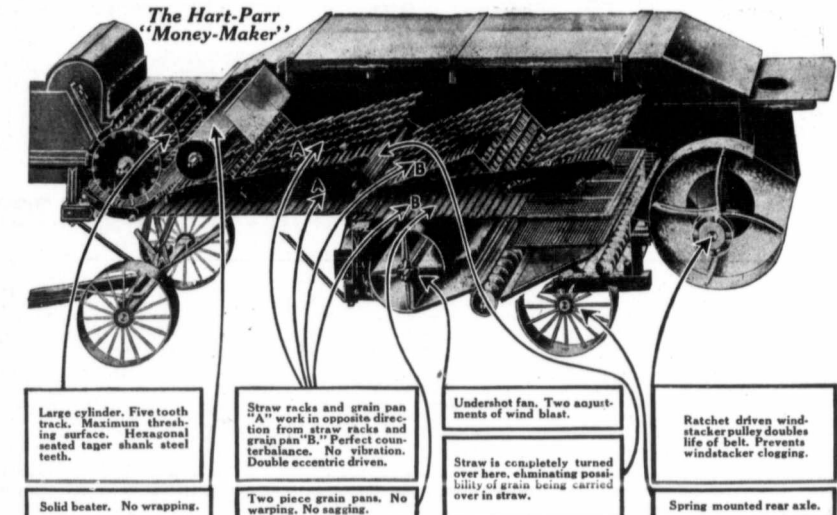
I am raising chickens now. I have sixteen out. I hope I have good luck with them.

My little brother and I put our garden in a long time ago but the weather has been so disagreeable there is none of it up. The cabbage in the hot bed is doing fine. We have four little pigs now and a few others to fatten. I like sheep very well but we haven't got any. I am going to try and get some this summer.

Do you girls like the overalls to wear? I am going to get a pair. They'll just be grand to ride horseback and work out of doors. I put on my brother's now sometimes to milk and work in the hen house. I am going to white wash the hen-pen and fix it up in grand style.

I have a little bird in the house now with its wing broken. It was in the pig-pen this morning. I think it will be well in a day or so and I'll let it out then. I don't think any person could be mean enough to harm a sweet little bird. I have some flowers in the house, one is in bloom. It is a pretty pale pink.

Isn't the war awful? I think it must be getting worse all the time. I wish I could



- Large cylinder. Five tooth track. Maximum threshing surface. Hexagonal seated taper shank steel teeth.
- Straw racks and grain pan "A" work in opposite direction from straw racks and grain pan "B." Perfect counterbalance. No vibration. Double eccentric driven.
- Undershot fan. Two adjustments of wind blast.
- Ratchet driven windstacker pulley doubles life of belt. Prevents windstacker clogging.
- Solid beater. No wrapping.
- Two piece grain pans. No warping. No sagging.
- Straw is completely turned over here, eliminating possibility of grain being carried over in straw.
- Spring mounted rear axle.

# HART-PARR

## CAN YOU AFFORD TO LOSE GRAIN?

Surely not. Then use the Hart-Parr "Money-Maker" which threshes and separates thoroughly—the separator that saves more of the grain and makes threshing easier and more profitable.

Study the placards above—see how the Hart-Parr "Money-Makers" are special feature separators. One-half of the straw racks and grain pan is balanced in motion against the other half. Then the "Money-Makers" are double belted and double eccentric driven. All this means perfect counterbalance and smooth running; the racking effect of unbalanced motion is avoided, side strain is eliminated, durability is increased. Grain pan warping or sagging out of shape is unknown in Hart-Parr "Money-Makers."

At the center of the racks the straw is completely inverted, insuring thorough separation and eliminating carry-over. The Hart-Parr "Money-Makers" have extra large clearance—their capacity is limited only by the number of pitchers at the feeder.

The life of the windstacker belt is doubled and windstacker clogging prevented by the ratchet windstacker drive pulley which equalizes the difference in speed between the cylinder and stacker. Two adjustments of wind blast from the undershot fan permit thorough cleaning under all conditions. Hart-Parr "Money-Makers" are equipped with adjustable sieves and riddles, with belt reel and belt pulley guide, without extra charge.

Hart-Parr "Money-Makers" are durable. They have hardwood sills and are thoroughly reinforced from axles to their arched decks, that shed water like a duck's back. Every joint is a tight fit.

All adjustments are within easy reach on the outside of Hart-Parr "Money-Makers." All oiling is done from the outside.

Hart-Parr "Money-Makers" have many other valuable features. You should know more about them. Drop us a card today for full information, giving the size of engine for which you may want a separator.

### Hart-Parr Tractors

Hart-Parr kerosene burning tractors have been the standard for years. Hundreds are in use today. They mean kerosene supremacy. Not only will they thresh and plow, grade, haul, field work, etc.

We founded the tractor industry, we built the first kerosene burning tractors, and our tractors today are the result of years of experience in building tractor leaders.

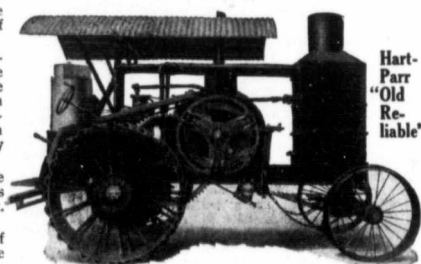
Hart-Parr Tractors are made in three sizes:

The "Old Reliable"—"Our 60."

The "Oil King 35."

The "New Hart-Parr"—3 Plow.

Write us for full information. Special inducement made to dealers handling large sales.



HART-PARR COMPANY, 564 Lawler Street, Charles City, Iowa

HART-PARR of Canada, Ltd., Winnipeg and Regina

do something to help the Allies win but way out on a farm the only thing is to grow more food and I am going to work hard at our garden this year.

My letter is getting long and I must close. If this letter is ever printed it will be a surprise to me, but I'll trust to Cousin Doris, she will know what to do with it. Good luck to all. Bye-bye, your friend, Elsie Herrington.

Maple Creek, Sask., June 24, 1918  
 Dear Cousin Doris:—I thought I would write and tell you what I am doing this summer. It has been awful dry here and lots of wind. There aren't many that has a bit of garden left. I set one of our geese. Mamma told me I could and so when she went to laying I brought the eggs in so

they would not get chilled. I wrapped them carefully and kept them in the cellar. When she wanted to set, she lined her nest with feathers from her breast. I put 11 eggs under her. She set four weeks then eight little goslings hatched out. There would have been nine only one egg got broken but it had a little gosling in it. The other two were bad. I put the old goose and the little ones in a pen and gave them some water and bread crumbs and cracked wheat and picked green grass for them. They were so fluffy and they talk so funny to one another. They hatched the 20th of May and they grow so fast they are feathering out now. They pick lots of grass and don't take much feed. The coyotes don't bother geese like they do chickens, and they are no trouble. They are put in their

pen every night. They bring a good price when they are big.

Well this is enough for this time.  
 Age 12 yrs. Verona W. Pendry.

When the train stopped at the little Southern station the tourist from the North sauntered out and gazed curiously at a lean animal with scraggy bristles, which was rubbing itself against a scrub oak.

"What do you call that?" he asked curiously of a native?  
 "Razorback hawg, suh."  
 "What is he doing rubbing himself against that tree?"  
 "He's stropping hisself, suh, just stropping hissef."

# OUR WOMEN FOLK

CONDUCTED BY  
PEARL RICHMOND HAMILTON

### The Prayer

By Lillian Mayfield Roberts  
Dear God, I am a woman—womanlike,  
No weaker and no stronger than the rest.  
And that is why I ask this prayer to-night  
For help and guidance in the little things.  
If I could feel your hand upon my lips  
On days when I am sick, or merely tired  
Of all the little trivial worrying things,  
Perhaps the stabbing word would not dart  
out  
To wound my child, and turning, cut my  
heart.  
I do not want to nag. I only want  
Guidance to understand that each of us  
Has his small troubles, and that mine are  
not  
Harder in truth than other women bear.  
And when the little troubles vex me so  
I am too prone to turn and cry them out  
In maudlin tears upon my husband's  
breast.  
Keep me from this—he has enough to bear.  
And one more prayer that I would make  
to-night:  
If I could only see the difference  
Between the really big and little things!  
I do not ask for better—or for more—  
I only ask for this. God keep my soul  
From growing petty. It will be enough.  
Help me in this, and I am satisfied.

### The Soldier

By Andrew Edwards  
He needs no tinsel on his coat,  
No medal, star or braid;  
No outward sign of rank or worth  
To keep him unafraid.

The soldier carries in his breast  
A living accolade  
The dear medalion of her face,  
The noblest medal made!

Her faith, her hope, her tenderness,  
Her human fear and pain  
Are like a glory on his soul  
To comfort and sustain.

In honor and in pride he goes  
To face his duty grim  
Transplanted to himself, he feels  
The heart that beats for him!

### Woman

A sermon preached a few Sundays ago by Rev. J. B. Sileox in honor of the memory of his wife, was so full of helpful inspiration that I want to share it with our readers. Dr. Sileox is more than seventy years young. He is the youngest man I know judging time by clearness of intellect and beauty of soul vitality. I never hear him speak without being more enthused to make the most of my opportunities, so full of healthful mental tonic are his thoughts and utterances. This sermon was preached on the forth-eighth anniversary of his marriage. His wife passed into the other life less than a year ago. The subject of the sermon was "Royal Womanhood." Following are some quotations from the sermon:

"The Scriptures say, and I love to repeat the words, 'Favor is deceitful and beauty is vain, but a woman that feareth the Lord she shall be praised.' It is well at times to praise women, for the beauty and goodness of their life and character. There is many a husband in the land that is remiss in this matter. It is well to have a 'Mother's Day,' but I suggest a 'Wife's Day,' when husbands shall specially think of what their wives are to them, and give to them some fitting expression of their affection and esteem. 'Husbands love your wives' is a too much neglected passage of Scripture in some homes. If there is one vow a man should religiously observe more than another it is the vow he takes at the

marriage altar to 'love and to cherish.' I like that little gem sentence in the Bible, 'She became his wife and he loved her.' The command of God, 'Let none deal treacherously against the wife of his youth,' needs to be recalled to men's memory and conscience to-day, along with the apostolic counsel, 'show piety at home!' The meanness of all mean men is the man who is mean to his wife. The man who is untrue to his wife is not fit to be door-mat to a dog kennel.

"One of the most beautiful pen portraits of womanhood found in the Bible is of a wife and mother. 'The heart of her husband trusteth in her, and he shall have no lack of gain. She doeth him good and not evil all the days of her life. She stretcheth out her hands to the poor and needy. All her household are clothed with scarlet, her clothing is fine linen and purple. She openeth her mouth with wisdom, and the law of kindness is on her tongue! She looketh well to the ways of her household, and eateth not the bread of idleness. Her children rise up and call her blessed; her husband also, and he praiseth her, saying, many daughters have done worthily, but thou excellest them all. Give her of the fruit of her hands and let her own works praise her in the gates.' The Bible everywhere gives honor to womanhood. Wherever the Bible goes you find a higher esteem and station for womanhood. Study the women of the Bible and learn the place of honor and service God intends women to occupy in this world.

"From among the many women of the Bible I select as character and career of Esther as a basis of some things I wish to say on the worth and work of woman. This young woman on whose head was set the royal crown may not have been ideal in all respects, but she did possess elements of character every woman must possess who would fulfil life's highest mission.

"The Book of Esther is a divine drama, unsurpassed in its brevity and completeness as a piece of superb literature. It is the only book in the Bible that has not in it the name of God. But though it does not contain the name of God it is full of the Providence of God. In this respect it explains much of life about us."

Dr. Sileox here gives the story of Esther. He continues:

"Vashti was deposed. She passes off the stage, and we hear of her no more. But we will honor her memory and applaud her deed, and tell the story to

our daughters that they may learn how divinely beautiful is the bloom of modesty on young human cheeks. Her divorce was a tribute to the purity of her character and a testimony to the perfidy of the man who divorced her.

"It would be in the interests of pure and undefiled religion of some if the young women who walk our streets would take a leaf from the life of Vashti and refuse to dress in a way that exposes their persons to public gaze. Multitudes of women, young and old, black and white, plump and scrawny, single and married alike, have thrown modesty overboard in seeing how much of their bosom and legs they dare expose to public view. Ninety-nine men out of every hundred know that this exposure is a lack of modesty, and a lack of modesty is a lack of womanhood. No woman with a refined and exalted ideal of womanhood will dress in the immodest fashion that prevails with many to-day. A woman without modesty is a diamond without brilliancy, and a diamond without brilliancy is of no more beauty or worth than a chunk of mud. The beauty of modesty like the beauty of holiness is woman's crowning glory, and when she throws it away, she throws away the scepter of power over man for good. Dryden said of one of Shakespeare's characters, 'Her person was a paradise and her soul a cherub to guard it.'

"Scotland's poet-preacher, L. Maclean Watt, chaplain to the Gordon Highlanders, speaking of the men at the front, tells us that he has been with many of all kinds at the lat in the low dark lane that runs between the eternities, and that few have died without a whisper of the divine, and none that I can think of without a woman's name upon their lips. It is clean womanhood that keeps manhood clean. If women would only remember this they would not make such an exhibition of themselves and lower themselves in the thought of men. A writer in The N. A. Review for this month asks 'Is there a man married to a woman of fashion who in the last five years has not felt a pang of shame at his wife's appearance?' I commend that Catholic bishop who refused the communion to women unless they came in decent, modest attire."

Later in referring to Esther in the sermon he says:

"By the moral venture she made that day she set a standard of heroic womanhood that women in all ages must emulate and imitate if they would reach the highest possibilities of womanly character. She

not only elevated womanhood, but by her personality and example she elevated manhood. Every woman who lives on a higher level of intellectual and moral life, lifts man to higher levels. The men of a nation are not likely to rise higher in purity or patriotism than the women of a nation. The moral advance of the world rests largely on the intelligence and character of the wives and mothers of the land. If woman sinks in moral courage, moral beauty, moral elevation there will be a slump in manhood pitiful to contemplate.

"The woman's cause is man's, they rise or sink Together, dwarfed or God-like, bond or free."

"The modesty and chastity of a sister has often kept the brother up to a high standard of personal purity. The memory of a mother's holy life has kept many a man from atheism and sensualism. The sweet and gracious womanhood of a wife has saved many a man from moral shipwreck. Blessed is the man who has the steadfast love of a true devoted wife. Tennyson knew what the influence of a pure and noble woman meant for higher manhood when he wrote:

"Happy he with such a wife. Faith in womanhood  
Beats with his blood, and trust in all things  
high  
Comes easy to him; and though he trip  
and fall,  
He shall not blind his soul with clay.

There is no more subtle master under heaven  
Not only to keep down the base in man,  
But teach high thoughts and amiable  
moods,  
And courtliness, and the desire of fame,  
And love of truth, and all that makes a  
man."

"King Arthur was therefore wise when wanting to create a glorious company the flower of men to serve as models for the mighty world, he selected his knights and made them lay their hands in his and swear:

"To lead sweet lives in purest chastity,  
To love one maiden only, cleave to her,  
And worship her by years of noble deeds,  
Until they won her."

"There is good philosophy and good religion in this. Men are not likely to rise to nobility of character, and nations will not rise where there is not a high regard for womanhood. The Moslem religion will never elevate a nation because it dishonors woman, puts her in a harem, and declares that intellectually, socially, religiously she is the inferior of man. Mormonism and Mohammedianism are very much alike in this matter. Polygamy everywhere and always means the inferiority of women and works disastrously for manhood and nationhood alike. Men who entertain low thoughts of woman doom themselves to lowest levels of character. A man's attitude toward woman is an index of his character. Mothers should teach their sons to lead lives in purest chastity, which is God's law for man as truly as it is for woman.

"Ruskin was right in affirming that 'No man ever lived a right life who had not been chastened by a woman's love, strengthened by her courage and guided by her discretion.' When some one asked Charles Kingsley the secret of his life, he answered 'I had a friend.' That friend was his wife. It is true to say that back of every man of genius that ever lived may be found some woman who directly or indirectly was the inspiring power of his life. It is also true that back of the ruin of many a man has been a woman of weak moral character. King Arthur had to say to Guinevere, 'Thou hast spoilt the pur-



WAR BREEDS BAD "MANNERS"

"My! Mrs. Huggins, look at that sheet of yours!"  
"Yes, when my son was 'ome 'e 'adn't sleep' in a bed lately and 'e forgot to take 'is spurs off."



pose of my life.' Blessed beyond compare is the man who has the companionship through life of an intelligent, steadfast, affectionate, noble-souled wife. It is the highest earthly good God can give a man. "Fame is a steep which few may climb, But duty is a path that all may tread."

"In the commonplace routine of daily life, in the monotonous drudgery of the kitchen, in the patient toil of the school room, in the exhausting service of the hospital, in the noisy din of the factory, in the hum-drum work of the office, in the wearing work of the store, you may be faithful to duty. In the sight of God your devotion to duty is as beautiful and your service to humanity as acceptable as though it were rendered by a queen in the arena of thrones. All service ranks the same with God as Browning sings in Pippa Passes. The Gleaners of Millet are as beautiful as the Madonnas of Raphael. There are women in humble homes doing their duty as heroically as Esther on the throne. There are women all around us for whom crowns are prepared in heaven.

"In the service of humanity use the gift you have, and dream not of greatness afar. The highest compliment ever paid to Sarah Cooper, that eminent kindergarten teacher, of San Francisco, was when a poorly clad little girl in the slum region of Tar Flat said to her, 'I likes you, Mrs. Cooper, cause you're the only one who ever grins at me.' That noble woman never passed the girl in the slums without a glad good morning and a smile which brought some of heaven's sunshine into the desolate life of the little outcast, and waked up the possibilities of noble womanhood dormant in her soul.

"It was only a glad good morning, As she passed along the way, But it spread the morning sunshine, Over the live-long day."

"Do not imagine you must have great wealth or great gifts before you can render service to humanity. If you cannot do anything else go and grin at some neglected, heart-hungry little child, and offer the prayer 'O Master, let me walk with Thee, in lowly paths of service free.' When a woman asked Carlyle how she might render some service to the world, the wise old man told her to hunt up some lonely, neglected Scotch lassie and be kind to her. Go and do that, and Jesus will say inasmuch as ye did it to her, ye did it to Me.

"'Ain't you cold, Johnny?' said a kind-hearted woman to a newsboy on the street.

"'Well I was, Mrs., before you spoke, but I am all right now.'

"In a queenly fashion go and do something for the betterment of humanity. When you knit a pair of socks for a soldier over the sea, write a little note of appreciation and cheer and put into it, and tell him you made a prayer for him, that his feet may be kept in the way of righteousness and religion."

I wish I had space to quote the entire sermon by Dr. Silcox. It is a sermon made possible only through life companionship with a noble woman.

**Practical Ideas on Conservation of Clothing**

By Mary L. Stoddard

THE first exhibition of made over clothing ever held so far as we know was last April in Washington, D.C., during the Convention of the National Congress of Mothers and Parent-Teacher Associations. The idea was to demonstrate what can be done with two articles of men's wearing apparel heretofore considered useless, namely men's cast-off shirts and socks. There were thirty-four different styles of clothing made from the shirt, including ladies', boys' and girls' shirt waists, children's dresses, rompers, pajamas, jackets for men, children's and ladies' aprons, children's petticoats and drawers, bibs and caps, etc.

In making garments from the shirt we always try to use the buttons and the buttonholes, as they are, either for front or back of garment, thus saving time and work. Of course this is not always possible. Also turn best part of shirt where there will be most wear. Stocking for children were made from men's socks, and stockings and tights for children from women's stockings.

That the exhibit met with approval has been fully demonstrated, as we have had calls for it not only from parent-teacher

# "Silver Gloss" STARCH



for all Home Starching

The starch you can depend upon for fine work on fine fabrics.



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associations but from women's clubs and institutes in different parts of the country, showing the desire to conserve clothing as well as food. Most women can make a garment from new material but comparatively few have any idea of making over or utilizing material at hand.

My experience has been, in giving away clothing that needed a patch or a few stitches, that the garment was put on and worn without mending and was soon gone, while if it had been made over it would have lasted much longer.

We do not pretend to say that garments made from cast-off clothing will last as long as new material, but if the garment is well made it will last as long if not longer than much of the new material that may can afford in these times of high prices. As a rule the average housewife has been reluctant to pass on to others the many little ways of economizing she has found effective in her home, fearing she might be considered penurious. That time is past. The slogan now is to save.

It is time to look through our closets and boxes and bring to light the clothing that is not being used and that is, perhaps, only furnishing food for moths. If it were possible to conserve and utilize all the cast-off clothing, every man, woman and child could be properly clad.

There should be a sewing club in every school where women could bring their sewing and exchange ideas and be helped to select suitable patterns for making new garments as well as making over garments. In this way cast-off clothing can be conserved, besides helping the needy during these trying times.

The day of isolated work for women has passed. Let the woman who has no children to sew for help the overworked mother of many. It would be of mutual benefit. We all know that a child can study better and accomplish more if properly clad. These sewing clubs might meet once or twice a month. Women could bring cast-off clothing to be made over either for their own children or for some charitable institution. There are many mothers who spend much time sewing cheap lace on their children's clothing, when it would be better to put the price of the lace in material more serviceable which would look better and last longer. There is our opportunity through the sewing clubs to get simple dressing in the schools.

Our grandmothers used to piece quilts from the scraps left from making new garments. We have thrown them away. They can be utilized for trimmings in making new garments or when making over garments.

In the near future there may be in every city a municipal building where cast-off clothing may be sent to be made over and utilized to the best advantage.

"See what I've got!" cried Johnnie, a Cockney boy, as he came running from a chicken-coop holding in his hand a china egg.

"Oh, go and put it back!" cried his six-year-old sister.

"That's the egg the hen measures by!"

**Why risk a broken arm from BACKFIRE?**

The fact that you have been lucky so far, won't ease the pain any, or pay your doctor bill, when you do get hurt.



Will YOU be next?

**At Last! You can take the Kick out of your Ford**

**With a Bear Crank Release**

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How many do you know in your own neighborhood who have carried their arm in a sling, and unable to work for a couple of months because their crank caught them?

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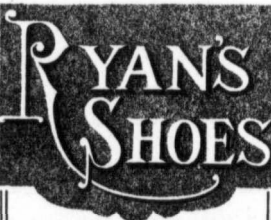
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**WILL LAST**

as long as the very best of tanned leather will last. They are not the lowest priced "shoes" sold, but in QUALITY—FIT—STYLE and

**VALUE**

they are out-classed by nothing on the market. When you buy a RYAN SHOE, you buy FORTY YEARS OF CHARACTER and EXPERIENCE to the last shoe-maker.

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**RYAN SHOE**

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WINNIPEG

**Positions**

**For Boys and Girls**

THERE is a marked scarcity of office help in Winnipeg, due to the heavy enlistment of office men. Success Business College graduates are given preference. The Success trains and places more certificated Stenographers, Book-keepers and Commercial Teachers than all other Manitoba Business Colleges combined. We employ 30 certificated, expert teachers (three times as many as employed by all local competitors) and own and use 150 typewriters. Our splendidly equipped premises have been highly commended by the Winnipeg Board of Health. The Success is the only school employing a Chartered Accountant who devotes all his time to teaching in day and evening classes; leads in graduates and gold medalists; places its students. Open all year. Enrol any time. Train in Winnipeg where positions are plentiful and board less expensive. Write for Free Information.

**The Success Business College, Ltd.**

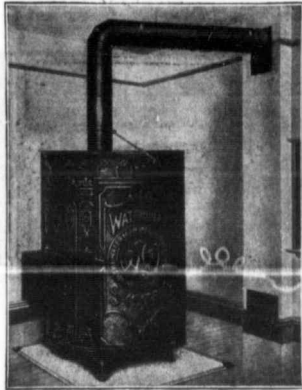
WINNIPEG - MANITOBA

**WANTED**—To hear from owner of good farm for sale. State cash price, full particulars. D. F. Bush, Minneapolis, Minn.

**WANTED**—To hear from owner of three-ring rig for sale. C. C. Shepard, Minneapolis, Minn.



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**Waterbury Heater**  
Made in Styles Suitable for either Old or New Buildings

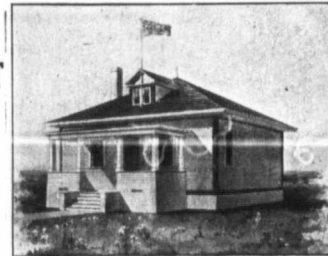
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For Schools without Water Systems

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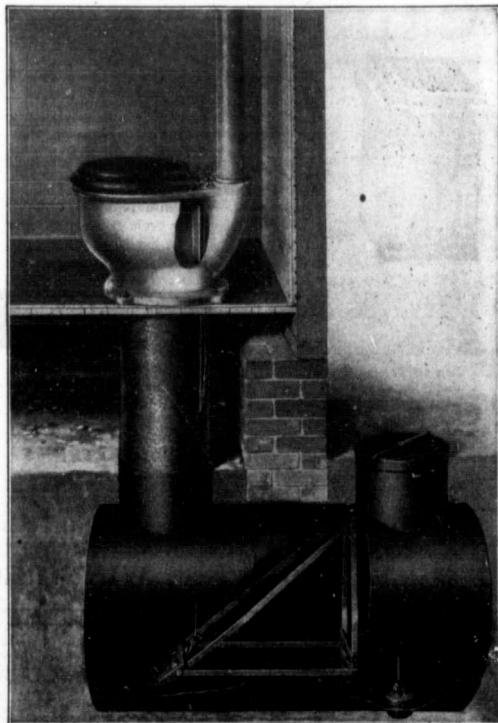


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Satisfy  
through  
**MERIT**

## We Build School Houses and the Better Class of Farm Homes

WRITE FOR OUR PLAN BOOKS



### THE WATERBURY SANITARY CLOSET

*For Schools and Homes Without Running Water*

"The greatest improvement offered to Rural and Village Schools since the Heating and Ventilating System."

It looks like a flush Closet. The Bowl is of the same vitreous china and the Seat is the same. But the Bowl does not catch the waste nor wash it out by flushing, the opening in the bottom being large enough to allow the waste to pass directly into the Vault where it is immediately attacked by a powerful Caustic Chemical.

As no water is used for flushing, the Vault needs to be emptied but once or twice each year.

**Clean Sanitary Attractive Odorless**

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## Womens' Winnings

### HOMEMAKERS CONVENTION AT SASKATOON

A convention producing nation building results was recently convened in Saskatoon by a large delegation of Canada's progressive and talented women.

Miss Delury, the director of the women's section of the extension department of the University of Saskatchewan, has done much in bringing about "the finding of companionship and the healing of home sickness," in planning and working for the convention of the Homemakers' clubs. The beautiful hospitality of the University of Saskatchewan has created a warm affection among the people of Saskatchewan, for the influence it radiates in intellectual inspiration, practical demonstration, and human brotherly and sisterly interest.

Miss Delury in her address gave the following statistics:

"Saskatchewan has now 195 Homemakers' clubs, 15 new this year, and in many of them short courses during the year were instituted. Many have rest rooms and community centres; 63 have the circulating library and 25 communities have taken advantage of the University library grant. Medical inspection at schools has become general where there are these clubs and work for schools such as introduction of sanitary measures as individual drinking cups, towels and noon lunches have become so common as scarcely to cause comment. Four communities have women trustees, members of the Homemakers' clubs. War work, which the members had reported through the clubs, has amounted to \$48,000 worth."

Mrs. Dracuz said the Homemakers' clubs were regarded as the "right arm of the Saskatchewan University."

It is a matter of extreme regret that the Editor of this department can not attend the Saskatchewan conventions but "the children" in her home make it impossible. We would like some of the delegates to send us their impressions of the convention. What was the most helpful feature of the convention to you as a woman citizen? We know there were many. Let us have reports for our department from the Homemakers, the Women's Section of the Graingrowers, the United Farm Women of Alberta as well as the Home Economics of Manitoba. This department is an open forum for women and all that interests them.

**T**HE Women's War Conference has recently issued its report. The following resolutions were a few of the many passed. Under the section on Public Health and Child Welfare:

1. That the Conference of Canadian women in session at the request of the War Cabinet consider that one of the first and most essential things needed by the country at the present time is the establishment of a Federal Department of Health, and request that immediate steps be taken to have such a department established.

2. That in view of the terrible wastage of war and of the excessively high death rate among infants in Canada and of the ravages made by venereal diseases, it is essential, in order to secure the maximum human efficiency in the country, that immediate steps be taken by the Government to conserve infant life and to deal with the problem of venereal disease.

The further discussion of the section on the scope of its work ranged over many subjects, i.e., registration of births, milk supply, feeble-minded, parental care, pensions for mothers, education of children in sex matters, child labour on farms. The section, however, decided in view of the short life of the conference to confine its recommendations to matters in which the need of prompt action is vital to the welfare of the nation and the above resolutions were passed as pointing out the most urgent needs of Canada at present in the matter of public health.

Under the section of Industrial Activity of which Mrs. Chas. Robson was convener we quote three of the resolutions passed:

1. That women could be successfully

employed in the following occupations, thereby relieving men for necessary war work; the civil service; railways; electric and motor transportation; building trades; food production and manufacture; printing and allied trades; wood working; jewellery manufacture; telegraphy; certain departments of shipbuilding, and that women could also be employed as porters and elevator operators; delivery wagon drivers; electrical operators; waiters in hotels and restaurants. Women might be employed in a Women's Auxiliary Corps for service behind the lines as is done in the Imperial Army.

2. That women should be employed in those industries on the terms of equal pay for equal work, and with a careful supervision of hours and conditions of labour, especially for the purpose of conserving potential motherhood. We place ourselves on record in favour of the principles of minimum wage for women. We would respectfully suggest that any wage board or adjustment bureau which may be appointed, either federally or locally, should include women.

3. That the training necessary for women before they can be employed in various trades can be provided by technical schools, vocational training night schools, agricultural schools and any other agencies which may exist or be created.

The section on Agriculture and Production, with Mrs. H. W. Dayton as convener passed the following resolutions:

1. That women could be much more extensively employed in outdoor work on farms, in all classes of work, the only reservation being that it is undesirable that they do much pitching of sheaves of either grain or hay.

2. That it is not reasonable to expect farmers who are being asked to produce to the utmost to take time to train wholly inexperienced help, be they men or women. The committee, therefore, suggests that the proper place for training is on farms attached to agricultural colleges, the experimental and demonstration farms, and the farms in connection with such government institutions as asylums, jails, etc. There is a sufficient number of these in every province to furnish places of instruction for several thousands of women during the coming season. Instruction in these schools should be free, including board, but should carry with it the obligation of service in farm production, for say, a period of at least a year.

3. That the Government, or the War Committee working through established bureaux, should exercise some control of wages for women working on farms. Ontario and British Columbia proved last year the tendency to exploit woman labour. The committee consider that it would not be reasonable for women, without previous training, during their first season to receive the same pay as experienced farm help, but they should be worth as good wages as are now paid for inefficient casual male help. For a second season they should receive the same wages as are paid to experienced male farm hands.

4. That in view of the need of help in farm kitchens, and of the fact that the proposed National Registration may come too late to be of service in finding help for farmers' wives this season, the committee urges that for this purpose a volunteer registration be taken either by the War Committee or the new Registration Board. This registration should call for volunteers for service in farm kitchens as a special war service. The registration to be taken through a form to be published in all the papers of Canada in English, French and foreign languages.

5. That the Government establish, at convenient centres, short course training schools in practical housework, under farm conditions as they exist, in both East and West. This training to be given free, including board, but to entail an agreement of service in farm housework for a period of at least one year. The need of this training is essential in view of labour conditions among women in Ontario, where curtailment of manufacture due to war conditions and the decrease of munition contracts is throwing many women out of

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Those things called dear are, when justly estimated, the cheapest.

—John Ruskin

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if they are lined on the inside with our hard burned flue lining. Not only does the lining of a flue add to its safety from the danger of the flue cracking, but also from the possibility of soot fires.

The inside of a flue being smooth, it leaves no place for soot to gather, and for this reason it is next to impossible to have a chimney fire.

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BUILDERS' SUPPLIES OF ALL KINDS  
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**FOR SALE CHEAP**—10-20 h.p. Case gas engine with Grand De Tour plow, 3 stubble and 2 breaker bottoms with extra shares. In good condition. Snap at \$1,200, complete. H. Stainforth, Aldersyde, Alta.

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**IN PERFECT ORDER**—Aultman-Taylor 30 x 80 tractor. A real bargain in one of best engines built, but don't answer this ad. unless prepared to inspect the engine. Address C., Box 3184, Winnipeg.



# SAVE FOOD BY HOME CANNING

Everyone now knows that the conservation of food is a very vital part of our war duties. "Food is Ammunition." We are asked to save it and to utilize the largest possible proportion of perishable food in our own land, sending exportable foods to our Soldiers and Allies overseas.

In our "War Gardens" we are now growing tons of vegetables that can best be saved for winter use by home canning. This will reduce the demands upon exportable tinned goods, and these will be available for shipment abroad.

To ensure success in home canning, the Manitoba Department of Agriculture is giving practical canning demonstrations by experts at 238 places within the Province during the summer months of 1918.

**"The Food Crisis is Grave and Urgent Beyond Possibility of Exaggeration"**

**SIR ROBERT BORDEN**

## 238 Canning Demonstrations Every Manitoba Woman Should Attend One of These

Home Canned Goods are Wholesome and Delicious. Apart from the War Needs, Home Canning is worthy of encouragement.

**Watch for Posters** or write the Agricultural Extension Service, Parliament Buildings, Winnipeg, as to dates.

For Manitoba's excellent FREE CANNING BULLETIN, "Canning by the Cold Pack Method," write a post card request to the Publications Branch, Manitoba Dept. of Agriculture, Winnipeg.

**V. WINKLER**

Minister of Agriculture and Immigration.



"More and more we must live on Garden Products. More and more we must give our commercial supplies to our Allies. It is only through the help of our Housewives we can accomplish this substitution."

**CHAS. LATHROP PACK,**  
President National War Garden Commission,  
Washington.

work, who for lack of training are at present unavailable for housework. Women on taking these short courses in general housework should be given a certificate as to their degree of efficiency and wages should be based on that certificate.

6. That whatever labour bureaux or exchanges are established should constitute a board of appeal to settle disputes between employer and employed.

7. That with regard to the employment of boys and girls of school age in farm work, these should not be drafted into farm work during the school period until other sources of labour supply have been exhausted. Further, that in order to make use of the labour of children of school age during the long vacation, the Federal Government should ask the provincial boards of education to adjust the time of the long vacation in each province as nearly as possible to coincide with the harvest time of that province.

8. That the committee deeply imbued with the extreme seriousness of the food situation earnestly recommends to the Government the consideration of the matter of non-essential industries especially in view of the fact that the young boys of our nation are being appealed to for production possibly to their physical injury; boys whom we need to conserve for the future of our race.

Mrs. H. E. Huestis of Quebec, was the first woman to volunteer as a machine operator. She was promoted to the position of the machine barrel straightening department—a position held by no other woman on this continent. She has visited the largest factories in the United States and after returning she inaugurated welfare work, better forms of engaging and classifying help. She has also installed trained nurses, lunch rooms and more scientific methods for efficiency. Now she is superintendent of Women's Labor. A woman of this type assists the Empire.

Mrs. Geo. Hambleton, of Toronto, is the woman who reported on the Canadian millers. She was mainly instrumental in drawing up reports of cold storage companies also.

### Mother's Corner

#### A Thought

"When your daughters have grown to womanhood they will not remember whether their little dresses were made of sheer linen or domestic gingham. Your young men will not care whether the ruffles on the waists they wore in boyhood were stitched by hand or machine, but they will remember the walks and talks, the stories and books, that did so much to make childhood happy."

#### Prize Contest

AS I am writing this while away on a short vacation I have not the letters here for publication this month. We are anxious to make this department helpful to mothers and for this reason we offer two dollars every month, to the mother who sends us the

most helpful letter on the care of children. We also have a prize contest on until the first of October. The mother who sends us the picture of the most perfectly formed child with a description of the care of the child, a prize of twenty-five dollars is offered. The second prize is ten dollars and the third is five dollars. We hope to have the pictures of a hundred babies for this department. Do you not want to see your baby's face in our department? You will help other mothers by sending us your experience on the care of children. One mother writes: "I am glad one farm paper is interested in better babies as well as calves and colts." We feel that this contest will help many mothers and will be a factor in the conservation of childhood. Very great effort is needed at the present time in the conservation of childhood. We must not neglect our children but double our efforts in their behalf. We must help our erring boys and girls and plan in every possible way to improve their condition. We are anxious to make this contest a most im-

portant feature of our department and urge all our mothers to help us for your particular letter may save the life of a little one. Is that not worth while? Then send us the photo of your little one with a description of your care of the child. Give weight, height, chest measurement, and general condition. Every photo will have a place in our department. We all want to see the picture of your little one on our page.

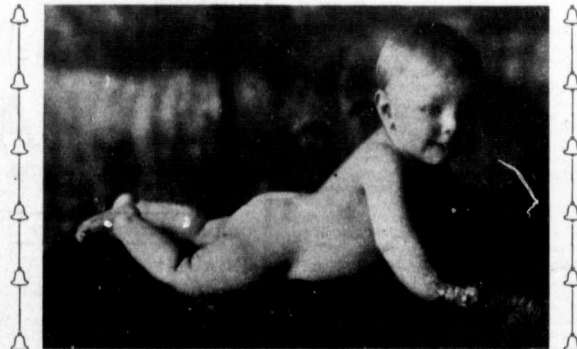
#### Prize Letter

Mekiwin, Man., June 28, 1918

Enclosed find photo of Stuart C. Milne for your better babies' contest. When photographed he was eight months old and weighed twenty-three pounds. His chest measured nineteen inches, height twenty-nine inches. He weighed ten pounds at birth and doubled his weight at three months.

He is a breast-fed baby and until three months was nursed every two hours excepting nights. Then he was fed at eleven, three and six o'clock. After three months I fed him every three hours omitting the three a.m. feeding which gave us a better night's rest. He fussed for a few nights but I did not take him up and he soon settled down to an all night sleep. He had no other food until eight and a half months excepting a little strained orange juice and boiled water. Then I started giving him one bottle a day of Allenbury's No. 3, made a little stronger than directions. I gradually increased his other feedings decreasing the breast feedings thus weaning him without discomfort to either of us. As he was such a husky chap I varied his diet sooner than I did my other baby who lived almost entirely on whole milk until three years of age. I started giving him a little baked potato mixed with milk, arrow root biscuit, part of a coddled egg with bread crumbs and other light easily digested foods. Also crusts to nibble at. My children so far have escaped all the so-called children's diseases, not even having summer complaint. At the first sign of any trouble I give an injection and a teaspoonful of castor oil and put them on boiled water until they are all right again.

In my experience with other babies I



Stuart C. Milne, son of Mr. & Mrs. Thos. W. Milne, Mekiwin, Man., 8 months old, weighs 23 lbs.—measures 19 inches chest; length 29 inches

**"MASTER MECHANIC OVERALLS"**



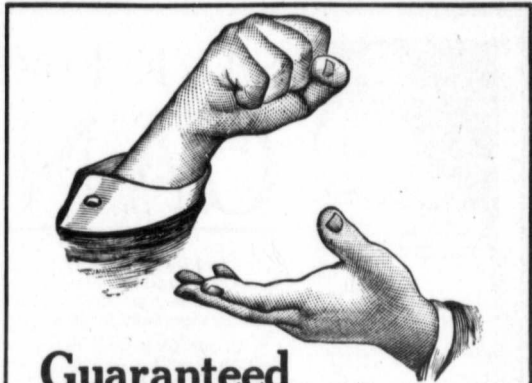
GUARANTEED BY YOUR DEALER AND THE MANUFACTURERS  
See the positive guarantee in the hip pocket of every Master Mechanic Overall.  
**WESTERN KING MANUFACTURING CO.**  
WINNIPEG Ltd.

have found a splendid treatment for the much dreaded summer complaint is a teaspoon of castor oil night and morning and no food but boiled water unless in protracted cases. Then give one pint boiled water, one teaspoon brandy, the white of one egg well beaten, mix and sweeten and give in small quantities. This will do for one day. I saw a child who was very low live on this for over three weeks and recover.

Children can be taught regular habits when three or four months old by putting them on a chair at regular hours. One can use glycerine suppository, or a slight injection to get them started. Like everything else the earlier one starts to teach them the easier it is.

My babies have always slept alone and have been kept out doors as much as possible even in winter time. If they are taken out of doors every day they don't mind the cold and are much more hardy. They are warmly clothed in winter especially the body and legs but dressed according to the weather in summer and with frequent sponge baths and powder rubs they don't mind the heat very much. They are not played with very much but allowed to amuse themselves. I had a box made eighteen inches square and put baby in it at eight months. In a few days he was pulling himself to his feet and walking around the sides. I can go on with my work in other parts of the house and know he is perfectly safe as he cannot fall out. It is cleaner and more free from draughts than on the floor and he can not get into mischief. My little girl learned to walk before she was taken out of it. I could write pages about babies, but must leave room for some one else. I hope this will help some inexperienced mother over that sinking feeling we all know so well when the nurse leaves her in charge of a brand new baby for the first time. It is a good sign to see a farm paper take an interest in better babies for a change instead of better colts and calves.

With best wishes for your success,  
Yours truly,  
L. C. Milne.



**Guaranteed Furnace Results**

- Heat**—sufficient volume to warm the home,  
—even distribution to all the rooms in the home,  
—the right quality to keep the home healthy,  
—at a reasonable cost for fuel,  
—with minimum effort in management, and  
—without dust, smoke, ash or gas escaping into the air of the home.

Those are the results you have a right to expect from your furnace. Those are what you should insist on getting from it.

The Sunshine Furnace, installed the McClary way, gives those results.

It has been getting those results in every kind of home and building throughout Canada for eighteen years.

The Sunshine Furnace when installed the McClary way is sold with the absolute guarantee that you will get those results.

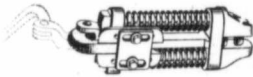
**Engineering Service Free.**

McClary's own heating engineers are at your service when you buy a Sunshine Furnace, to give you free expert advice on your home-heating requirements. Write to the nearest McClary Branch, and ask for particulars about this service. A booklet, "Comfort in the Home," makes clear all the things you want to know about furnaces and it is sent free on request.

**McClary's Sunshine Furnace**

- London Toronto Montreal Winnipeg Vancouver  
Calgary St. John, N.B. Hamilton Edmonton Saskatoon

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**POGUE SAFETY-HITCH**

The only reliable protection for tractors and implements. It saves hundreds of dollars in time and repairs, and assures longer life for them. It is a shock absorber as well as a safety-hitch. The load being pulled by springs takes all the jerk and jolt off the gears. It can be adjusted to unhitch at any weight of load you wish. This prevents break-age.

- Made in three sizes:—  
Small Size, 1 to 3 plows..... \$15.00  
Medium Size, 3 to 6 plows..... 20.00  
Large Size, 6 to 12 plows..... 25.00  
Larger ones made to order

All Hitches guaranteed to give satisfaction. Do not wait for a breakdown. Order one to-day or send for circular to

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148 Princess St. Winnipeg

EXPERIENCED MAN AND WIFE for position on farm. Returned soldier. Holds second class engineering certificate for Saskatchewan. One child of ten.



**TWIN BEAUTIES**  
Archie Ernest Ledgerwood and John Elliott Ledgerwood

Tugaske, Sask., June 24, 1918  
An enclosing photograph of my twin boys taken at six months old.

Their names are Archie Ernest Ledgerwood and John Elliott Ledgerwood.

At birth Archie weighed 6 lbs. and John 6½ lbs. They were very much alike and measured exactly the same.

From the first they were very little trouble. I nursed them until about three months when we began feeding Nestle's Food. I never fussed about waking them to feed at certain hours but they seemed to have a system of their own of waking at regular hours.

Their first teeth began to appear shortly after they were nine months old. They have had very little trouble in getting them.

They did not walk until after the first year but now at 21 months are two healthy, hearty boys trying to talk and do everything they see others doing and who keeps the home cheerful and happy with their sunny presence.

Yours truly,  
Mrs. A. E. Ledgerwood.

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District Passenger Agent  
Winnipeg, Man.

**This May Save Your Baby's Life**

While talking with the matron of a hospital yesterday I asked her for a remedy for dysentery she replied: "We have saved hundreds of babies with this remedy. When dysentery first appears give the child one dessertspoonful of castor oil with ten drops of whiskey every two hours until relieved. Also rub on the stomach a mixture of turpentine and warm water and cover with a warm flannel over which place the hot water bottle."

**For Ear Ache**

My little one suffered from earache. The doctor gave me this remedy: Take a piece of absorbent cotton and sprinkle a little pepper on it. Roll it up and dip in warm olive oil. Then put it in the ear. This will cure a very painful earache. The pepper is absorbed by the olive oil and forms the oil of pepper.

**Teeth Grinding, and What It Means**  
(From Mothers' Magazine)

**F**REQUENTLY mothers ask me why their children grind their teeth during sleep.

Very often it is due simply to nervousness, but not all nervous children grind their teeth in their sleep. Most children who have this trouble are suffering from some form of irritation, such as cutting teeth, or decayed teeth, or inflammation of the ears, indigestion, or worms. Not all children who suffer from any of these troubles grind their teeth in their sleep.

The most common idea held by mothers is that a child suffering from this habit is afflicted with worms. This is occasionally true, but not by any means is it always the case.

So many children are made nervous through the fault of the mother. The mother who rocks her baby to sleep, who walks the floor with her baby, and who gets up a half dozen times at night to quiet her fretful child is laying a foundation for a nervous child who will probably become a teeth grinder.

Probably the most common condition which will arouse a child sufficiently from its sleep to cause teeth grinding, is indigestion. Teething is a very common cause, the irritation and soreness of the gums seeming to aggravate the trouble. Do not fail, if your child is troubled greatly in this manner, to have the ears examined and to have the mouth carefully looked after for decayed teeth.

To stop the trouble, of course, you must always look for the cause. I believe that the most common cause of indigestion at night in children is allowing them a heavy supper and then putting them immediately to bed. Children should always have their heaviest meal in the middle of the day. The condition of the bowels, of course, must be carefully looked after. The diet must always claim your attention. Children who eat a great deal of fruit frequently suffer from fermentation in the intestines, and intestinal indigestion or irritation of any kind greatly aggravates the habit.

As mentioned, the possibility of worms must always be considered. A large dose of castor oil at night will probably cause a passage of some worms if there are any present, and enable you to determine whether or not this is the cause.

There are three types of worms which may be found in children. The pin worms are made up of a small yellowish white substance, resembling a piece of broken thread. The round worms are longer and larger, looking like small earth worms, and the tape worms, which rarely occur in children, appear as flat white, regular segments.

**Women in the Business**

Many changes in management of hotels are occurring. New men bring new ideas of management. Many of the new owners are women who never had any connection with the licensed hotel. They are giving to hotels a home-like atmosphere which is pleasing to travellers and to farmers and their families. Farmers' families now have no hesitation in making the hotel their headquarters while in town.

Another feature noticed is that in many hotels the old barrooms have been turned into stores by the proprietors and stocks of groceries, fruits, vegetables, tobacco, cigars, cigarettes and soft drinks are kept. These ventures are receiving good patronage.

**Community Centres**

There is evidence that the country hotel is fast becoming the community centre in many Manitoba towns.

There are now over 150 hotels, outside of Winnipeg, that are operating under the Manitoba License Act, and about twenty-five more are expected to take out their licenses.

With the purpose of encouraging men and women in charge of licensed hotels to cultivate gardens the provincial government is offering six cash prizes for the best gardens or parts of gardens to be entered in a hotel competition. The competition is limited to gardens which contain approximately 2,500 square feet. The gardens will be judged early in August by judges sent out by the agricultural college extension service. There is no entry fee but applications for judging must be in the office of the director of hotel accommodation early in June.

**W.C.T.U.**

The thirty-second annual convention of W.C.T.U. was recently held in Winnipeg.

The following officers were chosen: Evangelistic—Mrs. K. Williams. Sabbath Observance—Mrs. W. Angus. Sunday School Work—Mrs. T. J. Hall, Portage la Prairie.

Work Among Young Peoples' Societies—Mrs. Jacobs, Manitou. Little White Ribboners and Child Welfare—Mrs. L. P. Porter, Portage la Prairie. Scientific Temperance Instruction and Essay Contests—Miss McKenzie, Gladstone.

**"Bissell" AND Service**

**ARE ONE.** The Implements bearing the Bissell trade mark stand always for service—one goes with the other—Bissell Disks have time and again made a record for themselves doing double the work against all competitors.

The merit of the Bissell implements is strikingly proven by letters from representative farmers in Canada, United States and New Zealand—one of our many satisfied users writes as follows:

Mervin P. O., Sask., Canada, T. E. Bissell Co., Ltd., Elora, Ont.

Dear Sirs:—Your Disk, which I have used for ten years, has given me excellent satisfaction. I have only put one plate on as regards repairs till now, and I think if new ball boxes are furnished, it will run another ten. It has been over some of the roughest ground in Saskatchewan as our land is mostly scrub and some heavy timber, besides a few stones, and it is a wonder it is not all to pieces by now, so that on the whole it cannot be beat for durability and light draft. I remain, Yours truly, George Spencer.

The particular impressive feature of "Bissell" implements is their durability. Words of Praise encourage us to make "Bissell and Service" greater than ever.

The name Bissell has the confidence of all farmers because of the assurance they have in the service and guarantee that backs up the implement bearing the name. Recognition of this fact is the Foundation Stone of Bissell's Service.

**T. E. BISSELL CO. LTD.**  
ELORA, ONT.

**The Final Phonograph**

DESIGNED—NOT ADAPTED—TO PLAY ALL RECORDS



Why restrict your choice of records when you can have a phonograph that will play perfectly any and every make of record?



MADE IN CANADA

Models from \$53 to \$290

The Brunswick "had to come," Just as we have seen the automobile perfected during the past 15 years, so those in the phonograph industry have been watching and waiting for the Final Phonograph. And it has arrived—it is the Brunswick.

In the Brunswick all the best features of all the best phonographs have been frankly adopted. And, with some added refinements of beauty and finish, this wonderful phonograph is priced to you without the necessity of charging for discarded models or experiments.

Among other features that lift the Brunswick above all others is the perfected tone chamber which, like a violin, is built entirely of wood—white holly backed by spruce.

And on all three of the larger models there is the Ultona—the new invention that, by the mere turn of a hand, plays every make of record according to its exact requirements.

**Hear the Brunswick**  
When Visiting the Various Exhibitions!

FAIR DATES: Saskatoon, July 16-20; Brandon, July 22-26

**THE MUSICAL MERCHANDISE SALES CO.**  
143 PORTAGE AVENUE WINNIPEG

Winnipeg—The Phonograph Shop, Limited.  
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Sole Distributors for Canada,  
Dept. C.T.

143 Portage Avenue, Winnipeg

Please send me booklet describing the Brunswick Phonograph.

Name .....  
Street or R.R. ....  
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The Canadian Thresherman and Farmer

**Cream Shippers, Attention!**

**WE PAY THE EXPRESS**

If you desire the best returns for your cream—bill your next can to us. Our prices always highest—test and weights correct and returns mailed promptly. Shipping cans furnished at the following prices: 5-gal. \$4.25; 8-gal. \$5.25.

**SHIP YOUR EGGS TO US**

**The Tungeland Creamery Co. Brandon, Man.**

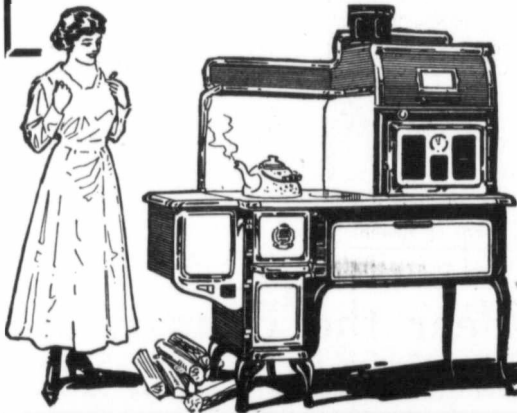
# Better Cooking—Lighter Work

You use a stove a thousand times a year—it's worth thinking about. It is natural for fire to travel in a straight line up, but all low oven ranges go against this principle—and take much longer to heat. Then, too, think of the stooping a woman must do to watch a roast or cake or bread! Nothing will pay bigger dividends in health than

## The NEW LIGHTER DAY

Doors and Splash Backs can be had in either Blue Enamel or entirely Nickerled.

## High Oven Coal or Wood RANGE



It's easy on fuel because it heats all parts so much quicker. It's easy to keep clean because it is burnished—no black leading—just a damp cloth now and then. And the material and construction are just right so that you can have absolute confidence in the "Lighter Day," year after year. We'll gladly explain all details to you—they're in a lovely interesting folder showing the photo story of "Lighter Day" Ranges. Get your copy by sending in the coupon.

**Clare Bros. Western Ltd.**

Makers of "Hecla" Furnaces

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WINNIPEG MANITOBA

Clare Bros. Western Ltd.  
Dept. D  
Winnipeg, Man.

Please send me "The photo story of Lighter Day Ranges."

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Address .....

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Christian Citizenship—Mrs. Mary Playfair.  
Work Among Indians—Mrs. Abey, Brandon.  
Work Among Colored People—Mrs. E. Barbee.  
Messenger—Mrs. McCharles, Manitou.  
The question of sending a delegate to the Dominion conference was debated at length. Finally it was decided that in spite of the expense, Mrs. A. H. Oakes, the president, should represent the Manitoba branch of the union.  
The session closed with the election of the following officers: Treasurer, Mrs. F. A. McCharles, Manitou; Y.P.B. branch Mrs. M. M. Jacobs; L.T.L. branch, Mrs. W. T. Wallace.

## On Thirst By One Who Has Thirsted

**D**ID you ever meet a person who, in the midst of an ocean of sparkling liquid, was literally prepared to barter his soul for a drink? In common with thousands who, like myself, have never tasted that banned "re-

frigerant" everywhere—but not a drop to drink!" Clear as crystal and cool as the polar current it was, but no salt was ever half so salt as that great expanse of water "strongly impregnated with chloride of sodium," as the chemist would say,



A BUNCH OF BIBULOUS BEAUTIES

Be it tennis-court, dance-hall, canoe or gondola, with the girls who make life a sweet-song; what can be so nice from it's packing of ice, as a bottle of cool Coca-Cola?

freshment" which breeds the most awful craving known to men, I have known the thirst of hell.

One night and two days in an open boat under a tropical sun did it. "Abund-

and pressing home the temptation of its fatal hospitality with maddening persistency.

Then there's the milder form of this great human experience of thirst that

one knows who has been working hard or playing with no less energy in the hot sunshine. This is the time when the sun-  
sation takes the delightful form of a thirst one "wouldn't sell for fifty dollars"; yet it can be satisfied to the soul's last desire—for five cents, the nimble nicker that the most unscrupulous retailer will dare to ask for a bottle of Coca Cola.

Of course the world is in general agreement as to the glass of water from the cool mountain spring being the most wonderful drink that heaven provides. But where, for example, in Western Canada can you get this greatest of Nature's luxuries? Need we elaborate on the sinking of wells and the filtering of creeks and streams to get what at its best cannot be called palatable and is often fraught with extreme danger? It needs no effort of the dullest imagination to conceive the difference between a glass of flat, tepid water with a powerful flavor of iron, alkali sulphur, or something worse to it, and the cool, crisp effervescent beverage known to the world as "Coca Cola."

Every page of the history of commerce is dotted with the failures of men who have attempted to make a drink that is at once a thirst quencher, that grips even the jaded palate, and that leaves no aftermath but that of invigoration.

Such is Coca Cola, and Coca Cola was a success from the start. Indeed, as a story of business romance, its rise and progress may be regarded as one of the "seven wonders of the world." This simple beverage was born in Atlanta just 30 years ago, and to-day it is the most popular drink in North America.

So enormous was the increase based figures of very recent date have got out of hand, but an idea may be gathered from the fact that Coca Cola grew from 26 gallons the first year of its existence to the stupendous total of over seven and a half millions of gallons in 1915.

Coca Cola did not win its way through money or influence in high places, but



### HAULING BIGGER LOADS

without extra spanning is easily accomplished when you use

### MICA AXLE GREASE

"Use half as much as any other"

Axles are rough and porous, causing friction. The mica flakes fill the pores and the grease keeps them there. Mica Grease prevents locked wheels and hot boxes, gives sure relief for unnecessary strain on horses and harness.

### EUREKA HARNESS OIL

"Lengthens leather life"

replaces the natural oils that dry out of the leather and puts new life in old harness. It penetrates the leather leaving it soft and pliable, and overcomes the worst enemies of harness—water and dirt.

Sold in standard sized packages by live dealers everywhere.

### IMPERIAL OIL LIMITED

BRANCHES IN ALL CITIES



### Wheat Estimating CONTEST

Correct Number of kernels in bottles was 46,183.

Nearest estimate, Fred Carlson, Hawarden, Sask., 46,190—Winner of Ford Car.

(Owing to an oversight in the office, we regret this announcement was not made at an earlier date.)

### HIDES

Farmers and Beef Ring Secretaries

WE ARE WANTING

### HIDES

Write for prices, it will pay you

THE WHEAT CITY TANNERY  
Brandon, Man.

Reference, Bank of Commerce

because it made an instant appeal to the palates of thirsty citizens—sober citizens—with a directness and completeness they had never experienced before. And it has never flagged.

It is prepared and bottled in a thoroughly satisfactory and scientific manner under the most careful supervision, using carefully filtered water, the purest carbonating supplies, and strictly clean bottles (always to be identified by the name Coca Cola blown in the glass).

Coca Cola in bottles is obtainable at all general stores, restaurants and confectioners, in the big cities, small towns, and at the little crossroads' store off in the back country.

You should make a point next time you are in Winnipeg to visit the great bottling plant of the Coca Cola Company. The Coca Cola building is one of the largest in the city. It is the largest Coca Cola plant in Canada, having been installed at a cost of \$30,000. Visitors are cordially invited to inspect the last detail of this, one of the most interesting of all our industries, and you don't need to "buy a drink."

### BETTER SCHOOLS FOR YOUNG CANADA

CANADA'S supreme asset to-day is her boys and girls. At any time, but especially in these times when the flower of our young manhood is being sacrificed in thousands on the national altar, language cannot appreciate what the children mean to the state.

More than this is the sad fact that but few men and women in Canada—even among the so-called "leaders"—seem to have anything but the most hazy conception of what is due to the young folks and their part in the future of nation building. They are our last line of defence, but not a day or a dollar should be lost in fitting them for the most advanced post in the country's service.

All living things succeed or suffer very much according to the character of their environment. If they are comfortless, uncongenial or insanitary, the result is disease and very often death. In any case no plant or animal or human creature can "do its bit" in an atmosphere of misery or in surroundings that are even partially salubrious.

In the matter of school-life does this particularly hold good, and few things in the programme of anything dealing with child life will pay so well in the highest sense of what "pay" means than the careful and continuous regard to the nature of the school premises and equipment.

On another page will be found some particulars of the work of a well known business house which has brought the subject of "Better Schools" to a fine art. This does not mean "art for art's sake," but a real necessity brought to a point of beauty in which not a dollar is wasted on mere beautification.

We refer to the Waterman-Waterbury Company of Regina, who concentrate exclusively on Better Schools. They are the originators of better plans for school-houses; they offer extremely valuable suggestions for the prevention of waste on improperly constructed houses where properly constructed houses can be erected, in many cases at the same or slightly increased cost; they seek "to make it easy and inexpensive for school officers to secure these better plans."

In common with many others who have seen the handiwork of the Waterman-Waterbury Company, we can bear testimony to its wonderful results in the past five years, particularly, during which period they have furnished a very large percentage of the new school buildings of Western Canada. Approximately 90 per cent of Saskatchewan's new schools have been constructed on Waterman-Waterbury plans during those five years.

In addition to the actual buildings, our friends also specialize in sanitary appliances, such as the Waterbury heater, the Waterbury drinking fountain, and the Waterbury chemical closets. These are details of the very first importance and their special character in every case discloses design, material and construction of a very high order.

## When You Come To CALGARY

for the Exhibition, Convention, or just for a few well earned summer holidays, arrange to spend just a few hours of your valuable time in our store.

IT WILL PAY YOU in more ways than one. Not only from a financial standpoint, but for the additional pleasure it will afford you to examine at leisure our beautiful and artistic display of fine Jewelry, Cut Glass and Silverware, Silver Novelties, Clocks, Watches, Leather Goods, etc.

AND THEN we always consider it a pleasure to be favored with your visit. It is a pleasure for us to show you what we have to sell. We feel proud, as it were, that we are able to show you the

LARGEST JEWELRY STORE WEST OF WINNIPEG

LEAVE YOUR NAME and address with us, and we will mail you our beautifully illustrated CATALOGUE. It will make your gift choosing easy.

D. E. Black @ Co. Limited  
JEWELERS

Herald Building Calgary, Alta.

## When in Saskatoon visit the Big Piano Store in the Drinkle Building on Second Avenue

(TWO DOORS NORTH OF WOOLWORTHS')

You will find here an immense array of the famous

GERHARD HEINTZMAN PIANOS and PLAYER PIANOS

as well as a complete line of

SHERLOCK-MANNING PIANOS CANADA'S BEST MEDIUM PRICED INSTRUMENTS

During the SASKATOON EXHIBITION we will, as usual, have a number of these instruments on display in the Main Building, Fair Grounds.

Our prices are reasonable and our terms easy

WRITE US FOR OUR CATALOG

H. J. M. GLOECKLER PIANO HOUSE

DRINKLE BUILDING SASKATOON, SASK.

## HECLA Warm Air FURNACE

More pure moist air comes from CIRCULAR WATER PAN (A HECLA FEATURE) than any other style.

GET GUARANTEED HOUSE HEATING PLANS & BOOKLET - FREE. If you are interested in Hot Water or Steam Heating ask for our Booklets on Adanic Boilers & Hydro Thermic Radiators

Coupon - CLARE BROS. WESTERN, LTD., WINNIPEG

Please send me "Comfort and Health," also your guaranteed house heating plans. NAME ADDRESS



**Kar-a-van**  
A Coffee  
of distinction



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The Gold Standard Mfg. Co  
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the  
**Invictus  
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for men. Made by Geo. A. Slater the Best Good Shoe.

**DOROTHY DODD**—For Women with comfort style and wear.

**CLASSIC and HURLTBUT**—Wells for Children.

WE FIT THE FEET

**Lawson's Shoe Store**  
1848 Scarth St. REGINA

FOR SALE—Small threshing outfit, complete, in good running order. Sykes, Russell, Man.

WANTED to hear from owner of good farm for sale. State cash price, full description. D. F. Bush, Minneapolis, Minn.

Since the spring of 1912 (when Waterman-Waterbury Company established in Regina), they have supplied over 3,000 heaters to Western Canadian schools. In 1917 they erected 152 school buildings, and at the moment of writing they have 23 crews hard at work on schools of the prairie provinces.

The Waterman-Waterbury Company is an all-around necessity to the school trustee. They are prepared to purchase school debentures. They plan the school building, build and equip it complete, ready for the teacher and pupils to occupy and start work the moment they enter, and they are agents for a complete line of the latest departures of approved school equipment made by the leading specialists in their particular line.

This year they are projecting their activities in the direction of building a better class of farm houses than what has obtained, not only from pioneer days, but even from the sadly abortive effects of recent architectural freaks.

Our correspondents publish one of the very best plan-books we have ever seen, which can be had free on application. It is printed in color, and from photographs or carefully executed wash and line drawings. Exteriors and interiors are given with perfect clearness of detail, and the mere typographical beauty reflects the greatest credit on one of our leading western cities—Regina to wit—where it was printed.

We have the greatest pleasure in recommending any interested readers to get in touch with the Waterman-Waterbury Company before committing themselves or their school district to any expenditure.

**CALGARY'S GREAT JEWELRY EXHIBITION**

FROM a rabbit hutch to a palace in ten years fairly describes the progress of the D. E. Black Company—Calgary's great jewelry store.

In 1904 this enterprising firm started in as a small repair shop with a staff of one, who is still the head of the firm. But the one-man staff did good work, so much so that the business offered became so voluminous that another man had to be called in to help.

Then the premises had to be enlarged to suit, and after three moves to "more convenient and commodious quarters," the house finally located its business where it now is on the ground floor of the big "Herald" building, one of the finest examples of business architecture in Western Canada.

The one-man watch-cobbler business has grown to a staff of 16, which finds steady employment in repairing and cleaning watches alone. The personal element in the business has been maintained from the first; no outside capital has been employed, the incorporation having been completed from old servants, the department managers of the house.

The little side street watchmaker's business has grown till it is, in fact, the most up-to-date jewelry store between Winnipeg and the Pacific, and one glance at the splendid catalogue the company issue is quite enough to demonstrate this. It is quite on a par with the very best jewelry catalogue printed in Canada, and its contents give the assurance that in point of quality and artistic merit, its wares are in no second rank.

We are asked to direct our readers to the splendid exhibit of jewelry and art wares, etc., which will be presented by the D. E. Black Company at the forthcoming Calgary exposition. Beyond doubt it will be one of the most worthy and attractive efforts in what promises to be a unique assembly of fine things.

**BAKING TIPS FOR THE HOUSE-WIFE**

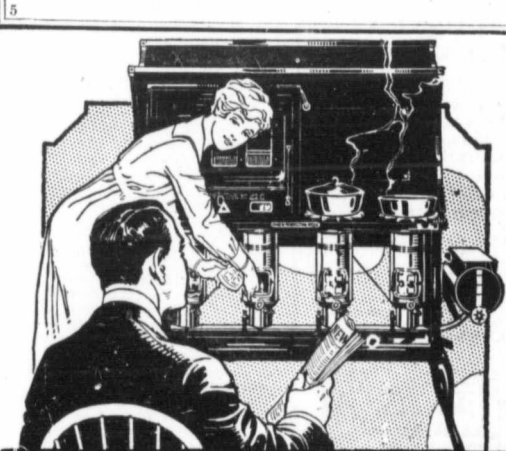
Canada Food Board Educational Division  
Canada's new wheat crop will not reach the consuming public as flour for three months at least and in the meantime this country will be very short of wheat flour. We have—as has also the United States—shipped as much wheat as possible to the Allies, giving them a considerable share of our own normal supply to help them over until the new harvest has come on to the market and



There is only one quality of

**BLUE RIBBON  
TEA**

the best. If you know it, you like it—if you don't know it, it will pay you to get acquainted.



**COOKING IN COMFORT,  
AT LAST!**

"WELL, no more coal or ashes to bother about now. And if my eyes hadn't been opened, you would still be cooking on the coal range all through the summer."

Husbands and sons—if you had to do the cooking, wouldn't you like to do it in the most economical, most efficient, simplest way possible? Save your wife or mother further fuel worries. Buy her a New Perfection Oil Cook Stove—It will mean better cooking, a cleaner, cooler kitchen and less work for her—and for you, economy, comfort and no waiting for meals.

Select the style now that suits the individual need of your home—one, two, three and four burner sizes. Be sure it's the stove with the Long Blue Chimney—and that it has the Cabinet and the New Perfection Oven. They make the stove complete for year-round cooking service.

Royalite Coal Oil gives best results.

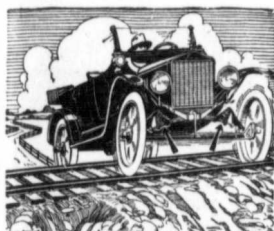
IMPERIAL OIL LIMITED

BRANCHES IN ALL CITIES

For Sale in Hardware, Furniture and Department Stores everywhere

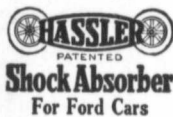
**NEW PERFECTION  
OIL COOK STOVE**





**Tires \$500 Apiece!**

**T**IREs are selling at fabulous figures in Europe. War conditions may make them go almost as high here. You owe it to the country and to yourself to make your present set give the greatest possible mileage.



Hassler Shock Absorbers save tires because they support the weight of the car. When the car strikes a rut, they gently compress and absorb the jolt instead of forcing the tires to lift the car. The increased mileage from one set of casings pays for them. Hassler Shock Absorbers make your Ford ride as easily as a \$2,000 limousine. They save gasoline, reduce up-keep cost one-third, 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.

**ROBERT H. HASSLER, Limited**  
Lock Driver H.C. 13 HAMILTON, ONT., CAN.

the corner has been turned. The use of substitutes, therefore, becomes an imperative necessity in this country and our people should familiarize themselves with methods successfully used in baking these substitute flours.

On the 1st of July the Canada Food Board Order became effective requiring all public bakeries, and private households also, to use 10 per cent substitute flour. On the 15th of July this percentage is to be increased to 20 per cent, in all of Canada east of Port Arthur. The question then will arise in each house-keeper's mind, what are substitutes for wheat flour, where can they be had and how are they to be used. Substitutes as defined by the new law, include bran, shorts, corn flour, corn meal, edible corn-starch, hominy, corn grits, barley flour, rolled oats, oat meal, rice, rice flour, buckwheat flour, potato flour, tapioca flour, rye flour and rye meal. Potatoes are also classed as a substitute for wheat flour, in proportion of four pounds of potatoes to one of the other substitutes mentioned, on account of the higher percentage of water in potatoes. A large number of millers are ready with these different flours and as soon as the public demand calls for them they will be distributed throughout the trade, and are now procurable by dealers.

There has been some talk about the price of substitutes being high in proportion to flour but it is expected that this condition will remedy itself as the new flours get into general circulation throughout the trade. In the case of corn meal, the price has advanced for corn in Chicago on account of market conditions. Canadian millers were depending on American corn and advanced the price of corn meal accordingly on all new contracts. It is not expected that this market condition will continue, however, as there has been plenty of corn in the United States since last harvest, although difficulty of distribution arose through lack of sufficient transportation facilities and similar cause. With the 1918 crop in prospect, it is expected that there will be a still more plentiful supply for the coming season.

It may be necessary to experiment with these substitute flours a few times before succeeding in producing a satisfactory loaf and opportunity should be taken to study the effect of these substitutes and the different methods of mixing, handling, fermenting and "proofing" of the doughs. As most of the wheat flour substitutes accelerate the fermentation, it will be better not to work the dough as long as usual. About four hours for fermentation will be sufficient in a room of moderate temperature, divided as follows:—

2 hours 45 minutes for the first punch, 45 minutes for the second punch.

30 minutes is allowed before the dough is finally taken out, kneaded and cut into loaves. After being set in the pan, 45 minutes is enough for "proofing," when it is ready for the oven.

When corn meal, oat meal or other



**Spinach Loaf**  
1 cupful spinach, 1 cupful cheese, cut bread crumbs, 1 tablespoonful fat, ¼ tea- spoonful salt. Mix and bake in greased dish twenty minutes.

## Maltum

REGISTERED

### A SUPERB Beverage

Lively, zestful and sparkling, with simply a glorious flavor. Serve on the table icy cold.

**E. L. Drewry Limited**

MOST EVERYBODY SELLS IT

**Winnipeg Canada**

DON'T FORGET TO DRINK IT AT THE FAIRS

## DENTISTRY

Proper care of the teeth means that you should visit a dentist at least twice a year. If your teeth fall your trouble starts, and until you can have your teeth put in such condition that they will properly masticate food, that trouble not only continues but increases. The time to visit a dentist is NOT when your teeth begin to ache but when you feel you are in perfect condition. The dentist often finds a small cavity that he can repair and save you a heap of trouble.

My prices are just half what others charge. **None but Experts. No Students**

**DR. J. A. MORAN, Dental Specialist**  
Over Union Bank, 2nd Avenue SASKATOON  
TELEPHONE 4633

If you are coming to the Saskatoon Fair, reserve time to give me a call. Examination and consultation free.

### MYERS COG GEAR TANK PUMPS

No. R-472

...serves ever... of their capacity... of operation and uniform service. Hand or gasoline engine. Several styles. Ask your dealer or write us. Circular on request.

**F. E. MYERS & BRO.** Ashland, Ohio



**IN THE AIR RAID ZONE**

Client. "None o' them two last settings I bought from you have hatched out."

Dealer. "Have you tried the 'All Clear' on the bugle, Mum?"

## REGINA COLLEGE, Regina, Sask.

**E. W. STAPLEFORD B.A., D.D., President**

A Residential and Day College for Girls and Young Women, Boys and Young Men.

**ACADEMIC:**—Preparatory, Grade VIII, Teachers' and Matriculation Courses.

**COMMERCIAL:**—Shorthand, Typewriting and Book-keeping.

**HOUSEHOLD SCIENCE:**—And Dressmaking.  
One Year and Two Year Homemakers' Courses.

**MUSIC:**—Piano, Vocal, Violin, Violoncello, etc.

**EXPRESSION AND ART.**

Residential life under helpful supervision offers many advantages which add greatly to the value of College training.

Fall Term begins September 24, 1918.  
Enrollment for present year, 590—largest previous enrollment, 414.

If interested, write for College Year Book.  
**E. R. DOXSEE, B.A., B.D., Registrar.**

FOR SALE—One 25 h.p. Case Steam Engine, with plowing attachment. One Waterloo 56 x 56 Separator, one caboose and tank wagon with two tanks, all in good running order. Apply Marsden Threshing Co., Ltd., Marsden, Sask.

## COMBINGS!



LADIES—We make your combings into switches, any quantity, for \$3.00

15c Postage

Satisfaction Guaranteed.

New Hair added to Combings from \$2.00 worth up if desired.

Elite Hairdressing Parlors  
301 Birks Building  
WINNIPEG



## Best for Baby

After many years' use by parents of all classes, in Royal Nurseries and humble homes, Savory and Moore's Food has the reputation of being a thoroughly reliable food for infants.

The experience of parents, nurses, and medical men all goes to show that babies do thrive remarkably well on this famous food, that its use prevents infant ailments, and that it builds up a strong constitution, so important in later life. You may therefore bring up baby on Savory & Moore's Food with the assurance that you are doing the best you can for your child.

### MOTHER'S GUIDE FREE

Savory & Moore's little Book, "The Baby," is full of useful information on Infant Management, and contains hints on Feeding, Teething, the Toilet, Infant Ailments, and many other subjects. It is just what a young mother needs, and will prove invaluable in the home. A Free Copy may be obtained on application to Savory and Moore, P.O. Box 1601, Montreal.

**SAVORY & MOORE'S FOOD**

Of all Druggists and Stores

## Monuments

Monuments Memorials Stone and Cement Curbing, Fences, etc. Catalog and Price List on request. In writing for Catalog please mention purpose of memorial. Material and Workmanship guaranteed. Dept. C.T.

Saskatoon Granite and Marble Company, Limited  
Box 272, SASKATOON,

**NEW PATENT YOUR IDEA INVENTIONS**

Get the reward by manufacturing and our "Patent Office" for free. Send sketch for free report on patentability. Process secured or our fees returned.

**HAROLD C. SHIPMAN & CO. Patent Attys.**  
Central Chambers, OTTAWA, CANADA

meal is used the moisture retaining qualities of the loaf may be improved by scalding these ingredients at a temperature of 150 degrees Fahrenheit and allowing two hours for cooling. Most of the wheat flour substitutes retain the moisture in the loaf longer than will the wheat flour and yield an increased amount of bread on account of their higher absorption of water, thus reducing the amount of yeast and shortening necessary. The following are a few of the recipes recommended to bakers. They will be useful also in private households when substitutes are to be mixed with wheat flour for bread.

### Corn Flour Bread

2½ pounds standard flour; ½ pound corn flour; 1 tablespoon brown sugar; 2 tablespoon salt; ½ oz. yeast; 1 tablespoon fat; 3 cups of water.  
This should produce 4½ pounds of bread.

### Barley Flour Bread

5-2-3 cups wheat flour; 11-3 cups barley flour; 2 cups milk and water; 1 cake of compressed yeast; 2 tablespoons sugar; 2 tablespoons fat; 2 teaspoons salt.

This should make two loaves.

### Rice Yeast Bread

8 cups standard flour; 7 cups boiled rice; ½ cup milk and water; ¼ cup warm water (for yeast); ½ cake compressed yeast; 4 teaspoons sugar; 4 teaspoons fat; 1½ teaspoons salt.

When ready for the pans will look like a stiff drop batter. The quantities mentioned make two loaves.

## Recipes

### Fish Loaf Recipe

Two pounds solid fish, two eggs, separated, one and three-fourths cupful soft bread-crumbs, one and one-fourth cupful milk, a grating of lemon-rind or a few drops of vinegar, one and one-fourth teaspoonful salt, one-half teaspoonful onion-juice, one-fourth teaspoonful pepper, one tablespoonful any good cooking fat, liquefied. Lay bits of bay-leaf on the fish, steam it and, when cool, remove the skin and bones and flake the fish into bits. In the meantime cook together the bread-crumbs to a paste, add this to the fish with the egg yolks and the remaining ingredients, fold in the egg white, beaten stiff, and pack into a well-oiled brick-shaped tin, the bottom being lined with paper. Stand in a pan of hot water and bake about fifty minutes. Let stand a while before unmolding. Either serve hot with bread sauce, creole, or egg sauce, or serve cold with salad-dressing or sauce tartare. If necessary to make an emergency dish, this same foundation recipe may be used, baking for half the time in timbale molds or custard-cups instead of in the tin. They may be unmolded and served with buttered peas.

### If You Live Inland

No longer is the woman who lives

inland unable to introduce fish into her menu; the delicious and hygienically packed varieties of canned fish bring it to her door.

The following recipe may be used in making cream of salmon, fish flake, oyster, crab, or lobster soup. Combine one cupful of the fish, minced, with a cupful and a half of cold water, three-fourths teaspoonful of salt, one-eighth teaspoonful of pepper and a teaspoonful of onion-juice or less if desired. Simmer for ten minutes, then add a quart of milk, and thicken the mixture when the boiling-point is reached, with two and a half tablespoonfuls each of butter, or any desired cooking fat, and flour rubbed together. Press through a pure sieve and serve with croutons or hot toast sticks. If desired, the soup need not be strained. In this case its takes on the character of a bisque, and a few drops of Worcestershire sauce is a good addition. To make a fish chowder in the same general way, slice or dice a cupful and a half of potatoes and cook in two cupfuls of water till they are half tender; then add the fish and seasonings as described above and finish the soup as directed. If a thin chowder is liked, omit half of the flour in thickening.

Few housewives appreciate the possibilities of canned fish in salad making. Turn it out of the can immediately on opening and allow it to stand exposed to a draft of air for at least a half hour if possible, to freshen it. In making the salad, use shrimps, salmon, fish flakes, crab meat, lobster, or tuna fish and either a boiled or mayonnaise dressing; allow one-third as much finely diced celery, shredded cabbage, or drained cucumber as there is fish.

Smoked and salted fish may be used in many ways, both by itself and in combination with other things. The curing process makes it an aid to digestion and as it stimulates the gastric juices it deserves a well defined place as an appetizer, and at breakfast, luncheon, or supper where light muscle-making foods are required. In this list belongs finnan-haddie, blotters, salt mackerel, codfish, smoked salmon and halibut, herring, and as an occasional treat, or an appetizer, sturgeon.

Finnan-haddie and blotters are two of the most inexpensive of the proteid foods and may be served in simple ways, as well as adjuncts to more expensive foods. Finnan-haddie may be combined with hard-cooked eggs in a well-seasoned cream sauce to make a delicious luncheon dish, at much less cost than if eggs were used. Smoked salmon, halibut, and finnan-haddie may be creamed and served about a mot: d of buttered rice, mashed potato, or buttered hominy. Either one of the three may be further combined with peas, cooked celery, or fried green peppers.

It is a mistake to over-freshen salt and smoked fish. Scalding is usually sufficient for cod and even this is sometimes not necessary; rinsing with boiling water is usually sufficient for the other varieties, with the exception of salt mackerel, which should be soaked for several hours before using.

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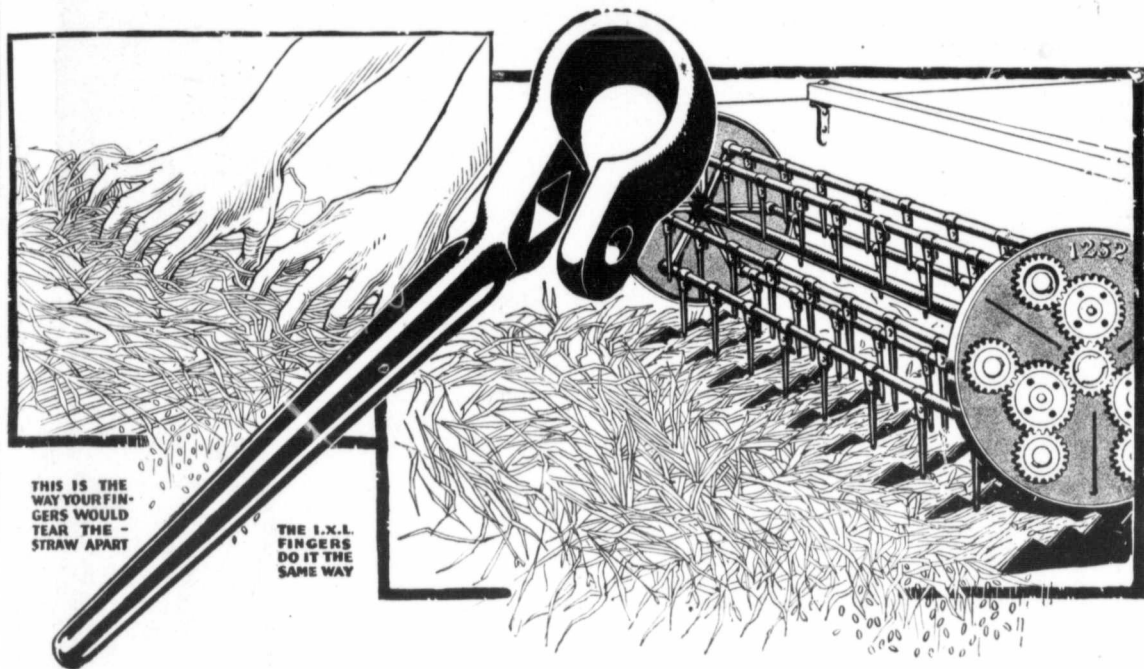
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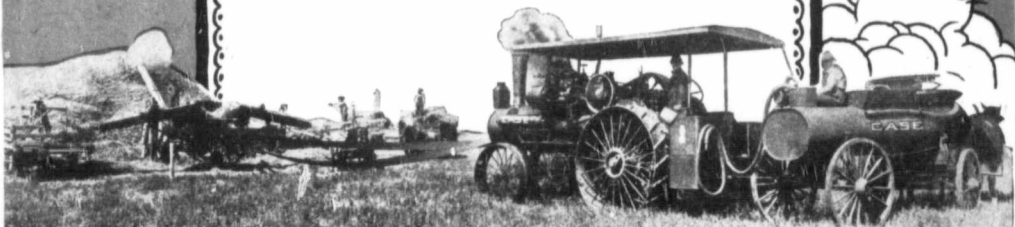
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